

PROPOSED

Sec. 9.4.3. – Retaining Walls

Where retaining walls are necessary, they are limited as follows:

A. Design

1. Height

- a. **Measurement** Total retaining wall height is considered to be:
 - i. **Structure Height (Building Code)**– The vertical distance measured from the bottom of the footing to the top of the wall at the same section.
 - ii. **Exposed Height (Zoning Code)**– The vertical distance measured from finished grade at the bottom of the front (exposed) side of the wall to the top of the wall at the same section.
- b. **Maximum Height**
 - i. **Retaining Walls** Up to eight (8) feet in exposed wall height as a single wall.
 - ii. **Retaining Walls** Over eight (8) feet in exposed wall height requires tiered retaining walls (each not to exceed eight (8) feet in exposed wall height).
 - iii. **Interior Facing** Retaining walls that are entirely interior facing are permitted up to 12 feet in height. This includes Wing Walls (retaining wall extensions from the building foundation walls that allow daylighting of a basement and/or egress from a basement) that are inward facing and finished with a permitted material finish.
 1. **Setbacks** If they are to encroach into building setbacks and are entirely inward facing the walls have to be a maximum of eight (8) feet in exposed wall height and meet the retaining wall setback requirements found in Sec. 9.4.3.C. below.
 2. **Length** Maximum length of any Wing Wall exceeding the normal maximum retaining wall height of eight (8) feet is 36 feet (based on the maximum 3:1 allowable grading slope). Any length of wall past 36 feet shall meet the requirements of a retaining wall as outlined above.
- c. **Elevation Marks** Wall height elevations marks shall be demonstrated on the grading plan through callouts at various locations along the retaining wall using the following or similar: TW-Top of Wall; BW-Bottom of Wall (at Grade); BF-Bottom of Footing.
- d. **Fences or Walls** Any portion of a retaining wall extending above the finished grade may be considered to be a fence or wall, subject to the requirements of Sec. 8.2.10.

2. Spacing

- a. **Distance** Retaining walls must be separated horizontally by at least four (4) feet from other retaining walls (measured from the back of the lower wall to the front of the upper wall). This horizontal separation area must be graded to capture stormwater and not sloped such that stormwater will run off. The stormwater design must be included with the retaining wall permit plans.
- b. **Design** Each tier between retaining walls must be vegetated and maintained with a mix of native, evergreen, and deciduous shrubs, one (1) shrub every four (4) linear feet to be approved by the City Arborist, as follows:

The Director may waive this landscaping standard for retaining walls that slope back (are inward facing) and contain natural planting.

3. Materials

- a. **Material and Finish** All retaining walls must be finished with stucco, brick, or stone. No beveled modular block, plain unfinished concrete masonry units, or other similar materials are allowed. Retaining walls which meet the description of Garden Walls below in Sec. 9.4.3.B.3. may also use crossties, landscape timbers, or similar as a wall, material finish.

B. Permits and Other Requirements

1. **All Retaining walls**, whether in commercial or residential settings, regardless of height:

Require a retaining wall permit and a professional engineer's certification of the design of the wall *if they support a surcharge*.

Surcharge is defined as any vertical load imposed on the retained soil that may impose a lateral force in addition to the lateral earth pressure of the retained soil. Examples of surcharges include:

- a. Sloping retaining soil;
 - b. Structure footings supported by the retained soil;
 - c. Adjacent vehicle loads supported by the retained soil.
 - d. Tiered retaining wall systems.
2. **Permit Required** All retaining walls over four (4) feet in *structure height* require a retaining wall permit and a professional engineer's certification of the design of the wall.
 3. **No Permit Required** All other retaining walls four (4) feet or less in *structure height* do not require a permit but do require an indemnification letter. This includes retaining walls otherwise known as "Garden Walls" which for the purposes of this code have a maximum exposed height of three (3) feet, while also not exceeding four (4) feet of *structure height*.
 4. **Global Stability** During the permit review process, the global stability of any series of tiered retaining walls will be reviewed. A safety factor of at least 1.5 is required.
 5. **Impact** Where a retaining wall or wing wall might impact (either visually or structurally) an existing structure, adjacent property, street, buffer, utility, or other similar significant interest, the Director and/or Building Official may require plans, details, cross-sections, and professional engineer calculations beyond those cited in this Section.

- C. **Setback Encroachment** In order to protect trees and vegetation on sites and the character of the neighborhood, the following setback standards apply:

1. **Side Setbacks** In the side building setbacks:

- a. In all RE- districts, retaining walls may encroach up to 10 feet into required side building setbacks.
- b. In all RD- districts, retaining walls may encroach up to half the depth of the required side building setbacks.
- c. In all RU- districts, no encroachment for retaining walls is allowed into the required side building setbacks.
- d. All other districts, retaining walls may encroach into the side setbacks so long as they are at least three (3) feet from the vertical plane of any lot line.

2. **Rear Setbacks** In the rear building setbacks:

- a. In all RE- Districts, no retaining walls are allowed within 20 feet of the rear lot line.
- b. In the RD-27, RD-18, and RD-15 districts, no retaining walls are allowed within 15 feet of the rear lot line.

- c. In the RD-12, RD-9, RD-7.5, and RU- districts, no retaining walls are allowed within 10 feet of the rear lot line.
- d. All other districts, retaining walls may encroach into the rear setbacks so long as they are at least three (3) feet from the vertical plane of any lot line.

D. Maintenance and Replacement Existing legally permitted and constructed retaining walls may be maintained and repaired, provided the maintenance and repair is structurally sound and does not result in an increase in the height of the wall above grade.

DRAFT