

# *University of Colorado at Boulder*

## Labor Trades and Crafts Trainee Program



### **Background Statement**

The Trades Department of Facilities Operations was faced with a growing concern of new employee turnover in its various level one positions; specifically Pipe Mechanical Trades, Structural Trades and Electrical Trades employees.

The scenario was basically the same for each of the Trades groups. Level one positions would vacate, we would re-list them at a competitive salary and more times than not, we would receive applications from people who were vastly over qualified; even journey level technicians would fill our hiring lists. As there were often no other options, we would fill these positions, the Journeyman or other employees would demand more money based on their qualifications; which of course is not an option in a "State" environment, and eventually the cycle would repeat all over again. The situation asks the question - How do we get and retain quality employees without losing them?

In the background of this repeating scenario are a few very hard working groups of employees in custodial, recycling and grounds maintenance that have people who have repeatedly tried to

apply for these jobs; but do not meet the State of Colorado minimum job requirements or qualifications to apply.

This dilemma is a real world problem that exists in multiple universities across the nation and would take some innovative, out of the box thinking to resolve. Into this thought process bore a new practice that would allow these loyal and hard-working employees from custodial, recycling and Grounds to have an avenue to get into Trades without having to meet the “State of Colorado” minimum job requirements.

### **Innovativeness, Creativity and Originality**

The creation of the Departments first ever in-house apprenticeship program was created and launched in February 2014. It is referenced as in-house because this is not a State recognized or accredited apprenticeship. *It is so much more!* The formal name for this innovative approach is the “Labor Trades and Crafts Trainee program.” How can it be so much more than an accredited program? The answer is simple. We began with the end in mind and looked at the goals of the program.

1. We wanted to create an avenue for non-Trades employees to have a shot at getting Trades jobs.
2. We wanted to have fully developed and trained people who could fit directly into the role of a Pipe mechanical trades I employee upon successful completion of the training program.
3. We wanted loyal employees who would make good use of the resources and training and advance up the ladder as opportunities arose.
4. We wanted to reduce costly turnover.

We created the program to be specific to a particular shop’s needs based upon the job descriptions that reside within that shop. We deciphered every possible duty that a Pipe Mechanical Trades I would perform in the Preventive Maintenance shop (trial shop). This is one of our busiest shops and to create a program that encompassed every detail would be exhausting and take a tremendous amount of time. This training book (electronically attached) is extremely comprehensive and at 62 pages of qualifications, ensures that the person selected for this program would be fully ready and able to fulfill the duties assigned within the PM shop.

During the creation of this training program, it became apparent that several different types of understanding would be required for the participant to fully understand not just how to

perform the maintenance, but recognizing the system and its related components. Therefore the manual was broken down into three main sections:

1. Fundamentals – Basic/fundamental knowledge of jobs the shop does every day. This 1/3<sup>rd</sup> of the program has hundreds of fundamental questions surrounding the job description that the apprentice must find the answers to and fill them into the training book in detail. This section can then be used as a reference to accomplish the next section. The second section cannot be started until the first section is completed.
2. Watch Stations – Taken from the Navy model, this section requires that the apprentice perform the duties/PM in front of a qualified person. Once satisfied the apprentice knows how to properly do the job, the qualified person puts his/her signature on the qualification line. The apprentice is required to get signatures for every duty, job and level of training required. This section must be completed before the last section can be started.
3. Practical Exams – This is a one on one with the shop’s supervisor to test the apprentices overall knowledge. This occurs at the end of the training program. The apprentice will be put into real-time maintenance scenarios and must perform appropriately.

### **Management Commitment and Employee Involvement**

Where would these positions come from? We did not have the funding to create these positions. The commonality across Trades is that the original dilemma always left the shops with vacancies. Management agreed to re-allocate one of these vacant positions into the state classification of Labor Trades and Crafts (LTC) level VII. Initially we decided to list this position internal only, by invitation only. We wanted to get an existing employee who had drive and initiative and knew the campus well. The applicant pool was limited to Custodial, Recycling and Grounds. The re-allocation would last two years (the same minimum experience requirement of the State of Colorado for a Pipe Mechanical Trades I) Upon successful completion of the training program, and at the end of the two year requirement these LTC employees would be re-allocated/promoted to a Pipe Mechanical Trades I in the shop for which they trained so hard. They are now fully qualified, loyal, trained and eager to assume the role as an equal in the PM shop.

Many interviews and meetings were held with the frontline personnel of the PM shop in the creation of this initial training document. When it comes to preventive maintenance; nobody knows this organization better than the front technicians that maintain it daily. The culmination of the document was a result of collaboration up and down the entire shop.

Every employee had a hand in creating this document and it was drafted by the Supervisor. As the training program was being created, announcements were made about it on the Facilities management web-site "Coming soon." The employee response was incredible. So many employees had an interest in learning a Trade, making a change, understanding systems, and making a little more money. Throughout the two year training program the LTC VII employees would receive a salary that is 20% less than the PMT-I's in the shop but this 20% less was more than the typical custodial, recycling or grounds position. This made the program attractive to internal candidates. The upper management, right up to the Vice Chancellor have has tremendous support of the training program. In fact; they still check in every few months to see hoe our apprentice is doing. The pilot program would not be as big of success as it is without the support and total buy-in from management. To ask a manager to sacrifice a position for two years is difficult, but to completely deliver the goals of the program was out of the box thinking on their part.

### **Institutional Benefit**

The benefits from this program are significant and long lasting. To ensure maximum training effectiveness, each of the three shops involved would only have one apprentice at a time. Any down time would be available for consistent "on the job" training. Each Apprentice would always be paired with a qualified or subject matter expert. In the end, and after completing the comprehensive training program, the employee is ready and immediately put into a role that they have been trained for.

Turnover is under control; these employees are loyal and have a renewed dedication to the University as they were invested in and have a strong sense of accomplishment through this program that never existed in those work units that could not meet the minimum Trades qualifications. This avenue now exists and work of mouth spreads fast. People are lining up for a shot at getting into the Trades in the next apprenticeship program. There are no educational or experience requirements to get into the program. We are looking for a candidate for who gets along with others, displays initiative and collaboration. By keeping this program internal, the applicant pool is diverse and not full of over qualified candidates that are just looking to get into the door and hassle management for more money.

These candidates are familiar with the campus, the State rules and how the department works. There is not adaption phase for an external candidate. Furthermore, they are trained the way we want them trained. There is no re-training of external candidates. This is a great way to promote from within while getting very strong technicians in the process.

### **Portability and Sustainability**

This program is here to stay, in fact, it is flourishing. The response to the initial program was so great that a second apprenticeship program is ready for advertisement in Structural Trades. This will encompass Access Services, Painting and the Carpenter's shop. This program, and the way it was put together is highly transferable to other institutions of Higher Education. In fact, we have been approached by Colorado State University and CU Denver to model our program. Depending on the governing body of an institution, this may be easy, or it may have challenges, but it is transportable to nearly all entities. The training format sets the groundwork for very extensive preventive maintenance, which many institutions are getting involved in. Although not in the general perception of the word, the sustainability of this training program rests with the success that both the University and the apprentice experience every day. Currently the department is in the process of creating and implementing a third program for Electrical Trades. The realization of these programs has been put into action and the University is reaping the benefit through sustained rewards. High morale, exceptional training, internal promotions, a sense of belonging, teamwork and cohesion are but a few attributes we relish from it. This program will be here for a long time.

### **Documentation, Analysis, Customer Input, and Benchmarking**

As this program is in its first tenure, the benchmarking is difficult; thus far the training of the apprentice is going exceptionally well. Since his interview and selection as the first apprentice his ability to do PM in the field is going very well. He was a person of no mechanical experience and now is a person whom had been trained in a diversity of mechanical systems like cooling towers, chillers, air filtration, CRAC units, condensers and various other systems. The team concept in which the apprentice is always with a subject matter expert has yielded incredible training opportunities and results. Our apprentice will be submitting a testimonial as a part of this section for your analysis, as historical data is not available, real life words from the beneficiary of this program will suffice. In addition, as attachments of supplemental documentation, the entire Preventive Maintenance training manual will be uploaded as well as the entire Structural Trades training manual. This program directly correlates to one of our highest customer expectations. In our Customer Service Committee we consistently hear that our customers want qualified people that are communicative and collaborative. The want technicians that deliver results right the first. These ideals are embedded in these training

manuals and will produce the most qualified technicians to meet or exceed these expectations in the future.

Here at the University of Colorado, Boulder – We think that we have hit a home run with this program. It addresses some long term needs and is correcting several shortfalls in hiring practices while producing the very best technicians. It is being integrated across the Mechanical / Electrical Trades shops and is highly sought after by our internal employees.

We believe that the program is a success and will continue to bring long term contributions to this and perhaps other higher education environments. The example of this programs success is noteworthy and deserving of the recognition afforded by the awarding of the APPA Award for Effective and Innovative Practices.