

# ICC-ES Evaluation Report

**ESR-2147**

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**DIVISION: 31 00 00—EARTHWORK**  
**Section: 31 60 00—Special Foundations and Load-Bearing Elements**

**REPORT HOLDER:**

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**EVALUATION SUBJECT:****AG-CO #10 AND #16 MOLDED PLASTIC FOOTING PADS****1.0 EVALUATION SCOPE****Compliance with the following codes:**

- 2009 *International Building Code*® (2009 IBC)
- 2009 *International Residential Code*® (2009 IRC)
- 2006 *International Building Code*® (2006 IBC)
- 2006 *International Residential Code*® (2006 IRC)

**Properties evaluated:**

- Structural
- Durability

**2.0 USES**

The AG-CO #10 and #16 molded plastic footing pads are footings for the support of columns on exterior residential decks and post-frame constructed agricultural buildings. The molded plastic footing pads are used as individual, isolated footings supporting gravity loads only.

**3.0 DESCRIPTION****3.1 General:**

The AG-CO footing pads are circular, ribbed-plastic pads formed by an injection molding process. See Figure 1 and Figure 2 for dimensions and rib configurations.

**3.2 Material:**

The AG-CO footing pads are made from a proprietary blend of plastic and fiberglass.

**4.0 DESIGN AND INSTALLATION****4.1 Design:**

The AG-CO footing pads are designed as shallow rigid footings that transmit, uniformly to the supporting soil, the applied gravity load imposed by a minimum nominally 4-by-4 wood post on the #10 pad and a minimum 3-ply laminated 2-by-6 post on the #16 pad. Allowable loads are controlled by the type of supporting soil. AG-CO footing

pad design loads must not exceed the allowable gravity loads shown in Table 1.

**4.2 Installation:**

The post location or spacing must be determined by the loads imposed on the post and the allowable AG-CO footing pad design load for the specific type of soil (see Table 1). The post hole must be slightly larger than the footing pad diameter and deep enough to satisfy all design requirements. The bottom of the hole must be flattened and leveled to provide a uniform bearing surface for the footing pad. The AG-CO footing pad must be placed into the hole with the flat side down. The footer pad must be tamped until level and stable in the bottom of the hole. The square-cut-post end must be positioned as close as possible to the center of the footer pad and the post must be plumbed. The dirt around the post must be placed in 12-inch lifts (30.5 cm), tamping each lift tamped before more soil is added.

**5.0 CONDITIONS OF USE**

The AG-CO #10 and #16 molded plastic footing pads described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1** Installation must comply with this report, the applicable code and the manufacturer's published installation instructions. If there is a conflict between the manufacturer's installation instructions and this report, this report governs.
- 5.2** The AG-CO molded plastic footing pads are limited in use to support wood posts used to support exterior residential decks or wood post columns for post-frame construction of Group U (Agricultural Buildings), Type V construction, under the IBC or any construction under the IRC.
- 5.3** The AG-CO molded plastic footing pads must be installed below the frost line of the locality.
- 5.4** The AG-CO molded plastic footing pads must be used as individual isolated footings to resist bearing loads only.
- 5.5** Use of the AG-CO molded plastic footing pads for resistance to seismic or wind loads is outside the scope of this report.
- 5.6** Mechanical fasteners must not be used with the AG-CO molded plastic footing pads.
- 5.7** Patio covers or other types of roof construction must not be connected to residential decks supported by the AG-CO molded plastic footing pads.

- 5.8 Design calculations for the structure supported by the AG-CO molded plastic footing pads must be submitted to the code official to document separate uplift and lateral load resistance.
- 5.9 The allowable soil bearing pressure and vertical movement for the AG-CO molded plastic footing pad must be determined by a site-specific geotechnical investigation or evaluation in accordance with Section 1803 of the IBC or Section R401.4 of the IRC. A geotechnical investigation or evaluation must be submitted to the code official for approval, when required by the applicable code.

**6.0 EVIDENCE SUBMITTED**

Data in accordance with the ICC-ES Acceptance Criteria for Molded Plastic Footing Pads (AC49), dated October 2009.

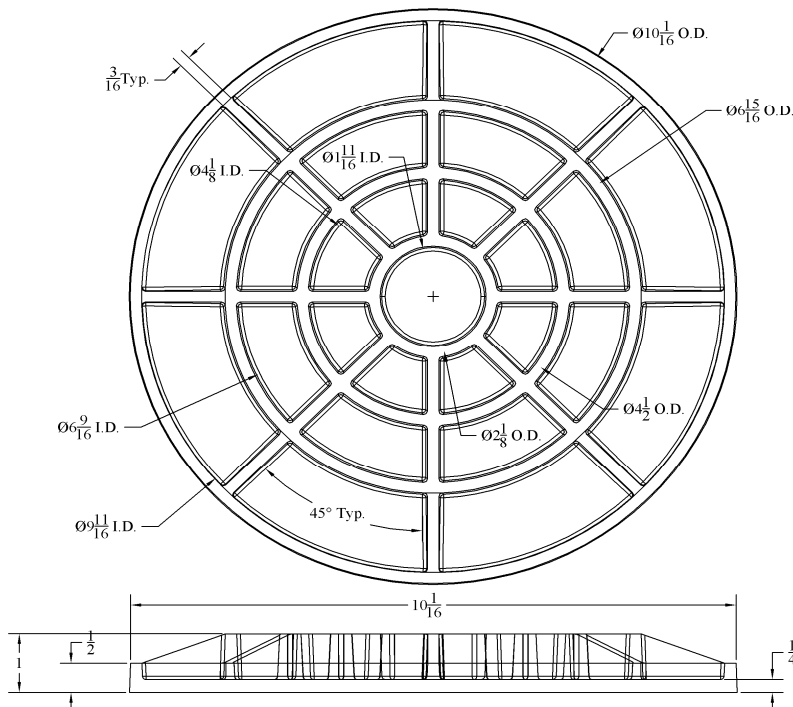
**7.0 IDENTIFICATION**

Each pad must have a permanent label or etching including the name of the manufacturer, the model number and the evaluation report number (ESR-2147).

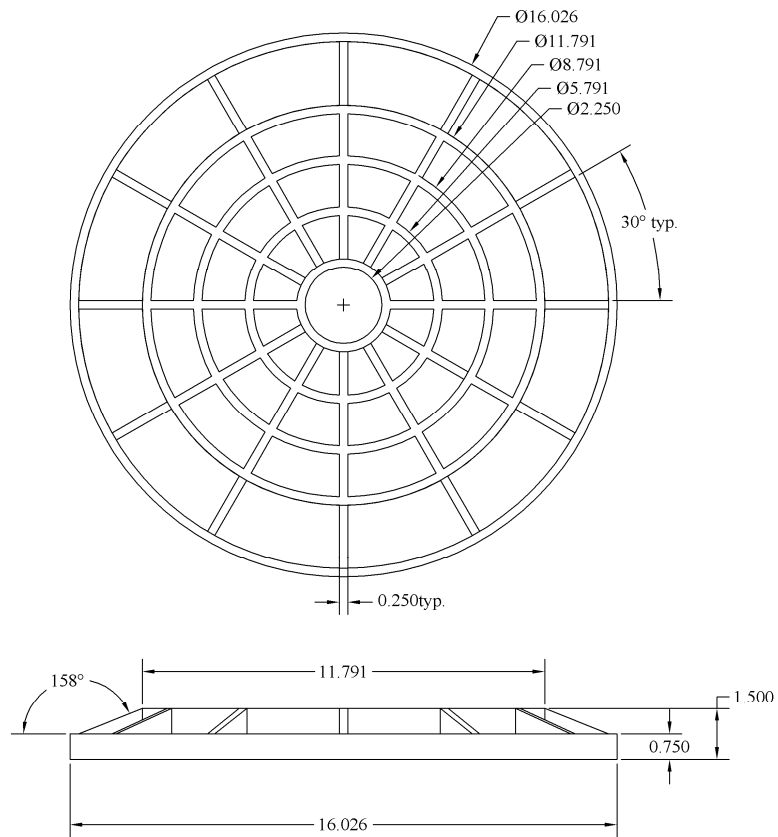
**TABLE 1—ALLOWABLE LOADS**

IDENTIFICATION	PAD DIAMETER	1500 psf SOIL CAPACITY	3000 psf SOIL CAPACITY
Model No. 10	10"	810 lbs.	1622 lbs.
Model No. 16	16"	2009 lbs.	4200 lbs.

For SI: 1 inch = 25.4 mm; 1 lbf = 4.4 N; 1 lbf/ft<sup>2</sup> = 47.9 Pa.



(All Dimensions in inches)  
**FIGURE 1—#10 FOOTER PAD**



(All dimensions in inches)  
**FIGURE 2—#16 FOOTER PAD**