

Hands-On

# Utility Pole Construction

Setting, Replacing, Framing and Guying



## Course Description

A utility pole is a column or post used to support overhead power lines and various other public utilities, such as electrical cable, fiber optic cable, and related equipment such as transformers and street lights. It can be referred to as a transmission pole, telephone pole, telecommunication pole, power pole, hydro pole, telegraph pole, or telegraph post, depending on its application.

Electrical wires and cables are routed overhead on utility poles as an inexpensive way to keep them insulated from the ground and out of the way of people and vehicles. Utility poles can be made of wood, metal, concrete, or composites like fiberglass...



This extensive Hands-On course covers Erecting Poles And Attaching Crossarms Erecting Poles Using Earthborer And By Manual Method Facing And Aligning Poles Installing Single, Double, Sidearm, Buck, And "H "Type Crossarms and the equipment and methods that can be used to set and replace utility poles.

This course describes three methods for digging holes, and outlines both power-operated and manual methods for installing Utility Poles. This course also includes guidelines for installing poles in congested cities and open rural areas and safety considerations for installing poles around obstacles and energized lines.

Additionally, this course also covers the methods for removing and replacing poles.

## Students Will Learn

- All types of utility poles
- The three methods of digging a hole for a utility pole.
- The basic requirements for preparing a job site for pole setting.
- How to Identify the basic steps involved in rigging a pole.
- How to use a digger derrick to set poles in open areas as well as in areas with obstacles and/or energized lines.
- How to set poles manually in open areas as well as in areas with obstacles.
- How to remove an old pole after a replacement pole has been installed.
- How to lift and set a pole using pikes.
- How to replace a pole with a new pole in the same hole.

- **How to attach Crossarms**
- **How to Erect Poles Using Earthborer and By Manual Method**
- **How to Face and Align Poles**
- **How to Install Single, Double, Sidearm, Buck, And "H" Type Crossarms**
- **And More...**

## Target Audience

Anyone working on or around setting and replacing Utility Poles.

## Prerequisites

None.

## Course Outline

Note: This course can be modified to meet your specific site requirements upon request.

### Module I. Digging Pole Holes

- Identify basic requirements for preparing a job site for pole installation.
- Describe how to use a digger derrick, a portable power hole digger, and manual digging tools to dig a hole for a utility pole.

### Module II. Setting a Pole

- Describe guidelines for rigging a utility pole before lifting it.
- Explain how to use a digger derrick to lift and set a utility pole in an open, unobstructed area.
- Explain how to use a digger derrick to lift and set a utility pole around energized lines or other obstacles.

### Module III. Setting Poles Manually

- Identify some of the guidelines to follow when replacing a pole manually.
- Describe how to set a pole manually in an open area.
- Describe how to set a pole manually in an area with obstacles.

#### **Module IV. Manual Pole Removal**

- Describe how an old pole may be safely removed after a replacement pole has been installed and the energized lines have been transferred.
- Identify the basic components of a typical hand-operated pole jack, and explain how it is used.

#### **Module V. Manual Pole Setting**

- Describe how a utility pole can be set by lifting and supporting it with pikes.

#### **Module VI. Manual Pole Replacement**

- Describe how a replacement utility pole can be set in the same hole as the pole it is replacing by using the cut and kick method.
- Describe some of the rigging considerations associated with the cut and kick method.

#### **Module VII. Crossarms, Guying, Framing, Guying and Etc.**

### **Notes**

Client must provide access to poles and the proper equipment for setting and replacing poles.

### **Delivery Method**

Instructor-Led with hands-on practical field exercises.

### **Equipment Requirements**

**(This apply's to our hands-on courses only)**

BTS always provides equipment to have a very successful Hands-On course. BTS also encourages all attendees to bring their own equipment to the course. This will provide attendees the opportunity to incorporate their own gear into the labs and gain valuable training using their specific equipment.

### **Course Length**

2 Days