

# DENSITY TEST WORKSHEET - VOLUME MEASURE

North Dakota Department of Transportation, Materials & Research  
SFN 2454 (5-2017)

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

<b>IN-PLACE TEST VOLUME MEASURE</b>	a	Final volume reading	cu. ft.			
	b	Initial volume reading	cu. ft.			
	c	Volume of hole = (a - b)	cu. ft.			
	d	Wet weight of soil	lbs.			
	e	Wet density = (d/c)	lbs./cu.ft.			
	f	Moisture	%			
	g	Dry density=(e x 100)/(100 + f)	lbs./cu.ft.			

<b>MOISTURE-DENSITY RELATIONSHIP TEST</b>		ND Procedure				
		Test Number (Proctor test)				
		Station				
		Offset from centerline				
		Depth below finished grade	ft.			
	h	Maximum dry density	lbs./cu.ft.			
	i	Optimum moisture	%			

<b>REQUIRED MOIS.-DENS.</b>	k	Required % maximum dry density				
	l	% Maximum dry density = (g/h) x 100				
	m	Required moisture	%			
	n	Moisture = f	%			

<b>MOISTURE DETERMINATION</b>		Container ID				
	p	Wet weight + container	g			
	q	Dry weight + container	g			
	r	Moisture loss = (p - q)	g			
	s	Tare weight of container	g			
	t	Dry weight of soil = (q - s)	g			
	f	Moisture = (r/t) x 100	%			

Remarks