

## WORKSHEET FOR A HVEEM MIX DESIGN AASHTO T 246

Project: \_\_\_\_\_ Date: \_\_\_\_\_  
 Contractor: \_\_\_\_\_ Class & Grading of mixture: \_\_\_\_\_  
 Asphalt supplier: \_\_\_\_\_ Grade of asphalt: \_\_\_\_\_  
 Sources for: Aggregates: \_\_\_\_\_ Mineral filler: \_\_\_\_\_  
 Testing laboratory name: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Testing performed by: \_\_\_\_\_  
 Testing reported by: \_\_\_\_\_

English  Metric

### SUMMARY OF THE PROPOSED JOB-MIX-FORMULA

- |   |   |
|---|---|
| 1. Percent asphalt by mass of total mix <sup>1</sup> , (P <sub>b</sub> ) _____<br>2. Air voids (V <sub>a</sub> ) _____<br>3. Voids in mineral aggregate (VMA) _____<br>4. Maximum specific gravity (G <sub>mm</sub> ) _____<br>5. Recommended plant mixing temperature, _____<br>(Attach Temperature Viscosity Curve)<br>6. Effective specific gravity of aggregate (G <sub>se</sub> ) _____<br>7. Stabilometer value _____ | 8. Specific gravity of binder (G <sub>b</sub> ) _____<br>9. Specific gravity of mineral filler _____<br>10. Dust-to-Binder ratio (DP) _____<br>11. Moisture susceptibility test results: <sup>2</sup><br>a. Dry strength, _____<br>b. Wet strength, _____<br>c. Index of retained strength, % _____ |
|---|---|

Gradation Designation: \_\_\_\_\_

GRADATION TARGET VALUES AND ALLOWABLE DEVIATIONS				SPECIFIC GRAVITY AND ABSORPTION			
Sieve Sizes	Job Mix Formula Target Value <sup>3</sup>	Target Value Specification Range %	Allowable Deviation <sup>4</sup> %	Fine Aggregate (AASHTO T 84)	Coarse Aggregate (AASHTO T 85)	Combined Aggregate	
				Bulk SG (G <sub>sb</sub> )	_____	_____	_____
				Bulk SSD SG	_____	_____	_____
				Apparent SG (G <sub>sb</sub> )	_____	_____	_____
				Absorption	_____ %	_____ %	_____ %

<sup>1</sup> Establish asphalt cement content (percent by mass of mix) to the nearest 0.01 percent.  
<sup>2</sup> See contract for moisture susceptibility test method: AASTHO T 165/T 167 or AASTHO T 283.  
<sup>3</sup> Establish target values to the nearest 0.1 percent as a part of the job mix formula.  
<sup>4</sup> Allowable deviations plus or minus from established target values.



**WORKSHEET FOR A HVEEM MIX DESIGN (Continued)**

Trial Number	1	2	3
% Asphalt by mass of total mix, (P <sub>b</sub> )			
Effective Binder Content (P <sub>bc</sub> )			
Specimen height,			
Stabilometer value			
Bulk specific gravity, (G <sub>mb</sub> )			
Bulk unit mass,			
Max. specific gravity, (G <sub>mm</sub> )			
Dust-to-Binder ratio, (DP)			
% Air voids, (V <sub>a</sub> )			
% Voids in mineral aggregate, (VMA)			
Average Stabilometer value			
Average % Air voids, (V <sub>a</sub> )			
Average % Voids in mineral aggregate, (VMA)			
Average Bulk Unit Mass			
Trial Number	4	5	6
% Asphalt by mass of total mix, (P <sub>b</sub> )			
Effective Binder Content (P <sub>bc</sub> )			
Specimen height,			
Stabilometer value			
Bulk specific gravity, (G <sub>mb</sub> )			
Bulk unit mass,			
Max. specific gravity, (G <sub>mm</sub> )			
Dust-to-Binder ratio, (DP)			
% Air voids, (V <sub>a</sub> )			
% Voids in mineral aggregate, (VMA)			
Average Stabilometer value			
Average % Air voids, (V <sub>a</sub> )			
Average Voids in mineral aggregate, (VMA)			
Average Bulk Unit Mass			

**Test Results for Each of the Individual Moisture Susceptibility Test Specimens**

Percent asphalt binder: \_\_\_\_\_  AASHTO T 165/T 167  AASHTO T 283  
 Antistrip, type, amount: \_\_\_\_\_ Specimen Dia:  6 inch  4 inch  
 Freeze cycle:  Yes  No

Sample I.D.							Average
Height	Dry						
	Wet						
Bulk Specific Gravity	Dry						
	Wet						
Air Voids	Dry						
	Wet						
Strength	Dry						
	Wet						
<b>Retained Strength, %</b>							

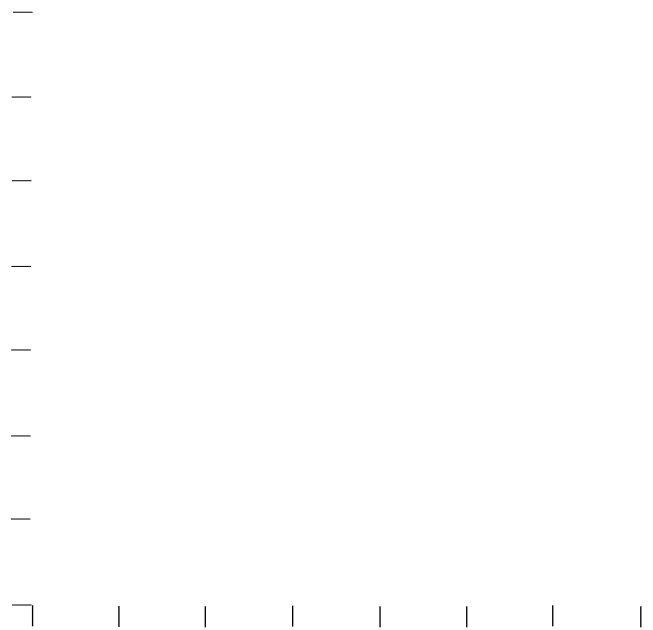
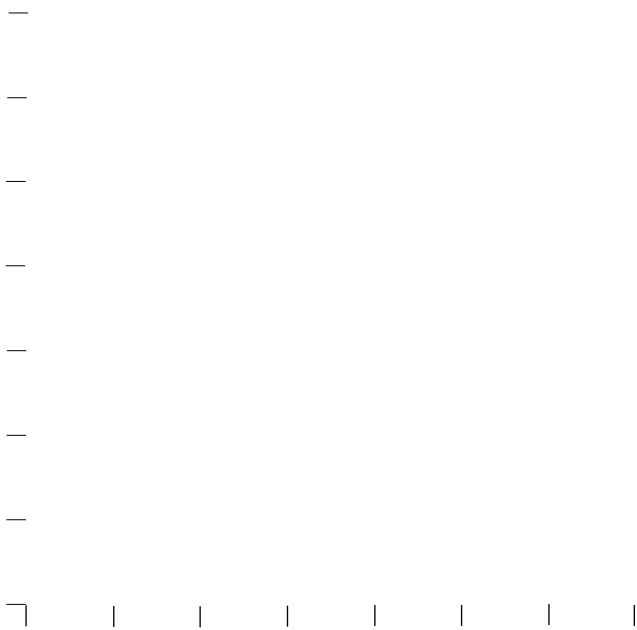
# WORKSHEET FOR A HVEEM MIX DESIGN (Continued)

## Design Curves for Proposed Job Mix Formula (JMF)

**AIR VOIDS ( $V_a$ )**

**UNIT MASS**

% Air voids ( $V_a$ )



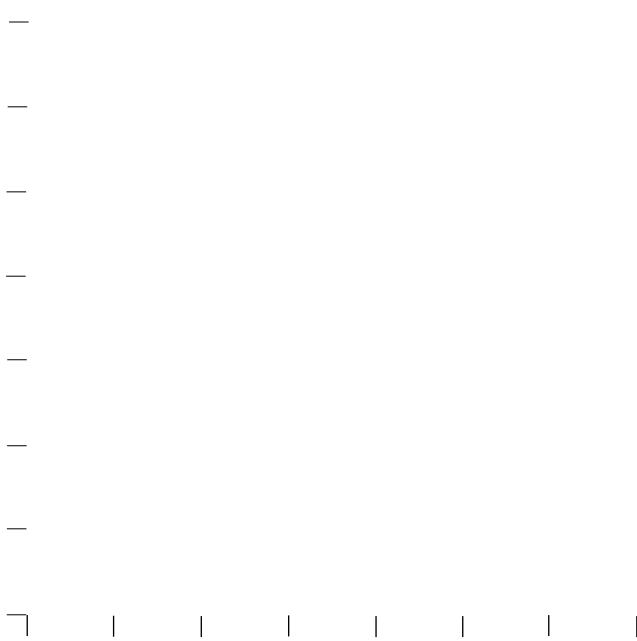
% Asphalt binder ( $P_b$ )

% Asphalt binder ( $P_b$ )

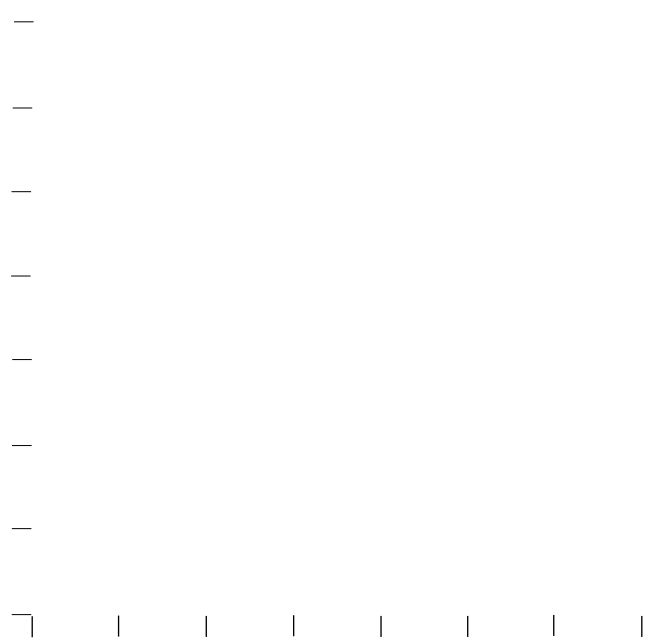
**S-VALUE**

**VMA**

Stabilometer values



Voids in mineral aggregate



% Asphalt binder ( $P_b$ )

% Asphalt binder ( $P_b$ )

