

**SUPERSEDED BY EB
97-065 EFFECTIVE
12/31/97**

ENGINEERING INSTRUCTION

NEW YORK STATE DEPARTMENT OF TRANSPORTATION

SUBJECT: REQUIRED REGIONAL USE OF RECYCLED TIRE RUBBER IN HOT MIX ASPHALT FOR FEDERAL FISCAL YEAR 1995

Subject Code: 7.27-3-403

ASSURANCE BUREAU

MAY 16 1994

Distribution: 30 Main Office 32 Regions

Code: EI-94-13

APPROVED

Date: 5/10/94

P. Clark, Facilities Design / P. Mack, Technical Services

Supersedes: N.A.

The use of recycled tire rubber (RTR) is mandated in Section 1038 of the Intermodal Surface Transportation Efficiency Act of 1991. NYSDOT is required to pave HMA or use spray applied binder containing RTR. The 1995 quantity of rubber to be used is calculated based on a 1% usage in 10% of the total tons of HMA financed either whole or in part by Federal Funds. Based on HMA quantities placed in previous years, the quantity of rubber to be accounted for in Federal fiscal year 1995 (October 1, 1994 to September 30, 1995) is approximately 5.4 million pounds. The use of this rubber is not restricted to Federal aided projects, any project independent of the funding source is acceptable. Failure to comply with the requirements of the legislation will result in a 10% reduction in Federal aid. All Regions will be responsible to meet or exceed the crumb rubber modifier usage listed in the table below.

1995 FFY REGION RUBBER ALLOTMENTS

Region	Pounds of ¹ Crumb Rubber	Tons of HMA ² With 1% Rubber	Combined '92/'93 Tonnage ³	
			Tons HMA	% of Total
1	777 600	38 880	1 027 559	14.4
2	405 000	20 250	534 660	7.5
3	432 000	21 600	576 072	8.0
4	685 800	34 290	909 250	12.7
5	939 600	46 980	1 245 867	17.4
6	226 800	11 340	299 561	4.2
7	513 000	25 650	676 870	9.5
8	766 800	38 340	1 017 544	14.2
9	415 800	20 790	550 755	7.7
10	237 600	11 880	313 730	4.4
11 ⁴	0	0	--	--
Total	5 400 000	270 000	7 151 868	100.0

Notes:

The production of HMA in Region 11, Westchester County in Region 8, and Nassau County in Region 10 was excluded for these calculations because of high traffic volumes.

- (1) As the information contained in this chart is updated revised copies will be sent to each Region.
- (2) These tonnages are based on an assumed 1% usage of crumb rubber. Actual tonnage will vary depending on the application rate for the rubber.
- (3) Combined 1992 and 1993 tonnage of HMA from the Capital Program (from BAMS).
- (4) The use of alternate materials or crack filler/sealer in Region 11 will be used to lower the total quantity of rubber state wide.

Each Region's rubber allotment was calculated based on their percentage of the total hot mix placed in 1992/1993 as shown in the above table. It may be necessary to modify these quantities as the actual Federal aided HMA tonnage for 1995 becomes known. Each Region is responsible for developing its own program using specifications and guidelines available from the Materials Bureau.

The new hot mix asphalt specification item numbers listed below include crumb rubber and are approved for use.

- ITEM 18403.1350 RUT AVOIDANCE ASPHALT CONCRETE - TYPE 3 RA, (WET PROCESS, 10% CRUMB RUBBER MODIFIED)
- ITEM 18403.1750 RUT AVOIDANCE ASPHALT CONCRETE - TYPE 6F RA, (WET PROCESS, 10% CRUMB RUBBER MODIFIED)
- ITEM 18403.1950 RUT AVOIDANCE ASPHALT CONCRETE - TYPE 7F RA, (WET PROCESS, 10% CRUMB RUBBER MODIFIED)
- ITEM 18403.11 ASPHALT CONCRETE - TYPE 1 BASE COURSE, (WET PROCESS, 10% CRUMB RUBBER MODIFIED)
- ITEM 18403.12 ASPHALT CONCRETE - TYPE 2 BASE COURSE, (WET PROCESS, 10% CRUMB RUBBER MODIFIED)
- ITEM 18403.13 ASPHALT CONCRETE - TYPE 3 BINDER COURSE, (WET PROCESS, 10% CRUMB RUBBER MODIFIED)
- ITEM 18403.16 ASPHALT CONCRETE - TYPE 6 TOP COURSE, (WET PROCESS, 10% CRUMB RUBBER MODIFIED)
- ITEM 18403.17 ASPHALT CONCRETE - TYPE 6F TOP COURSE, HIGH FRICTION, MARSHALL DESIGN, (WET PROCESS, 10% CRUMB RUBBER MODIFIED)
- ITEM 18403.18 ASPHALT CONCRETE - TYPE 7 TOP COURSE, (WET PROCESS, 10% CRUMB RUBBER MODIFIED)
- ITEM 18403.21 ASPHALT CONCRETE - TYPE 7F TOP COURSE, HIGH FRICTION, MARSHALL DESIGN, (WET PROCESS, 10% CRUMB RUBBER MODIFIED)
- ITEM 18403.1351 ASPHALT CONCRETE - Type 3 Binder (1% Crumb Rubber)
- ITEM 18403.2151 ASPHALT CONCRETE - Truing & Leveling (1% Crumb Rubber)
- ITEM 18403.1152 ASPHALT CONCRETE - Type 1 Base (2% Crumb Rubber)
- ITEM 18403.7505 Filling Cracks and/or Joints In Pavements and Shoulders Using Plastic Joint Material, ASTM D3405, With Recycled Tire Rubber

Copies of these new specifications and guidelines on the use of RTR and other materials are being sent to all Regional Design Engineers and Regional Materials Engineers. Others wishing to review this package or receive additional copies may contact Gary Frederick or Jill Martin of the Materials Bureau at (518) 457-4582.

Each Regional Design Engineer should select a person to maintain an inventory of prospective projects with a running total of crumb rubber quantities. This person should contact the Materials Bureau as soon as possible.

Project selections for the use of rubber or alternate materials should be made by May 15, 1994. This will allow time for adjustments, if necessary, depending on the actual Federal aid received or problems with project awards. Each Region shall send a list of projects and quantities used to comply with their portion of the ISTEA mandate to the Facilities Design Division with a copy to the Materials Bureau by June 1, 1994.

The Design Quality Assurance Bureau (518-457-4093) will be responsible for monitoring Regional programs for compliance.

Questions concerning the ISTEA, the use of rubber in HMA, the use of alternate materials and project selection should be directed to Gary Frederick of the Materials Bureau at 518-457-4582.

Questions concerning the use of crack and joint fillers and sealers should be directed to Dave Graves of the Materials Bureau at 518-457-4285.