

11/16/2018

Stop™ Removable Mount Bollard

HANDLE WITH CARE! Pangard II® Polyester Powder coat is a strong, long-lasting finish. Protect this finish from damage during installation. Place unwrapped powder coated parts on packaging foam or other non-abrasive surface. Do not place or slide powder coated parts on concrete or other hard or abrasive surfaces – this will damage the finish causing rust to occur. Use touch-up paint to repair any finish abrasions.

NOTE: Landscape Forms is not responsible for site preparation, footings, or drainage.

Hardware:

Bollards include the following components (see Figure 1):

- (1) – Removable Mount Tube Assembly
- (1) – Removable Mount Socket Assembly
- (1) – Bollard Casting
- (4) – 5/16-18 X 1.25 Set Screws with Thread Adhesive

Necessary Tools:

- Blanket or other padded material
- 3/16" Hex Wrench
- 1/2" Box end wrench

Procedure for embedding the removable bollard socket:

Warning: *Layout of Socket assembly determines the orientation of the bollard casting*

1. Excavate for socket footing and install drain (see Figure 1). Depth of socket is 1'-6". Footing depth is the responsibility of the installer and should comply with local and national building codes. Frost depth should be taken into consideration. Landscape Forms recommends 24" minimum depth to fully retain the socket. *Failure to allow for proper drainage may void the standard Landscape Forms warranty.*
2. Before pouring concrete, make sure the socket is plumb and in the correct orientation. The top of the socket should be flush with the top of the concrete after installation.

NOTE: ALL stop bollards have an alignment guide built into the assembly. The alignment guide consists of a flat edge on one of the components that is 2-11/16" from the center of the bollard tube. This flat edge aligns with the Front of the bollard. This alignment guide is the same for the Surface Mount, Embedded, and Removable Mount STOP bollards (See Figure 2), allowing them to be aligned during installation.

3. Make sure lower end of socket is sealed to prevent concrete from entering. PVC cap may be cut to fit drain connection.
4. Cover top of socket to prevent concrete from entering.
5. Once the concrete has cured, the bollard tube cannot be moved. Plumb the bollard before pouring concrete. After pouring concrete around the bollard tube, re-check plumb.
6. Gently clean all concrete splatter off of the bollard tube. Allow concrete to fully cure.

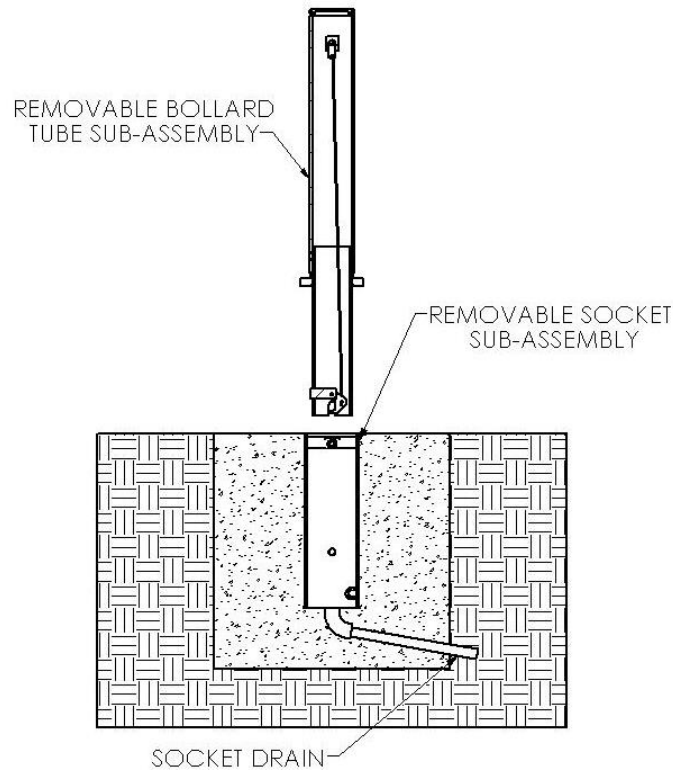


Figure 1 – Removable Bollard Socket Installation and Components

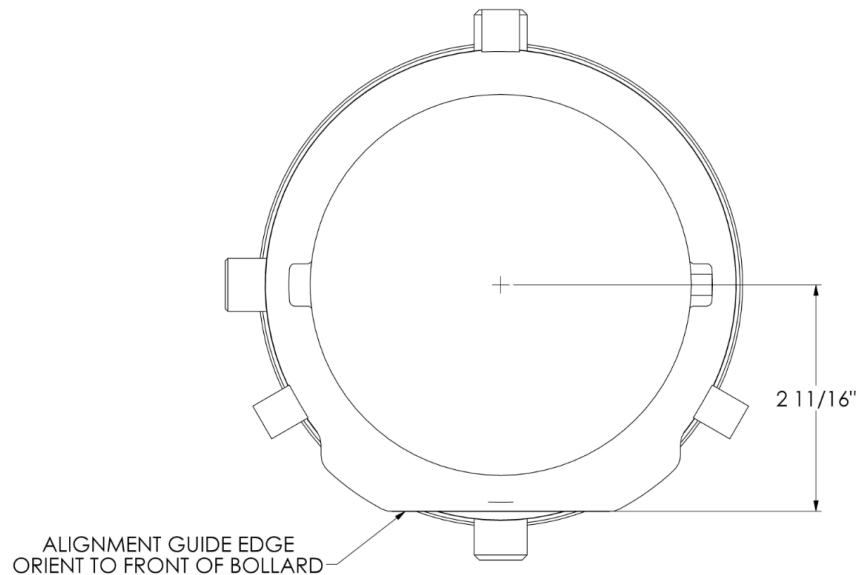


Figure 2 – Top View of Removable Bollard Socket Showing Alignment Guide

Procedure for installing removable bollards:

1. Remove socket cover plate. (*Hint: use a flat blade screwdriver to pry up edge*)
2. Store socket cover plate *below* cross bar inside socket.
3. Use key to open bollard latch (key horizontal). Remove key.
4. Position bollard near socket and align 2 slots in bollard with bar in socket. The lock should be oriented on the side opposite the flat alignment guide of the socket.

WARNING! TO AVOID INJURY TO PERSONS HANDLING BOLLARD, USE TWO PERSONS TO TEAM LIFT AND CARRY BOLLARD. Weight of bollard weighs ~75 lbs.

5. Ease bollard into socket. Twist until bars fit into slots.

CAUTION: Dropping bollard into socket may damage bollard or socket.

6. Using the ½" wrench, adjust the 3 screws inside the socket to adjust bollard alignment and to improve the fit of the bollard inside the socket. The bolts have nylon patches to resist movement after installation.
7. Use key to close latch (key will be vertical). Remove key.
8. Pull up on bollard tube assembly to insure latch is engaged.
9. Gently place the bollard casting over the removable mount tube and lower it to the mounting flange, using care not to scratch the finish of either component. The open side of the bollard casting is considered the front and should align with the flat edge of the mounting flange.

NOTE: The set screws have a tamper-resistant thread patch pre-applied to them. Once the set screws are installed, the adhesive begins to cure. The next few steps should be completed within 30 min.

10. Install the (4) set screws into the bollard casting until they just contact the mounting flange.
11. Verify the bollard tube is centered within the bollard casting. Adjust as necessary and fully tighten the set screws.
12. Verify alignment of the bollard casting openings with architects drawing(s). If changes are necessary the set screws may be loosened, and the bollard casting may be rotated to the correct alignment. Repeat steps 7 and 8 if this is necessary

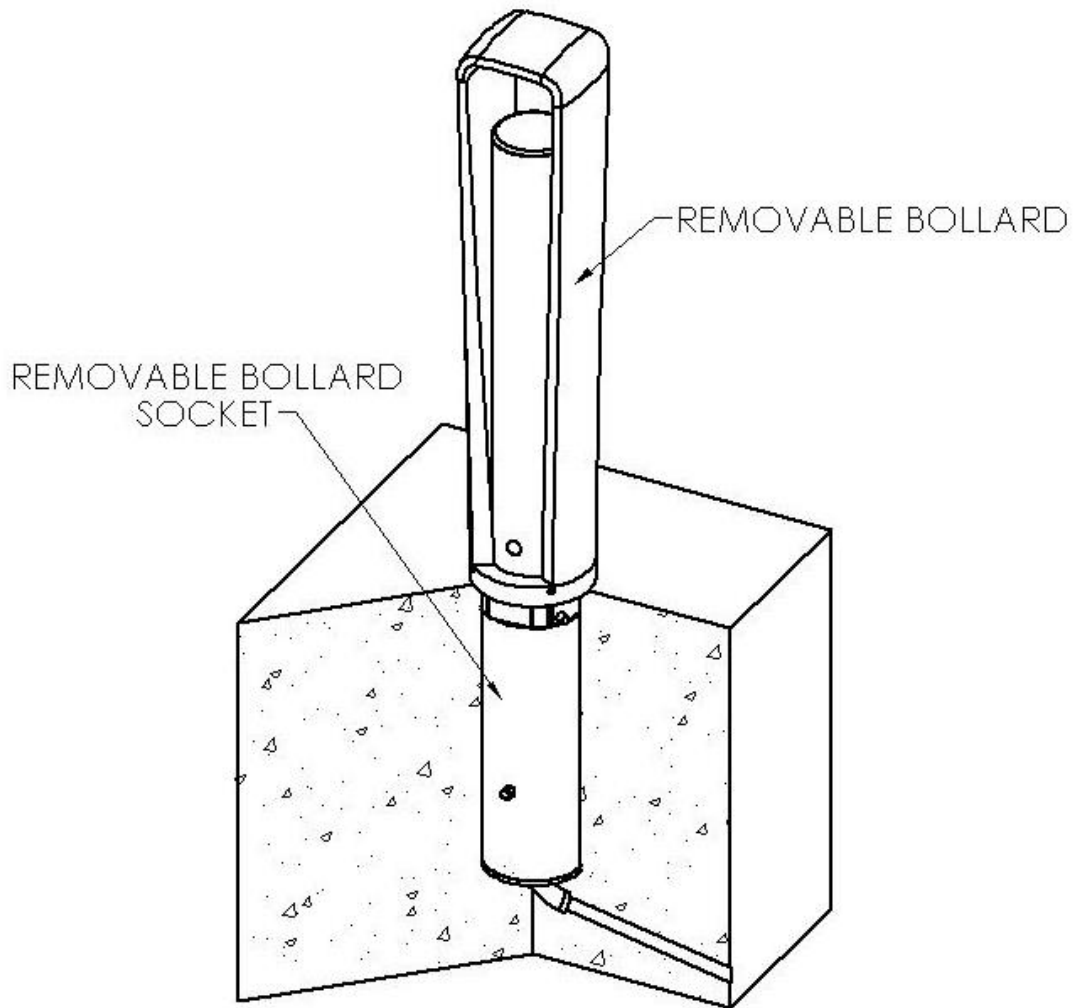


Figure 3: Removable Bollard after Installation

Procedure for removing removable bollards:

1. Use key to open latch (key will be horizontal). Remove key.
2. Carefully lift bollard out of socket and store on surface that will not damage finish.
3. **WARNING! TO AVOID INJURY TO PERSONS HANDLING BOLLARD, USE TWO PERSONS TO TEAM LIFT AND CARRY BOLLARD.** Weight of bollard is 75 lbs.
4. Retrieve socket cover plate from bottom of socket.
5. Place cover plate half onto socket making sure it is sitting flat and below the socket surface.

03/19/2021

Stop™ Embedded Mount Bollard

HANDLE WITH CARE! Pangard II® Polyester Powder coat is a strong, long-lasting finish. Protect this finish from damage during installation. Place unwrapped powder coated parts on packaging foam or other non-abrasive surface. Do not place or slide powder coated parts on concrete or other hard or abrasive surfaces – this will damage the finish causing rust to occur. Use touch-up paint to repair any finish abrasions.

NOTE: Landscape Forms is not responsible for site preparation, footings, or electrical wiring.

Procedure for installing embedded mount bollard with no light:

Hardware:

Bollards include the following components (see Figure 1):

- (1) – Embedded Mount Tube Assembly
- (1) – Bollard Casting
- (4) – 5/16-18 X 1.25 Set Screws with Thread Adhesive

Necessary Tools:

- Blanket or other padded material
- 3/16" Hex Wrench

Warning: *Layout of bollard tube assembly determines the layout of the bollard casting*

NOTE: ALL stop bollards have an alignment guide built into the assembly. The alignment guide consists of a flat edge on one of the components that is 2–11/16" from the center of the bollard tube. This flat edge aligns with the Front of the bollard. This alignment guide is the same for the Surface Mount, Embedded, and Removable Mount STOP bollards (See Figure 2), allowing them to be aligned during installation.

1. Place bollard(s) in the desired location and orientation(s). The flat edge of the alignment guide should face the front of the desired orientation. The bottom edge of the mounting flange should be flush with the top of the concrete (See Figure 3).
2. Footing depth is the responsibility of the installer and should comply with local and national building codes. Frost depth should be taken into consideration. Landscape Forms recommends 24" minimum depth to fully retain the bollard.
3. Place a section of rebar (supplied by installer) through the hole near the bottom of the bollard (see Figure 1).
4. Once the concrete has cured, the bollard tube cannot be moved. Plumb the bollard before pouring concrete. After pouring concrete around the bollard tube, re-check plumb.
5. Gently clean all concrete splatter off of the bollard tube. Allow concrete to fully cure.
6. Gently place the bollard casting over the embedded mount tube and lower it to the mounting flange, using care not to scratch the finish of either component. The open side of the bollard casting is considered the front and should align with the flat edge of the mounting flange.

NOTE: The set screws have a tamper-resistant thread patch pre-applied to them. Once the set screws are installed, the adhesive begins to cure. The next few steps should be completed within 30 min.

7. Install the (4) set screws into the bollard casting until they just contact the mounting flange.
8. Verify the bollard tube is centered within the bollard casting. Adjust as necessary and fully tighten the set screws.
9. Verify alignment of the bollard casting openings with architects drawing(s). If changes are necessary the set screws may be loosened, and the bollard casting may be rotated to the correct alignment. Repeat steps 7 and 8 if this is necessary

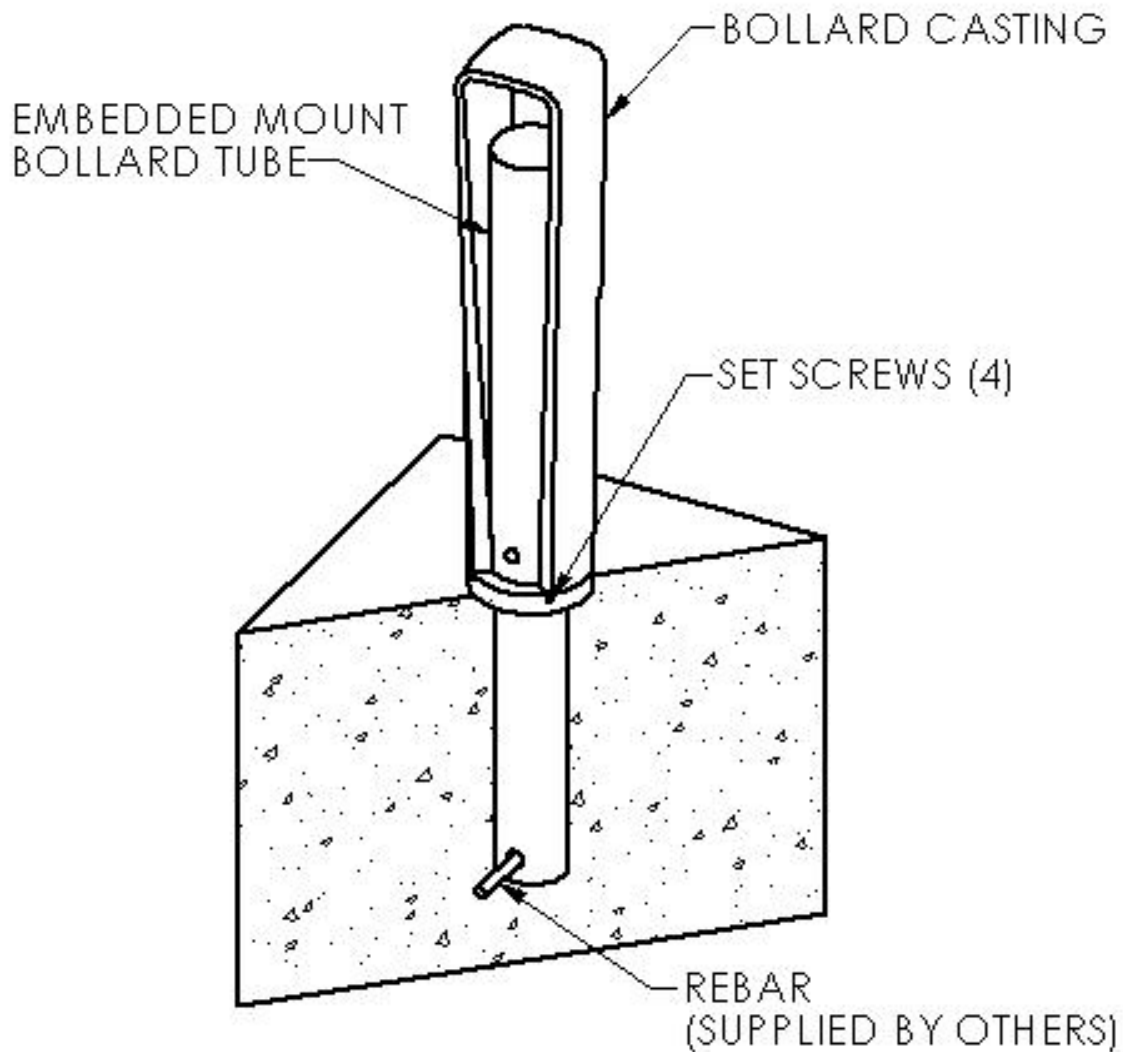


Figure 1: Embedded Mount Bollard Components

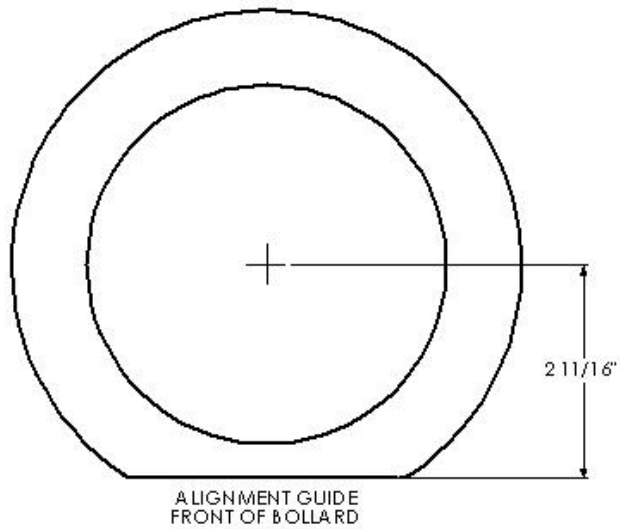


Figure 2: Top View of Bollard Post Assembly Showing Alignment Guide

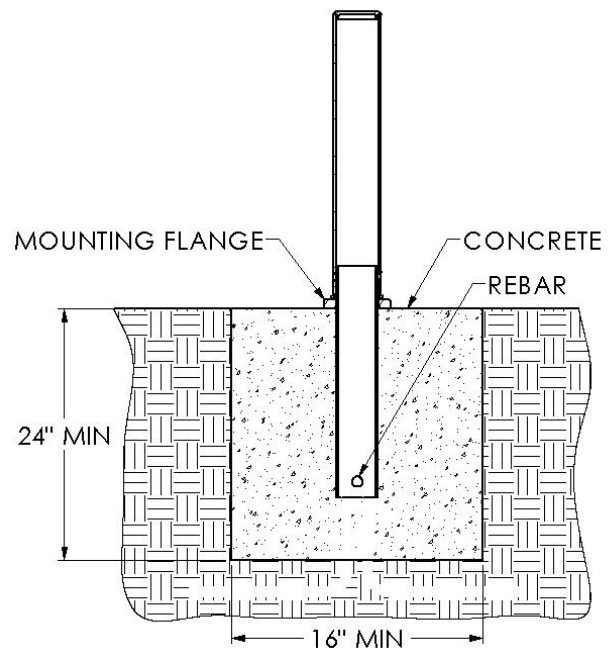


Figure 3: Bollard Tube Assembly Embedding Details

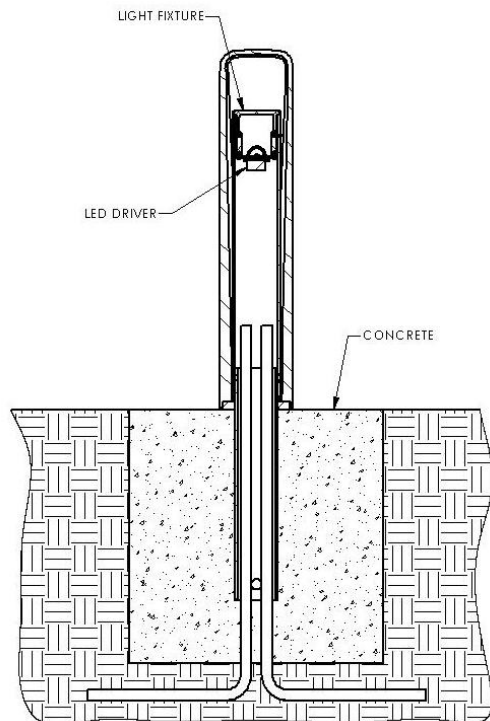


Figure 4: Bollard with Light Installation Details

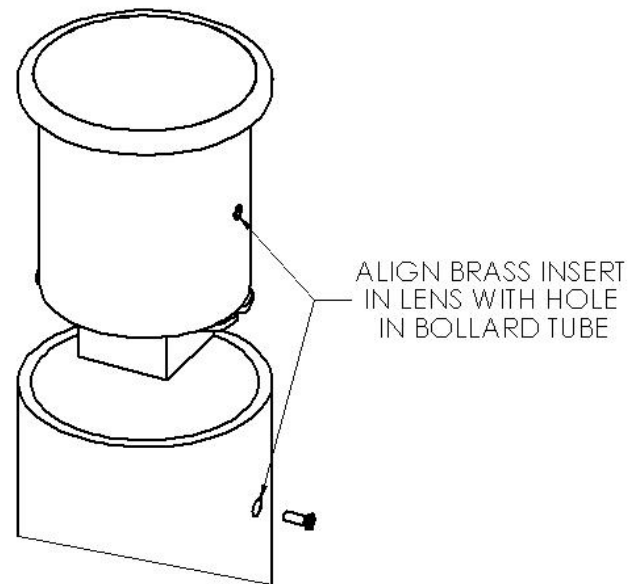


Figure 5: LED Lens Assembly Installation

Procedure for installing Embedded mount bollard with LED light:

Hardware:

Bollards include the following components (see Figure 1):

- (1) – Embedded Mount Tube Assembly
- (1) – Bollard Casting
- (4) – 5/16-18 X 1.25 Set Screws with Thread Adhesive

Necessary Tools:

- Blanket or other padded material
- 3/16" Hex Wrench

NOTE: Landscape Forms is not responsible for site preparation, footings, or electrical wiring.

CAUTION! Fixtures and wiring must be installed in accordance with local codes and ordinances. Bollard light fixtures are intended to be connected to line voltage. Do not install lighted bollards within 10 feet of a pool, spa, fountain, or other water features.

CAUTION! Wiring is the responsibility of the installer. Conduit stub should be installed as close to the center of the desired bollard location as possible. If multiple conduit stubs are necessary, they must be arranged so they will fit inside the 3" diameter center opening of the bollard tube. (See Figure 4) Line voltage supply wires must be long enough to reach the top of the bollard (~ 38")

WARNING!: LED cartridge and driver are not rated for connection or disconnection while energized. Doing so may damage LEDs and will void the warranty. Disconnect incoming power before making or breaking any electrical connections.

1. Place bollard(s) in the desired location and orientation(s) and over the conduit stub(s). The flat edge of the alignment guide should face the front of the desired orientation. The bottom edge of the mounting flange should be flush with the top of the concrete (See Figure 3).
2. Place a section of rebar (supplied by installer) through the hole near the bottom of the bollard (see Figure 1).
3. Once the concrete has cured, the bollard tube cannot be moved. Plumb the bollard before pouring concrete. After pouring concrete around the bollard tube, re-check plumb.
4. Gently clean all concrete splatter off of the bollard tube. Allow concrete to fully cure.
5. **WITH POWER OFF**, connect supply wires to LED driver lead wires according to Local and National Electrical Code requirements.
6. Insert the lens and LED assembly into the top of the bollard tube and align the brass thread inserts in the side of lens with the two small holes near the top of the bollard tube (See Figure 5).
7. Insert the two 8-32 flat head screws into the threaded inserts through the holes in the bollard tube and gently tighten (See Figure 5).
8. Make sure the decorative ring on the top of the bollard lens is in alignment with the bollard tube. Fully tighten the two 8-32 screws.
9. Gently place the bollard casting over the embedded mount tube and lower it to the mounting flange, using care not to scratch the finish of either component. The open side of the bollard casting is considered the front and should align with the flat edge of the mounting flange.

NOTE: The set screws have a tamper-resistant thread patch pre-applied to them. Once the set screws are installed, the adhesive begins to cure. The next few steps should be completed within 30 min.

10. Install the (4) set screws into the bollard casting until they just contact the mounting flange.
11. Verify the embedded mount tube is centered within the bollard casting. Adjust as necessary and fully tighten the set screws.
12. Verify alignment of the bollard casting openings with architects drawing(s). If changes are necessary the set screws may be loosened, and the bollard casting may be rotated to the correct alignment. Repeat steps 7 and 8 if this is necessary.

3/19/2021

Stop™ Surface Mount Bollard

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NOTE: Landscape Forms is not responsible for site preparation, footings, or electrical wiring.

Procedure for installing surface mount bollard with no light:

Hardware:

Bollards include the following components (see Figure 1):

- (1) – Surface Mount Tube Assembly
- (1) – Bollard Casting
- (4) – 5/16-18 X 1.25 Set Screws with Thread Adhesive

Necessary Tools:

- Hammer Drill with masonry bits
- 3/16" Hex Wrench
- Socket wrench for anchoring hardware
- Hammer
- Blanket or other padded material

Anchoring hardware and installation are the responsibility of the installer. The surface mount bollard has a 3/8" thick mounting plate that can accept 3 anchors up to 3/8" thread size. If stud anchors are used, select an anchor length that allows the stud to extend 3/4" above the mounting surface.

Warning: *Layout of bollard tube assembly determines the layout of the bollard casting*

NOTE: ALL stop bollards have an alignment guide built into the assembly. The alignment guide consists of a flat edge on one of the components that is 2-11/16" from the center of the bollard tube. This flat edge aligns with the Front of the bollard. This alignment guide is the same for the Surface Mount, Embedded, and Removable Mount STOP bollards (See Figure 2), allowing them to be aligned during installation.

1. Place bollard(s) in the desired location and orientation(s) and mark hole locations. The surface mount plate has oblong holes to allow some minor variation when drilling into concrete. The installer should mark the center of these holes for the proper drill location.
2. Move bollard to allow access for drilling holes.
3. Install the bollard Surface Mount Tube and anchors according to the anchor manufacturer's instructions. We recommend stainless steel anchor hardware. Do not fully tighten anchors at this time.
4. The surface mount bollard also includes three leveling glides that can be accessed through the top of the surface mount plate. Using a 3/16" hex wrench, adjust the glides as necessary to plumb the surface mount tube.
5. Fully tighten anchoring hardware, following the manufacturers' recommendations, making sure the head of the anchoring bolt or nut is below surface mount plate top face (See Figure 3)
6. Gently place the bollard casting over the surface mount tube and lower it to the surface mount plate, using care not to scratch the finish of either component. The open side of the bollard casting is considered the front and should align with the flat edge of the surface mount plate.

NOTE: The set screws have a tamper-resistant thread patch pre-applied to them. Once the set screws are installed, the adhesive begins to cure. The next few steps should be completed within 30 min.

7. Install the (4) set screws into the bollard casting until they just contact the surface mount plate.

8. Verify the surface mount tube is centered within the bollard casting. Adjust as necessary and fully tighten the set screws.
9. Verify alignment of the bollard casting openings with architect's drawing(s). If changes are necessary the set screws may be loosened, and the bollard casting may be rotated to the correct alignment. Repeat steps 7 and 8 if this is necessary

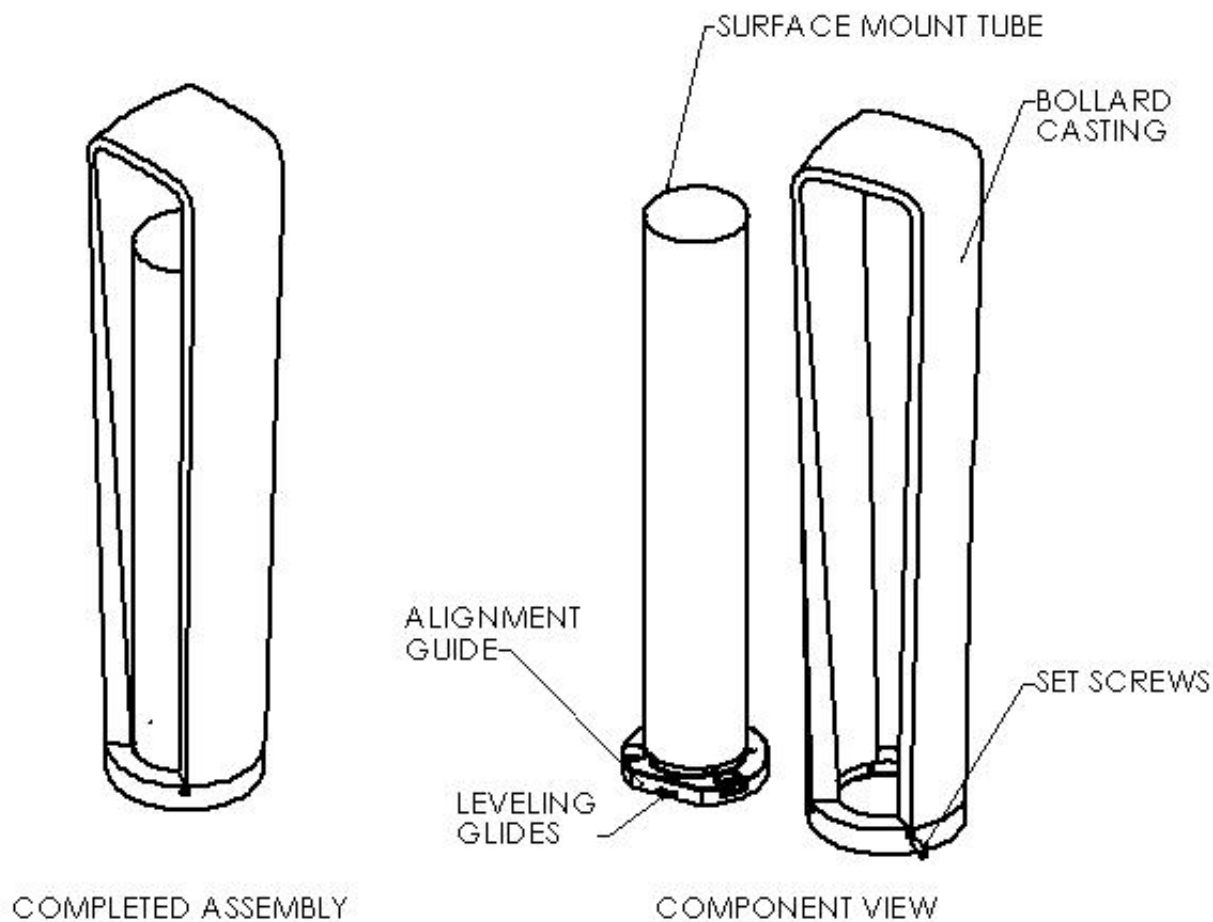


Figure 1: Surface Mount Bollard Components

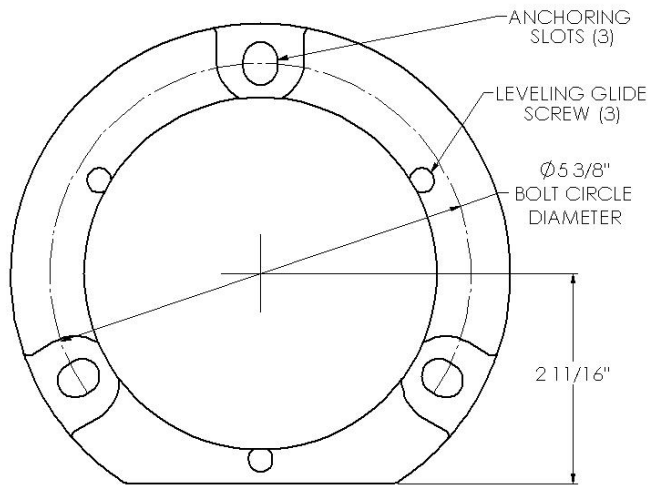


Figure 2: Surface Mount Plate Details

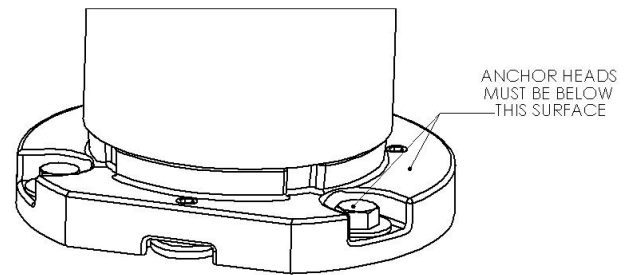


Figure 3: Anchoring Details

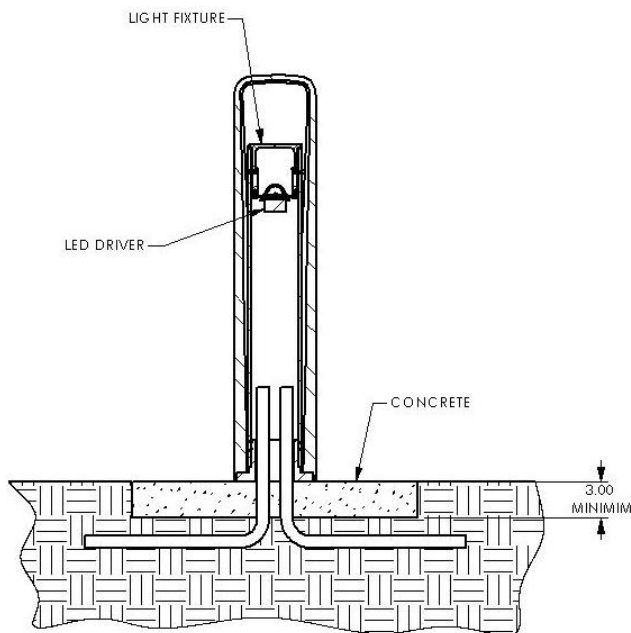


Figure 4: Bollard with Light Installation Details

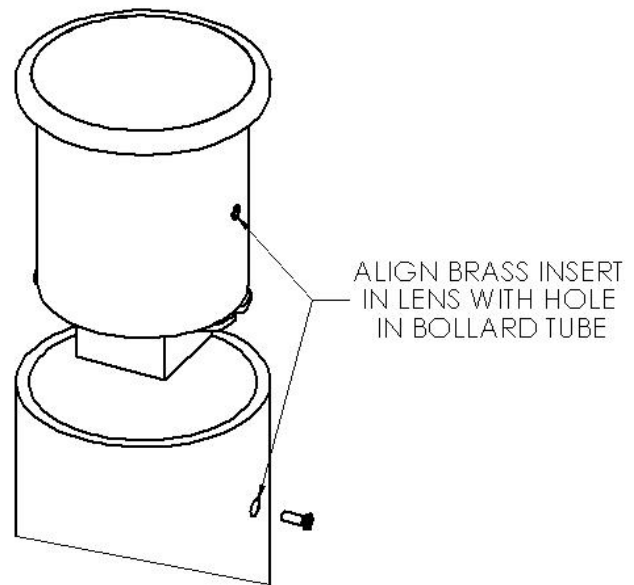


Figure 5: LED Lens Assembly Installation

Procedure for installing surface mount bollard with LED light:

Hardware:

Bollards include the following components (see Figure 1):

- (1) – Surface Mount Tube Assembly
- (1) – Bollard Casting
- (4) – 5/16-18 X 1.25 Set Screws with Thread Adhesive
- (2) – 8-32 x 1/2 Flat Head Machine Screw
- (1) – LED Light / Lens Assembly

Necessary Tools:

- Hammer Drill with masonry bits
- 3/16" Hex Wrench
- Socket wrench for anchoring hardware
- Hammer
- #2 Phillips screwdriver
- Blanket or other padded material

Anchoring hardware, wiring, and installation are the responsibility of the installer. The surface mount bollard has a 3/8" thick mounting plate that can accept 3 anchors up to 3/8" thread size. If stud anchors are used, select an anchor length that allows the stud to extend 3/4" above the mounting surface.

CAUTION! Fixtures and wiring must be installed in accordance with local codes and ordinances. Bollard light fixtures are intended to be connected to line voltage. Do not install lighted bollards within 10 feet of a pool, spa, fountain, or other water features.

CAUTION! Wiring is the responsibility of the installer. Conduit stub should be installed as close to the center of the desired bollard location as possible. If multiple conduit stubs are necessary, they must be arranged so they will fit inside the 3" diameter center opening of the bollard surface mount plate. (See Figure 4) Line voltage supply wires must be long enough to reach the top of the bollard (~ 38")

WARNING! LED cartridge and driver are not rated for connection or disconnection while energized. Doing so may damage LEDs and will void the warranty. Disconnect incoming power before making or breaking any electrical connections.

1. Place bollard(s) in the desired location and orientation(s) and mark hole locations. The surface mount plate has oblong holes to allow some minor variation when drilling into concrete. The installer should mark the center of these holes for the proper drill location.
2. Move bollard to allow access for drilling holes.
3. Place bollard over conduit stubs and pull excess wire through the top of the bollard tube.
4. Install the bollard Surface Mount Tube with anchors according to the anchor manufacturer's instructions. We recommend stainless steel anchor hardware. Do not fully tighten anchors at this time.
5. The surface mount bollard also includes three leveling glides that can be accessed through the top of the surface mount plate. Using a 3/16" hex wrench, adjust the glides as necessary to plumb the surface mount tube.
6. Fully tighten anchoring hardware, following the manufacturers' recommendations, making sure the head of the anchoring bolt or nut is below surface mount plate top face (See Figure 3)
7. **WITH POWER OFF**, connect supply wires to LED driver lead wires according to Local and National Electrical Code requirements.
8. Insert the lens and LED assembly into the top of the bollard tube and align the brass thread inserts in the side of lens with the two small holes near the top of the bollard tube (See Figure 5).
9. Insert the two 8-32 flat head screws into the threaded inserts through the holes in the bollard tube and gently tighten (See Figure 5).
10. Make sure the decorative ring on the top of the bollard lens is in alignment with the bollard tube. Fully tighten the two 8-32 screws.

11. Gently place the bollard casting over the surface mount tube and lower it to the surface mount plate, using care not to scratch the finish of either component. The open side of the bollard casting is considered the front and should align with the flat edge of the surface mount plate.

NOTE: The set screws have a tamper-resistant thread patch pre-applied to them. Once the set screws are installed, the adhesive begins to cure. The next few steps should be completed within 30 min.

12. Install the (4) set screws into the bollard casting until they just contact the surface mount plate.
13. Verify the surface mount tube is centered within the bollard casting. Adjust as necessary and fully tighten the set screws.
14. Verify alignment of the bollard casting openings with architects drawing(s). If changes are necessary the set screws may be loosened, and the bollard casting may be rotated to the correct alignment. Repeat steps 7 and 8 if this is necessary