

Training Partnerships Results in Lower Maintenance Costs And Improved Customer Services

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ABSTRACT

In the Fall of 2001, Baylor Facility Services (BFS) created a partnership with a local trade school, Texas State Technical College (TSTC). The result of the partnership was a 60-hour customized training program that was conducted over a 10-week period in Jan-Mar 2002. Cost was \$7,125. Targeted employees were 20 Zone Technicians who are responsible for general maintenance functions in campus buildings. Classes were held 2 nights per week on the TSTC campus. Training subjects included electricity and controls, hvac, plumbing, and general carpentry. Tests were given at the end of each session. Work times were shifted so no overtime was incurred for the training. The campus community was in full support of the training. During this time other BFS employees filled in for the "one techs" and received cross-training benefits. Plans are underway for another training session in 2003.

Results of the training include a general building maintenance mechanic with a higher skill level, lower maintenance costs because of their ability to make repairs without calling in higher paid specialty skilled technicians, and satisfied customers because their building repairs are handled faster.

INTRODUCTION OF THE ORGANIZATION

Chartered in 1845 by the Republic of Texas and affiliated with the Baptist General Convention of Texas, Baylor is the oldest institution of higher learning in the state and the largest Baptist university in the world. The beautiful 432-plus acre campus is located on the banks of the Brazos River in Waco, Texas, a metropolitan area of 215,000 people. While remaining true to its heritage, Baylor has grown to more than 13,000 students, who originate from all 50 state and some 85 countries. The high quality of the student body allows Baylor to be ranked among the nations top 1 percent in the number of freshmen National Merit Scholars enrolled. Students may choose from 164 baccalaureate degree programs, 73 masters programs and 19 doctoral programs.

Baylor is a nationally acclaimed teaching institution and an emerging research community where both the dissemination and discovery of knowledge are important. With a student/faculty ratio of 18:1, Baylor maintains small classes averaging 29 students, and approximately 92 percent of all classes are taught by faculty rather than graduate students.

INITIATIVE, DESIGN AND IMPLEMENTATION

In an effort to better serve Baylor University, a partnership with a local trade school, Texas State Technical College (TSTC) was developed in the Fall of 2001. The partnership resulted in a site-specific training program for 20 employees that work in the Zone Maintenance Department. These Zone Technicians provide various

maintenance services to the Baylor campus. They interface with faculty, staff and students on a daily basis and maintain a constant presence within each of their assigned buildings. Their job duties on a daily basis include repairing floor and ceiling tile, light plumbing, repairing door locks and hardware as well as replacing broken window panes and other minor repair within buildings. As you can see by their multiple job duties, the zone maintenance technician is skilled in numerous areas. However, the technicians are not licensed in the same way a plumber or electrician would be, so the skill level within the department varies with employee. This variance in skill level, was a contributing factor to the development of the training program. Our hope was that the training would not only narrow the variance in skill level, but also provide them with fundamental air-conditioning and electrical training that they previously had not been exposed to. After several meetings with TS TC instructors, it was decided that the training would focus on four areas: electrical, air-conditioning, plumbing and carpentry skills. Each section would be taught by a separate instructor from within their technology department. Each of the four sections would be allotted 15 training hours, which would total 60 hours for the entire program for a total cost of \$7,125. The technicians would not only participate in classroom lectures such as “basic electrical theory”, they also had “hands-on” lab sessions which included exercises such as using a volt meter or soldering copper, depending on what topic was being discussed in the lecture portion of the class. To measure training retention, a written test was administered at the end of each section. This test was also used to evaluate the effectiveness of the training program. In order to receive a certificate of completion, technicians were required to pass all four sections of the program.

The biggest challenge when scheduling the training was adequate campus coverage during the absence of our technicians. On a campus the size of Baylor, it wasn't feasible to allow one-fifth of our plant staff to be absent from campus while attending training. Much thought was given towards a solution that would allow our technicians to attend the classes and help us maintain our presence on campus. Our solution, schedule the training in the evening 6-9 PM Tuesdays and Thursdays when service calls were at a minimum. Both Baylor and TSTC were aware of our scheduling issues and supported the evening time frame. Now that we had gotten past the scheduling hurdle, we had to address the issue of overtime. If they maintained their normal shift of 7:30 AM-4:00 PM while attending the evening training classes, it would result in a total of 60 hours of overtime per employee during the course of the training. To avoid the cost of paying overtime, the zone technicians had their schedule shifted from 1-9:30 PM Tuesdays and Thursdays. To avoid coverage issues during the day, our trades (electricians, plumbers and air conditioning) technicians picked up service calls that arose during the 7:30 AM-1:00 PM time frame.

The training began on-site at the TSTC campus January 8th 2002. During the course of the next 10-weeks, our maintenance technicians participated in the numerous theory and lab applications that TSTC had outlined for them. Review material was included to help narrow the variance in skill level that was mentioned earlier and the new material was taught to further raise their existing job knowledge.

BENEFITS

The training was a tremendous success, and resulted in all 20 technicians receiving a certificate of completion. The training was so successful, we are looking at continuing

the partnership with TSTC and offering future classes for our zone technicians as well as our trades. More importantly, we now offer Baylor a more knowledgeable and higher skilled maintenance technician who can not only trouble shoot the problem but repair it as well. Results of the training are still being evaluated. However, since completion of the training on March 19th, zone maintenance work orders have been completed in a quicker time frame. We are also beginning to see a reduction in the number of service calls our trades receive. We believe that the reduction is a result of a more advanced zone technician being able to troubleshoot and repair a problem without calling upon a trade employee. This reduction in service calls also enables our trade persons to devote more time to preventive maintenance issues and less on time consuming service calls.

Along with the reduction of service calls, we have noticed a faster response time within the department. This quick response not only benefits our facility operations, but more importantly keeps the staff, students and faculty satisfied with our improved service.