

**COLORADO DEPARTMENT OF TRANSPORTATION
HMA DENSITY PROFILE DATA**

Project No.:	Date:
Project name/location:	Region:
Project code (SA#):	HMA Grading:
Paving contractor:	AC Type:

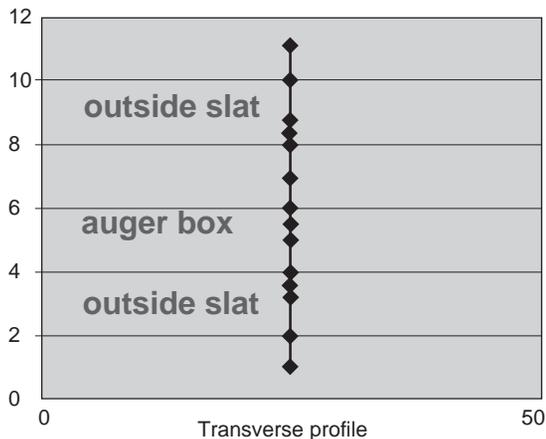
Comments: (Width, extenders, problems, etc.)	Overlay information: Thickness <input type="checkbox"/> on existing, <input type="checkbox"/> new construction
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Longitudinal profile identification			Relative density (%) at indicated location within profile										
Number	Profile station within project	Profile Type (Include stop duration)	0'	5'	10'	15'	20'	25'	30'	35'	40'	45'	50'
1													
2													
3													
4													

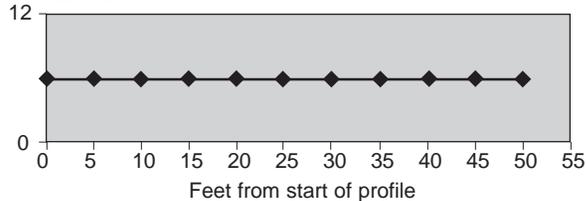
Paver profile data (Transverse)

Number	Paver profile station	Location in profile (feet from edge) vs. relative density (%)											
		0'	5'	10'	15'	20'	25'	30'	35'	40'	45'	50'	
P1	Location												
	Density												

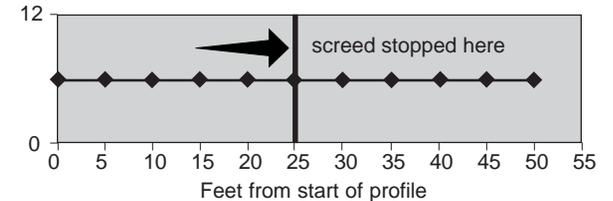
Check for paver segregation (Paver)



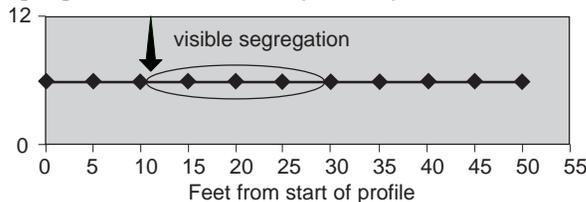
No segregation or stops (Control)



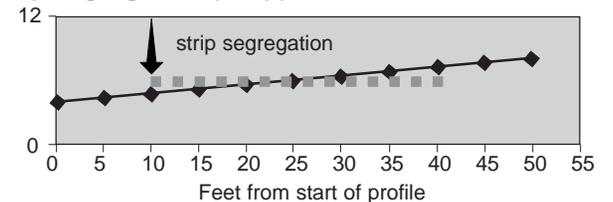
Paver stops at 10' (Stop)



Segregation starts at 10' (Visible)



Strip segregation (Strip)



The Contractor shall conduct a minimum of five density profile measurements, at the Contractor's expense. The Engineer will designate and mark the density profile locations. Data recorded on the "HMA Density Profile Data Sheet" shall be given to the Engineer within two days of testing. Density Profiles shall include one Paver profile and one Control profile. The three additional profiles shall be of Visible or Strip segregation, if available. If three locations of Visible or Strip segregation are not available, Stops will be profiled. If there are insufficient Stops, then additional Controls shall be profiled to bring the total profiles to five. The Contractor shall **not** make additional stops only for the purpose of creating additional locations for profiling. Pavement densities for the profile shall be determined in accordance with CP 81, except that only one, 1-minute count shall be taken at each test location.

The five types of density profiles shall be conducted as described below. The Contractor shall record the type of profile on the HMA Density Profile Data Sheet.

- 1. Hidden paver segregation possible (Paver):** Segregation caused by the paver may be detected by a transverse density profile with tests approximately every foot, starting and finishing one foot in from the edge of the paving pass.
One additional reading shall be taken at each of the three following locations:
The mat locations corresponding to each outside end of the paver's slat conveyors and at the auger box.
If the lane width is greater than 12 feet, disregard the outermost measurements so there are only a total of 14 measurements across the lane width.

- 2. Control profile (Control):** Control profiles will be located where both of the following conditions prevail: There is no visible segregation and the paver has not stopped. Control profiles will be longitudinal, with eleven tests located approximately five feet apart. These will provide density profile results for non-segregated pavement.
- 3. Where the paver stops (Stop):** The paver shall have been in stop condition for at least two minutes to be considered a "Stop." Profiling shall start 25 feet before the screed location when the paver stopped and proceed in the direction of paving for 50 feet. Eleven density tests shall be conducted at a spacing of approximately 5 feet apart. The profile should be located at least one foot in from the edge of the paving pass. The Contractor shall record the duration of the Stop on the HMA Density Profile Data Sheet (CDOT Form #1325). At least one reading at a Stop location shall be between the roller stop and the screed stop.
- 4. Where there is visible segregation (Visible):** Eleven tests at locations approximately five feet apart shall be conducted, beginning 10 feet prior to the start of visible segregation and proceeding in the direction of paving for 50 feet through the most severe or longest portion of the visible segregation.
- 5. Narrow strip of longitudinal segregation (Strip):** The Contractor shall conduct eleven tests at locations approximately five feet apart, starting ten feet before and two feet to the right of the strip of segregation and proceeding in the direction of paving for 50 feet, ending approximately two feet to the left of the strip.