



Training Proposal for:

Pipe Trades Joint Apprenticeship and Training Committee of Santa Clara and San Benito Counties

Agreement Number: ET17-0917

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:	Construction Green Technology Priority Industry: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Counties Served:	Santa Clara and San Benito	Repeat Contractor:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Union(s):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry of the United States and Canada (UA Local 393)		
Turnover Rate:	≤20%		
Managers/Supervisors: (% of total trainees)	N/A		

FUNDING DETAIL:

Program Costs	+	Support Costs	=	Total ETP Funding
\$504,000		\$34,900 8%		\$538,900

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	Journeyman	Commercial Skills, Business Skills, Computer Skills, OSHA10/30	100	8-200	0	\$941	\$53.55
				Weighted Avg: 40			
2	Apprentice	Commercial Skills, Computer Skills, OSHA10/30	140	8-210	0	\$2,780	\$33.61
				Weighted Avg: 200			
3	Apprentice Veteran	Commercial Skills, Computer Skills, OSHA10/30	20	8-210	0	\$2,780	\$33.61
				Weighted Avg: 200			

Minimum Wage by County: \$21.28 per hour Statewide (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

Although health benefits are provided, they are not being used to meet the Post-Retention Wage.

Wage Range by Occupation

Occupation Titles	Wage Range	Estimated # of Trainees
Journeyman Plumber, Steamfitter/Pipefitter, Plumbing Service and Repair Mechanic, Refrigeration and Air Conditioning Mechanic		100
Apprentice and Veteran Apprentice Plumber, Steamfitter/Pipefitter, Plumbing Service and Repair Mechanic, Refrigeration and Air Conditioning Mechanic		160

*This is the lowest base wage among the four Journeyman occupations participating in this proposal.

**Apprentice wages vary proportionate to the Journeymen by occupation. This is the low end of the range (Starting at Year 2).

INTRODUCTION

The Pipe Trades Joint Apprenticeship and Training Committee of Santa Clara and San Benito Counties (The Pipe Trades JATC or JATC) (<http://www.pipetradestraining.org/>) opened the Lloyd E. Williams Pipe Trades Training Center (Training Center) in 1961 in San Jose. The training center serves 1,900 union members represented by the Plumbers, United Association Local Union 393. The JATC was created in collective bargaining between Local 393 and management represented by the South Bay Piping Industry and the Santa Clara Valley Contractors Association. There are approximately 140 signatory employers, located throughout Northern California (primarily in Silicon Valley and the Bay Area).

The Training Center provides Apprentice and Journeymen classes to all the pipe trades involved in commercial, industrial, and residential plumbing. The courses are designed to provide Commercial, Computer and OSHA10/30 training with an emphasis on green

technology. The Training Center is a modern, 100,000-square-foot facility with 48 classrooms, in addition to welding and computer laboratories.

Affiliated with Foothill Community College, the Training Center apprentice program is accredited through the Division of Apprenticeship Standards (DAS) to offer apprenticeship opportunities in Residential Plumbing, Commercial Plumbing, Steamfitting, and Refrigeration/heating, ventilation, air-conditioning (HVAC). The significant number of retiring workers and the recent upswing in construction generate continued demand for skilled pipe trades workers in Santa Clara and San Benito Counties. As in the active project, ETP funds will help create a stable, flexible and well-skilled workforce for the local construction industry.

Employer Demand

According to the JATC, demand for Apprentices has been accelerating, with 347 Apprentices currently registered. The JATC graduated 20 Apprentices last year and anticipates 26 graduates this year. Graduates of the Pipe Trades program work in construction and repair for industries that include: semiconductor, energy, biopharmaceutical, healthcare, aerospace, education, housing, water treatment, and technology industries. A sample of local construction projects generating demand for Apprentices and Journeymen include:

- Google Campus
- Office buildings near the new San Jose Earthquakes Soccer Stadium
- Apple Campus (San Jose)
- New buildings and renovation of area hospitals including 2 new Stanford Hospitals
- Improvements to the Stanford University campus
- California Infrastructures Projects: BART, etc.

Signatory employers and union representatives have identified the following specific reasons for the need for Journeyman training:

- A recently developed Pipe Trades Training Center HVACR 13 Course Certification has been embraced by employers.
- A new Energy Management Classification is imminent at Local 393 and creates a greater need for these skill sets.
- CAD Detailing was added to the Local 393 contractual jurisdiction and will generate demand for these computer skills.
- Increased employer demand for training in Bluebeam and Plangrid software which supports CAD.
- New Green Mandates which require workers to use new materials and skills as a result of updated building standards and green/LEED business practices. The industry is focused on the need to develop, retrofit, and maintain greener energy and water flow into and out of buildings.
- Title 24 Verification Courses. California Energy Commission (CEC) will soon approve the Pipe Trades Santa Clara training center as a training and exam site for Acceptance Test Technicians.

This will be the Panel's fourth Agreement with this JATC. However, this is the first time Veterans have been included as a discrete cohort of Apprentice trainees.

The JATC is returning to the Panel for funding at this time because all training has been delivered under its most recent Agreement. The request for additional funding is driven by the demand of employers for skilled apprentices and journeymen plumbers in Santa Clara and San Benito Counties.

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 are 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 (in this case Foothill Community College). The Apprenticeship Program allows reimbursement for up to 200 hours of RSI plus OSHA10/30, per apprentice. (Journeymen 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 reimbursement is reduced by \$5, reducing the priority industry rate from \$18 to \$13 per hour. In addition, the Panel adopted a “blended rate” for Journeymen, reflecting the fact that they may be employed by a variety of contractors over the two-year term of contract ranging from large employers, to small (≤ 100 employees). This is \$22 per hour, midway between the Priority Industry standard rate (\$18) and Small Business rate (\$26).

The ETP wage for Apprentices is no less than \$21.28 per hour, tracking the Special Employment Training wage as modified for priority industries. However, the actual wages paid are shown in the Training Plan Table and contract when they exceed \$21.28, for both Apprentices and Journeymen.

PROJECT DETAILS

The JATC employs 50-70 full- and part-time credentialed instructors with vast field experience. Instructors attend special courses provided by the international union’s Instructor Training Program to stay current with changes in the industry. The instructors create many of their own teaching materials, providing students with the most up-to-the-minute, customized information on codes, new materials, and processes not found in traditional textbooks. All training is center-based and trainers are qualified Journeymen with extensive practical training experience.

Plumbers are responsible for providing pure water to residential, commercial or industrial buildings, and for removing waste water. Plumbing and plumbing fixtures must be installed in

accordance with plumbing codes and health and safety regulations. Plumbers also work as plumbing service and repair mechanics responsible for the service, repair and remodeling of existing plumbing systems in residential, commercial and industrial buildings.

Pipefitters/steamfitters are responsible for designing and installing complex heating systems, and specialty piping for acid, gas, oil, air, oxygen, nitrogen, ultra-high-purity water and gas systems, and other substances. HVAC refrigeration fitters serve as mechanics providing service, repair, installation and retrofit of all types of refrigeration equipment.

Journeyman Training

Commercial Skills (80%): Training for all trades will focus on new construction, service, and repair techniques and equipment. Advanced skills training will expand the availability of employer-driven certification classes such as welding, and will also focus on new materials and the modernization of the industry, including the shift to green materials. Because plumbing, pipefitting, and refrigeration work revolves around energy management, many commercial and industrial businesses are seeking LEED certification.

Business Skills (5%) - Training will focus on collaborative bidding and project development practices; meeting budgets; interacting with other types of construction workers; and implementing green solutions in traditional work environments. The proposed training will give trainees the tools to plan, organize, and manage construction to efficiently complete projects. Training will also include team-building and leadership skills so that electricians can effectively lead teams.

Computer Skills (5%) - Training will include scheduling, planning and modeling software. AutoCAD and Job Tracking applications will provide trainees with tools to modify blueprints, look-up project requirements, build budgets and timelines, design virtual buildings, and adjust computerized control systems.

Apprentice

Commercial Skills (90%): Training will include topics such as trade math, blueprint reading, and all plumbing and mechanical systems in use, in addition to basic skills required across all pipe trades. Training will help apprentices gain the skills needed to work safely and productively across industries. Training will also cover courses in green construction compliance, practices and materials; new equipment, welding and industry certifications; and safety competency and awareness. Because this JATC operates in a highly competitive construction and service market, all training must meet the demands of Silicon Valley's construction industry.

Computer Skills (5%): Training for apprentices also covers CAD and 3-D software applications.

Certified Safety Training

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. When delivery is by CBT all training hours must be delivered in a classroom over a finite number of time, and the vendor must have a certified instructor present to confirm attendance.

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 nor in the 50% limitation on CBT.

Journeymen and Apprentice Plumbers and related occupations may work under extremely dangerous conditions and on tight timelines. Thus, there is the potential for injury to themselves and other people in the work area vicinity. Participating employers and property owners may need trainees to undergo additional training to ensure that they can perform their work safely.

Veteran Apprentice

The Veteran training curriculum will be the same as Apprentice training outlined above. These trainees are in a separate Job Number to better track performance toward the goal of improved outreach for Veterans.

The JATC is committed to supporting job-related training that helps Veterans transition into California's workforce. It recruits Veterans in cooperation with Helmets to Hardhats, (<http://www.helmetstohardhats.org>), a national joint labor-management program that recognizes the link between skills acquired in military service and the building trades.

In addition, the Veterans in Piping (VIP) program <http://www.uavip.org/veterans> offered by the United Association (UA) of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry of the United States and Canada, offers high-quality skills training and jobs in the pipe trades to active duty military personnel preparing to leave military service. The JATC reports that since 2008, the UA has trained over 1,000 Veterans. The VIP program consists of 18 weeks of highly specialized, intensive training in marketable skills such as welding; heating, ventilating, air conditioning and refrigeration (HVACR); and sprinkler fitting. The UA provides Veterans with additional skills training opportunities after they complete this program by connecting them to established apprenticeship training programs.

The VIP Program has been recognized as one of the leading programs in the country for assisting Veterans. The VIP does all this at absolutely no cost to the military, the government, or participants because all costs are paid by the UA and its contractors.

Curriculum Development

The curriculum is employer-driven, based on local industry needs. The JATC's instructors also work with the National Competency Testing Institute to create industry-driven curriculum. In addition, local projects and their hiring demands have resulted in a comprehensive and technically advanced curriculum. The JATC estimates that more than \$800,000 has been spent to create this curriculum. It is designed to address employer needs as determined by customers, energy efficiency changes that are quickly becoming standard in the plumbing industry, and local hiring demands and projects. Feedback on all training also comes directly from employer and union representatives, based on workplace performance, requests of customers, needs of the industry and student course evaluations completed at the end of each course.

Impact/Outcome

Certifications earned for the journeymen and apprentice training may include: OSHA 10, OSHA 30, Medical Gas Installer, Medical Gas Brazer, Industrial Rigging, Signaller, National Environmental Balancing Bureau (NEBB) Commissioning, Backflow, Blueprints, Star Review and various welding certifications.

Commitment to Training

Signatory employers will continue to make contributions to the training trust for every hour worked by Apprentices and Journeymen. General safety training is, and will continue to be, provided by participating employers in accordance with all pertinent requirements under state and federal law.

Marketing and Support Costs

The JATC is requesting 8% in support costs to fund recruiting and qualify additional participating employers for this program. The JATC Training Coordinator, along with two assistant coordinators and five administrative assistants, will be responsible for marketing, recruiting, and conducting needs assessments. While many participating employers have already been recruited, the JATC still needs to perform additional recruitment and assessment activities with employers to support apprenticeship training. The projected budget costs for personnel alone will exceed the ETP support cost funding.

The JATC will disseminate class information throughout the year to all apprentice and journeyman within the local's jurisdictions, as well as to the contractors who employ them through direct mailings, personal contacts, telephone calls, public service announcements, emails, and its website. The JATC is also active in the local workforce investment board in northern Santa Clara County (NOVA) where the JATC has a representative that serves as a board member, executive board member, youth subcommittee chairperson, and NOVA Youth Foundation board member. Staff recommends 8% support costs.

RECOMMENDATION

Staff recommends approval of this proposal.

ACTIVE PROJECTS

The following table summarizes performance by the Pipe Trades JATC under an active ETP Agreement:

Agreement No.	Approved Amount	Term	No. Trainees (Estimated)	No. Completed Training	No. Retained
ET16-0901	\$642,410	08/08/2015-08/07/2017	370	TBD	0

Based on ETP Systems, 36,013 reimbursable hours has been tracked as of October 13, 2016 sufficient to support earnings of \$503,845 (78%). The Contractor projects final earnings of 100%. All apprenticeship training has been completed.

PRIOR PROJECTS

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

Agreement No.	Location (City)	Term	Approved Amount	Payment Earned \$ %
ET13-0924	San Jose	04/02/2013- 04/01/2015	\$502,706	\$409,559 (81%)
ET11-0325	San Jose	06/30/11- 06/29/13	\$394,398	\$249,254 (63%)

ET11-0325 was approved by the Panel prior to the establishment of the Apprenticeship Pilot program and thus focused on Journeymen retraining. Funds earned were lower than anticipated because Journeymen were still experiencing less than full employment. (The Pipe Trades often are employed at later stages of construction.)

DEVELOPMENT SERVICES

Pipe Trades JATC retained California Labor Federation in Sacramento and Strategy Workplace Communications in Oakland to assist with development at no cost.

ADMINISTRATIVE SERVICES

Pipe Trades JATC also retained Strategy Workplace Communications to perform administrative services for an amount not to exceed 13% of payment earned.

TRAINING VENDORS

To Be Determined

Exhibit B: Menu Curriculum

Class/Lab Hours

8-200 (Job Number 1)

Trainees may receive any of the following:

Journeyman Training

COMMERCIAL SKILLS

- ✚ Green Compliance:
 - Energy Efficiency in Existing Equipment and Materials
 - Design and Installation of New Energy Efficient Equipment and Materials
 - LEED Standards
- ✚ BACnet Programming
- ✚ Johnson Controls Courses
- ✚ Robotic Total Station
- ✚ Start Test and Balance
- ✚ Solar Installations
- ✚ Specialty Seminars for Service Work
- ✚ Johnson DX9100 (Brand of Digital Controller)
- ✚ Compressor Overhaul
- ✚ Direct Digital Controls – Principals of Operation, Calibration, Documentation, Shutdowns
- ✚ Orbital Welding
- ✚ Welding
- ✚ Brazing
- ✚ Safe Working Conditions (All training supplements Cal-OSHA required safety training):
 - Foreman and Worker Responsibility
 - Scaffolding
 - Fall Protection
 - Electrical Safety
 - Falling Objects
 - Working in Confined Spaces
 - Working Around Pipelines
- ✚ Certifications:
 - Industrial Rigging
 - Signalperson
 - National Environmental Balancing Bureau
 - Commissioning (Certification for Heating & Cooling Systems)
 - Medical Gas -- Installation, System Testing, Maintenance, Repair, Standards and Brazing
 - Foreman
 - Backflow
 - Orbital Welding
 - Tungsten Inert Gas Welding
 - Star Review
 - Blueprint
 - Boilers

COMPUTER SKILLS

- ✚ Computer-Aided Drafting (CAD)
- ✚ 3-D Drawings Software
- ✚ Bluebeam and Plangrid Software

OSHA 10/30 (OSHA CERTIFIED INSTRUCTOR)

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

Class/Lab Hours

8-210 (Job Number 2 & 3) Trainees may receive any of the following:

Apprentice Training**COMMERCIAL SKILLS****Plumbing and Steamfitting**

- ✚ 2nd year
 - Code/Water Supply
 - Drawing I
- ✚ 3rd year
 - Drawing II
 - Welding
 - Oxygen / Acetylene Training
 - Pipe Fitting
- ✚ 4th year
 - Steam Systems
 - Rigging
 - Pipefitting and Service
 - Hydronics/ Steam
 - Medical Gas Certification
 - Signal Person Certification
- ✚ 5th year
 - Advanced Drawing/Layout
 - Code II
 - Junior Mechanics Review and Exam

Refrigeration

- ✚ 2nd year
 - Basic Electricity
 - Advanced Electricity
 - Pneumatic DDC Introduction
- ✚ 3rd year
 - Controls I
 - Electro Pneumatics
 - Controls II
 - Advanced Pneumatics
 - Calibration
 - Hydronics
- ✚ 4th year
 - Start, Test and Balance I
 - Start, Test and Balance II

- ✚ 5th year
 - Chillers
 - HVAC Star Certificate
 - Special Systems
 - Heating Ventilation Air Conditioning Refrigeration Star Review
- ✚ Trade Math
- ✚ Industry Math
- ✚ Rigging
- ✚ Drawing
- ✚ Blueprint Reading
- ✚ Welding
- ✚ Cutting
- ✚ Industrial Safety
- ✚ Industrial Install
- ✚ Medical Gas Install
- ✚ Backflow Certification
- ✚ Foreman Certification
- ✚ Rigging Certification
- ✚ Direct Digital Controls
- ✚ Compressor Overhaul

COMPUTER SKILLS

- ✚ Computer-Aided Drafting
- ✚ 3-D Drawings Software
- ✚ Bluebeam and Plangrid Software

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. This 10% safety training cap does not apply to OSHA 10/30 training.

Note: Reimbursement for Job Number 1 Journeymen retraining is capped at 200 total training hours per trainee regardless of the method of delivery. Reimbursement for Job Numbers 2 and 3 Apprenticeship training is capped at 200 total training hours per trainee in Commercial and Computer Skills and 10 hours of OSHA10/30 for a total of 210 hours regardless of the method of delivery.