

DENSITY TEST WORKSHEET - SAND CONE METHOD

North Dakota Department of Transportation, Materials & Research
 SFN 59725 (5-2016)

Project Number	PCN	Date	Tested By
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TEST IDENTIFICATION	Test Number					
	Time					
	Lot					
	Station					
	Offset from centerline					
	Lane					
	Depth below finished grade ft.					

IN-PLACE DRY DENSITY DETERMINATION	a	Unit Weight of Sand (pcf) SFN 59724				
	b	Wt. material removed from test hole-lbs.				
	c	Initial sand weight - lbs.				
	d	Final sand weight - lbs.				
	e	Wt. sand in funnel and hole = c - d				
	f	Cone calibration factor- lbs. SFN 59724				
	g	Wt. sand in hole = e - f (lbs.)				
	h	Volume of test hole = g/a (cu. ft.)				
	i	Wet Density = b/h/(lbs./cu. ft.)				
	j	Dry Density = $i/(100+p) \times 100$ (lbs./cu.ft.)				
		Moisture Determination				
	k	Wet weight + container				
	l	Dry weight + container				
	m	Moisture loss = k - l				
	n	Tare weight of container				
	o	Dry weight of soil = l - n				
p	Moisture Percentage = $(m/o) \times 100$ (%)					

MOISTURE-DENSITY RELATIONSHIP TEST	ND Procedure					
	Test Number (Proctor Test)					
	Station					
	Offset from centerline					
	Depth below finished grade					
	q	Maximum Dry Density				
		Optimum Moisture				

REQUIRED MOIS-DENS.	Required % maximum Dry Density					
	% Maximum Dry Density = $(j/q) \times 100$					
	Required Moisture					
	Moisture = p					

Remarks