

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
**RECYCLED TIRE RUBBER MODIFIED HOT MIX ASPHALT MIXTURES
PERMISSIVE USE**

CFS:KPK

1 of 2

APPR:JWB:CJB:03-04-20

FHWA:APPR:03-13-20

a. Description. Substitution of recycled tire rubber for part of the new materials required to produce the hot mix asphalt (HMA) is acceptable when done as described herein. This work consists of furnishing and placing HMA recycled tire rubber (RTR) mixture(s) using Superpave mix design methods. Furnish Superpave HMA RTR mixtures in accordance with section 501 of the Standard Specifications for Construction, except as modified herein. No deviations to acceptance test methods/procedures will be allowed. This special provision includes mix specifications for recycled tire rubber terminal blend (RTRTB). Supply a RTRTB modified binder.

b. Mix Design. Furnish an HMA mixture design for the HMA RTR mixtures specified to the Engineer and to the HMA Operations section at Construction Field Services. The submitted designs will be evaluated in accordance with the *HMA Production Manual*, Procedures for HMA Mix Design Processing. Provide the manufacturers recommended mixing temperature for the rubber modified binder.

c. Recycled Mixtures. The Contractor may substitute reclaimed asphalt pavement (RAP) for a portion of the new materials required to produce HMA mixture. RAP percentage will not exceed Tier 1. Recycled asphalt shingles (RAS) will not be allowed in HMA RTR mixtures. The mixture will be designed and produced to meet all of the criteria herein.

d. Materials. Furnish modified Superpave HMA recycled tire rubber mixtures consisting of aggregates of the highest quality available to meet the minimum specifications herein. Furnish a mix design in accordance with the standard specifications.

1. **Aggregates.** Furnish aggregates free of topsoil, clay, and loam for use in plant mixed HMA mixtures. For RTRTB the gradation must meet the requirements for the designated superpave mix per the standard specifications.

2. **Recycled Tire Rubber.** Furnish RTR composed of recycled scrap tires free from metal and other contaminants.

Furnish samples of RTRTB binders to the Engineer for performance evaluation.

A. **Recycled Tire Rubber Terminal Blend (RTRTB) Method.** Furnish RTRTB binder as described herein.

Furnish RTRTB modified asphalt cement binder meeting the requirements and the properties of this specification and section 904 of the Standard Specifications for Construction.

e. Quality Control, Sampling for Performance Testing, and Acceptance of Modified HMA Mixtures. The special provisions 20SP-501R - Superpave Hot Mix Asphalt Percent Within Limits and/or 20SP-501S - Superpave Hot Mix Asphalt Percent Within Limits for Capital Preventive Maintenance Mill & Resurface Projects and One Course Overlay Projects will apply except as modified herein.

Asphalt Binder Content will be determined by the ignition method. Vacuum extraction will not be allowed.