Revised: April 5, 2017
W Greenwood

Equipment Checklist
AASHTO T-88 Hydrometer

		P	F	NA
Oven				
1.	A thermostatically controlled drying oven capable of maintaining 110 ± 5ºC (230 ± 9ºF).			
Balance				
2.	Readable to 0.1% of sample mass or better and conforms to the requirements of M 231.			
Stirring Apparatus				
3.	Mechanically operated stirring apparatus with speed not less than 10,000 rpm without load.			
4.	Shaft length not less than 19 mm (0.75 in) nor more than 38mm (1.5 in) above bottom of dispersion cup.			
5.	Replaceable paddle made of plastic, metal, or hard rubber.			
6.	Dispersion cup has 6 long baffle rods and 6 short baffle rods opposed, in good condition?			
7.	Dispersion cup with flat bottom measures 95.2 mm (3.75 in) in diameter across top, 66.0 mm (2.6 in) in diameter across bottom, 178 mm (7.0 in) tall, and have permanent baffles.			
8.	Dispersion cup with rounded bottom shall have a brass base, an internal radius of 33.0 mm (1.3 in), measures 95.2 mm (3.75 in) in diameter across top, 66.0 mm (2.6 in) in diameter across bottom, 178 mm (7.0 in) tall, and have removable baffles.			
Hydrometer				
9.	Overall Length of 278 – 282 mm (10.94 – 11.10 in).			
10.	Length from bottom of body to 0 G/L (1.000 SP. G.) 245 ± 1 mm (9.65 ± 0.04 in).			
11.	Length of body (not including stem) 115 – 142 mm (4.53 – 5.59 in).			
12.	Length from midpoint of body to bottom 58 – 71 mm (2.28 – 2.80 in).			
13.	Maximum diameter of body 30 – 32 mm (1.18 – 1.26 in).			
14.	Stem shall extend 15 mm (0.59 in) above the top graduation line and remain cylindrical for at least 3 mm (0.12 in) below the lowest graduation and shall have no perceptible irregularities.			
15.	**Type 151:** Scale length from 1.000 to 1.031 SP. G. 82 - 84 mm (3.23 – 3.31 in), reads 1.0 in 20ºC distilled water.			
16.	**Type 152:** Scale length from 0 to 50 G/L 82 - 84 mm (3.23 – 3.31 in), reads 0.0 in 20ºC distilled water.			
17.	Current Calibration Record Available S/N:_____(check records)			
Sedimentation Cylinders				
18.	Glass cylinder approximately 460 mm (18 in) in height and 60 mm (2.5 in) diameter.			
19.	1000-mL mark at 360±20 mm (14±1.0 in.) from bottom on inside.			
Thermometer				
20.	Calibrated and readable to 0.5°C (1°F).			
Sieves				
21.	Conforming to the requirements of M 92.			
22.	Required for Analysis: No. 4 (4.75 mm), 10 (2.00 mm), 40 (0.425 mm), and 200 (0.075 mm)			
23.	Additionally required for M 145 and M 147: 3 in (75 mm), 2 in (50 mm), 1 in (25 mm), and 3/8 in (9.25 mm).			

Water Bath or Constant Temperature Room				
24.	Bath or constant temperature room capable of maintaining the soils suspension at a constant temperature during hydrometer analysis.			
Beaker				
25.	Glass beaker having a capacity of at least 250 mL and not greater than 500 mL.			
Timing Device				
26.	Watch or clock readable to nearest second.			
Containers				
27.	Resistant to corrosion and not subject to a change in mass or disintegration on repeated heating and cooling. Closed fitting lids. One container for each moisture content determination.			
Stirring Device				
28.	Any nonporous device for stirring sample mixture without loss of material.			
Dispersing Agent				
29.	Solution of sodium hexametaphosphate at the rate of 40 grams per liter of solution (Distilled or DI water)			
30.	Date of preparation written on solution container.			
31.	New solution prepared at least once per month or adjusted to pH of 8 or 9 with sodium carbonate.			

Remarks:

Date: _____ Technician: _____ IA Observer:_____

Technician's E-mail Address: _____

Employer's/ Supervisor's E-mail Address: _____