

# NorthEast Transportation Training & Certification Program

## Soundness of Coarse Aggregate Test Report (T 104)

Date/Time:		Lab/Location:	
Weather:		Date Rec'd #:	Random Sample: Yes No
Project:		Lab Login #:	Lot #:
Contract #:		Material ID:	Sublot #:
Contractor:		Material #:	Sample Location:
Pay Item #:		Sample #:	Station:
Source:		Sample Type: QC A-V IA DR Other	Offset:
Plant Type:		Sampled By/Cert. #:	

### Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate (T 104)

Na <sub>2</sub> SO <sub>4</sub> Solution Sp. Gr. 1.151/1.174		Temp. °F		New Solution: Yes No
MgSO <sub>4</sub> Solution Sp. Gr. 1.295/1.308		Temp. °F		New Solution: Yes No

### Soundness Test of Coarse Aggregate: # 4 (4.75 mm) - 2 1/2 in. (63 mm)

Sieve Size (Eliminate size if < 5% present)		(A) Original	(B) Original Mass	Mass after 1st Soaking		Mass after 2nd Soaking		Mass after 3rd Soaking	
Passing, in. (mm)	Retained, in. (mm)	% Retained	Oven Dry	Oven dry	2 hr later	Oven Dry	2 hr Later	Oven Dry	2 hr later
2 1/2 (63)	1 1/2 (37.5)								
Note: 3000g - 2 1/2 in. (63 mm) to +2 in. (50 mm); 2000g - 2 in. (50 mm) to +1 1/2 in. (37.5 mm); Total Mass = 5000g +/- 300g									
1 1/2 (37.5)	3/4 (19)								
Note: 1000g - 1 1/2 in. (37.5 mm) to + 1 in. (25 mm); 500g - 1 in. (25 mm) to + 3/4 in. (19 mm); Total Mass = 1500g +/- 50g									
3/4 (19)	3/8 (9.5)								
Note: 670g - 3/4 in. (19 mm) to +1/2 in. (12.5 mm); 330g - 1/2 in. (12.5 mm) to +3/8 (9.5 mm); Total Mass = 1000g +/- 10g									
3/8 (9.5)	#4 (4.75)								
Note: 300g +/- 5g - 3/8 in. (9.5 mm) to + #4 (4.75 mm)									

  

Sieve Size		Mass after 4th Soaking		Mass after 5th Soaking		(C) Mass	(D) Mass	(E) Percent	(F) Mass
Passing, in. (mm)	Retained, in. (mm)	Oven Dry	2 hr later	Oven Dry	2 hr later	Retained after Test	Lost (B - C)	Loss (D/B)x100	% Loss (AxE)/100
2 1/2 (63)	1 1/2 (37.5)								
1 1/2 (37.5)	3/4 (19)								
3/4 (19)	3/8 (9.5)								
3/8 (9.5)	#4 (4.75)								

% Loss (Sum of F):

### Qualitative Examination of Coarse Sizes

		Particles Exhibiting Distress							
Particle Sieve Size	Initial No. of Particles	Splitting		Crumbling		Cracking		Flaking	
		No.	Percent	No.	Percent	No.	Percent	No.	Percent
1 1/2 (37.5) - 2 1/2 (63)									
3/4 (19) - 1 1/2 (37.5)									

Comments:

Tested by:	Reviewed by:
Certification #:	Certification #:
Date:	Date:

Test Results Within Engineering Limits:

YES ☐

NO ☐