

**TWC Apprenticeship Program
2002-2003 Exit Cohort
5-Year Longitudinal Study**

Methodology

The Labor Market and Career Information (LMCI) department used 3,604 archived seed records. The usable seed records were linked to TWC Unemployment Insurance (UI) wage records in the 4th quarter of 2003 (4Q2003) to determine initial employment and earnings (baseline measure). The five-year snapshot linked the seed records to wage records to the 4th quarter of 2007 (4Q2007). In the case where participants who were found working had earnings greater than or equal to \$25,000 in any target quarter were identified, these records were excluded from analysis based on the likelihood of inaccurate wage record data and to reduce the possibility of inappropriately skewing the data. Supplemental linkages were conducted with the Texas Department of Criminal Justice (TDCJ) and Texas Bureau of Vital Statistics (TBVS) to determine incarcerations and deaths, as well as the United States Office of Personnel Management (OPM), the United States Postal Service (USPS), and the Department of Defense (DoD). Cohort members who were found incarcerated or deceased during the study years were excluded from analysis. After all exclusions, there were 3,514 seed records retained for analysis in this report.

For this report, only post-exit labor market outcomes were compared from the two study periods to ensure that comparable data are being used. For example, the initial snapshot of this cohort (4Q2003) did not include earnings data from the federal agencies to which the records were linked because the earnings data received were not compatible with state measures. For the five-year snapshot, taken at 4Q2007, the earnings data received from federal databases were compatible; however, these data will not be included in this report.

In both study periods, earnings were summed across unique Social Security Numbers (SSN). The industry sector by 4-digit North American Industry Classification System (NAICS) of the employer that paid the most wages during the target quarter was retained for analysis.

Results

Table 1 shows employment and earnings in 4Q2003 by occupation of training for program participants. There were several occupations with 100 percent employment, although the group sizes were too small to display. The three occupations with the most participants were Electrician, Plumber, and Sheet Metal Workers. Electricians had the highest employment of those three in 4Q2003 with 87.1 percent employed, followed by Plumbers, Pipefitters, and Steamfitters. Employment for the entire cohort in the 4th quarter of 2003 was 85.0 percent.

Table 1 also shows median quarterly earnings by occupation. Median quarterly earnings for the cohort were \$7,003 in 4Q2003. Electrician apprentices had the highest median quarterly earnings between the three most common occupations, earning \$7,098.

Table 1. Employment and Earnings for All Working by Occupation in 4Q2003

Occupation	N	N Working	% Working	Median Earnings
Cabinetmakers and Bench Carpenters	n/a	n/a	100.0	\$5,065
Roofers	n/a	n/a	100.0	\$5,344
Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic	n/a	n/a	100.0	\$7,727
Welders, Cutters, Solderers, and Brazers	n/a	n/a	50.0	\$6,808
Cement Masons and Concrete Finishers	n/a	n/a	66.7	\$4,835
Telecommunications Equipment Installers and Repairers, Except Line Installers	n/a	n/a	100.0	\$7,196
Tapers	n/a	n/a	100.0	\$4,326
Drywall and Ceiling Tile Installers	5	n/a	80.0	\$4,778
Maintenance Workers, Machinery	5	5	100.0	\$7,528
Millwrights	7	6	85.7	\$5,157
Stonemasons	10	8	80.0	\$11,451
Floor Layers, Except Carpet, Wood, and Hard Tiles	12	9	75.0	\$4,248
Glaziers	13	8	61.5	\$5,641
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	14	12	85.7	\$7,763
Painters, Construction and Maintenance	16	14	87.5	\$4,917
Machinists	19	14	73.7	\$6,967
Tool and Die Makers	20	20	100.0	\$8,576
Hazardous Materials Removal Workers	21	18	85.7	\$5,835
Molders, Shapers, and Casters, Except Metal and Plastic	22	21	95.5	\$12,395
Insulation Workers, Floor, Ceiling, and Wall	24	23	95.8	\$6,432
Operating Engineers and Other Construction Equipment Operators	27	19	70.4	\$6,492
Brickmasons and Blockmasons	44	30	68.2	\$5,718
Carpenters	123	104	84.6	\$6,811
Construction and Related Workers, All Other	203	156	76.9	\$7,039
Sheet Metal Workers	205	156	76.1	\$6,222
Plumbers, Pipefitters, and Steamfitters	530	450	84.9	\$7,007
Electricians	2,178	1,896	87.1	\$7,098
Total	3,514	2,987	85.0	\$7,003

Note: Cells with values smaller than 5 are marked "n/a" to protect the privacy of cohort members.

As would be expected, Building Equipment Contractors was the industry of employment with the largest number of participants found employed in 4Q2003 (Table 2). Participants found working in the Office Furniture (including Fixtures) Manufacturing industry sector had the highest median quarterly earnings at \$12,403. Five of the ten industries in the top ten were either contracting or construction.

Table 2. Top 10 Industries of Employment for All Working in 4Q2003

Industry of Employment	N Working	Median Earnings	NAICS Code
Building Equipment Contractors	2,111	\$7,273	2382
Employment Services	117	\$5,608	5613
Nonresidential Building Construction	85	\$6,601	2362
Building Finishing Contractors	69	\$6,024	2383
Foundation, Structure, and Building Exterior Contractors	54	\$6,353	2381
Architectural and Structural Metals Manufacturing	38	\$6,066	3323
Office Furniture (including Fixtures) Manufacturing	20	\$12,403	3372
Lessors of Real Estate	20	\$7,561	5311
Business Support Services	17	\$8,261	5614
Utility System Construction	16	\$6,550	2371

Table 3 shows employment and earnings in 4Q2007 by occupation of training for program participants. There were again several occupations with 100 percent employment, but as with the 4Q2003 results, several of the group sizes were too small to display. Looking at the three occupations with the most apprentices, Electricians had the highest employment of those three in 4Q2007 with 80.4 percent employed, followed by Plumbers, Pipefitter, and Steamfitters with 77.9 employment. Employment for the entire cohort in the 4th quarter of 2007 was 78.3 percent. Median quarterly earnings for the cohort were \$11,296 in 4Q2007. Electricians and Plumber apprentices had the highest median quarterly earnings between the three most common occupations, earning \$11,580.

Table 3. Employment and Earnings for All Working by Occupation in 4Q2007

Occupation	N	N Working	% Working	Median Earnings
Cabinetmakers and Bench Carpenters	n/a	n/a	100.0	\$7,537
Roofers	n/a	n/a	100.0	\$6,985
Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic	n/a	n/a	50.0	\$10,838
Welders, Cutters, Solderers, and Brazers	n/a	n/a	50.0	\$3,560
Cement Masons and Concrete Finishers	n/a	n/a	33.3	\$7,695
Telecommunications Equipment Installers and Repairers, Except Line Installers	n/a	n/a	100.0	\$9,320
Tapers	n/a	n/a	100.0	\$8,338
Drywall and Ceiling Tile Installers	5	n/a	60.0	\$8,173
Maintenance Workers, Machinery	5	n/a	80.0	\$15,760
Millwrights	7	6	85.7	\$7,121
Stonemasons	10	7	70.0	\$11,170
Floor Layers, Except Carpet, Wood, and Hard Tiles	12	7	58.3	\$5,217
Glaziers	13	9	69.2	\$7,633
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	14	12	85.7	\$8,488
Painters, Construction and Maintenance	16	12	75.0	\$9,361
Machinists	19	13	68.4	\$9,911
Tool and Die Makers	20	18	90.0	\$13,075
Hazardous Materials Removal Workers	21	17	81.0	\$10,513
Molders, Shapers, and Casters, Except Metal and Plastic	22	15	68.2	\$12,877
Insulation Workers, Floor, Ceiling, and Wall	24	13	54.2	\$8,660
Operating Engineers and Other Construction Equipment Operators	27	19	70.4	\$12,074
Brickmasons and Blockmasons	44	31	70.5	\$5,802
Carpenters	123	94	76.4	\$8,251
Construction and Related Workers, All Other	203	141	69.5	\$11,779
Sheet Metal Workers	205	152	74.2	\$11,307
Plumbers, Pipefitters, and Steamfitters	530	413	77.9	\$11,580
Electricians	2,178	1,752	80.4	\$11,580
Total	3,514	2,750	78.3	\$11,296

Note: Cells with values smaller than 5 are marked "n/a" to protect the privacy of cohort members.

In Table 4 we see the ten industries of employment with the largest number of participants found employed in 4Q2007. The Building Equipment Contractors sector employed the most apprentices in 4Q2007. The Support Activities for Mining industry had the highest median quarterly earnings at \$13,440. Participants employed in the Architectural and Structural Metals Manufacturing sector had the second-highest median quarterly earnings in 4Q2007 with \$12,729.

Table 4. Top 10 Industries of Employment for All Working in 4Q2007

Industry of Employment	N Working	Median Earnings	NAICS Code
Building Equipment Contractors	1,505	\$11,890	2382
Employment Services	155	\$7,382	5613
Nonresidential Building Construction	88	\$11,161	2362
Foundation, Structure, and Building Exterior Contractors	59	\$10,760	2381
Executive, Legislative, and Other General Government Support	45	\$9,436	9211
Building Finishing Contractors	43	\$8,862	2383
Architectural and Structural Metals Manufacturing	33	\$12,729	3323
Support Activities for Mining	29	\$13,440	2131
Utility System Construction	26	\$10,141	2371
Elementary and Secondary Schools	24	\$6,283	6111

References

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