

MASONRY

Masonry Walls at Property Line and Returns 149

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The drawing below shows all the information needed to build our block wall. We build a masonry 8-inch pilaster/4" interlock engineered designed wall on our new homes.

Sequence to Follow:

1. A plot plan is issued by our Pre-Construction Operations Manager. The plan shows the location of the walls, gates, wall heights. All our lots are surveyed and pinned with property corners prior to any work being started.
2. Building permits and inspections requirements for masonry walls vary from city to city throughout the state of AZ. Some require and some don't.
3. In the event inspections are required the HFH masonry superintendent will call in the inspection and be present on site for inspection.
4. Our masonry superintendent along with construction managers determine if we will self-perform or sub out the work on a lot by lot basis.
5. We attempt to get any neighbors we share a property line with to sign a hold harmless agreement prior to starting any work. When the agreement is signed, we split the property line 4 inches on each side. In the event we do not obtain a hold harmless agreement we keep the wall entirely on our property. Any walls bordering alleys, non-private residentially owned property we also keep the wall entirely on our property.
6. We clear the property line of all existing objects, and we require 3' on each side of center clear for our excavation contractor. Prior to any excavation on our sites we are required by law to schedule AZ 811 (formerly known as Blue Stake). They schedule the marking of underground utilities.
7. The scheduled start of the walls varies from house to house. We typically will be building the walls at the start of the pad/pouring of the floor slab. We hold off on the return walls till the house has been stuccoed and painted.

Standard Policies / Codes

Gates:

- 1 – 4' walk thru, most often located on the garage side of the house.
- 1 – 4' walk thru to alleys.
- On side yards exceeding 16' in width we propose a 10' RV gate subject to approval of family services, the homeowner gets the option at an extra cost.
- We buy the gates from a supplier and install with volunteers on self-performed walls.

Wall heights:

- 6' high + or – above footing grade on rear, side and return walls.
- 3' high + or – above footing grade on walls on street side/front of house/ return walls.
 - Note: Not all homes get 3' walls, this is determined on a house by house basis.

Return Walls:

- Return walls must be built behind the electrical service panel, and not obstructing access to it from the front/street side of house.

- The face of the wall must be a minimum of 36 inches from center of the electrical panel (we typically go 40 inches). This can vary house to house depending on the location of tv and cable conduits stubbed up for the homeowner (these conduits are on the non-street side of the panel riser).

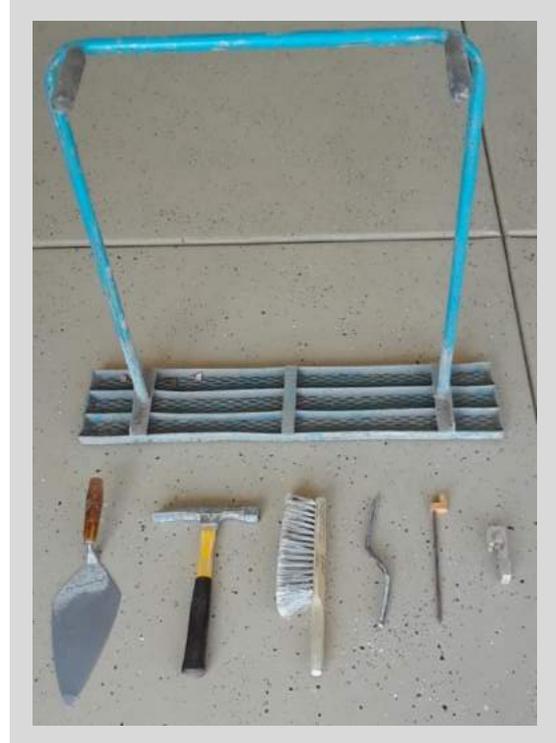
Clean up and grading:

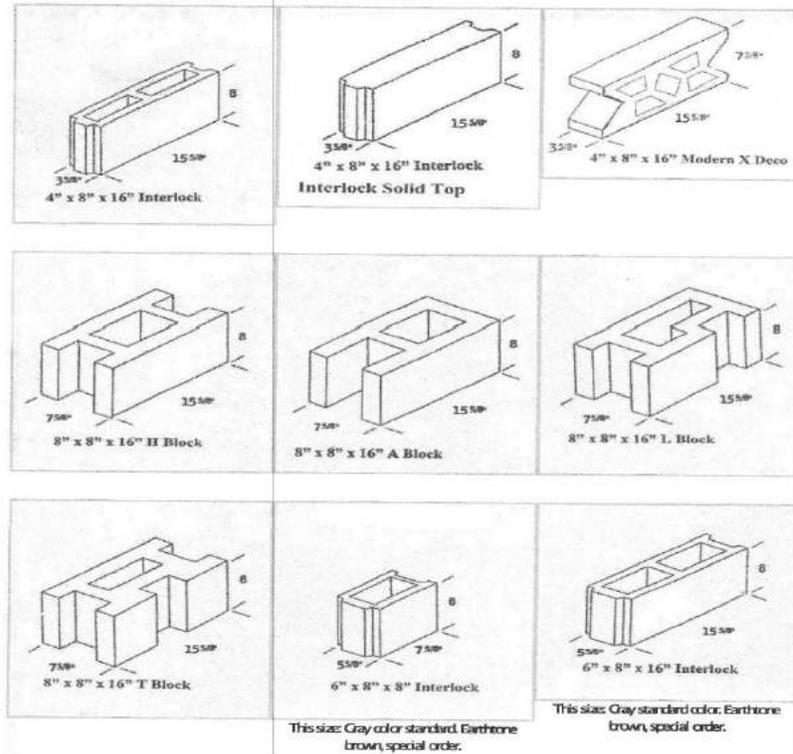
At the completion of the masonry walls we grade and clean up our lot and the neighbors.

Masonry Tools Needed to Build Our Walls

Top: Concrete Tamper

Left to Right: Mason's Trowel, Brick Hammer, Soft Brush (used after striking joints, to clean off excess mortar etc), S-Jointer (gives a concave finish to the mortar joints, most effective moisture/water Shedding joint, pro longs the life of the mortar), Rebar Isolator (used in placing horizontal rebar in the footing), Line block (used to secure line when pulled horizontal to lay block).



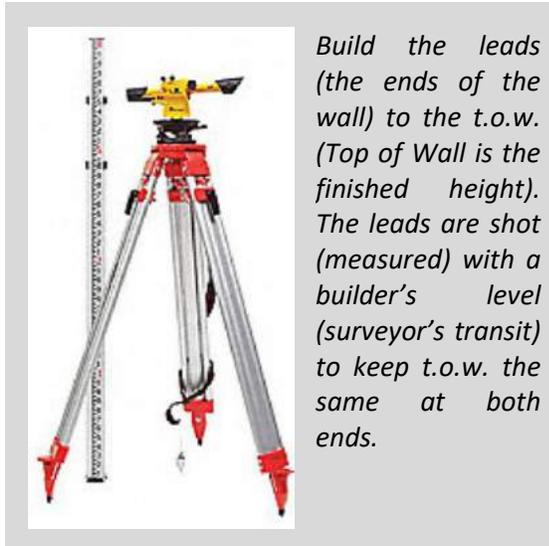


Types of Block

- The A block is used at jambs and openings. At this location we have two vertical rebar coming out of the footing continuing to the top of the wall.
- The H block is located in the middle of the wall with the 4" interlock block laid from both directions
- The L block - aka C block or corner block. These are laid at the corners with the interlock laid in two directions at 90 degrees.
- The T block - is laid at intersecting walls and the interlock can be laid in three directions.
- The Wagon Wheel block is laid at the bottom of the wall allowing for water drainage, typically at the returns.

Building the Wall

All block wall footings are dug by our excavation contractor, so the first step for us is Footing Layout. Once the footing is poured and the block layout is established, the wall is built in the following manner.



Build the leads (the ends of the wall) to the t.o.w. (Top of Wall is the finished height). The leads are shot (measured) with a builder's level (surveyor's transit) to keep t.o.w. the same at both ends.



Once the leads are completed, we start building the wall in panels (the sections between pilasters), usually one panel per bricklayer.

We normally lay 2 courses at a time and strike the joints every two courses. When there are enough volunteers we have them do all of the striking. Striking like all finish work is very important and critical to the appearance of the wall. Bad striking will make a perfectly laid wall look terrible, while good striking can help improve a wall not as well laid.

The duro-wire is laid on top of every 2 courses (16" o.c.), so it is put in place before laying the next two courses.

This sequence is followed until we reach the top course, where we lay solid top block.

Once the wall is completed, we install a lap bar in the pilasters, the rebar coming out of the footing is typically 3' above the footing. The lap bar is a piece of rebar typically 4 inches shorter than the total height of the pilaster. The amount of lap is called out on the GSN (the General Structural Notes on your plans).

The next step is to grout (fill) the pilasters, and once grouted we lay a 2" solid cap on top of each pilaster.

The last step is clean up. We clean the wall (loosening excess mortar and other debris by scraping with a trowel and then brushing it off), remove any mortar spoils (spills) on the ground and hand grade the soil against the bottom of wall.

As dictated by special circumstances we occasionally build walls that include wrought iron view panels. We use 3' high wrought iron panels on top of 3' high block walls. We lay a single 8x8x16 block, have rebar in each cell and grout solid. We use Red-Head brand masonry anchors to fasten the wrought iron brackets to the masonry.

