

Producers of COREFLOOR HOLLOW-CORE SLAB
PRESTRESSED CONCRETE SLAB SYSTEMS

HOLLOW-CORE PRECAST BEARING

ACI 1996 Standard provides guidelines on page 550R-6, Section 8.1, for the minimum end bearing of simply supported hollow-core slabs. Below is a brief summary of the ACI Standard. This information should only be used as a guideline for the associated topping work in conjunction with a precast plank structure. Please consult the aforementioned section of the ACI Standard for a complete description of this work.

ACI Section 8.1.1

The bearing stress at the contact surface between supported and supporting members should not exceed the design bearing strength for either surface and the bearing element. Concrete bearing strength should be as given in ACI 318.

ACI Section 8.1.2

The distance to the edge of the support to the end of the precast member in the direction of the span is at least $l/180$, but not less than 2 inches for solid or hollow-core slabs.

ACI Section 8.1.3

Bearing pads at unarmored edges shall be set back a minimum of ½ inch (or at least the chamfer dimension at chamfered edges). This also applies to the edge of the hollow-core plank as well.

Example – A simply supported hollow-core slab is 20'-0 in length. The slab is to bear on a trowel finished concrete foundation ledge.

Calculate Bearing – The slab is 240" long, so $l/180$ is equal to approximately 1 ¼ inches. However, this is less than the minimum of 2 inches. Therefore, 2 inches is required. The concrete wall is an unarmored trowel edge. Therefore, per section 8.1.3, add ½ inch to the face of the foundation wall and ½ inch from the edge of the plank. The minimum bearing should be no less than 3 inches.

