

# Underground School

**May 7–10, 2024**



**MMUA Training Center  
Marshall, MN**



# Underground School 2024

**Underground School** features hands-on training with a variety of sessions. Whether you are a seasoned journeyman looking to stay current or an apprentice just starting out, this school offers something for everyone!

**Participants will be divided into groups and will rotate through the following six hands-on training sessions:**

## **Equipotential grounding**

Proper testing and grounding is one of the single most important safeguards we have in our industry. It establishes a safe work zone where all conductors are at the same potential. It ensures that even if a circuit becomes energized the lineworker is still protected.

- Changes made to the 17th edition APPA safety manual regarding grounding underground cables.
- The science behind why equipotential grounding is the safest way to ground.
- Hands-on equipotential grounding in various scenarios.

## **Cable pulling**

This session will focus on the proper procedures for pulling wire. Crews will pull in 1/0 wire using state of the art pulling equipment. Students will be instructed on preparing the site on which the work will take place and identifying the hazards that may be in the area. This class will focus on safety and proper procedures to increase confidence and expand knowledge of the tasks at hand.

## **Directional drill operations**

In this session, participants will gain hands-on experience operating a directional drill as well as the equipment needed to complete a project. Whether you have experience with a directional drill or not, this class will be beneficial.

## **Troubleshooting and fault-finding primary cable**

In this session, students will be taught how to isolate and restore power on underground primary systems. Proper use of phasing sticks with DC hi-pot adapters, fault indicators and thumpers will be demonstrated to help students understand and address the issues related to URD faults.

## **Vehicle vs junction accident scenario**

When a vehicle strikes any piece of electrical equipment, it can pose a variety of threats and challenges. This session will cover the necessary steps needed from start to finish—from securing the scene to restoring power to the affected area.

## **600-amp terminations**

This session will help participants gain important knowledge in the process of terminating 500 MCM aluminum wire. Terminations for a riser as well as a PMH switch will be taught. Proper tool selection and grounding will also be covered.



## **General sessions**

### **Worksite traffic control**

Worksite traffic control involves the implementation of measures to manage and regulate the flow of traffic in any area where work activities may impact the normal flow of vehicles. The primary goals of worksite traffic control are to ensure the safety of both workers and the public, minimize traffic congestion, and maintain the efficient movement of vehicles. This may include the use of temporary signage, signals, barriers, and designated traffic lanes to guide drivers safely through or around the work area. Worksite traffic control plans are typically developed in compliance with local regulations and guidelines to address specific safety and traffic management requirements.

### **Distributed energy resources safety**

The goal of this session is to provide attendees with information on how to identify distributed energy resources (DERs) and to work safely around them. With the rise of interconnected solar, wind, battery, and even electric vehicle chargers, it is important to understand the risks to our distribution systems. Because DERs can be connected directly to our systems, they can affect our utility from a safety and an operational standpoint.

This session will cover:

- How to identify a DER site, even if unseen
- Safety precautions to take while in proximity to a DER site
- How a DER can affect first responders in emergency situations
- Effects of anti-islanding technology on safety
- How DER can impact other utility equipment
- Tools and resources available to a utility for a non-compliant DER

# Underground School—program details

## Schedule

### Tuesday, May 7

12:00–1:00	Registration and check-in
1:00	Welcome and opening remarks
1:05–4:00	Worksite traffic control
4:00	Wrap-up

### Wednesday, May 8

8:30–12:00	Hands-on training
12:00–1:00	Lunch
1:00–4:00	Hands-on training
4:00	Wrap-up
5:00	Optional evening activities: archery, sporting clay shoot, or golf (equipment required, each at participant's expense)

### Thursday, May 9

8:30–12:00	Hands-on training
12:00–1:00	Lunch
1:00–4:00	Hands-on training
4:00	Lineworker mystery event

### Friday, May 10

8:30–12:00	DER safety
12:00–1:00	Wrap-up



## What do I need to bring?

Please bring appropriate attire and materials, including:

- High-visibility clothing/outerwear
- Hard hat
- Safety glasses
- Work gloves
- Rubber gloves
- Work boots

## Hotel information

The AmericInn and EverSpring Inn in Marshall offer special pricing for participants based on availability. Contact the hotel directly and ask for MMUA's reduced rate when making your reservation.

Visit [MMUA's website](#) for more information.

## Certificate of achievement

Attendees earn a certificate of achievement for their participation. Watch for an email notification upon completion of the course.

## Registration information

### Underground School fees

- Member—\$535 per person
- Non-member—\$720 per person

Fee includes school tuition, materials, refreshment breaks, lunch on Wednesday and Thursday, and a certificate of attendance.

Registration fees increase \$50 on April 6. **To register, visit [mmua.org/event/underground-2024](https://mmua.org/event/underground-2024).**

**Register by April 5, 2024 for best rate. The final deadline is April 15, 2024.**

