

Barkman Pole Base Installation and Backfill Recommendations

(2021)

Note:

This is a manufacturer recommendation only. The contractor is at all times to abide by any project engineering drawings/documents.

Installation Procedure:

1. Mark Location

- a. Mark the center of the hole
- b. Set two or more offset stakes
- c. Mark finish elevation of top of base.

2. Excavate Hole.

- a. Dig/auger/hydrovac the excavation.
- b. Hole size should equal diameter of base plus 6"-12" (300 mm).
 - i. Hole size should permit space for pole tamper.
- c. Excavation depth equals the embedment depth plus 6" (150 mm) for crushed stone foundation
- d. Bottom of excavation should be flat.

3. Install Foundation

- a. Place, level, and compact crushed stone foundation.
- b. Crushed stone $\frac{3}{4}$ " crushed stone.
- c. Minimum thickness of crushed stone should be 6" (150 mm) thick.
- d. Extend crushed stone foundation to the edge of excavation or a minimum of 6" (150 mm) from edge of the concrete Pole Base.

4. Place the Pole Base

- a. Barkman can provide a certified lifting device (preferred method). Padded slings can also be used.
 - i. The contractor assumes all responsibility when using lifting devices.
 - ii. Contractor to abide by Manitoba workplace safety and health regulations.
- b. Verify orientation of the Pole Base anchor bolt pattern and conduits compared to the site requirements and drawings.
- c. Set Pole Base unit while in a plumb orientation into final location. Do not tilt up during installation.
- d. Set unit to proper elevation, plus/minus $\frac{1}{2}$ " (12 mm) or to project specifications.
- e. Brace Pole Base as required to maintain unit level, true, and plumb until backfill has been placed and compacted.

5. Backfilling

- a. Place structure backfill per plans and specifications.
 - i. Backfill is typically $\frac{3}{4}$ " crushed stone. See grading requirements chart.
- b. Place backfill uniformly around perimeter of Pole Base in 6" (150 mm) lifts.
- c. Compact each backfill to 90% relative density using an air or hydraulic tamper.
- d. Backfill to conduit trench bottom elevation and install below grade electrical connections.
- e. Underground cables entering the concrete base should be protected by a layer of sand/or equivalent material/method, surrounding the cables and protecting it from the crushed $\frac{3}{4}$ " backfill material.
- f. Finish backfilling and compacting in 6" (150 mm) lifts to the rough grade or as contract documents require.

6. Clean Base & Erect Pole

- a. Remove all soil stains from the exposed concrete.
- b. Install lighting fixtures.

Grading Requirements for Backfill

Canadian Metric Sieve Size	Percent of total Dry Weight Passing Each Sieve	
	Backfill Material	Foundation Material
75 000		
28 000		100%
20 000	100%	
10 000		
5 000	40% - 70%	0% - 5%
2 500	25% - 60%	
630		
315	8% - 25%	
80	6% - 17%	

Note: material is to consist of sound, hard, crushed rock or crushed gravel free from organic or soft material that would disintegrate through decay or weathering, well graded throughout conforming to the grading requirements of the above table. Backfill material is to have a 100% crush content and be well graded throughout

Photos:



Photo 1: Auger or HydroVac Hole.



Photo2: Certified Lifting Device



Photo 3: Lower Unit into hole



Photo 4: Place backfill and compact with pole tamper.