FLAT OR ELONGATED PARTICLES IN COARSE AGGREGATE

North Dakota Department of Transportation, Materials & Research

SFN 51700 (Rev. 01-2009)

Project	PCN
District	Engineer
Contractor	Submitted By
Date Sampled	Material
Specification	Size or Class
Sample From	Field Sample Number

Pit Location

Sand	Gravel
Aggregate	Pit Owner

Total Weight of Sample (B) (gram) including -9.5 mm (3/8") material							
Sieve Size		Weight Retained	Percent Retained	Weight (~100 particles)	Weight Flat/Elongated	Percent Flat/Elongated*	(G) = A x F
Mm	In.	(A) (gram)	(C) = $\frac{A}{B}$ x 100	(D) (gram)	(E) (gram)	(F) = $\frac{E}{D}$ x 100	
37.5	1 1/2						
25.0	1						
19.0	3/4						
12.5	1/2						
9.5	3/8						
(H) = Sum of (A)					I = Sum of (G)		
					*Weighted Average = $\frac{I}{H}$		

If the sieve has < 10% retained, do not test it. Use the value for the next size larger or smaller that has ≥ 10% retained.

If both a larger and smaller size have ≥ 10% retained, use the average.

*Report to nearest whole number

ASTM D 4791 Tested by _____