

NDDOT 5 - SAMPLING AND SPLITTING FIELD VERIFICATION HOT MIX ASPHALT (HMA) SAMPLES

Conduct this procedure according to NDDOT defined standards.

SCOPE

This procedure is used to obtain samples of hot mix asphalt from behind the paver. The material is then used to run ND T 245 for Marshall plugs, ND T 209 for the Rice test, or ND T 312 for Superpave gyratory compaction.

REFERENCED DOCUMENTS

ND T 209 and AASHTO T 209, Theoretical Maximum Specific Gravity and Density of Hot Mix Asphalt
ND T 245 and AASHTO T 245, Resistance to Plastic Flow of Bituminous Mixtures Using Marshall Apparatus
ND T 312 and AASHTO T 312, Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor

APPARATUS

Shovel - flat bottom, square-edge
Pails
Insulated container
Scoop - flat bottom, square-edge
Trowel

PROCEDURE

SAMPLING:

Obtain a hot mix asphalt sample of approximately 72 lbs (33 kg) from behind the paver. If the sample is for a Marshall project you will only need approximately 50 lbs (23 kg) of hot mix for the gyratory compactor specimens.

The location where the sample is collected is determined randomly by a DOT employee. The sample may be obtained by Contractor's personnel under observation of DOT personnel.

Take one bucket full of material from the asphalt windrow in front of the paver. This material will be used to fill the hole created when obtaining the sample from behind the paver.

Mark out an area that is large enough to provide the required size sample. Use the shovel and take the sample a minimum of one foot from the edge of the pavement. Be careful to avoid including material from the subgrade or base.

Place the sample in the pails. Place the pails in an insulated container and cover to retain as much heat as possible for the transport to the field lab. A DOT representative will transport the sample to the field or testing lab.

SPLITTING:

At the field lab place the entire sample on a level surface or in a pan and re-mix with the scoop. Carefully flatten to a uniform thickness and divide the flattened mass into four equal quarters using a trowel.

For the Marshall specimens a portion from each of three quarters will be used. The fourth quarter will be used for running the theoretical maximum specific gravity, or Rice test.

For Superpave projects use one quarter for the Rice test and the opposite quarter for one gyratory specimen. A second gyratory specimen can be made from either one of the remaining two quarters.

Place any unused portion of the hot mix asphalt sample into a container and save it for further testing if needed.

Discard the unused portion when all testing on the original sample is complete.