AMERICAN PRECAST INDUSTRIES LLC

pole base®

Installing Pole Base: Preconstruction Checklist

Safety

- Personal Protective Equipment (PPE)
- Fall protection
- Rigging & lifting
- Maintain safe excavations
- Other relevant safety precautions

Engineering and Permits

- Review the detailed final design prepared by the Engineer/Architect of Record
- Review the project specifications
- Project design documents take precedence over these general recommendations
- Make sure neccessary project approvals and permits are obtained

Project Plan Review

- Make sure you completely understand project plans, details, and specifications
- Ask the design engineer any questions you have about the project before starting
- Coordinate your work with the General Contractor and other trades
- Consider having a Pre-Installation meeting

Construction Planning

- Locate and mark all underground utilities; call 8-1-1 or online at www.call811.com
- Pole Base should be stored above the ground on wooden cribbing, keeping the units clean and separated from each other
- Ensure no damage of the texture, or staining, cracking, chipping, etc.
- Use approved lifting devices or padded slings; never use choke chains on the units
- Decide upon method of backfilling. Backfill options include crushed stone, granular backfill, or controlled low-strength material, as described in the Pole Base Design Resource Manual, or as otherwise required by the project specifications
- Verify weight of the units for safe lifting, transport, and installation

Equipment

- Lifting and setting equipment
- Nylon slings or lifting plate
- Excavator or rotary auger to create the hole
- Compactor and soil packing tools
- Shovels, rakes, hoes
- Level and measuring tapes

Installing Pole Base: The Details

1. Mark Location

- Mark the center location
- Set two or more offset stakes
- Mark finish elevation of top base

2. Auger

- Auger or excavate hole. Hole size should equal diameter of base plus 12 inches (300 mm)
- Hole depth should equal bottom of the base plus a minimum of 6 inches (150 mm) for the crushed stone base
- Check hole depth with level
- Bottom of excavation should be flat

3. Install Foundation

- Place, level, and compact crushed stone foundation
- Minimum thickness of crushed stone should be 6 inches (150 mm) thick
- Extend crushed stone foundation to the edge of excavation or a minimum of 6 inches (150 mm) from edge of the concrete Pole Base
- Verify embedment depth of Pole Base and top of foundation elevation with level; adjust as required

4. Place the Base

- Verify orientation of the Pole Base anchor bolt pattern and conduits compared to the site requirements and drawings
- Set Pole Base unit while in a plumb orientation into final location. DO NOT TILT-UP DURING INSTALLATION
- Set unit to proper elevation, ± ½ inch (12 mm) or project specifications
- Brace Pole Base as required to maintain unit level, true, and plumb until backfill has been placed and compacted

5. Backfill

- Place structure backfilling per plans and specifications. Backfill is typically crushed ASTM No. 57 stone, clean granular fill (sand), or controlled low-strength material (flowable fill)
- Place backfill uniformly around perimeter of Pole Base in 6 inch (150 mm) lifts
- Compact each backfill lift to 90% relative density
- Backfill to conduit trench bottom elevation and install below grade electrical connections
- Finish backfilling and compacting in 6 inch (150 mm) lifts to the rough grade or as contract documents require

6. Clean Base & Erect Pole

- Remove all soil or stains from the exposed concrete.
- Install lighting fixtures
- Take professional quality photographs for your completed project portfolio

Installing Pole Base: Lifting Plate

The Pole Base Lifting Plate is intended to be used as an aide to safely set individual Pole Base units, connecting them to properly rated and installed rigging on construction machinery, such as a backhoe. The maximum working load limit for the Pole Base Lifting Plate is 10,000 lbs (4,535 kg). With proper use, inspection, and maintenance, the Pole Base Lifting Plate should function for several years. Contact your local Pole Base Manufacturer for more info on the Pole Base Lifting Plate.

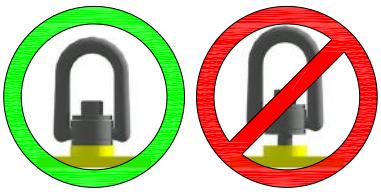
WARNINGS

- Do not exceed the 10,000 lb (4,535 kg) working load limit of the Lifting Plate
- Only use the Lifting Plate to lift Pole Base units with properly designed and installed anchor bolts
- Do not modify in any way

1. Inspect

Inspect Pole Base Lifting Plate and do not use if there are signs of deflection, damage, and wear. As a minimum:

- ☐ Inspect paint for signs of overstress.
- ☐ Inspect hoist ring for any signs of overstress.
- ☐ Inspect chains and lifting hardware for defects or damage.
- ☐ Check that the hoist ring is fully installed and snug-tight.
- ☐ Check that the hoist ring rotates and pivots freely in all directions.
- ☐ Check that Pole Base ID tag is attached and undamaged.
- ☐ Check that the hoist ring ID tag is attached and undamaged.



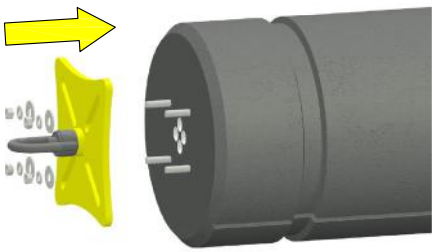
2. Review

Review your project safety plan before starting any work.

3. Bolt Together

Place the Pole Base Lifting Plate over anchor bolts cast into an individual Pole Base unit. Place the washers and nuts shipped with the Pole Base unit on the anchor bolts and tighten to snug-tight.

Nuts, washers, Lifting Plate, and Pole Base unit must all be in direct contact. All nuts must be snug-tight and the Lifting Plate must not be free to move in any direction.



A snug tight condition is commonly obtained after a few impacts of an impact wrench or the full effort of an ironworker with an ordinary spud wrench. It is a simple analogy to say that a snug-tight bolt would be installed similarly to the lug nut on the wheel of a car; each nut is turned to refusal and the pattern is cycled and repeated so that all fasteners are snug.

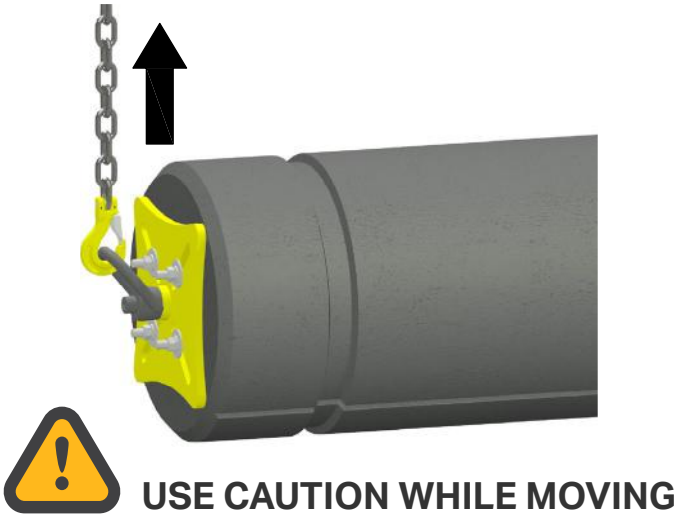
4. Connect

Connect the Pole Base Lifting Plate to properly rated and installed rigging on the construction equipment.

Installing Pole Base: Lifting Plate Continued

5. Lift to Position

Slowly raise the Pole Base unit with the properly sized construction equipment with sufficient capacity to safely lift and move the Pole Base unit. Move the Pole Base unit to position and set the unit in a pre-augered hole. A person may be needed to stand next to the Pole Base unit and gently turn or guide the unit into final position. The Pole Base unit shall be placed level, true, and plumb in the proper alignment.

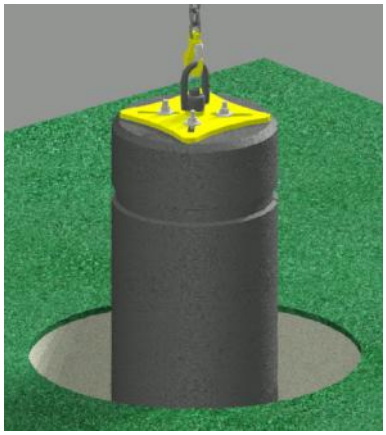


USE CAUTION WHILE MOVING

- Do not lift Pole Base units over people
- Never apply shock loads
- Use good lifting practices
- Always lift gradually
- Do not allow hoist ring to contact anchor bolts while lifting
- Do not swing the Pole Base unit on the rigging
- Keep hands clear of pinch points while setting the unit in place.
- Stand clear of the Pole Base unit during the entire lift.
- Never position your feet under the Pole Base unit during the lift.
- Personal Protective equipment should include hard hats, steel toed safety shoes with metatarsal foot protectors.
- The Operator shall not ride, or allow others to ride loads moved with the Pole Base Lifting Plate.

6. Disconnect

Properly backfill around the Pole Base unit as required in the project plans and specifications until the unit is secured in place and unable to move. Unbolt and remove the Pole Base Lifting Plate from the unit. Carefully move the construction equipment with the attached Lifting Plate to the next Pole Base unit to be set and repeat steps 3 through 6.



Annual Maintenance

The Pole Base Lifting Plate and hoist ring must be inspected annually. Magnetic particle inspection should be performed on the plate, hoist ring, and all welds. Chains, shackles, etc. must be inspected per OSHA or CSA requirements. All inspections must be performed again anytime shock loading occurs.