



★ Working Together For Jobs

ALASKA WORKS PARTNERSHIP
Construction Education & Training

TRAINING DESCRIPTIONS

www.alaskaworks.org

H2H: Helmets to Hardhats. WIT: Women in the Trades

****Advanced Construction Math:** This class will cover addition and subtraction of fractions, review of fraction and decimal conversions. Use of Pythagorean theorem, ratio and proportion, right triangle, squaring lines, and stair math.

****Basic Construction Math:** This class will cover the basic operations of addition, subtraction, multiplication, and division. Be able to convert decimals to fractions so you can read it on a measuring tape. Be able to recognize patterns, understand order of operations and rounding in construction math.

****Blueprint Reading:** Training covers basic residential print reading skills, abbreviations, plot plans, foundation plans, floor plans, exterior elevations, section views, details, framing plans, door & window schedules, finish schedules, and specifications.

***Building Maintenance:** Training covers building maintenance and repair items such as: door hardware/trim, flooring basics, sheetrock patching and repair, basic plumbing and electrical.

***Carpentry 1:** Training covers the basics of carpentry and trades math. Accurate reading and use of tape measure, hammer, saw, 3-4-5 layout method, and safe use of hand and power tools. Using skills learned in class, participants build the following projects: a foot stool, and a set of stairs to a platform. Construction site education, safety, and carpenter expectations also covered.

Carpentry 2: Training with classroom instruction and hands-on covers the following: builders level, floor construction, exterior wall framing with windows and doors, and a gable roof. Students apply the skills they learn by building a miniature house.

***Commercial Driver CDL-Class A (H2H Only):** Participants must already have their CDL permit: This 2 week training will be the fundamentals of driving a tractor-trailer and get industry experience. CDL driving test given on last day for licensing.

***Electrical Wiring:** Training covers: Basic electrical theory, electrical code, blueprints, and tool safety. Hands-on training includes; wiring of switches, GFCI receptacles, duplex receptacles, panels, 3-way and 4-way switches, bending EMT and rigid conduit. Students apply the skills they learn by assembling and wiring a lamp with a light switch, outlets, and USB receptacles.

****First Aid/CPR/AED (Former Students only):** Combines adult CPR, AED, and first aid training in a program designed for the occupational first aid provider. This comprehensive program meets OSHA and other federal and state regulatory requirements for training people how to respond and care for medical emergencies at work.

Heavy & Light Duty Mechanics: Training covers instruction into Heavy Duty Diesel Mechanics. Modules include: hydraulics, drivetrains, fuel systems, exhaust systems, electrical functions, and troubleshooting techniques. The proper use of tools and jobsite safety will be included in the instruction.

***Heavy Equipment Operators:** Training covers class room instruction in the Alaska Safety hand book, Camps & Safety Orientation, Environmental Excellence, Hazard Communication, Hazwopper Awareness, Personal Protective Equipment, Hydrogen Sulfide, and includes Hands-on practice on heavy equipment including; Hydraulic Excavator, Dozer & Front-end Loader. Equipment training covers how to conduct pre-operational 360° walk-arounds, control familiarization, basic equipment functions, basic operating techniques and safety rules and practices.

Intro to North Slope Pipelaying: (Fairbanks Only) Training with classroom instruction and hands-on training includes an introduction to pipeline construction and the various types of work that Construction Craft Laborers are responsible for. May include basic hoisting and rigging, scaffolding, insulation of pipe among many other job duties performed when working on the Trans Alaska Pipeline System or in the North Slope oil fields.

Intro to Pipelaying: (Chugiak) Training with classroom instruction and hands-on training includes an introduction to the installation of water, sewer, and storm drain utilities. Basic skills in tool use and how the utilities work.

***Ironwork & Welding (Welding - Fairbanks):** Training with classroom instruction and hands-on training includes; Vertical and horizontal stick welding, oxygen and acetylene cutting, hands-on tools and materials, hazard awareness, work site safety. Identify and use safe welding practices, identify joint design and fit-up, set up a welding machine, and identify electrode selection. Participants learn basic rebar wire tying and reinforcing practices, basic structural ironworking and rigging practices, and basic rough terrain forklift operation and hand signals.

Laborers Field Challenge: Participants will be split up into three groups that will include several physically demanding activities for two full days. The activities are structured to give the applicant a true understanding of the type of work that Laborers are responsible for on construction jobsites. Applicants must be in good physical condition to complete these timed, hands-on activities, which include carrying concrete blocks 100' and properly stacking them, erecting and tearing down scaffolding, moving two cubic yards of material by wheelbarrow, and digging a trench with a pick and shovel.

Metal Studs Framing / Sheetrock & Taping: Training covers the basics of carpentry and trades math. Accurate reading and use of a tape measure, 3-4-5 layout method and safe use of power tools. Hands-on covers layout and framing of walls which will be attached at partitions and squared. Material handling, storage, layout, cutting, application and installation of sheetrock, proper application of joint compound, tape and corner bead, and patch/repair of sheetrock. Participants also learn the difference between using metal and wood studs.

****OSHA 10 (Former Students only):** Provides entry level construction workers information about their rights and employer responsibilities and how to file a complaint. Emphasizes how to identify, abate, control, avoid and prevent job related hazards on a construction site. Covers a variety of construction safety and health hazards which a worker may come across on a construction site as well as personal protective equipment (PPE).

Pipefitter Welding (Fairbanks only): Training covers hazard recognition associated with welding and cutting applications, basic understanding of pipeline terminology, introduction to cutting and beveling, introduction to trade mathematics (algebra, geometry and trigonometry), and introduction in SMAW, MIG, TIG and SAW welding processes.

***Plumbing, Pipefitting & Welding (Anchorage only):** Training covers: Soldering and brazing, oxy acetylene torch set-up and cutting, pipe threading, pro-press fittings and methods of joining. Introduction to SMAW welding metallurgy. Introduction to waste, drainage, vent fittings, soil pipe methods of joining and cutting, plumbing fixtures and roof drains, plumbing and pipefitting tools, pipe beveling, Oakie Beveller and Tri-Tool. Introduction to hangers, supports, valves and use of ladders, and introduction to hangers, supports, valves and use of ladders, and introduction to plumbing codes.

Power Tools: Training covers: The ability to quickly and accurately use a tape measure, and the general safety, size, types, marking and cutting of lumber. Proper and safe use of a handsaw, hammer and various hand tools. Safety, operation and proper use of a variety of power tools used in the construction industry including; Orbital sander, finish sander, compound miter saw, router, jig saw, kreg jig, drill, impact driver, and belt sander. Students will construct several small projects and complete tasks using various power tools.

Residential Wood Framing (Fairbanks only): Training covers layout for wood framing using 16 & 24-inch O.C. layout, design placement and use of wall framing, door and window components. Conventional gable roof framing techniques are also covered for wood rafters, ceiling joist, lookouts, barge rafters and roof sheathing.

Rigging & Piledriving: Training covers the basics of the Piledriving trade including; safe hoisting & rigging techniques, universal hand signals, rigging mathematics, types of pile, welding & splicing, cast in place concrete, & the daily rigors of a Piledriver.

Scaffold User (Former Students only): This training covers correct procedures for erecting, disassembling, moving, operating, maintaining and inspecting scaffold, proper use and handling of material on the scaffold, fall protection, falling object protection, and the associated safety wear.

***Sheet Metal & HVAC:** Training covers the basics of Sheet Metal Work. Learn to build 3-D objects from flat sheets of metal. Learn about HVAC systems and how to fabricate and install ductwork. Use your brain to calculate cut sizes, your hands to fabricate intricate sheet metal pieces and your brawn to install the piece where it belongs.

Sheetrock & Taping: Training covers materials, handling, storage, layout, cutting, application, and installation of sheetrock (drywall). Students exhibit their learned skills through the proper application of joint compound, tape, and corner bead to provide finished appearance to sheetrock.

Structural Welding: This introduction to welding workshop starts with safety first. Using an oxy-acetylene torch, students learn how to cut, prep, and fit metal test coupons. Students will then practice and test their skills with structural welding in multiple positions using the Shielded Metal Arc (SMAW) and Flux-Cored ARC (FCAW) welding processes.

Telecommunications: Training covers exposure to basic principles in the telecommunications industry including: central office operations, outside plant line and splicing work, installation and repair, data and key/pbx, simple termination and testing of category 5E cabling, network interface device installation techniques, block terminations, basic AC/DC theory as it relates to telecommunications, and principles of light and fiber optics.

Welding Fabrication: Training covers the techniques used in the maintenance and repair of heavy equipment. Participants will learn and practice the safe process of oxy-acetylene cutting and arc welding as well as the proper use of tools and jobsite safety.

*Trades basic skills training. **Trade Ready Training. Trainings that are part of a Quality Pre–Apprenticeship (QPA) Program.

See the QPA Framework on our website for more information under the Apprenticeship tab.

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