

# EMPLOYER SURVEY REPORT - STUDY OF WORKER SHORTAGES & SURPLUSES IN NOVA SCOTIA

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## 1.0 Introduction

The employer survey report is part of a larger study with the objective of determining whether a shortage or surplus of plumbers and framers existed in Nova Scotia at a given point in time (2002) and to explain the factors that contributed to the shortages or surpluses. The rationale for the study is that, despite the frequent mentions of shortages of skilled trades workers, it is difficult to conclusively diagnose the existence of shortages. Surveys of employers and EI beneficiaries completed in this study will contribute to this diagnosis.

Information and analysis from the surveys will be combined with analysis of data on key variables that are indicators of labour market imbalances (wage rate changes, unemployment and vacancy rates, etc.) to come to conclusions about the existence of shortages in the designated trades in 2002. These conclusions will enable us to make judgements about shortages in years prior to 2002, and in years subsequent to 2002, by comparing industry and labour market data over time with the data in 2002.



## 2.0 Survey Methodology

### 2.1 Target Population

The target population for the survey was employers of framers, plumbers, and electricians in the construction industry in Nova Scotia. For the purposes of this study, a framing carpenter was defined as a carpenter who completed the following activities:

- ▲ Wood framing;
- ▲ Steel stud (load bearing) installation;
- ▲ Systems installation (engineered trusses, post & beam, etc.);
- ▲ Exterior sheathing;
- ▲ Weather barrier;
- ▲ Doors & Windows;
- ▲ Deck building; and
- ▲ Staircase stringers.

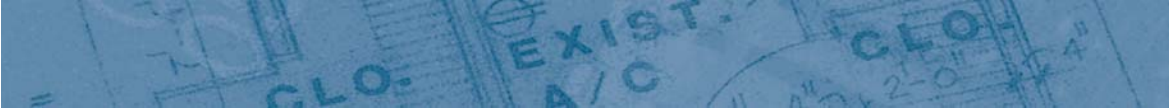
### 2.2 Sampling Frame

The sampling frame is a list of all the sampling units available for selection in the sampling process. In this case, the sampling frame was based solely on a list of employers obtained from the Human Resources and Skills Development Canada (HRSDC) website:

[www160.hrdc-drhc.gc.ca/english/LMI/employer/Employer.asp](http://www160.hrdc-drhc.gc.ca/english/LMI/employer/Employer.asp). The HRSDC database was the only readily available list identifying companies by type of occupation employed.

The database was queried on-line to identify employers of carpenters (NOC 7271) and plumbers (NOC 7251) in Nova Scotia. The HRSDC database did not specifically identify employers of framers. In lieu, the sampling frame included employers of carpenters and those companies not employing framers were subsequently disqualified at the survey stage.

For the most part, data on electricians (NOC 7241) was collected in surveys in the course of interviewing employers of carpenters/framers and plumbers. Surveys were completed with five additional employers



of electricians in order to reach the target of 100 surveys with employers of workers in trades that have compulsory certification.

The employer database maintained by HRSDC does not include all employers in Nova Scotia. The database is refreshed on the Internet every two months and is based on a variety of sources including (but not limited to) directories, Internet sites, and telephone contacts with employers in Nova Scotia.

The HRSDC list was culled, to the extent possible, for duplicate entries and the final sampling frame comprised 876 employers.

### **2.3 Sampling Procedure**

The targeted number of completes was 100 employers of framers and 100 employers of plumbers. The target for plumbers was extended to include employers of electricians in recognition of the reality that it might not be possible to complete surveys with employers of 100 plumbers due to the small number of these employers in the survey frame.<sup>1</sup> The actual number of completed surveys is as follows:

- ▲ 144 employers of carpenters only;
- ▲ 70 employers of plumbers only;
- ▲ 25 employers of both plumbers and carpenters; and
- ▲ 5 employers of electricians only.
- ▲ A total of 244 surveys with employers were completed.

A pre-test of 20 employers was conducted over two days - May 27<sup>th</sup> and May 28<sup>th</sup>, 2003. Twenty employers were contacted two to three times. A total of 13 surveys were completed. The questionnaire was revised based on the results of the pre-test.

The proposal for this project proposed to conduct a stratified random sample. In fact, the sampling procedure was a census of all employers in the survey frame with a minimum of three callbacks. A

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<sup>1</sup> Electricians were included because, like plumbers, certification is mandatory for this trade.



census was required to achieve the targeted completion numbers. Additional callbacks were made to employers of plumbers to ensure a high response rate and adequate sample size from this category.

Following the pre-test stage, the full survey was completed between June 10<sup>th</sup> and July 21<sup>st</sup>, 2003. A total of 853 companies were contacted, an average of 3.8 times. Due to the limited sample relative to the desired number of completes, a number of companies were contacted more than ten times.

## **2.4 Response Rates and Sampling Fractions**

The overall response rate was 28% (244/876) of the original sample frame. Of the 72% non-respondents, 49 refused (6%), 59 (7%) were wrong, disconnected, fax or duplicate numbers, 280 (32%) were disqualified due to the fact that they did not employ framers, plumbers or electricians and the remainder were non-respondents for various other reasons such as no answer, etc. The number of respondents by county in Nova Scotia is found in Table 5 below.

## **2.5 Statistical Accuracy**

A census of employers on the HRSDC employer list was conducted. Since the data are based on a census rather than a sample from a population, analysis of the statistical accuracy of the sample is not relevant. The HRSDC list would not include all employers of plumbers and electricians. Rather it would be a sub-set of the actual population of employers. Survey responses would not, therefore, reflect those that would result from a survey of the population the employers. If employers with certain characteristics, very small employers for example, were systematically excluded from the list, the survey will produce biased estimates of the population.

There may also be non-sampling errors or biases due to the fact that some potential respondents chose not to participate or could not be contacted. For this reason, the extent to which the respondents represent all employers on the HRSDC list is not known.

The degree to which survey respondents reflect the geographic distribution of employers of plumbers and carpenters in Nova Scotia is discussed in the report. The size of respondent businesses, as estimated by the number of employees, also is compared to the size of businesses in important sectors of the construction industry as estimated in the Statistics Canada Business Register.

### 3.0 Profile of Employers

A total of 169 employers of framers, 95 employers of plumbers, and five employers of electricians were interviewed in this survey. The breakdown of industry sectors of these employers is presented in Table 1. Note that many employers were involved in more than one industry sector. As a result, the percentages in Table 1 add to more than 100 percent.

**Table 1**

INDUSTRY SECTOR OF EMPLOYERS					
Category	Sub-Category	Framing		Plumbing	
		Number	Percent of Employers (n=169)	Number	Percent of Employers (n=95)
Construction					
	<i>New Home Construction</i>	92	54%	53	56%
	<i>Multi-Unit Construction</i>	12	7%	12	13%
	<i>Home Renovations</i>	115	68%	59	62%
	<i>Service Calls</i>	11	7%	38	40%
	<i>ICI</i>	48	28%	33	35%
	<i>Engineering</i>	3	2%	1	1%
	<i>Other</i>	5	3%	7	7%
Manufacturing		11	7%	2	2%
Retail Trade		0	0%	1	1%
Real Estate		1	1%	0	0%
Non-Profit					
	<i>Health Care</i>	2	1%	3	3%
	<i>Educational Services</i>	6	4%	5	5%
	<i>Public Administration</i>	7	4%	7	7%

Source: Question 2

The table shows that two-thirds of the employers of framers, and almost two-thirds of those for plumbers, worked in home renovations. Over one-half of the employers for both trades worked in new home construction. Slightly more than one-third of the employers of plumbers and slightly less than one-third of the employers for framers worked in the Institutional, Commercial and Industrial Building sector (ICI). Fewer than 10% of the employers for carpenters worked in any of the other industry sectors





in Table 1. Forty percent of the employers for plumbers engaged in service calls while 13% worked in multi-unit construction.

Table 2a shows the industry sector where employers of framers earned the most revenue in 2002. Note that some firms indicated that they earned an equal amount of revenue in two sectors. In these cases, one-half of the firms were allocated to each sector.

**Table 2a**

<b>DISTRIBUTION OF FIRMS BY INDUSTRY SECTOR WITH THE MOST REVENUE – FRAMING</b>		
	<b>Number</b>	<b>Percent (n=154)</b>
Home Renovations	65	42%
New Home Construction	46	30%
Non-Residential Building Construction	24	15%
Manufacturing	7	4%
Multi-Unit Housing	7	4%
Service Calls	3	2%
Engineering	3	2%
Non-construction	2	1%

Source: Question 2

The table shows that almost three-quarters of employers earned most of their revenues in the home renovations and new home construction sectors.



Table 2b shows the industry sector where employers of plumbers earned the most revenue in 2002.

**Table 2b**

<b>DISTRIBUTION OF FIRMS BY INDUSTRY SECTOR WITH THE MOST REVENUE – PLUMBING</b>		
	<b>Number</b>	<b>Percent (n=80)</b>
New Home Construction	25	31%
Home Renovations	16	19%
Service Calls	16	19%
Non-Residential Building Construction	15	19%
Multi-Unit Housing	4	5%
Non-construction	3	3%
Manufacturing	2	3%
Engineering	1	1%

Source: Question 2

Table 2b shows that 50% of the firms that employed plumbers earned most of their revenues in the home renovations and new home construction sectors. Significant proportions of firms earned most of their revenue through service calls and non-residential building construction.



Table 3 shows that about two-thirds of the firms that employed framers were specialized, that is, they had only one category in which they earned 25 percent or more of their revenue. Approximately 26% of firms specialized in the home renovations sector. For framing firms that divided their activity between two or more areas, the most common combination was new home construction and home renovation.

**Table 3**

<b>COMMON COMBINATIONS OF CONSTRUCTION ACTIVITY EMPLOYERS OF FRAMERS</b>		
<b>(Employers with more than 25 percent of revenue in area)</b>		
	<b>Number</b>	<b>Percent</b>
<b>Specialization<sup>(1)</sup></b>		
New Home Construction	25	15%
Home Renovation	44	26%
Non-Residential Building Construction	19	11%
Service Calls	2	1%
Other Specialized	27	16%
<b>Total Specialized</b>	<b>117</b>	<b>69%</b>
<b>Common Combinations of Specialization<sup>(2)</sup></b>		
New Home Construction and Home Renovation	33	20%
Home Renovation and Service Calls	2	1%
Home Renovation and Non-Residential Building Construction	3	2%
New Home Construction and Non-Residential Building	2	1%
Other Combinations	12	7%
<b>Total Combinations</b>	<b>52</b>	<b>31%</b>
(1) Firms with only one category with 25 percent or more revenues.		
(2) Firms with more than one category of revenues each with 25 percent or more revenue.		

Source: Question 2



Table 4 shows that employers of plumbers were slightly less specialized than framing employers and that non-residential building construction was the sector with the highest proportion of firms specializing.

**Table 4**

<b>COMMON COMBINATIONS OF CONSTRUCTION ACTIVITY EMPLOYERS OF PLUMBERS (Employers with more than 25 percent of revenue in area)</b>		
	<b>Number</b>	<b>Percent</b>
<b>Specialization<sup>(1)</sup></b>		
New Home Construction	9	9%
Home Renovation	4	4%
Non-Residential Building Construction	13	14%
Service Calls	9	9%
Other Specialized	21	22%
<b>Total Specialized</b>	<b>56</b>	<b>59%</b>
<b>Common Combinations of Specialization<sup>(2)</sup></b>		
New Home Construction and Home Renovation	16	17%
Home Renovation and Service Calls	6	6%
Home Renovation and Non-Residential Building Construction	2	2%
New Home Construction and Non-Residential Building	3	3%
Other Combinations	12	13%
<b>Total Combinations</b>	<b>39</b>	<b>41%</b>
(1) Firms with only one category with 25 percent or more revenues.		
(2) Firms with more than one category of revenues each with 25 percent or more revenue.		

Source: Question 2



Table 5 presents the distribution of respondents by county.

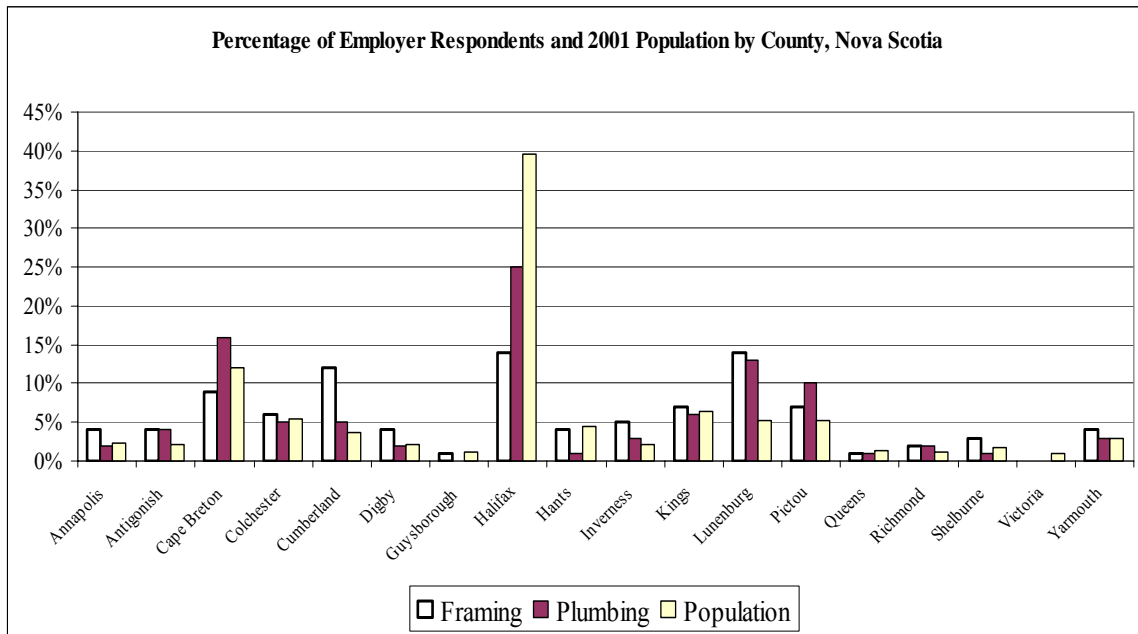
**Table 5**

<b>DISTRIBUTION OF RESPONDENTS BY COUNTY</b>						
<b>County</b>	<b>All Employers</b>		<b>Framing</b>		<b>Plumbing</b>	
	<b>Number</b>	<b>Percent (n=244)</b>	<b>Number</b>	<b>Percent (n=169)</b>	<b>Number</b>	<b>Percent (n=95)</b>
Annapolis	7	3%	6	4%	2	2%
Antigonish	10	4%	7	4%	4	4%
Cape Breton	28	12%	15	9%	15	16%
Colchester	14	6%	10	6%	5	5%
Cumberland	21	9%	20	12%	5	5%
Digby	7	3%	6	4%	2	2%
Guysborough	2	1%	2	1%	0	0%
Halifax	41	17%	23	14%	24	25%
Hants	8	3%	7	4%	1	1%
Inverness	14	6%	9	5%	3	3%
Kings	15	6%	12	7%	6	6%
Lunenburg	36	15%	24	14%	12	13%
Pictou	19	8%	12	7%	9	10%
Queens	2	1%	1	1%	1	1%
Richmond	5	2%	4	2%	2	2%
Shelburne	6	3%	5	3%	1	1%
Yarmouth	9	4%	6	4%	3	3%

Source: Question 2



The following exhibit shows that, except for employers of both trades in Victoria County, and employers of plumbers in Guysborough, every county was included in the surveys for both trades. Employers in Halifax were under-represented in both trades in relation to its population while employers of framers in Cape Breton were under-represented and those for plumbers were over-represented.



Source: Question 2 and 2001 Census, Statistics Canada

## 4.0 Business Characteristics

The vast majority employers of both plumbers and framers were active in their industries for ten years or more. Employers of plumbers were active for a slightly longer period (26.3 years on average) than employers of framers. Table 6 illustrates the age profile of surveyed companies.

**Table 6<sup>2</sup>**

NUMBER OF YEARS ACTIVE IN INDUSTRY						
	All Employers		Framing		Plumbing	
	Number	Percent (n=227)	Number	Percent (n=154)	Number	Percent (n=80)
<5 years	11	5%	10	6%	1	1%
5-9 years	15	7%	10	6%	6	8%
10-24 years	113	50%	80	52%	37	46%
25-39 years	64	28%	43	28%	21	26%
40+ years	24	11%	11	7%	15	19%
<b>Average (years)</b>	<b>23.9</b>		<b>23.0</b>		<b>26.3</b>	

Source: Question 29

<sup>2</sup> Please note that the number of framing employers plus the number of plumbing employers sometimes exceeds the total number of employers in this and subsequent tables because some companies employed both framers and plumbers.



Employment is one measure of the size of a business. Respondents were asked to estimate the total number of seasonal and full-time employees in their enterprises at peak season. Their responses were used to group the respondents by employee size range as shown in Table 7.

**Table 7**

<b>RESPONDENTS BY EMPLOYEE SIZE RANGE (FULL-TIME + SEASONAL) EMPLOYEES AT PEAK SEASON</b>						
	<b>All Employers</b>		<b>Framing</b>		<b>Plumbing</b>	
	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>
0 employees	14	6%	8	5%	7	8%
1-4 employees	80	33%	57	34%	23	25%
5-9 employees	64	27%	42	25%	24	26%
10-24 employees	42	18%	32	19%	17	19%
25+ employees	39	16%	29	17%	20	22%
<b>Total</b>	<b>239</b>	<b>100%</b>	<b>168</b>	<b>100%</b>	<b>91</b>	<b>100%</b>

Source: Question 1

The table shows that about 40% of employers of framers, and 33% of employers of plumbers, had fewer than five employees. Approximately one-quarter of the employers of both trades employed from five to nine employees at peak season while roughly 40% of respondent firms for both trades employed ten or more employees.





Another measure of the size of companies is the number of full-time employees. The number and percentage of respondents by full-time employee size range as shown in Table 8.

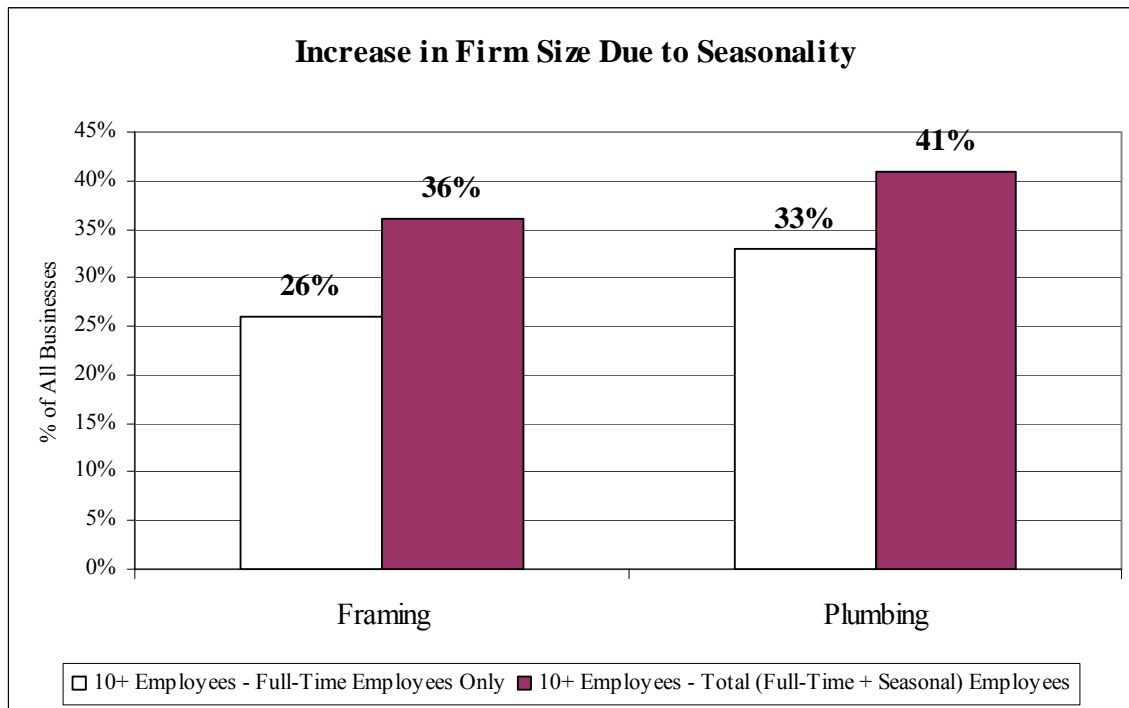
**Table 8**

<b>RESPONDENTS BY EMPLOYEE SIZE RANGE (FULL-TIME) EMPLOYEES AT PEAK SEASON</b>						
	<b>All Employers</b>		<b>Framing</b>		<b>Plumbing</b>	
	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>
0 employees	63	26%	52	31%	14	15%
1-4 employees	76	32%	45	27%	32	34%
5-9 employees	43	18%	28	17%	16	17%
10-24 employees	30	12%	21	13%	15	16%
25+ employees	29	12%	22	13%	16	17%
<b>Total</b>	<b>241</b>	<b>100%</b>	<b>168</b>	<b>100%</b>	<b>93</b>	<b>100%</b>

Source: Question 1

The table shows that just 60% of employers of framers, and 50% of employers of plumbers, had fewer than five full-time employees. About one-quarter of carpentry employers, and one-third of employers of plumbers, had ten or more employees.

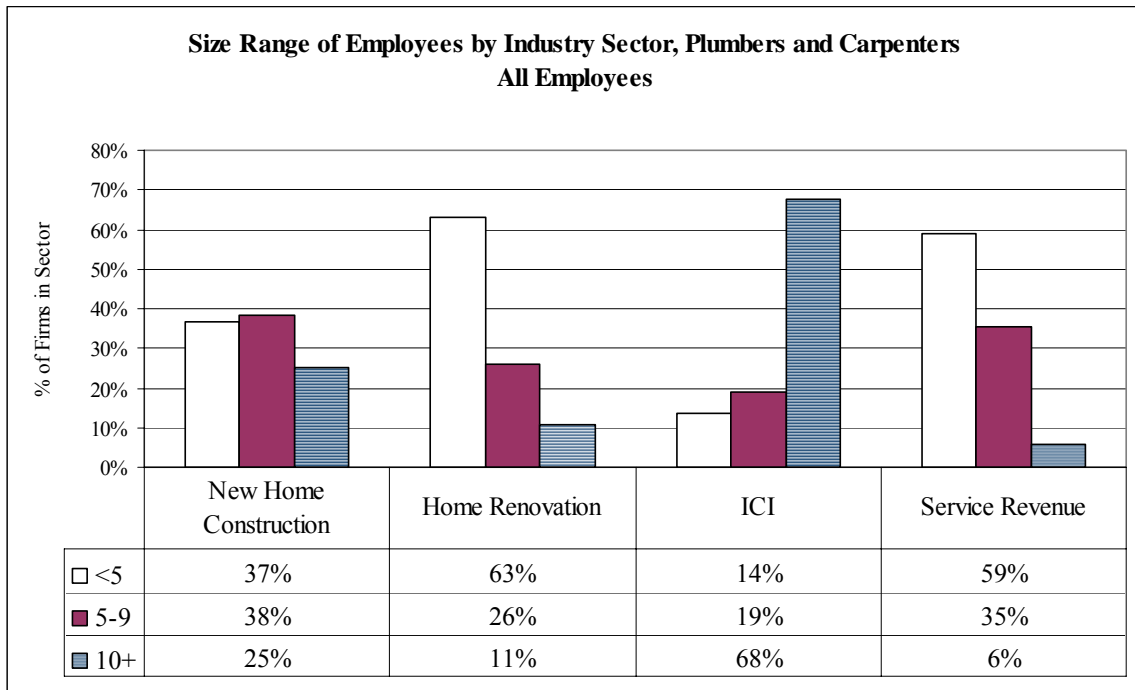
Comparing Table 8 to Table 7 provides insights into the size and seasonality of firms in the survey. The comparison shows that the percentage of firms with ten or more employees drops from 36% to 26% for framers, and 41% to 33% for plumbers, if only full-year employees are included. Conversely the number of larger firms (10 or more employees) rises significantly when seasonal workers are added to full-time employees. This is illustrated in the following exhibit.



Source: Question 1



The variation in the number of employees per firm by industry is illustrated in the following exhibit. The exhibit shows the four industry sectors with the greatest number of employees and aggregates employers of carpenters and plumbers.



Question 1 and 2

Roughly 60% of the employers in the home renovation and service revenue sectors had fewer than five employees while a small percentage of the firms in these sectors had ten or more employees. About two-thirds of the firms in the ICI sector had ten or more employees and a small proportion had fewer than five employees. Firms in the new home construction sector were more evenly distributed across the various employee size ranges.

An attempt was made to compare the distribution of firms by employee size range from the employer survey to that in the Business Register produced by Statistics Canada. The comparison is hampered by the fact that a significant proportion of the firms in the Business Register are classified in an “indeterminate” category. Indeterminate establishments are those that do not maintain a payroll but may hire contract workers, family members, or business owners.

If these establishments are assumed to have fewer than five employees, a comparison with the Business Register is possible. The comparison shows that the proportion of firms with fewer than five employees in the Business Register was about twice that in the survey. The comparison suggests that small firms may be under-represented in the employer survey.

Another measure of the size of businesses is the value of sales. Table 9 shows the sales range of employers included in the survey. Non-profit employers who responded to the survey are not included in Table 9.

**Table 9**

VALUE OF SALES IN 2002						
	All Employers		Framing		Plumbing	
	Number	Percent	Number	Percent	Number	Percent
Less than \$100,000	37	16%	29	19%	8	10%
\$100,001 - \$200,000	36	16%	28	18%	9	11%
\$200,001 - \$500,000	51	23%	32	21%	23	29%
\$500,001 - <\$1,000,000	34	15%	20	13%	13	16%
\$1,000,000 - \$3,000,000	22	10%	16	10%	9	11%
Greater than \$3,000,000	20	9%	13	8%	7	9%
Don't Know/Refused	27	12%	16	10%	11	14%
<b>Total Responses</b>	<b>227</b>	<b>100%</b>	<b>154</b>	<b>100%</b>	<b>80</b>	<b>100%</b>

Source: Question 34

Plumbing firms were larger than those in who employed carpenters. Approximately 21% of plumbing firms had sales of less than \$200,000 compared to 37% of framing firms. A relatively high proportion of plumbing firms had sales in the \$200,000 to \$1 million range while the proportion of firms with sales over \$3 million was similar for employers of both trades.



Businesses can work as either general contractors or as sub-contractors. The percentage of businesses activity in each category for employers of plumbers and framers in the construction industry is shown in Table 10.

**Table 10**

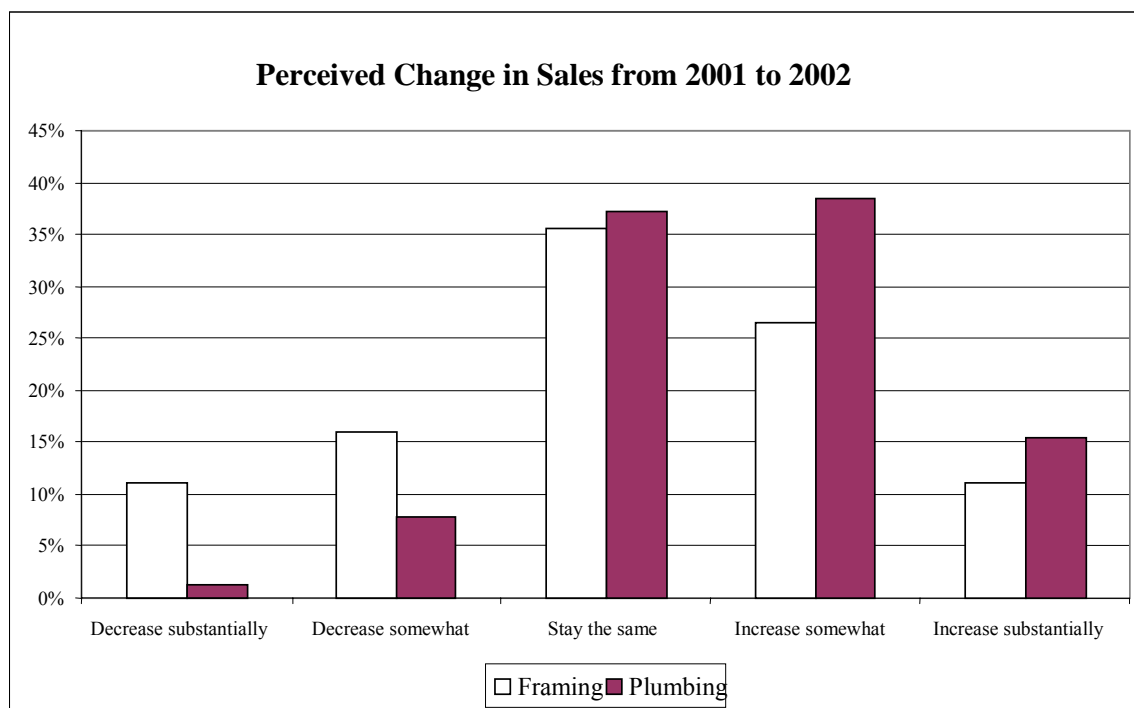
<b>AVERAGE PERCENTAGE OF BUSINESS</b>			
<b>Category of Construction Activity</b>	<b>All Employers (n=211)</b>	<b>Framing (n=146)</b>	<b>Plumbing (n=71)</b>
General Contractor	75%	88%	51%
Sub-contractor	25%	12%	49%

Source: Question 30

Table 10 shows most of the firms that employed framers primarily worked as general contractors while firms that employed plumbers worked about the same amount as general and sub-contractors.



The following exhibit shows that more firms felt that sales increased than decreased over the 2001-2002 period, especially for employers of plumbers where 54% of respondents said sales increased while only 9% said they decreased.



Source: Question 31

Employers were even more optimistic about future sales with 68% of plumbers' employers and 62% of employers of framers indicating that they expected sales to grow.



Employers were asked to rate the seriousness of various problems facing their industry from 1 (low) to 5 (high). Of the issues raised, the most commonly felt concern was with competition from the “underground” economy – those not charging GST, paying Workers’ Compensation, or working while on EI. Almost half of the employers rated this problem a 4 or 5. Forty percent of employers rated skilled trades shortages at a 4 or 5. None of the other issues received a rating of 4 or 5 from more than 15% of employers surveyed.

**Table 11**

<b>SERIOUSNESS OF PROBLEMS FACING INDUSTRY</b>						
	<b>Low</b>			<b>High</b>		
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Don't Know</b>
Shortages of qualified business managers	81%	7%	5%	2%	6%	0%
Shortages of qualified worksite managers or supervisors	73%	7%	7%	5%	8%	0%
Shortages of skilled trades workers	39%	6%	14%	10%	30%	0%
Turnover in skilled trades workers	67%	10%	15%	4%	5%	0%
The number of skilled employees who retired from the labour force	82%	7%	7%	1%	2%	1%
Keeping up with new work methods	70%	10%	11%	4%	5%	1%
Keeping up with new technologies	66%	10%	16%	3%	5%	1%
Price competition from companies operating in the “underground economy” (i.e., not charging GST, not paying Workers’ Comp, working while on EI, etc.)	22%	7%	18%	10%	39%	4%
Delays associated with the building regulatory and inspection system	56%	13%	16%	4%	9%	2%
Costs associated with the building regulatory and inspection system	59%	11%	16%	3%	8%	3%
Access to financing	65%	10%	11%	4%	7%	3%



## 5.0 Ownership

Businesses often are owned by individuals who also work in the business as a trades worker or in some other capacity. Respondents to the PRAXIS survey, except those working for non-profit enterprises, were asked about the ownership structure of their companies. Approximately 90% of the businesses employing framers and 89% of the businesses employing plumbers were owner-operated.

Survey results indicate that the very largest firms, those with 25 or more employees or sales greater than \$3 million, have a lower degree of owner-operator control. Roughly 50% to 60% of firms in these categories were controlled by owner-operators compared to 90% for the remaining firms.

Table 12 shows the proportion of owner-operated firms that were owned by one, two or more individuals. It shows that these proportions are similar for carpentry employers and employers of plumbers.

**Table 12**

NUMBER OF OWNER-OPERATORS						
	All Employers		Framing		Plumbing	
	Number	Percent (n=202)	Number	Percent (n=139)	Number	Percent (n=71)
One	115	57%	80	58%	38	54%
Two	68	34%	48	35%	23	32%
Two or more	19	9%	11	8%	10	14%

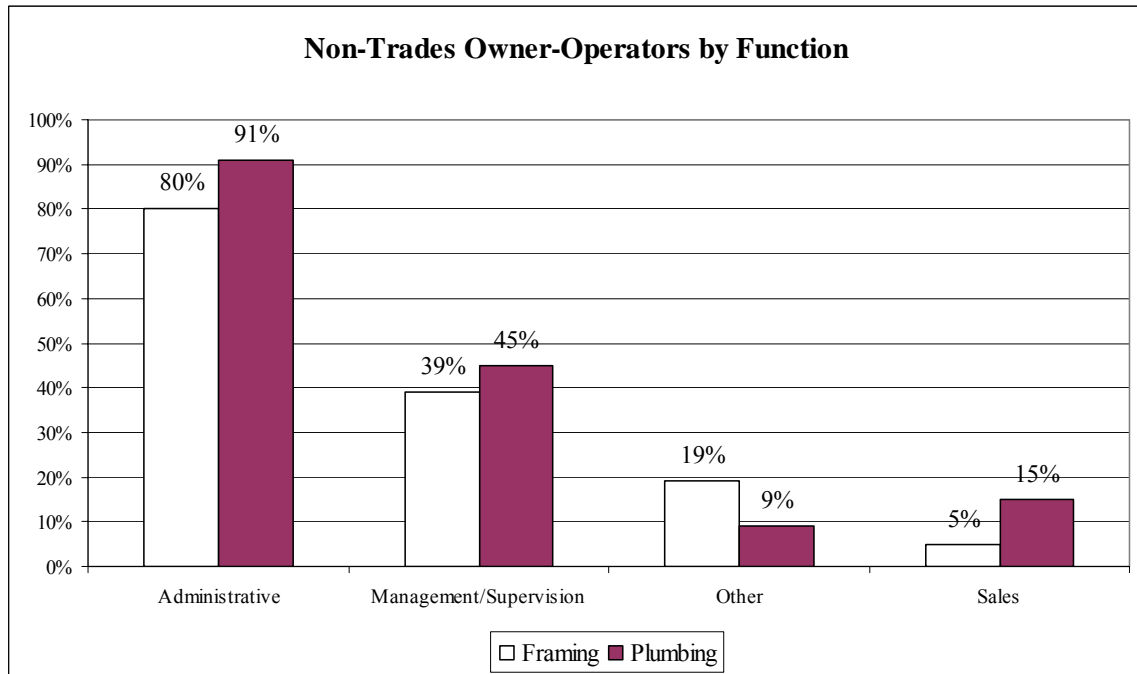
Source: Question 3

The PRAXIS survey showed that there were 303 owner-operators who actively worked in businesses in 2002. Of this total 213, or 70%, worked for the company as skilled trades people. Of the remaining owner-operators, most (80%-91%) were involved in administrative functions while somewhat less than one-half (39%-45%) were involved in a management/supervision capacity. Smaller proportions of owner-operators were in sales-related and other functions.





The following exhibit illustrates these findings.<sup>3</sup>



Source: Question 3

It is interesting to note that two-thirds of the non-trades owner-operators were spouses of trades owner-operators while an additional 16% were relatives.

<sup>3</sup> It is important to note that many of these owner-operators were engaged in more than one activity, so these percentages total more than 100.



## 6.0 Workforce Profile

### 6.1 Owner-Operators

Of the owner-operators who are tradespeople, the number involved in the following trades in 2002 is shown in Table 13.

**Table 13**

NUMBER OF OWNER-OPERATORS INVOLVED IN TRADES		
Trade/Activity Area	Number	% of Owner-Operators, Trades Workers
Carpentry (including framers, finish carpenters, cabinetmakers)	132	61%
Plumbers	66	31%
Electricians	15	7%

Source: Question 4

Of the owner-operators involved in carpentry, electrical, and plumbing trades, the number of licensed journeypersons is shown in Table 14.

**Table 14**

NUMBER OF LICENSED JOURNEYPerson OWNER-OPERATORS		
Trade/Activity Area	Number of Licensed Journey Persons	% of Owner-Operators, By Trade
Carpentry (including framers, finish carpenters, cabinetmakers)	63	48%
Plumbers	63	95%
Electricians	15	100%

Source: Question 5

The table shows that virtually all owner-operators who are plumbers and electricians are licensed whereas slightly less than one-half of the carpentry owner-operators indicated that they were licensed.



Table 15 shows that the vast majority of licensed journeypersons that were plumbers and electricians held a Red Seal certification while about 60% of licensed carpenters held this designation.

**Table 15**

<b>NUMBER OF JOURNEYPEOPLE WITH RED SEAL CERTIFICATION</b>		
<b>Trade/Activity Area</b>	<b>Number with a Red Seal Certification</b>	<b>% of Licensed Owner-Operators, By Trade</b>
Carpentry (including framers, finish carpenters, cabinetmakers)	37	59%
Plumbers	52	83%
Electricians	13	87%

Source: Question 6

## **6.2 Employees**

### **6.2.1 Workforce and Certification**

The total number of carpenters, plumbers, and electricians employed (excluding apprentices and owner-operators) at the peak of the 2002 season is shown in the Table 16.

**Table 16**

<b>NUMBER OF TRADESPEOPLE EMPLOYED IN 2002 (excluding Apprentices and Owner-Operators)</b>	
<b>Trade/Activity Area</b>	<b>Total # of Employees</b>
Carpentry (including framers, finish carpenters, cabinetmakers)	952
Plumbers	491
Electricians	353

Source: Question 13



The number and percentage of licensed and Red Seal certified employees by trade is shown in Table 17.

**Table 17**

<b>NUMBER OF LICENSED AND RED SEAL CERTIFIED TRADESPEOPLE</b>				
<b>Trade/Activity Area</b>	<b># of Licensed Journey Persons</b>	<b>% of Total Employees</b>	<b># Red Seal Certified</b>	<b>% of Licensed</b>
Carpentry (including framers, finish carpenters, cabinetmakers)	409	43%	71	17%
Plumbers	468	95%	110	24%
Electricians	252	71%	81	32%

Source: Questions 8, 9 and 10

Table 17 shows that the vast majority of plumbers and over two-thirds of electricians indicated that they were licensed journey persons while slightly less than one-half of carpenters were licensed. A minority of licensed journey persons in all trades held a Red Seal designation.

## **6.2.2 Unionization**

Table 18 shows that a minority of the surveyed firms were partially or fully unionized with the proportion of unionized firms employing framers being significantly lower than the proportion employing plumbers and electricians.

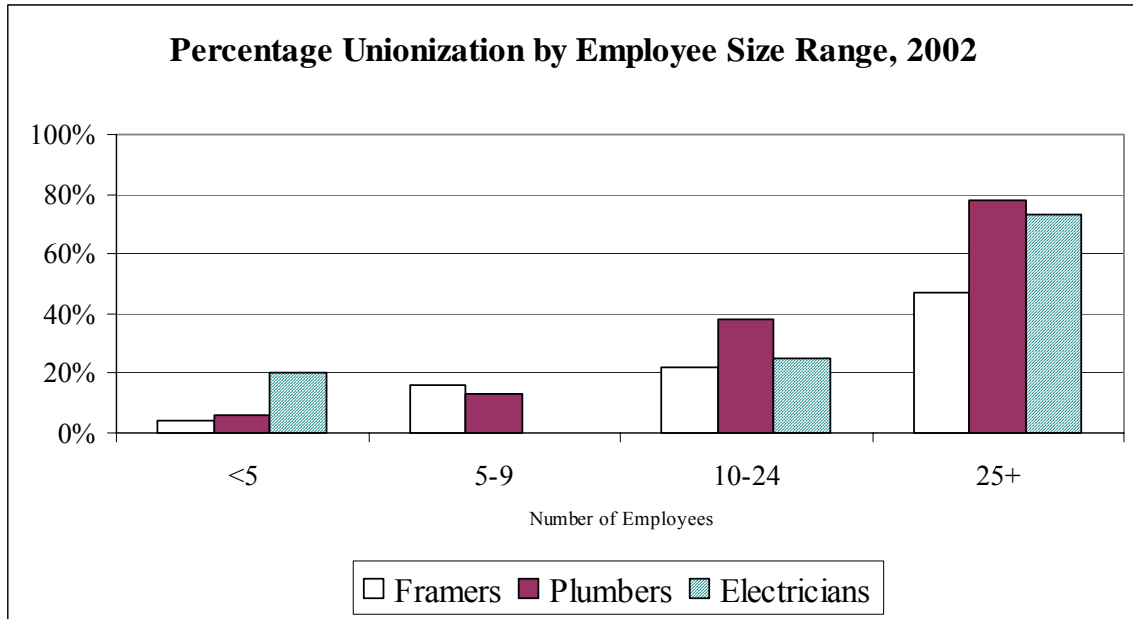
**Table 18**

<b>UNIONIZATION BY TRADE</b>			
	<b>Trade</b>		
	<b>Framers</b>	<b>Plumbers</b>	<b>Electricians</b>
Number of Businesses Employing	156	79	43
Number of Partially Unionized Businesses	11	7	0
Number of Fully Unionized Businesses	20	19	19
<b>Percent Partially or Fully Unionized</b>	<b>20%</b>	<b>33%</b>	<b>44%</b>
Number of Tradespeople	952	491	348
Number of Unionized Tradespeople	316	314	262
<b>Percent Unionized</b>	<b>33%</b>	<b>64%</b>	<b>75%</b>

Source: Question 15



Table 18 showed that the percentage of the workforce that was unionized was much higher than the percentage of the businesses that were partially or fully unionized. The explanation for this divergence is provided in the following exhibit.



Source: Question 15

The exhibit shows that the proportion of unionized companies increased with the size of companies. A small minority of companies with less than five employees were unionized in 2002 while almost 50% of employers of with 25 or more employees were unionized. Approximately three-quarters of the employers of plumbers and electricians with 25 or more employees were unionized.

The degree of unionization also varies by industry sector. For example, only 6% of the employers in home renovations were unionized compared to 22% in new home construction and 30% in non-residential building construction.



### 6.2.3 Wage Rates

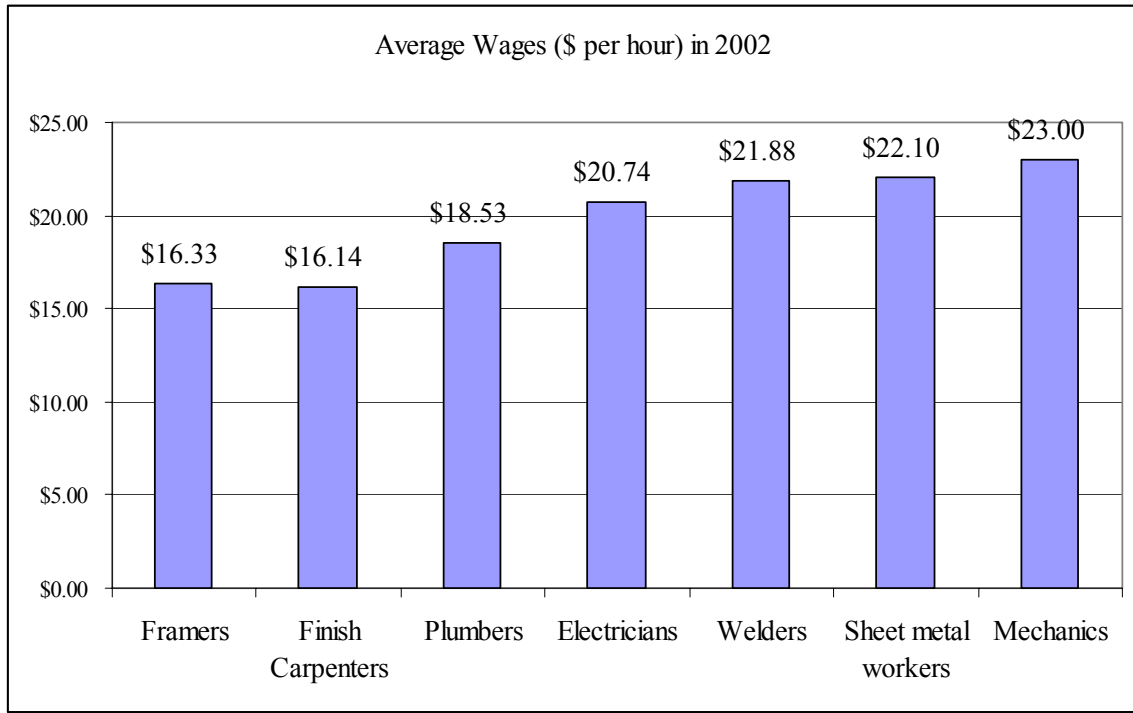
Average hourly wages paid to trades workers at surveyed businesses and institutions in 2002 are presented in Table 19. The trades workers were separated into those who were certified and those who were not.

**Table 19**

AVERAGE WAGES (\$ PER HOUR) IN 2002			
	Uncertified Non-apprentices	Apprentices	Certified Trades Persons
Framers	\$13.03	\$11.87	\$16.33
Finish Carpenters	\$13.83	\$14.00	\$16.14
Plumbers	\$13.40	\$12.36	\$18.53
Electricians	\$15.50	\$15.73	\$20.74
Welders	N/A	\$15.00	\$21.88
Sheet metal workers	N/A	\$14.50	\$22.10
Mechanics	\$16.00	N/A	\$23.00
Trades Helpers and Labourers	\$11.88	N/A	N/A
Others	\$19.14	N/A	\$19.00

Source: Question 16

A number of interesting points emerge from Table 19. First, hourly wages for certified trades persons varied significantly with framers and finish carpenters receiving hourly rates that were roughly 12% below those of plumbers and 24% below those for electricians. This variation is illustrated in the following exhibit. The exhibit presents hourly wages for welders, sheet metal workers and mechanics employed at surveyed businesses to provide a perspective on wages levels for trades that are the focus of this study.

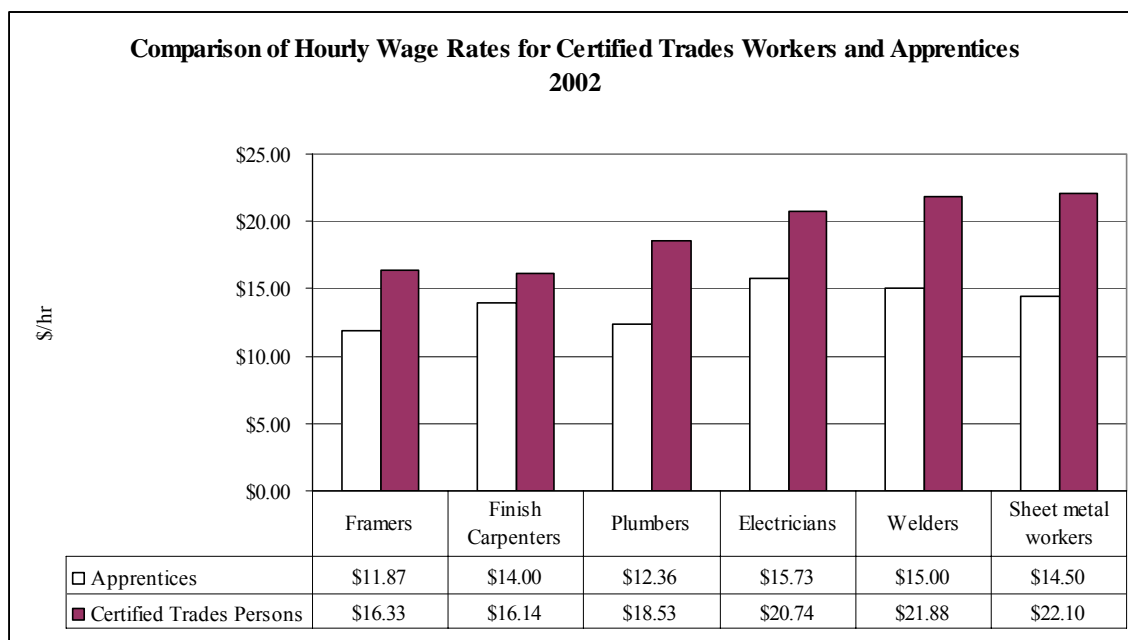


Source: Question 16

The wage rate data also show that uncertified framers made 20% less than certified framers while uncertified finish carpenters made 14% less than certified carpenters. The gap for certified versus uncertified plumbers and electricians was 28% and 25% respectively. Certification is mandatory in Nova Scotia for plumbers and electricians. Employers in the survey identified a distinct group of workers in these trades who assisted certified workers but were, in their opinion, more highly skilled than labourers.



The gap between wages paid for certified trades workers and apprentices is illustrated in the following table.



Source: Question 16

Apprentices were paid between one-quarter and one-third less than certified trades workers except in the case of apprentices classified as finish carpenters who were paid 13% less than their certified counterparts.





Unionization has a significant impact on hourly wage rates as shown in Table 20. Some results could not be reported in Table 20 due to the small number of responses.

**Table 20**

<b>AVERAGE WAGE RATES (\$ PER HOUR) BY TRADE, 2002</b>			
<b>Trade</b>	<b>Unionized Employers</b>	<b>Non-Unionized Employers</b>	<b>All Employers</b>
<b>Framers</b>			
Certified (licensed) tradesperson (n=97)	\$19.69	\$15.10	\$16.33
Uncertified (licensed) tradesperson (n=107)	\$15.56	\$12.80	\$13.03
Apprentice (n=53)	\$14.58	\$11.16	\$11.87
<b>Finish Carpenters</b>			
Certified (licensed) tradesperson (n=11)	\$18.25	\$15.67	\$16.14
<b>Plumbers</b>			
Certified (licensed) tradesperson (n=70)	\$20.83	\$17.33	\$18.53
Uncertified (licensed) tradesperson (n=10)	\$15.00	\$13.22	\$13.40
Apprentice (n=45)	\$14.63	\$11.63	\$12.36
<b>Electricians</b>			
Certified (licensed) tradesperson (n=39)	\$22.25	\$19.44	\$20.74
Apprentice (n=11)	\$18.21	\$13.67	\$15.73

Source: Questions 15 and 16

Table 20 shows that non-unionized certified framers were paid 23% less than their unionized counterparts. Non-unionized certified plumbers received hourly wages that were 17% less than unionized certified plumbers and non-unionized certified electricians were paid 13% less than unionized certified electricians. The union-non-union gap in hourly wages was even larger for apprentices in these trades.



Larger employers tend to pay higher wages than smaller employers. Firms that hire fewer than 10 carpenters, for example, paid certified framers an average of \$15.56 per hour, compared to \$21.19 for firms that hired 25 or more carpenters. A similar relationship is true for plumbers and electricians as shown in Table 21.

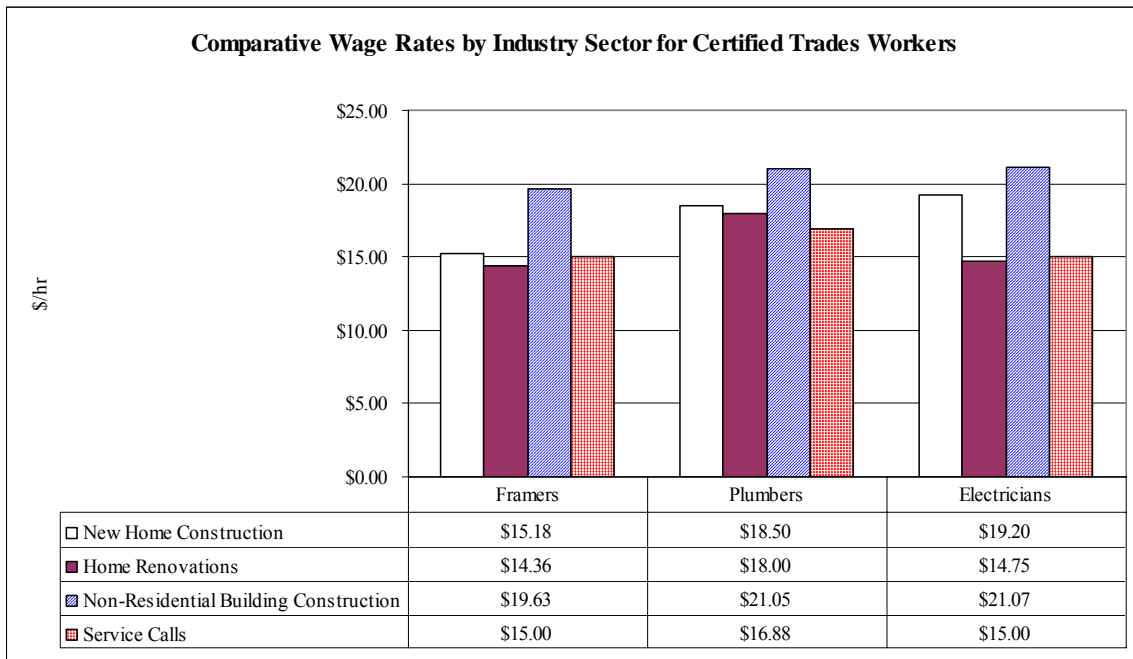
**Table 21**

<b>AVERAGE CERTIFIED TRADES PERSONS WAGES (\$ PER HOUR) IN 2002</b>				
<b>Trade</b>	<b>Employers with fewer than 10 carpenters</b>	<b>Employers with 10-25 carpenters</b>	<b>Employers with more than 25 carpenters</b>	<b>All Employers</b>
Framers	\$15.56	\$17.87	\$21.19	\$16.33
Finish Carpenters	\$16.19	\$16.00	N/A	\$16.14
	<b>Employers with fewer than 10 plumbers</b>	<b>Employers with 10-25 plumbers</b>	<b>Employers with more than 25 plumbers</b>	<b>All Employers</b>
Plumbers	\$18.17	\$19.81	\$24.00	\$18.53
	<b>Employers with fewer than 10 electricians</b>	<b>Employers with 10-25 electricians</b>	<b>Employers with more than 25 electricians</b>	<b>All Employers</b>
Electricians	\$20.65	\$19.60	\$25.00	\$20.74

Source: Questions 1 and 16



The industry sector in which businesses worked also affected hourly wage rates. Firms whose primary activity is non-residential building construction paid higher wages for certified tradespeople than firms in other industry sectors. Home renovation and service call firms paid wages at the lower end of the range. The average wage rate for certified plumbers working for the non-residential building construction firms surveyed was \$21.05 per hour, for example, compared to an average wage for certified plumbers working for service call firms of \$16.88 per hour. A similar pattern was found for the other certified trades included in the survey as shown in the following exhibit.



Source: Questions 1 and 16

The exhibit shows that wages in non-residential building construction were significantly higher for all three trades followed by new home construction. Wages in home renovations and service calls were lower than those in new home construction for all three trades.

## 6.2.4 Wage Trends

Wage trends in 2001 and 2002 are presented in Table 22.

**Table 22**

<b>WAGE TRENDS FOR 2001 AND 2002, BY TRADE</b>		
<b>Trade</b>	<b>Percentage Change in 2001</b>	<b>Percentage Change in 2002</b>
Framers (1)	3%	3%
Electricians (2)	2%	2%
Plumbers (3)	1%	1%
Apprentice Carpenters (1)	2%	2%
Apprentice Construction Electricians (2)	<1%	<1%
Apprentice Industrial Electricians (2)	<1%	<1%
Apprentice Plumbers (3)	<1%	<1%
Entire Workforce (4)	3%	3%
1- Average increase weighted according to the total number of carpenters hired. 2- Average increase weighted according to the total number of electricians hired. 3- Average increase weighted according to the total number of plumbers hired. 4- Average increase weighted according to the total number of all three trades hired.		

Source: Question 17

The table shows a consistent pattern in 2001 and 2002. The wages for framers increased at the same rate as the entire workforce for firms surveyed. Wages for plumbers and electricians increased at a lower rate than for the entire workforce while wages for most apprentices were virtually unchanged.



Employers were asked to gauge whether wage increases for particular trades in 2002 were more or less than increases experienced in an average year in the 1990s. Table 23 shows that the majority of employees thought that wage increases were about the same (rating wage changes as a 3 on a scale of 1 to 5), and the remaining were more likely to say that wage increases were higher (rating a 4 or 5) in 2002 compared to a typical year in the 1990s.

**Table 23**

<b>PERCENT WAGE CHANGES IN 2002 COMPARED TO AN AVERAGE YEAR IN THE 1990s*</b>						
	<b>2002 is Less Compared to 1990s</b>			<b>2002 is More Compared to 1990s</b>		
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Don't Know</b>
Framers	6%	6%	53%	19%	16%	9%
Electricians	8%	5%	65%	14%	8%	16%
Plumbers	9%	5%	61%	14%	12%	13%
Apprentice Carpenters	2%	2%	59%	20%	17%	23%
Apprentice Construction Electricians	0%	0%	100%	0%	0%	0%
Apprentice Industrial Electricians	0%	0%	75%	0%	25%	0%
Apprentice Plumbers	3%	6%	63%	14%	14%	26%
Entire Workforce	5%	6%	58%	15%	15%	16%

\*Includes responses of only those employers who employed workers in the specified trade.

Source: Question 18



### 6.2.5 Seasonality

Approximately 37% of the employees of the firms in the survey worked on a seasonal basis (less than 40 weeks per year). Electricians were somewhat more likely to be hired on full-year basis whereas apprentice carpenters were the most likely to be hired on a seasonal basis. These findings are shown in Table 24.

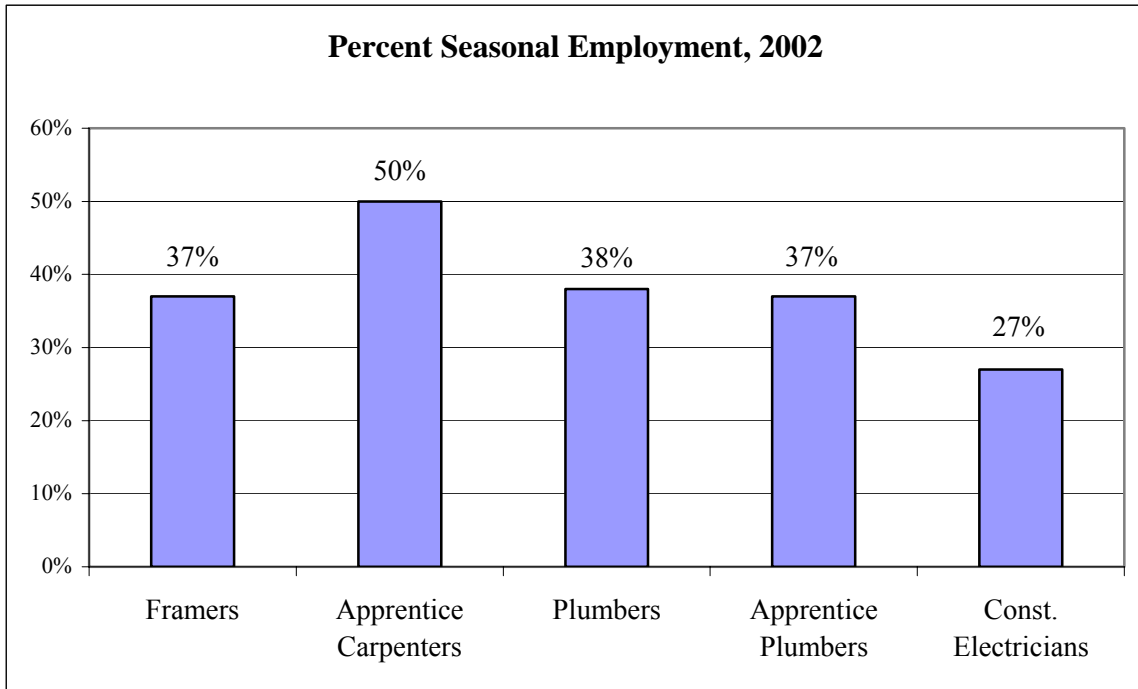
**Table 24**

NUMBER OF EMPLOYEES			
Trade/Activity Area	# Seasonal	# Full-Year	% Seasonal
Framers	355	599	37%
Electricians	97	257	27%
Plumbers	186	298	38%
Apprentice Carpenters	69	68	50%
Apprentice Construction Electricians	5	5	50%
Apprentice Industrial Electricians	1	14	7%
Apprentice Plumbers	46	77	37%
<b>Total</b>	<b>759</b>	<b>1,318</b>	<b>37%</b>

Source: Question 13



Seasonality by trade is illustrated in the following exhibit.



Source: Question 13

Approximately one-half of workers in the three designated trades were employed seasonally at firms with less than five employees compared to about one-third at firms in employee size ranges greater than five.



## 6.3 Carpentry Activities

### 6.3.1 Owner-Operators

Of the owner-operators in carpentry occupations, the level of involvement by major work activity is shown in Table 25.

**Table 25**

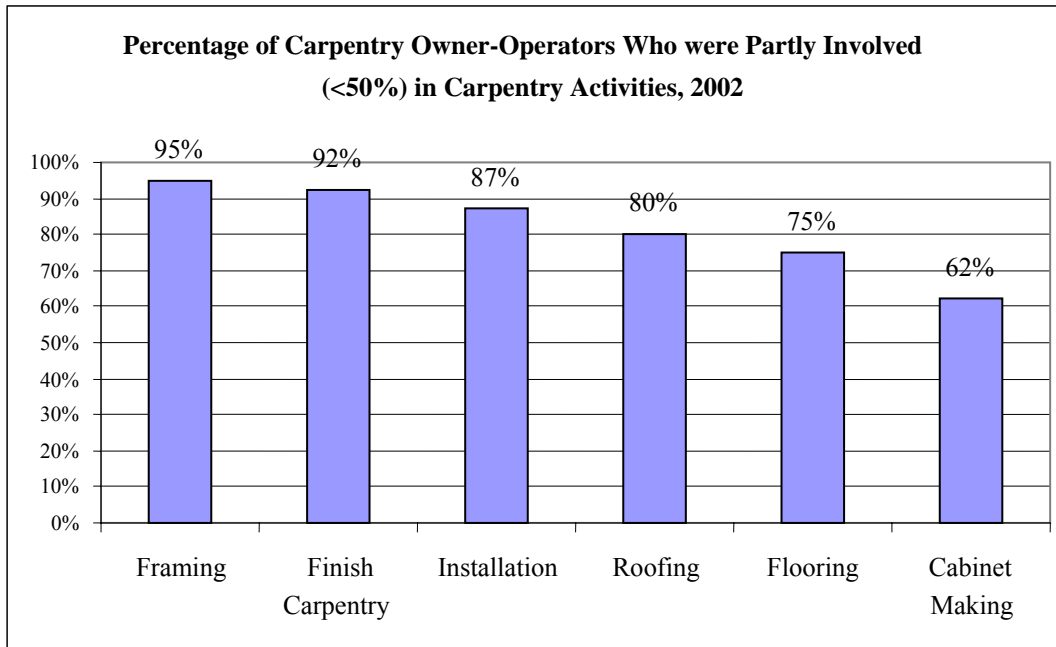
<b>OWNER-OPERATORS INVOLVEMENT IN CARPENTRY-RELATED WORK ACTIVITIES</b>				
<b>Work Activity</b>	<b>Exclusively (100%)</b>	<b>Mostly (&gt;50%)</b>	<b>Partly (&lt;50%)</b>	<b>Total</b>
Framing	3	11	111	125
Finish Carpentry	2	2	118	122
Cabinet Making			82	82
Roofing		2	104	106
Flooring			99	99
Installation	1	1	113	115
Other – Mgmt/Administration			24	24
Other – Other Construction			10	10
Other – Foreman	2			2

Source: Question 7





Table 25 shows that very few owner-operators were exclusively or mostly involved in individual carpentry-related work activities. Framing (11%) was the only activity in which more than 5% of owner-operators were exclusively or mostly involved. The vast majority were partly involved in many carpentry activities as illustrated in the following exhibit.



Source: Questions 4 and 7



### 6.3.2 Employees

Table 26 shows that, as with owner-operators, a small proportion of employees were exclusively or mostly involved in individual carpentry-related work activities and most were partly involved in many carpentry activities.

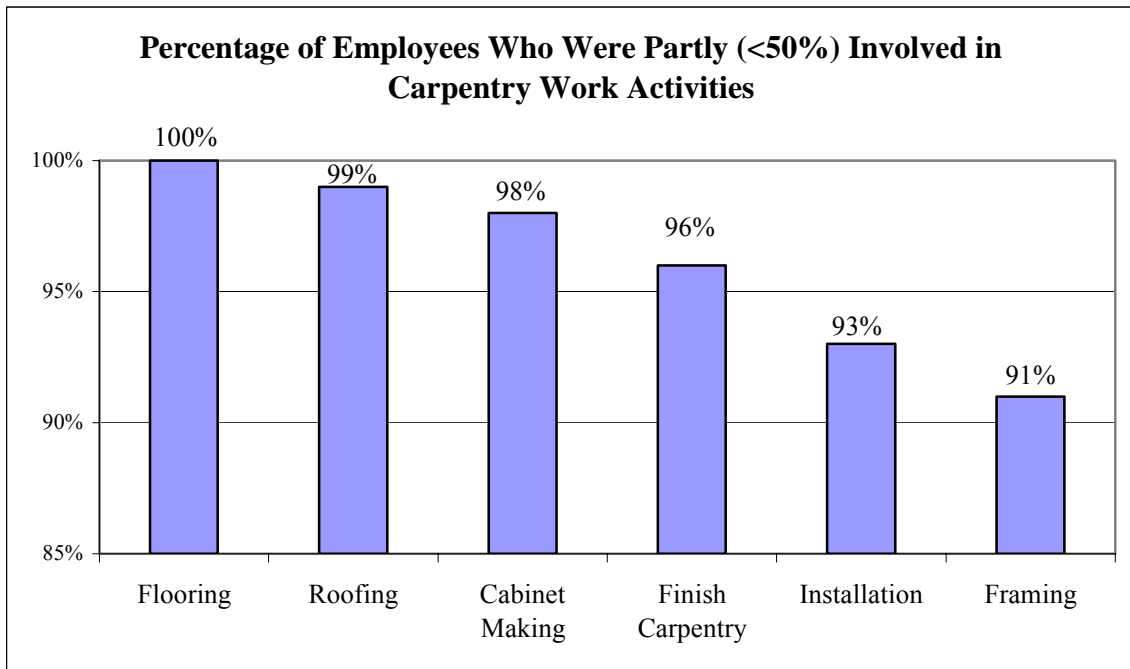
**Table 26**

<b>EMPLOYEE INVOLVEMENT IN CARPENTRY-RELATED WORK ACTIVITIES</b>			
<b>Work Activity</b>	<b>Exclusively (100%)</b>	<b>Mostly (<math>\geq 50\%</math>)</b>	<b>Partly (<math>&lt; 50\%</math>)</b>
Framing	25	66	897
Finish Carpentry	16	20	811
Cabinet Making	0	10	459
Roofing	0	4	705
Flooring	0	0	611
Installation (siding, eavestroughing, windows, kitchen cupboards, other)	49	2	662
Other	7	8	73

Source: Questions 8 and 14



The proportion of employees who were partly involved with carpentry-related work activities is shown in the following exhibit. As with owner-operators, framing (10%) was the only activity in which more than 5% of employees were exclusively or mostly involved.



Source: Questions 8 and 14



## 6.4 Apprentices

Of the 239 firms responding, 106 or 44 percent employed apprentices in 2002. They employed a total of 298 apprentices as shown in Table 27.

**Table 27**

<b>LICENSED JOURNEY PERSONS &amp; APPRENTICES BY TRADE ACTIVITY</b>			
<b>Trade/Activity Area</b>	<b># of Licensed Journey Persons</b>	<b># of Apprentices</b>	<b>% of Apprentices</b>
Carpentry (including framers, finish carpenters, cabinetmakers)	409	145	35%
Plumbers	468	123	26%
Electricians	252	30	12%
<b>Total</b>	<b>1,129</b>	<b>298</b>	<b>26%</b>

Source: Questions 12, 13 and Intro3

The proportion of apprentices to licensed journey persons varied by trade with carpenters recording the higher ratio in 2002. In interpreting Table 27, it is important to remember that employers of electricians were not targeted in the survey and were interviewed only incidental to interviews targeting employers of carpenters and plumbers. This reality will bias the sample of these employers. One obvious bias is that no owner-operator electricians were interviewed.

A relatively high proportion of the carpentry workforce were unlicensed. The proportion of apprentices to the total workforce, including licensed workers, unlicensed workers and apprentices, was 13% for carpenters, 20% for plumbers and 8% for construction electricians.



## 7.0 Job Openings, Recruitment and Retention

### 7.1 Job Openings

Employers were asked how many job openings they had in the previous year for various categories of tradespeople. Forty-four employers had seasonal job openings for framers, three had job openings for electricians, and 11 had seasonal openings for plumbers. There were 11 employers with full-year openings for framers, five employers with openings for full-year electricians, and 16 employers with openings for full-year plumbers. Small numbers had openings for apprentice carpenters (one with a full-year position and five with seasonal positions) and apprentice plumbers (one full-year and three seasonal). Due to the small sample size of employers who had openings for apprentice plumbers, apprentice construction electricians or apprentice industrial electricians (less than five employers), the number of openings will not be reported here.

The largest numbers of job openings were for seasonal framers (125) and plumbers (126).<sup>4</sup> There were 17 seasonal openings for electricians. There were 37 full-year openings among the employers surveyed for framers, 32 full-year openings for plumbers, and five full-year openings for electricians. The number of full-year openings was only one-quarter to one-third the number of openings for seasonal workers in these trades.

As a percent of the total workforce, plumbers had the highest proportion of job openings, at 68% of the seasonal workforce<sup>5</sup> and 11% of the year-round workforce. Framers were next highest in demand, at 35% of the seasonal and 6% of the year-round workforce. Job openings for electricians stood at 18% of the seasonal workforce and 2% for the full-year workforce.

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<sup>4</sup> The number of seasonal plumbers needed is high mainly because one employer is listed as having 100 seasonal job openings.

<sup>5</sup> See previous note; this percentage is largely due to the demand of one employer.

**Table 28**

NUMBER OF SEASONAL AND FULL-YEAR JOB OPENINGS, BY TRADE						
Trade/ Activity Area	# of Employers with Job Openings		# of Job Openings		Percent of Employees	
	# Seasonal	# Full-Year	# Seasonal	# Full-Year	# Seasonal	# Full-Year
Framers	44	11	124	37	35%	6%
Electricians	3	5	17	5	18%	2%
Plumbers	11	16	126	32	68%	11%
Apprentice Carpenters	5	1	18	1	26%	1%

Employers with job openings were asked how long on average it took to fill the jobs. In general, it took longer to fill full-year jobs than seasonal jobs. Full-year apprentice plumbers positions took the longest to fill at an average of 123 days, but seasonal plumbing positions took only four days to fill on average. For the non-apprentice positions included in the survey, it took between 17 and 24 days on average to fill seasonal positions and between 52 and 62 days to fill full-year positions on average. The exception was for apprentice carpenters; it took about 21 days to fill seasonal positions but two days to fill full-year positions.

**Table 29**

AVERAGE NUMBER OF DAYS REQUIRED TO FILL JOB OPENINGS		
Trade/Activity Area	# Seasonal (less than 40 weeks per year)	# Full-Year (40 weeks or more per year)
Framers	17	52
Electricians	16	62
Plumbers	24	61
Apprentice Carpenters	21	2

Many employers reported being unable to fill positions. Of the employers with job openings, 46% could not fill all of their positions for seasonal framers and 30% could not fill full-year framing positions. One-third could not fill positions for seasonal electricians. Twenty-seven percent of employers with



openings for seasonal plumbers and 40% with openings for full-year plumbers could not fill all of these positions.

**Table 30**

<b>PERCENTAGE OF EMPLOYERS WITH JOB OPENINGS WHO COULD NOT FILL POSITIONS</b>		
<b>Trade/Activity Area</b>	<b># Seasonal (less than 40 weeks per year)</b>	<b># Full-Year (40 weeks or more per year)</b>
Framers	46%	30%
Electricians	33%	0%
Plumbers	27%	40%
Apprentice Carpenters	40%	0%

As another indication of the supply of these occupations, employers were asked to rate the difficulty in filling positions from 1 (low) to 5 (high). Percentages were calculated based only on the responses of employers who had job openings in 2002.

Survey results show that about two-thirds of employers who were looking for framers and plumbers found it difficult to fill those positions, rating the difficulty a 5 on a scale of 1 to 5. Employers found it easier to find electricians (with 25 percent rating a 5) and apprentice carpenters.

**Table 31**

<b>DIFFICULTY FILLING POSITIONS*</b>						
	<b>Low</b>		<b>High</b>			<b>Don't Know</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	
Framers	10%	8%	12%	8%	62%	0%
Electricians	38%	13%	13%	13%	25%	0%
Plumbers	21%	4%	8%	0%	67%	0%
Apprentice Carpenters	50%	0%	17%	0%	17%	17%

\*Percent of employers who had openings for the trade.

Source: PRAXIS Survey



## 7.2 Recruitment Problems and Practices

Employers were asked to rate various factors in terms of their importance in determining why trades were difficult to fill.<sup>6</sup> In general, employers did not think lack of applicants was a problem. More than half thought lack of applicants was not very important or not important at all, while less than 40% thought this was important or very important.

The two most highly rated reasons why positions were difficult to fill were a lack of experience and skills on the part of applicants. Approximately one-half of employers rated these factors as a 5 on a scale of 1 to 5 in terms of difficulty. A lack of certifications among applicants received a rating of 5 by over one-third of employers.

**Table 32**

IMPORTANCE IN DETERMINING WHY TRADES WERE DIFFICULT TO FILL							
	Low					High	
	1	2	3	4	5	Don't Know	
Lack of applicants	44%	8%	8%	9%	29%	3%	
Applicants did not have the experience (at least two years in trade) required	14%	4%	18%	10%	49%	5%	
Applicants did not have the specific skills required	15%	1%	19%	13%	47%	5%	
Applicants did not have the certifications required	30%	11%	9%	8%	37%	5%	
Other	0%	47%	0%	0%	0%	53%	

Source: PRAXIS Survey, Question 22

<sup>6</sup> In this question, “not important at all” means the respondent rated the issue at a 1 where 1 means “low” and 5 means “high”; “not important” means the rating was a 2, “important” means the rating was a 4, and “very important” means the rating was a 5.





Most employers did not think that wages lower than expectations or the seasonal nature of the employment were problems in attracting applicants. Most did not think that qualified workers were not willing to travel from other areas to find employment. A majority, however (55%) thought that training institutions did not produce enough graduates to meet the needs of the industry.

**Table 33**

<b>REASONS FOR LACK OF APPLICANTS</b>						
	<b>Low Importance</b>			<b>High Importance</b>		<b>Don't Know</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	
Wages offered by my business/institution don't meet expectations	53%	5%	18%	11%	8%	5%
Training institutions do not produce enough graduates	3%	8%	16%	13%	42%	18%
Only seasonal employment was available	53%	8%	21%	5%	5%	8%
Qualified workers won't travel from other areas for employment	37%	13%	18%	11%	13%	8%
Other	61%	0%	0%	0%	0%	39%

Source: PRAXIS Survey, Question 23

When faced with difficulties in finding qualified workers for these trades, most employers said they did not respond by increasing wages or offering more attractive benefits. Instead, slightly more than half of the employers said they broadened the area of search or increased the time they spent searching for skilled people.

**Table 34**

<b>ACTIONS TAKEN TO INCREASE RECRUITMENT</b>			
	<b>Yes</b>	<b>No</b>	<b>Don't Know</b>
Increased wages	29%	67%	4%
Increased time spent searching for skilled people	54%	42%	4%
Broadened the area of the search for new workers	51%	46%	4%
Offered more attractive benefits	18%	78%	4%
Other	19%	72%	9%

Source: PRAXIS Survey, Question 24

When they could not find the skilled tradespeople, at least two-thirds of employers said they re-organized the work activities of existing employees (76%), provided more overtime to skilled people (67%) and limited the amount of work taken on (67%). The majority did not react by hiring less qualified people or increasing training for existing workers. These responses are shown in the following table.

**Table 35**

<b>REACTION TO SITUATIONS WHERE EMPLOYERS COULD NOT FIND SKILLED TRADESPEOPLE</b>			
	<b>Yes</b>	<b>No</b>	<b>Don't Know</b>
Limited the amount of work taken on	67%	32%	1%
Sub-contracted work	41%	58%	1%
Hired less qualified people	33%	66%	1%
Increased training for existing workers	39%	59%	1%
Re-organized the work activities of existing employees	76%	23%	1%
Provided more overtime to skilled people	67%	32%	1%
Other	8%	80%	13%

Source: PRAXIS Survey, Question 25



The most popular means of recruiting workers among employers surveyed were informal methods – word of mouth, either among industry people (78%), or the local community (81%). No other method listed on the survey was used by more than 40% of employers, although significant numbers contacted community colleges or the Apprenticeship division, advertised in the local newspaper, and/or placed a job vacancy with HRDC.

**Table 36**

<b>METHODS USED TO RECRUIT WORKERS</b>			
	<b>Yes</b>	<b>No</b>	<b>Don't Know</b>
Contacted community colleges	29%	69%	2%
Contacted the Apprenticeship Division	22%	75%	3%
Advertised in the local newspaper	29%	69%	2%
Advertised in newspapers across the province	10%	88%	2%
Recruited out of the province	8%	90%	2%
Tried to recruit through word of mouth among industry people	78%	20%	2%
Tried to recruit through word of mouth in the local community	81%	17%	2%
Placed a job vacancy with Human Resources Development Canada	39%	58%	3%
Other	24%	68%	7%

Source: PRAXIS Survey, Question 26



### 7.3 Retention of Employees

Employers surveyed were asked to indicate how many workers in the designated trades permanently left their jobs in 2002. A total of 92 framers, 17 electricians and 22 plumbers left during that year. As a percentage of the number of employees (seasonal plus year round) in the trade,<sup>7</sup> framers and apprentice construction electricians had a 10% turnover rate, and electricians and plumbers had a 5% turnover rate.

**Table 37**

NUMBER OF WORKERS WHO PERMANENTLY LEFT THEIR JOB		
Trade Designation	# of Employees Who Left	Percent Turnover
Framers	92	10%
Electricians	17	5%
Plumbers	22	5%
*Percentages and turnover includes only those employers who reported employing workers in the trade in 2003.		

Source: PRAXIS Survey, Question 23

While framers had the highest calculated turnover rate, they were also most likely to have been laid off for various reasons. Almost 60% of framers who left in 2002 were laid off, either due to lack of work, lack of skills, or poor attitudes. By comparison, 24% of electricians who left were laid off, all due to lack of work, and 28% of plumbers who left were laid off for various reasons.

The most common reason for employees leaving was that they were laid off because the business/institution did not have enough work for them. This explanation was responsible for 27% of employees leaving overall. Another 15% of workers who left were laid off because they did not have the skills required to do the job, a factor that accounted for 100% of the lay-offs for apprentice carpenters, 11% of plumbers and 18% of framers. Another 8% were laid off because of a poor attitude toward work (e.g., being late, not getting along with co-workers). Overall, layoffs were responsible for almost half of all attrition in the designated trades.

<sup>7</sup> For consistency in comparing turnover and employment in these trades, turnover totals include turnover from only those employers who also reported employing that trade in 2003 (Question 13).



Retirements were responsible for 10% of the attrition experienced by employers. Electricians who retired accounted for 35% of all electricians who left. Attending school or injury accounted for only a small fraction of attrition (0 and 2% respectively). About a quarter left for another company, industry, or province, with most of these seeking jobs with better pay and benefits within the same industry.

**Table 38**

<b>REASONS FOR LEAVING EMPLOYMENT, BY DESIGNATED TRADES</b>					
	<b>Percent who left in 2002*</b>				
	<b>Framers</b>	<b>Electricians</b>	<b>Plumbers</b>	<b>Apprentice Carpenters</b>	<b>All Designated Trades</b>
They retired from the labour force	7%	35%	0%	0%	10%
They were laid off because the business/institution did not have enough work for them	32%	24%	6%	0%	27%
They were laid off because they lacked the skills to do the job	18%	0%	11%	0%	15%
They were laid off because of a poor attitude toward work (e.g., being late, not getting along with co-workers)	9%	0%	11%	0%	8%
They left to return to school	0%	0%	0%	0%	0%
They quit primarily to get better pay or benefits working for another company/institution	13%	29%	33%	0%	17%
They quit primarily to get better pay or benefits working in a different industry	1%	0%	0%	0%	1%
They left to work in another province	5%	0%	28%	100%	8%
They left primarily because of injury or illness	1%	0%	6%	0%	2%
Other	14%	12%	6%	0%	13%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

\*Does not include responses from employers who did not report employing the trade in 2002.

Source: PRAXIS Survey, Question 28



## Appendix A: Employer Survey

### Shortages and Surpluses Study for Framers, Plumbers and Electricians in Nova Scotia

#### EMPLOYER SURVEY

Survey# \_\_\_\_\_ Postal Code \_\_\_\_\_

We are conducting a survey focused on determining if there were shortages or surpluses of framers, plumbers and electricians in Nova Scotia in 2002. We are doing the survey on behalf of the Atlantic Home Building and Renovation Sector Council (AHB&RSC). Could I please speak with the person most involved in managing human resources in your business?

**Contact name:** \_\_\_\_\_ **Position:** \_\_\_ Employee  
\_\_\_ Owner/Operator  
*(please check one)*

The survey is funded through the Labour Market Development Agreement – a joint agreement between the federal government (Human Resources Development Canada) and the Province of Nova Scotia. The survey is an attempt to assess the balance between demand and supply for three key trades – Framers, Plumbers and Electricians. Information from the survey will be used to identify human resource issues for these occupations.

All information you provide is strictly confidential, and results will be summarized so that no one respondent can be identified. This will take about 25 - 30 minutes. Would you help us by participating in a brief survey about your industry? Is this a suitable time to complete the survey or is there a later time that would be preferable?

**Yes** \_\_\_\_\_ **No** \_\_\_\_\_ **(end of call)**



**A. THE WORKFORCE, WAGES AND UNIONIZATION**

**1. Is the business owned by an owner-operator; that is, does the owner of the business work as a trades worker in the business?**

1.1. \_\_\_\_\_ Yes

1.2. \_\_\_\_\_ No

**If Yes, how many other owner-operators are in the business?**

1.3. \_\_\_\_\_ 0

1.4. \_\_\_\_\_ 1

1.5. \_\_\_\_\_ 2

1.6. \_\_\_\_\_ More than 2

**2. Of the owner-operators who are trades workers, how many were carpenters, electricians and plumbers in 2002? For each category, please identify how many, if any, were licensed journey-persons and the number with Red Seal certification? Please state the number employed at the peak of your season.**

*Interviewer: Fill in the numbers provided by the respondent for each category. If respondents are unfamiliar with Red Seal Certification, do not fill in the column on Red Seal certification.*

Trade/Activity Area	# of trades workers	# of certified journeypersons	# with Red Seal certification
Carpentry (incl. framers, finish carpenters, cabinetmakers)	<b>2.1.</b>	<b>2.2.</b>	<b>2.3.</b>
Plumbers	<b>2.4.</b>	<b>2.5.</b>	<b>2.6.</b>
Electricians	<b>2.7.</b>	<b>2.8.</b>	<b>2.9.</b>

**3. Of the owner-operators in carpentry occupations, what proportion worked exclusively, mostly or partly in each of the following activities?**

*Interviewer: This question is asked only if the respondent indicates in Question 2 that there was an owner-operator who worked in the carpentry trade. Please explain that **Exclusively** means that the individual worked 100% of their time in the designated work activity, **Mostly** means that that the individual worked between 50% and 99% of their time in the designated work activity and **Partly** means that that the individual worked less than 50% of their time in the designated work activity.*

<b>Work Activity</b>	<b>Exclusively (100%)</b>	<b>Mostly (≥ 50%)</b>	<b>Partly (&lt; 50%)</b>
Framing	<b>3.1.</b>	<b>3.2.</b>	<b>3.3.</b>
Finish Carpentry	<b>3.4.</b>	<b>3.5.</b>	<b>3.6.</b>
Cabinet Making	<b>3.7.</b>	<b>3.8.</b>	<b>3.9.</b>
Roofing	<b>3.10.</b>	<b>3.11.</b>	<b>3.12.</b>
Flooring	<b>3.13.</b>	<b>3.14.</b>	<b>3.15.</b>
Installation (siding, eavestroughing, windows, kitchen cupboards, other)	<b>3.16.</b>	<b>3.17.</b>	<b>3.18.</b>
Other (specify)	<b>3.19.</b>	<b>3.20.</b>	<b>3.21.</b>

**4. How many people, including apprentices, were employed by your business on a full-year (40 weeks or more per year) and seasonal (less than 40 weeks per year) basis in 2002? Please state the number employed at the peak of your season.**

**4.1.** Number of Employees who worked a Full-Year in 2002

**4.2.** Number of Seasonal Employees in 2002

*Interviewer: All respondents must answer this question but self-employed owner-operators should be not be included as employees as they were included in questions 1 and 2.*





5. **Excluding apprentices and owner-operators, how many employees were carpenters, electricians and plumbers in 2002? For each category, please identify how many, if any, were licensed journey-persons and the number with Red Seal certification? Please state the number employed at the peak of your season.**

*Interviewer: If respondents are unfamiliar with Red Seal Certification, do not fill in the column on Red Seal certification.*

Trade/Activity Area	# of trades workers	# of certified journeypersons	# with Red Seal certification
Carpentry (incl. framers, finish carpenters, cabinetmakers)	<b>5.1.</b>	<b>5.2.</b>	<b>5.3.</b>
Plumbers	<b>5.4.</b>	<b>5.5.</b>	<b>5.6.</b>
Electricians	<b>5.7.</b>	<b>5.8.</b>	<b>5.9.</b>

*NOTE: If there are no owner-operators (Question 2) or employees (Question 5) in the three designated trades, TERMINATE INTERVIEW.*

6. **Please estimate the number of employees (excluding owner-operators) in the following trades that worked on a seasonal (less than 40 weeks per year) or full-year (40 weeks or more per year) basis for your company in 2002? Please state the number employed at the peak of your season.**

Trade/Activity Area	# of Employees	
	# Seasonal	# Full-Year
Framers	<b>6.1.</b>	<b>6.2.</b>
Apprentice Carpenters	<b>6.3.</b>	<b>6.4.</b>
Electricians	<b>6.5.</b>	<b>6.6.</b>
Apprentice Construction Electricians	<b>6.7.</b>	<b>6.8.</b>
Apprentice Industrial Electricians	<b>6.9.</b>	<b>6.10.</b>
Plumbers	<b>6.11.</b>	<b>6.12.</b>
Apprentice Plumbers	<b>6.13.</b>	<b>6.14.</b>

**7. Of the employees working in carpentry occupations, what proportion worked exclusively, mostly or partly in each of the following activities?**

*Interviewer: This question is asked only if the respondent indicates in Question 5 that there was at least one employee who worked in the carpentry trade. Please explain that Exclusively means that the individual worked 100% of their time in the designated work activity, Mostly means that that the individual worked between 50% and 99% of their time in the designated work activity and Partly means that that the individual worked less than 50% of their time in the designated work activity.*

<b>Work Activity</b>	<b>Exclusively (100%)</b>	<b>Mostly (≥ 50%)</b>	<b>Partly (&lt; 50%)</b>
Framing	<b>7.1.</b>	<b>7.2.</b>	<b>7.3.</b>
Finish Carpentry	<b>7.4.</b>	<b>7.5.</b>	<b>7.6.</b>
Cabinet Making	<b>7.7.</b>	<b>7.8.</b>	<b>7.9.</b>
Roofing	<b>7.10.</b>	<b>7.11.</b>	<b>7.12.</b>
Flooring	<b>7.13.</b>	<b>7.14.</b>	<b>7.15.</b>
Installation (siding, eavestroughing, windows, kitchen cupboards, other)	<b>7.16.</b>	<b>7.17.</b>	<b>7.18.</b>
Other (specify)	<b>7.19.</b>	<b>7.20.</b>	<b>7.21.</b>

*NOTE: If there are no owner-operators (Question 3) or employees (Question 7) classified in framing work activities, TERMINATE FRAMING INTERVIEWS.*

**8. Were there apprentices in carpentry, plumbing or electrical trades employed by your business in 2002?**

**8.1.** Yes \_\_\_\_\_

**8.2.** No \_\_\_\_\_

*Interviewer: If Yes, please answer Question 9. If No, please move to Question 10.*



9. **Could you please indicate how many apprentices by apprenticeship category your business employed in 2002? Please state the number employed at the peak of your season.**

*Interviewer: Fill in the numbers provided by the respondent for each category.*

<b>Apprentice Title</b>	<b># of Apprentices</b>
Carpenters	<b>9.1.</b>
Construction Electricians	<b>9.2.</b>
Industrial Electricians	<b>9.3.</b>
Plumbers	<b>9.4.</b>

10. **What percentage of employees in your company is unionized in the following trades?**

<b>Trade</b>	<b>Percentage</b>
Framers	<b>10.1.</b>
Plumbers	<b>10.2.</b>
Electricians	<b>10.3.</b>

**11. Please estimate the average wages paid to trades workers in your business in 2002.**

<b>Trade</b>	<b>Average Wages (\$ per hour)</b>	
	<b>Starting</b>	<b>Experienced Workers</b>
Framers	<b>11.1.</b>	<b>11.2.</b>
Finish Carpenters	<b>11.3.</b>	<b>11.4.</b>
Bricklayers/masons	<b>11.5.</b>	<b>11.6.</b>
Drywall Installers	<b>11.7.</b>	<b>11.8.</b>
Drywall Finishers	<b>11.9.</b>	<b>11.10.</b>
Plumbers	<b>11.11.</b>	<b>11.12.</b>
Electricians	<b>11.13.</b>	<b>11.14.</b>
Painters	<b>11.15.</b>	<b>11.16.</b>
Welders	<b>11.17.</b>	<b>11.18.</b>
Sheet metal workers	<b>11.19.</b>	<b>11.20.</b>
Mechanics	<b>11.21.</b>	<b>11.22.</b>
Trades Helpers and Labourers	<b>11.23.</b>	<b>11.24.</b>
Others (specify)	<b>11.25.</b>	<b>11.26.</b>



12. Please estimate the percentage change in wages for framers, plumbers and electricians, and for your workforce as a whole, in 2001 and 2002.

Trade	Percentage Change in 2001	Percentage Change in 2002
Framers	12.1.	12.2.
Electricians	12.3.	12.4.
Plumbers	12.5.	12.6.
Entire Workforce	12.7.	12.8.

13. Rate wage changes in 2002 compared to changes in the 1990s. Please rate using a scale of 1 to 5 where 1 means that wage changes were *significantly lower in 2002 than in the 1990s* and 5 means that wage changes were *significantly greater in 2002 than in the 1990s*.

**Percent Wage Changes in 2002 Compared to the 1990s**

	Less compared to 1990s			More compared to 1990s		Don't Know
	1	2	3	4	5	99
13.1. Framers						
13.2. Electricians						
13.3. Plumbers						
13.4. Entire Workforce						



**B. RECRUITMENT AND RETENTION**

- 14. Please estimate the number of job openings at the peak of your season in 2002. Identify openings that were seasonal (less than 40 weeks per year) or full-year (40 weeks or more per year) for the following trades?**

Trade/Activity Area	# of Job Openings	
	# Seasonal	# Full-Year
Framers	<b>14.1.</b>	<b>14.2.</b>
Apprentice Carpenters	<b>14.3.</b>	<b>14.4.</b>
Electricians	<b>14.5.</b>	<b>14.6.</b>
Apprentice Construction Electricians	<b>14.7.</b>	<b>14.8.</b>
Apprentice Industrial Electricians	<b>14.9.</b>	<b>14.10.</b>
Plumbers	<b>14.11.</b>	<b>14.12.</b>
Apprentice Plumbers	<b>14.13.</b>	<b>14.14.</b>

*Interviewer: If respondents indicate that there were no job openings, please move to question 21.*



**15. Please estimate the number of days required to fill job openings in 2002?**

<b>Trade/Activity Area</b>	<b># of Days Required to Fill Job Openings</b>	
	<b># Seasonal (less than 40 weeks per year)</b>	<b># Full-Year (40 weeks or more per year)</b>
Framers	<b>15.1.</b>	<b>15.2.</b>
Apprentice Carpenters	<b>15.3.</b>	<b>15.4.</b>
Electricians	<b>15.5.</b>	<b>15.6.</b>
Apprentice Construction Electricians	<b>15.7.</b>	<b>15.8.</b>
Apprentice Industrial Electricians	<b>15.9.</b>	<b>15.10.</b>
Plumbers	<b>15.11.</b>	<b>15.12.</b>
Apprentice Plumbers	<b>15.13.</b>	<b>15.14.</b>

16. On a scale of 1 to 5 where 1 means *no difficulty at all* and 5 means *great difficulty*, please rate the difficulty in filling positions identified in the following table.

**Difficulty Filling Positions**

	Low					High	Don't Know
	1	2	3	4	5	99	
<b>16.1.</b> Framers							
<b>16.2.</b> Apprentice Carpenters							
<b>16.3.</b> Electricians							
<b>16.4.</b> Apprentice Construction Electricians							
<b>16.5.</b> Apprentice Industrial Electricians							
<b>16.6.</b> Plumbers							
<b>16.7.</b> Apprentice Plumbers							





17. Please rate the following factors on a scale of 1 to 5 where 1 means *not important at all* and 5 means *very important* in terms of their importance in determining why positions were difficult to fill in 2002.

**Importance**

	Low		High			Don't Know
	1	2	3	4	5	99
<b>17.1.</b> Lack of applicants						
<b>17.2.</b> Applicants did not have the experience (at least two years in trade) required						
<b>17.3.</b> Applicants did not have the specific skills required						
<b>17.4.</b> Applicants did not have the certifications required						
<b>17.5.</b> Other (specify)						

*Interviewer: For respondents who rated lack of applicants as 3 or higher, please ask the employer the following question:*

18. Why do you think that there was a lack of applicants? Please rate the following factors on a scale of 1 to 5 where 1 means *not important at all* and 5 means *very important* in terms of their importance in determining why there were a lack of applicants in 2002.

**Importance**

	Low					High	Don't Know
	1	2	3	4	5	99	
<b>18.1.</b> Wages offered by my business don't meet expectations							
<b>18.2.</b> Training institutions do not produce enough graduates							
<b>18.3.</b> Only seasonal employment was available							
<b>18.4.</b> Qualified workers won't travel from other areas for employment							
<b>18.5.</b> Other (specify)							

19. What actions did you take to increase recruitment in cases where you experienced difficulty finding skilled tradespeople in 2002?

Action	Yes	No	Don't Know
Increased wages	<b>19.1.</b>	<b>19.2.</b>	<b>19.3.</b>
Increased time spent searching for skilled people	<b>19.4.</b>	<b>19.5.</b>	<b>19.6.</b>
Broadened the area of the search	<b>19.7.</b>	<b>19.8.</b>	<b>19.9.</b>
Offered more attractive benefits	<b>19.10.</b>	<b>19.11.</b>	<b>19.12.</b>
Other (specify)	<b>19.13.</b>	<b>19.14.</b>	<b>19.15.</b>



**20. How did your business react to situations where you could not find skilled tradespeople to fill openings in 2002?**

<b>Action</b>	<b>Yes</b>	<b>No</b>	<b>Don't Know</b>
Limited the amount of work taken on	<b>20.1.</b>	<b>20.2.</b>	<b>20.3.</b>
Sub-contracted work	<b>20.4.</b>	<b>20.5.</b>	<b>20.6.</b>
Hired less qualified people	<b>20.7.</b>	<b>20.8.</b>	<b>20.9.</b>
Increased training for existing workers	<b>20.10.</b>	<b>20.11.</b>	<b>20.12.</b>
Re-organized the work activities of existing employees	<b>20.13.</b>	<b>20.14.</b>	<b>20.15.</b>
Provided more overtime to skilled people	<b>20.16.</b>	<b>20.17.</b>	<b>20.18.</b>

**21. What methods did you use to recruit workers?**

<b>Options</b>	<b>Yes</b>	<b>No</b>	<b>Don't Know</b>
Contacted community colleges	<b>21.1.</b>	<b>21.2.</b>	<b>21.3.</b>
Contacted the Apprenticeship Division	<b>21.4.</b>	<b>21.5.</b>	<b>21.6.</b>
Advertised in the local newspaper	<b>21.7.</b>	<b>21.8.</b>	<b>21.9.</b>
Advertised in newspapers across the province	<b>21.10.</b>	<b>21.11.</b>	<b>21.12.</b>
Recruited out of the province	<b>21.13.</b>	<b>21.14.</b>	<b>21.15.</b>
Tried to recruit through word of mouth among industry people	<b>21.16.</b>	<b>21.17.</b>	<b>21.18.</b>
Tried to recruit through word of mouth in the local community	<b>21.19.</b>	<b>21.20.</b>	<b>21.21.</b>
Placed a job vacancy with Human Resources Development Canada	<b>21.22.</b>	<b>21.23.</b>	<b>21.24.</b>
Other (please specify)	<b>21.25.</b>	<b>21.26.</b>	<b>21.27.</b>



**22. How many, if any, employees in designated trades permanently left your business in 2002?**

<b>Trade Designation</b>	<b># of Employees Who Left</b>
Framers	<b>22.1.</b>
Apprentice Carpenters	<b>22.2.</b>
Electricians	<b>22.3.</b>
Apprentice Construction Electricians	<b>22.4.</b>
Apprentice Industrial Electricians	<b>22.5.</b>
Plumbers	<b>22.6.</b>
Apprentice Plumbers	<b>22.7.</b>

*Interviewer: If respondent's answer to 22.1 through 22.7 is "0", go to Question 24.*

**23. Of those employees in designated trades who permanently left your business in 2002, how many left primarily for each of the following reasons?**

*Interviewer: Please ask for numbers of employees by type for each reason. Check that the total number of employees in this table equals the total number in the table in Question 25.*

<b>Reasons for leaving</b>	<b>Number</b>
They retired from the labour force	<b>23.1.</b>
They were laid off because the business did not have enough work for them	<b>23.2.</b>
The were laid off because they lacked the skills to do the job	<b>23.3.</b>
They were laid off because of a poor attitude toward work (e.g., being late, not getting along with co-workers)	<b>23.4.</b>
They left to return to school	<b>23.5.</b>
They quit primarily to get better pay or benefits working for another company	<b>23.6.</b>
They quit primarily to get better pay or benefits working in a different industry	<b>23.7.</b>
They left to work in another province	<b>23.8.</b>
They quit because they wanted a full-time, non-seasonal job	<b>23.9.</b>
They left primarily because of injury or illness	<b>23.10.</b>
Other (please specify)	<b>23.11.</b>
Other (please specify)	<b>23.12.</b>
Other (please specify)	<b>23.13.</b>

**C. THE BUSINESS**

**24. In which of the following industry sectors was your business active in 2002?**

*Interviewer: Please ask for a YES or NO answer for each category of work. For each category where the answer is YES, please ask:*

**Approximately what percentage of your overall business revenues was generated in each of the following industry sectors?**

<b>Industry Sector</b>	<b>Y/N</b>	<b>Percentage</b>
New home construction – single detached including cottages	<b>24.1.</b>	<b>24.1.1.</b>
Apartments, condominiums or other multiple-unit housing	<b>24.2.</b>	<b>24.2.1.</b>
Home Renovations	<b>24.3.</b>	<b>24.3.1.</b>
Non-Residential Building Construction (Commercial, Institutional and Industrial buildings, including renovations)	<b>24.4.</b>	<b>24.4.1.</b>
Engineering Construction	<b>24.5.</b>	<b>24.5.1.</b>
Manufacturing	<b>24.6.</b>	<b>24.6.1.</b>
Retail Trade	<b>24.7.</b>	<b>24.7.1.</b>
Real Estate and Rental and Leasing	<b>24.8.</b>	<b>24.8.1.</b>
Health Care	<b>24.9.</b>	<b>24.9.1.</b>
Educational Services	<b>24.10.</b>	<b>24.10.1.</b>
Public Administration	<b>24.11.</b>	<b>24.11.1.</b>
Accommodation and Food Services	<b>24.12.</b>	<b>24.12.1.</b>
Other (please specify)	<b>24.13.</b>	<b>24.13.1.</b>

**25. For how many years has your business been active in your industry?**

\_\_\_\_\_



- 26. Sub-Contracting – Only for businesses in the construction industry. Please indicate the approximate percentage of your business in 2002 where you were the general contractor and the percentage of your business where you worked as a sub-contractor.**

Category of Residential Construction Activity	Percentage
General Contractor	<b>26.1.</b>
Sub-contractor	<b>26.2.</b>

- 27. Over the past 2 years (2001-2002), did your sales?**

- 27.1.  Decrease substantially  
 27.2.  Decrease somewhat  
 27.3.  Stay the same  
 27.4.  Increase somewhat  
 27.5.  Increase substantially  
 27.6.  Don't Know or N/A

- 28. Do you expect sales for your sales to increase or decrease over the next two years (2003-2004)?**

- 28.1.  Decrease substantially  
 28.2.  Decrease somewhat  
 28.3.  Stay the same  
 28.4.  Increase somewhat  
 28.5.  Increase substantially  
 28.6.  Don't Know or N/A



**29. On a scale of 1 to 5 where 1 means *not a problem at all* and 5 means *a serious problem*, please rate the extent to which each of the following factors were a problem for your business over the past two years:**

**Seriousness of Problems**

	Low					High	Don't Know
	1	2	3	4	5	99	
<b>29.1.</b> Shortages of qualified business managers							
<b>29.2.</b> Shortages of qualified worksite managers or supervisors							
<b>29.3.</b> Shortages of skilled trades workers							
<b>29.4.</b> Turnover in skilled trades workers							
<b>29.5.</b> The number of skilled employees who retired from the labour force							
<b>29.6.</b> Keeping up with new work methods							
<b>29.7.</b> Keeping up with new technologies							
<b>29.8.</b> Price competition from companies operating in the “underground economy” (i.e., not charging GST, not paying Workers’ Comp., working while on EI, etc.)							
<b>29.9.</b> Delays associated with the building regulatory and inspection system							
<b>29.10.</b> Costs associated with the building regulatory and inspection system							
<b>29.11.</b> Access to financing							
<b>29.12.</b> Other (specify)							





**30. What was the value of your sales in 2002?**

- 30.1.** Less than \$100,000 \_\_\_\_\_
- 30.2.** \$100,001 - \$200,000 \_\_\_\_\_
- 30.3.** \$200,001 - \$500,000 \_\_\_\_\_
- 30.4.** \$500,001 - \$1,000,000 \_\_\_\_\_
- 30.5.** Greater than \$1,000,000 \_\_\_\_\_

**Thank you very much for your time.**