

Diary Number: _____

Inspector Name: _____

TRACS Number: _____

Date: _____

Division IV: Surface Treatments and Pavements
Title: Asphalt Rubber Blending and Hot Mix Plant

Blender Plant Name
Plant Name
Plant Location
Mixes 413
Mixes 414
Mixes 415

Attribute Numbers	Compliance	Narratives	References
0.		Mix Design was approved by ADOT's District Regional Materials Engineer or ADOT's Central Lab Materials Engineer. The mix design is in the project files, the hot plant control room and with ADOT inspectors.	Standard Specifications 413-4 Standard Specifications 414-4 Standard Specifications 415-4
1.		Changes to the mix design are documented by the contractor and approved by ADOT. The re-approved mix design is in the project files, the hot plant control room and with ADOT inspectors.	Standard Specifications 413-4 Standard Specifications 414-4 Standard Specifications 415-4
2.		Mix design aggregate bin percentages, asphalt cement content, rubber content, mineral admixture % and moisture content % are verified daily with the hot plant's computer. Percentages correlated with the mix design and are documented in the daily diaries.	Standard Specifications 413-4 Standard Specifications 414-4 Standard Specifications 415-4
3.		An approved Crumb Rubber Asphalt (CRA) blend design is in the project files, the blending plant control room and with ADOT inspectors.	Standard Specifications 413-4 Standard Specifications 414-4 Standard Specifications 415-4
4.		CRA blend design percentages were verified with the blending plant's computer readout. Percentages correlated with the blend design and are documented in the daily diary.	Construction Manual 105.11 Standard Specifications 1009-2.04

5.		The certificate of compliance was submitted for the asphalt cement (performance grade PG).	Special Provisions 106.05 Standard Specifications 1005-1
6.		If mineral admixture was used, the project verified it was on the Approved Materials Source List. Mineral admixture is Portland Cement I or II, Blended Hydraulic Cement Type "IP" or Hydrated Lime. The date of verification was recorded in the daily diary.	Construction Manual 105.11 Materials Practice and Procedure Directives 13a 2.4
7.		The certificate of compliance is submitted for the crumb rubber and matches the identification on the crumb rubber containers.	Standard Specifications 1009-2.01 (B)
8.		The required inspection and testing standards are available to technicians.	Standard Specifications 413-4
9.		The plant belt scales and meters have been calibrated and were documented in the daily diary.	AASHTO M-156 Construction Manual 105.11 Standard Specifications 403-2
10.		The platform truck scales and/or silo load cells are certified every 365 days, or after being moved to a new location. Platform truck scales and/or silo load cells dates were documented in the daily diary.	Construction Manual 105.11 Standard Specifications 109.01
11.		413 and 414 ONLY: Before beginning production, cold feed was calibrated and recorded in the daily dairies.	Construction Manual 105.11 Standard Specifications 413-6.03 Standard Specifications 414-6.03
12.		The mineral admixture positive signal system is verified at the beginning of the project and documented in a daily diary (operating properly: mixing automatically stops if mineral admixture is not being introduced).	Construction Manual 105.11 Standard Specifications 403-2
13.		Adequate dry storage is provided for the mineral admixture.	AASHTO M 156-4.3 Standard Specifications 403-2
14.		414 mix: Aggregate is wet with free moisture on surface just prior to mixing. The Engineer may require a moisture content up to 1-1/2 percent above the combined water absorption and document in the daily hot plant report.	Construction Manual 105.11 Special Provisions 403-2
15.		There is an automatic plant shutoff when any aggregate bin becomes empty.	AASHTO M 156-6.2.3 Standard Specifications 403-2
16.		The stock piles are managed to prevent contamination and segregation. Stock piles are checked before and during production.	Standard Specifications 413 Standard Specifications 414 Standard Specifications 415
17.		The bins are loaded properly with adequate bulkheads provided to prevent overflowing into adjacent bins.	Standard Specifications 403-2
18.		The bituminous material (asphalt rubber) is controlled by an automated system fully integrated with the controls for the mineral aggregate and mineral admixture.	Standard Specifications 403-2

19.		The pyrometer reading is verified with a certified temperature gun to assure its accuracy and a report is submitted to the Engineer in the daily hot plant report.	Standard Specifications 403-2
20.		The mix temperature does not exceed 350 degrees at the dryer/mixer discharge. Checked at least once per shift and recorded in the daily diary.	Construction Manual 105.11 Standard Specifications 413 Standard Specifications 414 Standard Specifications 415
21.		At the addition of the rubber into the asphalt cement, the temperature is between 350 and 400 degrees F. Checked at least once per shift and recorded in the daily diary.	Construction Manual 105.11 Standard Specifications 1009-3.01
22.		The crumb rubber is protected from moisture (excessive moisture content can cause rapid foaming and boil over of the asphalt rubber binder) as per the manufacturer's requirements.	Manufacturer's Requirement
23.		The times, dates, amount of crumb rubber (expressed as percent by the weight of the asphalt cement) and temperatures of each batch of asphalt rubber are continually monitored and documented by the Contractor from beginning of blending until the batch is used and documented in the daily hot plant report.	Standard Specifications 1009-2.02
24.		The proportions of ground rubber and asphalt cement are within design (a minimum of 20% crumb rubber by the weight of the asphalt cement.)	Standard Specifications 1009-3.02
25.		The times and results of the Contractor's viscosity tests, for each batch of asphalt rubber, are documented in the daily hot plant report and on file at the hot plant.	Standard Specifications 1009-3.02
26.		The Contractor shall test viscosity of the asphalt rubber in each batch by the use of a rotational viscometer, in accordance with ASTM 7741.	Special Provisions 1009-3.01
27.		The asphalt rubber is maintained at temperatures between 325 and 375 degrees F in the reaction tank and continually mixed for at least one hour prior to use. Recorded in the hot plant report.	Standard Specifications 1009-3.01
28.		When the asphalt rubber is held more than 10 hours, and allowed to cool, it must be gradually reheated to a temperature between 325 and 375 degrees F before application (cooling and reheating is allowed only once).	Standard Specifications 1009-3.02
29.		Asphalt rubber content is measured by the Contractor with a nuclear gauge a minimum 4 times/per shift as per Ariz test 421 for 413 and 414. For 415 use Ariz Test 427 or other approved method. ADOT must observe and document in the hot plant report.	Standard Specifications 413 Standard Specifications 414 Standard Specifications 415
30.		Adequate and safe stairways (if applicable) are provided to permit easy and safe access to obtain the material samples.	AASHTO M 156 OSHA 1926-1052 Standard Specifications 403-2

31.		Aggregate has a uniform coating of bituminous material.	Standard Specifications 413-6 Standard Specifications 414-6 Standard Specifications 415-3
32.		The trucks use tarps or covers.	Standard Specifications 414-7.04 (A)(2)
33.		All required samples are obtained. Sampling is performed correctly and sample containers are the correct size and type.	Materials Testing Manual Appendix C Series 900 (Table 2 and Table 3)
34.		When material is measured by weight for payment in the truck using platform scales, haul trucks are weighed empty at least once daily and record in the daily diary.	Construction Manual 105.11 Standard Specifications 109.01
35.		Contractor provided daily documentation of the weight and proportion of each individual component (mineral aggregate, mineral admixture, and bituminous material) of the mix and recorded in the daily hot plant report.	Special Provisions 403-2
36.		Quantlist Minimum Frequency is being followed, 1 per week.	Construction Bulletin 07-01