

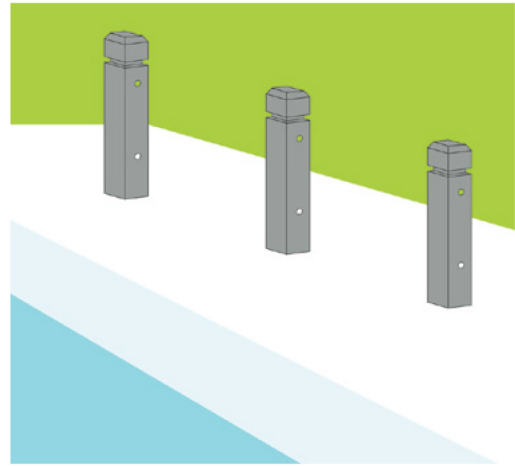
Bollard Installation into Concrete

PolyScape® by Bedford Plastic Bollards are decorative posts that can be used to mark boundaries, protect areas, or add aesthetic appeal to your outdoor space. They are made from recycled plastic and have the look and feel of natural wood. Unlike wood, they will not rot, crack, splinter, or warp, and they are resistant to insects, mold, and moisture. They are easy to install and maintain and can be cut, drilled, and fastened with standard tools. This guide will show you how to install a bollard in a concrete base.

For decorative use only, not made to stop vehicles.

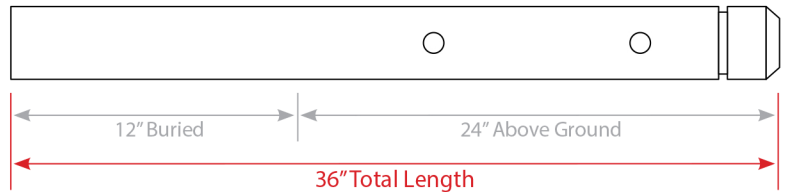
TOOLS & MATERIALS

- | | | |
|--------------------------------|----------------------------|----------------|
| - Plastic Bollard (4x4 or 6x6) | - 2 - 1/2"x12" Rebar | - String Line |
| - Jack Hammer / Air Chisel | - Expansion Joint Material | - Tape Measure |
| - Sledgehammer | - Drill | - 4' Level |
| - Cement Saw | | |



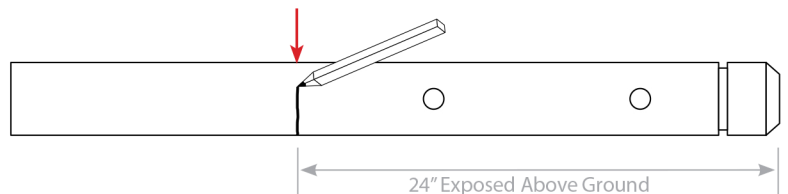
STEP 1: Determine Height

Determine final height of bollard above cement. Take final height desired and multiply times 1.3 to determine correct height; cut bollard to this measurement. This should leave approximately 1/3 the of bollard in cement. If bollard was preordered to length, go to next step.



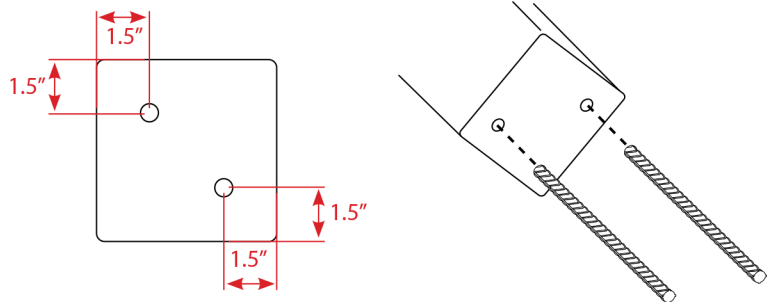
STEP 2: Mark the Bollard

Mark a line on the bollard at desired exposed height. In this example, 24" down from the top.



STEP 3: Insert Rebar

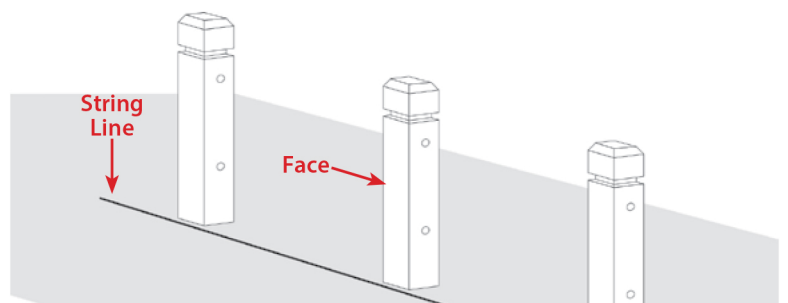
Drill two 1/2" holes 1.5" in from each side, opposite of each other, at a depth of 4-5". Cut 2 pieces of 1/2" rebar to approximately 12" long. Pound rebar into drilled holes.



STEP 4: Alignment

For **retrofit**, shown here, snap a string line between existing bollards to determine face or outer edge of bollard.

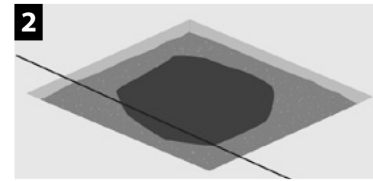
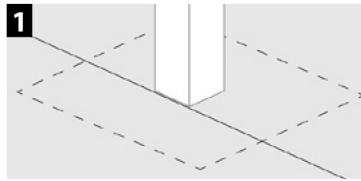
For **new installation**, skip to Step 7.



ASSEMBLY

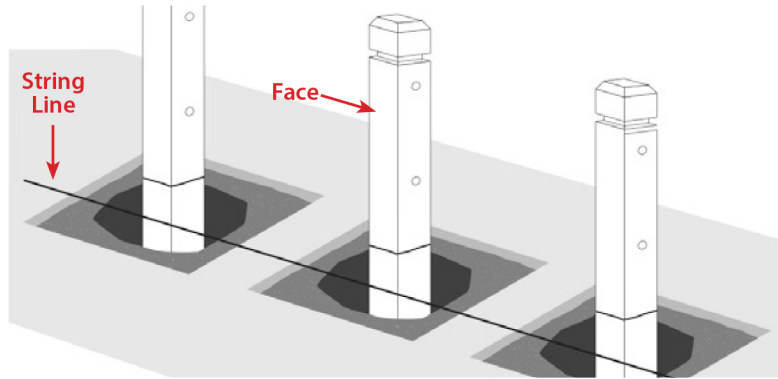
STEP 5: Remove Old Bollard

1. Mark a 16-24" square around existing wooden bollard. Use a cement saw to cut the square around the existing bollard.
2. Use a jackhammer or air chisel to break up cement within the square. Completely remove all material down to sub-base.



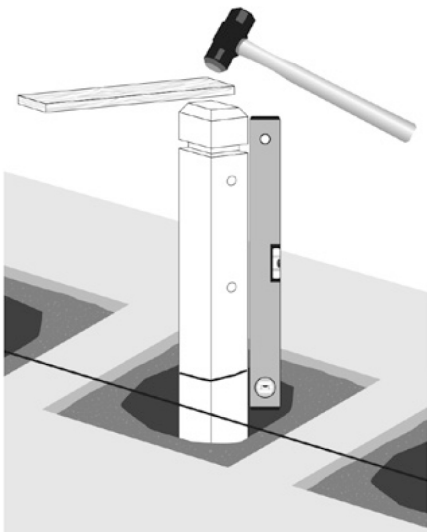
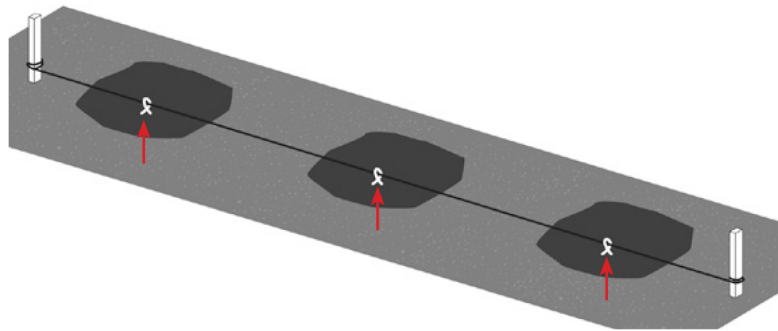
STEP 6: Orientation

Determine correct orientation of bollard to existing line. Install face of bollard flush to string line. Measure that bollard center-line is at center point between existing bollards. Go to Step 8.



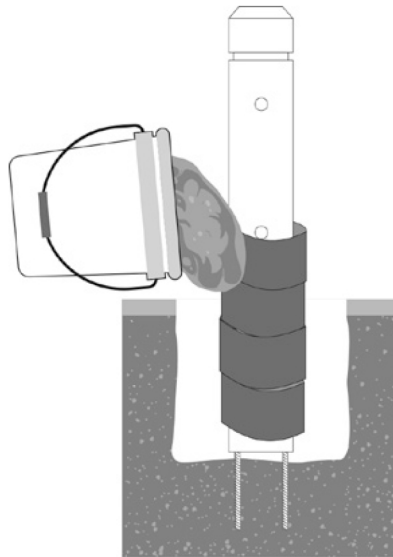
STEP 7: Layout

For new installation, determine path and correct orientation of bollard(s). Place a string line at the final cement height. Dig a hole that is equal in length to the bottom third of the bollard. For example, dig a hole 12" deep so that 24" of the bollard is exposed above ground. Go to Step 8.



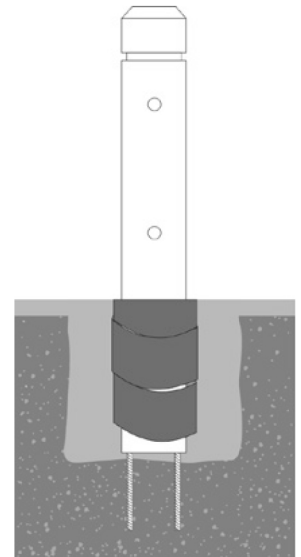
STEP 8: Secure in Place

Using a sledgehammer and a scrap piece of wood, pound down on top of bollard so that rebar engages with sub-base below existing concrete. Pound to desired final height. Check for plumb and correct orientation.



STEP 9: Wrap & Set with Cement

Wrap base of bollard with expansion wrap material 6-10" higher than final concrete height. Mix concrete to manufacturers instructions. Fill in the hole and smooth out.



STEP 10: Trim Wrap

Once concrete is set, trim excess expansion wrap material so that it is level with final concrete height. Your bollards are now ready to use.