

Proposal 4 (18) – Group B – GE version #1

IEBC [BS] TABLE A301.2

Proponents: CTC

IEBC [BS] A301.2 Scope. The provisions of this chapter apply to residential buildings of light-frame wood construction containing one or more of the structural weaknesses specified in Section A303.

Exception: The provisions of this chapter do not apply to the buildings, or elements thereof, listed below. These buildings or elements require analysis by a registered design professional in accordance with Section A301.3 to determine appropriate strengthening:

1. ~~Group R-1~~
2. ~~Group R-2 or R-4~~ occupancies with more than four dwelling units.
3. Buildings with a lateral force-resisting system using poles or columns embedded in the ground.
4. Cripple walls that exceed 4 feet (1219 mm) in height.
5. Buildings exceeding three stories in height and any three-story building with cripple wall studs exceeding 14 inches (356 mm) in height.
6. Buildings where the *code official* determines that conditions exist that are beyond the scope of the prescriptive requirements of this chapter.
7. Buildings or portions thereof constructed on concrete slabs on grade.

~~**Reason:** EB78-04/05 revised the exception—a reverse scope of what is not covered. The original scope of this appendix in UBC was to address single-family homes, duplexes and small congregate residences. The scoping in the IBC has been revised to put these types of facilities in Group R-3 and R-4. In addition, the phrase ‘with more than four dwelling units’ does not make a lot of sense with Group R-1 and R-4 occupancies; therefore, the current text is broken.~~

~~**Reason:** The purpose of this code change is to coordinate the exceptions to Section A303 with the Group R occupancies and uses in the IBC. The original scope of this appendix in the UBC was limited to single-family homes, duplexes, and other small congregate residences. Proposal EB78-04/05 modified the scope and exception to replace the reference to UBC Group R, Division 1 with the appropriate Group R categories in the IBC. Subsequently, the IBC was amended to permit the occupancies and uses under Group R to be housed in buildings designed per the IRC, making them equivalent to single-family dwellings. Thus, the exception needs to be modified to remove the limitation on Group R-4 buildings.~~

~~In addition, the language regarding number of dwelling units only applies to Group R-2 structures, not Group R-1, as only Group R-2 is defined in terms of dwelling units. It is noted the UBC originally excluded all multifamily occupancies and other Group R, Division 1 occupancies and uses from the appendix. However, the current IEBC language would permit a Group R-2 building with three or four dwelling units to apply the appendix. An example of such a building would be an existing three-story single-family rowhouse that is converted into three apartments for rental purposes. Since there is no technical reason why the retrofit details in Appendix A303 would not work for such a building, the allowance is retained for Group R-2 buildings with 4 or fewer dwelling units.~~

EB78-04/05

A301.2

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Revise as follows:

A301.2 Scope. The provisions of this chapter apply to ~~light-wood-frame~~ residential buildings of light-frame wood construction that are in assigned to Seismic Design Category Categories C, D, or E and F of the 2003 IBC (located in Seismic Zones 3 and 4 of the UBC), containing one or more of the structural weaknesses specified in Section A303.

Exception: The provisions of this chapter do not apply to the buildings, or elements thereof, listed below. These buildings or elements require analysis by an engineer or architect in accordance with Section A301.3 to determine appropriate strengthening.

1. ~~Group R, Division 4~~ R-1, R-2 or R-4 occupancies with more than four dwelling units.
2. Buildings with a lateral-force-resisting system using poles or columns embedded in the ground.
3. Cripple walls that exceed 4 feet (1219 mm) in height.
4. Buildings exceeding three stories in height and any three-story building with cripple wall studs exceeding 14 inches (356 mm) in height.
5. Buildings where the building official determines that conditions exist that are beyond the scope of the prescriptive requirements of this chapter.

The provisions of this chapter do not apply to structures, or portions thereof, constructed on a concrete slab on grade.

The details and prescriptive provisions herein are not intended to be the only acceptable strengthening methods permitted. Alternative details and methods may be used when approved by the building official. Approval of alternatives shall be based on test data showing that the method or material used is at least equivalent in terms of strength, deflection and capacity to that provided by the prescriptive methods and materials.

The provisions of this chapter may be used to strengthen historic structures, provided they are not in conflict with other related provisions and requirements that may apply.

Reason: Editorial: Revise construction type to be consistent with IBC language (see IBC Section 2302.1), and revise occupancy in exception 1 to be consistent with the IBC (see IBC Section 310.1). Note that the IBC specifies four Group R occupancies, while the UBC specified only two such divisions. The added IBC divisions are added to the exception to maintain the previous scope of this chapter based on the UBC occupancy classification.

It is not appropriate to exempt buildings assigned to SDC C from these requirements as this covers buildings in what is considered a moderate level of seismic hazard. SDC F is only associated with Occupancy Category IV, to which this chapter does not apply.

Cost Impact: *The code change proposal **will not** increase the cost of construction.*

There may be a cost savings for a building housing a Group R-4 occupancy or use that would now be allowed to use the prescriptive details in Appendix A303. Otherwise, the code change is just a clarification of the existing exceptions prohibiting the use of Appendix A303 for all Group R-1 buildings or for Group R-2 buildings with 5 or more dwelling units.

Substantiation: ~~This is a clarification of requirements which will eliminate confusing language and not increase construction.~~