

**Town of Indian River Shores
6001 North Highway A.1.A
Indian River Shores, FL 32963
Building Department
Telephone (561) 231-4453 & Fax (561) 234-5246**

Subject: Indian River Shores - Retaining Wall Construction

This memo summarizes the installation criteria for the construction of small gravity retaining walls used for landscape grading purposes. Walls built using stacked concrete filled bags, stacked concrete blocks or railroad ties are generally classified as "gravity" retaining walls. These types of wall retain earth and resist lateral earth pressures by the weight of the construction elements. Proper long-term performance of such walls is determined by the following three site conditions;

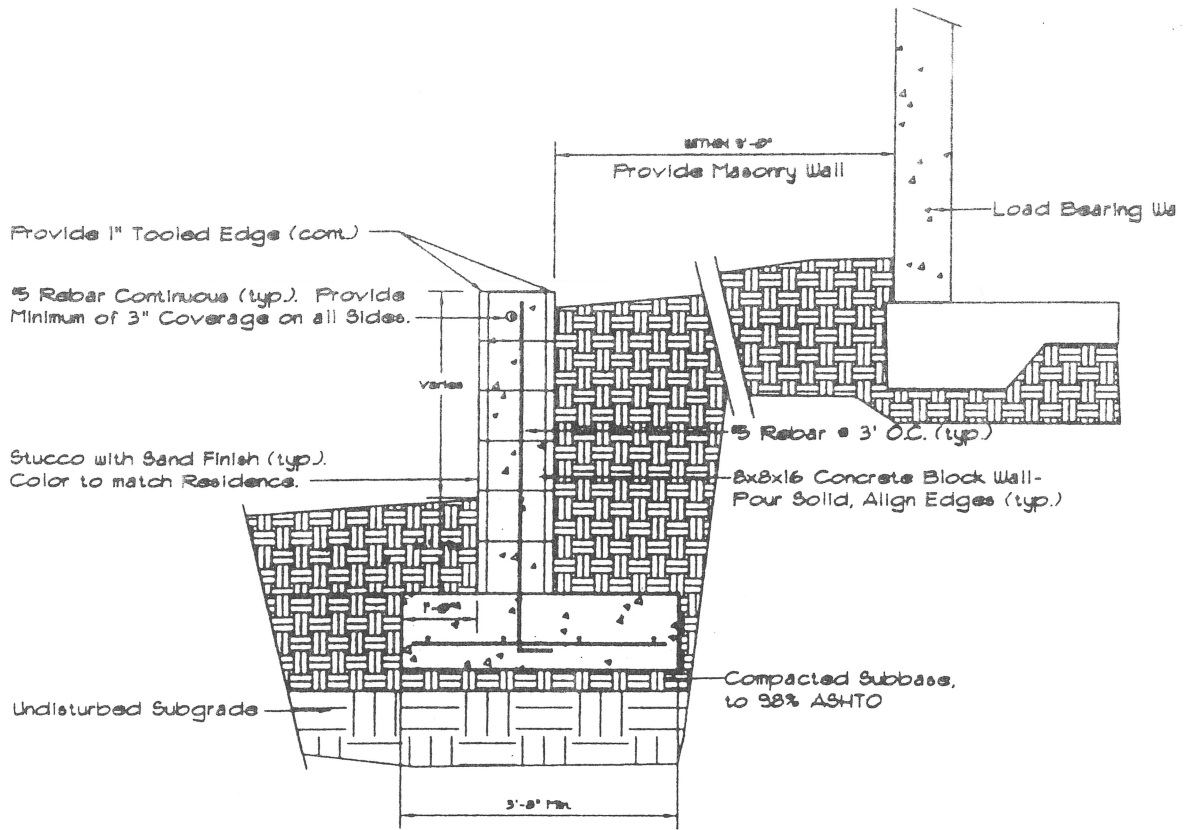
- *Foundation Materials and Compaction:* As with any structure, the adequacy of the foundation materials plays an important role in the performance of the retaining walls. Materials at the base of the walls are considered to form the foundation of the retaining wall. While clean compacted sands form adequate foundations, loose materials with high organic content provide improper support to the retaining walls.
- *Groundwater Conditions:* The presence of the groundwater level near the foundation level of the retaining wall significantly reduces the bearing capacity of the foundation soils thereby reducing the ability of the wall to properly retain earth. For a proper foundation condition for a small gravity retaining wall, the groundwater level should be about two (2) feet below the base of the wall.
- *Surface Water Drainage:* For proper performance of the retaining wall, surface water should flow away from the wall. Drainage towards the wall promotes a loss of fines through the gaps in the wall consequently causing subsidence of the back fill material.

In general, retaining walls are designed by engineers for the given site conditions.

The following are guidelines for the installation of small retaining walls for landscape use only;

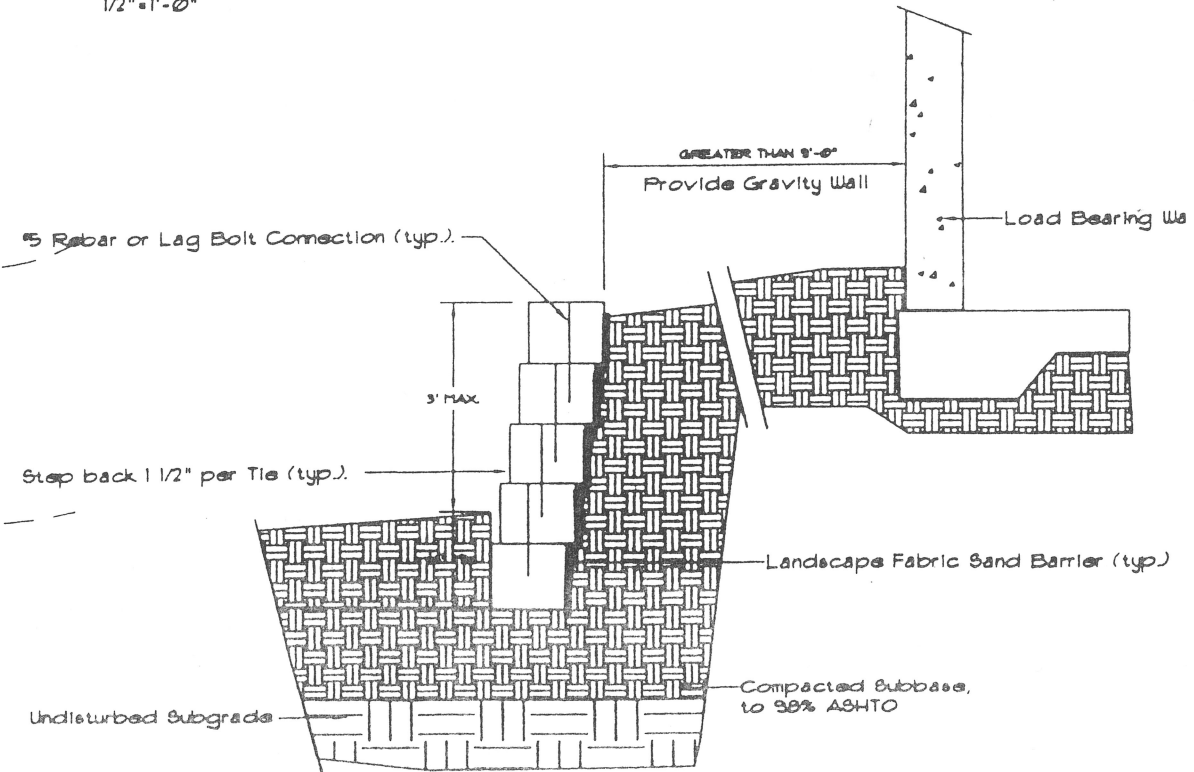
1. Walls should be three (3) feet in height or less when used for landscape grade separation purposes only.
2. The base of the wall should be at least two (2) feet above the prevailing ground water levels.
3. The foundation materials should be substantially free of organic materials and should be properly compacted.
4. The wall should be battered back about 4 to 6 inches.
5. Runoff should be diverted away from the wall.
6. Load bearing structures should not be within 9 feet of wall.

We require that a Florida registered Professional Engineer design any retaining walls that do not meet these requirements. Signed and sealed calculations should be submitted to the Town Building Department for approval.



Masonry Retaining Wall - Section

1/2" = 1'-0"



Gravity Retaining Wall - Section

1/2" = 1'-0"