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Retaining Wall Requirements

Updated December 23, 2019

Permit:

Universal Permit Application

<u>Unified Development Code (UDC)</u>

3.05.07 Easements and Dedications:

F. Retaining Wall Easements

- 1. If in the opinion of the Director of Public Works, the grading plans submitted with the Application for approval of a Final Plat indicate a need for the construction of one or more retaining walls, a private retaining wall easement showing the location of the retaining wall(s) and the no-build zone shall be dedicated and shown on the Preliminary Plat and the Final Plat.
- 2. The width of the retaining wall easement shall be 10 feet or the width of the retaining wall (including subsurface elements), whichever is greater, plus the width of the no-building zone, as established by the Applicant's structural engineer and approved by the Director of Public Works or City Engineer.
- 3. The retaining wall easement shall include a no-building zone extending from the retaining wall on both sides, within which any additional load from future construction would exceed the design capacity of the retaining wall.
 - a. The no-building zone width shall be a minimum of the clear height of the retaining wall.
 - b. No structure (other than the retaining wall), swimming pool, landscaping, or any other feature which adds load to the retaining wall, shall be constructed within the no-building zone.
- 4. A retaining wall easement shall be located entirely on one lot and shall not straddle property lines unless the wall is constructed within a retaining wall easement dedicated to the Homeowners' or Property Owners' Association in accordance with 3.05.07. F.5 (below).
- 5. The property owner, or the Homeowner's Association for the subdivision, as applicable, shall be responsible for maintenance of the retaining wall, and a note shall be included to this effect on the Final Plat."

3.05.11 - Retaining Wall Construction

A. Location



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- 1. Retaining walls shall be located and constructed on private property only.
- 2. Retaining walls shall be located within a private retaining wall easement.
- 3. If a retaining wall is designed to traverse three or more lots within a Subdivision, the wall shall be located within a private retaining wall easement dedicated to the Homeowners' or Property Owners' Association of the Subdivision.
 - a. The easement shall be shown on the Preliminary Plat and Final Plat and shall be dedicated to the Homeowners' or Property Owners' Association of the Subdivision to maintain the wall in a safe and orderly condition.
- B. Design Any retaining wall four (4) feet of height shall be designed by a professional engineer and plans submitted to the City for review must be signed and sealed by the design engineer.
- C. Building Permit Required
 - 1. Any earth terracing method that supports a structure or vehicle load, or that is over four feet (4') in height (as measured from the bottom of footing to top of wall), shall require a building permit and shall meet the requirements of this section. A retaining wall shall not be constructed in excess of four feet in height unless accompanied with a signed and sealed engineering design along with site specific geotechnical analysis. The height shall be measured from the top of the wall to the bottom of the footer (below grade).
 - a. Retaining walls shall have proper fall protection as defined within the Building Code as adopted by the City.
 - b. Walls that are anticipated to support a fence (or screen wall) either integrally or separately shall be designed to handle the structural forces of the fence imposed onto the wall. This is irrespective of the height of the wall, one foot (1') high and up.
 - c. Subdivision construction plans shall include the engineering design of walls prior to construction release.
 - 3. No building permit, other than for a retaining wall, shall be issued for any lot within a Subdivision until all retaining walls are constructed in accordance with a grading plan for the Subdivision.
 - 4. A retaining wall shall be constructed in accordance with the grading plan and shall comply with the requirements of the applicable building code and this ordinance.
 - 5. Any change from the approved grading plan or design for a retaining wall within a Subdivision shall not be permitted unless the Applicant has submitted plans for the entire Subdivision showing the proposed changing



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in grading and the Director of Public Works has approved the proposed change(s).

Amended by Council on 12/5/19

Engineering Standards Manual:

https://www.cityofcorinth.com/engineering/page/2019-engineering-design-standards

Section 7. Retaining Wall Construction

Subsection 7.01. Design

7.01.01. Construction Standards

A retaining wall shall be designed and constructed using a cantilevered reinforced concrete structure, masonry gravity structure, or stone gravity structure, capable of supporting the live load and dead load forces. Brick may be used as a facing material on a concrete retaining wall, but shall not be used as a structural element of the wall.

7.01.02. Development Standards

If a retaining wall is to be constructed in a new subdivision, the design of the retaining wall shall accompany the site development construction plans.

The following items shall be included with the submittal for retaining wall over four (4) feet in height:

- 1. A site specific geotechnical report, sealed and signed by a licensed geotechnical engineer licensed in the State of Texas. The geotechnical report shall include soil parameters to be used in the design of the retaining wall for sliding and overturning stability. Additionally, global stability analysis shall be included in the geotechnical study for retaining walls with a retained height of over 10 feet or immediately adjacent to a stream or ponded water.
- 2. Structural calculations, sealed by a licensed professional engineer in the State of Texas, for the proposed retaining wall that utilize the parameters provided in the geotechnical report indicating that the retaining wall is stable in sliding, overturning, and internal failure modes.
- 3. Retaining wall plans, sealed by a licensed professional engineer in the State of Texas, with dimensions and reinforcing in accordance with the structural calculations.

Tiered retaining wall systems shall be spaced with clear dimension between the farthest structural element of the lower wall (including back of footing, reinforced zone, etc.) and the leading structural element of the upper wall (including wall toe, leveling pad, etc.). The clear dimension shall be a minimum distance equal to the clear height of the lower wall.



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Avoid placing retaining walls at the top of slopes of greater than 10 (horizontal) to 1 (vertical). If a retaining wall must be placed at the top of a slope greater than 10 to 1, the wall shall bear below the bottom of the slope and the soil in front of the wall shall be neglected in the calculations for the wall.

Subsection 7.02. Prohibited Material

Timber material is prohibited for use as any part of a retaining wall, regardless of height.

Amended by Council on 12/5/19