



DEVELOPMENT SERVICES

TO: Development Services Customers

SUBJECT: **INFORMATION BULLETIN 171**
Retaining Walls – Permit/Inspection Requirements

DATE: March 19, 2010/*Revised January 2022/April 2025/March 2026*

CREATED BY: Plan Review Division

Purpose:

As a customer service initiative, the Development Services Department (DSD) created this information bulletin (IB) to clarify the process to obtain permits for retaining walls. This IB was updated to simplify information and add in an existing residential exemption.

Scope:

A retaining wall is a wall designed to resist lateral earth and/or fluid pressures, including any surcharge, in accordance with accepted engineering practice. Retaining walls are considered structures, and permits are required prior to construction as outlined by Section 10-6(e) of Chapter 10 of the City Ordinances. The City of San Antonio exempts retaining walls from permitting if walls are 4 feet or less in height, all along its' length, measured from the grade level at the front of the wall to the top of the wall, unless the wall supports a surcharge, or impounds Class I, II or IIIA liquids. If a wall is 4-feet or less in height but supports a surcharge, a permit is required. (See exemption below for retaining walls on residential lots with an established home.)

Definitions

Surcharge A surcharge is a vertical load imposed on top of the wall or on top of the retained soil imposing a lateral force on the wall in addition to the lateral earth pressure of the retained soil. Examples of surcharges are:

- Sloping retained soil steeper than 3:1 (3 horizontal to 1 vertical) adding a surcharge force.
- Building foundations, parking lots, roads/driveways, footings for advertising signs and monuments or other structures that create additional forces on the wall. If these additional structures are located a distance from the wall greater than one and one-half (1 ½) times the exposed height of the wall, they are not considered surcharges.

- Solid Fences contribute wind load forces onto the wall. If a fence is attached or directly adjacent to a retaining wall these create a surcharge. However, residential retaining walls on established lots that are 4-feet or less in height are exempt from permits if the only surcharge is a fence. (The exemption does not apply to a pre-cast concrete or CMU block fence). Regardless of a retaining wall permit requirement, a residential fence permit is still required.

Tiered Retaining Walls Tiered walls are two or more walls tiered together that acts as a larger wall. If the horizontal distance between upper and lower walls is less than or equal to two times the height of the lower wall, measured from the face of the bottom of the wall at grade to the top of the wall, the multiple wall system is considered a single tiered retaining wall. The total height of a tiered wall shall be measured from the grade at the front of the lower wall to the top of the upper wall. If the horizontal distance between walls is greater than two times the height of the lower elevation wall, then the walls are considered separate for design and permitting purposes.

Multiple walls may be submitted for one address under one application, or each wall may be submitted separately depending on phasing of construction.

Structures that are not Retaining Walls for permitting purposes

Development Services requires permits for structures that may retain soil but are not considered retaining walls. The following are not considered retaining walls and are permitted through other DSD permit applications.

- Detention Pond Walls designed as part of a detention pond. These are civil structures permitted separately as part of the scope of a larger building permit.
- Foundation Walls/Basement Walls - These are designed by structural engineers as part of a foundation. They may include extensions of a building foundation outdoors that retain soil on one side. These are permitted as part of the building foundation in a building permit.
- Wing Walls. These include walls that may retain soil as part of a standard culvert design, bridge design, or tunnel design. These are sometimes in the public right away and then not permitted through Development Services.
- Fences are covered under the Unified Development Code. Residential fences require an [Residential Fence](#) permit. Commercial fences are permitted through the [Commercial Project Application](#).

Permit and Design Requirements

Retaining walls requiring a permit shall be designed by a Texas Licensed Professional Engineer. Retaining walls may also require a global stability analysis performed by the design professional. The owner is responsible to hire the design professional to provide a final letter of inspection to DSD (example letter attached to this IB). The following summarizes the requirements for submittal depending on wall height and surcharge:

Walls 4-Feet and Less in Height with No Surcharge

- No Permit required
- No inspections required
- A separate Tree Affidavit/Permit is still required

Walls 4-Feet and Less in Height with a Surcharge

- Permit required
- Design Professional design required
- Design Professional inspection letter required
- Exemption for Existing Established Residential lots – A retaining wall 4-feet or less in height is exempt from permitting if the only surcharge is a fence not made of pre-cast concrete or CMU block. A fence permit is still required.

Walls greater than 4-Feet in Height

- Permit required
- Design Professional design required
- Design Professional inspection letter required

Design Requirement Notes:

Design Professional – Texas Licensed Professional Engineer - walls less than 10-feet in height may be designed by a Texas Registered Landscape Architect if there is no surcharge on the wall system.

Inspection Letter –Required design professional inspection letter to clear final inspection and close the permit. Submitted by the design professional in responsible charge performing the on-site inspections during construction– See attached standard sample letter. The letter is uploaded to the permit record through BuildSA.

Global Stability Calculation Requirements

A global stability analysis can be provided by a geotechnical engineer or a retaining wall design engineer. For retaining walls that require a permit, a Global Stability Analysis (GSA) is required for the following:

- The groundwater table is above or within the wall height
- All tiered retaining walls
- The retaining wall is over expansive soils, organic soils, or peat
- A surcharge includes an occupiable building or a traveled roadway/drive isle/parking lot
- A retaining wall is 10-feet or higher with or without a surcharge
- Slopes greater than 3 to 1 (3 horizontal to 1 vertical) at the toe or the top of the wall.

A geotechnical / wall design engineer may submit a stamped and sealed letter to the City indicating the reasons why a GSA is not required. The City will review such as request and respond back.

Submittal for Application, Issuance of Permits and Inspection Process

- **Application** – Retaining walls for both residential and commercial applications are applied for using the Commercial Project Application. This application is an electronic submittal through the [Accela Customer Access \(ACA\) Portal](#). The application is located under the “Building” module tab. Choose “Create an Application”, and then chose the “Commercial Project Application”. Within the online application, the applicant will choose the type of commercial project application. The retaining wall is a sub-type of “Minor Structure”, so the applicant will select Minor Structure. For a standalone retaining wall, the applicant should never check Sitework, only Minor Structure”, since the sitework associated with a retaining wall is part of the issued retaining wall permit. Checking Sitework as a type of application in addition to a retaining wall will create a second permit. Later in the application, the applicant will select “Retaining Wall” and fill out information about the wall(s) to be permitted.
- **Multiple walls** – Multiple walls on one lot may be applied for under one application with one resulting permit issued. Information regarding each wall is entered under the one application. Each wall on an application/permit requires an inspection by the engineer with submittal of a letter addressing the wall(s). Alternatively multiple applications and permits for one lot may also be submitted if more appropriate because of construction phasing.
- **Application Type** - A retaining wall may be standalone application (applied for with no other scope of work). The goal for first reviews is as 3-days after payment of the plan review fees. A retaining wall may also be applied for in one application as part of a larger scope of commercial work. When applied for in one application with other commercial work, the first-time review goal will be set to that of the larger scope of work. The submitted construction documents would include the design of the retaining wall(s) as well as the design of the rest of the commercial project.
- **Electronic Design Documents** - After the application is submitted, the next step is to upload the construction plans (documents) in one or more pdf files to the Plan Room located under the application record in the BuildSA Customer Portal. It is important to remember that the City does not receive notice of the application until electronic documents are uploaded to the Plan Room.
- **Plan Review Fees** - Once the City reviews the submittal and electronic documents for completeness, the Plan Review fees are generated which may be paid through the BuildSA Customer Portal. Plan Review fees are paid on the application record.
- **Technical Reviews** – Issues (questions or requests for revised documents) are created in the Plan Room with e-mail notice. Customers respond to issues by submitting revised or missing documents through the Plan Room in the Customer portal.
- **Building Permit Fees** - Whether a retaining wall is applied for separately or as a part of a larger commercial project application, a retaining wall permit will be created with a retaining wall permit number for inspection purposes. After plan review is complete the permit records are created and building permit fees may be paid. Building permit fee payments are made through the shopping cart in the BuildSA Customer Portal. Payments may be made on the application record or the permit record.

- **Inspections** - Retaining walls are subject to a requirement for inspections by the design professional of record registered/licensed in the state of Texas. Inspection and certification of the construction of the retaining wall will be provided by the design professional registered with the State of Texas. The design professional will be required to submit a letter indicating the construction was in general conformance to the engineered/landscape design as approved by Development Services prior to completion and closing of the permit. A sample letter is attached to this document. The letter will need to be submitted on the permit record through the BuildSA Customer Portal. The upload creates a Document Review by city inspectors.
- **Permit Close Out** – For a larger project, the retaining wall permit(s) are considered children of the main building permit and will be required to be closed prior to obtaining a certificate of occupancy. The actual retaining wall permit will receive a Letter of Completion by e-mail once inspections are complete and all fees are paid.

Mechanical, Electrical, Plumbing, and Flatwork

Retaining walls permits are issued as minor structures permits and by default contain NO mechanical, electrical or plumbing/sewer (MEP) fees or inspections, or any sidewalk/curb driveway approach fees or inspections. Any MEP work in the scope of the project, and any flatwork associated with a retaining wall, requires separate trade permits pulled by a registered licensed MEP contractor or flatwork contractor. Construction drawings which include MEP or civil flatwork may be submitted with the wall(s) design, but no reviews, fees or inspections will be included on the minor structures/retaining wall permit record regarding this work.

If you have any questions regarding this Information Bulletin or the procedure for retaining walls, please e-mail DSDPlansManagement@sanantonio.gov.

This Information Bulletin is for informational purposes only.

Summary:

Prepared by:	Richard Chamberlin, PE, Development Services Engineer
Reviewed by:	Plan Review Division
Authorized by:	Melissa Ramirez, Deputy Director

Engineer's Registered Firm/Company's Letterhead

(Date)

(Client Name)

(Client Firm Name)

(Client Address)

(Client Address)

Project: *(Project Name)*

(Project Address)

San Antonio, Texas 78_____

Property Address or Legal Description: _____

City of San Antonio Building Permit Number: _____

Dear *(Client)*:

You constructed your retaining wall referenced above using construction documents prepared by *(Design Professional Engineer)*.

Qualified individuals from this office visited the site to check the construction stated above for general conformance with our construction documents. In my opinion, based on our experience, knowledge, information and belief, the stated construction that we observed is in general conformance with our construction documents.

As denoted by the engineering seal on the construction documents and on this letter, we believe we have fulfilled our obligations as an engineer under the Texas Engineering Practice Act pursuant to its requirements to protect the public health, safety, and welfare in the practice of engineering. We further believe we have met those requirements insofar as our responsibility for periodic observation of the work for conformance is concerned.

If you have any questions, please call.

Respectfully,

Engineer Signature

(Engineer Typed Name)

Engineer's P.E. Seal

Notes to help correctly prepare this form letter:

1. Fill in the specific date, client name & address, project information, permit number (A/P) and legal description where italicized.
2. For landscaping walls built to protect tree roots or to hold landscaped beds, allowed to be designed by any design professional registered/licensed with the Texas Board of Professional Engineers or the Texas Board of Architectural Examiners (except Interior Designers – See Table 171), you may substitute the word “engineer” with the appropriate term and substitute the words Texas Engineering Practice Act with the Architects or Landscape Architects statutes Chapter 1051 or Chapter 1052 respectively.
3. Sign, seal, and date before submitting to the City of San Antonio, Development Services Department.