

North Carolina Department of Transportation/Division of Highways-Materials and Tests Unit
Field And A.A.S.H.T.O. Density Determinations

Date: _____

Project: _____ County: _____ Test #: _____

Test Location and Type:

(Sta; Lane;)

(Rdwy. or Shldr.)

(Embank., Subg., or Base)

(Dist. from C/L; Rt. or Lt.)

(Dist. Below Subg. Elev.)

ROAD DENSITY DETERMINATION

VOLUMETRIC TEST

Volume of Hole:

2 nd Reading	_____	Empty Mold & Collar	_____
1 st Reading	_____	Mold w/Soil	_____
Difference	_____ cu ft	Compacted Vol. of Soil	_____ cu ft

% Moisture:

Wt. Wet Soil (g) _____ { $\frac{\text{Wt. Water (g)}}{\text{Wt. Dry Soil (g)}}$ } 100 _____ = _____ %

Wt. Dry Soil (g) _____

Wt. Water (g) _____

Wet Density:

$\frac{\text{Wet Wt. Soil (g)}}{\text{Volume} \times 453.6}$ = _____ = _____ lb./cu. ft.

Dry Density:

{ $\frac{\text{Wet Density}}{100 + \% \text{ Moisture}}$ } 100 _____ = _____ lb./cu. ft.

A.A.S.H.T.O. DENSITY DETERMINATION

% Moisture:

Wt. Wet Soil (g) _____ { $\frac{\text{Wt. Water (g)}}{\text{Wt. Dry Soil (g)}}$ } 100 _____ = _____ %

Wt. Dry Soil (g) _____

Wt. Water (g) _____

Wet Density:

$\frac{\text{Wet Wt. Soil (g)} \times 30}{453.6}$ = _____ = _____ lb./cu. ft.

Dry Density:

{ $\frac{\text{Wet Density}}{100 + \% \text{ Moisture}}$ } 100 _____ = _____ lb./cu. ft.

PERCENT COMPACTION

{ $\frac{\text{(Compacted Vol.) Dry Road Density}}{\text{Dry A.A.S.H.T.O. Density (In-Place Vol.)}}$ } 100 _____ = _____ %

Signature:

Inspector: _____ Resident Engineer: _____