

**Bulk Specific Gravity of Laboratory Compacted Asphaltic Concrete Specimen**

Lab Experiment #8

Submitted to:

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## Table of Contents

	<u>Page</u>
<b>I. Lab Handouts</b> .....	next
Purpose	
Objective	
Apparatus	
Procedure	
<b>II. Results</b> .....	3
Findings of the lab: tables and graphs	
<b>III. Discussion</b> .....	3
Procedure	
Answers to "Observations and Discussion"	
Uses of the test	
Advantages/Disadvantages	
Possible Errors	
Limitations of this Lab	
<b>IV. Conclusion</b> .....	5
Properties of the paving material	
Engineering Significance of this lab	
<b>V. Appendix</b> .....	5
References	
Calculations and Data	

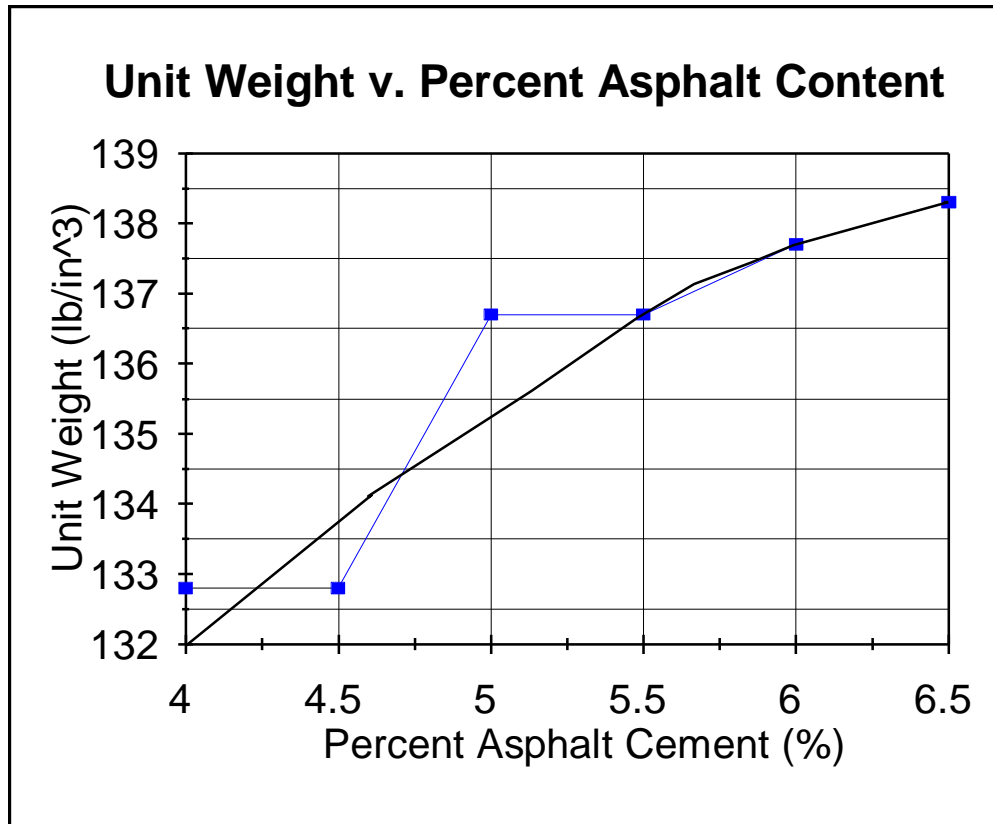
## II. Results

**Table 2.1-Bulk Specific Gravities of tested Asphalt Concrete Specimens: Results from 6.5% Asphalt Cement Content**

Sample Number:	Weight of Specimen		Weight of saturated, Surface-dry Specimen	Bulk Specific Gravity	Unit Weight (lbs./ft <sup>3</sup> )
	In Air	In Water	In Air		
	(g)	(g)	(g)		
1	1138.8	625.0	1140.0	2.21	137.98
2	1203.1	663.1	1204.1	2.22	138.76
3	1198.8	658.2	1200.8	2.21	137.86
4	1164.7	642.6	1167.7	2.22	138.42

**Table 2.2-Data and Bulk Specific Gravities of Asphalt Concrete Specimens**

Percent Asphalt Cement	Specific Gravity of Specimen A	Specific Gravity of Specimen B	Specific Gravity of Specimen C	Average Specific Gravity	Unit Weight (lbs/ft <sup>3</sup> )
4	2.12	2.13	2.16	2.13	132.8
4.5	2.15	2.11	2.13	2.13	132.8
5	2.18	2.19	2.2	2.19	136.7
5.5	2.2	2.18	2.19	2.19	136.7
6	2.23	2.18	2.21	2.21	137.7
6.5	2.22	2.21	2.22	2.22	138.3



**Figure 2.1-Unit Weight v. Percent Asphalt Content for all tested Specimens**

By observation of table 2.2 and fig. 2.1, the maximum specific gravity was found to have a value of 2.22. If this value is multiplied by 62.4, a value of 138.3 lbs/in<sup>3</sup> is obtained. This represents the maximum unit weight of the asphaltic concrete specimens tested.

In fig. 2.1, one may observe that as the asphalt cement content of the compacted asphaltic concrete specimens increase, the unit weight will increase as well. But the unit weight will eventually obtain a maximum value, after which the unit weight of the asphaltic specimen will decrease with the addition of asphalt cement.

### **III. Discussion**

#### ***Procedure***

##### ***Preparation of the specimens***

#### ***Answers to "Observations and Discussion"***

##### ***1. When is the Float Test used to determine asphalt consistency?***

##### ***Uses of the test***

##### ***Advantages/Disadvantages***

###### ***Advantages:***

###### ***Disadvantages:***

##### ***Possible Errors***

##### ***Limitations of this Lab***

### **IV. Conclusions**

#### ***Properties of the paving material***

#### ***Engineering Significance of this lab***

### **V. Appendix**

The following books were used for reference:

American Society for Testing and Materials. *1978 Annual Book of ASTM Standards*. Part 15. American Society for Testing and Materials, 1978.

Garber, Nicholas J. and Lester A. Hoel. *Traffic and Highway Engineering*. West Publishing Company, 1988.

***Calculations and Data on Next Page.***