



Retaining Walls

City of Prior Lake Requirements

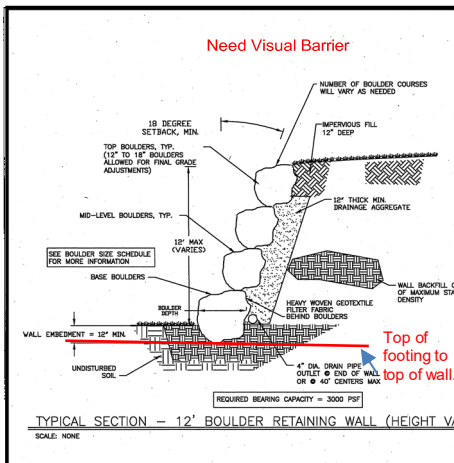
This handout is intended to be a guide only.

Specific code language can be found in the City Codes at: PriorLakeMN.gov

Planning and Zoning - Chapter 10 & MN Dept Labor & Industry: 2020 Minnesota Residential Code

Definition: Retaining Wall is a wall or terraced combination of walls used to provide barrier or restrain lateral forces of soil or other material and not used to support, provide a foundation for, or provide a wall for a building or structure

Top of Footing to Top of Wall



Bluff. A topographic feature such as a hill, cliff, or embankment having all of the following characteristics:

- Part or all of the feature is located in a Shoreland area;
- The slope rises at least 25 feet above the Ordinary High Water Level of the water body;
- The grade of the slope from the toe of the bluff to a point 25 feet or more above the Ordinary High Water Level averages 30% or more; and
- The slope must drain toward the water body.

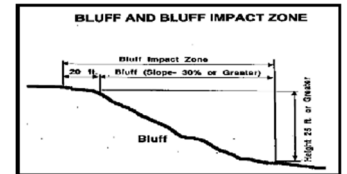
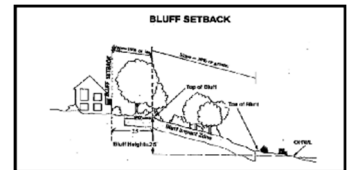
Except that an area with an average slope of less than 18% over a distance of 50 feet or more shall not be considered part of the bluff.

Parts of a bluff include the following:

Bluff, Toe of the. The lower point of a 50-foot segment with an average slope exceeding 18%.

Bluff, Top of the. The highest point of the slope, as measured from the toe of the bluff, where the grade becomes less than 30%.

Bluff Impact Zone. A bluff and land located within 20 feet from the top of a bluff.



R404.4 Retaining Walls.

Retaining walls that are not laterally supported at the top and that retain in excess of 48 inches (1219 mm) 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 safety factor of 1.5 against lateral sliding and overturning. This section shall not apply to foundation walls supporting buildings.

A permit is required for erecting a retaining wall over 4 feet in height (Top of Footing to Top of Wall) or for three or more adjacent retaining walls. A permit is also required for walls within a bluff or bluff set-back area. If a retaining wall is separated by one or two walls by a slope of 1:1.5 slope or less, a permit is not required, unless it is a riparian lot. Any movement of earthen material of more than 50 cubic yards or more than 500 square feet or any movement of earthen material within a shore impact zone of more than 10 cubic feet requires a grading and excavation permit.

SUBMITTALS FOR PERMIT:

- Signed completed retaining wall permit application form.
- **The retaining wall plan.** The plan must be designed and drawn by a licensed structural engineer licensed in the State of Minnesota. A soils engineer licensed in the State of Minnesota must supply soil testing to the designer to be used for the design of the retaining wall (s). Walls within a bluff area or over 4 feet in height will require a signed soils and global failure plane determination.
- **A Certificate of survey** with the retaining wall location drawn on it to scale. An existing certificate of survey may be used if all existing buildings, property lines, setback hubs, elevation/contours, and easements are shown. The existing survey must be signed by a registered land surveyor. A current and updated survey may be required if additional information is needed to determine ordinance compliance such as yard setbacks, bluff setback, OHW setback, etc.
- **Cash Escrow:** The City may employ a structural engineer licensed in the State of Minnesota to review the retaining wall plans and to conduct site inspections during construction. An escrow is required to be submitted equal to the fee in which the city's consulting structural engineer charges.

ZONING CODE REQUIREMENTS

MINIMUM SETBACKS: The Zoning Ordinance requires that retaining walls over 4 feet in height (Top of Footing to Top of Wall) maintain the following minimum setbacks in the R-1, R-2, and R-3 use districts:

- Front: 25' feet
- Side: 10' feet
- Rear: 25' feet
- Shoreland: 75 feet
- Wetland: 30 feet
- Bluff: Minimum 25 feet³ from top of bluff

¹Non-conforming lots of record in the R-1 and R-2 use districts may have a reduced setback, but no less than 5 feet. See City Code Chapter 10 Article III Division 5 - Non-conformities.

²Shoreland ordinance permits the use of the average setback of adjacent structures from the ordinary high-water mark or 50 feet whichever is greater. See City Code Chapter 10 Article IV Division 2 - Shoreland.

³Bluff setback is the upper end of a segment at least 25 feet in length having an average slope less than 18 percent. See City Code Chapter 10 Article IV Division 2 – Shoreland.

Replacement of a retaining wall over 4 feet in height (top of footing to top of wall) that do not meet the minimum required setbacks may be replaced provided the retaining wall existed on June 1, 2009 and is the same size and location and not located within an easement, the public right-of-way or over a property line. In lieu of a survey, a Site Plan may be accepted. A **Site Plan** is a to-scale plan showing setbacks, existing structures, dimensions, swale, distance from lot line contours and the proposed retaining wall height.

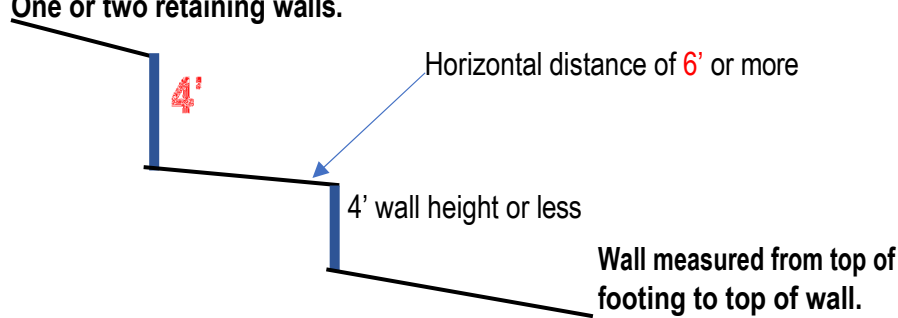
Note: Only (1) retaining wall 4 feet or less in height (top of footing to top of wall) is allowed in a Bluff area. If replacing an existing retaining wall, a building permit, engineering and a signed geotechnical soil report is required.

EXAMPLE OF WALL HEIGHTS AND NUMBER OF RETAINING WALLS

Subp.4. Work Exempt from Permit (Unless located in Bluff lot).

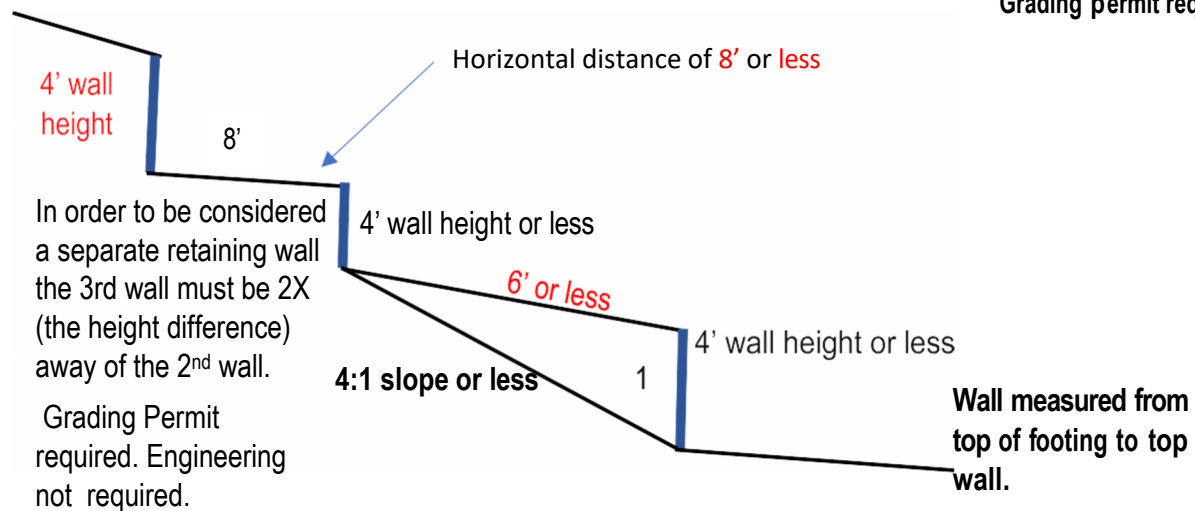
Exemption from permit requirements of the code do not authorize work to be done in any manner in violation of the code or any other laws, or ordinances of this jurisdiction. Permits shall not be required for the following: Retaining walls that are not over 4 feet (1,219 mm) in height measured from the top of the footing to the top of the wall, unless supporting a surcharge or impounding Class, I, II, or III-A-liquids . All retaining walls located in a bluff area require engineering and a building permit.

One or two retaining walls.



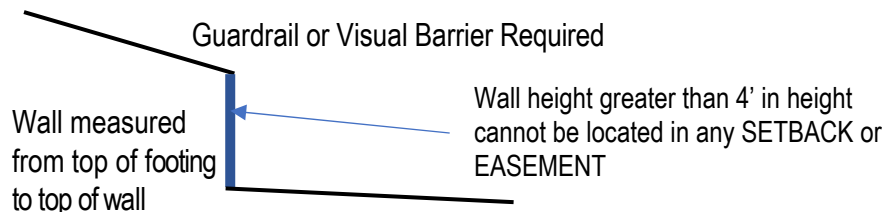
EXAMPLE #1
Grading permit required

Three or more walls require a building permit.



EXAMPLE #2
Grading permit required

One retaining wall separated by one or two walls with a slope of 4:1 or less.



EXAMPLE #3
Building permit & engineering required.

One or more retaining walls greater than 4' in height, a 36" high guardrail is required at the top of a 4' or greater in height retaining wall.