

**FY 2012/2013 QC Category No. 7B  
STATEWIDE INSPECTION GUIDELIST  
Asphalt Milling / Paving**

**GENERAL PAVING**

1. A pre-paving conference is held before the milling and paving operation and a written report is distributed. [CPAM Sec. 3.1]
2. A qualified CTQP Asphalt Paving Level II technician shall be on the roadway at all times when placing HMA at the job site (except when placing miscellaneous or temporary asphalt). All testing shall be performed by a CTQP Asphalt Paving Level 1 technician with the exception that cross-slope, temperature and spread rate can be performed by someone under the supervision of a CTQP Paving Level 2 technician. [Spec. 105-8.6.2]
3. A copy of the approved Contractor's Quality Control Plan shall be present on the project and the Contractors Roadway QC Technician is required to have a copy of the mix design for the HMA being placed at paving site. [CPAM 3.2.8.2]
4. The paving machine is equipped with automatic longitudinal and transverse screed controls with a min. length of 25 feet that are being used during paving operation. [330.5]
5. Establish the forward speed of the asphalt paver based on the rate of delivery of the mix to the roadway to maintain a constant supply of mix (head of material) at the augers in front of the screed. [Spec. 330-6]
6. Do not place asphalt mixtures while rain is falling or when there is water on the surface to be paved. [Spec. 330-3]
7. Ensure trucks are not bumping the paver. After releasing the HMA material from the truck's body to the paver, the remaining material in the truck shall not be dumped on the tacked surface in front of the paver. [Spec. 300-8]
8. A string line is being used for an accurate, uniform alignment of the pavement edge in areas where there is no curb and gutter. The deviation along the unsupported pavement edge shall be not more than +/- 1.5 inches from the stringline. [Spec. 330-6]
9. Do not allow the mixture to adhere to the wheels or tires of any rollers and do not use fuel or other petroleum distillates to prevent adhesion. Scrapers, pads and moistening systems shall be function properly to avoid having HMA adhering to the wheels. [Spec. 330-5]
10. Pneumatic-tire rollers (traffic rollers) are using tires inflated 50 to 55 PSI or as specified by the manufacturer. [Spec. 330-5]
11. Pneumatic-tire roller (traffic roller) is used on first overbuild course and the traffic roller or vibratory roller is used on the first structural layer over an asphalt rubber membrane interlayer (ARMI) layer. [Spec. 330-7]
12. When using an extendable screed device to extend the screed's width on the full width lane or shoulder by 24 inches or greater, an auger extension, paddle, or kicker device shall be equipped and used during paving unless the Contractor provides written documentation from the manufacturer that these are not necessary. [Spec. 330-5]

**GENERAL PAVING (continued)**

13. Protect the last structural layer placed prior to the friction course and newly finished dense-graded friction course from traffic until the surface temperature of these layers has cooled below 160°F. [Spec. 330-10]
14. The lift thickness meets the specification requirements. [Spec. 334-1 or for FC-5 (Spec 337-8)]
15. When the design speed is 55 miles per hour or greater and intermediate layer or temporary pavement will be opened to the traffic, the smoothness of the pavement shall be checked by 15 foot rolling straightedge, which is calibrated before each use and to ensure that no smoothness deficiency is in excess of 3/8 inch. [Spec. 330-9, CPAM Section 11.2]
16. Document the roadway density random numbers in the Asphalt Plant-Random Number Worksheet, Form 675-030-25 and ensure that the 5 cores are cut from each subplot. Do not obtain cores any closer than 12 inches from an unsupported edge. After coring, core holes are patched properly within three days of coring. [334-5]
18. Produce a finished surface of uniform texture and compaction with no pulled, torn, crushed, raveled, or loosened portions and free of segregation, bleeding, flushing, sand steaks, sand spots, or ripples. Address any pavement not meeting the requirements of this specification in accordance with 330-9.5. [Spec. 330-9.2]
19. Monitor the 15 foot rolling straightedge operations and corrective actions in accordance with CPAM Sec. 11.2. [Spec. 330-9]
20. The transverse joint, longitudinal joint and pavement approaches to the bridge joints are constructed properly and checked by 15-foot manual straightedge to achieve smooth and compacted surfaces. The 15-foot manual straightedge shall also be used to check the smoothness on crossovers, intersections, tapers, transitions at beginning and end of project, parking lots and similar areas. [Spec. 330-9, FM5-529]
21. For night paving, sufficient lighting shall be provided at the job site. [Spec. 8-4]
22. Keep sections of newly compacted asphalt concrete, which are to be covered by additional courses, clean until the successive course is laid. [Spec 330-10]
23. Do not dump embankment or base material directly on the pavement. Dress shoulders before placing the friction course on adjacent pavement. [Spec.120-12.2 and 330-10]
24. Equip blade graders operating adjacent to the pavement during shoulder construction with a 2 by 8 inch or larger board, or other attachment providing essentially the same results, attached to their blades in such manner that it extends below the blade edge in order to protect the pavement surface from damage by the grader blade. [Spec 330-10]
25. Perform the verification measurements at a min. frequency of twice per day to ensure that the temperature of the mix at the paving site is checked and recorded in accordance with the procedures stated in the specifications. Reject a load or portion of a load of HMA, when a mix temperature exceeds the acceptance limits. Document the results in the Asphalt Roadway - Verification Report, Form 675-030-021. [Spec. 330-6, CPAM Sec. 5.10]

### **GENERAL PAVING (continued)**

26. For process control, the Contractor shall monitor the pavement temperature with an infrared temperature device. The roadway density shall be monitored by either 6- inch diameter roadway cores, a nuclear density gauge, or other density measuring device at a min. frequency of once per 1500 feet of pavement. [Spec. 330-2]
27. Perform the verification activities at a min. frequency of once per layer per day to ensure that the spread rate (yield) is in compliance with the Contract requirements. In case of verification with deficiencies, the Contractor shall take corrective action immediately and a recheck shall be made afterward. If the recheck indicates that the operations are still out of control, the operation shall be stopped and the quality of the defective areas shall be evaluated separately. The results shall be documented in the Asphalt Road-Verification Report, Form 675-030-021. [Spec 330-6, CPAM Sec 5.10].
28. Perform the verification activities by randomly taking a minimum of ten measurements of the cross slope per mile in tangent sections, control points in transition sections, and a minimum of three cross slope measurements on fully superelevated sections over a day's production to ensure that Contractor's measurements are within the acceptable tolerances listed in Table 330-2 Acceptable Cross Slope Tolerance. (Individual Deviations: +/- 0.4 % for tangent and superelevated sections, +/- 0.5 % for shoulders, Average Deviations: +/- 0.2 % for tangent and superelevated sections, +/- 0.5 % for shoulders). [Spec. 330-9, CPAM 5.10]

### **GENERAL MILLING**

29. The milled surface is swept with a power broom or other approved equipment. A Street sweeper is used in urban and other sensitive areas. Any surface delamination or scaling pieces shall be removed. [Spec. 327-3, 327-4]
30. The milling surface has a uniform texture with no deviation in excess of ¼ inch. The depth of cut and the cross slope are checked periodically to ensure that the results are in compliance with the contract requirements. [Spec. 327-3, 327-4]
31. Repave all milled surfaces no later than the day after the surface was milled or as specified in contract. [Spec. 327-3]
32. Perform the cross slope verification measurements in accordance with 327-3 and CPAM Sec. 5.10 to ensure that Contractor checks the cross slopes at a frequency of one measurement every 100 feet during milling operations. [Spec. 327-3, CPAM Sec. 5.10]

### ***PRIME AND TACK COAT***

33. The asphalt distributor being used is in accordance with the specifications. [Spec. 300-3]
34. The roadway surface is cleaned prior to application of the tack coat. [Spec. 300-5]
35. Perform the verification measurements at a min. frequency of once per day to ensure that the tack coat is applied uniformly with proper spread rate (per Table 300-1 of Spec 330-8) checked by the Contractor at least twice per day and the tack has broken prior to the placement of asphalt. Document the results in the Asphalt Roadway-Verification Report. [Spec. 300-8, CPAM 5.10]

### ***ASPHALT RUBBER MEMBRANE INTERLAYER (ARMI)***

36. Use ARB-20 for the binder and size No. 6 stone, slag or gravel for the cover material in ARMI. [Spec. 341-2]
37. Perform the verification measurements at a min. frequency of once per day to ensure that the application rate of the asphalt rubber binder and the cover material meets the specification requirements. Document the results in the Asphalt Roadway-Verification Report. [Spec. 341-6, CPAM Sec. 5.10]
38. The rolling operation of the ARMI layer conforms to the contract documents. Ensure that the entire width of the mat is covered immediately by traffic rollers. For the first coverage, provide a minimum of three traffic rollers in order to accomplish simultaneous rolling in echelon of the entire width of the spread. If necessary, see that additional coverages with traffic rollers are applied, as directed by the Engineer. [Spec. 341-6]
39. The ARMI layer is covered with the first course of asphalt concrete prior to being opened to traffic. [Spec. 341-6]

### ***FRICITION COURSE***

40. During paving operations for friction course, the temperature of the mixture and the air temperature at lay down shall meet the specification requirements. [Spec. 337-7]
41. Perform the verification activities at a min. frequency of once per day to ensure that the spread rate of the friction course meets the specifications. Document the results in the Asphalt Roadway-Verification Report, Form 675-030-021. [Spec. 337-5, CPAM 5.10]
42. For FC-5, use two static steel-wheeled rollers with an effective weight in the range of 135 to 200 PLI and with an appropriate rolling pattern for the pavement compaction in order to seat the mixture without crushing the aggregate. In the event that the roller begins to crush the aggregate, reduce the number of coverages or the PLI of the rollers. [Spec. 337-7]
43. For FC-5, in the event that an individual QC test result of a subplot for A/C content or two consecutive test results for gradation on any of the sieve sizes do not meet the requirements of Table 337-2, step shall be taken to correct the situation and actions taken shall be reported to the Engineer. The LOT will be automatically terminated and production of the mixture shall be stopped. The material represented by the failing test result shall be evaluated in accordance with the specifications. [Spec. 337-6 & 334-5.9.5].