



Illinois Department of Transportation

Division of Highways / Bureau of Construction
2300 South Dirksen Parkway, Springfield, Illinois 62764

Subject: CONSTRUCTION MEMORANDUM NO. 06-10
Vibratory Rollers Approved
For Use in Illinois **Effective:** April 1, 2006
Article 1101.01(g) **Expires:** Indefinite

This memorandum supersedes Construction Memorandum No. 00-10 dated January 4, 2000.

Because of the wide variety of rollers currently available, and modifications which affect their performance can easily be made to these rollers, the Engineer of Construction will no longer maintain an approved list of vibratory rollers for use on IDOT projects. The Resident Engineer should ensure any vibratory roller the contractor proposes to use on IDOT projects meets the requirements of Article 1101.01(g) of the specifications prior to its use.

To accomplish this task, the Resident must check that the drum is at least 48" in diameter, at least 66" wide, minimum vibrations per minutes (VPM) of 1600, static force of 125 lbs./inch, and a total applied force of 325 lbs./inch.

If not directly shown on the contractor's specification sheet, the forces for the equipment can be calculated as follows. The static unit force is calculated by dividing the weight of the drum (in pounds) by the width of the drum (in inches). The dynamic force of each drum must be provided by the equipment specification sheet for each amplitude setting. The dynamic force (in pounds) is divided by the drum width (in inches). The total applied force is calculated by adding a dynamic force to the static force.

If the contractor's equipment satisfies the requirements of Article 1101.01(g), it may be used on IDOT projects. The project inspectors should monitor the equipment to ensure it provides the required results. Any equipment which does not provide satisfactory field performance must be removed from the project.

In addition to these requirements, on thin (<2.5") bituminous lifts, IDOT inspectors should restrict the total applied forces to not more than 450 lbs/linear inch. Greater applied forces tend to crush the coarse aggregate.

A handwritten signature in black ink that reads "Roger L. Driskell".

Roger L. Driskell, P.E.
Engineer of Construction