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Interpretation of Retaining Walls and Fences

2016 California Building Code Section 105.2

NOTE: *Check with your Homeowner's Association and Architectural Review Committee for Conditions, Covenants & Restrictions(CC&R's). The County of Lake has no regulatory authority to enforce or notify permit applicants of CC&R Requirements, nor deny permits for non-compliance.*

WHEN IS A PERMIT NOT REQUIRED?

A Building Permit is not required for the following types of Fences/Retaining Walls (Per 2016 California Building Code, Section 105.2):

- Masonry and Concrete Walls not over 4 feet in height measured from the bottom of the Footing to the top of the wall, will need to speak with the Planning Division regarding the Zoning Ordinance requirements and this may need a Zoning Clearance.
- All other Fences not over 7 feet in height (See Planning for Zoning Requirements – as to Set backs and Height restrictions.)
- Retaining Walls not over 4 feet in height, measured from the bottom of the Footing to the top of the wall, unless supporting a surcharge or impounding Class I, II, or III-A liquids. Note: If the Retaining wall utilizes intermittent wood post supports in lieu of a continuous wall footing, the vertical height measurement of the retaining wall shall begin at the lower grade level with the maximum height of the wall to be 24 inches (retaining earth or not). To avoid a surcharge, a level grade (less than 6 horizontal to 1 vertical without footings or driveways) must be maintained a distance away from the wall equal to or greater than its overall retained height. (See Figure 2B)

WHEN IS A PERMIT NEEDED?

A Building Permit is required for any of the following:

- Concrete or masonry fences that measure more than 4 feet from grade to the top of the fence. Structural calculations and drawings showing details of the wall and footings are required. Engineered calculations must be signed and stamped by a licensed architect or engineer.
- Retaining Walls that: a) Measure more than 4 feet from the bottom of the footing to the top of the retaining wall; and/or b) Support a surcharge or impound Class I, II, or III-A liquids

Retaining walls must be approved by the Planning and Building & Safety Divisions. Structural calculations and drawings showing details of the wall and footings are required, stamped and signed by a licensed architect or engineer, and must demonstrate that the subject wall will resist the lateral pressure of the retained material as specified in Section 1610 of the 2016 CBC; as well as a Site Plan showing location of wall and setbacks, and an elevation of the wall.

See Page 2 for General Definitions

General Definitions

Retaining Wall – A Retaining Wall is a wall designed to resist lateral earth and/or fluid pressures, including any surcharge, in accordance with accepted engineering practice. This definition also applies to freestanding pool walls. The County of Lake adopts, by reference, the 2016 California Residential Code Section 105.2 Item 3 which states: "Retaining walls that are not over 4 feet (1219mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge." It is a common misconception by builders, designers, landscape contractors, pool contractors, and homeowners that this section of the CBC allows retaining walls of up to 4 feet in exposed wall height to be constructed without a permit, regardless of the back-slope conditions.

In order to interpret this Building Code Section correctly, a clear understanding of the following terms is essential:

- Retained Wall Height is the vertical distance measured from the bottom of the footing to the finish grade at the top of the wall (i.e. upper soil grade). This is the height referred to in CBC §105.2, item 3 and it includes the wall and depth of footing below grade.

- Exposed Wall Height is the vertical distance measured from the finish grade at the bottom of the wall (i.e. lower soil grade) to the finish grade at the top of the wall (i.e. upper soil grade). This height does not include the wall and depth of footing below grade.

- Tiered Retaining Walls Use of tiered walls is a special condition where 2 or more short walls, horizontally offset from one another, are used in lieu of a single tall retaining wall. When tiered walls are not properly offset from each other, the upper wall may impose a surcharge condition on the lower wall. In order for the walls to be treated as separate retaining walls, a general rule of thumb is that the tiered walls be horizontally offset by a minimum distance of two times the exposed wall height of the lower wall.

As an example, two-tiered retaining walls each with an exposed wall height of 3 feet, and level back fill that are horizontally offset by a distance of 2 feet would be treated as a single 6-foot-tall wall and as a result, a building permit would be required.

2016 California Residential Code Section 404.4 States*: "Retaining walls that are not laterally supported at the top and that retain I excess of 48 inches (1219mm) of unbalanced fill, or retaining walls exceeding 24 inches (610 mm) in height that resist lateral loads in addition to soil, shall be designed in accordance with accepted engineering practice to ensure stability against overturning, sliding, excessive foundation pressure, and water uplift. Retaining walls shall be designed for a safety factor of 1.5 against lateral sliding and overturning. This section shall not apply to foundation walls supporting buildings."*