AGGREGATE SAMPLE WORKSHEET

North Dakota Department of Transportation, Materials & Research

SFN 9987 (Rev. 08-2015)

PCN
Laboratory No.
Field Sample No.
Pit Location
Owner
Project
County
Material/Specification
Date Received
Date Sampled
Sampled From
Submitted By

Sieve Size		Wt. Ret. Non-Cum.	Wt. Ret. Cum.	% Ret.	% Pass	ND Spec.
100 mm	4"					
90 mm	3 1/2"					
75 mm	3"					
63 mm	2 1/2"					
50 mm	2"					
37.5 mm	1 1/2"					
25.0 mm	1"					
19.0 mm	3/4"					
16.0 mm	5/8"					
12.5 mm	1/2"					
9.5 mm	3/8"					
4.75 mm	No. 4					
Minus No. 4						
Wt.Check						
Original Wt.						

ND T-27 Tested By: _____

FRACTURED FACES
FF = % of particles w/ frac. faces
WF = Wt. of frac. particles
WQ = Wt. of questionable frac. particles
WA = Wt. of total sample
FF = [WF + (WQ/2)]/WA X 100
FF =
ND Spec.

NDDOT 4 Tested By: _____

Sieve Size		Wt. Ret. Non-Cum.	Wt. Ret. Cum.	% Ret.	% Pass	% Pass Tot. Smpl.	ND Spec.
2.36 mm	No. 8						
2.00 mm	No. 10						
1.18 mm	No. 16						
600µm	No. 30						
425µm	No. 40						
300µm	No. 50						
150µm	No. 100						
75µm	No. 200						
Minus No. 200							
Original Wt.							
Wt. After Wash							
Wash Loss							
Wt.Check							

ND T-27 Tested By: _____ ND T-11 Tested By: _____

LIGHTWEIGHT PIECES

+ No. 4 Material				– No. 4, + No. 30 Material			
(A) % Retained on No.4 Sieve	=		%	(I) Weight of Lt Wt Pieces, -No. 4, + No. 30 Mtrl.	=		g
(B) % Passing No. 30, Total Sample	=		%	(J) Weight of – No. 4, + No. 30 Material	=		g
(C) % Pass No. 4 – % Pass No. 30, [100–(A+B)]	=		%	(K) Lt Wt Pieces, – No. 4, + No. 30 (I/J)x100	=		%
(D) Total Sample A+B+C	=	100.0	%	(L) Lt Wt Pieces, – No. 4, + No. 30 Material % of Total Sample (KxC)/100	=		%
(E) Weight of Lt Wt Pieces in + No. 4 Mtrl.	=		g				
(F) Weight of + No. 4 Material	=		g				
(G) Lt Wt Pieces, + No. 4 Mtrl (E/F)x100	=		%				
(H) Lt Wt Pieces, + No. 4 Mtrl., % of Total Sample (GxA)/100							%
				(M) Lightweight Pieces in Total Sample (H+L)	=		%

ND T-113 Tested By: _____ ND Spec. _____

Distribution:

☐ _____ District

☐ Central Lab.

Date	Testing Lab Supervisor

SFN 9987

Laboratory Number

Liquid Limit, Plastic Limit, and Plasticity Index

Liquid Limit

A. Can no. tare weight	
B. Can and wet soil	
C. Can and dry soil	
D. Moisture loss (B - C)	
E. Dry soil weight (C - A)	
F. Moisture at blows (D/E) x 100	
Moisture corrected (F x K)	
G. Liquid Limit	

ND T 89 tested by: _____

#Blows

Number of blows N	Factor for Liquid Limit K
22	0.985
23	0.990
24	0.995
25	1.000
26	1.005
27	1.009
28	1.014

Plastic Limit

H. Can No. tare weight	
I. Can and wet soil	
J. Can and dry soil	
L. Moisture loss (I - J)	
M. Dry soil weight (J - H)	
Moisture content (L/M) x 100	
O. Plastic Limit	
Plastic Index (G - O)	

ND T 90 tested by: _____

LA Abrasion

Grading Used: ☐ A ☐ B ☐ C ☐ D		
Weight of original sample	(A) =	grams
Weight of sample retained on No. 12	(B) =	grams
Loss	(C) =	grams
LA Abrasion = C/A x 100	=	% Loss

AASHTO T-96 Tested By: _____

Unit Weight

Wt. Loose, lbs	lbs/cf
Wt. Rodded, lbs	lbs/cf

AASHTO T-19 Tested By: _____