



NEVADA LABOR COMMISSIONER
NEVADA STATE APPRENTICESHIP COUNCIL
2023 Non-Joint Standards of Apprenticeship

Appendix A

WORK PROCESS SCHEDULES AND RELATED INSTRUCTION OUTLINE

Pole Line Contractors, Inc.

LINE INSTALLER / REPAIRER

O*NET-SOC CODE: 49-9051.00 RAPIDS CODE: 0282

APPROVED BY
THE NEVADA LABOR COMMISSIONER AND THE NEVADA STATE APPRENTICESHIP COUNCIL

Richard J. Williams, Nevada State Apprenticeship Director

REGISTRATION DATE: _____

RAPIDS PROGRAM ID NUMBER: _____

DEVELOPED IN COOPERATION WITH THE
THE NEVADA LABOR COMMISSIONER, THE NEVADA STATE APPRENTICESHIP COUNCIL AND
THE U.S. DEPARTMENT OF LABOR

Appendix A

WORK PROCESS SCHEDULE

This schedule is attached to and a part of these Standards for the above identified occupation.

1. TYPE OF OCCUPATION

☒ Time-based ☐ Competency-based ☐ Hybrid

2. TERM OF APPRENTICESHIP

The term of the occupation shall be defined by the attainment of all competencies of the position. The program uses a time-based approach, requires the completion of not less than 2,000 hours of [work experience,] on-the-job learning, consistent with a minimum of 144 training hours per year and training requirements as established by practice in the trade.

This would be expected to occur with not less than 8000 hours of OJL, 694 classroom hours, supplemented by the minimum of 2,000 hours of OJL, 144 hours of related instruction per year of the apprenticeship.

3. RATIO OF APPRENTICES TO JOURNEYWORKERS

The apprentice to journey worker/fully trained worker ratio is: 1 apprentice(s) to 1 journey worker/fully trained worker(s).

4. APPRENTICE WAGE SCHEDULE

An apprentice minimum starting wage will be at least \$19.00 per hour. Apprentices shall be paid a progressively increasing schedule of wages based on either a percentage or a dollar amount of the current hourly journey worker/fully trained worker wage. A journey worker/fully trained worker minimum wage will be at least \$38.00.

1-Year Term Example:

1st Year = 50% or \$19.00

2nd Year = 60% or \$22.80

Periodic review and evaluation of the apprentice's on-the-job learning and related technical instruction will be conducted in alignment with the wage schedule established.

5. WORK PROCESS SCHEDULE (See attached Work Process Schedule)

The sponsor may modify the work processes to meet local needs prior to submitting these Standards to Nevada Labor Commissioner, Nevada State Apprenticeship Council for approval.

6. RELATED INSTRUCTION OUTLINE (See attached Related Instruction Outline)

The sponsor may modify the related instruction to meet local needs prior to submitting these Standards to Nevada Labor Commissioner, Nevada State Apprenticeship Council for approval.

Appendix A

WORK PROCESS SCHEDULE

The term of the occupation shall be defined by the attainment of all competencies, both technical and behavioral, of the position, which would be expected and approximated to occur within __8000__ hours of OJL, supplemented by a minimum of 144 hours of related instruction per year of apprenticeship.

Apprenticeship Competencies – Technical

Item	Work Processes	Approx. Hours
A	Safety Related	1,000
	Safety manual	
	Personal protective equipment	
	Installation of personal protective grounds (overhead and underground)	
	Pole climbing	
	Fire, hazard, confined space awareness	
	Emergency Action Plan (EAP)	
	First Aid/CPR/AED/BBP certification(s)	
	HAZCOM training	
B	Vehicle Operations	840
	CMV and Non-CMV Inspection	
	Coupling/uncoupling of combination units	
	Set up of heavy equipment (digger and large bucket trucks)	
	Operational (digging holes, hanging transformers, hauling/setting poles, etc.)	
	Digger derrick and pressure digger operation	
	DOT compliance	
C	Associated Tools	350
	Knowledge, care, and inspection of line tools (hot sticks, hoist, grips, rubber goods, line trucks, PPE, etc.)	
	Voltage detectors/meters	
	Compression tools	
	Slings	
D	Overhead Line Construction, Maintenance, and Repair	2,400
	Climbing Wooden Poles	
	Trouble shooting	
	Stringing conductor (wire)	

	Hanging, change out, and banking of transformer(s)	
	Phase rotation	
	Fusing and fuse coordination	
	Repairing fallen conductor(s)	
	Right-of-way	
	Building taps	
	Under build and secondary	
E	Equipment Related	1,200
	Retiring, change out, and relocating lines and line equipment (pole, transformers, cutouts, etc.)	
	Training pertaining to services (connections, installing, and removing meters, etc.)	
	Training pertaining to working on energized systems (hot sticks, insulating rubber cover gear, rubber glove and rubber sleeve work)	
F	Underground/URD Construction, Maintenance, and Repair	1,560
	Proper installation of all underground lines and equipment (wire, transformer, etc.)	
	Troubleshooting primary and secondary issues	
	Installing, terminating, and splicing cable	
	Transformer change out and proper make-up	
	Cable identification	
	Training in underground location equipment training dealing with services (connections, installing, and removing meters, etc.)	
	Three phase equipment	
G	Substations	650
	Troubleshooting	
	Knowledge and operations of all substation equipment (fuses, breakers, regulators, metering, etc.)	
	Mobile substation	
	Use of equipment inside of substations	
	Care and maintenance of substations	
	Total hours (approximate)	8000

The above on-the-job-learning (OJL) work process competencies are intended as a guide. It need not be followed in any sequence, and it is understood that some adjustments may be necessary in the hours allotted for different work experience. In all cases, the apprentice is to receive sufficient experience to make them fully competent and use good workmanship in all work processes, which are a part of the industry. In addition, the apprentice shall be fully instructed in safety and OSHA requirements.

Apprenticeship Competencies – Behavioral

In addition to mastering all the essential technical competencies, an apprentice must consistently demonstrate at an acceptable level the following behavioral competencies, to complete the apprenticeship.

Item #	Behavioral Competencies
1.	Participation in team discussions/meetings
2.	Focus in team discussions/meetings
3.	Focus during independent work
4.	Openness to new ideas and change
5.	Ability to deal with ambiguity by exploring, asking questions, etc.
6.	Knows when to ask for help
7.	Able to demonstrate effective group presentation skills
8.	Able to demonstrate effective one-on-one communication skills
9.	Maintains an acceptable attendance record
10.	Reports to work on time
11.	Completes assigned tasks on time
12.	Uses appropriate language
13.	Demonstrates respect for patients, co-workers, and supervisors
14.	Demonstrates trust, honesty, and integrity
15.	Requests and performs work assignments without prompting
16.	Appropriately cares for personal dress, grooming and hygiene
17.	Maintains a positive attitude
18.	Cooperates with and assists co-workers
19.	Follows instructions/directions
20.	Able to work under supervision
21.	Able to accept constructive feedback and criticism
22.	Able to follow safety rules
23.	Able to take care of equipment and workplace
24.	Able to keep work area neat and clean
25.	Able to meet supervisor's work standards
26.	Able to not let personal life interfere with work
27.	Adheres to work policies/rules/regulations

RELATED INSTRUCTION OUTLINE

The related instruction has been developed in cooperation with employer-partners as part of the apprenticeship. The following is a set of courses to be delivered by subject matter experts, overseen by Spencer Porter, Journeyworker lineworker trainer.

Related Technical Instruction (RTI) - This instruction shall include, but not be limited to, at least 144 hours per year for each year of the apprenticeship. The related theoretical education listed below is tightly integrated with real work product. The curriculum is defined as a variety of classes, around which the exams and projects are based. By defining the RTI this way, all competencies required of the students are met, through project work.

COURSE TOPICS

HOURS

A. Year 1=

172

Introduction of Transmission & Distribution System	8
Transmission	8
Distribution	8
Substation & Switchyards	8
Underground Residential Distribution System	10
Basic Electricity	8
A/C Fundamentals	8
Climbing Wooden Poles	8
Safety in T&D Maintenance	8
Using Tools	8
Safety in Underground Line Maintenance	10
Distribution Line Safety	10
Overhead Distribution Systems	10
Safety in Overhead Line Maintenance	10
Pole Framing and Guying	10
Setting and Replacing Poles	8
Rigging 1	8
Rigging 2	8
Electrical Safety	8
Hydraulic Derricks Digging Equipment	8

B. Year 2 =

#182

Bucket Trucks	8
Material Handling Bucket Trucks	8
Safe Bucket Truck Operations	10
Service Installations Parts 1 & 2	10
Introductions to Metering	8
Safety in Meter Work	8
Bucket Truck Rescue	8
Working on Distribution Poles	8
Care & Testing of Tools and Equipment	8
Underground Cable Installation	8
Pad-mount Transformers & Switch Gear	10
Cable Splicing 1	8
Cable Splicing 2	8
Cable Terminations	8
URD Troubleshooting	10
Locating Primary Faults (URD)	10
Locating Secondary Faults (URD)	8
Multimeter Operations	8
Using Line Test Equipment	8
Transformer Connections 1	10
Transformer Connections 2	10

C. Year 3 =

#146

System Protection & Monitoring	8
Tree Trimming	8
Pole Top Equipment & Replacement (Transformers)	10
Pole Top Equipment & Replacement (Reclosers & Switches)	10
Pole Top Equipment & Replacement (Capacitors)	10
Pole Top Equipment & Replacement (Voltage Regulators)	10
Distribution Line Installation & Removal	10
Distribution Line Replacement	10
Distribution Line Repair (Gloves)	10
34.5 kV Rubber Glove Work	10
Distribution Line Repair (Hot sticks)	10
Transformer Troubleshooting	10
Troubleshooting Overhead Lines	10
Overhead Troubleshooting 1	10
Overhead Troubleshooting 2	10

D. Year 4 =

#194

Advanced Rigging	8
Safety in Substations & Switchyards	8
Control Equipment	10
Capacitors and Reactors	8
Voltage Regulators 1	10
Voltage Regulators 2	10
Power Transformers 1	10
Power Transformers 2	10
Circuit Breaker 1	10
Circuit Breaker 2	10
Relays 1	8
Relays 2	8
Power Quality	10
Transmission Line Safety	10
High Voltage Terminations	8
Transmission Structures	8
Climbing Steel Poles and Towers	8
Transmission Line Installation	8
Rigging For High Voltage Work	8
Working De-Energized Transmission Lines	8
Transmission Line Repair (Hot sticks)	8
Transmission Line Repair (Barehand Method)	8
Total Classroom Hours	694

COURSE TOPIC DESCRIPTIONS

- A. Description #1 Introduction to the High Voltage Electrical System, Electrical Theory, Safety, Tools, Rigging and Digger Derrick Trucks.
- B. Description #2 Operating Bucket Trucks, Learning about Electric Meters, Underground, Electrical Tools and Methods, and Transformer Connection Training for Single-Phase and Three-Phase Transformers.
- C. Description #3 Electrical System Operations, Distribution System and Equipment Maintenance and Troubleshooting.
- D. Description #4 Substation Equipment Operations, Transmission Lines, Equipment and Energized Maintenance.

SECTION 27 - OFFICIAL ADOPTION OF APPRENTICESHIP STANDARDS

Pole Line Contractors, Inc., hereby adopts these standards of apprenticeship.

Sponsor(s) designate the appropriate person(s) to sign the standards on their behalf.



Signature of Sponsor (designee)

Date: 3/23/23

Spencer Porter / President
Type Name & Title