



TECHNICAL BULLETIN

PERMIT AND RESOURCE MANAGEMENT DEPARTMENT

B-26X

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Story Determination

INTRODUCTION

The following commentary was written by Ted Thorhaug while serving as the Senior Plancheck Engineer to the Sonoma County Building Inspection Department in 1993. While the California Building Code (CBC) has undergone many changes the methods described and the definitions referred to have remained unchanged. It is presented in the spirit and intent as written.

TECHNICAL DETAILS

Frequently buildings which have only two floors are defined by this department as three story buildings. This often causes confusion and misunderstanding for designers and applicants. This memo has been prepared to assist you and the public in understanding this process. Therefore to determine the number of stories in a building, use the following definitions and explanations.

- I. **Building** is any structure as to which state agencies have regulatory power, used or intended for supporting or sheltering any use or occupancy, housing or enclosure of persons, animals, chattels, equipment or property of any kind, and also includes structures wherein things may be grown, made, produced, kept, handled, stored or disposed of, and all appendages, accessories, apparatus, appliances and equipment installed as a part thereof.

“Building” shall not include machinery, equipment or appliances installed for manufacture or process purposes only, nor shall it include any construction installations which are not a part of a building, any tunnel, mine shaft, highway or bridge, or include any house trailer or vehicle which conforms to the Vehicle Code (Section 202).

- II. **Structure** is that which is built or constructed, an edifice or building of any kind or any piece of work artificially built up or composed of parts joined together in some definite manner (Section 220).
- III. **Total perimeter** is the outer limits of the lowest level under consideration. The perimeter is the bound area formed by the exterior walls of that level. Posts which support an upper structure are considered an exterior wall. Cantilevered exterior balconies or decks are not included (Section 224 and Reference 2.).
- IV. **Exterior wall** is any wall or element of a wall, or any member or group of

members, which defines the exterior boundaries or courts of a building and which has a slope of 60 degrees or greater with the horizontal plane (Section 224).

- V. **Basement** is any floor level below the first story in a building, except that a floor level in a building having only one floor level shall be classified as a basement unless such floor level qualifies as a first story as defined herein (Section 203).
- VI. **Story** is that portion of a building included between the upper surface of any floor and the upper surface of the floor next above, except that the topmost story shall be that portion of a building included between the upper surface of the topmost floor and the ceiling or roof above. If the finished floor level directly above a usable or unused under-floor space is more than 6 feet above grade as defined herein for more than 50 percent of the total perimeter or is more than 12 feet above grade as defined herein at any point, such usable or unused under-floor space shall be considered as a story (Section 220).
- VII. **Story, first**, is the lowest story in a building which qualifies as a story as defined herein, except that a floor level in a building having only one floor level shall be classified as a first story, provided such floor level is not more than 4 feet below grade, as defined herein, for more than 50 percent of the total perimeter, or not more than 8 feet below grade, as defined herein, at any point (Section 220).
- II. **Grade (Adjacent Ground Elevation)** is the lowest point of elevation of the finished surface of the ground, paving or sidewalk within the area between the building and the property line, or when the property line is more than 5 feet from the building, between the building and a line 5 feet from the building (Section 208).
- IX. **Height of building** is the vertical distance above a reference datum measured to the highest point of the coping of a flat roof or to the deck line of a mansard roof or to the average height of the highest gable of a pitched or hipped roof. The reference datum shall be selected by either of the following, whichever yields a greater height of building:
 - A. The elevation of the highest adjoining sidewalk or ground surface within a 5 foot horizontal distance of the exterior wall of the building when such sidewalk or ground surface is not more than 10 feet above lowest grade.
 - B. An elevation 10 feet higher than the lowest grade when the sidewalk or ground surface described in Item 1 above is more than 10 feet above lowest grade.

The height of a stepped or terraced building is the maximum height of any segment of the building (Section 209).

In order to determine the number of stories:

- a. Measure the story height from the lowest adjacent ground level and the

next upper floor level at any point from the exterior wall line up to a point 5 feet away.

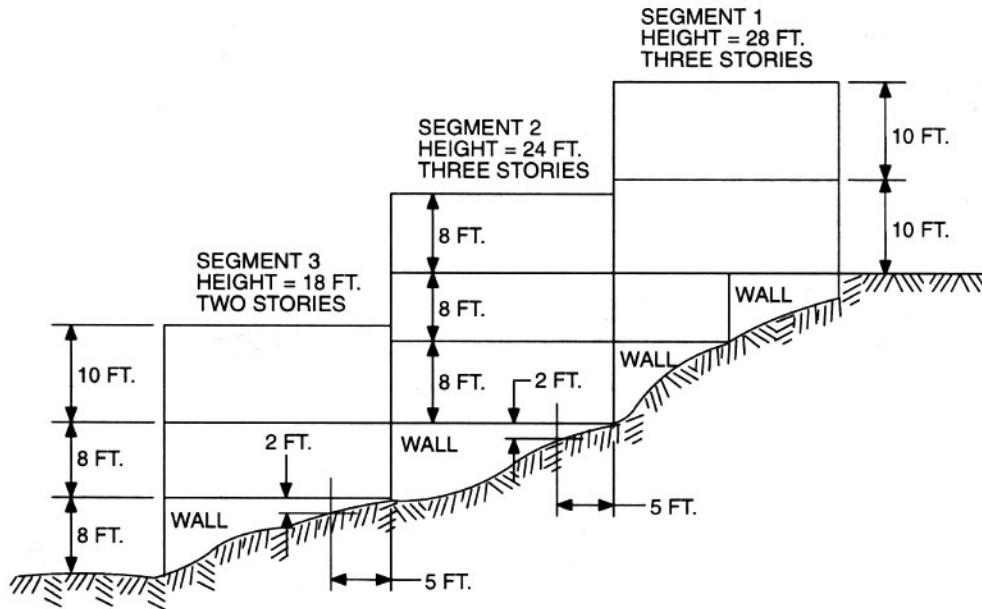
- b. If at any point (per a. above), the next upper floor level is more than 12 feet above grade, then the area below that next upper floor level above grade is considered to be the first story.
- c. If at any point (per a. above), the height above grade to the next upper floor is always less than 12 feet, then see the examples below for one story and multi-story classifications.

Figure No. 4-5 illustrates one example in which the height of the building and number of stories are determined for a stepped or terraced building. In the case of a stepped or terraced building, the language “total perimeter” used to define the case separating the first story from a basement is intended to include the **entire perimeter of each segment** of the building. Therefore, in the cross section of Figure No. 4.3, the total perimeter of the down-slope segment would be bounded by the retaining wall, the down-slope exterior wall, and the east and west exterior walls. In the case illustrated, the dwelling has two stories and a basement for the down-slope segment. In this case the highest grade of the segment is more than 10 feet above the lowest grade. Thus, the reference datum would be 10 feet above lowest grade, and the height would be 17 feet 6 inches plus half the height of the attic.

REFERENCES

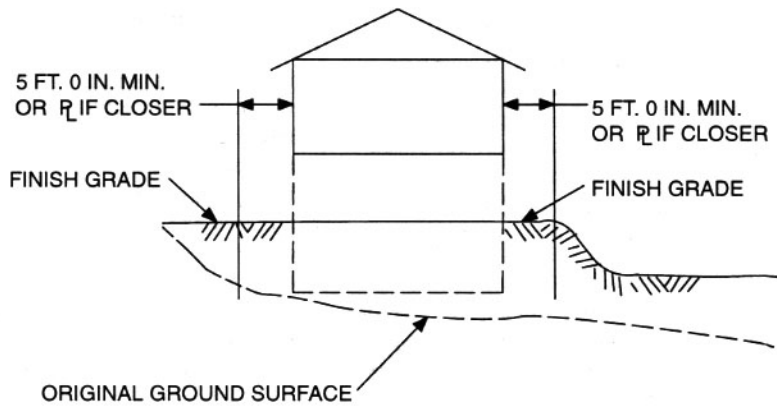
1998 California Building Code Section 506
Uniform Building Code, 1991 Edition.
Handbook to the Uniform Building Code, 1991 Edition, I.C.B.O.

MAXIMUM HEIGHT OF BUILDING IS 28 FT. @ SEGMENT 1.
 MAXIMUM NUMBER OF STORIES IS 3 @ SEGMENTS 1 AND 2.



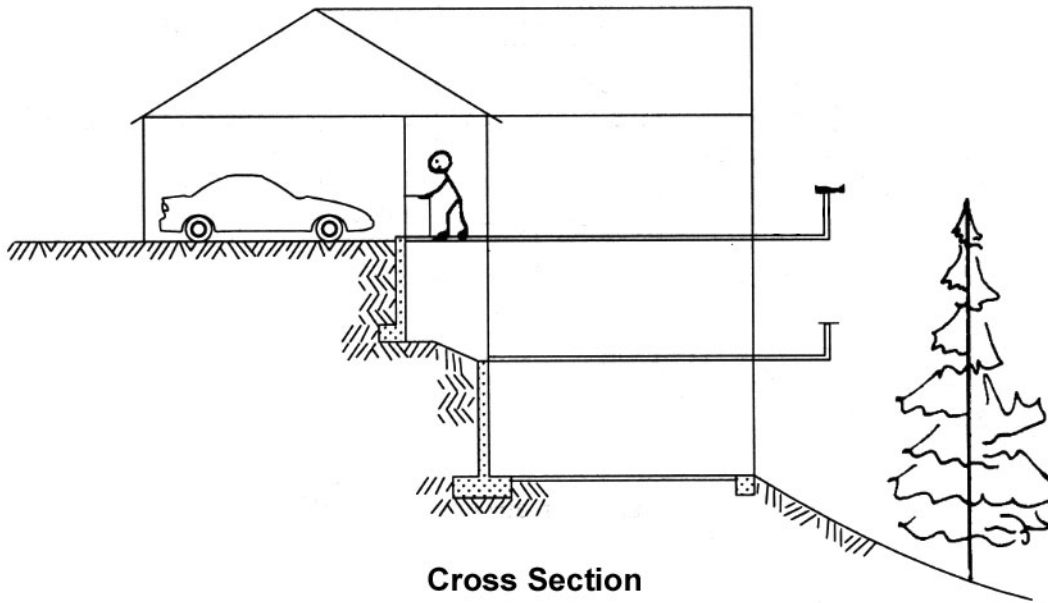
For SI: 1 foot = 304.8 mm.

Terraced Building

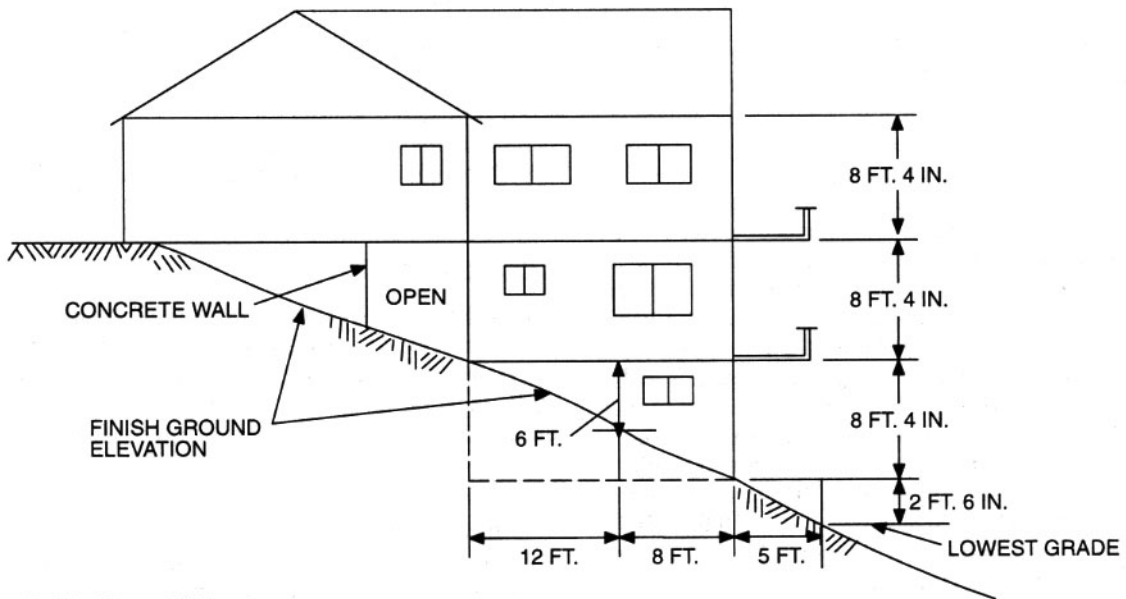


For SI: 1 foot = 304.8 mm.

Use of Built-up Soil to Raise Finish Grade

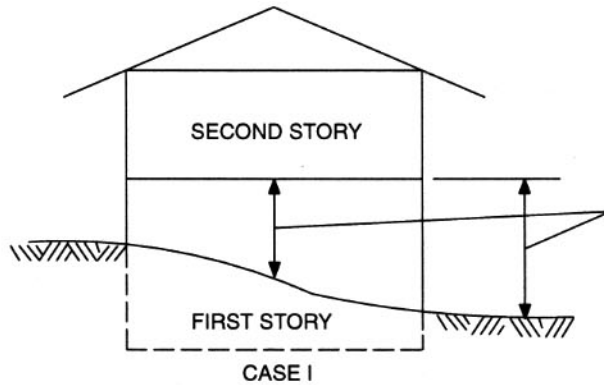


Cross Section



For SI: 1 foot = 304.8 mm.

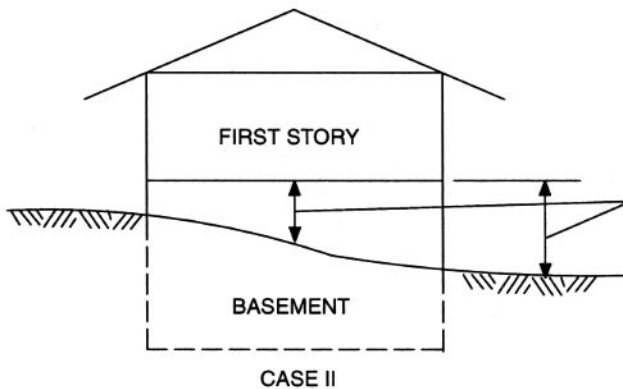
**West Elevation
Two-Story and Basement Building**



THE LOWER FLOOR LEVEL IS CLASSIFIED AS THE FIRST STORY IF THE FLOOR LEVEL ABOVE IS:

MORE THAN 6 FEET ABOVE GRADE FOR MORE THAN 50 PERCENT OF THE TOTAL PERIMETER OR MORE THAN 12 FEET ABOVE GRADE AT ANY POINT.

Two-Story Building



THE UPPER FLOOR LEVEL WILL BE CLASSIFIED AS THE FIRST STORY IF THE FLOOR LEVEL IS:

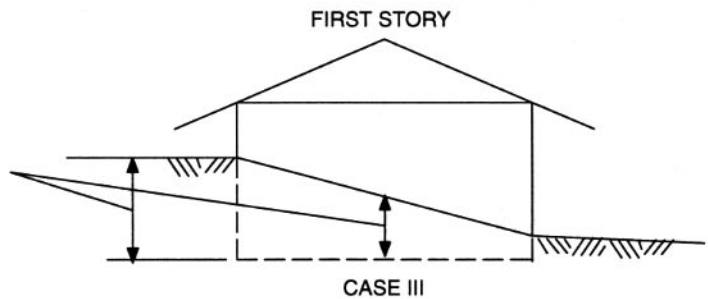
NOT MORE THAN 6 FEET ABOVE GRADE FOR AT LEAST 50 PERCENT OF THE PERIMETER AND DOES NOT EXCEED 12 FEET ABOVE GRADE AT ANY POINT.

**One-Story and Basement Building
Multilevel Buildings**

FIRST STORY FOR A BUILDING HAVING ONLY ONE LEVEL:

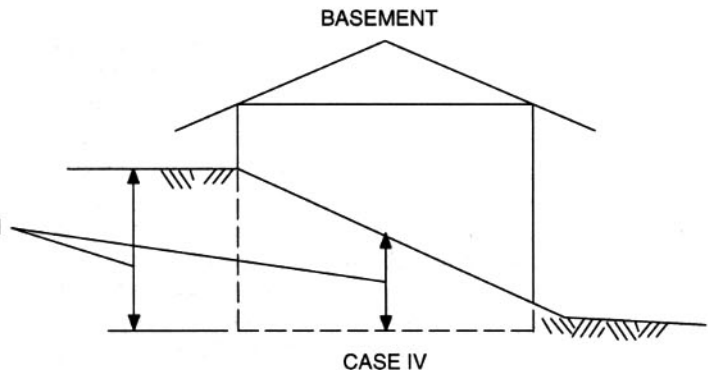
FLOOR LEVEL IS CLASSIFIED AS THE FIRST STORY WHEN THE FLOOR LEVEL IS:

NOT MORE THAN 4 FEET BELOW GRADE FOR MORE THAN 50 PERCENT OF THE TOTAL PERIMETER NOR MORE THAN 8 FEET BELOW GRADE AT ANY POINT.



BUILDING HAS NO FIRST STORY AND THE FLOOR LEVEL IS CLASSIFIED AS A BASEMENT WHEN THE FLOOR LEVEL IS:

MORE THAN 4 FEET BELOW GRADE FOR MORE THAN 50 PERCENT OF THE TOTAL PERIMETER OR MORE THAN 8 FEET BELOW GRADE AT ANY POINT.



For SI: 1 foot = 304.8 mm.

Single-level Buildings