



UNDERGROUND RESIDENTIAL DISTRIBUTION PROGRAM (URD)



NEPPA's Underground Residential Distribution (URD) Program will be held April 2-4, 2024, at the NEPPA Training Center (200 New Estate Road, Littleton, MA 01460).

WHO SHOULD ATTEND?

This course is designed for NEPPA members who build or maintain Underground Residential Distribution Systems.

LEARNING OBJECTIVES

Upon completion of the program, participants will:

- Have the knowledge and skill in all aspects of URD/UCD installation, operation, and maintenance.
 - NEPPA URD/UCD design & construction best practices
 - Tools, equipment, troubleshooting
 - URD/UCD maps
 - Hands-on work with pre-molded terminations and testing equipment.
- Understand safety practices, as they pertain to URD/UCDs and related work, will be defined and demonstrated.
- Will be awarded a Certificate of Completion.

TOPICS COVERED

The classroom portion of the course will include:

- Cable, Splice & Termination Designs
- Introduction to Equipment
- Switching Devices
- URD/UCD Maps & Symbols
- Trouble & Fault Locating
- Cable Preparation Tools
- Tactical Exercises
- Final Assessment

The hands-on session will include:

- Secondary Connections
- Handholes/Transformers
- Parallel Service
- Phase Rotation
- Switching & Test Equipment Exercises
- Introduction to Shotguns
- Types
- Maintenance
- Operating Procedures
- Electrical Potential Test Equipment
- A.B. Chance Multi range voltage detector (MRVD)
- Hard voltage test
- Capacitance test point (not for grounding purposes)
- Clantek potential indicator/phasing gear
- Capacitance test point only (separable connections)
- Elevated Voltage Indicator
- Fluke (secondary voltage testing)
- Secondary Phase Rotation (Knopp Meter)
- Phasing Equipment
- A.B. Chance Phasing Equipment (live phasing only)
- Clantek (capacitance test point only)
- Fluke (secondary phasing)
- Fault Locating Equipment
- A.B. Chance DC Hi Pot Adaptor
- Primary Cable Fault Locating (VON)
- Secondary Cable Fault Locating (Pin Pointer)

TESTING

Final Exam (25 Questions)

AGENDA *Agenda details are subject to change*

Day 1: Sections 1-8

- 8:00 am Section 1: Welcome & Introduction
- 8:15 am Section 2: Primary Cable & Design
- 10:00 am Break
- 10:15 am Section 3: Splice Types & Design
- 11:00 am Section 4: Termination Types & Design
- 11:30 am Lunch
- 12:00 pm Section 5: Infrared Heat Inspections
- 12:30 pm Section 6: Loadbreaker/ Deadbreak Equipment
- 1:00 pm Break
- 1:15 pm Section 7: Transformers & Fusing
- 1:40 pm Section 8: Switching Devices
- 2:00 pm Adjourn

Day 2: Sections 9-15

- 8:00 am Section 9: Test Equipment
- 8:15 am Test Equipment
- 10:00 am Break
- 10:15 am Section 10: Fault Locating & Repair
- 11:00 am Section 11: Arresters
- 11:30 am Lunch
- 12:00 pm Section 12: Secondary Cable Operations
- 12:30 pm Section 13: Maps & Symbols
- 1:00 pm Break
- 1:15 pm Section 14: URD Cable Pulling Procedures
- 1:20 pm Section 15: Ergonomics
- 1:40 pm Tool Demonstration, Terminations, Student Hands-on
- 2:00 pm Adjourn

Day 3: Review, Exercise & Test

- 8:00 am Review of Day 1 & 2
- 8:30 am Section 16: Switching & Tagging Exercise
- 10:00 am Break
- 10:15 am Section 16: Switching & Tagging Exercise Continued
- 11:30 am Lunch
- 12:00 pm Section 17: Final Assessment & Discussion
- 1:15 pm Break
- 1:30pm Completion Certificates are given.
- 2:00 pm Adjourn

INSTRUCTOR *Additional instructors and guest speakers may also participate and provide instruction.*



Mike Pazzanese, CUSP - NEPPA Safety & Technical Trainer

Mike joins NEPPA as part of the training team in April 2021.

Mike is a Certified Utility Safety Professional (CUSP) with 38 years of experience in all aspects of electric and gas utility operations, as well as contractor management, employee health and safety, and utility technical training, particularly in underground distribution and cable splicing.

Mike holds both the OSHA 30-hour General Industry and 20-hour Leadership Certifications.

As a graduate of Bridgewater State University with a teaching degree, Mike's background and utility technical training experience strengthens NEPPA's capacity to provide top-tier training.

