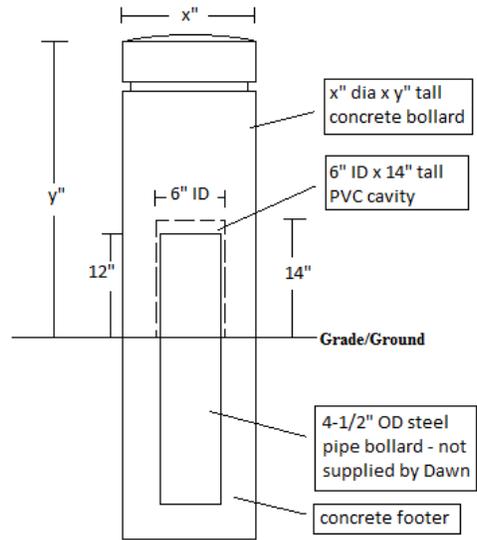


Standard Bollard Installation Methods

Option 1: Cavity and Pipe Installation

Available for: 10" sq or larger bollards - BOC10S, BOC10SP, BOC12R, BOC12RPD, BOC12RC, BOC12D, BOC12S, BOC14R, BOC18R, BOC24R or BOC24RD

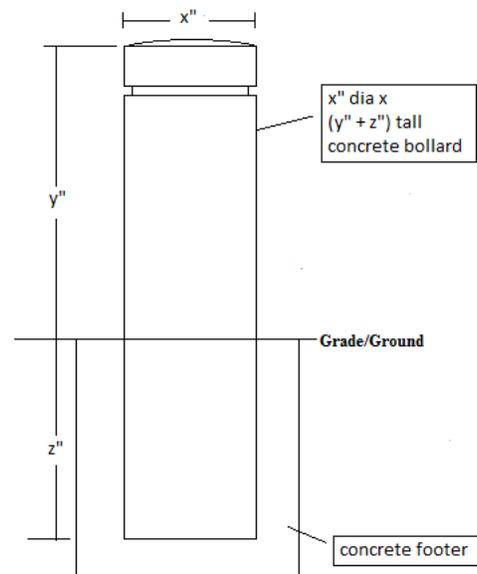
This installation method involves the customer embedding a 4-1/2" OD steel pipe (sold separately) into a concrete footer leaving 12" of it exposed above ground level. Dawn Enterprises casts a 6" ID x 14" deep piece of PVC pipe into the bottom of the concrete bollard to create a cavity that will accommodate the exposed steel pipe. Once the concrete footer sets the customer then mounts the precast concrete bollard over the top of the steel pipe, securing it to using a small amount of concrete, an epoxy adhesive or similar.



Option 2: Direct Embed Installation

Available for: All concrete bollards - BOC6R*, BOC8R*, BOC10S, BOC10SP, BOC12R, BOC12RPD, BOC12RC, BOC12D, BOC12S, BOC14R, BOC18R, BOC24R or BOC24RD

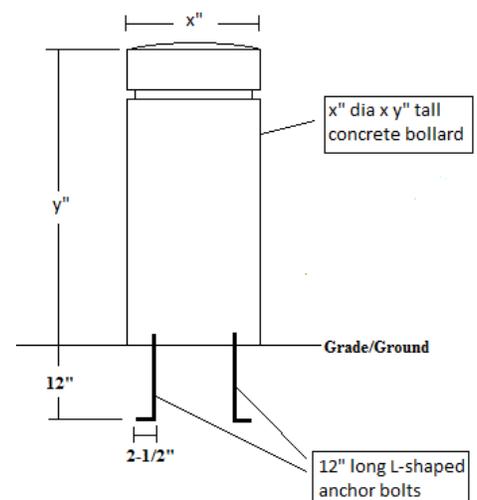
This installation method involves embedding the precast concrete bollard directly into a concrete footer. To get the overall length of the bollard required, add the above grade height to the below grade depth (labeled 'y' and 'z' in drawing to the right).



Option 3: Anchor Bolt Installation

Available for: 10"sq or larger bollards - BOC10S, BOC10SP, BOC12R, BOC12RPD, BOC12RC, BOC12D, BOC12S, BOC14R, BOC18R, BOC24R or BOC24RD

This installation method involves either (2) or (4) L-shaped anchor bolts coming out of the base of the concrete bollard to anchor them into the ground. The bolts can either be embedded in a shallow concrete footer or can be secured into small core drilled holes with concrete, an epoxy adhesive or similar.



*Please Note: The BOC6R's & BOC8R's are designed to be an aesthetically pleasing delineation to guide the flow of pedestrian traffic. Because of their small diameters, they will not withstand repeated bumps or hits from vehicles and as such should not be used in parking lots or other high traffic areas. If they are struck by a vehicle, they will need to be replaced.