



**Training Proposal for:
California Labor Federation, AFL-CIO
Agreement Number: ET17-0913**

Panel Meeting of: October 28, 2016

ETP Regional Office: San Francisco Bay Area **Analyst:** D. Woodside

PROJECT PROFILE

Contract Attributes:	Retrainee Priority Rate Apprenticeship Veterans	Industry Sector(s):	Construction Green Technology Priority Industry: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Counties Served:	Statewide	Repeat Contractor:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Union(s):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Various Local Unions		
Turnover Rate:	≤20%		
Managers/Supervisors: (% of total trainees)	N/A		

FUNDING DETAIL

Program Costs	+	Support Costs	=	Total ETP Funding
\$888,000		\$61,452 8%		\$949,452

In-Kind Contribution:	50% of Total ETP Funding Required	Inherent
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TRAINING PLAN TABLE

Job No.	Job Description	Type of Training	Estimated No. of Trainees	Range of Hours		Average Cost per Trainee	Post-Retention Wage
				Class / Lab	CBT		
1	Priority Rate Journeyman	Commercial Skills, Computer Skills, Business Skills, OSHA 10/30	45	8-200	0	\$564	\$27.31
				Weighted Avg: 24			
2	Apprentice (Bricklayers & Allied Crafts-46 Northern CA Counties)	Commercial Skills OSHA 10/30	81	8-210	0	\$2,224	\$21.28
				Weighted Avg: 160			
3	Apprentice (Electrician-Tri-County Electrical)	Commercial Skills OSHA 10/30	31	8-210	0	\$2,780	\$23.73
				Weighted Avg: 200			
4	Apprentice (Electrician-Santa Barbara)	Commercial Skills OSHA 10/30	26	8-210	0	\$2,780	\$21.28
				Weighted Avg: 200			
5	Apprentice (Sheet Metal Worker-Fresno)	Commercial Skills OSHA 10/30	33	8-210	0	\$2,780	\$21.28
				Weighted Avg: 200			
6	Apprentice (Electrician/ Inside Wireman-San Joaquin & Calaveras)	Commercial Skills OSHA 10/30	30	8-210	0	\$2,780	\$21.28
				Weighted Avg: 200			
7	Apprentice (Electrician-Central Valley)	Commercial Skills OSHA 10/30	64	8-210	0	\$2,780	\$21.28
				Weighted Avg: 200			
8	Apprentice (Plasterer-So. Cal)	Commercial Skills OSHA 10/30	42	8-210	0	\$2,224	\$21.28
				Weighted Avg: 160			
9	Apprentice (Sheet Metal Worker-Kern/Bakersfield)	Commercial Skills OSHA 10/30	15	8-210	0	\$2,780	\$21.28
				Weighted Avg: 200			
10	Veteran Apprentice (All Trades)	Commercial Skills OSHA 10/30	35	8-210	0	\$2,780	\$21.28
				Weighted Avg: 200			

Minimum Wage by County: \$21.28 Statewide Average Hourly Wage (Priority Industry).

Health Benefits: Yes No This is employer share of cost for healthcare premiums – medical, dental, vision.

Used to meet the Post-Retention Wage?: Yes No Maybe

All Collective Bargaining Agreements provide for health benefits and the amount varies by union local.

Wage Range by Occupation		
Occupation Titles	Wage Range	Estimated # of Trainees
Job Number 1 Journeyman:		
Bricklayers & Allied Crafts		10
Electricians		20
Plasterers		5
Sheet Metal Workers		10
Job Numbers 2 – 10 Apprentice:		
Bricklayers & Allied Crafts (46 No. CA Counties)		81
Electricians (Tri-County)		31
Electricians (Santa Barbara)		26
Sheet Metal Workers (Fresno)		33
Electricians, Inside Wireman (San Joaquin & Calaveras)		30
Electricians (Central Valley)		64
Plasterers (San Diego)		42
Sheet Metal Workers (Kern & No Los Angeles)		15
Job Number 10 Veterans across all Trades		35

*The wage range for Journeymen is due to cost-of-living adjustment by geographic region and varying union locals.

INTRODUCTION

The California Labor Federation, AFL-CIO (CalFED) (www.californialabor.org) seeks funding for its fifth statewide “Building Green Skills” training program. This project will be coordinated by the CalFED Workforce and Economic Development (WED) program.

Founded in 1901, CalFED is an umbrella organization comprised of 1,200 unions, representing 2.1 million union members in manufacturing, retail, construction, hospitality, the public sector, health care, entertainment and other industries in California. CalFED is a repeat contractor, and meets ETP eligibility requirements as a Workforce Innovation and Opportunity Act recipient. Through this proposal, CalFED will serve its membership working in construction.

This project would include Journeyman upgrade and Apprentice training. Training will allow Journeymen in various construction trades to learn skills that are in demand for commercial and industrial construction, public infrastructure projects, and “green” construction. Apprenticeship training, the primary focus of this proposal, will include courses on new energy efficiency regulations and goals, in addition to standard Related and Supplemental Instruction (RSI).

PROJECT DETAILS

Assisting Smaller JATC's

CalFED's project acts as an incubator for smaller apprentice programs that do not have the staff capacity to hold their own ETP contract. For example, many of the JATCs listed in this project have either part-time or no administrative assistance. These small JATCs operate in rural communities throughout the state including Fresno, Bakersfield, Tracy, Stockton, Santa Barbara,

and outlying areas of San Diego and Modesto. The goal is to “graduate” a JATC into its own ETP contract based on its performance under this proposal along with improvements in its DAS completion rate. To date, this model has allowed eight JATCs to hold their own ETP contracts.

Of the eight small JATCs in this proposal, seven participated in the prior ETP Agreement held by Cal-FED. One JATC, Northern California Plasterers, “graduated” and has applied and received ETP funding individually. The Sheet Metal Worker JATC in Fresno is a newly participating JATC under this proposal.

Each JATC is a DAS-approved apprenticeship program sponsor. Training will be in a series of occupations as shown below for Job Number:

- Job No. 2: Bricklayers & Allied Crafts Local 3 JATC
Marble Mason
Marble Finisher
Terrazzo Mechanic
Terrazzo Finisher
Pointer-Cleaner-Caulker
Bricklayer
LEA: Hayward and San Leandro Adult Schools
- Job No 3: Tri-County Electrical Local 234 JATC
Electrician
LEA: Hartnell Community College
- Job No. 4: Santa Barbara County Electrical Local 413 JAC
Electrician
LEA: LA County Office of Education and Allan Hancock Community College
- Job No. 5: Fresno Sheet Metal Local 104
Sheet Metal Worker
LEA: Fresno Regional Occupational Program
- Job No. 6: San Joaquin & Calaveras Counties Electrical Local 595 JATC
Electrician
Inside Wireman
LEA: San Joaquin Delta Community College
- Job No. 7: Central Valley Electrical Local 684 JATC
Electrician
LEA: Stanislaus County Office of Education
- Job No. 8: San Diego Plastering Industry Local 200 JATC
Plasterers
LEA: North Orange County Regional Occupational Program
- Job No. 9: The Kern & Northern Los Angeles Countries A/C and Sheet Metal Local 105
Sheet Metal Workers
LEA: Bakersfield Community College
- Job No. 10: Apprentice-Veterans/Across all JATCs and Occupations/Trades

Veteran Apprentice

The Veteran training curriculum will be the same as Apprentice training. These trainees are in a separate Job Number to better track performance toward the goal of improved outreach for Veterans. CalFED is committed to supporting job-related training that helps Veterans transition into the California workforce. However, this is the first time Veterans have been included as a discrete cohort of Apprentice trainees.

Participating JATCs recruit Veterans in cooperation with Helmets to Hardhats, a national joint labor-management program that recognizes the link between skills acquired in military service and the building trades. Individual JATCs may also advertise special days on their websites just for veterans to come in and apply for the apprenticeship program. In some cases, veterans who apply for an apprenticeship can skip the first stage (the written assessment) and go the second stage (the interview).

Apprenticeship Pilot

The Panel is authorized to fund Apprentice training that does not displace any other source of government funds, or replace an existing apprenticeship program approved by the DAS. ETP funding is designed to supplement cost of delivery for the Related and Supplemental Instruction (RSI) portion of DAS-approved apprenticeship training. Depending on the type of trade, apprenticeship programs vary in length. In this case, the programs vary from three to five years.

Apprentice programs are typically sponsored by a Joint Apprenticeship Training Committee (JATC). A JATC is created through collective bargaining, with an equal number of members appointed by union and management with employer contributions to a training trust fund. The employers are not "participants" but are signatories to the Collective Bargaining Agreement.

RSI is traditionally delivered as class/lab, and ETP does not reimburse CBT delivery for apprenticeship training. The curriculum is developed with input from DAS and a designated Local Educational Agency (all outlined above). The Apprenticeship Program allows reimbursement for up to 200 hours of RSI plus OSHA10/30, per-apprentice. (Journeyman are capped at 200 hours.)

For the building trades, it is not customary for workers to be employed for a standard retention period of 90 consecutive days with one employer. In that instance, the Panel may substitute non-consecutive hours worked for retention. This modified retention period must be no less than 500 hours within 272 days with more than one employer. Both the standard and modified retention periods will apply to this proposal.

To ensure ETP does not displace Montoya Funds, Apprenticeship Pilot reimbursement is reduced by \$5.00, reducing the priority industry rate from \$18.00 to \$13.00 per hour. The ETP wage for Apprentices will be the SET Statewide rate as modified for priority industries (\$21.28 per hour). ETP funding will only apply to apprentices in Year 2+ to ensure commitment.

However, the actual wages paid are shown in the Training Plan Table and contract when they exceed \$21.28 for Journeyman.

Need for Training

This project will incorporate trade-specific green skills training, which may be ancillary to traditional RSI. According to CalFED, construction trade employers are demanding this type of

specialized skill, even from Apprentices, given recent energy efficiency and renewable energy legislation. CalFED has identified the following factors generating demand for the proposed training:

Employers need: (1) workers who able to construct building and install systems that maintain energy efficient buildings as outlined by LEED and other energy efficiency standards; training in green construction and industry certifications will position the employers to bid on new projects; (2) more qualified construction workers to replace retiring journeymen; (3) workers with the ability to adapt quickly and competently to new technologies, (4) more workers skilled in safety competency, as opposed to just safety awareness and (5) more skilled workers who can meet the demand generated by increased construction of hospitals, prisons, public work projects, commercial buildings, wind and solar projects, office building retrofits and schools.

To stay employable, trainees need the skills to install and maintain new kinds of equipment, work with new materials, and comply with the latest complex and quickly changing energy efficiency standards. For instance, the 2013 Building Energy Efficiency Standards (Title 24) established by the California Energy Commission (CEC), requires training and certification to perform mechanical acceptance testing of newly installed mechanical equipment in non-residential buildings before occupancy is approved. Acceptance Tests ensure code compliance and promote optimization of efficiency and performance for nonresidential buildings. The CEC is currently at a standstill in enforcing the requirement of certifying mechanical equipment per their 2013 standard until a minimum threshold of certified technicians in the discipline of Testing, Adjusting, and Balancing (TAB) become available in all areas of the state of California.

Meeting these changes is not easy for the employers. The training outlined in this proposal will assist employers certify more workers to meet customer demands. Currently, there are no (zero) certified TAB technicians who reside in Kern County. JATCs have not been providing this training in the past due to the low demand for such services by mechanical contractors, but this demand has now changed due to the requirements of Title 24.

Training will also cover energy-efficient technologies and products such as solar photovoltaic panels, wind turbine systems, new motor controls, green building materials; advanced welding skills including Tungsten Inert Gas, Metal Inert Gas and/or Stick Welding; climate energy efficiency and consumption greenhouse gas abatement; solar hot water and water efficiency installation and retrofitting; reuse/recycled water and wastewater treatment systems; and green materials testing and audit equipment. This training will help workers hone the new skills and knowledge necessary to work in green construction.

PROJECT DETAILS

All training outlined in this proposal will be center-based, classroom/laboratory training occurring at each JATC's designated training facility. Journeymen will receive OSHA 10/30, Commercial, Business and Computer Skills; Apprentices and Veteran Apprentices will receive Commercial Skills and OSHA 10/30 training. Instructors are experienced journeymen.

Commercial Skills (80% of Journeyman and 90% of Apprentice training) - Training is customized for each trade, although coursework will also be provided across all trades and occupations in energy audits, equipment installation, testing, energy auditing, green awareness, blueprint reading, and welding.

Computer Skills (5% of Journeyman training) - Training will include scheduling, planning and modeling software and AutoCAD applications that provide trainees with the ability to modify

blueprints, look up project requirements, build budgets and timelines, design virtual buildings, and adjust computerized control systems.

Business Skills (5% of Journeyman training) - Training will teach trainees how to work not only with workers within their trade, but also with other workers on construction projects. Because energy efficiency techniques and new computerization of work involves more coordination than project teams have needed in the past, improved business skills are essential. The proposed training will give trainees the tools to plan, organize and manage projects to complete them efficiently and on time. Training may include team-building, problem-solving, decision-making and leadership skills so that Journeymen can lead and participate effectively in the team environment.

OSHA 10/30 (10% of Journeymen and Apprentice training)

This training provides a complete overview of occupational safety and health so that construction workers are more knowledgeable about workplace hazards. With OSHA30, apprentices will also learn how to respond to such hazards. OSHA 10/30 training is a series of courses “bundled” by industry sector and occupation. This training is not required as a condition of doing business in California. However, the coursework must be approved by, and the instructors must be certified by Cal-OSHA.

Completion of the training results in a certificate that expands employment opportunities. To ensure that each trainee receives certification, ETP will only consider payment earned upon completion of the full 10-hour or 30-hour course. OSHA 10/30 is not included in the 10% limitation on safety training.

Impact/Outcome

The JATCs will offer certification classes for OSHA 10/30, Green Audits, Arc Flash Safety Awareness, Building Automation Systems, Rigging and Lifting, Medical Gas Installer, Medical Gas Brazer, Foreman’s Certification, Industrial Rigger Certification and various welding certifications. Currently, there are minimal green certifications for the trades participating in this project. However, such certifications are becoming more widespread. Trainees will be prepared to meet any new requirements.

Feedback comes directly from the employers to the JATCs, based on workplace performance, requests of customers, and needs of the industry as well as course evaluations that are completed by both Journeymen and Apprentices trainees.

Curriculum Development and Feedback

The JATCs use national curricula developed by the international unions in concert with industry organizations such as the International Training Institute and the National Electrical Contractors Association (NECA) and Sheet Metal and Air Conditioning National Association (SMACNA). Curricula are then customized to address the needs of the local union membership, participating employers, and the local construction and green industry technologies and practices.

Training Coordination

The start of ETP training will vary by participating JATCs. At this time, the first training class is scheduled to begin November 1, 2016. Each JATC will be responsible for coordinating and scheduling training classes. While the training schedules vary from trade-to-trade, the majority of training will occur in the fall, winter and spring months.

Commitment to Training

In all instances, the participating JATCs represent that signatory employers will continue to pay into the respective Trusts for Journeyman and Apprentice training. In addition, the signatory employers provide all structured, on-the-job training for Apprentices that meet DAS standards. Safety training is provided by the participating employers in accordance with all requirements under state and federal law.

Marketing, Employer Recruitment & Support Costs

CalFED is requesting 8% in support costs to fund its staff in marketing and assessment. Individual JATCs will market the Journeyman program training programs through direct mailings, informational flyers, personal contacts, telephone calls, public service announcements, emails, and websites. JATCs prepare multimedia materials such as videos to inform employers, workers, students, and community organizations about new Apprenticeship, Journeyman, and green construction training opportunities. The JATCs also work with their local WIBs in actively recruiting Apprentices.

While most participating employers have already been notified, additional outreach and assessment, will occur for journey and apprentice training. Assessment of employer-specific job requirements will occur throughout the term of the contract. CalFED staff will promote the training program at the California annual apprenticeship conference, statewide WIB meetings, labor-industry meetings and CalFED annual workforce development conference. In addition, email and face-to-face marketing to employers, contractors associations, and local unions will be ongoing and necessary to ensure the training program's success.

Each JATCs' Training Coordinator, along with his or her staff, administrative assistants, union representatives and trainers will also assist in marketing, recruiting, conducting needs assessments, and scheduling training. Staff recommends 8% support costs.

RECOMMENDATION

Staff recommends approval of this proposal.

ACTIVE PROJECTS

The following table summarizes performance by CalFED under an active ETP Agreement:

Agreement No.	Approved Amount	Term	No. Trainees (Estimated)	No. Completed Training	No. Retained
ET15-0905	\$678,720	08/04/14- 08/03/16	284	122	122

Based on ETP Systems, hours of training have been delivered to date sufficient to show earnings of \$686,726 (potentially 100% of the Approved Amount). The Close-out Invoice is in process and should be finalized by the October Panel meeting.

PRIOR PROJECTS

The following table summarizes performance by CalFED under an ETP Agreement that was completed within the last five years:

Agreement No.	Location (City)	Term	Approved Amount	Payment Earned \$ %
ET13-0904	Statewide	09/05/2012- 09/04/2014	\$593,511	\$540,578 (91%)
ET11-0310	Statewide	6/30/2011- 6/29/2013	\$497,530	\$487,225 (98%)

DEVELOPMENT SERVICES

Strategy Workplace Communications in Oakland assisted with development of this proposal at no cost.

ADMINISTRATIVE SERVICES

Strategy Workplace Communications will also perform administrative services in connection with this proposal for an amount not to exceed 13% of payment earned.

TRAINING VENDORS

N/A

Exhibit B: Menu Curriculum**Class/Lab Hours**

8-200 Job Number 1

Journeyman

Trainees may receive any of the following:

COMMERCIAL SKILLS**Electricians**

- Solar Panel Installation
- Codeology
- National Electrical Code
- Other Recognized Standards (Installation Changes)
- Plan, Build, and Use
- Related Standards (Mandatory and Permissive Rules)
- Special Occupancies and Equipment
- Arc Flash

Analog/Digital Circuit (AC/DC) Principles

- Math for Electricians
- Ohm's Law
- Generators
- Inductance/Reactance
- Series/Parallel Circuits

Grounding

- Grounding and Bonding
- National Electrical Code Article 100-Definitions and Provisions
- National Electrical Code Article 110-Requirements
- National Electrical Code Article 90-Introduction
- National Electrical Code Article Chapters 1-4
- Significant Changes to National Electric Code

Fire Alarm Systems and Installations

- Definitions and Systems
- Initiating Devices and Notification Systems
- National Electrical Code and Installation Requirements
- Start Up and Check Out Procedures
- National Fire Protection Act, 1972 (NFPA 72)

Fire Life Safety

- National Electrical Code (Relating to Fire Alarms)
- National Electrical Code Article 725
- National Electrical Code Article 760
- NFPA 72
- Principles of Electronics

Industrial Motor Control

- Control Relays and Timers
- Jogging and Plugging Controls
- Manual Starters and Magnetic Coils
- Push Buttons, Selector Switches, and Mechanical Devices
- Solid State Electronic Devices
- Variable Frequency Drives

Programmable Logic Control

- Developing Ladder Programming
- Introduction to Programmable Equipment
- Programming Programmable Logic Controllers
- Using Timers and Counters in Logic Programs
- Writing a Program

Electrical Design

- 3 and 4-Way Switching
- Design of Electrical Circuits
- Magnetic Motor Control and the Code
- LonWorks and Building Automation
- Transformers and the Code

Voice, Data, and Video

- Audio Distribution
- CCTV Security Surveillance
- Computer Networking
- Fiber Optics
- Telephonic Interconnect

Industry Specific Skills

- Confined Space Entry
- Specialized Tools
- Conduit Bending
- Rigging
- Firestop Installation
- Blueprints and Schematics
- Work Flow and Resources

California Advanced Lighting Control Program

- Advanced Lighting Control Systems
- Lighting Control Strategies
- Line Voltage Switching Controls
- Low Voltage Switching Control
- Dimming Controls
- Occupancy Sensors
- Photosensors

Sheet Metal Workers

- California Home Energy Rating System Program
- Energy Auditing: Total Building (Green Training)
- Energy Auditing: Total Heating Ventilation and Air Conditioning (HVAC) Systems (Green Training)
- Ducts Maintenance
- Working with Building Materials Training
- Upgrading Lead Handling and Asbestos Removal Skills
- Proper Machine and Equipment Set-Up
- Advanced Welding Skills
- Architecture Designs
- Management and Monitoring of Materials
- Testing Materials and Equipment –Proper Set-Up and Use
- Materials and Equipment Testing for Industrial Use
- Understanding Changes to Industry Standards
- Safe Working Practices
- Rigging and Signal Training
- Lean Construction Training
- Job Coordination Training
- Fire/Life HVAC System Building Inspection Training
- CA Green Building Code Training

All Trades

- Energy Audits
- Welding and Burning
- Aerial Lift
- Proper Installation and Use of Testing and Auditing Materials and Equipment (Green Training)
- Understanding New Technologies and Changes to Industry Standards (Green Training)
- Proper Equipment Set-Up (Green Training)
- Safe Working Practices Advanced Instrumentation and Motor Controls
- Programmable Logic Controllers
- Advanced Welding
- Architecture Designs and Advanced Plan Reading
- Management and Monitoring of Materials
- Testing Materials and Equipment –Proper Set-Up and Use (Green Training)
- Understanding Changes to Industry Standards (Green Training)

OSHA 10/30 (OSHA CERTIFIED INSTRUCTOR)

- OSHA 10 (requires completion of 10 hours)
- OSHA 30 (requires completion of 30 hours)

COMPUTER SKILLS

- Auto Computer-Aided Design (AutoCAD)
- Scheduling and Planning Jobs
- Automated Systems Applications Scheduling & Planning Jobs

- 3-D Modeling – Virtual Construction
- Benchmark Software – Lean Construction

BUSINESS SKILLS

- Teambuilding Skills
- Green Awareness Training and Green Certifications
- Leadership Skills
- Customer Service Skills
- Conflict Resolution
- Problem Solving
- Decision Making Skills
- Inventory Checklist
- Creating Master Plan for Future Improvements
- Advanced Time Management
- Filling Out Work Documents and Reports Accurately
- Project Management
- Creating Project Bids

Class/Lab Hours

8-210 (Job Number 2 - 10)

Apprentice

Trainees may receive any of the following:

COMMERCIAL SKILLS

Electricians

- AC Refrigeration
- AC Theory
- Blueprints
- Building Automation and Controls
- Codeology: Code and Practices
- Conduits
- Control Diagrams and Drawings
- Circuits
- Digital Electronics, DC Theory and DC/AC Theory
- Distributed Generation
- Electrical Theory and Electrical Code
- Electrical Grounding
- Electrical Motors
- Electrical Safe Work Practices
- Electric Vehicle Infrastructure
- Estimating
- Fire Alarm Systems
- Generators and Transformer Theory
- Grounding and Bonding
- Hazardous Location
- Health Care Systems
- Industrial Blueprints
- Installer/Technician

- Closed Circuit Television
- Local Area Network
- Nurse Cal I System
- Paging System
- Radio Frequency Communications
- Sound Reinforcement
- Telephony
- Instrumentation
- Lighting Essentials and Protection
- Low Voltage Systems and High Voltage Systems
- Materials, Tools and Wire Methods
- Mechanical and Electric Benders
- Mathematics
- Motor Control
- National Electrical Code
- National Electric Code Grounding
- Over-Current Protection
- Photovoltaic Systems
- Pipe Bending
- Power Quality
- Programmable Logic Controllers
- Rigging
- Security System
- Semiconductor Electronics
- Structured Cabling
- System Sec/Solar or Theory CD/B
- Test Instruments and Test Instruments Applications Manual
- Torque
- Transformers and Transformer Connections
- First Aid/CPR

(Plasterers)

- Workplace Safety and Health
- Fundamental Math
- Measuring
- Common Tools and Plastering Tools and Materials
- Mask and Protect Adjacent Surfaces
- Inspect Lath & Plaster Bases
- Mix and Apply Scratch Coat, Brown Coat, Finish Coat and Veneer
- Mix and Apply Inspect Lathing and Bases for Portland Cement Scratch Coat
- Mix and Apply Portland Cement Scratch Brown and Finish Coats
- Blueprint Reading
- Estimating
- Exterior Insulation Finish System

- Cementitious, Mineral Fiber and Intumescent Fireproofing
- Acoustical Plaster Finish
- Small Engine Operation and Maintenance
- Ornamental and Earth Plasters
- Green Building Standards
- First Aid/CPR

Terrazzo

- Blueprint Reading
- Building Codes
- Cleaning and Sealing Terrazzo
- Construction Sequence
- Cutting Control Joints
- Design Layout
- Floor Layout and Installation
- Green Construction, Design, Materials, Methods and Techniques, LEED Certification
- Grouting and Caulking
- Hand Tool and Equipment, Proper Use and Safety
- Illegal Discrimination and Sexual Harassment
- Materials, Identification, Characteristics, and Estimating
- Membranes and Underlayments
- Mixing Mortar and Bonding Materials
- Repair and Renovation of Terrazzo
- Scaffold Safety Training
- Substrates, Mixing and Bonding Materials
- Terrazzo Materials, Handling
- Trade Math
- First Aid/CPR

Bricklayer

- Blueprint Reading
- Building Arches
- Building Codes
- Building Radius Walls
- Construction Sequence
- Cutting and Welding Steel
- Drawing and Sketching Techniques
- Green Construction, Design, Materials, Methods and Techniques, LEED Certification
- Hand Tool and Equipment, Proper Use and Safety
- History of Masonry
- Insulated Concrete Forms
- Illegal Discrimination and Sexual Harassment
- Interlocking Paving
- Laying Corner Leads
- Laying Headers, Soldiers and Roloks

- Laying Piers
- Laying Pilasters
- Laying to the Line
- Lintel Beam Construction
- Materials, Identification, Characteristics, and Estimating
- Metrics
- Mixing Mortar
- Pattern Bonds
- Paving
- Proto II Walls
- Read a Rule
- Rebar Identification and Installation
- Scaffold Safety Training
- Segmental Retaining Walls
- Trade Math
- Transit Familiarization
- Waterproofing
- First Aid/CPR

Marble, Pointer, Cleaner and Caulker Workers

- Basic Bricklaying Fundamentals
- Blueprint Reading
- Building Codes
- Caulking
- Cleaning and Polishing Marble
- Cleaning Masonry
- Construction Sequence
- Cutting and Welding Steel
- Deck Coatings
- Drawing and Sketching Techniques
- Drilling and Cutting Marble to Specific Dimensions
- Epoxy Injection
- Fundamentals of Marble Setting
- Green Construction, Design, Materials, Methods and Techniques, LEED Certification
- Grouting and Caulking Slabs
- Hand Tool and Equipment
- Hand-Set Techniques
- Laying and Cutting Building Units
- Laying and Setting on Footings and Foundations
- Materials, Identification, Characteristics and Estimating
- Mechanical Anchoring
- Metrics
- Mixing Mortar and Epoxy
- Move and Store, Rig and Hoist Materials
- Patching Marble and Related Materials
- Pinning

- Pointing, Caulking, and Cleaning
- Prepare Marble for Setting, Including Anchoring and Plugging
- Rigging
- Scaffold Erection and Safety Training
- Substructure Preparation
- Trade Math
- Tuckpointing
- Waterproofing
- First Aid/CPR

Sheet Metal

Building Trades Service

- Basic Electricity for Sheet Metal Air Conditioning Service
- Advanced Electricity for Sheet Metal Air Conditioning Service
- Air Conditioning, Commercial Systems, Heating
- Commercial Systems, Heat Loads, Piping
- Refrigeration for Sheet Metal Air Conditioning Service
- Properties of Air Distribution for Sheet Metal Air Conditioning Service
- Refrigeration Theory for Sheet Metal Air Conditioning Service
- Sheet Metal Control Systems
- First Aid/CPR

Energy Management Test and Balance

- Air Balance Test Equipment Instruments
- Temperature Measurement Instruments & Duct Systems
- Electrical Systems Operation, Controls & Devices
- HVAC Testing & Balancing Procedures
- Air Distribution & Manufacturing Systems
- Systems Installation & Troubleshooting
- Control Systems
- Hazardous Material Recognition for the Test & Air Balance Industry
- First Aid/CPR

Building Trades Sheet Metal

- Parallel Line Fittings
- Triangulation Fittings
- Radial Line Layout and Ogee Offsets
- Basics of Architectural Sheet Metal
- Architectural Sheet Metal
- Field Installation
- Welding I: Process and Safety Overview, GMAW
- Welding II: GMAW & FCAW
- HVAC Energy Conservation
- Plans and Specifications
- Submittals and Shop Drawings
- Industrial and Stainless Steel Introduction
- HVAC Air Systems and Duct Design

- Measuring and Sketching
- Fabrication and Shortcuts
- Codes and Standards
- Forman Training
- Metal Roofing
- Advanced Welding
- CAD Detailing
- Intermediate CAD
- Advanced Architectural
- Advanced Layout and Fabrication
- Project Management, Takeoffs, Estimates
- Service Basics for Sheet Metal Workers
- Final HVAC Project
- Final Architectural/Industrial Project
- First Aid/CPR

Residential HVAC

- Residential Structure and Sheet Metal Work
- Residential Duct Systems
- Residential AC Units
- Piping
- Filters and Filter Housings
- Common Furnace Features
- Furnace Installation
- Installing Thermostats, Flues and Vents
- First Aid/CPR

OSHA 10/30 (OSHA CERTIFIED INSTRUCTOR)

- OSHA 10 (requires completion of 10 hours)
- OSHA 30 (requires completion of 30 hours)

Safety Training will be limited to 10% of total training hours per trainee (excluding OSHA 10/30)

Note: Reimbursement for retraining is capped at 200 total hours per trainee for Job Number 1 and 210 total hours for Job Numbers 2-10, regardless of method of delivery.