Clear Form

ON-THE-JOB TRAINING PROGRAM

HIGHWAY CONSTRUCTION TRADES

OVERVIEW

The purpose of the OJT Program is to address the underrepresentation of minority, female, veteran and disadvantaged individuals in the highway construction trades.

By providing on-the-job training, the contractor will attract and retain more highly qualified employees and improve productivity and services.

The goals of the OJT Program are:

- To offer equal opportunity for the training and upgrading of minorities, female, veteran and disadvantaged persons toward journey-level status in the highway construction trades.
- To improve the skills of the available workforce.

PARTICIPANT RECRUITMENT

Contractors will review employment applications of prospective participants for work experience who will make desirable trainees. Contractors could obtain prospects who are interested in the OJT program through:

- Job fairs
- Existing employees
- Online Employment Resources
- ADOT BECO OJT Supportive Services Program

ENTRANCE REQUIREMENTS

Applicants will meet the following minimum qualifications:

- The applicant must be a minimum of eighteen (18) years of age.
- The applicant must be physically capable of performing the essential functions of the OJT program, with or without a reasonable accommodation, and without posing a direct threat to the health and safety of the individual or others.
- Applicants are subject to random, post-accident and reasonable suspension drug testing per company policy.
- No applicant will be accepted as a trainee in any classification for which he/she has successfully completed, or in which he or she has been gainfully employed.

EMPLOYEE ORIENTATION

Each trainee will receive an orientation by a Project Manager and/or Supervisor. These meetings will include the following:

- The trainee will receive a copy of this manual, which includes the specific training program he/she is completing.
- The starting wage rate and the graduated pay scale of the trainee enrolled in the training program.
- The seasonality of construction work and the adverse weather conditions under which work may occur.
- The necessity that construction workers are punctual and willing to work extra hours in order to remain steadily employed.
- From time to time, the trainee may have an obligation to perform tasks not included in the training program outline.
- Qualities or traits the company considers desirable in its workers, including work ethics.
- Ways in which employees can earn a promotion within the company.
- EEO policy, Affirmative Action Plan, Complaint and Unlawful Harassment policies.
- Appropriate PPE (i.e. hard hat, safety vest, work boots etc.) for the project shall be worn at all times in compliance with “Company Policy.” Clothing should be applicable for the job environment.
- Basic hours of operation, overtime, weekend expectations.
- Whom the trainee will report to (primary supervisor); whom the trainee should call in case he/she will be tardy, absent from work or need to leave the worksite, specifically identifying the Company policies.
- Disciplinary procedures, termination, and layoff policies.
- Tool Box Talk participation.

SUPERVISION

The trainee will be assigned to a journey worker, supervisor, or other knowledgeable employee who will, on a daily and personal basis, direct, review, and observe the trainee.

The allowable ratio of apprentices to journeyman is 1:1 ratio for the first trainee and one trainee for the next three journeymen at the same occupation.

RECORD KEEPING

Contractor must complete a Trainee Enrollment form for each trainee. Contractor shall make all training records available for ADOT review upon request.

Training hours achieved on ADOT Federally funded projects shall be recorded in ADOT's online OJT reporting module within the ADOT DOORS System. Training hours achieved on non-federally funded ADOT Projects shall be recorded by contractor and made available for review upon request.

BENEFITS

For employees subject to prevailing wages, the fringe benefits will be contributed into bona fide funds, plans or programs when applicable. Unless specified in union standards, fringes will be at the journeyman rate.

WORK HOURS

The normal workweek is to consist of eight (8) hours per day, five (5) days per week, or that which the journeyman in the craft is working. Additionally, a trainee is eligible to work overtime if the opportunity is presented.

TERMINATION FOR JUST CAUSE

The trainee may be terminated at any time during training. Some examples of reasons for termination are: absenteeism, lack of punctuality, accident-proneness, lack of interest, poor attitude, failure to demonstrate his/her ability to perform diligently and faithfully the work of the trade and other pertinent duties as assigned, or failure to conduct him/herself in a creditable, ethical, and moral manner.

As an employee, participation in the OJT program is not intended and does not constitute a contract of continued employment between the contractor and yourself. In addition, employment with the contractor is "at will" and that either the trainee or the employer may terminate employment at any time, and for any or no reason.

CERTIFICATE OF TRAINING PROGRAM COMPLETION

At the completion of the training program, the trainee will receive a Certificate as a record of his/her accomplishment.

TEMPLATE ON THE JOB TRAINING CLASSIFICATIONS

The OJT Program has been designed to provide training in the skilled construction trade classifications, and to ensure the Trainee consistently receives the level and quality of training necessary to perform in their respective skilled trade classification. The training classifications below and as outlined in the document have been approved by FHWA. Changes made to the content below will need to be submitted to ADOT for FHWA approval.

TRAINEE CLASSIFICATION	NUMBER OF TRAINING HOURS
Construction Carpenter Trainee	4,000
Construction Cement Mason Trainee	4,000
Construction Laborer Trainee	1,000
Project Engineer Trainee	6,000
Equipment Operator Trainee	6,000
Mechanic / Equipment Services Trainee	6,000

CONSTRUCTION CARPENTER TRAINEE	4,000 HOURS

The Trainee will perform a combination of tasks on construction projects as work requires under general supervision of a skilled carpenter.

A typical training program under this classification will consist of the following (as a minimum):

A. FAMILIARIZATION

- Safety
- Company Policies
- Materials
- Employer/Employee Responsibility
- General Housekeeping on the Project
- Communication
- Heat Stress
- Personal Protective Equipment
- Noise and Hearing Protection
- Jobsite Safety Orientation
- Accident Prevention Heavy Construction
- Working Around Mobile Equipment
- Power and Hand Tools
- Hazard Communication Awareness

B. TRAINING

- First-Aid/CPR
- OSHA – An Introduction
- OSHA 10
- OSHA 10 Road Course
- OSHA 30
- Fall Protection Awareness
- Fire Protection Awareness
- Portable Fire Extinguishers
- Scaffold Safety Awareness
- Ladder Safety
- MSDS/Hazmat
- Traffic Safety/Control
- Introduction to Measuring Tools:
  - ✓ Mathematics for Construction
  - ✓ Area and Volume Calculations
  - ✓ Measuring Rules
  - ✓ Chaining Tapes
  - ✓ Elevation Rods
  - ✓ Transits
  - ✓ Levels
  - ✓ Laser Aligner Measuring Elevations
- Form Building and Erection:
  - ✓ Basic Form Design
  - ✓ Construction of Forms
  - ✓ Erection and Placement of Forms
  - ✓ Stripping and Salvage of Forms for Reuse
  - ✓ Box Culverts, Inlets and Headwall Formwork
  - ✓ Decking Formwork
  - ✓ Endwall Formwork
  - ✓ Parapet and Hand Railing Formwork
  - ✓ Bridge Falsework
  - ✓ Shape or Cut Materials to Specified Measurements Using Hand Tools, Machines, or Power Saw

- Catch Basins
- Sidewalk
- Drainage Structures
- SWPPP
- Pier, Pile and Cap Formwork
- SWPPP
- Pier, Pile and Cap Formwork
- Routine Cleaning and Maintenance of Area, Materials, Tools and Equipment
- Select Materials and Order
- Work with and/or Remove Hazardous Material
- Demolition:
  - ✓ Remove Damaged or Defective Parts or Sections of structures
  - ✓ Repair, Remove or Replace Sections of Structures Using Hand Tools

C. GENERAL CONSTRUCTION

- Carpenter

CONSTRUCTION CARPENTER TRAINEE - FEDERAL FUNDED PROJECT							
LEVEL 1 – 1,000 HOURS @60%	_____	+	_____	**FRINGE**	=	_____	**WAGES**
LEVEL 2 – 2,000 HOURS @70%	_____	+	_____	**FRINGE**	=	_____	**WAGES**
LEVEL 3 – 3.000 HOURS @80%	_____	+	_____	**FRINGE**	=	_____	**WAGES**
LEVEL 4 – 4,000 HOURS @90%	_____	+	_____	**FRINGE**	=	_____	**WAGES**

4,000 @ 100% OJT HOURS ACHIEVED CERTIFICATE OF COMPLETION AWARDED.

CONSTRUCTION CEMENT MASON TRAINEE — 4,000 HOURS

The Trainee will perform a combination of tasks on construction projects as work requires under general supervision of a skilled cement mason.

A typical training program under this classification will consist of the following (as a minimum):

A. FAMILIARIZATION

- Safety
- Company Policies
- Materials
- Employer/Employee Responsibility
- General Housekeeping on the Project
- Communication
- Heat Stress
- Personal Protective Equipment
- Noise and Hearing Protection
- Jobsite Safety Orientation
- Accident Prevention Heavy Construction
- Working Around Mobile Equipment
- Power and Hand Tools
- Hazard Communication Awareness

B. TRAINING

- First-Aid/CPR
- OSHA – An Introduction
- OSHA 10
- OSHA 10 Road Course
- OSHA 30
- Fall Protection Awareness
- Fire Protection Awareness
- Portable Fire Extinguishers
- Scaffold Safety Awareness
- Ladder Safety
- MSDS/Hazmat
- Traffic Safety/Control
- Soil Analysis and Classifications
- Trenching and Excavation Awareness
- Demolition Hazards
- Introduction to Measuring Tools:
  - ✓ Mathematics for Construction
  - ✓ Area and Volume Calculations
  - ✓ Measuring Rules
  - ✓ Chaining Tapes
  - ✓ Elevation Rods
  - ✓ Transits
  - ✓ Levels
  - ✓ Laser Aligner Measuring Elevations
- Structural Concrete:
  - ✓ Concrete Materials
  - ✓ Finishing Concrete/Pouring/Setting
  - ✓ Patching Concrete
  - ✓ Concrete Curing
  - ✓ Bidwell Operation

- Screed and Form Setting
- Finishing/Flat Work
- Curb and Gutter Paving
- Grinding/Sacking/Patching
- Machine Operation Sets
- Setting Screeds to Line
- Use of Float and Trowel
- Use of Edger and Jointer
- Chipping of Concrete
- Patching of Concrete
- Rubbing and Brushing of Concrete
- Establishing Grade Lines and Heights
- Setting Expansion Joints
- Curb and Gutter Screeds
- Finishing of Curbs, Gutters, Sidewalks
- Laser or Transit
- Layout of Joints in Special Designs
- Laser Aligner Measuring Elevations
- Concrete Demolition:
  - ✓ Removal/Clearing of Materials
  - ✓ Tools and Equipment
  - ✓ Methods of Removal
  - ✓ Protection of Surroundings
- Concrete Work
  - ✓ Level Concrete
  - ✓ Level with Laser or Transit
  - ✓ Install Reinforcement
  - ✓ Place Expansion Joints
  - ✓ Construct and Set Screeds and Forms
  - ✓ Form a Catch Basin
  - ✓ Identify Types of Concrete Mix
  - ✓ Cut, Repair and Resurface Concrete
- Girder Erection
  - ✓ Placement/Fastening
  - ✓ Exposure to Pile Driving, Welding, Cutting, and Minimum Heavy Equipment Operation

C. GENERAL CONSTRUCTION

- Cement Mason
- Concrete Mucker
- Concrete Small Tools
- Concrete Vibrating Machine
- Formsetter

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CONSTRUCTION CEMENT MASON TRAINEE - FEDERAL FUNDED PROJECT

LEVEL 1 – 1,000 HOURS @60%	_____	+	_____	**FRINGE**	=	_____	**WAGES**
LEVEL 2 – 2,000 HOURS @70%	_____	+	_____	**FRINGE**	=	_____	**WAGES**
LEVEL 3 – 3.000 HOURS @80%	_____	+	_____	**FRINGE**	=	_____	**WAGES**
LEVEL 4 – 4,000 HOURS @90%	_____	+	_____	**FRINGE**	=	_____	**WAGES**

4,000 @ 100% OJT HOURS ACHIEVED CERTIFICATE OF COMPLETION AWARDED

CONSTRUCTION LABORER TRAINEE	1,000 HOURS

The OJT Trainee will perform a combination of tasks on construction projects, usually working in a utility capacity. Individuals will transfer from task to task, as work requires under general supervision of a skilled construction employee.

A typical training program under this classification will consist of the following (as a minimum):

A. FAMILIARIZATION

- Safety
- Company Policies
- Materials
- Employer/Employee Responsibility
- General Housekeeping on the Project
- Communication
- Heat Stress
- Personal Protective Equipment
- Noise and Hearing Protection
- Jobsite Safety Orientation
- Accident Prevention Heavy Construction
- Working Around Mobile Equipment
- Power and Hand Tools
- Hazard Communication Awareness

B. TRAINING

- First-Aid/CPR
- OSHA – An Introduction
- OSHA 10
- OSHA 10 Road Course
- OSHA 30
- Fall Protection Awareness
- Fire Protection Awareness
- Portable Fire Extinguishers
- Scaffold Safety Awareness
- Ladder Safety
- MSDS/Hazmat
- Traffic Safety/Control
- Soil Analysis and Classifications
- Trenching and Excavation Awareness
- Demolition Hazards
- Right-of-Way Lines
- Alignment Stakes, Grade Stakes
- Boundary Markers, Bench Markers and Tie Points
- Tools/Equipment
- Project Set-Up
- Introduction and Observation of Routine Procedures
- Introduction to Measuring Tools:
  - ✓ Mathematics for Construction
  - ✓ Area and Volume Calculations
  - ✓ Measuring Rules
  - ✓ Chaining Tapes
  - ✓ Elevation Rods
  - ✓ Transits
  - ✓ Levels
  - ✓ Laser Aligner Measuring Elevations
- Confined Space Entry:
  - ✓ Hazard Recognition
  - ✓ Entry Program
  - ✓ Atmospheric Testing
  - ✓ Controlling Atmospheric Hazards
- Air Tool Operation:
  - ✓ Inspection and Maintenance of Tools and Equipment
  - ✓ Construction Craft Laborer Air Compressor Operation
  - ✓ Demonstration of Air Tools
- Small Gas Engines:
  - ✓ Preventive Maintenance and Trouble Shooting
  - ✓ Operation of Equipment

- Highway Work Zone:
  - ✓ Flagger Safety
  - ✓ Worksite Safety
  - ✓ Equipment Identification
  - ✓ Use of Hand Signals and Signs
  - ✓ Control of Traffic through the Project
  - ✓ Control of Construction Equipment through the Project
  - ✓ Installing/Removing Traffic Control Devices
  - ✓ Emergency Procedures
- Stripping/Salvage:
  - ✓ Removal/Clearing of Materials
  - ✓ Safety Check of Equipment
- Pipe Installation:
  - ✓ Excavation, Shoring and Placement of Material
  - ✓ Handling Materials
  - ✓ Fine Grading
  - ✓ Back Filling and Compaction
  - ✓ Back Injury Prevention
  - ✓ Measuring Tools
  - ✓ Locating Utilities
  - ✓ Manhole/Catch Basin Construction
  - ✓ Trenching and Excavation Safety
  - ✓ Pressure Pipe Laying Techniques
  - ✓ Gravity Flow Piping Systems
  - ✓ Laying all Types of Pipe Duct, Adjust Pipe to Line and Grade, and Sealing of Pipe Joints.
  - ✓ Actual Use of Hand Level, Grade Line and Laser as Applicable.

C. GENERAL CONSTRUCTION CLASSIFICATIONS

- AC Dumpman
- Air and Water Washout Nozzleman
- Asbestos Abatement
- Asphalt Laborer
- Asphalt Raker
- Asphalt Raker II
- Bander
- Bio-Filter, Pressman, Installer, Operator
- Cement Mason Tender
- Chain Saw
- Chipper
- Compaction Tool Operator
- Concrete/Asphalt Saw
- Concrete Cutting Torch
- Concrete Mucker
- Concrete Small Tools
- Concrete Vibrating Machine
- Concrete Worker
- Cribber & Shorer (except tunnel)
- Cutting Torch Operator
- Drill Docker/Air Tool Repairman
- Driller-Core, Diamond, Wagon, Air Track
- Dumpman Spotter
- Fence Builder
- Fine Grader (small area with shovel)
- Formsetter (steel forms)
- Grade Setter (pipeline)
- Guardrail InstallerGuinea Chaser
- Gunite
- Hazardous Waste Removal
- Hydraulic Jacks and similar tools
- Jackhammer and/or Pavement Breaker
- Landscape
- Landscape Sprinkler
- Lead Abatement
- Lead Pipeman
- Operator and Tender of Pneumatic and Electric Tools (not herein separately classified)
- Pest Technician/Weed Control
- Pipe Caulker and Backup Man-Pipeline
- Pipe Layer
- Pipe Wrapper
- Pneumatic Gopher
- Powderman, Hydrasonic
- Power Type Concrete Buggy
- Pre-cast Manhole Erectors
- Process Piping Installer
- Rigger and Signal Man
- Riprap Stoneman
- Scaffold Builder
- Scaffold Laborer
- Scaler
- Scaler (Driller)
- Scissor Lift Operations
- Tamper (mechanical)
- Traffic Control
- Trencher – hand guided

CONSTRUCTION LABORER - FEDERAL FUNDED PROJECT

LEVEL 1 – 500 HOURS @60%	_____	+	_____	**FRINGE**	=	_____	**WAGES**
LEVEL 2 – 500 HOURS @80%	_____	+	_____	**FRINGE**	=	_____	**WAGES**

1,000 @100% OJT HOURS ACHIEVED CERTIFICATE OF COMPLETION AWARDED.

PROJECT ENGINEER TRAINEE	6000 HOURS

Individuals will be trained to act in a supervisory capacity coordinating activities of work crews on highway and/or bridge construction projects. The trainee will learn:

- Company policies and procedures
- Jobs and personnel function to gain knowledge of all phases of highway/bridge construction tools and processes including:
  - ✓ Project Plans and Specifications;
  - ✓ Topographical Maps and Surveying;
  - ✓ Scheduling; and
  - ✓ Programs and Regulations Governing Construction Activities.

A typical training program under this classification will consist of the following (as a minimum):

A. FAMILIARIZATION

- Safety
- Company Policies
- Materials
- Employer/Employee Responsibility
- General Housekeeping on the Project
- Communication
- Heat Stress
- Personal Protective Equipment
- Noise and Hearing Protection
- Jobsite Safety Orientation
- Accident Prevention Heavy Construction
- Working Around Mobile Equipment
- Hazard Communication Awareness

B. Training

- EEO Policy
- AAP
- Sexual Harassment Training
- 30 Hour OSHA
- MSHA
- First-Aid/CPR
- SWPPP
- PPE
- Competent Person Trenching and Site Excavation
- Competent Person Fall Protection
- ATSSA Flagger Training
- ATSSA Supervisor Training
- Responsibilites:
  - ✓ Scheduling of all Flag Personnel
  - ✓ Employee Relations – Recognition and Motivation
  - ✓ Conflict Resolution
  - ✓ Public Relations
  - ✓ Safety and First-Aid
  - ✓ Weekly Project Audits
  - ✓ Tool Box Talks Meeting
  - ✓ Project Review of EEO Meeting
  - ✓ Job Hazard Analysis
  - ✓ Crew and Equipment Scheduling
  - ✓ Review Subcontractors Contracts
  - ✓ Review Subcontractors Insurance Certificates
  - ✓ Project Documentation (Weekly Time Sheets, Equipment Time, etc.)
  - ✓ Equipment/Material Usage and Maintenance
  - ✓ Recordkeeping
  - ✓ Review Plans and Specifications
  - ✓ Statistical Safety Program
  - ✓ Measuring Equipment Production
  - ✓ Project Set-Up
- Job Knowledge:
  - ✓ Blueprint/Topographical Map/Layout Reading
  - ✓ Use of Transit
  - ✓ Planning and Layout of Field Office and Grounds

- ✓ Layout and Staking
- ✓ Site Preparation
- ✓ Ground Condition Analysis and Testing
- ✓ Excavation
- ✓ Drainage
- ✓ Pipe Culverts Planning and Installation
- ✓ Sub-Grade Preparation
- ✓ Fine Grading
- ✓ Erosion Control
- ✓ Placement of Paving - Concrete, Asphalt and Base Coarse
- ✓ Job Site Cleanup
- ✓ Traffic Control
- ✓ Contractor Quality Control/Quality Assurance
- ✓ Dust Control

- Form Building and Erection:
  - ✓ Basic Form Design
  - ✓ Construction Forms
  - ✓ Erection and Placement of Forms
  - ✓ Placement of Reinforcing Steel
- Structural Concrete:
  - ✓ Concrete Materials
  - ✓ Finishing Concrete – Pouring/Setting
  - ✓ Patching Concrete
  - ✓ Curing Concrete
  - ✓ Bidwell Operation
  - ✓ Form Work
  - ✓ False Work
  - ✓ Concrete Quality Control
- Stripping/Salvage:
  - ✓ Stacking Fundamentals
  - ✓ Removal/Clearing of Materials
- Concrete Demolition:
  - ✓ Removal/Clearing of Materials
  - ✓ Tools and Equipment
  - ✓ Methods of Removal
  - ✓ Protection of Surroundings
- Girder Erection:
  - ✓ Placement/Fastening/Securing
  - ✓ Exposure to Pile Driving, Welding, Cutting, and Minimum Heavy Equipment Operation
- Familiarization of Equipment:
  - ✓ Observation of Various Equipment
  - ✓ Understanding Basic Function and Preparation of Equipment
  - ✓ Understanding Use of Parts Catalog and Cost/Purchasing of Parts
  - ✓ Learning Key Parts Required
  - ✓ Learning Company Purchase, Receipts, Storage and Issuance Procedures
- Equipment Functions:
  - ✓ Tool Care, Storage and Transportation
  - ✓ Lubrication – Oil, Air and Fuel Filters, Grease Points – Inspection Techniques to Detect Abnormal Conditions
  - ✓ Welding and Burning Equipment and Operation of Lathes, Saws, Shapers, Grinders and Presses
  - ✓ Operation and Service of Fuel Systems
  - ✓ Hydraulic Systems
  - ✓ Electronic Systems
  - ✓ Equipment Operations
- Application of Equipment Training:
  - ✓ Preventive Maintenance – Shop and Field
  - ✓ Corrective Maintenance – Shop and Field
  - ✓ Order, Receive, and Store Tools and Equipment Under Supervision of Skilled Worker
  - ✓ Draw, Arrange, and Transport Tools and Materials Under Supervision of Skilled Worker
  - ✓ Participate in Equipment Preparation and Maintenance Under Supervision of Skilled Worker – Both in the Shop and Field Environments
  - ✓ Use Tools of the Trade and Perform Related Duties as Required
- Traffic Signage:
  - ✓ Types of Equipment and Materials
  - ✓ Maintenance, Operation Limitations and Capabilities
  - ✓ Fueling, Lubricating and Servicing
  - ✓ Set-up

- Traffic Control:
  - ✓ Learning Company Policies and Procedures
  - ✓ Federal and State Regulations
  - ✓ Proper Hand and Sign Signaling
  - ✓ Public Relations
  - ✓ Recordkeeping
  - ✓ Knowledge of Proper Equipment and Safe Signing
  - ✓ Use of Radio Equipment
  - ✓ Control of Construction Equipment Through Work Area
  - ✓ Coordination of Activities with Proper Management and Supervisory Personnel
  - ✓ Daily Start-Up and Shut-Down Involving Safety Equipment
  - ✓ Maintenance of Adequate Level of Supplies for Daily Use
  - ✓ Placing Concrete Barriers
  - ✓ Safety and Operating Procedures
  - ✓ Topographical Map Reading
  - ✓ Planning and Layout Of Sign Packages
  - ✓ Excavating, Drainage, and Pipe Laying
  - ✓ Fence and Guardrail
  - ✓ Compaction and Backfilling
  - ✓ Fine Grading and Erosion Control
  - ✓ Placement of Hot Mix Asphalt and Hot Mix Asphalt Curb
  - ✓ Cold Planning and Reclaiming
  - ✓ Removal of Permanent Construction Signs and Job Site Clean-up
  - ✓ Temporary Pavement Markings

C. GENERAL CONSTRUCTION CLASSIFICATION

- Project Engineer

PROJECT ENGINEER TRAINEE - FEDERAL FUNDED PROJECT							
LEVEL 1 – 1,000 HOURS @60%	_____	+	_____	**FRINGE**	=	_____	**WAGES**
LEVEL 2 – 2,000 HOURS @65%	_____	+	_____	**FRINGE**	=	_____	**WAGES**
LEVEL 3 – 3.000 HOURS @70%	_____	+	_____	**FRINGE**	=	_____	**WAGES**
LEVEL 4 – 4,000 HOURS @75%	_____	+	_____	**FRINGE**	=	_____	**WAGES**
LEVEL 5 – 5,000 HOURS @80%	_____	+	_____	**FRINGE**	=	_____	**WAGES**
LEVEL 6 – 6,000 HOURS @90%	_____	+	_____	**FRINGE**	=	_____	**WAGES**

6,000 @ 100% OJT HOURS ACHIEVED CERTIFICATE OF COMPLETION AWARDED.

EQUIPMENT OPERATOR TRAINEE 6000 HOURS

The trainee will learn and operate many types of construction equipment used on highway and bridge construction projects.

A typical training program under this classification will consist of the following (as a minimum):

A. FAMILIARIZATION

- Safety
- Company Policies
- Materials
- Employer/Employee Responsibility
- General Housekeeping on the Project
- Communication
- Heat Stress
- Personal Protective Equipment
- Noise and Hearing Protection
- Jobsite Safety Orientation
- Accident Prevention Heavy Construction
- Working Around Mobile Equipment
- Power and Hand Tools
- Hazard Communication Awareness

B. TRAINING

- First-Aid/CPR
- OSHA – An Introduction
- OSHA 10
- OSHA 10 Road Course
- OSHA 30
- Fall Protection Awareness
- Fire Protection Awareness
- Portable Fire Extinguishers
- Scaffold Safety Awareness
- Ladder Safety
- MSDS/Hazmat
- Traffic Safety/Control
- Soil Analysis and Classifications
- Trenching and Excavation Awareness
- Demolition Hazards
- Defensive Driving
- Crane Safety Basics
- Perform a Walk Around Inspection
- Mounting and Dismounting
- Safety Videos and Safe Operation of Equipment
- Task List:
  - ✓ Start Up and Shut Down Procedures
  - ✓ Safety and Maintenance Inspections
- Construction Basics:
  - ✓ Operation and Maintenance Manual
  - ✓ Load Charts
  - ✓ Materials/Earth Work
  - ✓ Site Preparation
  - ✓ Dust Control
  - ✓ Fueling/Lubrication/Hydraulic Systems
  - ✓ Equipment Capabilities and Limitations
  - ✓ Rolling (Compaction/Vibration)
  - ✓ Trenching/Pipe Laying
  - ✓ Cut and Fill Ground Elevation Variations
  - ✓ Backfill/Curbing
  - ✓ Rigging/Hoisting
  - ✓ Common Grade Stake Terms and Placement
  - ✓ Making Adjustments for Proper Depth, Grade and Finish
  - ✓ Reading Survey Stakes and their Markings
- Operations of Equipment:
  - ✓ V-Ditching
  - ✓ Side Slop Finishing

- ✓ Grading
- ✓ Stockpiling
- ✓ Site Prep
- ✓ Site Clean-up
- ✓ Cutting/Leveling
- ✓ Accu Grade Equipment
- ✓ Level/Straight Dozing
- ✓ Slot Dozing
- ✓ Backfilling
- ✓ Ripping
- ✓ Tree Stump Removal
- ✓ Slope Building
- ✓ Boulder Removal
- ✓ Ramp Building
- ✓ Drainage
- ✓ Excavation
- ✓ Lifting
- ✓ Demolition
- ✓ Loading Trucks
- ✓ Finding Utilities
- ✓ Finish Straight Walls
- ✓ Integrated Tools
  - ➢ Buckets - Standard and Multipurpose, Hammers, Augers, Rippers, Tampers, Rollers, Material Handling, Brooms, Rakes, Asphalt Cutters, Bale Spear, Thumb Attachment, E-Stick
- ✓ Towing
- ✓ Forestry
- ✓ Mining
- ✓ Wheel Roller, Tamping
- ✓ Screening Material
- ✓ Payload Control Material
- ✓ Fill Compaction
- ✓ Landfill Construction
- ✓ Levee Construction
- ✓ Aggregate Mining
- ✓ Airport Construction
- ✓ Canal Excavation
- ✓ Earthfill Dam Building
- ✓ Irrigation System Work
- ✓ Pond Building
- ✓ Railroad Embankment Construction
- ✓ Reclamation
- ✓ Refuse Covering
- ✓ Spoil Removal
- ✓ Stripping
- ✓ Terracing
- ✓ Haul Road Maintenance

- Maintenance:
  - ✓ Maintenance of Equipment (Minor Repairs/Parts Replacement)
  - ✓ Machine Cleanliness
  - ✓ Performing Maintenance Safely
  - ✓ Cleaning Vehicle, i.e. Windows, Lights, Cargo Area, Placing Proper Placard on Truck
  - ✓ Checking and Adding Vehicle Fluid as Necessary
  - ✓ Basic Fueling

C. GENERAL CONSTRUCTION CLASSIFICATIONS

- A-Frame Boom Truck
- Aggregate Plant
- Air Compressor
- Asphalt Laydown Machine
- Asphalt Plant Mixer
- Auto Grade Machine
- Backhoe 1 < cu yd
- Backhoe < 10 cu yd
- Backhoe 10 cu yd and over
- Barge
- Bee Gee
- Beltcrete
- Boring Bridge and Texture
- Boring Machine
- Boring Machine (including Mole, Badger & similar type directional/horizontal)
- Brakeman
- Clamshell < 10 cu yd
- Clamshell 10 cu yd and over
- Concrete Batch Plant
- Concrete mechanical Tamping-Spreading Finishing Machine

- Concrete Mixer (paving & mobile)
- Concrete Mixer (skip type)
- Concrete Pump
- Concrete Pump (truck mounted with boom only)
- Conductor
- Conveyor
- Crane (crawler & pneumatic 15 > 100 tons)
- Crane (crawler & pneumatic 100 tons and over)
- Crane (under 15 tons)
- Crawler Type Tractor with Boom Attachment & Slope Bar
- Cross Timing and Pipe Float
- Curing Machine
- Derrick
- Dinky (under 20 tons)
- Dragline < 10 cu yd
- Dragline 10 cu yd and over
- Drilling Machine (including water wells)
- Elevating Grader (except as otherwise classified)
- Elevator hoist (Husky and similar)
- Fireman
- Forklift
- Generator (all)
- Gradall
- Grade Checker
- Handler
- Helicopter Hoist or Pilot
- Highline Cableway
- Highline Cableway Signalman
- Hydrographic Mulcher
- Hydrographic Seeder
- Joint Inserter
- Jumbo Finishing Machine
- Kolman Belt Loader
- Locomotive Engineer (including Dinky 20 tons & over)
- Machine Conveyor
- Mass Excavator
- Mechanical Hoist
- Milling Machine/Rotomill
- Moto-Paver
- Motor Grader (finish-any type power blade)
- Motor Grader (rough)
- Mucking Machine
- Multiple Power Concrete Saw
- Oiler-Driver
- Operating Engineer Rigger
- Overhead Crane
- Pavement Breaker
- Pile Driver Engineer (portable, stationary or skid)
- Pipe-Wrapping & cleaning Machine (stationary or traveling)
- Power Driven Ditch Lining or Ditch Trimming Machine
- Power Grizzly
- Power Jumbo Form Setter
- Power Sweeper
- Pressure Grout Machine
- Pump
- Remote Control Earth Moving Machine
- Road Oil Mixing Machine
- Roller (all types asphalt)
- Roller (excluding asphalt)
- Scraper (pneumatic tired)
- Screed
- Self-Propelled Chip Spreading Machine
- Self-Propelled Compactor (with blade-grade operation)
- Shovel < 10 cu yd
- Shovel 10 cu yd and over
- Skip Loader (all types < 3 cu yd)
- Skip Loader (all types 3 < 6 cu yd)
- Skip Loader (all types 6 < 10 cu yd)
- Slip Form (power driven lifting device for concrete forms)
- Slip Form Paving Machine (including Gunnert, Zimmerman & similar types)
- Slurry Seal Machine (Moto paver driver)
- Small Self-Propelled Compactor (with blade-backfill, ditch operation)
- Soil Cement Road Mixing Machine
- Straw Blower
- Surface Heater & Planer
- Tower Crane or similar type
- Tractor (dozer, pusher-all)

EQUIPMENT OPERATOR TRAINEE - FEDERAL FUNDED PROJECT

LEVEL 1 – 1,000 HOURS @60%	_____	+	_____	**FRINGE**	=	_____	**WAGES**
LEVEL 2 – 2,000 HOURS @65%	_____	+	_____	**FRINGE**	=	_____	**WAGES**
LEVEL 3 – 3.000 HOURS @70%	_____	+	_____	**FRINGE**	=	_____	**WAGES**
LEVEL 4 – 4,000 HOURS @75%	_____	+	_____	**FRINGE**	=	_____	**WAGES**
LEVEL 5 – 5,000 HOURS @80%	_____	+	_____	**FRINGE**	=	_____	**WAGES**
LEVEL 6 – 6,000 HOURS @90%	_____	+	_____	**FRINGE**	=	_____	**WAGES**

6,000 OJT HOURS ACHIEVED CERTIFICATE OF COMPLETION AWARDED

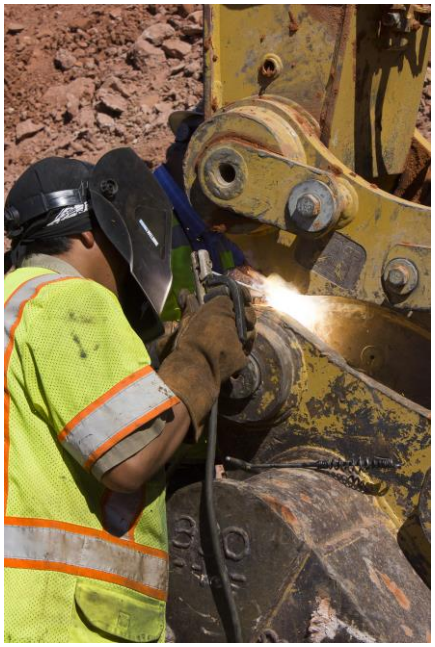
All contractors and work sites have their respective work site safety rules. They have their own traffic rules for on-site service or haul roads. As a new operator, you need to review these with your supervisor. Make sure you understand the signs and markings used on the jobsite, especially those relating to underground utilities. Scan the site for overhead danger areas. And ensure that you are aware of any clearance or weight limitations in areas you will be working.

The O&M Manual contains many warning sections for each machine on how the machine should or should not be used. An O&M Manual is provided with each machine. It is attached to the cab by a lanyard. The operator should become thoroughly familiar with its contents before initially operating the tractor. Often, this manual is stored in a pouch attached to the back of the seat.

MECHANIC/EQUIPMENT SERVICES TECHNICIAN TRAINEE 6000 HOURS

A typical training program under this classification will consist of the following (as a minimum):

Analyzes malfunctions and repairs, rebuilds, and maintains construction equipment, such as cranes, power shovels, scrapers, paving machines, motor graders, trench-digging machines, conveyors, bulldozers, dredges, pumps, compressors and pneumatic tools: Operates and inspects machines or equipment to diagnose defects. Dismantles and reassembles equipment, using hoists and hand tools. Examines parts for damage or excessive wear, using micrometers and gauges. Replaces defective engines and subassemblies, such as transmissions. Tests overhauled equipment to ensure operating efficiency. Welds broken parts and structural members. May direct workers engaged in cleaning parts and assisting with assembly and disassembly of equipment. May repair, adjust, and maintain mining machinery, such as stripping and loading shovels, drilling and cutting machines, and continuous mining machines.



A. FAMILIARIZATION

- Safety
- Company Policies
- Materials
- Employer/Employee Responsibility
- General Housekeeping on the Project
- Communication
- Heat Stress
- Personal Protective Equipment
- Noise and Hearing Protection
- Jobsite Safety Orientation
- Accident Prevention Heavy Construction
- Working Around Mobile Equipment
- Power and Hand Tools
- Hazard Communication Awareness
- Identification of repair parts and replacing of stock
- Repair parts ordering
- Proper use of parts manual

B. TRAINING

- Basic Care and Maintenance
  - ✓ Lubrication
  - ✓ Cleaning
  - ✓ Periodic maintenance
- Brakes (All Types)
  - ✓ Air Systems
  - ✓ Hydraulic Systems
  - ✓ Mechanical Systems
- Transmissions, Clutches, and Converters
  - ✓ Wet Clutches
  - ✓ Dry Clutches
  - ✓ Single Stage Converters
  - ✓ Multi-Stage Converters
  - ✓ Automatic Transmission
  - ✓ Hydrostatic Transmission
  - ✓ Standard Transmission
- Final Drives
  - ✓ Differential
  - ✓ Planetary
- Steering Mechanisms
  - ✓ Manual
  - ✓ Power Assisted
  - ✓ Power
- Power Control Units
  - ✓ Electrical
  - ✓ Air
  - ✓ Hydraulic
- Winches
  - ✓ Review O & M Manual

- Hydraulic Systems

- ✓ Hoses
- ✓ Generating
- ✓ Lighting
- ✓ Ignition

- Engine Fuel Systems
  - ✓ Carburetor
  - ✓ Injection
- Cooling Systems
  - ✓ Radiator
  - ✓ Heat Exchanger
  - ✓ Hydraulic
  - ✓ Air
- Engine Maintenance, Repair, and Rebuild
  - ✓ Gas
  - ✓ Diesel
  - ✓ Two Cycle
  - ✓ Four Cycle
- Welding
  - ✓ Electrical
  - ✓ Gas
- Field Maintenance, General

C. GENERAL CONSTRUCTION CLASSIFICATIONS

- Field Equipment Serviceman (under Laborer or PEO)
- Heavy Duty Mechanic Welder (under Laborer or PEO)

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MECHANIC/EQUIPMENT SERVICES TECHNICIAN TRAINEE - FEDERAL FUNDED PROJECT

LEVEL 1 – 1,000 HOURS @60%	_____	+	_____	**FRINGE**	=	_____	**WAGES**
LEVEL 2 – 2,000 HOURS @65%	_____	+	_____	**FRINGE**	=	_____	**WAGES**
LEVEL 3 – 3.000 HOURS @70%	_____	+	_____	**FRINGE**	=	_____	**WAGES**
LEVEL 4 – 4,000 HOURS @75%	_____	+	_____	**FRINGE**	=	_____	**WAGES**
LEVEL 5 – 5,000 HOURS @80%	_____	+	_____	**FRINGE**	=	_____	**WAGES**
LEVEL 6 – 6,000 HOURS @90%	_____	+	_____	**FRINGE**	=	_____	**WAGES**

6,000 @ 100% OJT HOURS ACHIEVED CERTIFICATE OF COMPLETION AWARDED.