1609 Asphalt HMA Sealant Bond Block Preparation- Mn/DOT Method

Prepare asphalt HMA bond blocks from HMA gyratory specimens using the following procedures.

A. Applicable Test Procedures

AASHTO R35 - Standard Practice for Superpave Volumetric Design for Hot-Mix Asphalt (HMA)

MnDOT 1804 - TRIAL MIX PREPARATION

MnDOT 1806 - BULK SPECIFIC GRAVITY (DENSITY) OF MARSHALL OR GYRATORY COMPACTED SPECIMENS

MnDOT 1807 - MAXIMUM SPECIFIC GRAVITY (RICE VOIDS TEST) OF PAVING MIXTURES

MnDOT 1808 - PERCENT AIR VOIDS AASHTO Designation T 269 (Mn/DOT Modified

MnDOT 1820 - STANDARD METHOD FOR PREPARING AND DETERMINING THE DENSITY OF HMA SPECIMENS BY MEANS OF THE GYRATORY COMPACTOR

AASHTO T 312 (MN/DOT Modified)

MnDOT 1854 - ADJUSTED ASPHALT FILM THICKNESS (AFT)

B. Mixture

Mixture shall be a Fine Graded Design that meets the following Gyratory Design Parameters:
Design Gyrations: 60
Air Voids: 4.0 ±0.5%
Minimum Adjusted AFT: 8.5
Dust to Binder Ratio: 0.6-1.2

C. Materials

Binder: PG 58-28

Aggregate shall meet Mn/DOT Spec 3139, Class A,B,C or D.

Use of RAP or RAS is not allowed.

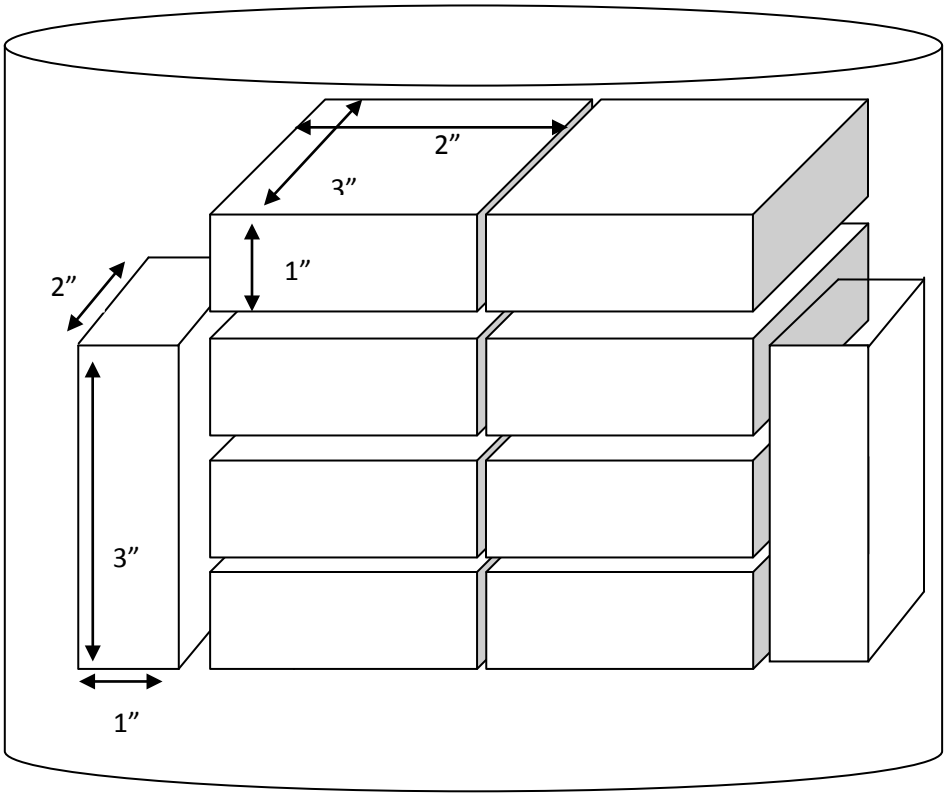
Combined Aggregate Gradation shall fall between the following broad bands:

Sieve Size	% passing
¾” (19.0mm)	100
½” (12.5mm)	85-100
3/8” (9.5mm)	75-90
#4 (4.75mm)	55-80
#8 (2.36mm)	40-65
#200(0.075mm)	2.0-7.0

D. Sawing Blocks

After curing the blocks shall be cut into 25.4 by 50.8 by 76.2 mm **(1 x 2 x 3 inch)** test blocks using a diamond saw blade. See pictures and diagram below.

Side View with vertical blocks rotated 90% to show center blocks



Top View