
**COMPUTER OR OFFICE
ACCESS FLOORS**

IR 16-2

References:
2001 California Building Code, Sections 1632A and 1634A

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Discipline: Structural

This Interpretation of Regulations (IR) is intended for use by the Division of the State Architect (DSA) staff, and as a resource for design professionals, to promote more uniform statewide criteria for plan review and construction inspection of projects within the jurisdiction of DSA which includes State of California public elementary and secondary schools (grade K-12, community colleges and state-owned or state-leased essential services buildings. This IR indicates an acceptable method for achieving compliance with applicable codes and regulations, although other methods proposed by design professionals may be considered by DSA.

This IR is reviewed on a regular basis and is subject to revision at any time. Please check the DSA web site for currently effective IRs. Only IRs listed in the document at <http://www.dgs.ca.gov/dsa/Resources/IRManual.aspx> at the time of plan submittal to DSA are considered applicable.

Purpose: The purpose of this Interpretation of Regulations (IR) is to provide guidance in the design of Computer Access Flooring (CAF) for proper support and anchorage to resist seismic forces as prescribed in the California Building Code. This IR is only applicable to projects submitted to DSA under the 2001 California Building Code (CBC). For projects submitted under later editions of the CBC, refer to the regulations.

1. Seismic Load. The lateral force applied to the CAF platform in any horizontal direction should be determined using the equations in the 2001 CBC, Section 1632A.2, where;

W_p = dead load of platform + actual super-imposed equipment load, the minimum load for the entire platform area is 50 psf.

See Footnote 9 of Table 16A-O in the CBC

See 2001 CBC, Section 1607A.3, for floor live load

F_p may be 2/3 of the values shown when CAF's are mounted on concrete slabs on grade.

2. Lateral Resistance.

2.1 If the lateral bracing of the raised floor is provided by surrounding structural elements:

1. Structural elements of the building are to be designed to resist the platform lateral loads.
2. Floor panels and struts are to be tightly fitted together and against the structure to prevent "hammering" of the platform against the resisting structure.
3. Floor panels and struts acting in tension are to be mechanically connected together and anchored to the structure.

2.2 If the raised floor is not surrounded by structural elements:

1. Pedestals are to be restrained at base against sliding and overturning.
2. If pedestals are positively tied together by a system of struts and floor panels then the total lateral load may be divided equally to each pedestal
3. If pedestals are not tied together then design each for the pedestal based on the tributary lateral load.

4. Pedestal stems and bases are to be designed for vertical and lateral load combinations.

2.3 Testing. All tests are to be performed by a testing laboratory. Tests are to be observed and the results recorded in a report signed by a California registered civil engineer.

2.3.1 When shot-in anchors or drilled-in anchors are used to attach the pedestal bases to the supporting floor, testing of anchors is required. Test one of every ten shot-in anchors and one of every two drilled-in concrete anchors at 160% of the ICBO recommended allowable load. In case of test failures, see the 2001 CBC, Section 1923A.3.5, for procedure.

2.3.2 Use of adhesives to attach pedestal bases to concrete or wood floor systems will not be accepted unless test reports on long term durability, high temperature and strength are submitted to the Division of the State Architect (DSA) for review.

2.3.3 Mechanical connections in the floor system that are not subjected to analysis are to be tested for twice the lateral load. Submit test procedure to DSA for approval before testing.