

SEP-11-2006 MON 02:07 PM Lakeside Industries

FAX NO. 4253132822

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SEP-11-2006 11:38 AM WSDOT MATERIALS LAB

360 709 5575

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Washington State Department of Transportation - Materials Laboratory  
 PO Box 47315 Olympia / 1655 S 2nd Ave. Tumwater / WA 98504  
**BITUMINOUS SECTION MIX DESIGN VERIFICATION REPORT**

TEST OF AGGREGATE PROPERTIES FOR HMA CLASS: 12" WORK ORDER NO: TA2416  
 LAB ID NO: 000205313 MIX ID NO: Q81714

CONTRACTOR'S DESIGN AGGREGATE STRUCTURE AND AGGREGATE TEST DATA

Material:	3/4" & 3/8"		3/8"-0		Tolerance	
	N-143		N-144		Non-Statistical	
Source:						
Ratio:	30%	70%				
1 1/2" square						
1" square						
3/4" square	100%	100.0	100	100	99-100	
1/2" square	80.	100.0	94	90-100	90-100	
3/8" square	15.	97.8	79	MAX 90	79-85	
U.S. No. 4	3.	65.9	47		41-53	
U.S. No. 8	2.	42.0	31	28-56	28-37	
U.S. No. 16	2.	28.5	21			
U.S. No. 30	2.	21.0	15			
U.S. No. 50	2.	15.4	11			
U.S. No. 100	1.	11.1	6			
U.S. No. 200	1.	7.7	3.9	2.0-7.0	3.9-7.0	

Gib Course	2.153	2.741			
Gib Fine		2.738			
Gib Blend	2.153	2.760			
Sand Equivalent		66	2.761	66	45 MIN.
Uncompacted Voids (FAA)				56	40% MIN.
Flat & Elongated					
1" square					10% MAX.
3/4" square					10% MAX.
1/2" square					10% MAX.
3/8" square					10% MAX.
Course Agg Frac					
1" square					
3/4" square					90% Double Face Fracture
1/2" square					60% Double Face Fracture
3/8" square					90% Double Face Fracture
U.S. No. 4	100	100	100	100	90% Double Face Fracture

**EXAMPLE**

STATE MATERIALS LABORATORY AGGREGATE TEST DATA

Gib Course	2.153	2.787			
Gib Fine		2.769			
Gib Blend	2.153	2.775			
Sand Equivalent		68	2.777	68	45 MIN.
Uncompacted Voids (FAA)				48	40% MIN.
Flat & Elongated					
1" square					10% MAX.
3/4" square					10% MAX.
1/2" square					10% MAX.
3/8" square					10% MAX.
Course Agg Frac					
1" square					
3/4" square					90% Single Face Fracture
1/2" square					90% Single Face Fracture
3/8" square					90% Single Face Fracture
U.S. No. 4	100	100	100	100	90% Single Face Fracture

Environment & Engineering Program 1152 3 Remarks: Flat and Elongated testing not required.  
 Construction Engineer X T153  
 Accounting Section X T156 2  
 General File X T172  
 Bituminous Materials Section X T174  
 Region: SOUTHWEST T178 1  
 Construction Office 44 X  
 Materials Engineer 44 X  
 P.E.: COWLITZ COUNTY X(2)  
 THOMAS E. BAKER P.E.  
 Materials Engineer  
 By: Dennis Duffy P.E.  
 Bituminous Materials Engineer  
 (360) 709-5420  
 Date: 9/1/2006



**SUBMITTAL PROCEDURES (26 OF 28)**

STANDARD PLAN:  
**PN - 035 - L**  
 DATE: **FEB. 2008**

CITY ENGINEER APPROVAL:  
 Longview: **C.B.**  
 Kelso: