



TEC 2019

DEVELOP TALENT. HONE SKILLS.

INSTRUCTOR-LED WORKSHOP

Staking Technician Training Seminar— Phase III

SEPTEMBER 30–OCTOBER 4 • TEC GEORGETOWN TRAINING FACILITY

Register by September 2

Monday: 1–4 p.m., Tuesday–Thursday: 9 a.m.–4 p.m., Friday: 9 a.m.–noon

This course covers underground line design and subdivision layout; construction contracts; sizing transformers and conductors; and basic sectionalizing and line equipment.

Class limited to 20 attendees.

To register online, go to texas-ec.org.



Texas Electric Cooperatives

A Touchstone Energy® Cooperative 



STAKING TECHNICIAN TRAINING SEMINAR—PHASE III

September 30–October 4 • TEC Georgetown Training Facility, 100 Cooperative Way, Georgetown

COURSE INFORMATION

Course Description: The course covers underground line design and subdivision layout; construction contracts; sizing transformers and conductors; and basic sectionalizing and line equipment.

The study of underground line design and subdivision layout explains the components, applications and limitations of underground distribution systems. Students learn how to lay out subdivisions, specify pad-mounted equipment, and design sectionalizing systems.

In the section on construction contracts, students learn how the construction contract affects every aspect of the project, how to prepare special conditions and units, and how to administer the contract terms and conditions for a successful outcome.

The sizing transformers and conductors session focuses on basic electric theory, instructing students on the most efficient methods to size transformers and service conductors for standard residential and small commercial loads. Basic calculations for current, voltage, power and voltage drop are also presented.

The section on basic sectionalizing and line equipment gives students a basic understanding of fault currents, sectionalizing devices, voltage regulators and capacitors. The course focuses on teaching the staking technician how to apply and locate these devices on the distribution system when the line is being staked.

Participants learn to:

- Recognize components, limits and applications of underground distribution systems.
- Calculate pulling tensions relative to conduit bends and cable runs.
- Apply construction contract clauses to instances that occur during construction.
- Describe basic electric theory.
- Perform basic calculations for current, voltage, power and voltage drop.
- Apply and locate sectionalizing devices, voltage regulators and capacitors.

Required Materials:

Current NESC Code Manual, scientific calculator

Instructors: Hi-Line Engineering specializes in providing engineering consulting services to electric utilities. Hi-Line's staff exhibits diverse experience in the planning, design, operation and maintenance of electric distribution systems. Plus, Hi-Line offers a variety of training courses geared to the electric utility industry.

COURSE OUTLINE

Part 1—Underground Line Design and Subdivision Layout

This session explains the components, limitations and applications of underground distribution systems, including:

- Underground cable and pad-mounted switch gear
- Over-voltage protection and cable-pulling in conduit systems and designing underground systems

Part 2—Construction Contracts

This session explains how the construction contract affects every aspect of the project, and highlights include:

- RUS contracts and plans and specifications
- Staking for a construction contract
- Materials control, contractor observation
- Contract closeout

Part 3—Sizing Transformers and Conductors

This section focuses on basic electric theory, how to correctly size transformers and service conductors, and how to perform basic calculations for current, voltage, power and voltage drop. The course covers:

- Basic electric theory and service voltage drop
- Transformers and transformer sizing

Part 4—Basic Sectionalizing and Line Equipment

This section gives the student a basic understanding of fault currents, sectionalizing devices, voltage regulators and capacitors, including:

- Principles of over-current protection
- Fault current calculations
- Over-current and transformer protection
- Line coordination, regulators and capacitors

Continuing Education Units and Continuing Professional Education Hours

This course may be eligible for CEUs or CPEs, depending on the governing body. Upon request and completion of the entire course, TEC will provide a certificate of completion to participants that may be used to apply for CEUs/CPEs. TEC is registered with the State Board of Public Accountancy as a CPE sponsor. Registration with the board does not constitute an endorsement by the board as to the quality of the CPE program.



TEC 2019

INSTRUCTOR-LED WORKSHOP

STAKING TECHNICIAN TRAINING SEMINAR—PHASE III

September 30–October 4 • TEC Georgetown Training Facility, 100 Cooperative Way, Georgetown

Register by September 2. [Click here to register online.](#)

Registration Fees (all include lunch)

Member Registration \$1,695 per person

Group Rate for 4 or More Employees \$1,595 per person

Nonmember Registration \$1,795 per person

Note: Cancellations received two weeks prior (register by date) to the start of the workshop are fully refundable. Any cancellations received after this date will be issued a refund minus \$175 cancellation fee. Substitutions are accepted. No shows and registrants failing to cancel prior to the first day of the workshop are responsible for paying the full registration fee.

Questions: Brooke Robertson, (512) 486-6212 or brobertson@texas-ec.org

Training Location: TEC Georgetown Training Facility

100 Cooperative Way, Georgetown 78626, (512) 868-8610 or 1-877-868-8610

Suggested Places To Stay: Attendees are responsible for making their own hotel room reservations.

Holiday Inn

2370 Chisholm Trail
Round Rock 78681
(512) 246-7000
\$89, includes hot breakfast

Hilton Garden Inn Round Rock

2310 North Interstate Hwy 35
Round Rock 78681
(512) 341-8200
\$119, includes hot breakfast

Courtyard Austin Round Rock

2700 Hoppe Trail
Round Rock 78681
(512) 244-1457
\$103; Use code X58