

BRITISH COLUMBIA

British Columbia's expansion set to resume

HIGHLIGHTS 2021-2030

A rise in major engineering and public-sector projects partly offsets declines in residential and other private-sector investment in 2020, interrupting the strong expansion over the latter half of the previous decade.

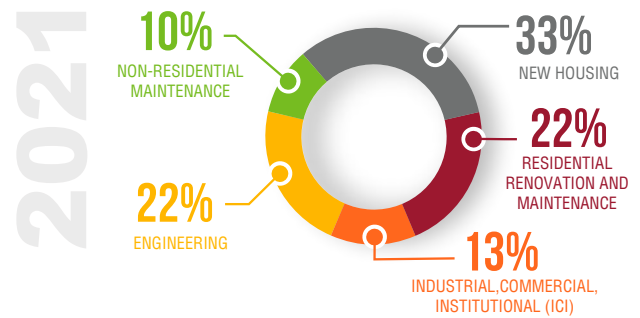
The slowdown in activity provided a reprieve from some of the chronic recruitment challenges felt across most markets in 2019, but challenges are expected to return as growth resumes in 2021 and builds to an anticipated non-residential peak in 2022.

British Columbia's construction employment is expected to recover and continue rising to 2024, increasing by 12,446 workers (+7%). Growth is driven by the stacking of major heavy industrial, public transit, education, health care, highway, and bridge projects, as well as a recovery in new housing, renovation work, and commercial building construction.

As current major projects peak and wind down, non-residential construction is expected to cycle down, but is projected to return to growth by 2027. Following an expected decline in 2021, residential employment rises at a moderate pace across the 2021-2030 scenario period. Over the decade, construction industry employment should grow by 17,800 workers – an approximate 10% rise over 2020 levels.

Industry faces the added challenge of replacing an aging labour force with the expected retirement of more than 41,000 workers, or 22% of the current labour force, over the next decade.

DISTRIBUTION OF CONSTRUCTION EMPLOYMENT IN 2021, BRITISH COLUMBIA



10-YEAR WORKFORCE OUTLOOK FOR BRITISH COLUMBIA



HIGHLIGHTS

- Non-residential employment is expected to be propelled higher by 11,439 workers (+16%) in just two years between 2020 and 2022.
- Housing starts are anticipated to recover in 2022 and rise back above 40,000 units by 2024.
- The recent slowdown has not alleviated the expected retirement of 41,000 workers over the scenario period. Accounting for retirements and expansion demand, industry will need to recruit close to 59,650 workers over the coming decade.



AVERAGE UNEMPLOYMENT RATE **6.4%**

BuildForce's LMI System

BuildForce Canada uses a scenario-based forecasting system to assess future construction labour requirements in the heavy industrial, residential, and non-residential construction markets. This labour market information (LMI) system tracks 34 trades and occupations. To further improve the robustness of the system, BuildForce consults with industry stakeholders, including owners, contractors, and labour groups, to validate the scenario assumptions and construction project lists, and seeks input from government on related analysis. The information is then distilled into labour market condition rankings to help industry employers with the management of their respective human resources.

BRITISH COLUMBIA CONSTRUCTION OUTLOOK

British Columbia was among the provinces hit hardest by the impacts of COVID-19 in 2020, recording the first material decline in construction employment in more than a decade. The strong pullback was felt in new housing, and commercial and industrial building construction, which experienced double-digit declines in investment compared to 2019. The overall losses were only partly offset by rising major project demands, including the LNG Canada facility, Site C dam, the Trans Mountain Pipeline Expansion, and numerous public-transportation projects.

The decline follows a period of rapid growth that translated into a 20% increase in construction employment over the four years prior to 2020, which drove down unemployment and led to the emergence of widespread recruiting challenges.

Construction is poised for renewed growth in 2021, as major project demands continue to rise and industrial and commercial investment recovers. Non-residential employment is expected to rise by 11,400 workers to an anticipated peak in 2022. Much of the anticipated growth in construction investment is concentrated in the Lower Mainland region, driven by several major transportation and other major public-infrastructure projects. The pace of residential employment growth is constrained in 2021, driven by continued weakness in new-housing construction, where a modest decline in housing starts is expected, particularly in condo and apartment construction.

The challenges of meeting the ramp-up in major-project requirements has been somewhat lessened by increased mobility potentially from other sectors that weakened in 2020, but mobility may be limited for some trades where specialized skills and experience are needed to meet near-term peak demands.

Over the decade, industry growth increases the labour force by more than 18,600 workers – up 10% compared to 2020. Industry must also address the need to replace an aging workforce, with an estimated 41,000 workers, or 22% of the current labour force, expected to retire. Combining retirement and expansion demands, the construction industry will need to recruit close to 59,650 workers over the coming decade. This demand may be partially met by up to 35,150 new entrants under the age of 30 available locally, but a significant portion of remaining demand will need to be drawn from other industries or other provinces.

SECTOR INSIGHTS

The following sections provide sector-specific insights into the provincial residential and non-residential labour markets. Also included in the report are residential and non-residential market conditions for the B.C. Lower Mainland and Vancouver Island regions.

The BuildForce LMI system tracks supply and accounts for the change in the available labour force, including retirements, new entrants¹, and net mobility².

BuildForce assesses market conditions for 34 construction trades and occupations using a ranking system that combines measures of the change in employment, unemployment, net mobility, and adjustments based on industry input. The rankings reflect residential and non-residential market conditions unique to the province based on current and proposed construction activity. In addition, assumptions on provincial economic and population growth, new entrants to the labour force, and migration patterns (interprovincial and international) are built into the forecast scenario and included in the ranking assessment.

The rankings for some trades are suppressed due to the small size of the workforce (fewer than 100 workers) and limited statistical reliability when assessing labour market conditions at the sector level. Some trades are also excluded because they typically do not work in the sector being assessed (e.g., boilermakers and millwrights in residential construction, and homebuilding and renovation managers in non-residential construction).

For British Columbia, rankings are reported for 28 residential and 32 non-residential trades and occupations. For the Lower Mainland, rankings are reported for 27 residential and 32 non-residential trades and occupations. For Vancouver Island, rankings are reported for 19 residential and 23 non-residential trades and occupations.

PROVINCIAL RESIDENTIAL SECTOR

Residential construction in the province declined sharply in 2020, as COVID-19 impacted both new-home construction and renovation work. Housing starts fell sharply due to lower demand from reductions in migration to the province and lower investment for condos and apartments. The pullback followed a period of strong expansion, driven by high levels of international migration and an influx of foreign students, which put downward pressure on vacancy rates. COVID-related mandatory lockdowns and travel restrictions in 2020 reduced population growth and new household formations³.

As the economy fully reopens and travel restrictions are reduced, international migration to the province is expected to resume, driving population growth higher over the scenario period. Renewed population growth translates into a rise in housing starts between 2022 and 2024. Starts are then sustained above 40,000 units annually throughout most of the decade, with a moderate decline in the latter part of the period, as borrowing costs are projected to rise.

Following a decline in 2020, renovation work is expected to generally trend upward over the decade, driven by a buildup of an aging housing stock that will require maintenance.

Residential employment is expected to decline further into 2021, as pandemic-induced reductions in international migration are expected to continue limiting the demand for new-housing construction. Employment bounces back after 2021 and continues to grow across the scenario period, increasing by 7,923 workers (+8%) by 2030 compared to 2020.

¹ **New entrants** are measured by applying the traditional proportion of the provincial labour force that enters the construction industry. The projected estimate across the scenario period assumes that the construction industry can recruit this group in competition with other industries.

² **Net mobility** refers to the movement of labour in and out of the local construction industry labour force. In-mobility captures the movement into the labour force of out-of-province industry workers and/or workers from outside the industry. Many members of this group will move quickly out of the provincial labour force as work declines, referred to as out-mobility.

³ **Household formation** refers to the change in the number of households (persons living under one roof or occupying a separate housing unit) from one year to the next. It is the means by which population growth is transformed into demand for new housing.

Figure 1: Residential construction employment growth outlook, British Columbia

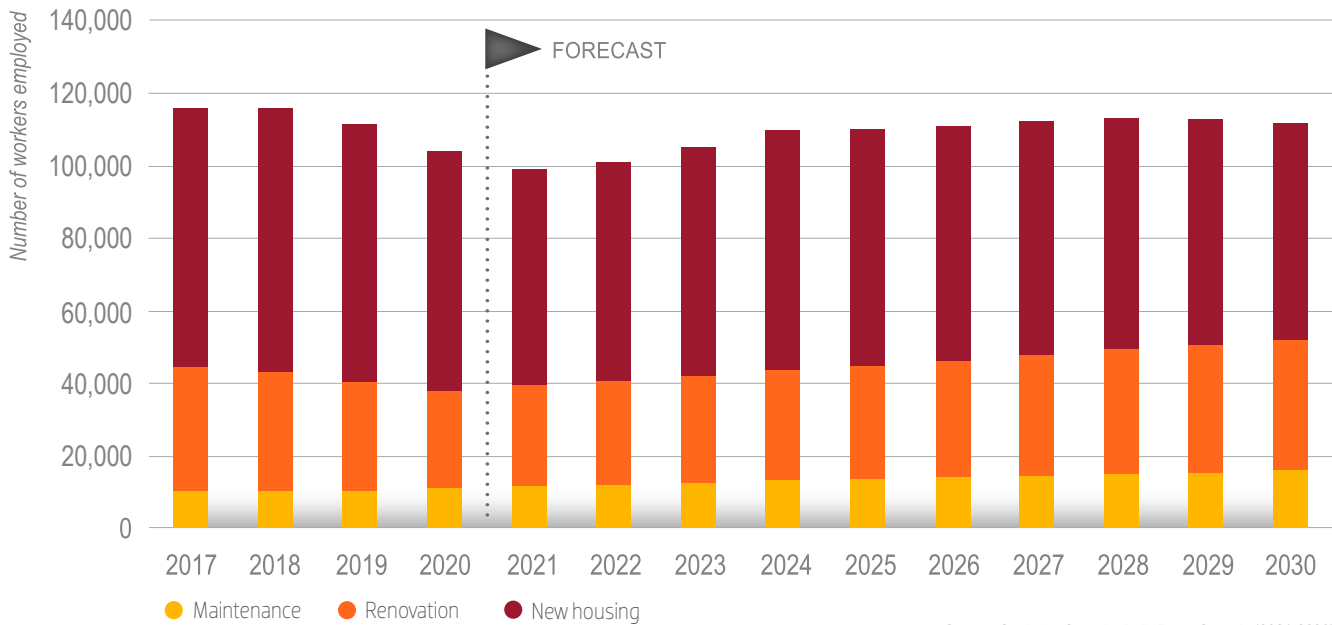


Figure 1 shows the employment trends by sector for residential construction.

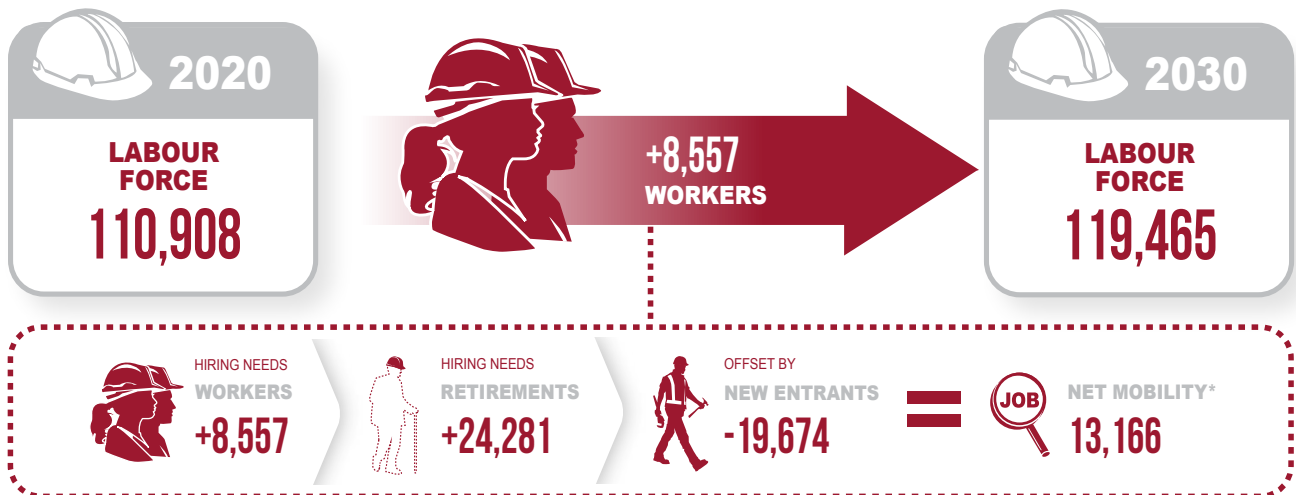
THE AVAILABLE LABOUR FORCE

The residential labour force is projected to increase by almost 8,600 additional workers to keep pace with expansion requirements over the decade. The expected retirement of nearly 24,300 workers during this period will increase the overall

recruitment requirement to close to 32,800 workers. The addition of an estimated 19,674 new-entrant workers under the age of 30 from local recruitment efforts will help to moderate labour force pressures, but unless recruitment is increased, a cumulative deficit of 13,166 workers is expected to emerge over the scenario period.

Figure 2 provides a summary of the estimated changes in the residential labour force across the full 2021–2030 scenario period.

Figure 2: Changes in the residential labour force, British Columbia



* Net mobility refers to the number of workers needed to be brought into the industry from other industries or other provinces to meet rising demands or the number of workers that exit the industry in downturns. Positive net mobility means that industry must attract workers, while negative net mobility arises from an excess supply of workers in the local construction labour force.

Note: Due to rounding, numbers may not add up to the totals indicated.

Source: BuildForce Canada

RESIDENTIAL RANKINGS, RISKS, AND MOBILITY

Table 1 reflects weaker residential labour market conditions in 2020 due to COVID-19 disruptions and a corresponding reduction in demand for new housing and renovation projects. Employment declined from high levels, however, with more severe reductions blunted by the large inventory of projects that were underway in 2020. Declines in renovation and new-housing construction demands keep markets weaker for many trades and occupations in 2021. Between 2022 and 2030, more moderate levels of growth restore balance to labour markets.

MARKET RANKINGS

1

Workers meeting employer qualifications are available in local markets to meet an increase in demand at the current offered rate of compensation and other current working conditions. Excess supply is apparent and there is a risk of losing workers to other markets.

2

Workers meeting employer qualifications are available in local markets to meet an increase in demand at the current offered rate of compensation and other working conditions.

3

The availability of workers meeting employer qualifications in the local market may be limited by large projects, plant shutdowns or other short-term increases in demand. Employers may need to compete to attract needed workers. Established patterns of recruiting and mobility are sufficient to meet job requirements.

4

Workers meeting employer qualifications are generally not available in local markets to meet any increase. Employers will need to compete to attract additional workers. Recruiting and mobility may extend beyond traditional sources and practices.

5

Needed workers meeting employer qualifications are not available in local markets to meet current demand so that projects or production may be delayed or deferred. There is excess demand, competition is intense and recruiting reaches to remote markets.

Table 1: Residential market rankings, British Columbia

TRADES AND OCCUPATIONS – RESIDENTIAL	2019	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Bricklayers	3	3	3	3	4	3	3	3	3	3	3
Carpenters	2	2	3	3	3	3	3	3	3	3	3
Concrete finishers	2	3	3	3	3	3	3	3	3	3	3
Construction estimators	2	2	3	3	3	3	3	3	3	3	3
Construction managers	3	2	3	3	3	3	3	3	3	3	2
Contractors and supervisors	2	2	3	3	3	3	3	3	3	3	3
Crane operators	3	2	3	3	3	3	3	3	3	3	2
Electricians	2	2	3	3	3	3	3	3	3	3	3
Elevator constructors and mechanics	3	3	2	3	3	3	3	3	3	3	3
Floor covering installers	2	3	3	3	3	3	3	3	3	3	3
Gasfitters	2	2	3	3	3	3	3	3	3	3	3
Glaziers	3	2	2	3	3	3	3	3	3	3	3
Heavy equipment operators (except crane)	2	2	3	3	3	3	3	3	3	3	3
Heavy-duty equipment mechanics	3	2	3	3	3	3	3	3	3	3	2
Homebuilding and renovation managers	2	2	3	3	3	3	3	3	3	3	3
Insulators	2	2	3	3	3	3	3	3	3	3	3
Ironworkers and structural metal fabricators	2	2	2	3	3	3	3	3	3	3	3
Painters and decorators	2	3	3	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	2	2	3	3	3	3	3	3	3	3	3
Plumbers	2	2	3	3	3	3	3	3	3	3	3
Refrigeration and air conditioning mechanics	2	2	3	3	3	3	3	3	3	3	3
Residential and commercial installers and servicers	2	3	3	3	3	3	3	3	3	3	3
Roofers and shinglers	3	3	3	3	3	3	3	3	3	3	3
Sheet metal workers	2	2	3	3	3	3	3	3	3	3	3
Tilesetters	2	2	2	3	3	3	3	3	3	3	3
Trades helpers and labourers	2	2	3	3	3	3	3	3	3	3	3
Truck drivers	2	2	3	4	4	3	3	3	3	3	3
Welders and related machine operators	2	2	3	3	3	3	3	3	3	3	3

Source: BuildForce Canada

PROVINCIAL NON-RESIDENTIAL SECTOR

British Columbia is entering the steepest period of an expansion that has been building over the past five years. Major-project demands are expected to intensify in 2021 and rise to a peak in 2022. These projects include ongoing work at Site C, LNG Canada’s export terminal and related TC Energy Coastal GasLink pipeline, the Trans Mountain Pipeline Expansion, Pattullo Bridge Replacement, and transit, education, health care, and other infrastructure projects.

Investment in ICI (industrial, commercial, institutional) building construction declined in 2020, but is expected to post strong growth between 2021 and 2022 with the stacking of several major health care and education infrastructure projects, as well as spin-off work related to major engineering projects. Investment remains elevated over the mid-2020s supported by growth in commercial building construction, and continues to rise after 2025, as population growth drives demand for commercial and institutional buildings, while a weaker Canadian dollar is anticipated to drive manufacturing and primary-sector growth.

Over the long term, continued growth of the province’s population supports increased spending on utilities, transportation, and road infrastructure, contributing to gains in engineering investment between 2027 and 2030.

The major-project-driven nature of the engineering demands in British Columbia is expected to propel non-residential employment higher by 11,439 workers (+16%) over two years to 2022. As some projects wind down, a 2023–2026 down-cycle takes away little more than half of the previous employment gains, while an up-cycle between 2027 and 2030 adds 5,428 workers (+7%). The net gain across the scenario period is 9,919 workers (+14%). ICI building construction is projected to experience more steady employment gains over the decade, adding more than 4,650 workers (+23%) by 2030 compared to 2020 levels.

Figure 3 tracks the change in non-residential employment by sector for key reference points across the scenario period, including the expected peak in 2022, and at the end of the scenario period in 2030.

Table 2 summarizes the percent change in non-residential employment by sector across two periods: the first captures the near-term trends to 2022, and the second, across the remainder of the scenario period.

Figure 4 shows the employment trends by sector for non-residential construction, which increases to a 2022 peak, then cycles down as current projects wind down, before rising again later in the decade in line with overall economic and population growth.

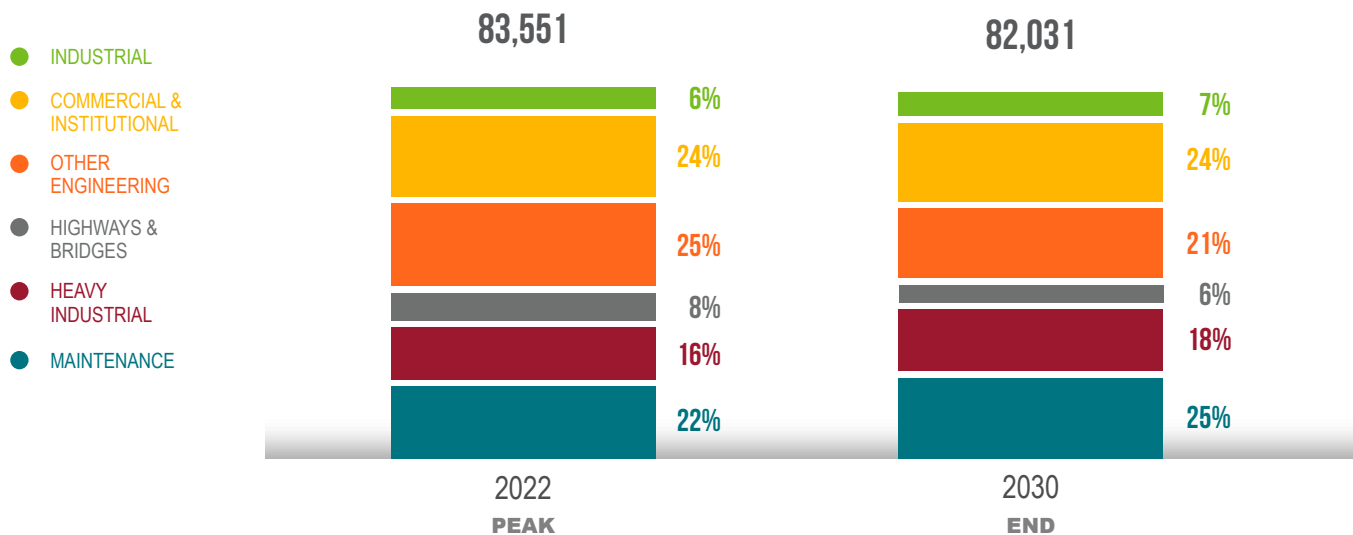
Table 2: Changes in non-residential employment by sector, British Columbia

SECTOR		% CHANGE 2021–2022	% CHANGE 2023–2030
Total non-residential employment		16%	-2%
ICI* buildings	Industrial	31%	14%
	Commercial, institutional and government	20%	-3%
Engineering	Highways and bridges	10%	-26%
	Heavy and other engineering	23%	-6%
Maintenance		-1%	11%

Source: Statistics Canada, BuildForce Canada (2021-2030)

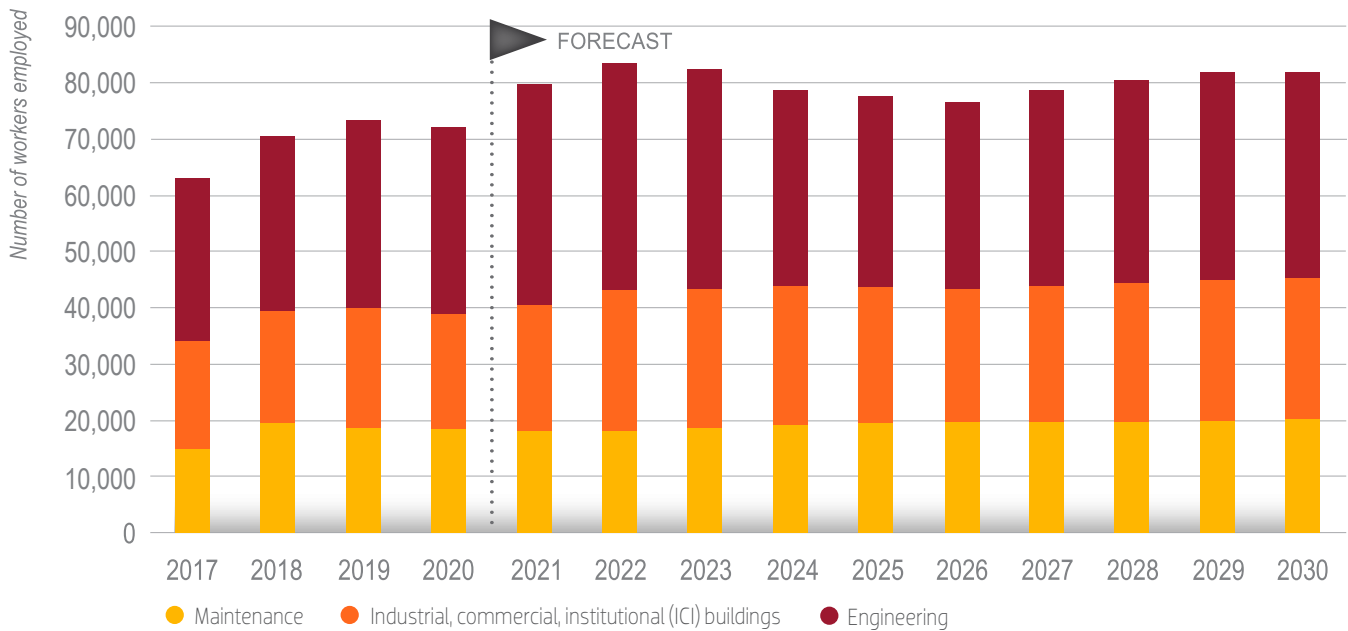
* industrial, commercial, institutional

Figure 3: Non-residential employment distribution by sector, British Columbia, 2022 and 2030



Source: Statistics Canada, BuildForce Canada (2021-2030)

Figure 4: Non-residential construction employment growth outlook, British Columbia



Source: Statistics Canada, BuildForce Canada (2021-2030)

THE AVAILABLE LABOUR FORCE

During the scenario period, the expected retirement of an estimated 16,736 workers from the provincial non-residential labour force will increase the overall recruitment requirement to just over 26,800 workers. Demand is expected to be partly met by the addition of nearly 15,500 new entrants under the age of 30 from the local population, but unless local recruitment is increased, industry will need to draw in an additional 11,331 workers by the end of the decade from other industries or neighbouring provinces to keep pace with construction demands.

Meeting rising near-term (2021–2022) employment demands for major projects may require training workers from other sectors in combination with out-of-province workers to supplement the local construction labour force to meet peak demand requirements.

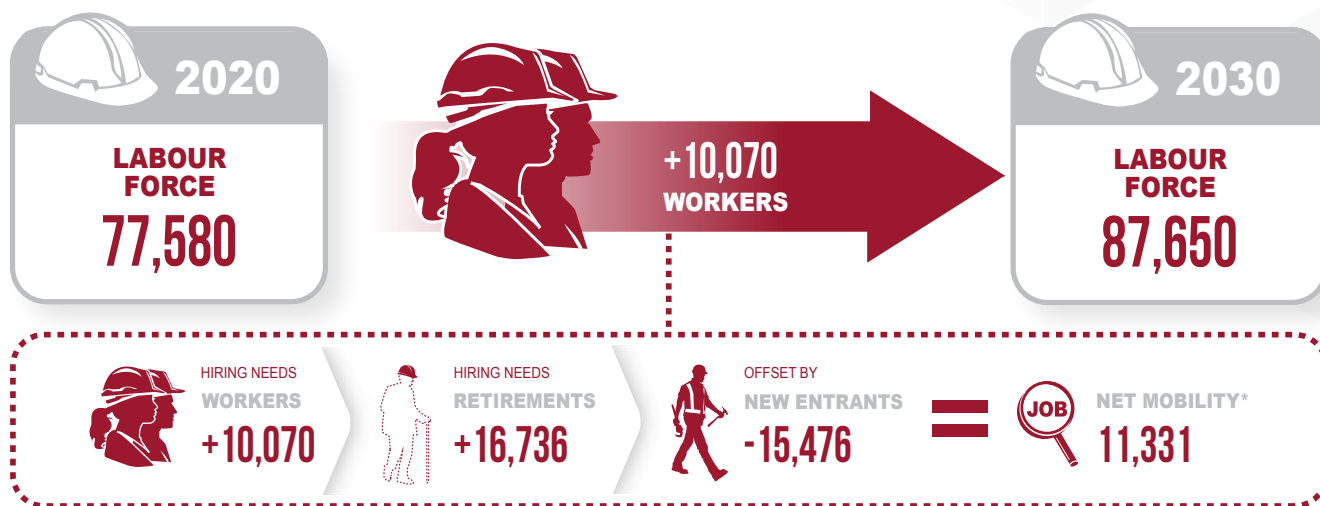
Figure 5 provides a summary of the estimated changes in the non-residential labour force across the full 2021–2030 scenario period.

NON-RESIDENTIAL RANKINGS, RISKS, AND MOBILITY

As commercial and industrial building construction declined in 2020, labour market conditions in B.C.'s non-residential sector retreated from very tight conditions in 2019 to more balanced conditions for most trades and occupations, as reflected by the rankings in Table 3.

An anticipated recovery in ICI construction, along with increasing major-project requirements, tightens labour markets in 2021 and 2022 for many trades and occupations. As current major projects move past peak in 2022, markets start to balance. Some weakness may arise in 2024 and 2026 related to the completion of several major projects. The long-term growth in employment is gradual and should allow markets to efficiently allocate workers to required projects, leading to generally balanced labour market conditions between 2027 and 2030.

Figure 5: Changes in the non-residential labour force, British Columbia



* Net mobility refers to the number of workers needed to be brought into the industry from other industries or other provinces to meet rising demands or the number of workers that exit the industry in downturns. Positive net mobility means that industry must attract workers, while negative net mobility arises from an excess supply of workers in the local construction labour force.

Note: Due to rounding, numbers may not add up to the totals indicated.

Source: BuildForce Canada

Table 3: Non-residential market rankings, British Columbia

TRADES AND OCCUPATIONS – NON-RESIDENTIAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Boilermakers	3	4	3	3	3	3	3	3	3	3	3
Bricklayers	3	3	4	3	3	3	3	3	3	3	3
Carpenters	2	3	3	3	2	3	2	3	3	3	3
Concrete finishers	3	4	4	3	3	3	3	3	3	3	3
Construction estimators	3	4	3	2	3	3	3	3	3	3	3
Construction managers	3	4	4	3	3	3	3	3	3	3	3
Construction millwrights and industrial mechanics	3	4	3	3	3	3	3	3	3	3	3
Contractors and supervisors	3	4	3	3	3	3	3	3	3	3	3
Crane operators	4	4	4	3	2	3	2	3	3	3	3
Drillers and blasters	3	4	3	3	3	3	3	3	3	3	3
Electrical power line and cable workers	3	3	4	3	3	3	3	3	3	3	3
Electricians	3	4	4	3	2	3	3	3	3	3	3
Elevator constructors and mechanics	3	3	4	3	3	3	3	3	3	3	3
Floor covering installers	3	3	4	3	3	3	3	3	3	3	3
Gasfitters	2	4	4	3	3	3	3	3	3	3	3
Glaziers	3	4	4	3	3	3	3	3	3	3	3

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Table 3: Non-residential market rankings, British Columbia (continued)

TRADES AND OCCUPATIONS – NON-RESIDENTIAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Heavy equipment operators (except crane)	3	4	3	3	2	3	3	3	3	3	3
Heavy-duty equipment mechanics	3	4	3	3	3	3	3	3	3	3	3
Insulators	3	4	4	3	2	3	3	3	3	3	3
Ironworkers and structural metal fabricators	3	4	3	3	2	3	3	3	3	3	3
Painters and decorators	3	4	4	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	3	3	4	3	3	3	3	3	3	3	3
Plumbers	3	4	3	3	3	3	3	3	3	3	3
Refrigeration and air conditioning mechanics	3	4	4	3	3	3	3	3	3	3	3
Residential and commercial installers and servicers	3	3	4	3	3	3	3	3	3	3	3
Roofers and shinglers	3	4	4	3	3	3	3	3	3	3	3
Sheet metal workers	3	4	3	3	3	3	3	3	3	3	3
Steamfitters, pipefitters, and sprinkler system installers	4	4	4	3	2	3	3	3	3	3	3
Tilesetters	3	3	4	3	3	2	3	3	3	3	3
Trades helpers and labourers	3	4	3	3	2	3	3	3	3	3	3
Truck drivers	3	4	3	3	2	3	3	3	3	3	3
Welders and related machine operators	3	4	3	3	2	3	3	3	3	3	3

Source: BuildForce Canada

LOWER MAINLAND CONSTRUCTION OUTLOOK

The Lower Mainland construction market experienced a sharp decline in residential and commercial activity in 2020. New housing was hit hardest, as housing starts retreated by one-quarter (-25%) from the highs reached in 2019, but sector employment was shielded from big declines by ongoing construction of the large number of apartment and condo projects already under construction.

Overall, non-residential market demands recorded a small rise, as construction on several major projects in the region either started or ramped up in 2020. These projects included hospitals, schools, the Pattullo Bridge replacement, and Millennium Line (Broadway). Combined, these projects helped to offset commercial and industrial building declines. Lower business and consumer confidence and reduced domestic and foreign demands for products led to declines in commercial and industrial building construction.

Looking forward, 2021 is shaping up to be a strong year, despite modest declines in new-home construction, as major public transit, institutional, industrial, and road, highway, and bridge projects ramp up. Investment is expected to continue growing to 2023 and then recede by 2026 as these projects move past their projected peak and begin winding down. Over the long term, robust economic and population growth should continue adding to demand for ICI

buildings, as well as major infrastructure. Construction employment is anticipated to rise by 9,888 workers (+9%) between 2021 and the anticipated scenario peak in 2024.

Residential construction, which accounted for more than two-thirds of total employment in 2020, will continue to dominate industry employment in the Lower Mainland over the coming decade. Total construction employment is projected to rise to a peak in 2024, but recedes thereafter, as the anticipated decline in new-home construction weighs on long-term growth. Employment is expected to decline by just over 900 workers by 2030, or a modest 1% decline compared to 2020.

As employment ebbs and flows, the projected retirement of nearly 24,300 workers will be the dominant driver of hiring requirements over the 2021–2030 scenario period. Over the same period, industry can expect to attract an estimated 20,500 new-entrant workers under the age of 30 from the local population, leaving a potential gap of just over 3,500 workers needed to be recruited from outside the local construction labour force.

LOWER MAINLAND RESIDENTIAL SECTOR

Like most regions, the Lower Mainland experienced sharp reductions in international migration and a decline in new housing starts in 2020 due to COVID-19 disruptions. Starts declined from 32,800 units in

2019 to 24,400 in 2020, with the reduction more concentrated in apartment building construction. Further reductions are anticipated in 2021, as the lingering impacts of COVID carry over into the early part of the year before a housing up-cycle is expected to start in 2022, driven by renewed population growth. Investment slows later in the period, as an aging population and a reduction in international migration is expected to limit the demand for new housing.

Residential employment declines in 2021 as new-home construction slows, but as the economy recovers from the pandemic, an up-cycle begins in 2022, driving employment higher to 2025. Despite steady growth in renovation and maintenance construction, lower demands for new-housing projects drive employment lower by 4,230 workers (-6%) over the scenario period, though the anticipated up-cycle is estimated to require some 10,300 workers between 2022 and 2025.

Figure 6 shows the employment trends by sector for residential construction.

THE AVAILABLE LABOUR FORCE

The decline in overall residential employment will necessitate a reduction in the regional labour force of just over 3,900 workers over the decade. The expected retirement of almost 16,300 workers during this period translates into an expected recruitment requirement near 12,400 workers over the decade, compared to a

potential inflow of close to 13,300 first-time new entrants under the age of 30 from the local population. As new-housing activity declines later in the scenario period, almost 900 workers are estimated to leave the residential labour force for employment opportunities in other sectors, industries, or provinces.

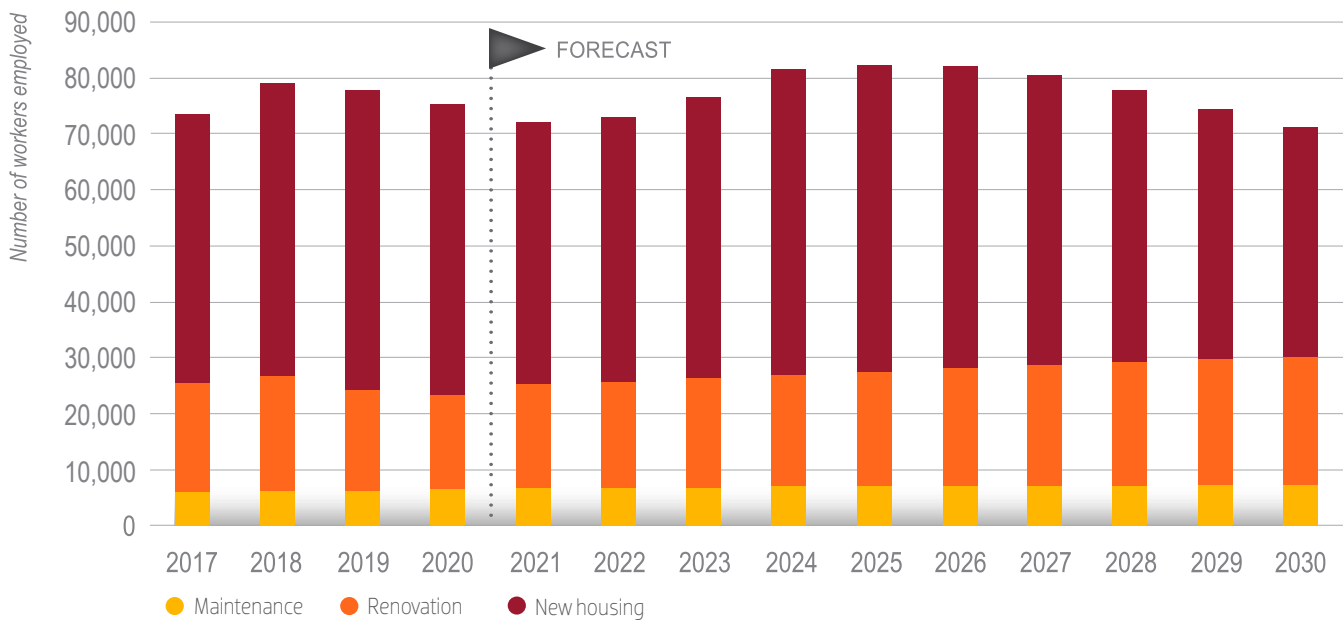
Figure 7 provides a summary of the estimated changes in the residential labour force across the full 2021–2030 scenario period.

RESIDENTIAL RANKINGS, RISKS, AND MOBILITY

The rankings in Table 4 reflect weakening of residential labour market conditions in the Lower Mainland in 2020, as both new housing and renovation work contracted. Weaker markets are expected into 2021 as the region continues to cope with the impacts of COVID-19 and lower international migration, which lowers the number of new homes demanded.

Tighter markets will likely emerge between 2023 and 2024, in line with the projected up-cycle in new-home construction. Stable demands between 2025 and 2027 are expected to translate into generally balanced labour markets during this period. Over the long term, growth in renovation and maintenance work is unable to offset lower new-housing demands. As employment related to new housing decreases, weaker markets are expected between 2028 and 2030.

Figure 6: Residential construction employment growth outlook, Lower Mainland, British Columbia



Source: Statistics Canada, BuildForce Canada (2021-2030)

Figure 7: Changes in the residential labour force, Lower Mainland, British Columbia



* **Net mobility** refers to the number of workers needed to be brought into the industry from other industries or other provinces to meet rising demands or the number of workers that exit the industry in downturns. Positive net mobility means that industry must attract workers, while negative net mobility arises from an excess supply of workers in the local construction labour force.

Note: Due to rounding, numbers may not add up to the totals indicated.

Source: BuildForce Canada

Table 4: Residential market rankings, Lower Mainland, British Columbia

TRADES AND OCCUPATIONS – RESIDENTIAL	2019	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Bricklayers	2	2	3	3	4	3	3	3	2	2	2
Carpenters	2	2	3	3	4	3	3	3	2	2	2
Concrete finishers	3	3	3	3	3	3	3	3	3	2	2
Construction estimators	2	2	3	4	4	3	3	3	2	2	2
Construction managers	2	2	2	4	4	3	3	2	2	2	2
Contractors and supervisors	3	2	3	3	4	3	3	3	2	2	2
Crane operators	3	2	2	4	4	3	3	2	2	2	2
Electricians	2	2	3	3	3	3	3	3	2	2	2
Elevator constructors and mechanics	3	3	2	3	4	3	3	3	2	2	2
Floor covering installers	3	2	3	3	3	3	3	3	2	2	2
Gasfitters	2	2	3	4	4	3	3	3	2	2	2
Glaziers	3	2	2	3	3	3	3	3	2	2	2
Heavy equipment operators (except crane)	2	2	3	3	4	3	3	3	2	2	2
Homebuilding and renovation managers	2	2	3	3	4	3	3	3	2	2	2
Insulators	2	2	3	3	4	3	3	3	2	2	2
Ironworkers and structural metal fabricators	3	2	2	3	4	3	3	3	2	2	2

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Table 4: Residential market rankings, Lower Mainland, British Columbia (continued)

TRADES AND OCCUPATIONS – RESIDENTIAL	2019	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Painters and decorators	3	3	3	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	2	2	3	3	4	3	3	3	2	2	2
Plumbers	2	2	3	3	3	3	3	3	2	2	2
Refrigeration and air conditioning mechanics	2	2	3	3	4	3	3	3	2	2	2
Residential and commercial installers and servicers	2	3	3	3	3	3	3	3	3	3	3
Roofers and shinglers	3	3	3	3	3	3	3	3	3	3	3
Sheet metal workers	2	2	3	3	4	3	3	3	2	2	2
Tilesetters	2	2	2	3	4	3	3	3	2	2	2
Trades helpers and labourers	3	2	3	3	4	3	3	3	3	2	2
Truck drivers	2	2	3	4	4	3	3	3	2	2	2
Welders and related machine operators	3	1	3	3	4	3	3	3	2	2	2

Source: BuildForce Canada

LOWER MAINLAND NON-RESIDENTIAL SECTOR

Significant near-term demands are expected to add an estimated 5,279 non-residential workers (+15%) between 2021 and 2023, driven by a wave of major investment projects, including the Pattullo Bridge Replacement, Millennium Line (Broadway), Surrey Langley SkyTrain, Roberts Bank container expansion, Woodfibre LNG, St. Paul's Hospital, Royal Columbian Hospital, and several school projects. After the 2023 peak is reached, investment is expected to recede to 2026 as projects wind down, but grow gradually thereafter, driven more by overall economic and population growth.

Heavy-industrial investment declined in 2020 but is expected to make gains over the next two years as the Second Narrows Water Supply Tunnel and North Shore Wastewater Treatment Plant projects ramp up. Investment is expected to cycle lower to 2025 with project completions, but growth resumes thereafter, as the growing population warrants further infrastructure expansion.

In addition to major projects, employment in ICI building construction is also expected to experience growth over the near term, adding 3,090 workers (+23%) to 2025, supported by rising institutional and industrial projects, as well as a recovery in commercial building construction. Though employment comes off peak after 2025, ICI employment finishes the decade higher, adding an additional 2,286 workers (+17%) by 2030.

As projects wind down, employment is expected to retreat moderately, but remains 3,296 workers (+9%) higher than 2020 levels by 2030.

Figure 8 shows the employment trends by sector for non-residential construction across the scenario period.

THE AVAILABLE LABOUR FORCE

The non-residential labour force is projected to increase by almost 3,700 additional workers to keep pace with expansion requirements over the decade. The expected retirement of nearly 8,000 workers during this period will increase the overall recruitment requirement to close to 11,700 workers. The addition of an estimated 7,200 new-entrant workers under the age of 30 from local recruitment efforts will help to moderate labour force pressures, but unless recruitment is increased, a cumulative deficit of almost 4,500 workers is expected to emerge over the scenario period.

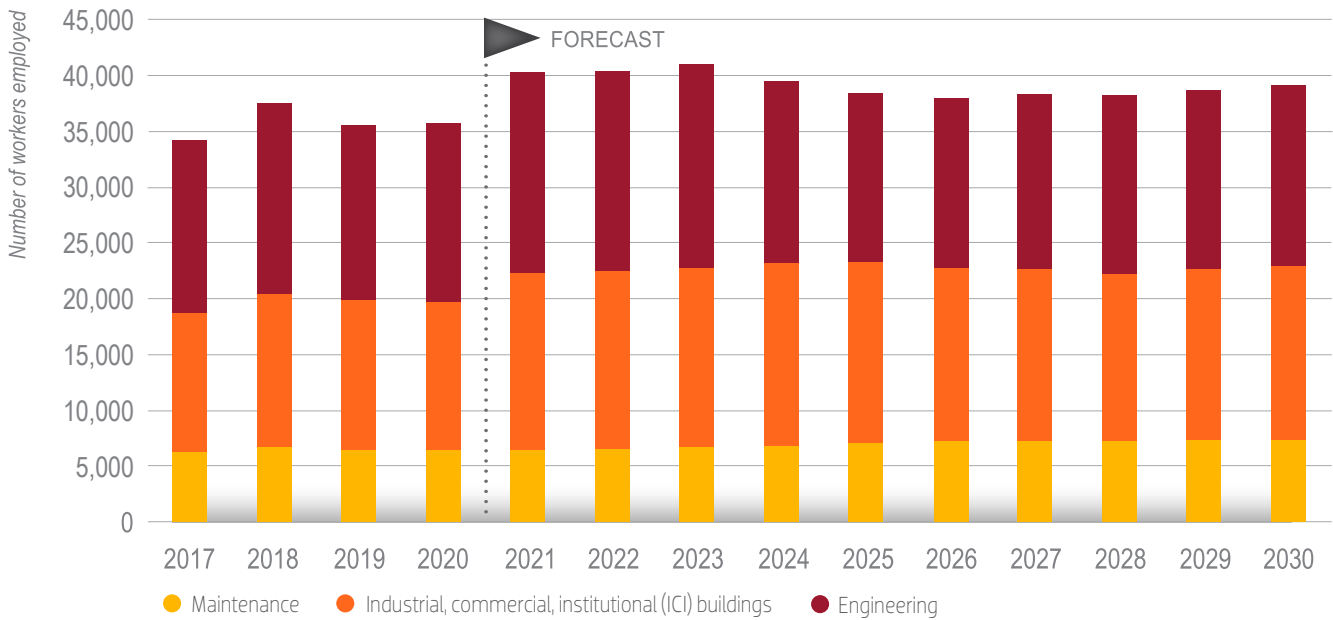
Figure 9 provides a summary of the estimated changes in the non-residential labour force across the full 2021–2030 scenario period.

NON-RESIDENTIAL RANKINGS, RISKS, AND MOBILITY

The rankings in Table 5 reflect mixed labour market conditions in the Lower Mainland in 2020, as work carried on in public transit and other engineering work, while commercial and industrial building activity retreated due to the impacts of COVID-19. Non-residential markets are expected to tighten in 2021, as rising major-project demands coincide with recovering ICI building construction. Conditions are generally balanced between 2022 and 2023, as markets are allowed to catch up with projects moving past anticipated peak levels of activity.

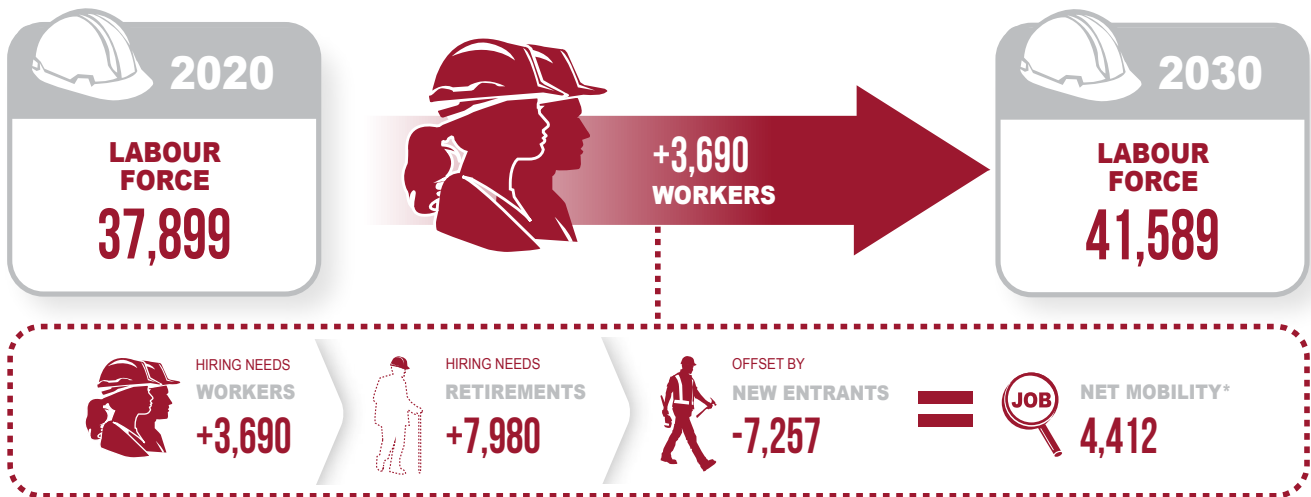
As projects wind down and complete, they release workers, resulting in labour markets weakening for several trades and occupations between 2024 and 2025. Over the remainder of the decade, generally balanced markets emerge, as the pace of growth is anticipated to be more gradual.

Figure 8: Non-residential construction employment growth outlook, Lower Mainland, British Columbia



Source: Statistics Canada, BuildForce Canada (2021-2030)

Figure 9: Changes in the non-residential labour force, Lower Mainland, British Columbia



* Net mobility refers to the number of workers needed to be brought into the industry from other industries or other provinces to meet rising demands or the number of workers that exit the industry in downturns. Positive net mobility means that industry must attract workers, while negative net mobility arises from an excess supply of workers in the local construction labour force.

Note: Due to rounding, numbers may not add up to the totals indicated.

Source: BuildForce Canada

Table 5: Non-residential market rankings, Lower Mainland, British Columbia

TRADES AND OCCUPATIONS – NON-RESIDENTIAL	2019	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Boilermakers	3	3	3	3	3	3	3	3	3	3	3
Bricklayers	3	4	3	3	3	3	2	3	3	3	3
Carpenters	3	4	3	3	2	3	3	3	3	3	3
Concrete finishers	4	4	3	2	3	3	2	3	3	3	3
Construction estimators	3	4	3	3	2	2	3	3	3	3	2
Construction managers	3	4	3	3	2	3	3	3	3	3	3
Construction millwrights and industrial mechanics	2	4	3	3	3	2	3	3	3	3	3
Contractors and supervisors	3	4	3	3	2	2	3	3	3	3	2
Crane operators	4	4	3	2	2	3	3	3	3	3	3
Drillers and blasters	3	4	3	3	2	2	3	3	3	3	3
Electrical power line and cable workers	2	3	3	3	2	2	4	3	3	3	3
Electricians	2	4	3	3	3	2	3	3	3	3	3
Elevator constructors and mechanics	3	4	3	3	3	3	3	3	3	3	3
Floor covering installers	3	4	3	3	3	3	3	3	3	3	3
Gasfitters	4	4	2	2	3	3	3	3	3	3	2
Glaziers	3	4	3	3	3	3	2	3	3	3	3
Heavy equipment operators (except crane)	3	4	3	3	2	2	3	3	3	3	3
Heavy-duty equipment mechanics	3	4	3	3	2	2	3	3	3	3	3
Insulators	3	4	3	3	2	3	3	3	3	3	3
Ironworkers and structural metal fabricators	3	4	3	3	2	2	3	3	3	3	3
Painters and decorators	3	4	3	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	3	4	3	3	3	3	3	3	3	3	3
Plumbers	2	4	3	3	3	3	3	3	3	3	2
Refrigeration and air conditioning mechanics	2	4	3	3	3	3	3	3	3	3	2
Residential and commercial installers and servicers	3	4	3	3	2	3	3	3	3	3	3
Roofers and shinglers	2	4	3	3	3	3	3	3	3	3	3
Sheet metal workers	2	4	3	3	3	3	3	3	3	3	3
Steamfitters, pipefitters, and sprinkler system installers	4	3	2	3	3	3	3	3	3	3	3
Tilesetters	3	4	3	3	3	3	3	3	2	3	3
Trades helpers and labourers	4	4	2	3	2	2	3	3	3	3	3
Truck drivers	3	4	3	3	2	3	3	3	3	3	3
Welders and related machine operators	3	4	3	3	3	3	3	3	3	3	3

Source: BuildForce Canada

VANCOUVER ISLAND CONSTRUCTION OUTLOOK

The Vancouver Island region experienced a modest slowdown in construction activity in 2020, as COVID-19 limited migration and travel, lowering demand in the residential, and commercial and industrial building sectors. Although a recovery in commercial activity is expected to shore up demands over 2021, a material rise in construction activity is not expected until 2022, when a recovery in new-home construction coincides with the expected start of major health care and education projects. A recovery in migration to the region is expected to drive an up-cycle in residential investment between 2022 and 2024, followed by modest declines to 2030, as gains in renovation work partially offset declines in new-home construction.

Total construction employment is expected to grow by 13% between 2021 and 2024 before receding moderately in line with weaker housing demands. Between 2020 and 2030, construction employment is projected to rise by 1,600 workers (+6%). Growing demands are exacerbated by the need to replace an estimated 7,845 workers expected to retire from the regional construction labour force over the decade.

VANCOUVER ISLAND RESIDENTIAL SECTOR

Residential investment has seen significant growth in recent years, fuelled by migration into the region from other regions and countries. Barriers to travel and migration in 2020 due to COVID-19 contributed to a decline in housing starts to 5,700 units, down from 6,900 units in 2019. Migration levels are not anticipated to improve until later in

2021, which will further dampen demand for new-housing activity throughout most of the year. Markets are expected to recover between 2022 and 2024 with improving levels of migration and low interest rates. Later in the period, demand for new homes declines as the population ages and consumer preferences shift increasingly to renovations over the purchase of a new home. Vancouver Island is not a key entry point for international migrants and has a significantly older population compared to the mainland.

Residential employment is expected to cycle lower in 2021 before recovering in 2022. The anticipated up-cycle drives employment to a peak of 21,225 workers by 2024 before cycling lower. By the end of the decade, residential employment is 200 workers (+1%) larger than 2020 levels.

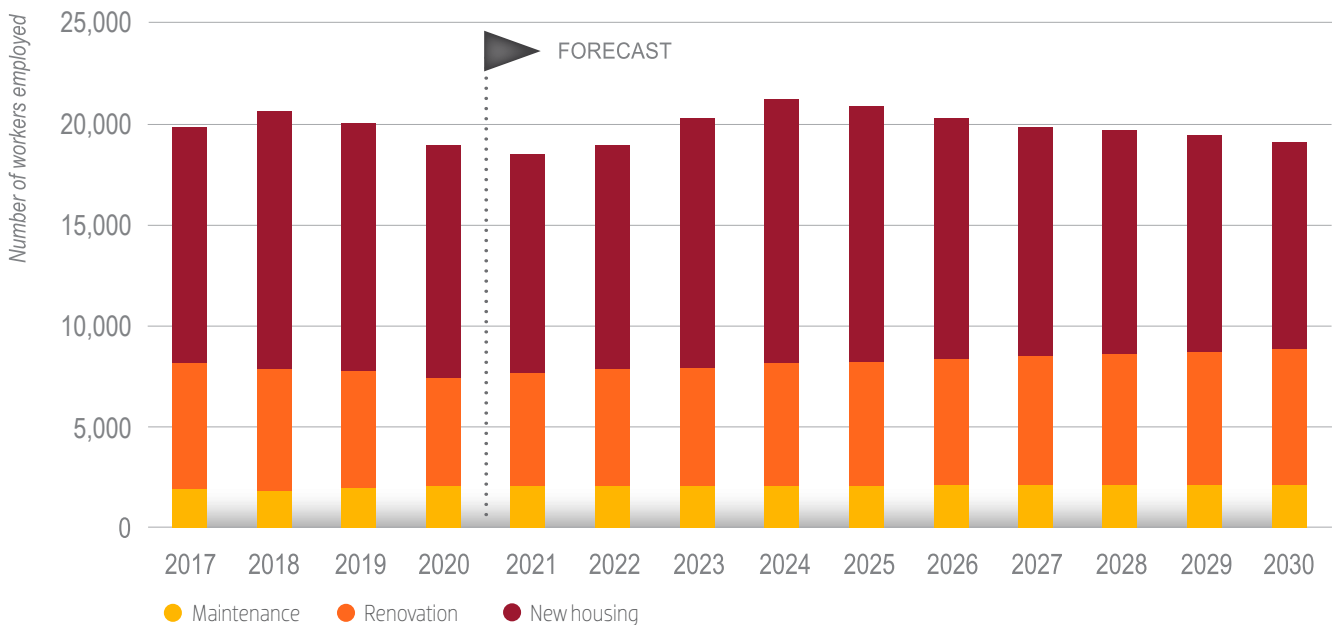
Figure 10 shows the employment trends by sector for residential construction.

THE AVAILABLE LABOUR FORCE

The residential labour force is projected to decline marginally by just over 300 workers over the decade. The expected retirement of just over 5,000 workers during this period translates into a recruitment requirement of just over 4,700 workers. The addition of an estimated 3,500 new entrants under the age of 30 from local recruitment efforts will help to moderate labour force pressures, but unless recruitment is increased, a cumulative deficit of just over 1,200 workers is estimated to emerge over the scenario period.

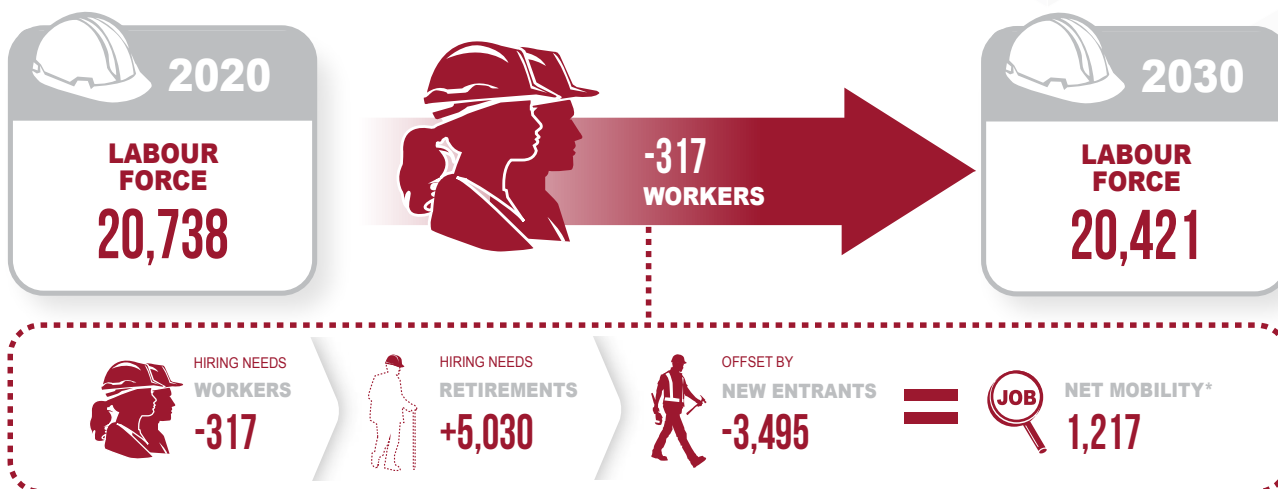
Figure 11 provides a summary of the estimated changes in the residential labour force across the full 2021–2030 scenario period.

Figure 10: Residential construction employment growth outlook, Vancouver Island, British Columbia



Source: Statistics Canada, BuildForce Canada (2021-2030)

Figure 11: Changes in the residential labour force, Vancouver Island, British Columbia



* Net mobility refers to the number of workers needed to be brought into the industry from other industries or other provinces to meet rising demands or the number of workers that exit the industry in downturns. Positive net mobility means that industry must attract workers, while negative net mobility arises from an excess supply of workers in the local construction labour force.

Note: Due to rounding, numbers may not add up to the totals indicated.

Source: BuildForce Canada

RESIDENTIAL RANKINGS, RISKS, AND MOBILITY

The rankings in Table 6 reflect weaker residential labour market conditions in 2020 due to reduced demand for new homes and renovation work. Conditions are expected to remain weak in 2021, as the second wave of the virus and the vaccine rollout will continue to limit travel and put downward pressure on new-housing demand.

The anticipated up-cycle in new-home construction between 2022 and 2024 and renewed growth in renovations tighten markets between 2023 and 2024. Market conditions are expected to remain mostly balanced between 2025 and 2030, as declining labour demands will be mostly offset by rising retirements.

Table 6: Residential market rankings, Vancouver Island, British Columbia

TRADES AND OCCUPATIONS – RESIDENTIAL	2019	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Bricklayers	2	2	3	4	4	3	3	3	3	3	3
Carpenters	2	2	3	4	4	3	2	3	3	3	3
Concrete finishers	2	2	3	3	3	3	3	3	3	3	3
Construction estimators	2	2	3	4	4	3	2	3	3	3	3
Construction managers	2	2	3	4	4	3	3	3	3	3	3
Contractors and supervisors	2	2	3	4	4	3	3	3	3	3	3
Electricians	2	2	3	3	4	3	3	3	3	3	3
Floor covering installers	3	2	3	3	4	3	3	3	3	3	3
Heavy equipment operators (except crane)	2	2	3	4	4	3	2	3	3	3	3
Homebuilding and renovation managers	2	3	3	4	4	3	3	3	3	3	3
Painters and decorators	2	2	3	3	3	3	3	3	3	3	3

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Table 6: Residential market rankings, Vancouver Island, British Columbia (continued)

TRADES AND OCCUPATIONS – RESIDENTIAL	2019	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Plasterers, drywall installers and finishers, and lathers	2	2	3	4	3	3	3	3	3	3	3
Plumbers	2	2	3	3	4	3	3	3	3	3	3
Residential and commercial installers and servicers	2	2	3	3	3	3	3	3	3	3	3
Roofers and shinglers	3	2	3	3	3	3	3	3	3	3	3
Sheet metal workers	2	2	3	4	4	3	3	3	3	3	3
Tilesetters	2	2	3	4	4	3	3	3	3	3	3
Trades helpers and labourers	2	2	3	4	3	3	3	3	3	3	3
Truck drivers	2	2	3	4	4	3	3	3	3	3	3

Source: BuildForce Canada

VANCOUVER ISLAND NON-RESIDENTIAL SECTOR

The CFB Esquimalt A/B Jetty Recapitalization and major wastewater treatment projects helped to offset declines in commercial and industrial construction activity in 2020. Demand is expected to slow in 2021 as some projects wind down, despite an anticipated recovery in commercial building construction. Growth strengthens after 2021 and across the remainder of the decade, driven by major health care and education projects, including the Cowichan District Hospital and Cowichan Secondary School replacements, as well as a diverse group of public transportation and infrastructure projects. Commercial building investment is projected to rise as tourism recovers, alongside growth in the region's population, propelling demand for retail and other commercial buildings.

Overall, non-residential employment is projected to grow by 1,400 workers (+15%) over the decade, with stronger demands between 2021 and 2024.

Figure 12 shows the employment trends by sector for non-residential construction across the scenario period.

THE AVAILABLE LABOUR FORCE

The non-residential labour force is projected to increase by almost 1,300 additional workers to keep pace with expansion requirements

over the decade. The expected retirement of just over 2,800 workers during this period will increase the overall recruitment requirement to approximately 4,100 workers. The addition of an estimated 2,013 new entrants under the age of 30 from local recruitment efforts will help to moderate labour force pressures, but unless recruitment is increased, a cumulative deficit of almost 2,100 workers is expected to emerge over the scenario period.

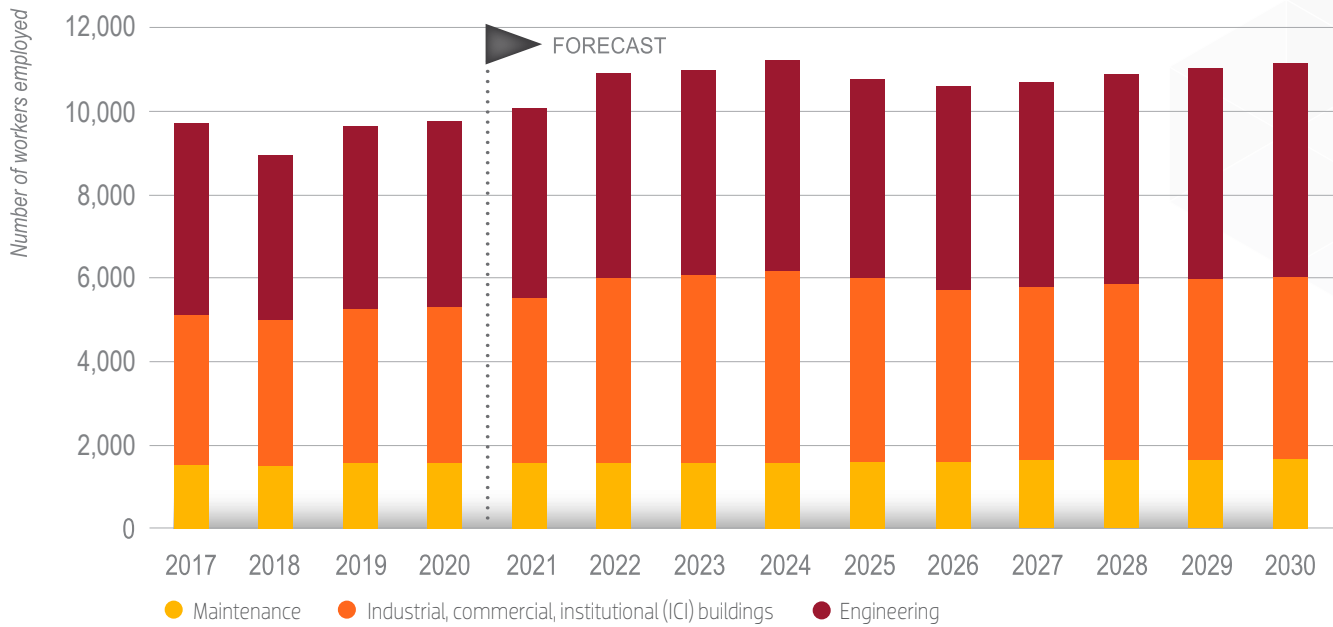
Figure 13 provides a summary of the estimated changes in the non-residential labour force across the full 2021–2030 scenario period.

NON-RESIDENTIAL RANKINGS, RISKS, AND MOBILITY

The rankings in Table 7 reflect generally balanced non-residential labour markets in 2020, as modest declines in commercial and industrial building activity were offset by rising engineering construction work. Balanced markets are sustained in 2021 as some engineering projects wind down, offsetting a recovery in ICI building construction.

Stronger growth in 2022 tightens market conditions for most trades and occupations, as work on the Cowichan hospital commences, alongside a recovery in commercial and industrial building construction. Labour market conditions are anticipated to weaken between 2025 and 2026 as these projects reach completion. Balanced labour markets prevail thereafter, as growth is more gradual.

Figure 12: Non-residential construction employment growth outlook, Vancouver Island, British Columbia



Source: Statistics Canada, BuildForce Canada (2021-2030)

Figure 13: Changes in the non-residential labour force, Vancouver Island, British Columbia



* Net mobility refers to the number of workers needed to be brought into the industry from other industries or other provinces to meet rising demands or the number of workers that exit the industry in downturns. Positive net mobility means that industry must attract workers, while negative net mobility arises from an excess supply of workers in the local construction labour force.

Note: Due to rounding, numbers may not add up to the totals indicated.

Source: BuildForce Canada

Table 7: Non-residential market rankings, Vancouver Island, British Columbia

TRADES AND OCCUPATIONS – NON-RESIDENTIAL	2019	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Boilermakers	2	3	4	3	3	3	3	3	3	3	3
Carpenters	3	3	4	3	3	2	2	3	3	3	3
Concrete finishers	3	3	4	3	3	3	2	3	3	3	3
Construction estimators	3	3	4	3	3	2	3	3	3	3	3
Construction managers	3	3	4	3	4	3	3	3	3	3	3
Contractors and supervisors	3	3	4	3	4	3	3	3	3	3	3
Crane operators	3	3	4	3	3	2	2	3	3	3	3
Drillers and blasters	3	2	4	3	3	2	3	3	3	3	3
Electricians	3	3	4	3	3	3	3	3	3	3	3
Glaziers	3	3	4	3	3	3	2	3	3	3	3
Heavy equipment operators (except crane)	3	3	4	3	3	2	3	3	3	3	3
Heavy-duty equipment mechanics	3	3	4	3	3	2	3	3	3	3	3
Insulators	3	3	4	3	3	2	3	3	3	3	3
Ironworkers and structural metal fabricators	3	3	4	3	3	2	3	3	3	3	3
Painters and decorators	3	3	4	3	3	2	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	3	3	4	3	3	2	2	3	3	3	3
Plumbers	3	3	4	3	3	3	2	3	3	3	3
Refrigeration and air conditioning mechanics	3	3	4	3	3	2	2	3	3	3	3
Residential and commercial installers and servicers	3	3	4	3	3	2	2	3	3	3	3
Sheet metal workers	3	3	4	3	3	3	3	3	3	3	3
Steamfitters, pipefitters, and sprinkler system installers	3	3	3	3	3	3	3	3	3	3	3
Trades helpers and labourers	3	2	3	3	3	3	3	3	3	3	3
Truck drivers	3	3	4	3	3	3	3	3	3	3	3
Welders and related machine operators	3	3	4	3	3	3	2	3	3	3	3

Source: BuildForce Canada

BUILDING A SUSTAINABLE LABOUR FORCE

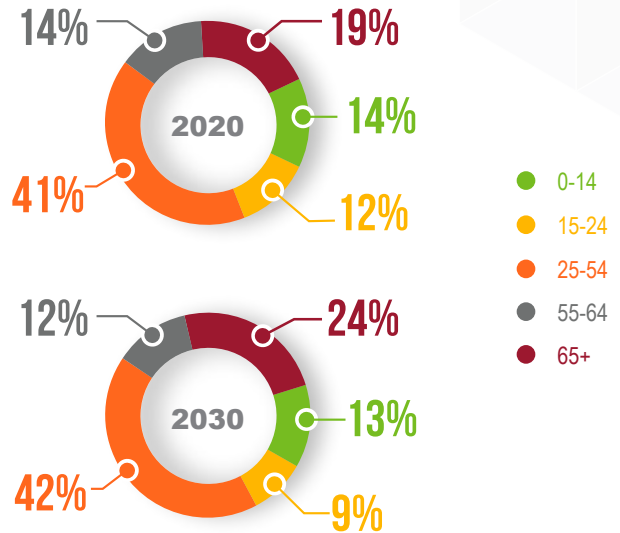
The rise in labour force requirements to a distinct peak, coupled with increasing replacement demands due to retirements, will require British Columbia's construction industry to implement recruiting strategies to build a sustainable labour force. Over the next 10 years, the province will need to replace an estimated 41,000 workers expected to retire. This represents a significant loss of workers and skills, which may exacerbate recruiting challenges across the scenario period.

Increased retirements across all industries in the province results from a rapidly aging population. Over the next decade, the share of the population in the older age bracket (65 years and over) is expected to increase, and at the same time, the share of the youth population (15-24 years old) is expected to decline (see Figure 14). These demographic shifts have the potential to tighten labour markets, as labour force participation by older workers is much lower than that of their younger counterparts.

British Columbia's migration levels have been elevated significantly over the past couple of years, with international inflows making up the bulk of population growth. The province's relatively older population and lower fertility rates translate into very modest natural population growth⁴ to 2028, leaving population growth more dependent on migration later in the scenario period. Interprovincial inflows are projected to increase over the decade, as B.C.'s labour markets recover more quickly than those of other provinces. Components of population growth for British Columbia are presented in Figure 15.

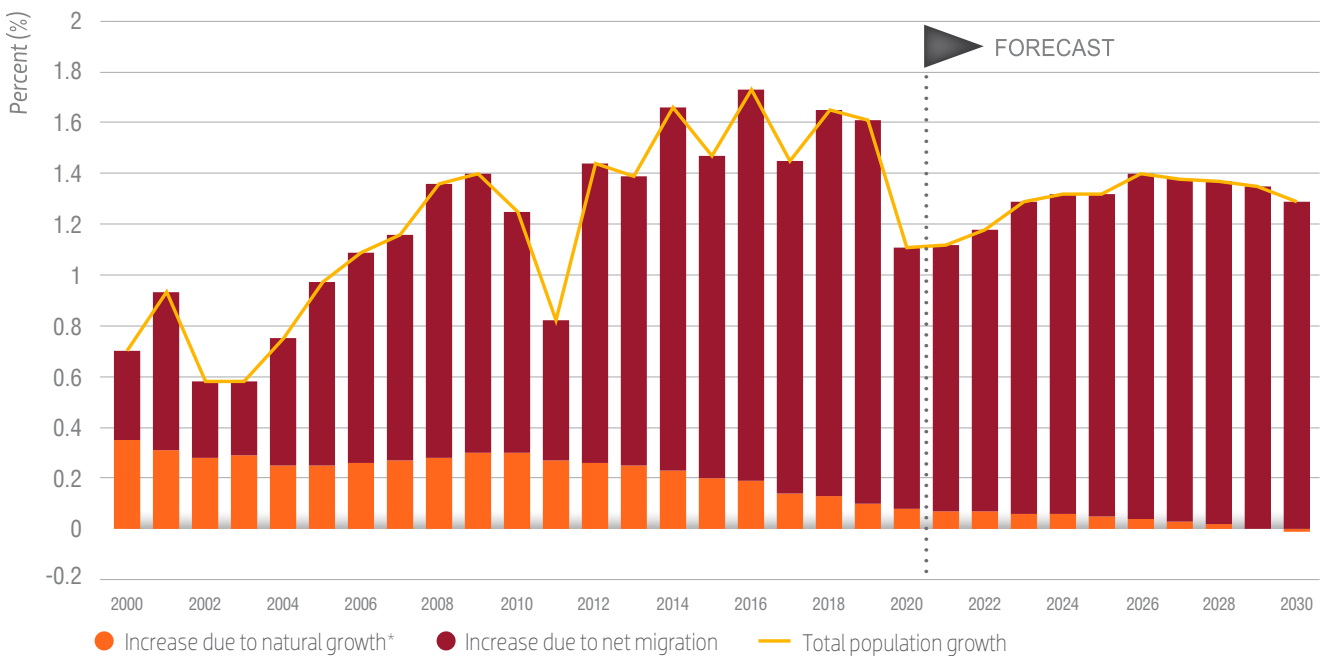
Based on historical trends, British Columbia's construction sector is expected to draw an estimated 35,150 first-time new entrants under the age of 30 from the local population into the industry over the next decade. Across the scenario period, the pace of retirements is

Figure 14: Population age distribution, British Columbia



Source: BuildForce Canada

Figure 15: Sources of population growth (%), British Columbia



* Natural rate of population growth refers to the growth in the population due to the number of births relative to the number of deaths, which leads to a positive or negative natural rate.

Source: Statistics Canada, BuildForce Canada (2021-2030)

⁴ Natural rate of population growth refers to the growth in the population due to the number of births relative to the number of deaths, which leads to a positive or negative natural rate.

projected to exceed the number of youth coming into construction, forcing industry to look to other industries, other provinces, and other countries for additional new workers to augment the available pool of local new entrants.

APPRENTICESHIP

New registrations in the 20 largest construction trade programs peaked at 8,540 in 2013 before declining to a low of 7,400 in 2017. New registrations returned to peak levels in 2018 before falling to 7,900 (-7%) in 2019. Limited available data suggest COVID-19 has imposed obstacles to the delivery of in-school training, testing, and certification. These impacts are likely to reduce the near-term numbers of new certified workers.

British Columbia's construction industry is projected to require nearly 17,100 new certified journeypersons to sustain the current workforce share of certifications and keep pace with employment and replacement demands across all industries over the scenario period.

Table 8 provides a provincial overview of the anticipated certification requirements for the 20 largest construction trade programs in all industries and in construction. The table also provides the target number of new entrants required to fulfill demand requirements over the scenario period, taking into account trends in program completion rates.

Table 9 provides a trade-by-trade breakdown of the anticipated certification requirements to meet the construction industry's share of employment and replacement demand over the scenario period. Based on projected new registrations, several trades were identified as being at risk of undersupplying the number of new journeypersons required by 2030. Trades within this group include Boilermaker, Carpenter, Gasfitter, Glazier, Heavy Equipment Operator, Industrial Electrician, Insulator, Lather, Painter, Roofer, and Welder. Supply risk may be increased over the near term depending on the severity of decline in new registrants caused by the impact of COVID-19. It is important to note that since it is difficult to determine in what sectors apprentices may work after completing their program, the analysis compares the projected supply of new journeypersons and certification requirements across all industries. It does not account for existing imbalances at the 2020 starting point.

Table 8: Estimated construction certification demand and projected target of new entrants at 42% assumed rate of completion, British Columbia, 2021 to 2030

	2021	2022	2023	2024	2025	Total 2021–2025	Total 2026–2030
Total certification demand – all industries	4,040	4,391	2,781	2,003	2,177	15,392	11,911
Total certification demand – construction	2,220	2,918	1,850	1,329	1,301	9,618	7,475
Construction certification share (%)	64%	65%	64%	64%	64%	64%	63%
Target new registrants – construction	4,641	3,842	6,010	5,634	5,125	25,252	17,854

Source: BuildForce Canada

Table 9: Estimated construction certification demand and projected target of new entrants by trade, British Columbia, 2021 to 2030

Trade	Total certification demand – construction	Target new registrants – construction	Apprentice certification supply risk – all industries
Boilermaker	376	514	At-risk supply
Carpenter	4,075	13,120	At-risk supply
Construction Electrician	2,350	3,099	Ample supply
Gasfitter	214	384	At-risk supply
Glazier	334	1,022	At-risk supply
Heavy-Duty Equipment Technician	330	398	Ample supply
Heavy Equipment Operator	501	5,435	At-risk supply
Industrial Electrician	1,732	1,786	At-risk supply
Industrial Mechanic (Millwright)	283	332	Balanced supply
Insulator (Heat and Frost)	259	656	At-risk supply

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Table 9: Estimated construction certification demand and projected target of new entrants by trade, British Columbia, 2021 to 2030 (continued)

Trade	Total certification demand – construction	Target new registrants – construction	Apprentice certification supply risk – all industries
Lather (Interior Systems Mechanic)	465	2,042	At-risk supply
Metal Fabricator (Fitter)	179	393	Ample supply
Painter and Decorator	1,197	4,366	At-risk supply
Plumber	2,377	4,011	Ample supply
Refrigeration and Air Conditioning Mechanic	705	908	Ample supply
Roofer	470	2,044	At-risk supply
Sheet Metal Worker	309	392	Ample supply
Sprinkler System Installer	165	247	Ample supply
Steamfitter/Pipefitter	420	1,121	Balanced supply
Welder	353	834	At-risk supply
Total	17,094	43,106	

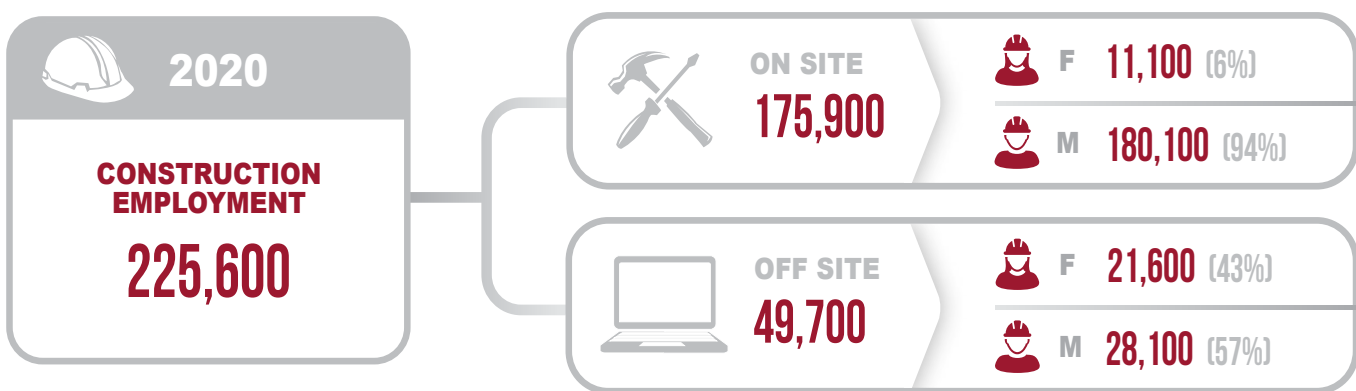
Source: BuildForce Canada

UNDERREPRESENTED GROUPS OF WORKERS

Building a sustainable and diverse workforce will require the construction and maintenance industry to increase recruitment from groups traditionally underrepresented in the current construction labour force, including women, Indigenous people, and new Canadians.

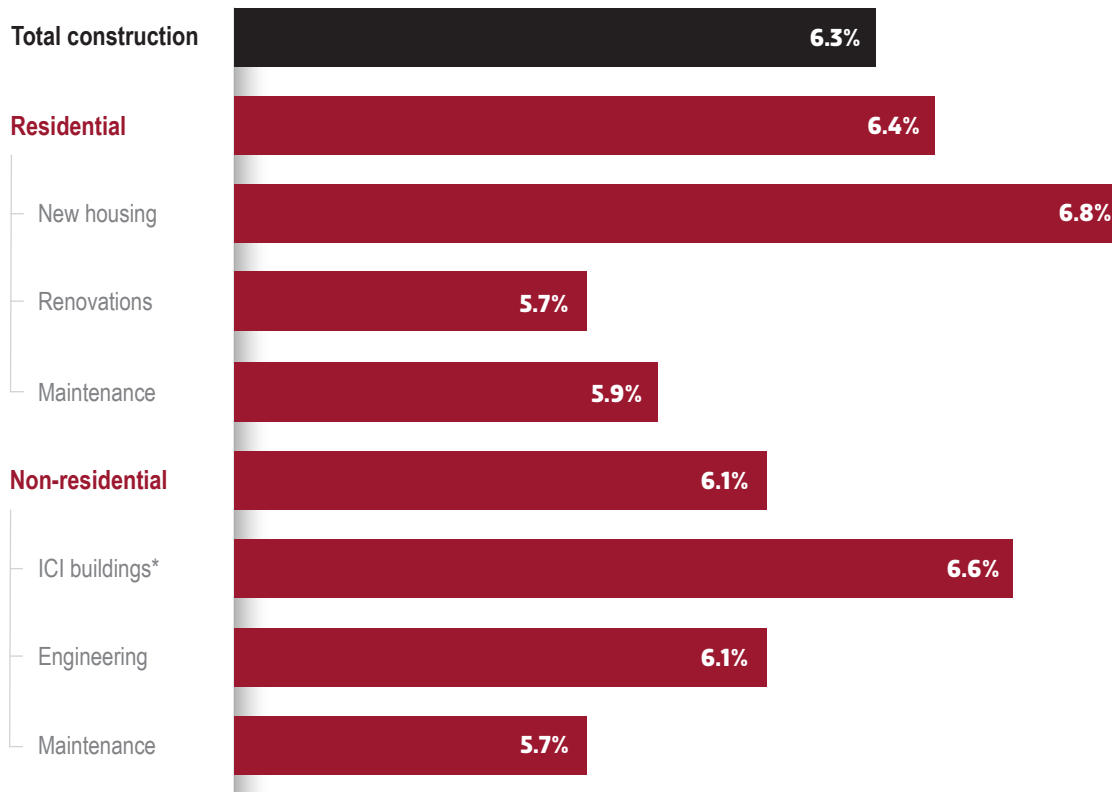
In 2020, there were approximately 32,700 women employed in British Columbia's construction industry, of which 34% worked on site, directly on construction projects, while the remaining 66% worked off site, primarily in administrative and management-related occupations. Of the 175,900 tradespeople employed in the industry, women made up only 6% (see Figure 16).

The estimated 11,100 tradeswomen in British Columbia are employed across all sectors of construction, but they tend to be employed in occupations highly demanded by the residential sector, as 60% of tradeswomen are employed in the new housing, renovation, and maintenance segments of construction. The representation of women (percent of women in the total workforce) is slightly higher in the residential sector, with women accounting for 6.4% of total tradespeople, compared to 6.1% in non-residential construction (see Figure 17). The top five trades and occupations in which women tend to be employed are trades helpers and labourers (22% of all tradeswomen), construction managers (17%), painters (12%), contractors and supervisors (9%), and carpenters (7%).

Figure 16: Detailed construction employment by gender, British Columbia, 2020

Source: BuildForce Canada calculations based on Statistics Canada's Labour Force Survey (LFS) and 2016 Census of the Population.

Figure 17: Women's share of total direct trades and occupations (on site), British Columbia



* industrial, commercial, institutional

Source: BuildForce Canada calculations based on Statistics Canada's Labour Force Survey (LFS) and the 2016 Census of the Population.

The Indigenous population is another underrepresented group that presents recruitment opportunities for British Columbia's construction industry. In 2020, Indigenous people accounted for approximately 5% of British Columbia's total working-age population.⁵ The Indigenous population is the fastest growing in Canada and has a higher propensity to choose the construction industry as a potential career choice. Based on the 2016 Census, an estimated

7.6% of non-Indigenous Canadians were employed in the construction industry, compared to 9.6% for the Indigenous population.

Approximately 5.7% of British Columbia's construction workforce is made up of Indigenous people, of which about 82% work directly on construction projects, while the remaining 18% work

⁵ Statistics Canada. Table 14-10-0364-01 Labour force characteristics by province, region, and Aboriginal group (x 1,000)

10-YEAR AVERAGE

1.3%



POPULATION GROWTH

46,900



BIRTHS

44,900



DEATHS

69,000



NET MIGRATION

BY 2030

41



AVERAGE AGE

22%



PERCENT OF CURRENT LABOUR FORCE LOST TO RETIREMENT

primarily in administrative and management-related occupations. The Indigenous population is also more likely to work in heavy-industrial construction, as approximately 30% of Indigenous people working in construction work in the sector, compared to 20% of non-Indigenous workers.

B.C.'s construction industry may also leverage new Canadians (immigrants) over the coming decade to meet labour requirements. The province is expected to welcome an average of 69,000 new international migrants annually between 2021 and 2030, making the immigrant population a key source of labour force growth.

British Columbia's construction workforce is made up of approximately 24% new Canadians.⁶ Historically, a key source of immigrants to the province were Europeans, who tend to have a higher propensity to choose the construction industry. Currently underway, however, is a shift that has seen a significant rise in immigration from Asia (China and India), whose citizens may have a lower tendency to consider employment in the construction sector. Due to Canadian immigration policies and selection criteria, persuading individuals upon arrival to consider careers in the trades may be challenging, particularly for those with professional training outside the skilled trades that are seeking employment in other sectors of the economy. As immigrants will make up an increasing share of the overall Canadian population over the next few decades, additional recruitment efforts will be required to ensure the construction industry continues to recruit its share of new Canadians into the labour force.

⁶ Statistics Canada, BuildForce Canada (2021-2030)

CONCLUSIONS AND IMPLICATIONS

British Columbia is poised for renewed growth and the addition of 12,446 jobs over the next four years to 2024, fuelled by current and proposed major projects and a modest up-cycle in new housing and increased renovation work. Non-residential labour market conditions are expected to tighten again, as work ramps up on a long list of major projects that sustain high levels of employment over the next several years.

Industry faces the added challenges of an aging workforce and the expected retirement of more than 41,000 workers over the next decade, or 22% of the current labour force.

Meeting near- and long-term labour force demand requirements will require a combination of industry strategies that include increased local recruitment and training, and attracting immigrants and workers from other industries, and potentially out-of-province workers during anticipated peak periods.

The industry scenario-based approach developed by BuildForce Canada to assess future labour market conditions provides a powerful planning tool for industry, government, and other stakeholders to better track labour market conditions and identify potential pressure points. The assumed timing of proposed major projects in the outlook underpins the market conditions anticipated. Any changes to these assumptions present risks and potentially alter anticipated labour market conditions.

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