

ITEM 402.19710125 – 19 F1 TOP COURSE HMA, 70 SERIES COMPACTION

ITEM 402.19720125 – 19 F2 TOP COURSE HMA, 70 SERIES COMPACTION

ITEM 402.19711125 – PLANT PRODUCTION QUALITY ADJUSTMENT TO ITEM 402.19710125

ITEM 402.19721125 – PLANT PRODUCTION QUALITY ADJUSTMENT TO ITEM 402.19720125

1. DESCRIPTION:

- 1.01 All of the requirements of Section 401 – Plant Production and Section 402 – Hot Mix Asphalt (HMA) Pavements shall apply, except as modified or revised by the special requirements given in this specification.

2. MATERIAL:

- 2.01 In Subsection 401-2.02; **Subsection A. Coarse Aggregate Type F1 Conditions** shall be **DELETED** and **SUBSTITUTE** the following:

“A. 19.0 NMAAS Coarse Aggregate Type F1 Conditions

1. Limestone, dolomite, or a blend of the two (2), having an acid insoluble residue content of not less than 20.0%.
2. Sandstone, granite, chert, traprock, ore tailings, slag or other similar noncarbonate materials.
3. Gravel, or a natural or manufactured blend of the following types of materials: limestone, dolomite, gravel, sandstone, granite, chert, traprock, ore tailings, slag or other similar materials, meeting the following requirements:

19.0 Nominal Maximum Size Aggregate Mixes. Noncarbonate plus 1/8” particles must comprise a minimum of 30.0% of the total aggregate (by weight with adjustments to equivalent volumes for materials of different specific gravities). Additionally, a minimum of 95.0% of plus 3/8” particles must be noncarbonate.”

- 2.02 In Subsection 401-2.02; **Subsection B. Coarse Aggregate Type F2 Conditions** shall be **DELETED** and **SUBSTITUTE** the following:

“B. 19.0 NMAAS Coarse Aggregate Type F2 Conditions

1. Limestone, dolomite, or a blend of the two (2), having an acid insoluble residue content of not less than 20.0%.
2. Sandstone, granite, chert, traprock, ore tailings, slag or other similar noncarbonate materials.
3. Gravel, or a natural or manufactured blend of the following types of materials: limestone, dolomite, gravel, sandstone, granite, chert, traprock, ore tailings, slag or other similar materials, meeting the following requirements:

19.0 Nominal Maximum Size Aggregate Mixes. Noncarbonate plus 1/8” particles must comprise a minimum of 10.0% of the total aggregate (by weight with adjustments to equivalent volumes for materials of different specific gravities). Additionally, a minimum of 20.0% of plus 3/8” particles must be noncarbonate.”

3. CONSTRUCTION DETAILS:

- 3.01 In Subsection 401-3.04; the last sentence of Subsection **B.7 Friction Aggregate** shall be **DELETED** and **SUBSTITUTE** the following:

“Perform sampling and testing of friction aggregate at the production facility using procedures outlined in NYSDOT MM 28 as amended by the following addendums to MM 28 tables: Table 2a, Table 4, Table 6, Table 7a, Table 7c and Table 7d.

Table 2a Addendum – Quality Control Sample Types (HMA)				
Mixture Type	Facility Type	Aggregates	Sample Type	Calculation Section ⁽¹⁾
19.0	Batch Plant	Coarse Aggregate	No. 2 & No.1 & No.1A Hot Bins	IX.A.1
			Composite Mixture	IX.B.1
	Drum Plant	Coarse Aggregate	Composite Aggregate or Mixture	IX.B.1

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Table 4 Addendum – HMA Quality Assurance Sample Sizes			
Mix Type	Size	Sample Size	
		Hot Bin	Composite
19.0	No. 2 Stone	1 gal	1 ½ gal
	No. 1 Stone	1 qt	
	No.1A Stone	1 qt	

Table 6 Addendum – Surface Course Samples		
Surface Course ⁽¹⁾	Evaluation Procedure	Sample Size
19.0 HMA	% Noncarbonate	Three 6” Cores
	% Acid-insoluble	One 6” Core

Table 7a Addendum – Quality Control Test Specimens for HMA Plants						
Aggregate Type	Testing Organization	Mix Sample Type ⁽¹⁾	Required Sizes (in)		Specimen Size ⁽²⁾	Required Test
Noncarbonate Blends – Plant Blended or Containing RAP	HMA Producer	19.0 Composite	-1 ½	+3/8	1200 g	Percent Noncarbonate
		19.0 Hot Bin	-3/8	+1/8	150 g	
			No.2 Hot Bin	-1 ½	+3/8	1200 g
			No.1 Hot Bin	-3/4	+3/8	300 g
			No.1A Hot Bin	-3/8	+1/8	150 g
High-residue and Cherty Carbonates – Naturally Occurring, Plant Blended or Containing RAP	HMA Producer	19.0 Composite	-1 ½	+1/8	800 g ⁽¹⁰⁾	Percent Acid-insoluble ⁽¹²⁾
		19.0 Hot Bin	-3/8	+1/8	50 g	
			No.2 Hot Bin	-1 ½	+1/8	800 g ⁽¹⁰⁾
			No.1 Hot Bin	-3/4	+1/8	200 g
			No.1A Hot Bin	-3/8	+1/8	50 g

Table 7c Addendum – Quality Control Test Specimens for Aggregate Sources ⁽¹¹⁾							
Aggregate Type	Aggregates Supplied for	Mix Size and Sample Type	Required Sizes (in)		Specimen Size ⁽²⁾	Required Test	
Noncarbonate Blends – Gravel, Quarry Blended, or All Others	HMA	All	No.2 Stockpile	-1 ½	+3/8	1200 g	Percent Noncarbonate
				-3/8	+1/8	150 g	
			No.1 Stockpile	-3/4	+3/8	300 g	
				-3/8	+1/8	150 g	
			No.1A Stockpile	-3/8	+No.4	150 g	
				-No.4	+1/8	50 g	
			No.1B Stockpile ⁽⁷⁾	-3/8	+No.4	150 g	
				-No.4	+No.8	50 g	

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NYSTA **AMENDED NYSDOT FORM "BR 57":**
 BR57TWY **Determination of Percent Noncarbonate Particles**
 (11/10) **in 19.0 NMAS Top Course Mixtures from Hot Bin Samples**

PRODUCER:	
PRODUCER LOCATION:	FACILITY NO.:
REGION:	SOURCE No.:
OTHER:	SOURCE No.:

Mix Code / Type:	JMF MIX/No.:	PLANT LOT No.:	SUBLOT:	DATE SAMPLED:
BR 3 SERIAL No.	TESTED BY:			TIME SAMPLED:

Determination of Noncarbonate Content on Each Sieve

Sieve Sizes	No. 2 Hot Bin						No. 1 Hot Bin or Composite						No. 1A Hot Bin					
	W _o	W _x	W _{xs} ⁽¹⁾	%R _{x,2bin}	W _{NC}	%NC _{x,2bin}	W _o	W _x	W _{xs} ⁽¹⁾	%R _{x,1bin}	W _{NC}	%NC _{x,1bin}	W _o	W _x	W _{xs} ⁽¹⁾	%R _{x,1A bin}	W _{NC}	%NC _{x,1A bin}
Sizes	a	b	c	d=b/a(100)	e	f=e/c(100)	g	h	i	k=h/g(100)	m	n=m/l(100)	o	p	q	r=p/o(100)	s	t=s/q(100)
3/8 in.																		
1/8 in.																		

W_o = Mass of sample prior to gradation analysisW_x = Mass of material retained on Sieve xW_{xs} = Mass of split sample before noncarbonate analysis%R_{x,ybin} = Percent of W_o on sieve x from y binW_{NC} = Mass of noncarbonate particles%NC_{x,ybin} = Percent of W_{xs} from bin y that is noncarbonate particles

%B - Batch percentage (of total aggregate) from the appropriate stone size

Note: Use all percentages in decimal form when performing calculations

Determination of Noncarbonate Content of Aggregate Larger than 3/8 in.

Batching Percentages	+ 3/8 in Aggregate		+3/8 in Noncarbonate Aggregate		Noncarbonate Content of + 3/8 in Aggregate	
	From No. 1 Hot Bin	From No. 2 Hot Bin	From No. 1 Hot Bin	From No. 2 Hot Bin	(y+z) / (w+x)(100)	
%B ₁	(K _{3/8})(u)	(d)(v)	(n _{3/8})(w)	(f)(x)		
u	w	x	y	z		

Determination of Noncarbonate Content of Total Aggregate

Noncarbonate + 1/8 in From the No. 1A Hot Bin		Noncarbonate + 1/8 in From the No. 1A Hot Bin		%NC of Total Aggregate	
%B _{1A}	(r)(t)(aa)	(k _{1/8})(n _{1/8})(u)		(y + z + bb + cc) (100)	
aa	bb	cc			

(1) When W_x is of an appropriate size for testing (the sample does not need to be further reduced), enter the value of W_x under both W_x and W_{xs}