

# Duralite<sup>®</sup>

## Installation Guide



**Warning:** All installations must be performed by qualified personnel with proper safety equipment. When installing any surface-level underground enclosures installers must follow all national and local electrical, safety and building codes. Call 811 call-before-you-dig.

**Please note:** Tier 15 and Tier 22 rated products should not be installed in roadways or parking lots. Typical installations are sidewalks, right-of-ways, and other non-deliberate traffic locations.

## 1. Excavation Procedure

- 1.1. Plan the excavation approximately twelve to sixteen inches (12" – 16") longer and wider than the actual dimensions of the enclosure to be installed. Excavate six to eight inches (6" – 8") deeper than the overall dimensions of the enclosure with the cover in place.
  - a. If the installation is to be within a sidewalk, it is generally more practical to use a masonry saw and remove the entire sidewalk width to facilitate proper soil removal.
- 1.2. Excavate the hole to the appropriate dimensions with a mechanical excavator or hand dig as appropriate. Be sure to confirm the excavation floor is flat and level.
  - a. For example, a hole for a 1118-18 box should be approximately 23" x 32" x 26". Note that an 1118 enclosure is not exactly 11" x 18", always use the exterior size of the box as a guide.

## 2. Installation Steps

- 2.1. Add crushed stone to the excavated hole. It is recommended to place a 6-8" layer of crushed stone in the bottom of the excavation. Using a deeper layer of crushed stone may reduce the chances of settling over time.

**NOTE:** Base material shall be crushed stone  $\frac{3}{4}$ " and smaller, angular stone, not 'river rock or round stone'. Desired compaction and equivalent resistance to lateral loading will not be achieved with round stone. The rock should be free of soil and organic material.



- 1.1. Use a mechanical or hand tamper to tamp down the crushed stone in the excavated hole to be flat and level.
- 1.2. Set the box into the excavated hole and adjust height to grade. Be sure the enclosure is centered in the hole and is parallel with the sidewalk or curb. When the enclosure needs to be level and installed on a slope or hillside, the enclosure should be installed and have a retaining wall built to hold the soil to prevent erosion above the enclosure.
- 1.3. When tamping the backfill, internal bracing is required to be installed within the box to protect the sides from bowing. Suitable bracing could be one or multiple wooden 2x4's cut to length and installed snug against the inside walls of the enclosure as shown in Figure 1.
- 1.4. Install the cover and bolts prior to backfilling. Installing the cover prevents debris from entering the enclosure and helps maintain box rigidity during the backfilling procedure.
- 1.5. Backfill along the open outer sides of the excavated hole by adding crushed rock and/or soil, or dry lean mix in eight- inch (8") lifts. Be sure to remove any stones 3" or larger from the backfill.
  - a. Alternate "lean dry mix" Backfill: A 'dry lean mix' may be prepared for backfill using Portland cement and crushed rock in a ratio of 1:10. This higher strength alternative is useful where known traffic is anticipated within the vicinity of the enclosure that could cause vehicular surcharge loading.
- 1.6. Once backfilling is complete, tamp the soil around the enclosure with hand tamping tools.

**NOTE:** It is recommended not to use mechanical tamping tools such as a tamping ram or plate compactor when tamping the backfill material around the enclosure to prevent bowing to sides of the enclosure. Mechanical compactors can increase the soil density by as much as 200%. DO NOT use heavy equipment, like backhoes, for tamping as damage will occur.

- a. Soil in the immediate vicinity should be tamped and sloped away from the enclosure. Be sure not to slope the grade towards the enclosure as debris could make the cover difficult to remove.

Figure 1

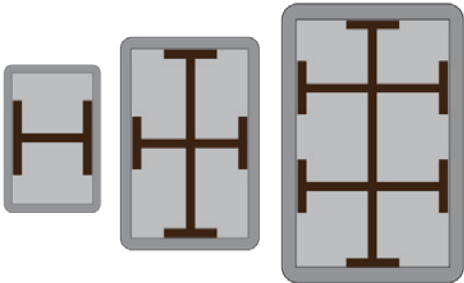


Figure 2

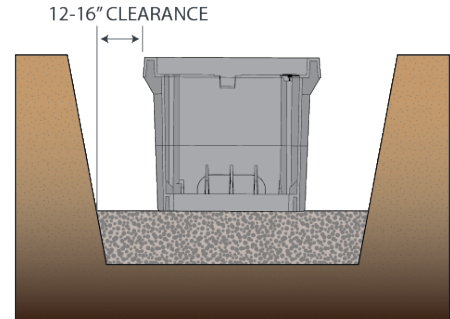


Figure 3

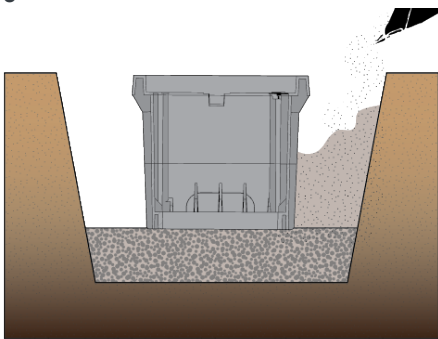


Figure 4

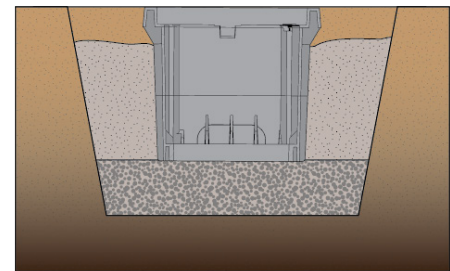


Figure 5

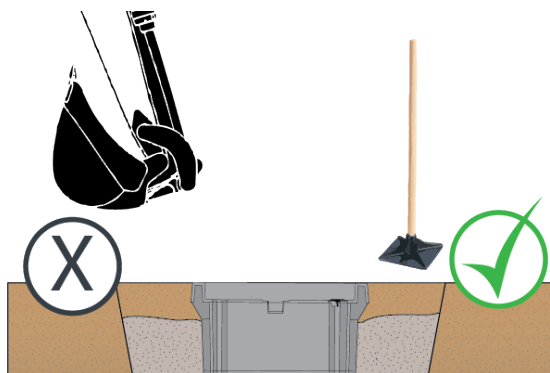
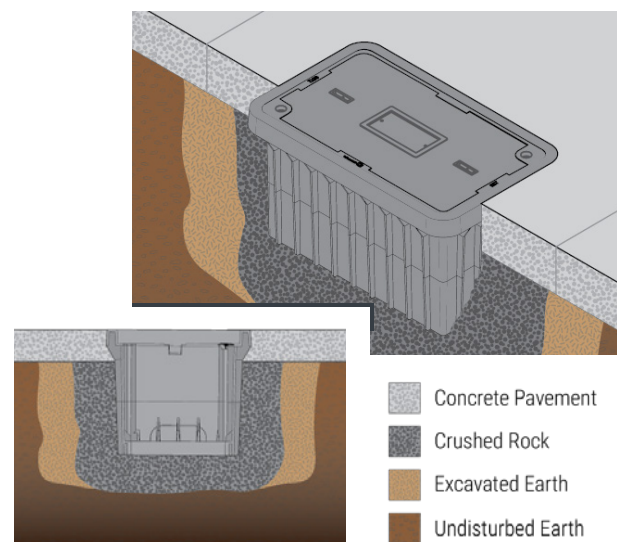


Figure 6



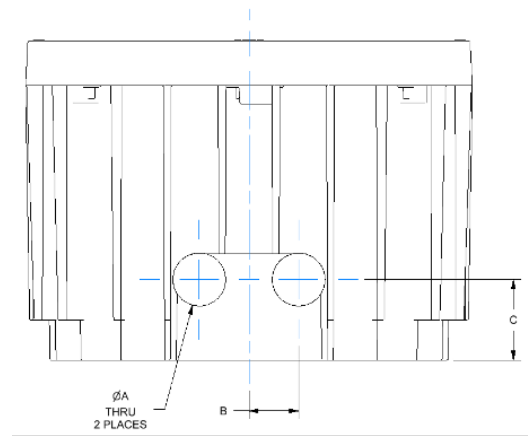
### Product Modification Instructions

Product modifications, including but not limited to, cutting holes for conduit access, or cutting in “Mouse-Holes” may alter tier rating or product performance in any underground enclosure.

#### Conduit Holes

The Duralite® sizes below were modified to include conduit holes, then the bodies were then laterally load tested to confirm compliance to SCTE-77. The body sizes below have been tested to be compliant to SCTE-77 T15/T22 lateral load requirements when the following configurations were cut into the bodies:

Body Size	Diameter A (Inches)	Dimension B (Inches)	Dimension C (Inches)
1730-24	4	2.5	5
2436-24	4	4	6.75
3048-24	4	6	6



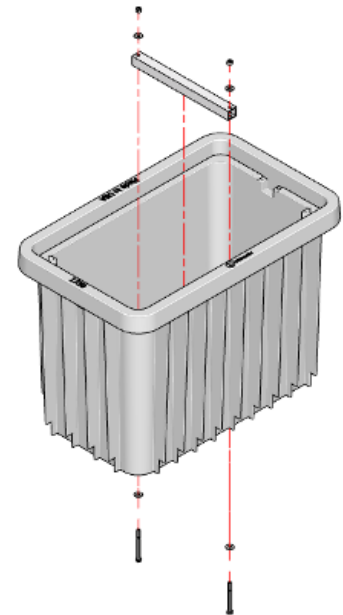
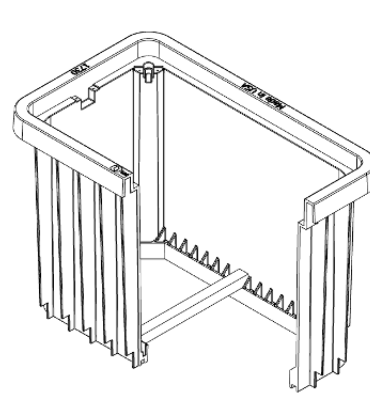
#### Mouseholes

Mouseholes can be cut in the field for Duralite products. Sizes 2436 and 3048 have been tested with mouseholes and have passed lateral loading tests. For enclosures sized at 1730 and smaller, a brace kit will be needed to reinforce the body when cutting in “mouseholes” or cutting through the footer of a Duralite body to ensure conformance to SCTE-77 lateral loading.

#### Tools Needed

- Drill and 25/64” Drill Bit
- Ratchet and 9/16” Socket
- 9/16” Wrench

Brace Kit(s)*
<p>BRK-1730 Brace kit for Duralite 1730 enclosures. Fits 12, 18, and 24” depths.</p> <p>*Brace kits for enclosures smaller than 1730 are not available at this time.</p>



Notes:

Horizontal lines for handwritten notes.





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