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Construction Regional Labour Market Information in BC


Prepared for the British Columbia Construction Association
through its Skilled Trades Employment Program

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Working together to help keep B.C. strong

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Canada



Executive Summary

The Construction Sector Council (CSC) develops labour market information which it releases in annual outlook reports for the provinces. The first of these reports for BC was released in 2005 and five subsequent reports have been published since then. The BC Construction Association (BCCA) retained RKA to complete a study, involving qualitative and quantitative aspects, to improve the measurement of regional demand and supply for trades/occupations working in the British Columbia's construction sector.

A total of 241 completed surveys were utilized to arrive at our analysis. The breakdown of respondents by region, union membership, and BCCA membership is summarized below.

	Number of Respondents	% Reported Workforce Unionized	% Reported as Member of BCCA
Lower Mainland	49	20.6%	60.9%
Vancouver Island	82	42.7%	55.7%
Southern Interior	60	11.1%	60.4%
Northern BC	50	2.4%	9.5%

On 2009 labour market conditions and expected conditions in 2010, results from survey respondents indicate that employers/contractors are optimistic that labour supply will meet labour requirement.

	Average Ranking		
	2009 Labour Market Conditions	2010 Expected Labour Market Conditions	
Lower Mainland	2.3	2.1	Respondents' consensus is that trades/occupations are generally available, and shortage only from time to time
Vancouver Island	2.6	2.6	Respondents' consensus is that trades/occupations generally available, and shortage only from time to time
Southern Interior	2.3	2.4	Respondents' consensus is that trades/occupations generally available, shortages only from time to time
Northern BC	3.1	3.1	Respondents' consensus is that there are shortages of trades/occupations from time to time

From "1" for "Excess Labour Supply"
To "5" for "Severe Labour Shortage"

Average age of trades/occupations and whether respondents are concerned about demographic factors impacting future supply of labour, respondents' responses are as follows.

	Average Age	Ave. Ranking Demographics an Issue of Labour Supply Next 5 Years	
Lower Mainland	38.3	2.4	Ageing workforce is disconcerting for specific trades, such as Carpenters, Gas Fitters, Residential Home Builders and Renovators, as well as Residential and Commercial Installers and Servicers.
Vancouver Island	38.2	2.2	Ageing workforce is of concern, specifically for Gas Fitters, Heavy Equipment Operators, Iron Workers, and Painters and Decorators
Southern Interior	38.2	2.1	A few respondents believe that the ageing workforce in these trades is of concern: Floor Covering Installers, Construction Supervisors, and Refrigeration and A/C Mechanics
Northern BC	33.9	2.6	A number of trades have an average age much higher than average for all trades: Construction Millwrights and Industrial Mechanics, and the Residential and Commercial Installers and Servicers.

From "1" for "A Major Issue"
To "3" for "Not an Issue"

Ageing of the workforce continues to be an issue in this industry, although results from these survey respondents did show an average age that is younger than what we have observed in literature in the recent past.

Certain areas of the industry face a challenge in recruiting young people into the sector as well as maintaining a level of apprenticeship enrolment that is sustainable to the industry. Survey respondents believe that it is important to communicate to young people the kinds of jobs available in the industry, which are professional careers that are well-compensated and in need of young recruits. High school career counsellors and parents also need to be involved to encourage more young people to enter these skilled trades/labour occupations. Certain factors impacting apprenticeship training completions were also identified, such as the access to financial assistance, and the unavailability of training facilities that are easily accessible to apprentices.

Overall, survey respondents appear to be cautiously optimistic about the level of apprentices to the industry in the near future.

Ave. Ranking Level of New Apprentices Next 3 Years	
Lower Mainland	2.4
Vancouver Island	2.2
Southern Interior	2.2
Northern BC	2.7

From "1" for "Decreasing"
To "3" for "Increasing"
(Value "4" for "Not Applicable")

Finally, the utilization of non-traditional sources of labour supply, namely, women, immigrants, and Aboriginal workers, has been examined. Of all the regions, employers/contractors in the Lower Mainland have the highest share of their workforce who are immigrants. In Northern BC, employers/contractors also make inroads in utilizing Aboriginal population in their workforce.

	Women's Representation	Immigrants Representation	Aboriginal Representation
Lower Mainland	3.9%	19.7%	3.2%
Vancouver Island	3.2%	5.8%	3.5%
Southern Interior	4.5%	6.1%	2.3%
Northern BC	1.4%	1.0%	6.9%

1. Introduction

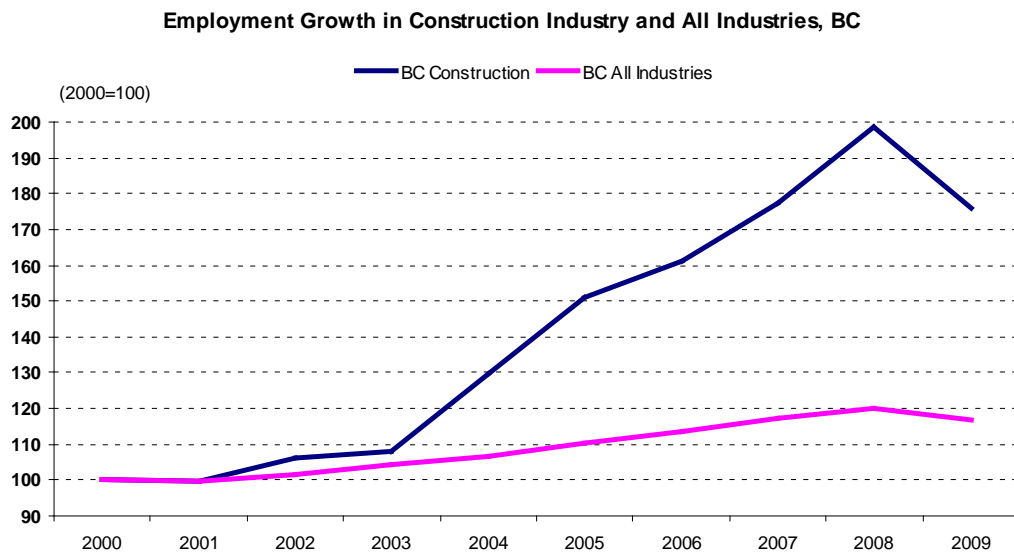
The Construction Sector Council (CSC) develops labour market information which it releases in annual outlook reports for the provinces. The first of these reports for BC was released in 2005 and five subsequent reports have been published since then. The BC Construction Association (BCCA) retained RKA to complete a study, involving qualitative and quantitative aspects, to improve the measurement of regional demand and supply for trades/occupations working in the British Columbia's construction sector.

The objective of the project is to analyze available demand and supply information and develop profiles on a regional basis. The study will focus on the information gaps and provide recommendations to improve regional demand and supply projections. Four regions will be studied: Northern BC, Lower Mainland, Southern Interior, and Vancouver Island.

The construction industry is a significant driver of the BC economy. The industry contributed to over 6 per cent of the provincial GDP (in 2008), and almost 9 per cent of the provincial employment (in 2009). Strong growth in construction activities throughout the province in the recent past implies increasing needs for trades and labour, and thus creates rising concerns about labour shortages for some trades and occupations.

Figure 1 shows employment growth in the construction industry and the provincial economy as a whole, between the years 2000 and 2009. It highlights the much stronger growth in the construction industry during this period (up by 76 percent) than the overall employment growth in the province (up by 17 percent).

Figure 1:



Source: LFS, Statistics Canada

Major projects require the services of large numbers of construction workers in various occupations and within specific regions. Skills shortages will negatively affect these projects. Limitations of labour market information for trades and occupations on a sub-provincial or regional basis in the province make projections challenging.

Since the focus of the report is regional labour market information and given statistical data availability, we have divided the province into four areas: Mainland/Southwest, Vancouver Island/Coast, Southern Interior, and Northern BC. The outline of these four regions is consistent with the geographic areas represented by the four regional associations of the British Columbia Construction Association.

The layout of the report is as follows. In the next Chapter, we will describe the approaches we adopted in collecting data and information for the report. Chapters 3 through 6 present our findings of trades' labour market conditions in each of the four regions. Finally, in Chapter 7, we summarize our findings.

2. Methodology

This project methodology included both secondary and primary research involving regional construction industry stakeholders across BC.

Primary Research

BCCA in collaboration with the Construction Sector Council and BCCA's STEP, developed survey questions to collect information and data that would assist the understanding of construction trades labour market conditions at the regional level. The regional STEP Trades Employment Specialists contacted employers and contractors to administer the surveys. The results of the surveys were sent to the BCCA Regional Presidents for review, validation and feedback. Preliminary results were also shared with the Construction Sector Council.

The survey results have then been organized electronically and passed on to RKA for tabulation and analysis.

Secondary Research

In addition to all surveys results, RKA also reviewed research and studies on regional labor market information including previous analysis that the CSC, BC LMI committee and other industry stakeholders have done. Data from the Census, Labour Force Survey, BC Major Projects Inventory (June 2009), and other government statistical reports were also reviewed.

3. Regional Construction Profile – Mainland/Southwest

The area covered by the Vancouver Regional Construction Association is similar to the Mainland/Southwest Development Region in the province. This area is the most densely populated (accounting for almost 60 percent of the total provincial population) and has a heavy concentration of economic activities. Total employment in the development region was 1,399,800 in 2009, which accounted for 62 percent of the total employment in BC.

Within BC between the years of 2000 to 2009, overall employment growth in the economy was at an average growth rate of 1.8 percent per year. Employment growth of the construction industry outpaced that of the overall economy, at 6.5 percent per year. Comparing the development region with the province as a whole, employment growth of the regional construction workforce was slightly faster than the province, at 6.6 percent per year. This is shown in Figure 2.

Figure 2: Employment in Construction Industry, Mainland/Southwest Development Region and BC

	2000	2009	2000 to 2009	
			Growth	Average Annual %
	(in '000)			
BC	111.1	195.3	84.2	6.5%
Mainland/Southwest	62.6	111.6	49	6.6%

Source: LFS, Statistics Canada

It should be noted that construction employment growth in the region, as well as in the province, was even stronger between 2000 and 2008, due to strong economic growth in the province, and major construction of infrastructure in Greater Vancouver and Whistler in preparation for the 2010 Winter Olympic Games and on other major projects. Between 2008 and 2009, construction employment declined by 13 percent in the Mainland/Southwest Region, due to the slowdown in residential construction, while across the province overall employment in construction shrank by about 12 percent.

We can use statistics available for building permits as a proxy to examine economic activities in the construction sub-sectors.¹ We note that for the province as a whole, residential construction activities account for the largest share of construction activities (almost two-thirds). Over the period between 2000 and 2009, it grew faster than the average for all sub-sectors of the construction

¹ It is noted that although building permits are a leading indicator of construction activities, they do not represent the total construction activity in the province or the region, because not all areas report and some large projects do not require a permit. Missing here in the Table is representation of engineering construction projects. CSC makes use of data on residential and non-residential building investment, as well as engineering construction in the analysis. However, such data at a regional level within BC is not available at this time.

industry. Also growing faster than average was the institutional and government building construction. On the other hand, industrial and commercial construction grew more slowly than the provincial average.

For the region, sub-sector distribution was similar to their provincial counterpart, with residential construction and commercial construction accounting for slightly larger shares. Over the period of 2000 to 2009, residential construction and institutional and government building construction grew faster than the regional average, reflecting the strong growth in the Lower Mainland housing market, as well as facility built-up leading to the Olympic Games. Details of the year-to-year change of the sub-sector construction activities in the province as well as in the region can be found in Figure 3.

Figure 3: Value of Building Permits by Type, Mainland/Southwest Development Region and BC

Building Permits (\$ 000) by Type	2000	2001	2002	2003	2004	2005	2006	2007	2008	Preliminary 2009p	2000-09 Average Annual Growth
British Columbia											
Residential	2,403,140	2,829,874	3,888,147	4,514,185	5,868,937	6,978,962	7,620,696	8,611,723	6,899,289	4,479,640	7%
% change	-7%	18%	37%	16%	30%	19%	9%	13%	-20%	-35%	
share	53%	57%	69%	71%	74%	68%	66%	69%	65%	59%	
Industrial	295,525	221,353	230,119	244,024	328,050	346,203	358,843	323,893	292,221	244,767	-2%
% change	-7%	-25%	4%	6%	34%	6%	4%	-10%	-10%	-16%	
share	7%	4%	4%	4%	4%	3%	3%	3%	3%	3%	
Institutional & Gov't l	496,062	732,312	424,408	506,406	513,713	979,529	1,068,309	961,170	762,136	1,135,123	10%
% change	-23%	48%	-42%	19%	1%	91%	9%	-10%	-21%	49%	
share	11%	15%	7%	8%	6%	10%	9%	8%	7%	15%	
Commercial	1,297,270	1,171,233	1,116,741	1,129,623	1,228,027	1,886,405	2,493,684	2,647,905	2,623,509	1,759,949	3%
% change	14%	-10%	-5%	1%	9%	54%	32%	6%	-1%	-33%	
share	29%	24%	20%	18%	15%	19%	22%	21%	25%	23%	
All Types	4,491,997	4,954,772	5,659,415	6,394,238	7,938,727	10,191,099	11,541,532	12,544,691	10,577,155	7,619,479	6%
% change	-4%	10%	14%	13%	24%	28%	13%	9%	-16%	-28%	
Mainland/Southwest DR											
Residential	1,662,756	2,012,824	2,820,259	3,075,163	3,996,577	4,411,988	4,740,972	5,319,560	3,887,028	2,715,384	6%
% change	-3%	21%	40%	9%	30%	10%	7%	12%	-27%	-30%	
share	54%	59%	70%	74%	74%	69%	64%	68%	61%	62%	
Industrial	194,874	150,526	162,652	129,759	198,427	187,744	227,879	173,600	173,345	143,242	-3%
% change	-15%	-23%	8%	-20%	53%	-5%	21%	-24%	0%	-17%	
share	6%	4%	4%	3%	4%	3%	3%	2%	3%	3%	
Institutional & Gov't l	269,172	433,939	257,727	262,720	315,090	582,865	673,268	437,913	411,260	455,130	6%
% change	-15%	61%	-41%	2%	20%	85%	16%	-35%	-6%	11%	
share	9%	13%	6%	6%	6%	9%	9%	6%	6%	10%	
Commercial	952,950	799,271	787,691	697,366	861,495	1,204,666	1,808,964	1,898,189	1,911,397	1,099,827	2%
% change	28%	-16%	-1%	-11%	24%	40%	50%	5%	1%	-42%	
share	31%	24%	20%	17%	16%	19%	24%	24%	30%	25%	
All Types	3,079,752	3,396,560	4,028,329	4,165,008	5,371,589	6,387,263	7,451,083	7,829,262	6,383,030	4,413,583	4%
% change	2%	10%	19%	3%	29%	19%	17%	5%	-18%	-31%	

Source: Statistics Canada

Looking forward, survey respondents indicate that major projects driving upcoming construction activities include:

- Commercial work;
- Highrise and multi-family residential construction
- Municipal infrastructure upgrade;
- Shipping industry

Specific projects include, for example, the Interior-Lower Mainland transmission line expansion, BCIT's Burnaby Campus expansion project, and the Ruskin Powerhouse rehabilitation project, according to the BC Major Projects Inventory.

3.1. Evaluation of 2009 and Expected Labour Market Conditions in 2010

A total of 49 completed surveys were received.² Of these respondents, about one-fifth reported they have a unionized workforce, and about 60 percent reported they are members of the BCCA.

In the Figure that follows, we show respondents' opinions on the labour market conditions in 2009 and their expectations in 2010. From a scale of 1 indicating "excess labour supply" to 5 for "severe labour shortage" for the specific occupation, the calculated average ranking for each trade is shown in the Table.

Throughout the rest of this chapter, it should be cautioned that, because of the extremely small sample size for certain trades/occupations (for example, the sample size for Construction Managers, Carpenters, Insulators, and Plasters, Drywall Installers and Finishers, and Lathers), the results for these trades/occupations may not be representative of the whole sector in the region.

For the region as a whole, the average ranking for 2009 labour market condition is 2.3, while the ranking for expected labour market conditions in 2010 is 2.1. This indicates that survey respondents are somewhat optimistic of the construction labour supply situation in the region.

² Note that these responses refer to number of completed surveys, and it is possible that the actual number of respondents is smaller as some respondents may have filled in questionnaires for more than one trade/occupation.

Figure 4: Respondents' Opinion on Labour Market Conditions, Lower Mainland

Occupation	Region	# of Resp't	2009 Condition Average Ranking	Expected 2010 Condition Average Ranking
Construction Managers	LM	1	1.0	2.0
Construction Supervisors	LM			
Construction Estimators	LM			
Boiler Makers	LM			
Bricklayers	LM			
Carpenters	LM	1	2.0	2.0
Concrete Finisher	LM	2	2.5	2.0
Construction Millwrights and Industrial Mechanics	LM	2	2.0	2.0
Trades Helpers and Labourers	LM	6	2.3	2.3
Crane Operators	LM			
Drillers and Blasters	LM			
Electricians	LM	2	1.5	1.5
Elevator Constructors and Mechanics	LM			
Floor Covering Installers	LM	2	3.0	2.0
Gas Fitters	LM	2	3.5	3.0
Glaziers	LM	4	3.8	3.5
Heavy Equipment Operators	LM	2	2.5	3.5
Heavy Duty Equipment Mechanics	LM			
Industrial Instrument Technicians & Mechanics	LM	2	3.5	3.0
Insulators	LM	1	2.0	1.0
Ironworkers	LM	3	1.3	1.3
Painters and Decorators	LM			
Plasters, Drywall Installers & Finishers, & Lathers	LM	1	4.0	2.0
Plumbers	LM	2	2.0	2.0
Refrigeration and A/C Mechanics	LM			
Residential Home Builders and Renovators	LM			
Residential and Commercial Installers & Servicers	LM	2	2.5	2.0
Roofers and Shinglers	LM	5	3.6	3.4
Sheet Metal Workers	LM	2	2.5	2.5
Steamfitters, Pipefitters & Sprinkler System Installers	LM			
Structural Metal Fitters	LM	2	1.0	1.0
Tilesetters	LM			
Truck Drivers	LM	2	1.5	1.5
Welders	LM	3	1.0	1.0

LM = Lower Mainland, VI = Vancouver Island, SI = Southern Interior, North = BCCA North

Source: CSC and BCCA Surveys; Prepared by RKA

3.2. Average Age and Respondents' Views on the Demographic Factor

Respondents also indicated the age distribution of their workforce, as well as their opinions on whether they consider age will be adversely impacting their labour supply in the next five years. They have been asked to rank with a value of "1" for "Seriously Affecting Labour Supply" to a value of "3" for "Not an Issue". The results are summarized in the Figure to follow.

Figure 5: Average Age and Respondents' Opinion on Demographic Factor, Lower Mainland

Occupation	# of		Average Age	Average Ranking
	Region	Resp't		
Construction Managers	LM	1	38	3.0
Construction Supervisors	LM			
Construction Estimators	LM			
Boiler Makers	LM			
Bricklayers	LM			
Carpenters	LM	1	44	3.0
Concrete Finisher	LM	2	36	1.5
Construction Millwrights and Industrial Mechanics	LM	2	41	3.0
Trades Helpers and Labourers	LM	6	35	2.5
Crane Operators	LM			
Drillers and Blasters	LM			
Electricians	LM	2	36	2.0
Elevator Constructors and Mechanics	LM			
Floor Covering Installers	LM	2	33	3.0
Gas Fitters	LM	2	46	1.5
Glaziers	LM	4	42	2.5
Heavy Equipment Operators	LM	2	35	3.0
Heavy Duty Equipment Mechanics	LM			
Industrial Instrument Technicians & Mechanics	LM	2	39	2.5
Insulators	LM	1	32	3.0
Ironworkers	LM	3	40	2.7
Painters and Decorators	LM			
Plasters, Drywall Installers & Finishers, & Lathers	LM	1	41	1.0
Plumbers	LM	2	41	2.0
Refrigeration and A/C Mechanics	LM			
Residential Home Builders and Renovators	LM		44	
Residential and Commercial Installers & Servicers	LM	2	43	2.0
Roofers and Shinglers	LM	5	37	2.0
Sheet Metal Workers	LM	2	35	3.0
Steamfitters, Pipefitters & Sprinkler System Installers	LM			
Structural Metal Fitters	LM	2	35	2.5
Tilesetters	LM			
Truck Drivers	LM	2	35	3.0
Welders	LM	3	34	2.3

LM = Lower Mainland, VI = Vancouver Island, SI = Southern Interior, North = BCCA North

Source: CSC and BCCA Surveys; Prepared by RKA

Average ranking values at 2.4, indicating respondents are only minimally concerned about the age factor in future labour supply. On the other hand, the average age as reported by respondents shows that the ageing workforce is disconcerting for specific trades, such as Carpenters, Gas Fitters, Residential

Home Builders and Renovators, as well as Residential and Commercial Installers and Servicers.

3.3. Average Size of Trades' Workforce and Seasonality

The Figure below shows the average size of the trades' workforce throughout the year, as well the size of the workforce at peak season. When the latter is quite different from the annual average, it indicates the seasonality nature of the working condition.

Figure 6: Average Size of Trades Workforce and Peak Season Workforce, Lower Mainland

Occupation	# of		Average Size of Workforce	Peak Season Workforce
	Region	Resp't		
Construction Managers	LM	1	75	85
Construction Supervisors	LM			
Construction Estimators	LM			
Boiler Makers	LM			
Bricklayers	LM			
Carpenters	LM	1	15	25
Concrete Finisher	LM	2	15	40
Construction Millwrights and Industrial Mechanics	LM	2	5	5
Trades Helpers and Labourers	LM	6	18	32
Crane Operators	LM			
Drillers and Blasters	LM			
Electricians	LM	2	30	30
Elevator Constructors and Mechanics	LM			
Floor Covering Installers	LM	2	20	30
Gas Fitters	LM	2		
Glaziers	LM	4	37	101
Heavy Equipment Operators	LM	2	10	20
Heavy Duty Equipment Mechanics	LM			
Industrial Instrument Technicians & Mechanics	LM	2	5	20
Insulators	LM	1	45	45
Ironworkers	LM	3	15	42
Painters and Decorators	LM			
Plasters, Drywall Installers & Finishers, & Lathers	LM	1	15	
Plumbers	LM	2		
Refrigeration and A/C Mechanics	LM			
Residential Home Builders and Renovators	LM			
Residential and Commercial Installers & Servicers	LM	2	20	50
Roofers and Shinglers	LM	5	19	27
Sheet Metal Workers	LM	2	15	45
Steamfitters, Pipefitters & Sprinkler System Installers	LM			
Structural Metal Fitters	LM	2	5	10
Tilesetters	LM			
Truck Drivers	LM	2	10	15
Welders	LM	3	8	12

LM = Lower Mainland, VI = Vancouver Island, SI = Southern Interior, North = BCCA North

Source: CSC and BCCA Surveys; Prepared by RKA

On average, peak season workforce is about three fourths higher than regular workforce in this region, indicating much more construction activities and therefore manpower requirement during peak season.

3.4. Respondents' View on Future Supply of New Apprentices

Respondents were asked of their opinions on whether they see future supply of new apprentices in the trade will be decreasing (for a value of "1") or will be increasing (for a value of "3"). If the topic is irrelevant to a specific trade, the value is "4". The Figure below shows the average ranking values by respondents.

Figure 7: Average Ranking of Future Supply of New Apprentices, Lower Mainland

Occupation	Region	# of Resp't	Average Ranking
Construction Managers	LM	1	2.0
Construction Supervisors	LM		
Construction Estimators	LM		
Boiler Makers	LM		
Bricklayers	LM		
Carpenters	LM	1	3.0
Concrete Finisher	LM	2	3.5
Construction Millwrights and Industrial Mechanics	LM	2	2.0
Trades Helpers and Labourers	LM	6	2.2
Crane Operators	LM		
Drillers and Blasters	LM		
Electricians	LM	2	3.0
Elevator Constructors and Mechanics	LM		
Floor Covering Installers	LM	2	2.0
Gas Fitters	LM	2	3.0
Glaziers	LM	4	2.6
Heavy Equipment Operators	LM	2	2.5
Heavy Duty Equipment Mechanics	LM		
Industrial Instrument Technicians & Mechanics	LM	2	3.0
Insulators	LM	1	2.0
Ironworkers	LM	3	2.0
Painters and Decorators	LM		
Plasters, Drywall Installers & Finishers, & Lathers	LM	1	2.0
Plumbers	LM	2	2.0
Refrigeration and A/C Mechanics	LM		
Residential Home Builders and Renovators	LM		
Residential and Commercial Installers & Servicers	LM	2	3.0
Roofers and Shinglers	LM	5	2.0
Sheet Metal Workers	LM	2	2.5
Steamfitters, Pipefitters & Sprinkler System Installers	LM		
Structural Metal Fitters	LM	2	2.5
Tiles setters	LM		
Truck Drivers	LM	2	2.5
Welders	LM	3	2.0

LM = Lower Mainland, VI = Vancouver Island, SI = Southern Interior, North = BCCA North
 Source: CSC and BCCA Surveys; Prepared by RKA

The average ranking from all respondents for the Lower Mainland is 2.4, indicating that more respondents believe that the future supply of apprentices will at least stay the same level as now, and may even be increasing.

When asked about major issues surrounding future labour supply, respondents have put forward the following:

- Need to increase career awareness;
- Have schools to teach more about trades careers;
- More training provided before a job;
- For mechanical insulators, (a lessor known trade) company takes responsibility to train their own apprentices as there are not many of these trades people available; and
- Mobility of tradespeople.

3.5. Non-Traditional Source of Labour Supply

Respondents were also asked about how much they rely on people that are considered to be non-traditional sources of labour supply in the construction industry: women, immigrants, and Aboriginal people. The findings for the region are summarized in the Figure below.

Figure 8: Sources of Non-Traditional Sources of Labour in Construction, Lower Mainland

Occupation	# of		Women representati on Average	Immigrant representati on Average	Aboriginal representati on Average
	Region	Resp't			
Construction Managers	LM	1	5.0%	5.0%	5.0%
Construction Supervisors	LM				
Construction Estimators	LM				
Boiler Makers	LM				
Bricklayers	LM				
Carpenters	LM	1	5.0%	18.0%	0.0%
Concrete Finisher	LM	2	0.0%	31.5%	2.5%
Construction Millwrights and Industrial Mechanics	LM	2	0.0%	2.5%	0.0%
Trades Helpers and Labourers	LM	6	1.7%	21.5%	2.5%
Crane Operators	LM				
Drillers and Blasters	LM				
Electricians	LM	2	2.5%	31.5%	2.5%
Elevator Constructors and Mechanics	LM				
Floor Covering Installers	LM	2	0.0%	5.0%	18.0%
Gas Fitters	LM	2	2.5%	9.0%	2.5%
Glaziers	LM	4	2.5%	36.0%	2.5%
Heavy Equipment Operators	LM	2	5.0%	18.0%	9.0%
Heavey Duty Equipment Mechanics	LM				
Industrial Instrument Technicians & Mechanics	LM	2	0.0%	40.5%	0.0%
Insulators	LM	1	5.0%	18.0%	0.0%
Ironworkers	LM	3	2.5%	31.3%	2.5%
Painters and Decorators	LM				
Plasters, Drywall Installers & Finishers, & Lathers	LM	1	5.0%	5.0%	0.0%
Plumbers	LM	2	2.5%	11.5%	2.5%
Refrigeration and A/C Mechanics	LM				
Residential Home Builders and Renovators	LM				
Residential and Commercial Installers & Servicers	LM	2	11.5%	9.0%	11.5%
Roofers and Shinglers	LM	5	4.6%	11.2%	2.0%
Sheet Metal Workers	LM	2	2.5%	11.5%	0.0%
Steamfitters, Pipefitters & Sprikler System Installers	LM				
Structural Metal Fitters	LM	2	5.0%	40.5%	2.5%
Tilesetters	LM				
Truck Drivers	LM	2	5.0%	18.0%	2.5%
Welders	LM	3	14.3%	39.7%	0.0%

LM = Lower Mainland, VI = Vancouver Island, SI = Southern Interior, North = BCCA North

Source: CSC and BCCA Surveys; Prepared by RKA

Results from survey respondents indicate that while women and Aboriginal people still account for a very small proportion of the trades workforce (on average 3.9 percent and 3.1 percent respectively), immigrants play an increasingly important role in the industry's labour supply. For the region, the average proportion of immigrants in the trades workforce as reported by respondents is almost 20 percent.

4. Regional Construction Profile – Vancouver Island/Coast

The area covered by the Vancouver Island Construction Association is about the same as the Vancouver Island/Coast Development Region in the province.³ This area is the second most populated (accounting for about 17 percent of the total provincial population) region and having a concentration of retired “baby-boomers”. Total employment in the development region was 379,400 in 2009, which also accounted for 17 percent of the total employment in BC.

Within BC between the years of 2000 to 2009, overall employment growth in the economy was at an average growth rate of 1.8 percent per year. Employment growth of the construction industry in the region outpaced that of the overall economy, at 6.5 percent per year. Comparing the development region with the province at a whole, employment growth of the regional construction workforce was below the average for the province, at 4.5 percent per year. This is shown in Figure 9.

Figure 9: Employment in Construction Industry, Vancouver Island/Coast Development Region and BC

	2000	2009	2000 to 2009	
			Growth	Average Annual %
	(in '000)			
BC	111.1	195.3	84.2	6.5%
Vancouver Island/Coast	22.4	33.4	11	4.5%

Source: LFS, Statistics Canada

It should be noted that construction employment growth in the region, as well as in the province, was even stronger between 2000 and 2008, due to strong economic growth in the province. However, the region did experience slower than average employment growth in the construction industry, due to slower than average population growth in the region. Between 2008 and 2009, construction employment declined by 15 percent in the Vancouver Island/Coast Region, due to the slowdown in residential construction, while across the province overall employment in construction shrank by about 12 percent.

We can use statistics available for building permits as a proxy to examine economic activities in the construction sub-sectors.⁴ We note that for the

³ With the exception of the Mainland portion of Mt. Waddington Regional District, which is included in the Northern BC Region in this study.

⁴ It is noted that although building permits are a leading indicator of construction activities, they do not represent the total construction activity in the province or the region, because not all areas report and some large projects do not require a permit. Missing here in the Table is representation of engineering construction projects. CSC makes use of data on residential and non-residential building investment, as well as engineering construction in the analysis. However, such data at a regional level within BC is not available at this time.

province as a whole, residential construction activities account for the largest share of construction activities (almost two-thirds). Over the period between 2000 and 2009, it grew faster than the average for all sub-sectors of the construction industry. Also growing faster than average was the institutional and government building construction. On the other hand, industrial and commercial construction grew more slowly than the provincial average.

For the region, sub-sector distribution was similar to their provincial counterpart, with institutional and government construction accounting for slightly larger shares. Over the period of 2000 to 2009, residential construction activity grew faster than the regional average. In fact, residential construction activity in the region grew even faster than residential construction activity in the province over the same period. Details of the year-to-year change of the sub-sector construction activities in the province as well as in the region can be found in Figure 10.

Figure 10: Value of Building Permits by Type, Vancouver Island/Coast Development Region and BC

Building Permits (\$ 000) by Type										Preliminary	2000-09
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009p	Average Annual Growth
British Columbia											
Residential	2,403,140	2,829,874	3,888,147	4,514,185	5,868,937	6,978,962	7,620,696	8,611,723	6,899,289	4,479,640	7%
% change	-7%	18%	37%	16%	30%	19%	9%	13%	-20%	-35%	
share	53%	57%	69%	71%	74%	68%	66%	69%	65%	59%	
Industrial	295,525	221,353	230,119	244,024	328,050	346,203	358,843	323,893	292,221	244,767	-2%
% change	-7%	-25%	4%	6%	34%	6%	4%	-10%	-10%	-16%	
share	7%	4%	4%	4%	4%	3%	3%	3%	3%	3%	
Institutional & Gov't I	496,062	732,312	424,408	506,406	513,713	979,529	1,068,309	961,170	762,136	1,135,123	10%
% change	-23%	48%	-42%	19%	1%	91%	9%	-10%	-21%	49%	
share	11%	15%	7%	8%	6%	10%	9%	8%	7%	15%	
Commercial	1,297,270	1,171,233	1,116,741	1,129,623	1,228,027	1,886,405	2,493,684	2,647,905	2,623,509	1,759,949	3%
% change	14%	-10%	-5%	1%	9%	54%	32%	6%	-1%	-33%	
share	29%	24%	20%	18%	15%	19%	22%	21%	25%	23%	
All Types	4,491,997	4,954,772	5,659,415	6,394,238	7,938,727	10,191,099	11,541,532	12,544,691	10,577,155	7,619,479	6%
% change	-4%	10%	14%	13%	24%	28%	13%	9%	-16%	-28%	
Vancouver Island/Coast DR											
Residential	304,971	349,563	504,062	643,673	859,834	1,033,514	1,227,171	1,316,201	1,161,995	784,813	11%
% change	-15%	15%	44%	28%	34%	20%	19%	7%	-12%	-32%	
share	52%	55%	66%	65%	78%	71%	72%	71%	71%	58%	
Industrial	29,713	34,805	16,469	33,629	18,529	20,651	31,411	30,109	50,699	37,270	3%
% change	-8%	17%	-53%	104%	-45%	11%	52%	-4%	68%	-26%	
share	5%	6%	2%	3%	2%	1%	2%	2%	3%	3%	
Institutional & Gov't I	99,288	102,581	93,473	113,567	80,933	148,336	161,347	265,408	119,353	209,085	9%
% change	-51%	3%	-9%	21%	-29%	83%	9%	64%	-55%	75%	
share	17%	16%	12%	11%	7%	10%	9%	14%	7%	16%	
Commercial	147,561	145,090	155,208	202,547	139,120	257,370	281,755	229,434	295,673	312,010	9%
% change	-18%	-2%	7%	31%	-31%	85%	9%	-19%	29%	6%	
share	25%	23%	20%	20%	13%	18%	17%	12%	18%	23%	
All Types	581,533	632,039	769,212	993,416	1,098,416	1,459,871	1,701,684	1,841,152	1,627,720	1,343,178	10%
% change	-25%	9%	22%	29%	11%	33%	17%	8%	-12%	-17%	

Source: Statistics Canada

Looking forward, survey respondents indicate that major projects driving upcoming construction activities include:

- Commercial work (mall expansion, Phase 2 Uptown, office towers);
- Highrise and multi-family residential construction;
- Government funded infrastructure (Royal Roads University Innovation Centre, UVic, CFB Esquimalt FMF Cape Breton,);
- Civil engineering projects (hydro projects, Johnson St. Bridge).

According to BC Major Projects Inventory, specific projects include, for example, the Capital Regional District Core Area Wastewater Management project, the East Toba River and Montrose Creek Hydroelectric projects, and BC Hydro's John Hart redevelopment project.

4.1. Evaluation of 2009 and Expected Labour Market Conditions in 2010

A total of 82 completed surveys were received.⁵ Of these respondents, about two-fifths reported they have a unionized workforce, and just over half of them reported they are members of the BCCA.

In the Figure that follows, we show respondents' opinions on the labour market conditions in 2009 and their expectations in 2010. From a scale of 1 indicating "excess labour supply" to 5 for "severe labour shortage" for the specific occupation, the calculated average ranking for each trade is shown in the Table.

Throughout the rest of this chapter, it should be cautioned that, because of the extremely small sample size for certain trades/occupations (for example, the sample size for Construction Supervisors, Bricklayers, Crane Operators, Heavy Equipment Operators, and Industrial Equipment Technicians and Mechanics, and others), the results for these trades/occupations may not be representative of the whole sector in the region.

For the region as a whole, the average ranking for 2009 labour market condition is 2.6, while the ranking for expected labour market conditions in 2010 is also 2.6. This indicates that respondents believe that while in general, construction trades/occupations are available; there is also occasional shortage of labour,

⁵ Note that these responses refer to number of completed surveys, and it is possible that the actual number of respondents is smaller as some respondents may have filled in questionnaires for more than one trade/occupation.

Figure 11: Respondents' Opinion on Labour Market Conditions, Vancouver Island

Occupation	Region	# of Resp't	2009 Condition Average Ranking	Expected 2010 Condition Average Ranking
Construction Managers	VI	3	3.3	2.3
Construction Supervisors	VI	1	3.0	3.0
Construction Estimators	VI	2	3.0	2.5
Boiler Makers	VI			
Bricklayers	VI	1	2.0	2.0
Carpenters	VI	4	2.0	2.5
Concrete Finisher	VI			
Construction Millwrights and Industrial Mechanics	VI			
Trades Helpers and Labourers	VI	3	2.0	2.0
Crane Operators	VI	1	3.0	
Drillers and Blasters	VI			
Electricians	VI	4	1.8	2.5
Elevator Constructors and Mechanics	VI			
Floor Covering Installers	VI			
Gas Fitters	VI	2	2.0	2.0
Glaziers	VI	13	2.4	2.5
Heavy Equipment Operators	VI	1	3.0	3.0
Heavy Duty Equipment Mechanics	VI	2	3.5	2.5
Industrial Instrument Technicians & Mechanics	VI	1	5.0	5.0
Insulators	VI	4	2.8	2.0
Ironworkers	VI	2	1.5	2.0
Painters and Decorators	VI	3	3.3	3.0
Plasters, Drywall Installers & Finishers, & Lathers	VI	3	2.3	1.7
Plumbers	VI	8	2.5	2.4
Refrigeration and A/C Mechanics	VI	3	2.3	2.7
Residential Home Builders and Renovators	VI	2	2.0	4.0
Residential and Commercial Installers & Servicers	VI	5	2.8	2.6
Roofers and Shinglers	VI	1	3.0	3.0
Sheet Metal Workers	VI	1	3.0	3.0
Steamfitters, Pipefitters & Sprinkler System Installers	VI			
Structural Metal Fitters	VI	1	2.0	2.0
Tilesetters	VI	5	2.2	1.3
Truck Drivers	VI	2		
Welders	VI	4	2.8	2.3

LM = Lower Mainland, VI = Vancouver Island, SI = Southern Interior, North = BCCA North
 Source: CSC and BCCA Surveys; Prepared by RKA

4.2. Average Age and Respondents' Views on the Demographic Factor

Respondents also indicated the age distribution of their workforce, as well as their opinions on whether they consider age is adversely impacting their labour supply in the next five years. They have been asked to rank with a value of "1" for "Seriously Affecting Labour Supply" to a value of "3" for "Not an Issue". The results are summarized in the Figure to follow.

Figure 12: Average Age and Respondents' Opinion on Demographic Factor, Vancouver Island

Occupation	# of		Average Age	Average Ranking
	Region	Resp't		
Construction Managers	VI	3	31	2.0
Construction Supervisors	VI	1	33	2.0
Construction Estimators	VI	2	42	2.0
Boiler Makers	VI			
Bricklayers	VI	1	38	3.0
Carpenters	VI	4	40	2.3
Concrete Finisher	VI			
Construction Millwrights and Industrial Mechanics	VI			
Trades Helpers and Labourers	VI	3	38	2.7
Crane Operators	VI	1	30	1.0
Drillers and Blasters	VI			
Electricians	VI	4	33	2.8
Elevator Constructors and Mechanics	VI			
Floor Covering Installers	VI			
Gas Fitters	VI	2	46	1.5
Glaziers	VI	13	39	2.4
Heavy Equipment Operators	VI	1	50	1.0
Heavy Duty Equipment Mechanics	VI	2	38	2.0
Industrial Instrument Technicians & Mechanics	VI	1	45	2.0
Insulators	VI	4	40	1.8
Ironworkers	VI	2	43	1.5
Painters and Decorators	VI	3	42	1.3
Plasters, Drywall Installers & Finishers, & Lathers	VI	3	38	2.9
Plumbers	VI	8	44	2.5
Refrigeration and A/C Mechanics	VI	3	37	2.0
Residential Home Builders and Renovators	VI	2	40	2.5
Residential and Commercial Installers & Servicers	VI	5	39	2.2
Roofers and Shinglers	VI	1	25	3.0
Sheet Metal Workers	VI	1	36	2.0
Steamfitters, Pipefitters & Sprinkler System Installers	VI			
Structural Metal Fitters	VI	1	33	3.0
Tilesetters	VI	5	33	2.2
Truck Drivers	VI	2	47	2.5
Welders	VI	4	33	2.3

LM = Lower Mainland, VI = Vancouver Island, SI = Southern Interior, North = BCCA North
 Source: CSC and BCCA Surveys; Prepared by RKA

Average ranking values at 2.2, indicating respondents are only minimally concerned about the age factor in future labour supply. On the other hand, the average age reported by respondents also shows that an ageing workforce is of

concern, specifically for Gas Fitters, Heavy Equipment Operators, Iron Workers, and Painters and Decorators.

4.3. Average Size of Trades' Workforce and Seasonality

The Figure below shows the average size of the trades' workforce throughout the year, as well the size of the workforce at peak season. When the latter is quite different from the annual average, it indicates the nature of seasonality of the working condition.

Figure 13: Average Size of Trades Workforce and Peak Season Workforce, Vancouver Island

Occupation	# of		Average Size of Workforce	Peak Season Workforce
	Region	Resp't		
Construction Managers	VI	3	25	45
Construction Supervisors	VI	1	5	
Construction Estimators	VI	2	5	
Boiler Makers	VI			
Bricklayers	VI	1	25	
Carpenters	VI	4	8	18
Concrete Finisher	VI			
Construction Millwrights and Industrial Mechanics	VI			85
Trades Helpers and Labourers	VI	3	15	30
Crane Operators	VI	1	5	25
Drillers and Blasters	VI			
Electricians	VI	4	33	45
Elevator Constructors and Mechanics	VI			
Floor Covering Installers	VI			
Gas Fitters	VI	2	5	5
Glaziers	VI	13	7	8
Heavy Equipment Operators	VI	1	5	
Heavy Duty Equipment Mechanics	VI	2		
Industrial Instrument Technicians & Mechanics	VI	1	15	
Insulators	VI	4	18	23
Ironworkers	VI	2	35	75
Painters and Decorators	VI	3	8	35
Plasters, Drywall Installers & Finishers, & Lathers	VI	3	15	28
Plumbers	VI	8		
Refrigeration and A/C Mechanics	VI	3	8	5
Residential Home Builders and Renovators	VI	2	15	25
Residential and Commercial Installers & Servicers	VI	5	21	42
Roofers and Shinglers	VI	1	15	25
Sheet Metal Workers	VI	1	5	
Steamfitters, Pipefitters & Sprinkler System Installers	VI			
Structural Metal Fitters	VI	1	5	5
Tilesetters	VI	5	11	20
Truck Drivers	VI	2	5	5
Welders	VI	4	8	10

LM = Lower Mainland, VI = Vancouver Island, SI = Southern Interior, North = BCCA North
 Source: CSC and BCCA Surveys; Prepared by RKA

On average, peak season workforce is more than double the regular workforce in this region. During peak construction season, the demand for workers can put much pressure on finding the necessary workers.

4.4. Respondents' View on Future Supply of New Apprentices

Respondents were asked of their opinions on whether they see future supply of new apprentices in the trade will be decreasing (for a value of "1") or will be increasing (for a value of "3"). If the topic is irrelevant to a specific trade, the value is "4". The Figure below shows the average ranking values by respondents.

Figure 14: Average Ranking of Future Supply of New Apprentices, Vancouver Island

Occupation	# of		Average Ranking
	Region	Resp't	
Construction Managers	VI	3	2.0
Construction Supervisors	VI	1	2.0
Construction Estimators	VI	2	2.0
Boiler Makers	VI		
Bricklayers	VI	1	2.0
Carpenters	VI	4	2.3
Concrete Finisher	VI		
Construction Millwrights and Industrial Mechanics	VI		2.0
Trades Helpers and Labourers	VI	3	1.7
Crane Operators	VI	1	3.0
Drillers and Blasters	VI		
Electricians	VI	4	2.3
Elevator Constructors and Mechanics	VI		
Floor Covering Installers	VI		
Gas Fitters	VI	2	2.0
Glaziers	VI	13	2.1
Heavy Equipment Operators	VI	1	2.0
Heavy Duty Equipment Mechanics	VI	2	2.5
Industrial Instrument Technicians & Mechanics	VI	1	2.0
Insulators	VI	4	2.3
Ironworkers	VI	2	2.5
Painters and Decorators	VI	3	1.5
Plasters, Drywall Installers & Finishers, & Lathers	VI	3	1.7
Plumbers	VI	8	1.9
Refrigeration and A/C Mechanics	VI	3	3.0
Residential Home Builders and Renovators	VI	2	3.0
Residential and Commercial Installers & Servicers	VI	5	2.0
Roofers and Shinglers	VI	1	2.0
Sheet Metal Workers	VI	1	3.0
Steamfitters, Pipefitters & Sprinkler System Installers	VI		
Structural Metal Fitters	VI	1	3.0
Tilesetters	VI	5	2.2
Truck Drivers	VI	2	2.0
Welders	VI	4	2.3

LM = Lower Mainland, VI = Vancouver Island, SI = Southern Interior, North = BCCA North
 Source: CSC and BCCA Surveys; Prepared by RKA

The average ranking from all respondents for the Vancouver Island region is 2.2, indicating that more respondents believe that the future supply of apprentices will at least stay the same level as now, and may even be increasing.

When asked about major issues surrounding future labour supply, respondents have put forward the following:

- Need to increase career awareness (very few trades people are used to management roles);
- The carpenter trade requires very skilled and experienced people. Working environment can be quite dangerous;
- Have schools teach more about trades career;
- Age demographic of the truly experienced is an issue;
- Lack of commercial transport certification on the island/ lack of financial support for the apprenticeship program is an issue
- Accreditation of foreign workers;
- For mechanical insulators, people need to develop tolerance for insulation products;
- No apprenticeship program available on the Island;
- Mobility of tradespeople needs to be increased.

4.5. Non-Traditional Source of Labour Supply

Respondents were also asked about how much they rely on people that are considered to be non-traditional sources of supply of labour in the construction industry: women, immigrants, and Aboriginal people. The findings for the region are summarized in the Figure below.

Figure 15: Sources of Non-Traditional Sources of Labour in Construction, Vancouver Island

Occupation	Region	# of Resp't	Women	Immigrant	Aboriginal
			representati on Average	representati on Average	representati on Average
Construction Managers	VI	3	3.3%	14.3%	5.0%
Construction Supervisors	VI	1	0.0%	0.0%	5.0%
Construction Estimators	VI	2	2.5%	0.0%	9.0%
Boiler Makers	VI				
Bricklayers	VI	1	0.0%	88.0%	0.0%
Carpenters	VI	4	1.7%	7.7%	3.3%
Concrete Finisher	VI				
Construction Millwrights and Industrial Mechanics	VI				
Trades Helpers and Labourers	VI	3	1.7%	1.7%	3.3%
Crane Operators	VI	1	5.0%	0.0%	5.0%
Drillers and Blasters	VI				
Electricians	VI	4	7.7%	0.0%	1.7%
Elevator Constructors and Mechanics	VI				
Floor Covering Installers	VI				
Gas Fitters	VI	2	0.0%	0.0%	0.0%
Glaziers	VI	13	0.6%	1.3%	0.6%
Heavy Equipment Operators	VI	1	0.0%	0.0%	5.0%
Heavy Duty Equipment Mechanics	VI	2	2.5%	0.0%	0.0%
Industrial Instrument Technicians & Mechanics	VI	1	5.0%	5.0%	5.0%
Insulators	VI	4	1.7%	3.8%	10.3%
Ironworkers	VI	2	5.0%	2.5%	2.5%
Painters and Decorators	VI	3	3.3%	1.7%	7.7%
Plasters, Drywall Installers & Finishers, & Lathers	VI	3	3.3%	1.7%	3.3%
Plumbers	VI	8	2.9%	1.9%	0.6%
Refrigeration and A/C Mechanics	VI	3	0.0%	1.3%	0.0%
Residential Home Builders and Renovators	VI	2	0.0%	11.5%	0.0%
Residential and Commercial Installers & Servicers	VI	5	15.8%	6.6%	5.6%
Roofers and Shinglers	VI	1	0.0%	0.0%	0.0%
Sheet Metal Workers	VI	1	0.0%	0.0%	18.0%
Steamfitters, Pipefitters & Sprinkler System Installers	VI				
Structural Metal Fitters	VI	1	0.0%	0.0%	0.0%
Tilesetters	VI	5	0.0%	8.6%	1.0%
Truck Drivers	VI	2	0.0%	0.0%	2.5%
Welders	VI	4	23.3%	0.0%	1.3%

LM = Lower Mainland, VI = Vancouver Island, SI = Southern Interior, North = BCCA North

Source: CSC and BCCA Surveys; Prepared by RKA

Opinions from survey respondents indicate that women and Aboriginal people still account for a very small proportion of the trades workforce (on average 3.2 percent and 3.5 percent respectively). Participation of immigrants is only slightly more common in the industry's labour supply. For the region, survey results show that the average proportion of immigrants is about 6 percent.

5. Regional Construction Profile – Southern Interior

The area covered by the Southern Interior Construction Association is the same as two Development Regions in the province: the Thompson-Okanagan Development Region and the Kootenay Development Region. The Thompson-Okanagan Region has received strong net inflows of population because of the growing mining industry and because this area is a popular retirement centre.

In the Kootenay Region, tourism and the construction of four season resorts likely have attracted workers particularly in the eastern portion of the region. Overall, this area accounts for about 15 percent of the provincial population total. Total employment in the development regions was 327,100 in 2009, which accounted for 14 percent of the total employment in BC.

Within BC between the years of 2000 to 2009, overall employment growth in the economy was at an average growth rate of 1.8 percent per year. Employment growth of the construction industry outpaced that of the overall economy, at 6.5 percent per year. Comparing the region with the province at a whole, employment growth of the regional construction workforce was much faster than the province, at 9.1 percent per year. This is shown in Figure 16.

Figure 16: Employment in Construction Industry, Southern Interior and BC

	2000	2009	2000 to 2009	
			Growth	Average Annual %
	(in '000)			
BC	111.1	195.3	84.2	6.5%
Southern Interior	17	37.1	20.1	9.1%

Source: LFS, Statistics Canada

Between 2008 and 2009, construction employment declined by 8 percent in the Southern Interior, due to the slowdown in residential construction, while across the province overall employment in construction shrank by about 12 percent.

We can use statistics available for building permits as a proxy to examine economic activities in the construction sub-sectors.⁶ We note that for the province as a whole, residential construction activities account for the largest share of construction activities (almost two-thirds). Over the period between 2000 and 2009, it grew faster than the average for all sub-sectors of the construction industry. Also growing faster than average was the institutional and government

⁶ It is noted that although building permits are a leading indicator of construction activities, they do not represent the total construction activity in the province or the region, because not all areas report and some large projects do not require a permit. Missing here in the Table is representation of engineering construction projects. CSC makes use of data on residential and non-residential building investment, as well as engineering construction in the analysis. However, such data at a regional level within BC is not available at this time.

building construction. On the other hand, industrial and commercial construction grew more slowly than the provincial average.

For the region, sub-sector distribution was similar to their provincial counterpart, but the level of activity was higher. Over the period between 2000 and 2009, construction activity in Southern Interior grew much stronger than the provincial average. Institutional and government construction grew at an annual average rate of 22 percent, more than double the provincial average of 10 percent per year. Commercial construction grew at a rate of 6 percent per year, compared to 3 percent per year for the province as a whole. Residential construction in the region grew at a rate of 10 percent per year, much faster than the provincial average of 6 percent per year. All of these activities are reflective of stronger than average population growth and general favourable economic conditions in the region. Details of the year-to-year change of the sub-sector construction activities in the province as well as in the region can be found in Figure 17.

Figure 17: Value of Building Permits by Type, Southern Interior and BC

Building Permits (\$ 000) by Type	2000	2001	2002	2003	2004	2005	2006	2007	2008	Preliminary 2009p	2000-09 Average Annual Growth
British Columbia											
Residential	2,403,140	2,829,874	3,888,147	4,514,185	5,868,937	6,978,962	7,620,696	8,611,723	6,899,289	4,479,640	7%
% change	-7%	18%	37%	16%	30%	19%	9%	13%	-20%	-35%	
share	53%	57%	69%	71%	74%	68%	66%	69%	65%	59%	
Industrial	295,525	221,353	230,119	244,024	328,050	346,203	358,843	323,893	292,221	244,767	-2%
% change	-7%	-25%	4%	6%	34%	6%	4%	-10%	-10%	-16%	
share	7%	4%	4%	4%	4%	3%	3%	3%	3%	3%	
Institutional & Gov't I	496,062	732,312	424,408	506,406	513,713	979,529	1,068,309	961,170	762,136	1,135,123	10%
% change	-23%	48%	-42%	19%	1%	91%	9%	-10%	-21%	49%	
share	11%	15%	7%	8%	6%	10%	9%	8%	7%	15%	
Commercial	1,297,270	1,171,233	1,116,741	1,129,623	1,228,027	1,886,405	2,493,684	2,647,905	2,623,509	1,759,949	3%
% change	14%	-10%	-5%	1%	9%	54%	32%	6%	-1%	-33%	
share	29%	24%	20%	18%	15%	19%	22%	21%	25%	23%	
All Types	4,491,997	4,954,772	5,659,415	6,394,238	7,938,727	10,191,099	11,541,532	12,544,691	10,577,155	7,619,479	6%
% change	-4%	10%	14%	13%	24%	28%	13%	9%	-16%	-28%	
Southern Interior											
Residential	347,969	396,528	491,915	719,397	901,473	1,396,067	1,446,234	1,692,673	1,610,238	793,126	10%
% change	-13%	14%	24%	46%	25%	55%	4%	17%	-5%	-51%	
share	56%	56%	72%	71%	75%	72%	74%	71%	77%	53%	
Industrial	57,961	26,278	29,970	55,904	44,425	57,194	82,788	79,137	42,222	51,784	-1%
% change	66%	-55%	14%	87%	-21%	29%	45%	-4%	-47%	23%	
share	9%	4%	4%	6%	4%	3%	4%	3%	2%	3%	
Institutional & Gov't I	69,942	104,966	40,613	93,618	93,736	160,646	181,300	187,272	150,425	420,570	22%
% change	-15%	50%	-61%	131%	0%	71%	13%	3%	-20%	180%	
share	11%	15%	6%	9%	8%	8%	9%	8%	7%	28%	
Commercial	140,139	177,775	117,691	144,773	168,740	316,486	242,697	416,018	293,505	238,155	6%
% change	-14%	27%	-34%	23%	17%	88%	-23%	71%	-29%	-19%	
share	23%	25%	17%	14%	14%	16%	12%	18%	14%	16%	
All Types	616,011	705,547	680,189	1,013,692	1,208,374	1,930,393	1,953,019	2,375,100	2,096,390	1,503,635	10%
% change	-9%	15%	-4%	49%	19%	60%	1%	22%	-12%	-28%	

Source: Statistics Canada

Looking forward, survey respondents indicate that major projects driving upcoming construction activities include:

- Commercial work (Holiday Inn in Kelowna, winery construction, church building, Sparkling Hill Resort at Predator Ridge(Vernon));
- Multi-family residential construction (Apple Valley Seniors Home-Kelowna,);
- Government funded infrastructure (Okanagan College in Penticton, Penticton High School, Coldstream Elementary School, UBCO-Engineers Building, Gracom-Arts&Science, Vernon and Kelowna General Hospital, RIH intensive care unit in Revelstoke, recreational centres, community centres);
- Civil engineering projects (Kamloops sewage treatment plant).

According to BC Major Projects Inventory, specific projects include, for example, Kicking Horse Canyon Project – Hwy. 1 Improvement, BC Hydro's Mica Generating Facility Upgrade, Waneta Power Plant expansion.

5.1. Evaluation of 2009 and Expected Labour Market Conditions in 2010

A total of 60 completed surveys were received.⁷ Of these respondents, just one in ten reported they have a unionized workforce, but about 60 percent reported they are members of the BCCA.

In the Figure that follows, we show respondents' opinions on the labour market conditions in 2009 and their expectations in 2010. From a scale of 1 indicating "excess labour supply" to 5 for "severe labour shortage" for the specific occupation, the calculated average ranking for each trade is shown in the Table.

Throughout the rest of this chapter, it should be cautioned that, because of the extremely small sample size for certain trades/occupations (for example, the sample size for Construction Supervisors, Carpenters, Trades Helpers and Labourers, Elevator Constructors and Mechanics, Heavy Equipment Operators, and others), the results for these trades/occupations may not be representative of the whole sector in the region.

For the region as a whole, the average ranking for 2009 labour market condition is 2.3, while the ranking for expected labour market conditions in 2010 is 2.4. This indicates that on average, respondents believe labour supply of construction trades/occupations is generally available, with occasional shortage.

⁷ Note that these responses refer to number of completed surveys, and it is possible that the actual number of respondents is smaller as some respondents may have filled in questionnaires for more than one trade/occupation.

Figure 18: Respondents' Opinion on Labour Market Conditions, Southern Interior

Occupation	Region	# of Resp't	2009 Condition Average Ranking	Expected 2010 Condition Average Ranking
Construction Managers	SI	2	2.0	2.5
Construction Supervisors	SI	1	3.0	3.0
Construction Estimators	SI			
Boiler Makers	SI			
Bricklayers	SI	4	2.0	2.0
Carpenters	SI	1	3.0	3.0
Concrete Finisher	SI	3	3.0	2.7
Construction Millwrights and Industrial Mechanics	SI			
Trades Helpers and Labourers	SI	1		
Crane Operators	SI			
Drillers and Blasters	SI			
Electricians	SI	8	1.9	1.9
Elevator Constructors and Mechanics	SI	1	3.0	3.0
Floor Covering Installers	SI	2	3.0	3.5
Gas Fitters	SI			
Glaziers	SI	7	2.2	2.1
Heavy Equipment Operators	SI	1	1.0	2.0
Heavy Duty Equipment Mechanics	SI			
Industrial Instrument Technicians & Mechanics	SI			
Insulators	SI	3	3.0	2.0
Ironworkers	SI			
Painters and Decorators	SI	5	1.6	2.0
Plasters, Drywall Installers & Finishers, & Lathers	SI	1	3.0	3.0
Plumbers	SI	5	3.0	2.3
Refrigeration and A/C Mechanics	SI	5	2.8	2.6
Residential Home Builders and Renovators	SI			
Residential and Commercial Installers & Servicers	SI	2	1.5	2.0
Roofers and Shinglers	SI	1	2.0	3.0
Sheet Metal Workers	SI	3	2.7	2.7
Steamfitters, Pipefitters & Sprinkler System Installers	SI	1	2.0	2.0
Structural Metal Fitters	SI	2	1.5	2.0
Tilesetters	SI			
Truck Drivers	SI			
Welders	SI	1	2.0	1.0

LM = Lower Mainland, VI = Vancouver Island, SI = Southern Interior, North = BCCA North
 Source: CSC and BCCA Surveys; Prepared by RKA

5.2. Average Age and Respondents' Views on the Demographic Factor

Respondents also indicated the age distribution of their workforce, as well as their opinions on whether they consider age is adversely impacting their labour supply in the next five years. They have been asked to rank with a value of "1" for "Seriously Affecting Labour Supply" to a value of "3" for "Not an Issue". The results are summarized in the Figure to follow.

Figure 19: Average Age and Respondents' Opinion on Demographic Factor, Southern Interior

Occupation	# of		Average Age	Average Ranking
	Region	Resp't		
Construction Managers	SI	2	30	2.5
Construction Supervisors	SI	1	41	1.0
Construction Estimators	SI			
Boiler Makers	SI			
Bricklayers	SI	4	40	2.0
Carpenters	SI	1	30	2.0
Concrete Finisher	SI	3	40	2.3
Construction Millwrights and Industrial Mechanics	SI			
Trades Helpers and Labourers	SI	1	38	3.0
Crane Operators	SI			
Drillers and Blasters	SI			
Electricians	SI	8	37	2.4
Elevator Constructors and Mechanics	SI	1	38	2.0
Floor Covering Installers	SI	2	43	1.0
Gas Fitters	SI			
Glaziers	SI	7	41	1.9
Heavy Equipment Operators	SI	1	48	2.0
Heavy Duty Equipment Mechanics	SI			
Industrial Instrument Technicians & Mechanics	SI			
Insulators	SI	3	35	2.3
Ironworkers	SI			
Painters and Decorators	SI	5	46	2.3
Plasters, Drywall Installers & Finishers, & Lathers	SI	1	44	2.0
Plumbers	SI	5	37	1.8
Refrigeration and A/C Mechanics	SI	5	37	1.4
Residential Home Builders and Renovators	SI			
Residential and Commercial Installers & Servicers	SI	2	34	2.0
Roofers and Shinglers	SI	1	37	2.0
Sheet Metal Workers	SI	3	31	2.7
Steamfitters, Pipefitters & Sprinkler System Installers	SI	1	32	3.0
Structural Metal Fitters	SI	2	41	2.5
Tilesetters	SI			
Truck Drivers	SI			
Welders	SI	1	40	2.0

LM = Lower Mainland, VI = Vancouver Island, SI = Southern Interior, North = BCCA North
 Source: CSC and BCCA Surveys; Prepared by RKA

Average ranking values at 2.1, indicating respondents believe that the age structure of their trades workforce is only somewhat of an issue in the future labour supply. Only a few respondents believe that the ageing workforce in these

trades is of concern: Floor Covering Installers, Construction Supervisors, and Refrigeration and A/C Mechanics.

5.3. Average Size of Trades' Workforce and Seasonality

The Figure below shows the average size of the trades' workforce throughout the year, as well the size of the workforce at peak season. When the latter is quite different from the annual average, it indicates the nature of seasonality of the working condition.

Figure 20: Average Size of Trades Workforce and Peak Season Workforce, Southern Interior

Occupation	Region	# of		Average Size of Workforce	Peak Season Workforce
		Region	Resp't		
Construction Managers	SI	2		15	25
Construction Supervisors	SI	1		25	35
Construction Estimators	SI				
Boiler Makers	SI				
Bricklayers	SI	4		12	13
Carpenters	SI	1		5	
Concrete Finisher	SI	3		8	22
Construction Millwrights and Industrial Mechanics	SI				
Trades Helpers and Labourers	SI	1		45	45
Crane Operators	SI				
Drillers and Blasters	SI				
Electricians	SI	8		21	50
Elevator Constructors and Mechanics	SI	1		25	35
Floor Covering Installers	SI	2		20	35
Gas Fitters	SI				
Glaziers	SI	7		10	25
Heavy Equipment Operators	SI	1		5	15
Heavy Duty Equipment Mechanics	SI				
Industrial Instrument Technicians & Mechanics	SI				
Insulators	SI	3		8	10
Ironworkers	SI				
Painters and Decorators	SI	5			
Plasters, Drywall Installers & Finishers, & Lathers	SI	1		25	40
Plumbers	SI	5		21	38
Refrigeration and A/C Mechanics	SI	5		13	15
Residential Home Builders and Renovators	SI				
Residential and Commercial Installers & Servicers	SI	2		10	20
Roofers and Shinglers	SI	1		15	15
Sheet Metal Workers	SI	3			
Steamfitters, Pipefitters & Sprinkler System Installers	SI	1		15	15
Structural Metal Fitters	SI	2		25	45
Tilesetters	SI				
Truck Drivers	SI				
Welders	SI	1		45	200

LM = Lower Mainland, VI = Vancouver Island, SI = Southern Interior, North = BCCA North
 Source: CSC and BCCA Surveys; Prepared by RKA

On average, the peak season workforce is about twice as many as the regular workforce in this region, indicating much seasonality in the nature of the industry.

5.4. Respondents' View on Future Supply of New Apprentices

Respondents were asked of their opinions on whether they see future supply of new apprentices in the trade will be decreasing (for a value of "1") or will be increasing (for a value of "3"). If the topic is irrelevant to a specific trade, the value is "4". The Figure below shows the average ranking values by respondents.

Figure 21: Average Ranking of Future Supply of New Apprentices, Southern Interior

Occupation	Region	# of Resp't	Average Ranking
Construction Managers	SI	2	2.0
Construction Supervisors	SI	1	2.0
Construction Estimators	SI		
Boiler Makers	SI		
Bricklayers	SI	4	2.3
Carpenters	SI	1	3.0
Concrete Finisher	SI	3	2.0
Construction Millwrights and Industrial Mechanics	SI		
Trades Helpers and Labourers	SI	1	3.0
Crane Operators	SI		
Drillers and Blasters	SI		
Electricians	SI	8	2.6
Elevator Constructors and Mechanics	SI	1	2.0
Floor Covering Installers	SI	2	2.0
Gas Fitters	SI		
Glaziers	SI	7	2.0
Heavy Equipment Operators	SI	1	
Heavy Duty Equipment Mechanics	SI		
Industrial Instrument Technicians & Mechanics	SI		
Insulators	SI	3	2.7
Ironworkers	SI		
Painters and Decorators	SI	5	2.4
Plasters, Drywall Installers & Finishers, & Lathers	SI	1	1.0
Plumbers	SI	5	2.2
Refrigeration and A/C Mechanics	SI	5	2.0
Residential Home Builders and Renovators	SI		
Residential and Commercial Installers & Servicers	SI	2	2.0
Roofers and Shinglers	SI	1	2.0
Sheet Metal Workers	SI	3	2.3
Steamfitters, Pipefitters & Sprinkler System Installers	SI	1	2.0
Structural Metal Fitters	SI	2	3.0
Tilesetters	SI		
Truck Drivers	SI		
Welders	SI	1	2.0

LM = Lower Mainland, VI = Vancouver Island, SI = Southern Interior, North = BCCA North
 Source: CSC and BCCA Surveys; Prepared by RKA

The average ranking from all respondents Southern Interior is 2.2, indicating that more respondents believe that the future supply of apprentices will at least stay the same level as now, and may even be increasing.

When asked about major issues surrounding future labour supply, respondents have put forward the following:

- Trades training school (locally) needed;
- People need to realize the seasonal nature of the construction work. Also physically demanding work and long hours;
- Need access to temporary foreign workers;
- Pay scale needs to be higher (wages in trades not competitive with other careers);
- Better educated and motivated teachers needed;
- For Floor Covering Installers, better methods of motivation and making it affordable for younger people to come into the trade is a big issue. BC Floor Covering Association is on the coast, so there is a huge cost sending people to the coast;
- Mobility of tradespeople;
- Number of young domestic workers who enter the Plaster, Drywall Installer and Finisher, and Lathers trade is too low to cover the demand for skilled workers; and
- Certification not needed for sheet metal workers. Deal with apprenticeship in schools-career development in trades. Business training for trades should be in apprenticeship programs.

5.5. Non-Traditional Source of Labour Supply

Respondents were also asked about how much they rely on people that are considered to be non-traditional sources of supply of labour in the construction industry: women, immigrants, and Aboriginal people. The findings for the region are summarized in the Figure below.

Figure 22: Sources of Non-Traditional Sources of Labour in Construction, Southern Interior

Occupation	Region	# of Resp't	Women	Immigrant	Aboriginal
			representati on Average	representati on Average	representati on Average
Construction Managers	SI	2	2.5%	21.5%	0.0%
Construction Supervisors	SI	1	5.0%	5.0%	5.0%
Construction Estimators	SI				
Boiler Makers	SI				
Bricklayers	SI	4	0.0%	12.0%	5.8%
Carpenters	SI	1	0.0%	5.0%	0.0%
Concrete Finisher	SI	3	0.0%	3.3%	1.7%
Construction Millwrights and Industrial Mechanics	SI				
Trades Helpers and Labourers	SI	1	38.0%	5.0%	0.0%
Crane Operators	SI				
Drillers and Blasters	SI				
Electricians	SI	8	4.8%	6.4%	0.0%
Elevator Constructors and Mechanics	SI	1	5.0%	5.0%	5.0%
Floor Covering Installers	SI	2	2.5%	5.0%	0.0%
Gas Fitters	SI				
Glaziers	SI	7	4.7%	0.8%	1.7%
Heavy Equipment Operators	SI	1	0.0%	0.0%	0.0%
Heavey Duty Equipment Mechanics	SI				
Industrial Instrument Technicians & Mechanics	SI				
Insulators	SI	3	1.7%	0.0%	0.0%
Ironworkers	SI				
Painters and Decorators	SI	5	5.6%	8.6%	3.6%
Plasters, Drywall Installers & Finishers, & Lathers	SI	1	2.5%	21.5%	2.5%
Plumbers	SI	5	2.0%	3.0%	3.8%
Refrigeration and A/C Mechanics	SI	5	1.0%	2.0%	0.0%
Residential Home Builders and Renovators	SI				
Residential and Commercial Installers & Servicers	SI	2	9.0%	2.5%	9.0%
Roofers and Shinglers	SI	1	0.0%	0.0%	5.0%
Sheet Metal Workers	SI	3	3.3%	1.7%	0.0%
Steamfitters, Pipefitters & Sprikler System Installers	SI	1	5.0%	5.0%	5.0%
Structural Metal Fitters	SI	2	2.5%	2.5%	2.5%
Tilesetters	SI				
Truck Drivers	SI				
Welders	SI	1	5.0%	18.0%	0.0%

LM = Lower Mainland, VI = Vancouver Island, SI = Southern Interior, North = BCCA North

Source: CSC and BCCA Surveys; Prepared by RKA

Based on results from survey respondents, women and Aboriginal people still account for a very small proportion of the trades workforce (on average 4.5 percent and 2.3 percent respectively). Survey respondents also indicate that immigrants account for a slightly higher portion in the regional industry's labour supply. For the region, the average proportion of immigrants is about 6 percent.

6. Regional Construction Profile – Northern BC

The area covered by the BC Construction Association North covers the areas corresponding to four Development Regions – Cariboo, North Coast, Nechako, and Northeast – in the province.⁸ This area is the least densely populated (accounting for only 7.3 percent of the provincial population total) but contains a concentration of resource related activities. Total employment in the development region was 153,100 in 2009, which accounted for 7 percent of the total employment in BC.

Within BC between the years of 2000 to 2009, overall employment growth in the economy was at an average growth rate of 1.8 percent per year. Employment growth of the construction industry outpaced that of the overall economy, at 6.5 percent per year. Comparing the development region with the province as a whole, employment growth of the regional construction workforce was slower than the province, at 4.5 percent per year. This is shown in Figure 23.

Figure 23: Employment in Construction Industry, Northern BC and BC

	2000	2009	2000 to 2009	
			Growth	Average Annual %
	(in '000)			
BC	111.1	195.3	84.2	6.5%
Northern BC	8.9	13.2	4.3	4.5%

Source: LFS, Statistics Canada

It should be noted that construction employment growth in the region was up by 7 percent between 2008 and 2009, while across the province overall employment in construction shrank by about 12 percent.

We can use statistics available for building permits as a proxy to examine economic activities in the construction sub-sectors.⁹ We note that for the province as a whole, residential construction activities account for the largest share of construction activities (almost two-thirds). Over the period between 2000 and 2009, it grew faster than the average for all sub-sectors of the construction industry. Also growing faster than average was the institutional and government building construction. On the other hand, industrial and commercial construction grew more slowly than the provincial average.

⁸ Including the Mainland portion of Mt. Waddington Regional District.

⁹ It is noted that although building permits are a leading indicator of construction activities, they do not represent the total construction activity in the province or the region, because not all areas report and some large projects do not require a permit. Missing here in the Table is representation of engineering construction projects. CSC makes use of data on residential and non-residential building investment, as well as engineering construction in the analysis. However, such data at a regional level within BC is not available at this time.

For the region, sub-sector distribution was similar to their provincial counterpart. Over the period of 2000 to 2009, residential construction and commercial construction grew faster than the regional average, reflecting positive in-migration to the region. Details of the year-to-year change of the sub-sector construction activities in the province as well as in the region can be found in Figure 24.

It should also be noted that since all types of building permits showed negative growth between 2008 and 2009 in the region, the positive employment growth in the region is likely the result of an increase in engineering construction.

Figure 24: Value of Building Permits by Type, Northern BC and BC

Building Permits (\$ 000) by Type	2000	2001	2002	2003	2004	2005	2006	2007	2008	Preliminary 2009p	2000-09 Average Annual Growth
British Columbia											
Residential	2,403,140	2,829,874	3,888,147	4,514,185	5,868,937	6,978,962	7,620,696	8,611,723	6,899,289	4,479,640	7%
% change	-7%	18%	37%	16%	30%	19%	9%	13%	-20%	-35%	
share	53%	57%	69%	71%	74%	68%	66%	69%	65%	59%	
Industrial	295,525	221,353	230,119	244,024	328,050	346,203	358,843	323,893	292,221	244,767	-2%
% change	-7%	-25%	4%	6%	34%	6%	4%	-10%	-10%	-16%	
share	7%	4%	4%	4%	4%	3%	3%	3%	3%	3%	
Institutional & Gov't l	496,062	732,312	424,408	506,406	513,713	979,529	1,068,309	961,170	762,136	1,135,123	10%
% change	-23%	48%	-42%	19%	1%	91%	9%	-10%	-21%	49%	
share	11%	15%	7%	8%	6%	10%	9%	8%	7%	15%	
Commercial	1,297,270	1,171,233	1,116,741	1,129,623	1,228,027	1,886,405	2,493,684	2,647,905	2,623,509	1,759,949	3%
% change	14%	-10%	-5%	1%	9%	54%	32%	6%	-1%	-33%	
share	29%	24%	20%	18%	15%	19%	22%	21%	25%	23%	
All Types	4,491,997	4,954,772	5,659,415	6,394,238	7,938,727	10,191,099	11,541,532	12,544,691	10,577,155	7,619,479	6%
% change	-4%	10%	14%	13%	24%	28%	13%	9%	-16%	-28%	
Northern BC											
Residential	87,444	70,959	71,911	75,952	111,053	137,393	206,319	283,289	240,028	186,317	9%
% change	-23%	-19%	1%	6%	46%	24%	50%	37%	-15%	-22%	
share	41%	32%	40%	34%	43%	33%	47%	57%	51%	52%	
Industrial	12,977	9,744	21,028	24,732	66,669	80,614	16,765	41,047	25,955	12,471	0%
% change	-44%	-25%	116%	18%	170%	21%	-79%	145%	-37%	-52%	
share	6%	4%	12%	11%	26%	19%	4%	8%	6%	3%	
Institutional & Gov't l	57,660	90,826	32,595	36,501	23,954	87,682	52,394	70,577	81,098	50,338	-1%
% change	37%	58%	-64%	12%	-34%	266%	-40%	35%	15%	-38%	
share	27%	41%	18%	16%	9%	21%	12%	14%	17%	14%	
Commercial	56,620	49,097	56,151	84,937	58,672	107,883	160,268	104,264	122,934	109,957	8%
% change	9%	-13%	14%	51%	-31%	84%	49%	-35%	18%	-11%	
share	26%	22%	31%	38%	23%	26%	37%	21%	26%	31%	
All Types	214,701	220,626	181,685	222,122	260,348	413,572	435,746	499,177	470,015	359,083	6%
% change	-7%	3%	-18%	22%	17%	59%	5%	15%	-6%	-24%	

Source: Statistics Canada

Looking forward, survey respondents indicate that major projects driving upcoming construction activities include:

- Commercial work (Walmart expansion, new hotels and casinos);
- New residential housing;
- Civil engineering projects (Horn River Basin & related projects, bio-energy facility, highway, oilfields, mining, pulp mills).

From BC Major Projects Inventory, specific projects include, for example, Mt. Milligan Copper/Gold Mine, Prince Rupert Port Expansion, Rio Tinto Alcan Aluminum Smelter Expansion, and BC Hydro's Peace River Site C Dam.

6.1. Evaluation of 2009 and Expected Labour Market Conditions in 2010

A total of 50 completed surveys were received.¹⁰ Of these respondents, only 2.4 percent reported they have a unionized workforce, and fewer than 10 percent reported they are members of the BCCA.

In Figure 25 that follows, we show respondents' opinions on the labour market conditions in 2009 and their expectations in 2010. From a scale of 1 indicating "excess labour supply" to 5 for "severe labour shortage" for the specific occupation, the calculated average ranking for each trade is shown in the Table.

Throughout the rest of this chapter, it should be cautioned that, because of the extremely small sample size for certain trades/occupations (for example, the sample size for Construction Supervisors, Construction Millwrights and Industrial Mechanics, Crane Operators, Floor Covering Installers, Glaziers, and others), the results for these trades/occupations may not be representative of the whole sector in the region.

For the region as a whole, the average ranking for 2009 labour market condition is 3.1, while the ranking for expected labour market conditions in 2010 is 3.1, indicating a slightly tighter labour supply in the region when compared with the rest of the province.

¹⁰ Note that these responses refer to number of completed surveys, and it is possible that the actual number of respondents is smaller as some respondents may have filled in questionnaires for more than one trade/occupation.

Figure 25: Respondents' Opinion on Labour Market Conditions, Northern BC

Occupation	Region	# of Resp't	2009 Condition Average Ranking	Expected 2010 Condition Average Ranking
Construction Managers	North			
Construction Supervisors	North	1	3.0	3.0
Construction Estimators	North			
Boiler Makers	North			
Bricklayers	North			
Carpenters	North	4	1.5	2.0
Concrete Finisher	North			
Construction Millwrights and Industrial Mechanics	North	1	5.0	5.0
Trades Helpers and Labourers	North	9	2.0	2.3
Crane Operators	North	1	3.0	3.0
Drillers and Blasters	North			
Electricians	North	4	2.5	2.8
Elevator Constructors and Mechanics	North			
Floor Covering Installers	North	1	3.0	3.0
Gas Fitters	North			
Glaziers	North	1	2.0	2.0
Heavy Equipment Operators	North	4	3.3	2.8
Heavy Duty Equipment Mechanics	North			
Industrial Instrument Technicians & Mechanics	North			
Insulators	North	1	3.0	3.0
Ironworkers	North			
Painters and Decorators	North	1	3.0	3.0
Plasters, Drywall Installers & Finishers, & Lathers	North	2	3.0	3.0
Plumbers	North	3	3.7	3.7
Refrigeration and A/C Mechanics	North	1	5.0	5.0
Residential Home Builders and Renovators	North	1	3.0	3.0
Residential and Commercial Installers & Servicers	North	1	5.0	5.0
Roofers and Shinglers	North	2	2.5	2.5
Sheet Metal Workers	North	2	3.5	3.5
Steamfitters, Pipefitters & Sprinkler System Installers	North			
Structural Metal Fitters	North	1	2.0	2.0
Tilesetters	North			
Truck Drivers	North	5	2.8	2.6
Welders	North	4	3.0	3.3

LM = Lower Mainland, VI = Vancouver Island, SI = Southern Interior, North = BCCA North
 Source: CSC and BCCA Surveys; Prepared by RKA

6.2. Average Age and Respondents' Views on the Demographic Factor

Respondents also indicated the age distribution of their workforce, as well as their opinions on whether they consider age is adversely impacting their labour supply in the next five years. They have been asked to rank with a value of "1" for "Seriously Affecting Labour Supply" to a value of "3" for "Not an Issue". The results are summarized in the Figure to follow.

Figure 26: Average Age and Respondents' Opinion on Demographic Factor, Northern BC

Occupation	Region	# of Resp't	Average Age	Average Ranking
Construction Managers	North			
Construction Supervisors	North	1	25	3.0
Construction Estimators	North			
Boiler Makers	North			
Bricklayers	North			
Carpenters	North	4	21	2.8
Concrete Finisher	North			
Construction Millwrights and Industrial Mechanics	North	1	50	1.0
Trades Helpers and Labourers	North	9	31	2.9
Crane Operators	North	1	25	3.0
Drillers and Blasters	North			
Electricians	North	4	34	3.0
Elevator Constructors and Mechanics	North			
Floor Covering Installers	North	1	25	3.0
Gas Fitters	North			
Glaziers	North	1	37	3.0
Heavy Equipment Operators	North	4	52	2.3
Heavy Duty Equipment Mechanics	North			
Industrial Instrument Technicians & Mechanics	North			
Insulators	North	1	25	3.0
Ironworkers	North			
Painters and Decorators	North	1	25	3.0
Plasters, Drywall Installers & Finishers, & Lathers	North	2	44	2.5
Plumbers	North	3	35	2.3
Refrigeration and A/C Mechanics	North	1	20	3.0
Residential Home Builders and Renovators	North	1	40	3.0
Residential and Commercial Installers & Servicers	North	1	41	1.0
Roofers and Shinglers	North	2	29	3.0
Sheet Metal Workers	North	2	33	2.5
Steamfitters, Pipefitters & Sprinkler System Installers	North			
Structural Metal Fitters	North	1	45	3.0
Tilesetters	North			
Truck Drivers	North	5	42	1.8
Welders	North	4	34	2.5

LM = Lower Mainland, VI = Vancouver Island, SI = Southern Interior, North = BCCA North
 Source: CSC and BCCA Surveys; Prepared by RKA

Average ranking values at 2.6, indicating respondents have few concerns about the age factor in future labour supply. A number of trades, however, do have an average age much higher than average for all trades, according to survey

respondents. These are the Construction Millwrights and Industrial Mechanics, and the Residential and Commercial Installers and Servicers.

6.3. Average Size of Trades' Workforce and Seasonality

The Figure below shows the average size of the trades' workforce throughout the year, as well the size of the workforce at peak season. When the latter is quite different from the annual average, it indicates the seasonal nature of the working condition.

Figure 27: Average Size of Trades Workforce and Peak Season Workforce, Northern BC

Occupation	# of		Average Size of Workforce	Peak Season Workforce
	Region	Resp't		
Construction Managers	North			
Construction Supervisors	North	1	5	5
Construction Estimators	North			
Boiler Makers	North			
Bricklayers	North			
Carpenters	North	4	18	23
Concrete Finisher	North			
Construction Millwrights and Industrial Mechanics	North	1	5	
Trades Helpers and Labourers	North	9		
Crane Operators	North	1	5	5
Drillers and Blasters	North			
Electricians	North	4	10	20
Elevator Constructors and Mechanics	North			
Floor Covering Installers	North	1	5	5
Gas Fitters	North			
Glaziers	North	1	15	15
Heavy Equipment Operators	North	4	8	10
Heavy Duty Equipment Mechanics	North			
Industrial Instrument Technicians & Mechanics	North			
Insulators	North	1	5	5
Ironworkers	North			
Painters and Decorators	North	1	5	15
Plasters, Drywall Installers & Finishers, & Lathers	North	2	5	5
Plumbers	North	3	18	25
Refrigeration and A/C Mechanics	North	1	5	5
Residential Home Builders and Renovators	North	1	5	5
Residential and Commercial Installers & Servicers	North	1	5	5
Roofers and Shinglers	North	2	10	10
Sheet Metal Workers	North	2	25	25
Steamfitters, Pipefitters & Sprinkler System Installers	North			
Structural Metal Fitters	North	1	5	5
Tilesetters	North			
Truck Drivers	North	5	9	10
Welders	North	4	5	13

LM = Lower Mainland, VI = Vancouver Island, SI = Southern Interior, North = BCCA North
 Source: CSC and BCCA Surveys; Prepared by RKA

On average, peak season workforce is about 25 percent higher than regular workforce in this region. Compared with other regions, this region's workforce sees the least amount of seasonality, which is likely attributed to the non-residential projects these contractors undertake.

6.4. Respondents' View on Future Supply of New Apprentices

Respondents were asked of their opinions on whether they see future supply of new apprentices in the trade will be decreasing (for a value of "1") or will be increasing (for a value of "3"). If the topic is irrelevant to a specific trade, the value is "4". The Figure below shows the average ranking values by respondents.

Figure 28: Average Ranking of Future Supply of New Apprentices, Northern BC

Occupation	Region	# of Resp't	Average Ranking
Construction Managers	North		
Construction Supervisors	North	1	3.0
Construction Estimators	North		
Boiler Makers	North		
Bricklayers	North		
Carpenters	North	4	2.5
Concrete Finisher	North		
Construction Millwrights and Industrial Mechanics	North	1	2.0
Trades Helpers and Labourers	North	9	3.2
Crane Operators	North	1	3.0
Drillers and Blasters	North		
Electricians	North	4	2.8
Elevator Constructors and Mechanics	North		
Floor Covering Installers	North	1	3.0
Gas Fitters	North		
Glaziers	North	1	2.0
Heavy Equipment Operators	North	4	2.3
Heavy Duty Equipment Mechanics	North		
Industrial Instrument Technicians & Mechanics	North		
Insulators	North	1	3.0
Ironworkers	North		
Painters and Decorators	North	1	3.0
Plasters, Drywall Installers & Finishers, & Lathers	North	2	2.5
Plumbers	North	3	2.3
Refrigeration and A/C Mechanics	North	1	1.0
Residential Home Builders and Renovators	North	1	3.0
Residential and Commercial Installers & Servicers	North	1	3.0
Roofers and Shinglers	North	2	2.5
Sheet Metal Workers	North	2	2.0
Steamfitters, Pipefitters & Sprinkler System Installers	North		
Structural Metal Fitters	North	1	4.0
Tiles setters	North		
Truck Drivers	North	5	3.0
Welders	North	4	3.0

LM = Lower Mainland, VI = Vancouver Island, SI = Southern Interior, North = BCCA North
 Source: CSC and BCCA Surveys; Prepared by RKA

The average ranking from all respondents from Northern BC is 2.7, indicating that more respondents believe that the future supply of apprentices will likely be increasing.

When asked about major issues surrounding future labour supply, respondents have put forward the following:

- Need to increase career awareness;
- Have schools to teach more about trades career;
- Labour in the industry should be regulated so that trades work is done by qualified trades' people and not by handymen off the street, or the cheapest foreign workers. This will help ensure that a person who chooses a career in construction will be able to raise a family and make a decent living. If we can do this, there would not be a problem finding workers;
- Not enough qualified journeypersons to train apprentices; and
- More northern training programs and on partnering with others to make training happen.

6.5. Non-Traditional Source of Labour Supply

Respondents were also asked about how much they rely on people that are considered to be non-traditional sources of supply of labour in the construction industry: women, immigrants, and Aboriginal people. The findings for the region are summarized in the Figure below.

Figure 29: Sources of Non-Traditional Sources of Labour in Construction, Northern BC

Occupation	Region	# of			
		Resp't	Women representati on Average	Immigrant representati on Average	Aboriginal representati on Average
Construction Managers	North				
Construction Supervisors	North	1	0.0%	0.0%	0.0%
Construction Estimators	North				
Boiler Makers	North				
Bricklayers	North				
Carpenters	North	4	5.0%	5.0%	18.0%
Concrete Finisher	North				
Construction Millwrights and Industrial Mechanics	North	1	0.0%	0.0%	0.0%
Trades Helpers and Labourers	North	9	1.3%	1.3%	31.0%
Crane Operators	North	1	0.0%	0.0%	0.0%
Drillers and Blasters	North				
Electricians	North	4	0.0%	0.0%	0.0%
Elevator Constructors and Mechanics	North				
Floor Covering Installers	North	1	0.0%	0.0%	0.0%
Gas Fitters	North				
Glaziers	North	1	0.0%	0.0%	5.0%
Heavy Equipment Operators	North	4	5.0%	5.0%	18.0%
Heavey Duty Equipment Mechanics	North				
Industrial Instrument Technicians & Mechanics	North				
Insulators	North	1	0.0%	0.0%	0.0%
Ironworkers	North				
Painters and Decorators	North	1	0.0%	0.0%	0.0%
Plasters, Drywall Installers & Finishers, & Lathers	North	2	0.0%	0.0%	38.0%
Plumbers	North	3	0.0%	0.0%	19.0%
Refrigeration and A/C Mechanics	North	1	0.0%	0.0%	0.0%
Residential Home Builders and Renovators	North	1	0.0%	0.0%	0.0%
Residential and Commercial Installers & Servicers	North	1	0.0%	0.0%	0.0%
Roofers and Shinglers	North	2	0.0%	0.0%	5.0%
Sheet Metal Workers	North	2	0.0%	0.0%	0.0%
Steamfitters, Pipefitters & Sprikler System Installers	North				
Structural Metal Fitters	North	1	0.0%	0.0%	0.0%
Tilesetters	North				
Truck Drivers	North	5	0.0%	0.0%	0.0%
Welders	North	4	19.0%	9.0%	11.5%

LM = Lower Mainland, VI = Vancouver Island, SI = Southern Interior, North = BCCA North

Source: CSC and BCCA Surveys; Prepared by RKA

In this region the use of immigrants is almost non-existent (1 percent of the trades workforce), according to survey respondents. Survey results also indicate that women's share is also low, at 1.4 percent, but the participation of Aboriginal people in the workforce is the highest amongst all regions in the province (7 percent of the workforce).

7. Summary and Conclusions

In this report, we examined available information regarding current labour market conditions of construction trades workforce as well as the expected labour market conditions for these trades in the near future in four regions: the Lower Mainland, Vancouver Island, Southern Interior, and Northern BC. Survey respondents also provided information regarding major construction projects in each of the four regions in the province which drive the growth of the construction industry in these regions.

We have found that

- In Northern BC, the driving forces for construction activities at present and in the near future are civil engineering projects and industrial building projects. Examples of these projects are oil fields development and highway construction.
- In the Southern Interior, Vancouver Island, and the Lower Mainland, the driving forces for construction activities in these regions are commercial and residential building projects. There is also a growing trend of multi-purpose commercial/residential building appearing in the market. In the Vancouver Island region, institutional building construction is also a driving force for employment.

We have also analyzed survey data related to the supply of labour for the industry.

A total of 241 completed surveys were utilized to arrive at our analysis. The breakdown of respondents by region, union membership, and BCCA membership is summarized below.

	Number of Respondents	% Reported Workforce Unionized	% Reported as Member of BCCA
Lower Mainland	49	20.6%	60.9%
Vancouver Island	82	42.7%	55.7%
Southern Interior	60	11.1%	60.4%
Northern BC	50	2.4%	9.5%

On 2009 labour market conditions and expected conditions in 2010, results from survey respondents can be summarized as follows.

	Average Ranking		
	2009 Labour Market Conditions	2010 Expected Labour Market Conditions	
Lower Mainland	2.3	2.1	Respondents' consensus is that trades/occupations are generally available, and shortage only from time to time
Vancouver Island	2.6	2.6	Respondents' consensus is that trades/occupations generally available, and shortage only from time to time
Southern Interior	2.3	2.4	Respondents' consensus is that trades/occupations generally available, shortages only from time to time
Northern BC	3.1	3.1	Respondents' consensus is that there are shortages of trades/occupations from time to time

From "1" for "Excess Labour Supply"
To "5" for "Severe Labour Shortage"

Average age of trades/occupations and whether respondents are concerned about demographic factors impacting future supply of labour, respondents' responses are as follows.

	Average Age	Ave. Ranking Demographics an Issue of Labour Supply Next 5 Years	
Lower Mainland	38.3	2.4	Ageing workforce is disconcerting for specific trades, such as Carpenters, Gas Fitters, Residential Home Builders and Renovators, as well as Residential and Commercial Installers and Servicers.
Vancouver Island	38.2	2.2	Ageing workforce is of concern, specifically for Gas Fitters, Heavy Equipment Operators, Iron Workers, and Painters and Decorators
Southern Interior	38.2	2.1	A few respondents believe that the ageing workforce in these trades is of concern: Floor Covering Installers, Construction Supervisors, and Refrigeration and A/C Mechanics
Northern BC	33.9	2.6	A number of trades have an average age much higher than average for all trades: Construction Millwrights and Industrial Mechanics, and the Residential and Commercial Installers and Servicers.

From "1" for "A Major Issue"
To "3" for "Not an Issue"

Ageing of the workforce continues to be an issue in this industry, although results from these survey respondents did show an average age that is younger than what we have observed in literature in the recent past.

Certain areas of the industry face a challenge in recruiting young people into the sector as well as maintaining a level of apprenticeship enrolment that is

sustainable to the industry. Survey respondents believe that it is important to communicate to young people the kinds of jobs available in the industry, which are professional careers that are well-compensated and in need of young recruits. High school career counsellors and parents also need to be involved to encourage more young people to enter these skilled trades/labour occupations. Certain factors impacting apprenticeship training completions were also identified, such as the access to financial assistance, and the unavailability of training facilities that are easily accessible to apprentices.

Overall, survey respondents appear to be cautiously optimistic about the level of apprentices to the industry in the near future.

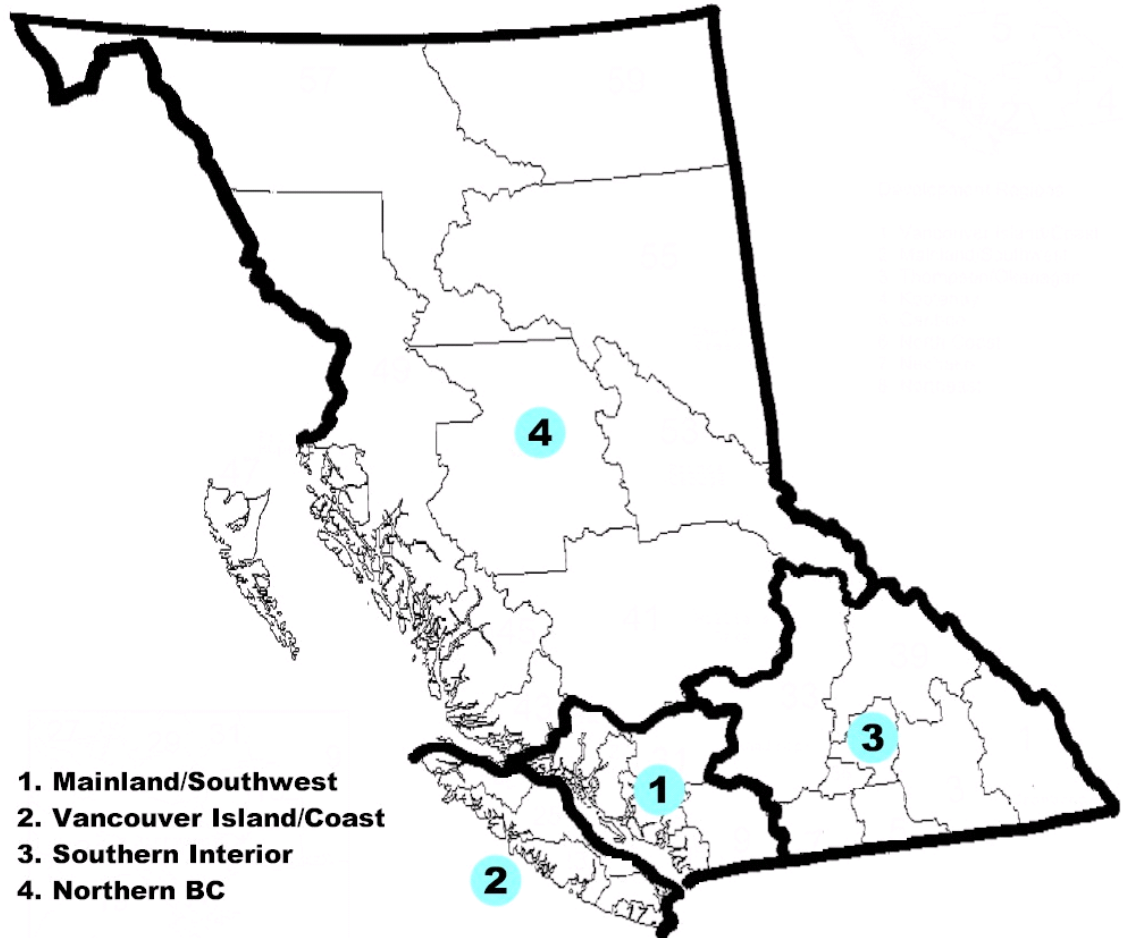
Ave. Ranking Level of New Apprentices Next 3 Years	
Lower Mainland	2.4
Vancouver Island	2.2
Southern Interior	2.2
Northern BC	2.7

From "1" for "Decreasing"
To "3" for "Increasing"
(Value "4" for "Not Applicable")

Finally, the utilization of non-traditional sources of labour supply, namely, women, immigrants, and Aboriginal workers have been examined. Of all the regions, employers/contractors in the Lower Mainland have the highest share of their workforce who are immigrants. In Northern BC, employers/contractors also make inroads in utilizing Aboriginal population in their workforce.

	Women's Representation	Immigrants Representation	Aboriginal Representation
Lower Mainland	3.9%	19.7%	3.2%
Vancouver Island	3.2%	5.8%	3.5%
Southern Interior	4.5%	6.1%	2.3%
Northern BC	1.4%	1.0%	6.9%

Appendix I Boundaries of BCCA Regions and BC Development Regions



Source: based on BC Stats' Map of Development Regions