

## Block Retaining Wall Specifications

The specifications listed below are an abbreviated list of the specifications recommended by the National Concrete Masonry Association (NCMA). More detailed information can be found at [NCMA.org](http://NCMA.org).

### Pre Construction Requirements

1. All materials and job details must be selected and confirmed.
  - a. Including patterns and exact locations.
  - b. Any permits required must be on site prior to the start of the project.
2. The underground utilities must be clearly marked.
  - a. Public Utilities will be marked by Gopher State One Call
  - b. The homeowner is responsible for marking private utilities such as irrigation, dog fence, low voltage lighting, outdoor electrical, buried gas lines, etc.)
3. The site must be in dry, workable condition, free of obstructions.

### Removal and Excavation

1. The existing material and debris in the work area will be removed to a depth that will allow for 6" of compacted base and 1 course of block to be buried.
2. When possible all private and public underground utilities should be rerouted away from the work area.
  - a. In the case that a utility cannot be rerouted from the work area, the utility will be put through a sleeve in the base.
    - i. In the event that a utility obstruction cannot be put through a sleeve without damaging the utility, an empty sleeve may be installed adjacent to the current utility for use at a later date.
    - ii. In no situation shall an irrigation line be spliced underneath a patio or sidewalk.
3. A trench will be excavated in the subsoil that is 1' wider than the width of the wall.
4. The excavation will step with grade.

### Base Installation and Compaction

1. The subsoil will be compacted using a mechanical compactor.
  - a. In the event that the subsoil does not allow for smooth compactor operation, a 1" layer of base material may be installed before compacting the subsoil.
  - b. Extra care will be taken to ensure proper compaction around obstruction such as foundations, footings, driveways. A jumping jack compactor or manual hand tamper will be used.
2. The base will be installed at least 6" wider than the wall width.
3. An aggregate base will be installed in 4" lifts. The base may contain some materials ranging in size from dust up to 1", but may not contain the full range of sizes. The base can be limestone or recycled concrete/asphalt material.
4. The base will be moistened to the proper level for compaction and compacted using mechanical compaction equipment. Extra compaction will be done around obstructions as listed above under subsoil compaction.

5. Subsequent lifts of base will be installed to bring the base up to the required height following the guidelines listed above.

### **Block Installation**

1. The first course of block will be leveled on the compacted base. The block must be level in all directions.

### **Stacking and backfilling**

1. The subsequent courses of block will be stacked no more than two courses at a time.
2. Drintile will be installed as per manufacturer's specifications and will be outletted from behind the wall.
3. Clear open graded drain rock will be installed behind the wall in a minimum of 1' behind the wall. The drain rock will be installed in all courses except for the top course of block.
  - a. The rock and any dirt fill will be compacted in lifts of no more than 6".
4. The top course of block will be backfilled with soil.

### **Capping**

1. Caps will be installed and glued using construction adhesive designed for bonding concrete.

### **Maintenance**

1. Relax and enjoy! Your new retaining wall will require little more than removing the leaves or debris that fall on it.