

### WORKSHEET FOR SUPERPAVE ASPHALT CONCRETE MIX DESIGN AASHTO R 35

Project:						
Contractor:						
Asphalt supplier:						
Sources for: Aggregates:						
Testing laboratory name:						
Testing performed by:						

Testing reported by:

English

### Date:

Nominal Maximum Aggregate Size, : Grade of asphalt: Mineral filler:

Phone:

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

1. Number of gyrations (N<sub>int</sub>/ N<sub>des</sub>/ N<sub>max</sub>)

Metric

- 2. Percent binder by mass of total mix  $(P_b)^1$
- 3. Percent binder by mass of aggregate
- 4. Air voids (V<sub>a</sub>) at N<sub>des</sub>
- 5. Voids in mineral aggregate (VMA) at  $N_{des}$
- 6. Voids filled with asphalt (VFA) at N<sub>des</sub>
- 7. Maximum unit mass (G<sub>mm</sub>)
- 8. Effective specific gravity of aggregate (G<sub>se</sub>)
- 9. Dust-to-Binder Ratio (DP)

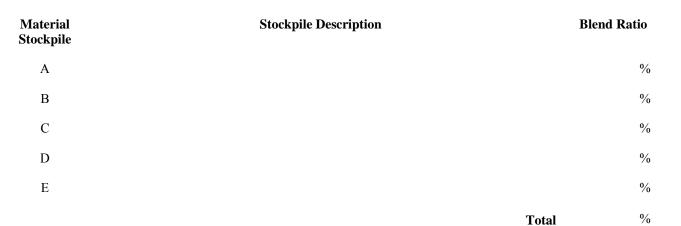
- 10. Specific gravity of binder (G<sub>b</sub>)
- 11. Recommended plant mixing temperature, (Attach Temperature Viscosity Curve)
- 12. Percent compaction at Nmax
- 13. Hveem stabilometer value (If specified)
- 14. Moisture Susceptibility:
  - a. Dry strength,
  - b. Wet strength,
  - Index of Retained Strength, % c.

GRADATION TARGET VALUES AND ALLOWABLE DEVIATIONS				SPECIFIC (	GRAVITY AND AB	SORPTION
Sieve Sizes	Job Mix Formula Target Value <sup>2</sup>	Allowable Deviation <sup>3</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> Establish target values to the nearest 0.1 percent as a part of the job mix formula.

<sup>3</sup> Allowable deviations plus or minus from established target values.

# WORKSHEET FOR A SUPERPAVE MIX DESIGN (Continued)



### **Stockpile Gradation**

Sieve Size	Stockpile A %	Stockpile B %	Stockpile C %	Stockpile D %	Stockpile E %	Blended Stockpile Gradation	Job Mix Formula Target Values	Specification Limits

### **Aggregate Properties**

Property	Result	Specification	Property	Result	Specification
LA Abrasion, % - Grading AASHTO T 96			Fine aggregate angularity, AASHTO T 304 - method A		
Sodium Sulfate Soundness, % AASHTO T 104			Flat and elongated particles, ASTM D 4791 - 1: ratio		
Durability index (Coarse) AASHTO T 210			Sand Equivalent AASHTO T 176, Alt method #2, reference method		
Durability index (Fine) AASHTO T 210			Other:		
Fractured Faces, % - ASTM D 5821			Other:		

# WORKSHEET FOR A SUPERPAVE MIX DESIGN (Continued)

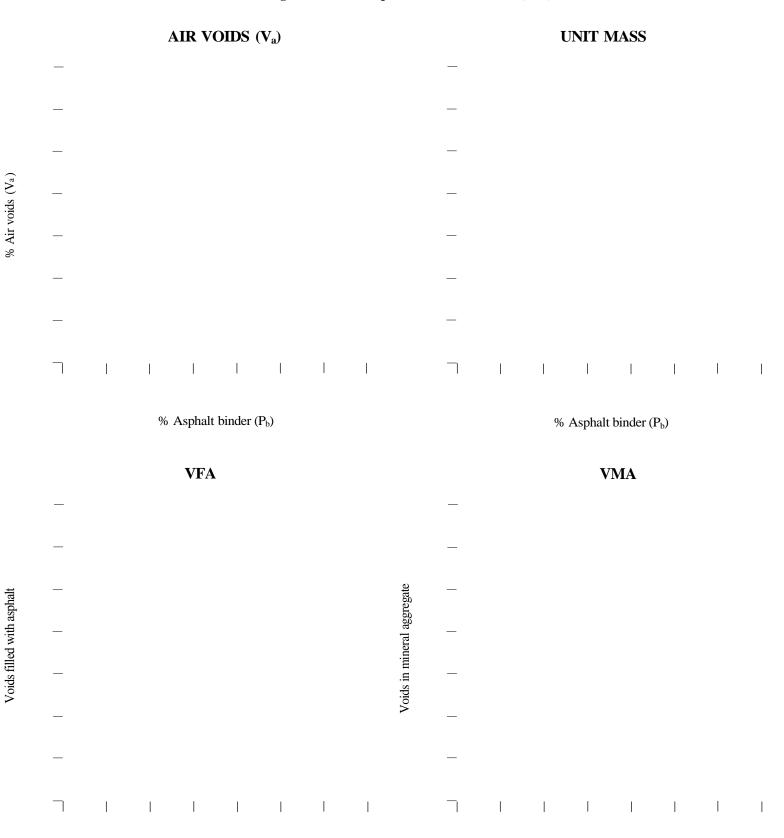
Trial Number	1	AVG	2	AVG	3	AVG
% Asphalt by mass of total mix (Pb)						
Specimen height,						
Effective Binder Content (P <sub>be</sub> )						
Bulk specific gravity at $N_{des}(G_{mb})$						
% compaction at $N_{int}$						
% Air voids at $N_{des}(V_A)$						
Max. unit mass G <sub>mm</sub>						
Voids in mineral aggregate (VMA) at N <sub>des</sub>						
Voids filled with asphalt (VFA) at $N_{des}$						
Dust-to-Binder Ratio, (DP)						
Hveem Stabilometer value						
Trial Number	4	AVG	5	AVG	6	AVG
% Asphalt by mass of total mix (Pb)						
Specimen height,						
Effective Binder Content (P <sub>be</sub> )						
Bulk specific gravity at N <sub>des</sub> (G <sub>mb</sub> )						
Bulk specific gravity at N <sub>des</sub> (G <sub>mb</sub> )						
Bulk specific gravity at N <sub>des</sub> (G <sub>mb</sub> ) % compaction at N <sub>int</sub>						
Bulk specific gravity at N <sub>des</sub> (G <sub>mb</sub> )     % compaction at N <sub>int</sub> % Air voids at N <sub>des</sub> (V <sub>A</sub> )						
Bulk specific gravity at N <sub>des</sub> (G <sub>mb</sub> )     % compaction at N <sub>int</sub> % Air voids at N <sub>des</sub> (V <sub>A</sub> )     Max. unit mass G <sub>mm</sub>						
Bulk specific gravity at N <sub>des</sub> (G <sub>mb</sub> )     % compaction at N <sub>int</sub> % Air voids at N <sub>des</sub> (V <sub>A</sub> )     Max. unit mass G <sub>mm</sub> Voids in mineral aggregate (VMA) at N <sub>des</sub>						

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

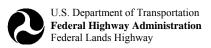
Percent asphalt binde Antistrip, type, amou	in asphan onider.		AASHTO	T 283	Specimen Dia Freeze cycle:	: 6 inch Yes	4 inch No
Sample I	.D.						Average
Height	Dry						
C	Wet						
Bulk Specific	Dry						
Gravity	Wet						
Air	Dry						
Voids	Wet						
	Dry						
Strength	Wet						
<b>Retained Strengt</b>	h, %						

### WORKSHEET FOR A SUPERPAVE MIX DESIGN (Continued)

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



% Asphalt binder (P<sub>b</sub>)



## **RECLAIMED ASPHALT PAVEMENT (RAP) DATA SHEET**

Location: \_\_\_\_\_

Sampled by: \_\_\_\_\_

Tested by: \_\_\_\_\_

Date: \_\_\_\_\_

	RA	AP 1	RA	P 2
% of RAP in Mixture				
Sieve Size	Dry Gradation	T 308 Burned Gradation	Dry Gradation	T 308 Burned Gradation

AC by % mix, Pb		
	Specific Gravity	Specific Gravity
Gmm		
Gse Gse = (100 - Pb)/(10/Gmm - Pb/Gb)		
Gsb Gsb = Gse/(((Pba*Gse)/(100*Gb)) + 1)		
Pba = (assumed)		
Gb = (assumed)		

### **Remarks:**