Revised: January 28, 2014
C. Roberts

Equipment Checklist
ASTM C-173 Air Content of Freshly Mixed Concrete by the Volumetric Method

		P	F	N/A
Air Meter				
1.	The measuring bowl and top sections shall be of sufficient thickness and rigidity to withstand rough field use.			
2.	The material shall not be attacked by high pH cement paste, deform when stored at high temperatures in closed spaces or become brittle or crack at low temperatures.			
3.	A watertight seal must be obtained when the top section is attached to the measuring bowl.			
4.	The measuring bowl shall have a diameter equal to 1 to 1.25 times the height and be constructed with a flange at or near the top surface.			
5.	Measuring bowls shall not have a capacity of less than 0.075 ft^3 [2.0 L].			
6.	The top section shall have a capacity at least 20 % larger than the measuring bowl and shall be equipped with a flexible gasket and a device to attach the top section to the measuring bowl.			
7.	The top section shall be equipped with a transparent scale, graduated in increments not greater than 0.5 % from 0 at the top to 9 %, or more, of the volume of the measuring bowl. Graduations shall be accurate to ± 0.1 % by volume of the measuring bowl. The upper end of the neck shall have a watertight cap that will maintain a watertight seal when the meter is inverted and rolled.			
Scoop				
8.	Of a size large enough so each amount of concrete obtained from the sampling receptacle is representative and small enough so it is not spilled during placement in the measuring bowl.			
Funnel				
9.	A funnel with a spout of a size permitting it to be inserted through the neck of the top section and long enough to extend to a point just above the bottom of the top section.			
10.	The discharge end of the spout shall be so constructed that when water is added to the container there will be a minimum disturbance of the concrete.			
Tamping Rod				
11.	A round, smooth, straight steel, high density polyethylene, or other plastic rod of equal or greater abrasion resistance with a $^5/_8$ inch ± $^1/_{16}$ inch[16 ± 2 mm] diameter. The length of the tamping rod shall be at least 4 inch [100 mm] greater than the depth of the measuring bowl in which rodding is being performed, but not greater than 24 inch [600 m] in overall length.			
12.	The rod shall have the tamping end or both ends rounded to a hemispherical tip of the same diameter as the rod.			
Strike-off Bar				
13.	A flat, straight steel bar at least $^1/_8$ by $^3/_4$ by 12 inch [3 by 20 by 300 mm] or a flat straight high-density polyethylene bar or other plastic of equal or greater abrasion resistance at least $^1/_4$ by $^3/_4$ by 12 inch [6 by 20 by 300 mm].			
Calibration Cup				
14.	A metal or plastic cup either having a capacity of or being graduated in increments equal to 1.00 ± 0.04 % of the volume of the measuring bowl of the air meter. The calibrated cup is only to be used to add water when the concrete air content exceeds 9 % or the calibrated range of the meter.			
Syringe				
15.	A rubber syringe having a capacity of at least 2 oz. [50 ml].			
Pouring Vessel for Water				
16.	A container of approximately 1 qt [1 L] capacity.			
Isopropyl Alcohol				
17.	Verify the isopropyl alcohol is 70 % by volume [approximately 65 % by weight].			
Mallet				
18.	A mallet with a rubber or rawhide head with a mass of approximately 1.25 ± 0.5 lb [600 ± 200 g]			

Remarks:

Date: _____ Technician: _____ IA Observer: _____

Technician's E-mail Address: _____

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