

# **HCMTCB AGGREGATES CERTIFICATION**

## **KEY ELEMENTS LIST**

**Release Date: October 19, 2021**

## **PERFORMANCE CHECKLIST**

### **AASHTO R 90 Sampling Aggregate Products**

#### **Sampling Coarse Aggregate**

##### **Procedure**

- 1 Determine the time or location using?
- 2 Ensure equipment and containers are \_\_\_\_?
- 3 Field Sample Size - Coarse Aggregate - #57 (1in. Nom. Max.)

Show the evaluator the proper table  
and determine the minimum size field  
sample for the requested gradation.

#### **Sampling From A Conveyor Belt**

- 1 Isolate sample increment using . . . ?
- 2 If one increment is not sufficient?
- 3 Collect how much material from between templates?

#### **Sampling From Conveyor Belt Discharge**

- 1 Avoid sampling from \_\_\_\_?
- 2 Sampling device must pass through \_\_\_\_?
- 3 Material adhering to the sampling device is \_\_\_\_?

#### **Sampling From Roadway - In Place**

- 1 Sample after \_\_\_\_?
- 2 Sample before \_\_\_\_?
- 3 Increments of what depth?
- 4 Do what with underlying material?

## **AASHTO R 90 Sampling Aggregate Products**

### **Sampling From Stockpiles**

#### **Power Pile**

- 1 Direct operator to enter stockpile with bucket at least \_\_\_\_.
- 2 Do what with first bucketful?
- 3 Have operator back drag to make a \_\_\_\_.
- 4 Minimum number of increments?
- 5 Stay at least \_\_\_\_ from the edge.
- 6 Be sure to \_\_\_\_\_ underlying material.

#### **Stockpile Face**

- 1 Create horizontal surfaces with \_\_\_\_\_ faces.
- 2 Prevent sloughing by using \_\_\_\_\_.
- 3 Obtain at least one increment from \_\_\_\_\_.

### **Sampling Fine Aggregate**

- 1 Minimum diameter of sampling tube?
- 2 Do what with outer layer?
- 3 Minimum number of increments?

## **PERFORMANCE CHECKLIST**

### **AASHTO R 76 Reducing Field Samples of Aggregate to Testing Size**

#### **Coarse Aggregate**

##### **Size of Test Sample**

Determine mass of sample needed to run T 255, T 27, and T 11.

##### **Mechanical Splitter**

- 1 Was splitter set up with proper size and number of chutes?
- 2 Sample properly distributed in pan or hopper?
- 3 Sample introduced to chutes at proper rate?
- 4 Sample properly reduced to specified size?

##### **Quartering**

- 1 Show evaluator where an alternate method is specified for quartering in the field if no level surface is available?

## **PERFORMANCE CHECKLIST**

### **AASHTO R 76 Reducing Field Samples of Aggregate to Testing Size**

#### **Fine Aggregate**

- 1 Determine mass of sample needed to run T 255, T 27, and T 11.

#### **Mechanical Splitter**

- 1 Specified number of chutes.
- 2 Minimum and maximum chute size.
- 3 Moisture condition of sample required to use splitter?

#### **Quartering**

- 1 Surface conditions?
- 2 Mixing procedure?
- 3 Flatten pile so each quarter contains the material originally in it.
- 4 Relative dimensions of resulting pile?
- 5 Divide pile into . . . ?
- 6 Retain what portions?
- 7 Treatment of fines?

#### **Miniature Stockpile**

- 1 Surface conditions?
- 2 Turn pile specified number of times.
- 3 Combine proper number of increments.
- 4 Brush spoon/sampling device each time.

## **PERFORMANCE CHECKLIST**

### **AASHTO T-255 Total Moisture Content of Coarse and Fine Aggregates By Drying**

#### **Coarse Aggregate**

- 1 Have applicant show examiner the proper table in T - 255 for test sample size.
  - 2 Describe the sources of heat permitted to properly dry the sample.
  - 3 Using the provided sample determine the mass of the oven dry sample within the specified tolerance.
  - 4 Record required data promptly.
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#### **Fine Aggregate**

- 1 Have applicant show examiner the proper table in T - 255 for test sample size.
- 2 Using the provided sample determine the mass of the oven dry sample within the specified tolerance.
- 3 Record required data promptly.

## PERFORMANCE CHECKLIST

### AASHTO T-11 Material Finer Than No 200 Sieve in Mineral Aggregates by Washing

#### Coarse Aggregate

- 1 Determine mass of sample within specified tolerance.
- 2 Ample amount of water added?
- 3 Wash sample until . . . ?
- 4 Pour wash water over what sieves?
- 5 Return material to sample as specified.
- 6 Dry washed sample to constant mass at what temperature?
- 7 Determine mass to specified tolerance.

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#### Fine Aggregate

- 1 Determine mass of sample within specified tolerance.
- 2 Ample amount of water added?
- 3 Wash sample until . . . ?
- 4 Pour wash water over what sieves?
- 5 Return material to sample as specified.
- 6 Dry washed sample to constant mass at what temperature?
- 7 Determine mass to specified tolerance.

## **PERFORMANCE CHECKLIST**

### **AASHTO T-27 Sieve Analysis of Fine and Coarse Aggregates**

#### **Coarse Aggregate**

- 1 Assemble specified nest of sieves.
- 2 Describe the method for determining sufficiency of sieving.
  - 2a. Use what equipment?
  - 2b. Hold sieve in what position?
  - 2c. Hand bump sieve at what rate?
  - 2d. Turn sieve how far at what interval?
  - 2e. Hand bump for how long before checking?
  - 2f. For sieves larger than No. 4?
  - 2g. Sieve until?
- 3 Did applicant check each sieve for blinding?
  - 3a. Calculations for determining blinded sieve.
  - 3b. Methods for prevention of blinding.
- 4 Determine the mass of material retained on each sieve.  
to the specified tolerance.



## **PERFORMANCE CHECKLIST**

### **AASHTO T-27 Sieve Analysis of Fine and Coarse Aggregates**

#### **Fine Aggregate**

- 1 Assemble specified nest of sieves.
- 2 Determine the mass of material retained on each sieve.  
to the specified tolerance.