

THE HBI CONSTRUCTION LABOR MARKET REPORT

Spring 2021

Based on research of the Research of the Economics Group, National Association of Home Builders



**Building Careers.
Changing Lives.**

A Message from HBI's President and CEO

The Home Builders Institute is proud to launch its new, semi-annual Construction Labor Market Report. We are grateful to Dr. Robert Dietz, Chief Economist and Senior Vice President for Economics and Housing Policy of the National Association of Home Builders (NAHB), and his extraordinary team, upon whose research this report is based.

The importance of tracking construction labor cannot be overstated. The home building industry faces a severe shortage of skilled workers. This persistent shortfall endangers housing affordability and availability, and hinders a robust economic recovery. For Americans and their communities to thrive in the post-pandemic era, we must build a new generation of skilled tradespeople and promote job opportunities in the construction trades.

Each spring and fall, HBI will release its Construction Labor Market Report. Meanwhile, our team of more than 200 professionals in 220 locations across the country will continue to build careers and change lives by training 10,000 students each year through HBI's industry-recognized curriculum. We are privileged to serve as a leader in this important mission for our nation.

Ed Brady

Executive Summary

Labor markets experienced turmoil during 2020, as local economies experienced activity restrictions in attempt to slow the virus crisis. While labor markets improved during the latter half of 2020, unemployment remained elevated. With the jobless rate just under 7% at year's end, the housing industry was a clear bright spot and job creator.

Given ongoing shortages of skilled labor, the residential construction industry was able to refill all its job losses from the Spring and ended 2020 with year-over-year gains for total employment. Nonresidential construction will take longer for job losses to be replace, yet according to government data, the industry is still short more than 200,000 workers as 2021 begins.

For construction and the housing industry to continue to lead the economy in recovery, job recruitment and training must take center stage. Moreover, if future stimulus efforts include a larger infrastructure package, ensuring that a trained and available skilled construction labor force will be at the top of both the national policy an economic agenda.

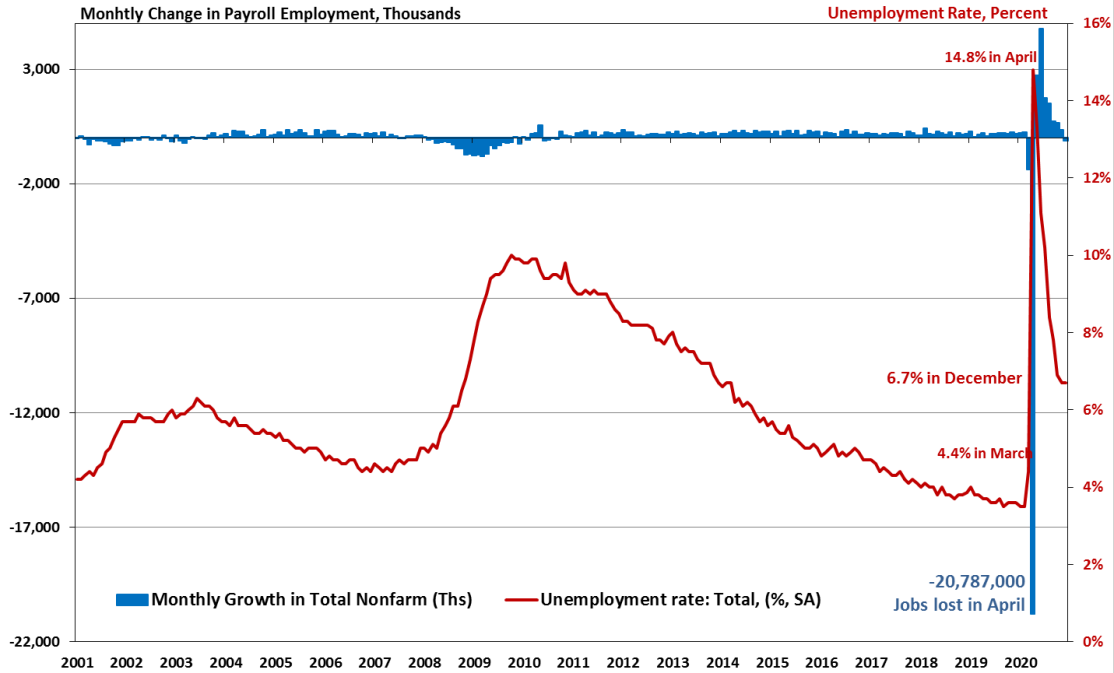
The following report summarizes recent labor market data and research. The analysis emphasizes the important role that the construction industry plays during an economic recovery, as well as the ongoing constraints associated with industry expansion due to the ongoing skilled labor shortage.

US Employment

Looking back at 2020, a year like no other, the economy lost 1.4 million jobs in March and 20.8 million jobs in April due to the impact of the COVID-19 pandemic and efforts to contain it. The April job loss was unprecedented in the history of data series since 1939.

From May to November, 12.5 million jobs have been created. After seven consecutive months' job gains, nonfarm payroll employment fell by 140,000 in December as virus cases surged. For the year of 2020, the average monthly employment growth was negative (-781,000), compared to the average monthly growth of 178,000 over all of 2019.

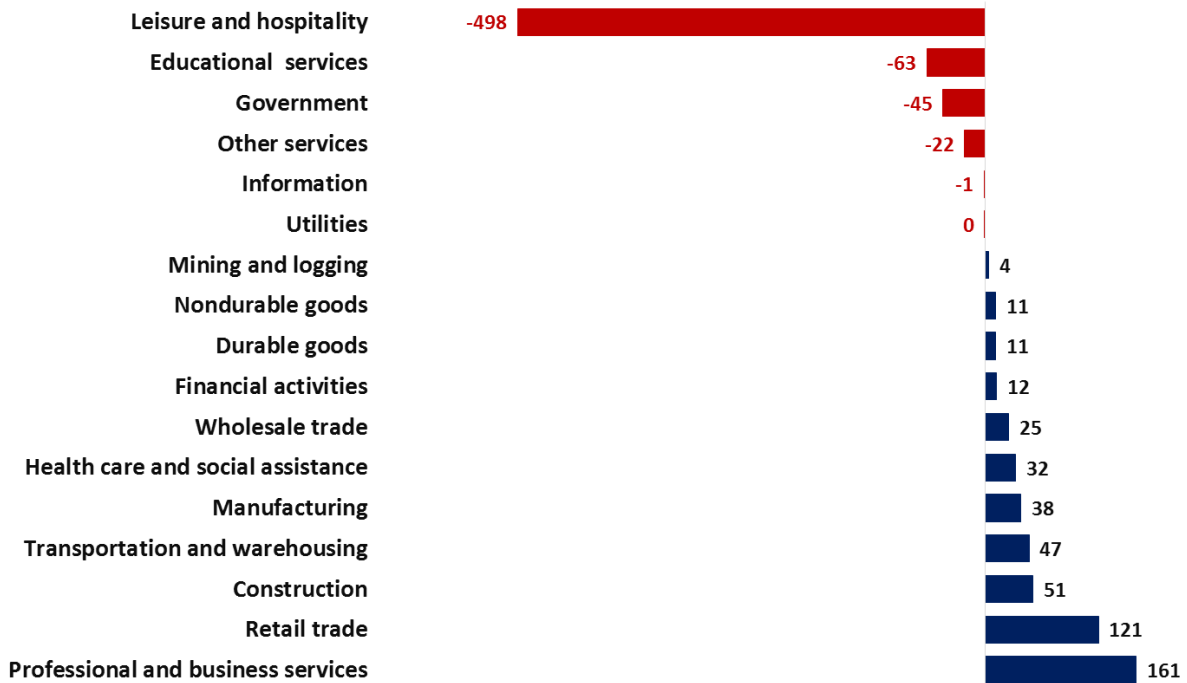
Figure 1. Monthly Change in Payroll Employment and Unemployment Rate



Source: Bureau of Labor Statistics.

The recent December job losses reflected the increasing COVID-19 cases and efforts to contain the pandemic. While employments in leisure and hospitality, educational services, government, and other services declined, professional and business services, retail trade, construction, and transportation and warehousing had job gains. The job openings rate in construction increased in January to 4%, with 309,000 open positions in the sector. This is higher than the 296,000 count recorded a year ago and the highest since October 2019 (324,000).

**Figure 2. December Employment Changes by Selected Industry
(month-over-month change, in thousands)**

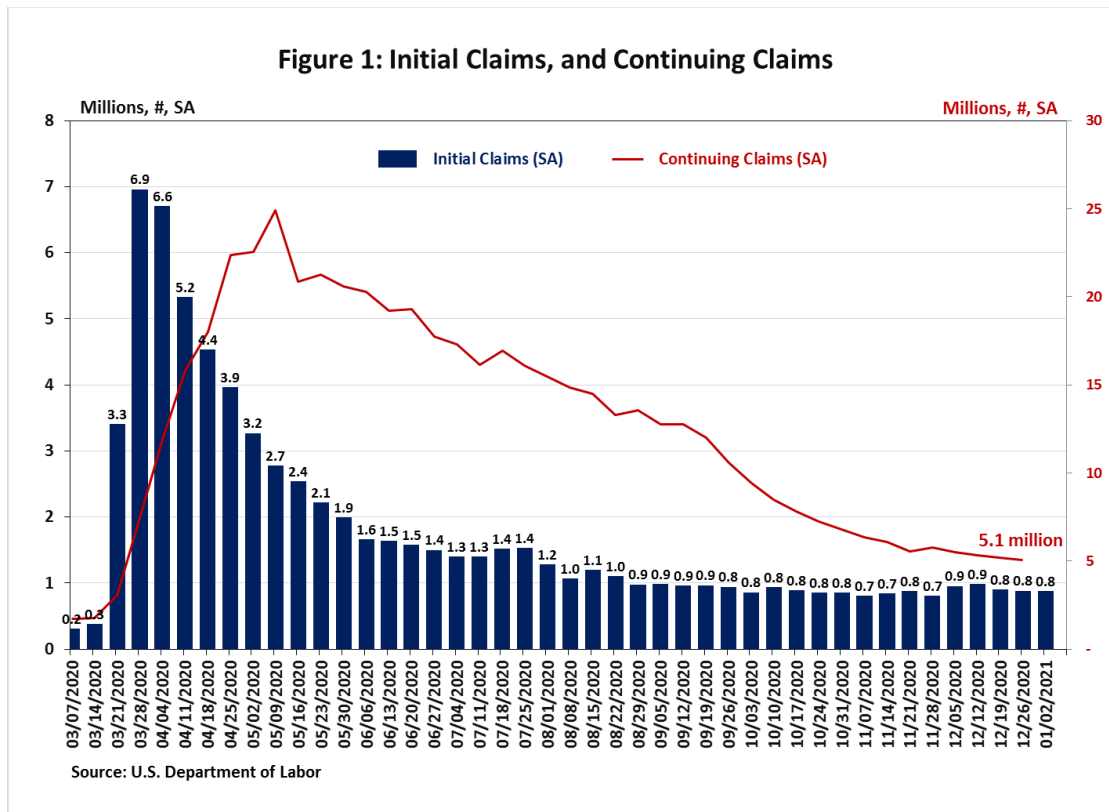


Source: Bureau of Labor Statistics.

US Unemployment Data and Trends

As of December 2020, the **national unemployment rate** was 6.7%. This is 8.1 percentage points lower than its recent high of 14.8% in April and 3.2 percentage points higher than the rate in February. The number of unemployed persons currently stands at 10.7 million. The labor force participation rate, the proportion of the population either looking for a job or already with a job, is 61.5%.

Weekly initial jobless claims peaked at nearly 7 million in the spring of 2020 and have remained at around 0.8 million since the fall of 2020 and into 2021, about four times higher than the pre-pandemic average. Going into 2021, the labor market will continue to recover from the COVID-19 pandemic. **Continuing claims (also known as the number of insured unemployed)**, which lag initial jobless claims by one week, are now hovering just above 5 million.



Teleworking Trends

According to the Household Survey supplemental data, which come from questions added to the Current Population Survey (CPS) since May 2020, 23.7% of employed persons teleworked or worked at home in the last 4 weeks specifically because of the coronavirus pandemic in December, up from 21.8% in November. In December, 15.8 million persons reported that they had been unable to work at some point in the last 4 weeks because their employer closed or lost business due to the coronavirus pandemic. Among those who reported that they were unable to work due to pandemic related closures, 12.8% received at least some pay from their employer for the hours not worked.

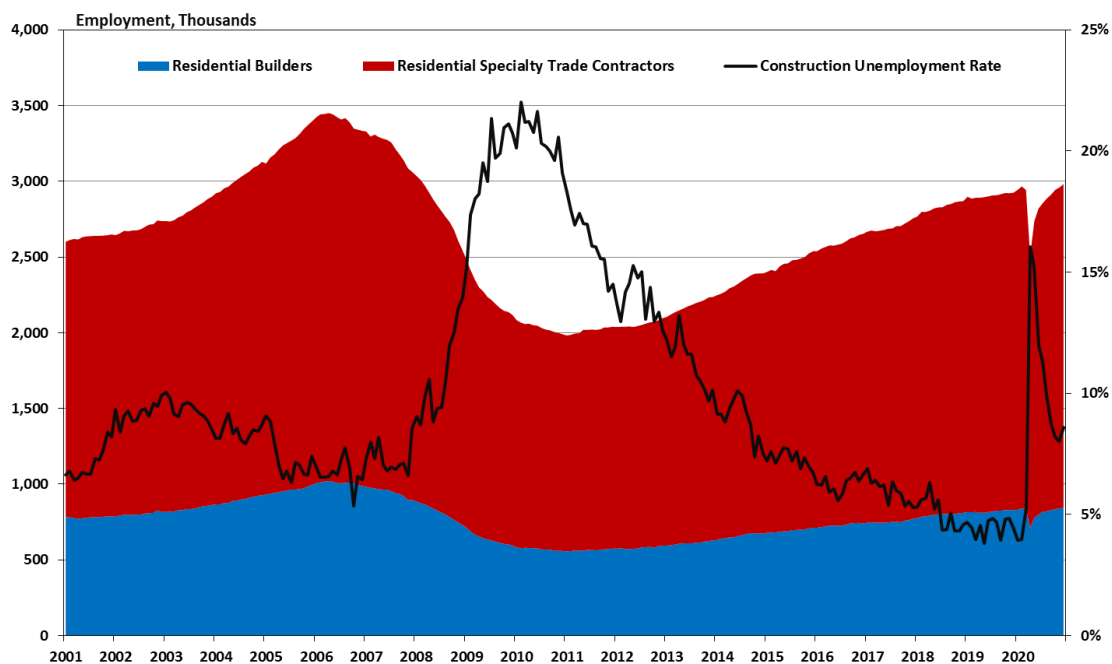
Residential Construction Employment

Total construction industry (both residential and non-residential) **payroll employment** totaled 7.4 million in December 2020. Out of this total, residential construction employment accounts for 3.0 million payroll jobs, broken down as 848,000 builders and 2.1 million residential specialty trade contractors.

The 6-month moving average of job gains for residential construction was 27,000 a month. Since the low point following the Great Recession, residential construction has gained 999,300 positions.

In the last eight months of 2020, residential construction added 472,500 jobs in total offsetting all the jobs lost in March and April. Sector employment now stands higher than in February. In contrast, only 61% of the net jobs lost in nonresidential construction have been regained.

Figure 2. Residential Construction Employment and Unemployment Rate



Source: Bureau of Labor Statistics.

After reaching 16.1% in April due to the impact of the COVID-19 pandemic, the **unemployment rate for construction workers** has been trending downward for the past eight months but increased in December to 8.6% on a seasonally adjusted basis.

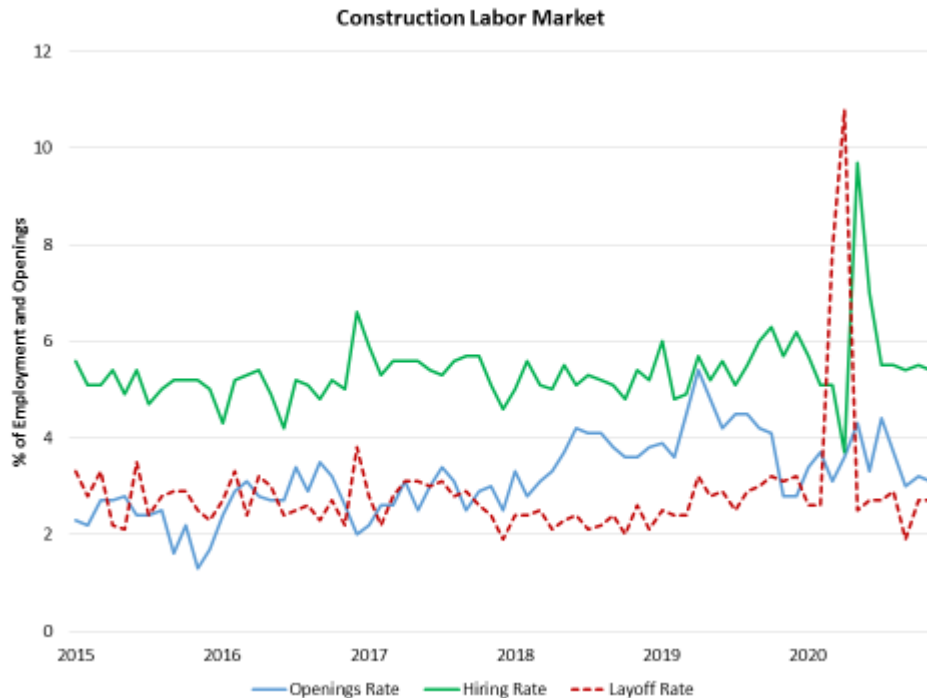
[Job Openings and Labor Turnover in Construction](#)

Job openings and **hiring** remained steady in November as net job gains continued, albeit with distinctions between residential and nonresidential construction as the sector experiences a two-tier recovery.

Overall, hiring in the construction sector remained steady in November, coming in at a 5.4% rate. The peak rate of hiring in 2020 occurred in May (9.7%) as a rebound took hold in home building and remodeling.

Construction sector **layoffs** were steady at somewhat elevated levels in November at 2.7%. In April, the layoff rate was 10.8%, after a loss of 7.9% in March. Since that time however, the sector layoff rate has been below 3%.

The **job openings rate** in construction was steady in November, at a 3.1% rate, with 236,000 open positions in the sector. This is higher than the 215,000 count recorded a year ago, a sign of sector expansion amid the surge in housing demand.

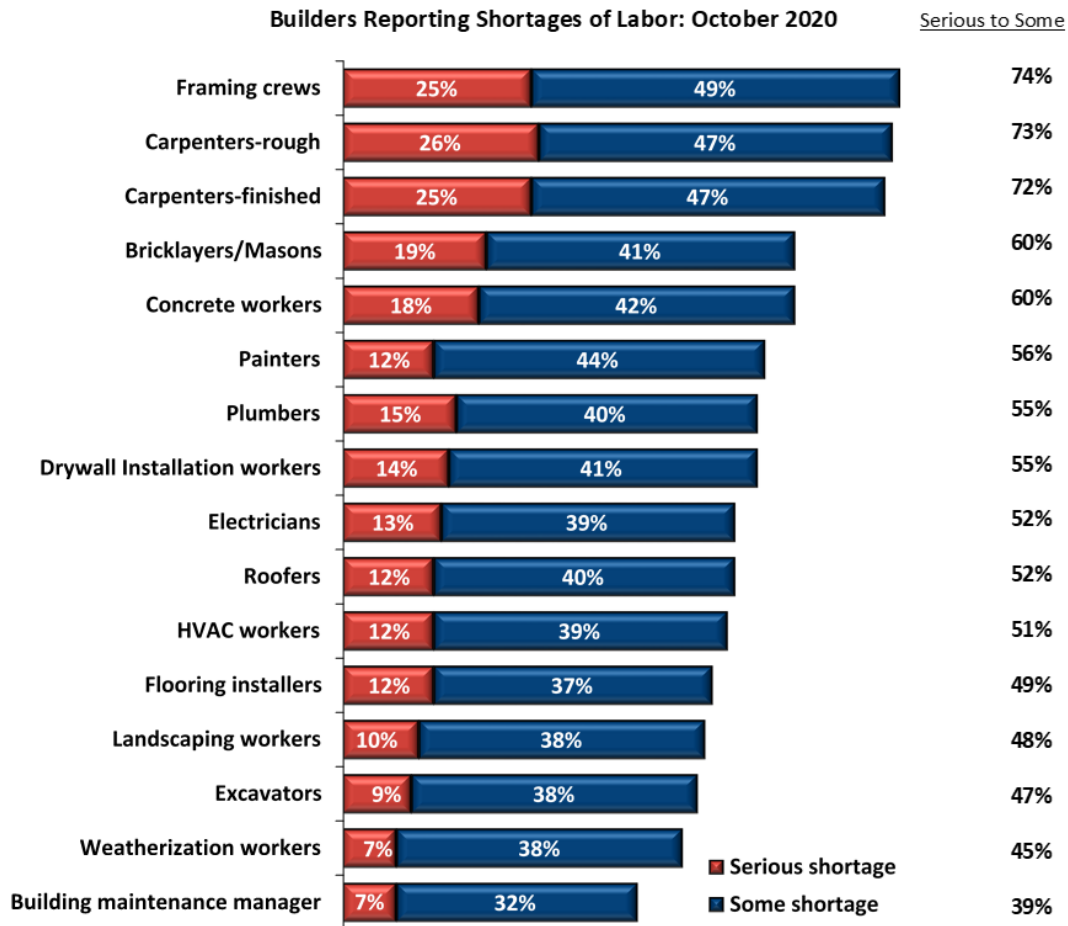


Looking forward, the job openings rate is likely to experience choppiness in the months ahead given divergent outlooks within the construction industry. Home building and remodeling are relative bright spots for the overall economy, while nonresidential construction will experience greater headwinds. Nonetheless, attracting skilled labor will remain a key objective for residential and nonresidential construction firms in the coming quarters.

Builders Reporting Shortages of Labor

The Economics Group of the National Association of Home Builders (NAHB) periodically asks single-family builders about the availability of labor and subcontractors in its monthly survey for the NAHB/Well Fargo Housing Market Index (HMI). The October 2020 HMI survey asked about shortages in 16 specific construction trades.

Shortages of labor directly employed by builders were generally a bit less severe than in 2019 (probably due to a temporary reduction in demand in the second quarter of 2020 due to the COVID-19 pandemic) but remained at least fairly widespread for each of the 16, ranging from a low of 39 percent for building maintenance managers to a high of 74 percent for framing crews.



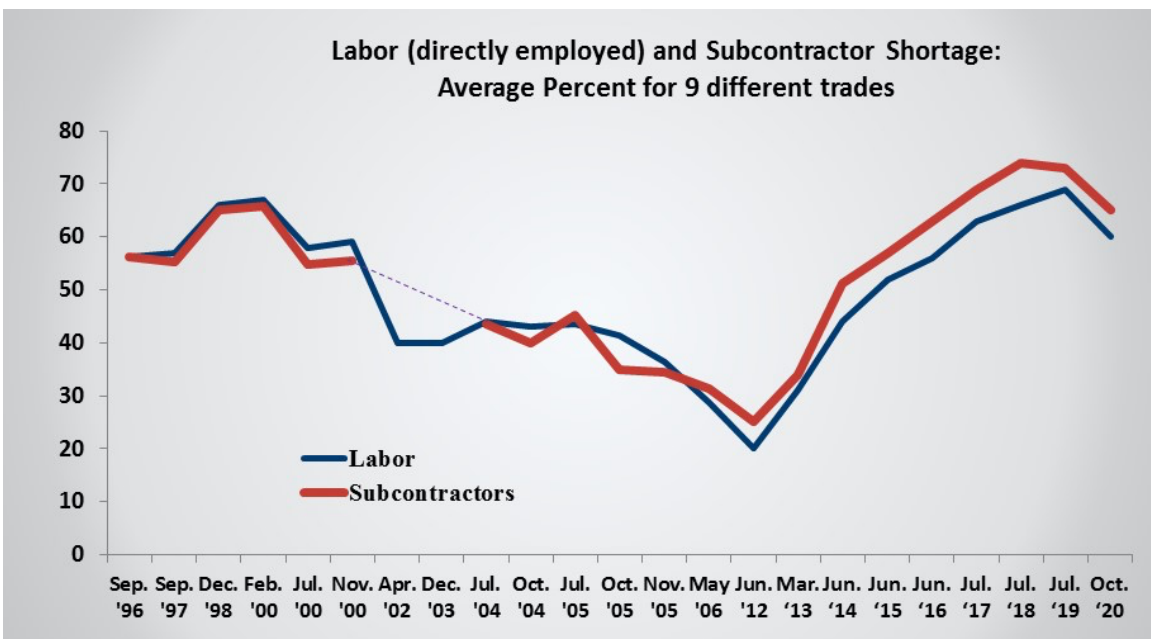
Averaged across the 9 occupations NAHB has covered in a consistent way since the 1990s, the share of builders reporting a shortage was 60 percent in October 2020. This is below the 63 percent reported in 2017, 67 percent in 2018, or 69 percent in 2019, but is higher than any 9-trade shortage percentage recorded prior to 2017.

The shortage percentage is especially high relative to total housing starts, which have increased steadily from an annual rate of under 1 million in April to a rate of roughly 1.5 million at the end of 2020. In contrast, during the housing boom of 2005 when starts exceeded 2 million, the 9-trade shortage percentage never exceeded 45 percent.



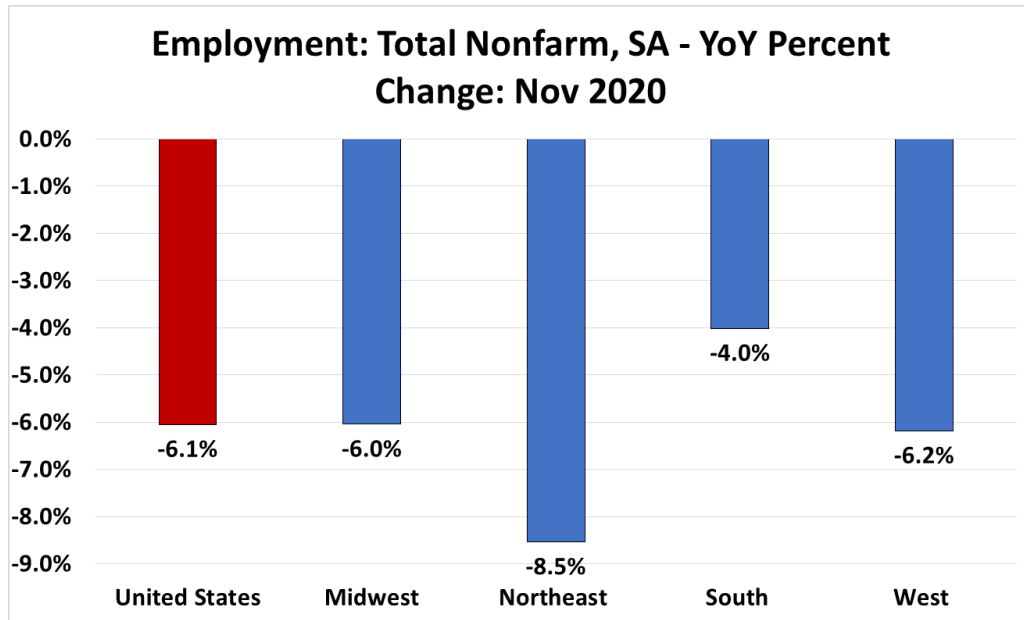
The numbers reported above pertain to labor directly employed by builders. Builders also employ workers indirectly, through subcontractors. Recently, the shortages of subcontractors have been more severe than for labor directly employed.

Since 2013 a persistent 5- to 7-point gap opened up between the 9-trade average shortage of subcontractors and labor directly employed by builders, with subcontractor shortages being more widespread. In 2019 and 2020, the gap has narrowed slightly but is still evident. This is significant, given that, according to a recent NAHB study, builders subcontract 84 percent of construction costs in the typical home they build.



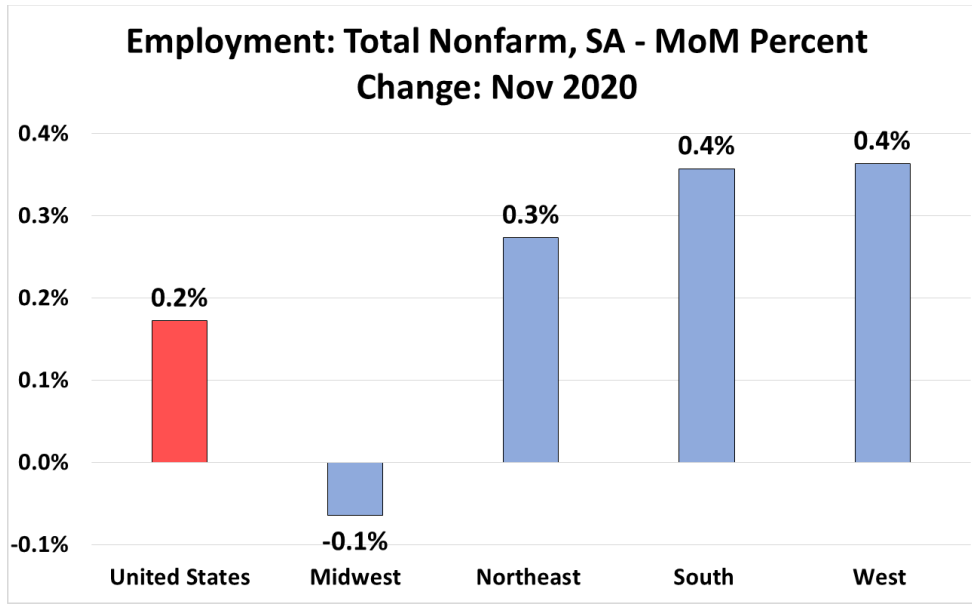
State-Level Employment Data

Year-over-year, ending in November, total nonfarm employment fell by 9.2 million jobs on a seasonally adjusted basis (SA), or -6.1%. During this time, total nonfarm employment decreased across all the regions. The Northeast declined by 8.5%, the West region by 6.2%, the Midwest by 6.0%, and the South by 4.0%.

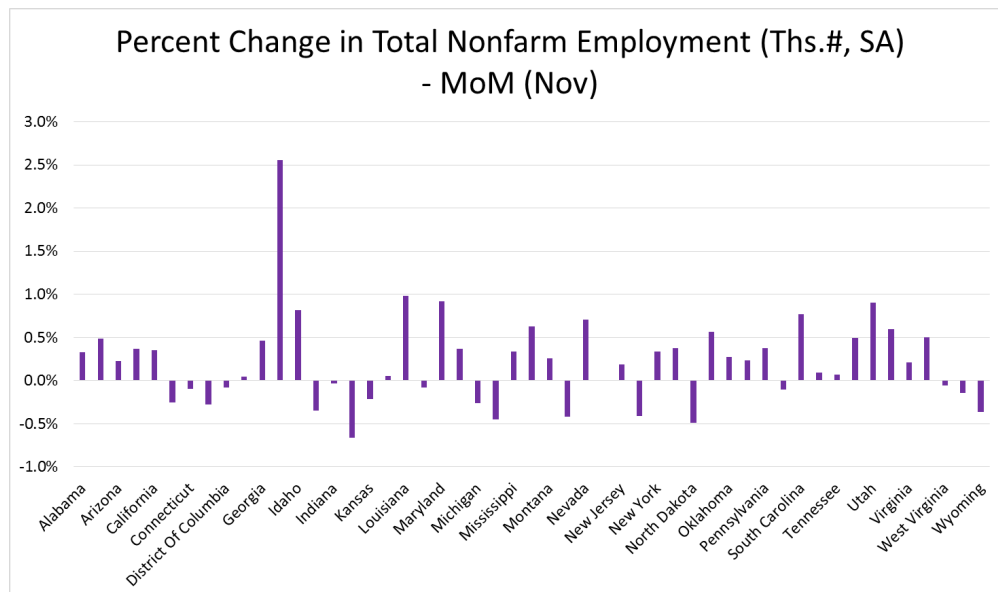


The annual payroll job losses were spread unevenly across states ranging from 200 jobs lost in Utah to 1.3 million job lost in California. In percentage terms, Hawaii reported the steepest decline at 15.2% while Alabama lost 2.1% of nonfarm payroll compared to a year ago. Idaho was the only state recording annual employment gains (+3,600 jobs, or 0.5%).

On a monthly basis, total nonfarm payroll employment increased just 245,000 (0.2%) over the month of November, following an increase of 610,000 jobs in October. The employment gains were sluggish across all regions increasing by 0.3% in the Northeast, 0.4% in the South and in the West, and declining by 0.1% in the Midwest.

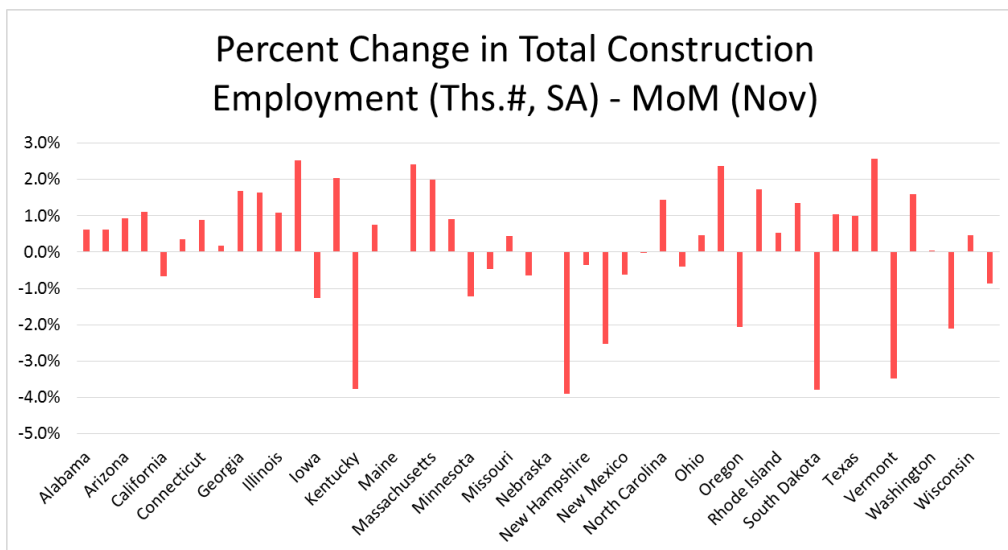


In November, nonfarm payroll employment increased in 32 states compared to the previous month. The largest increase came from Texas, which added 61,000 jobs during this time followed by California (+57,100) and New York (+29,500). The other 29 states added 293,400 jobs during this time. Seventeen states and the District of Columbia lost a total of 83,400 jobs. New Hampshire reported no change during this time. In percentage terms, Texas increased by 0.5% while Illinois reported a decline of 0.4% between October and November.



In the construction sector specifically, which includes both residential and non-residential construction, across the 48 states which reported construction sector jobs data, 29 states reported an increase in November compared to October, while 17 states lost construction sector jobs. Maine

and Nebraska reported no change. Texas added 7,500 construction jobs while California lost 5,800 construction sector jobs during this time. Overall, the construction industry added 27,000 jobs in November compared to the previous month. In percentage terms, Utah increased by 2.6% while Nevada reported a decline of 3.9% between October and November.



Year-over-year, the U.S lost 179,000 construction sector jobs, which is a 2.4% decrease compared to November 2019. Virginia added 12,200 jobs, which was the largest gains of any state, while Texas lost 32,700 jobs, which was the largest decline of any state. In percentage terms, Missouri had the highest annual growth rate in construction sector by 7.8%. Over this period, Vermont reported the largest decline at 26.0%.

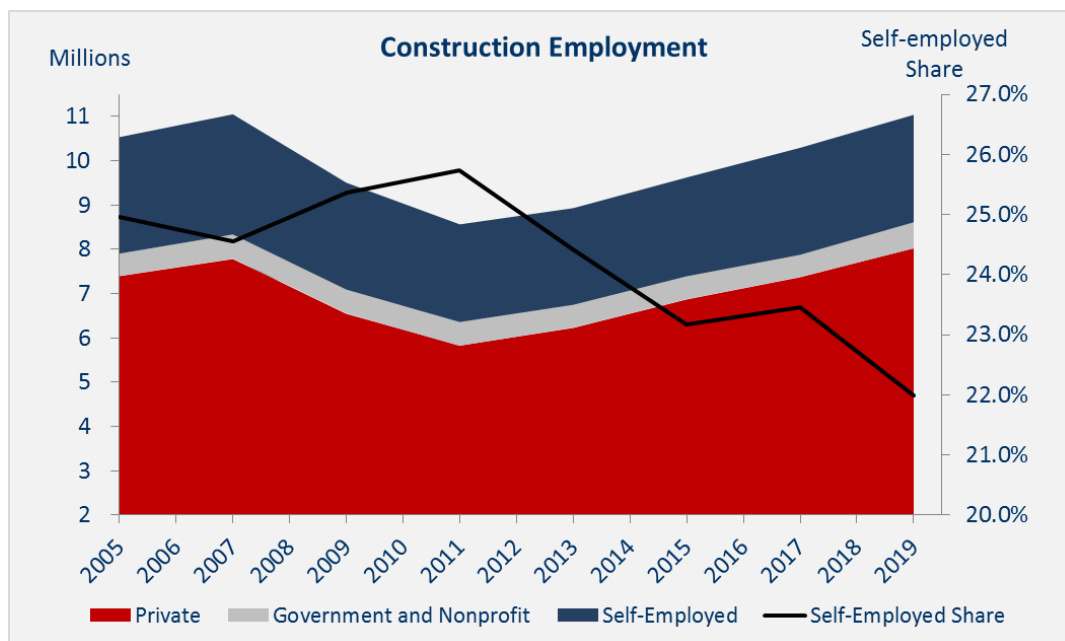
Self-employment in Residential Construction

The timely payroll employment and unemployment statistics from the Bureau of Labor Statistics (BLS) do not include self-employed workers. Counting self-employed is particularly important in the home building industry since they traditionally make up a larger share of the labor force.

The latest American Community Survey data show that out of 11 million people working in construction in 2019, more than 2.4 million, or 22%, were self-employed. In comparison, an economy-wide self-employment rate does not reach 10% of the employed labor force. The high self-employment rates in construction reflect a common practice of builders and remodelers to maintain relatively small payrolls and rely on subcontractors for a large share of the construction work.

During the housing downturn, construction self-employment increased from 24% in 2006 to more than 26% in 2010. It is likely that builders and remodelers who were no longer able to maintain a steady work flow may have tried to manage costs by eliminating payroll positions and joining the ranks of the self-employed. It is also possible that some construction employees laid off during the

downturn were able to stay in the industry by striking out on their own. The share of self-employed workers in construction peaked in 2010, exceeding 26%.

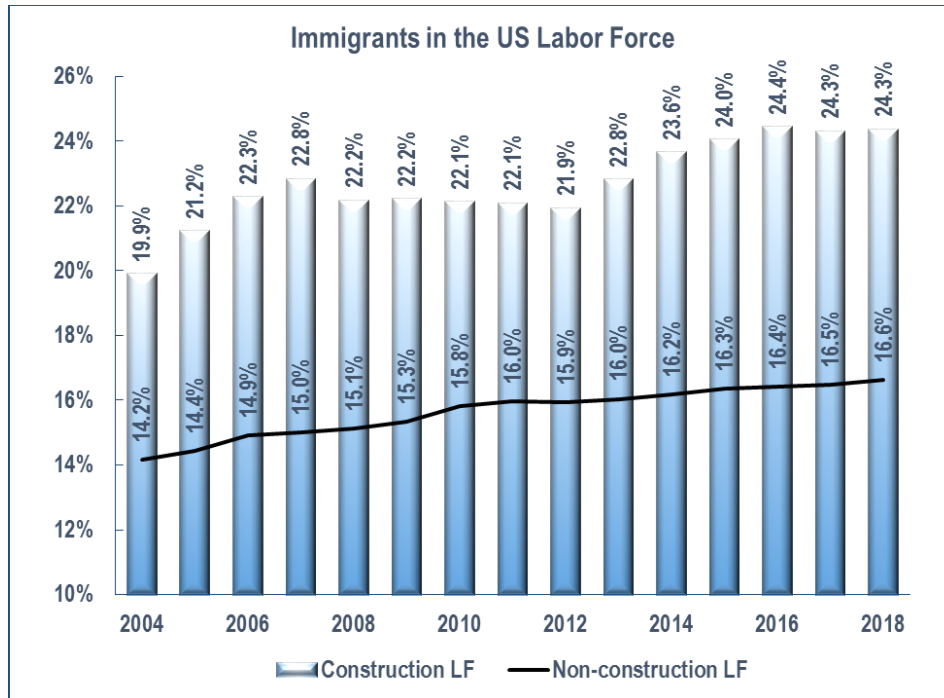


Since 2011 the construction industry has been adding payroll jobs faster. Consequently, the self-employment rates reversed their course in 2011 and fell to 22% in 2019, the lowest construction self-employment share recorded in the ACS.

Immigrants in Construction

The American Community Survey (ACS) shows that immigrant workers are a vital and flexible source of labor to the construction industry. Despite the slowing of immigration inflow to the U.S., the share of foreign-born workers in the US construction labor force has been rising since the housing recovery began. As of 2018, immigrant workers now account for close to one in four workers, a record high share that was reached for the first time in 2016.

The story behind the rising share of immigrants in the construction labor force during the housing recovery is twofold – an unusually slow, delayed and reluctant return of native-born workers and a much faster and robust comeback of immigrant workers.



The share of immigrants is even higher in construction trades, reaching 30%. Concentration of immigrants is particularly high in some of the trades needed to build a home, like carpenters, painters, drywall/ceiling tile installers, brick masons, and construction laborers – trades that require less formal education but consistently register some of the highest labor shortages in [the NAHB/Wells Fargo Housing Market Index \(HMI\) surveys](#) and [NAHB Remodeling Market Index \(RMI\)](#).

Immigrants in Construction Occupations

Construction Occupation	Total	Immigrant Share	No High School Diploma
Construction Laborers	2,087,689	36.0%	30.4%
Carpenters	1,143,228	32.7%	27.0%
First-Line Supervisors Of Construction Trades	755,647	17.2%	15.3%
Electricians	603,096	15.5%	8.3%
Painters And Paperhangers	556,003	47.3%	35.6%
Plumbers, Pipefitters, And Steamfitters	460,614	18.0%	15.7%
Construction Equipment Operators	302,708	13.9%	21.9%
Roofers	229,756	43.6%	42.0%
Brickmasons, Blockmasons, Stonemasons	161,213	39.6%	34.6%
Drywall Installers, Ceiling Tile Installers	153,299	50.0%	45.1%
Carpet, Floor, And Tile Installers And Finishers	131,683	40.2%	31.5%
Highway Maintenance Workers	83,557	7.3%	12.3%
Cement Masons, Concrete Finishers, And Terrazzo Workers	64,932	34.0%	33.7%
Sheet Metal Workers	53,209	17.0%	16.1%
Insulation Workers	43,073	32.1%	23.0%
Structural Iron And Steel Workers	42,011	15.3%	13.2%
Other Construction And Related Workers	36,352	27.1%	26.6%
Pipelayers	35,510	22.7%	30.6%
construction and building inspectors	33,620	9.9%	4.7%
Helpers, Construction Trades	33,494	28.4%	34.2%
Plasterers And Stucco Masons	29,157	47.4%	46.0%
Fence Erectors	28,988	26.9%	29.9%
Glaziers	25,811	10.6%	9.6%
Elevator Installers And Repairers	21,177	11.9%	2.2%
Surface Mining Machine Operators And Earth Drillers	20,468	8.1%	22.0%
Solar Photovoltaic Installers	14,531	18.1%	12.5%
Boilermakers	5,112	2.4%	20.1%
Hazardous Materials Removal Workers	3,576	36.2%	29.0%
Explosives Workers, Ordnance Handling Experts	1,701	0.0%	14.9%
Underground Mining Machine Operators	1,175	11.8%	6.4%
Other Extraction Workers	828	23.7%	7.2%
Rail-Track Laying And Maintenance Equipment Operators	484	0.0%	0.0%
Derrick, Rotary Drill, And Service Unit Operators	394	0.0%	9.6%

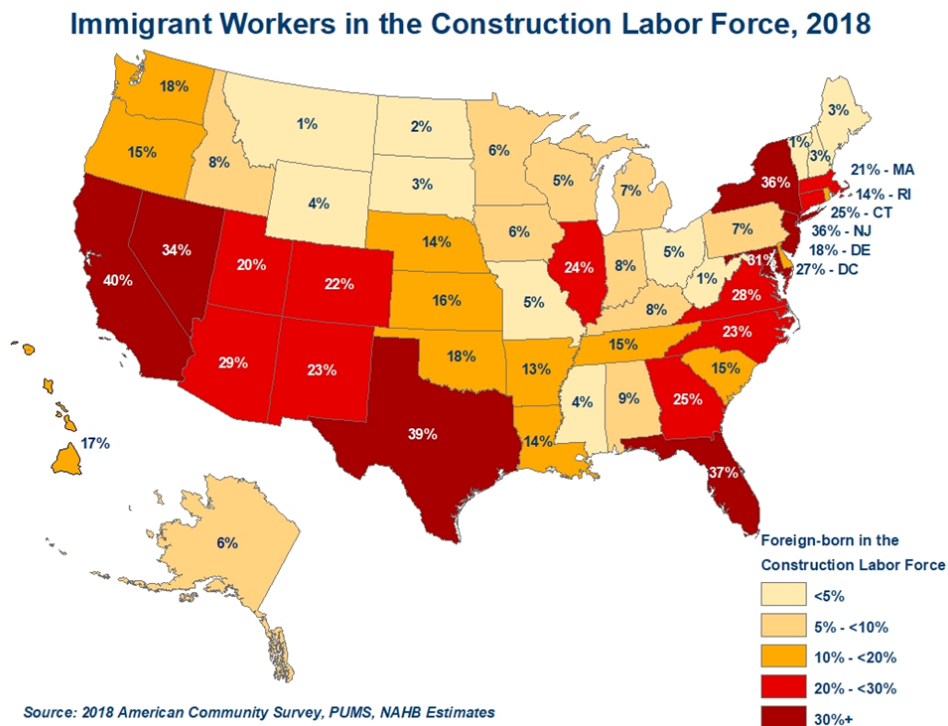
Source: the 2018 ACS, PUMS, NAHB estimates

The table above also shows that immigrants are concentrated in trades that do not require years of education. Immigrants account for half of drywall/ceiling tile installers, a trade where 45% of workers do not have a high school diploma. Over 47% of all plasterers/stucco masons and painters are immigrants. Workers with no high school diploma make up 46% and 36% of these trades, respectively.

The construction occupations with low presence of foreign-born labor, such as construction and building inspectors, boilermakers, elevator installers, electricians, first-line supervisors – tend to recruit better educated workers. Only 2% of elevator installers/repairers, less than 5% of construction and building inspectors, and 8% of electricians did not graduate from high school.

In addition to drywall/ceiling installers, plasterers/stucco masons and painters, the construction occupations with the highest presence of immigrants are roofers, carpet/floor/tile installers and brickmasons. The share of immigrants in these trades is 40% and higher. Between 32 and 42% of workers in these occupations do not have high school diploma.

In some states, reliance on foreign-born labor is even more pronounced. Immigrants comprise close to 40% of the construction workforce in California and Texas. In Florida, New Jersey and New York, close to 37% of the construction labor force is foreign-born. In Nevada, one out of three construction industry workers come from abroad.

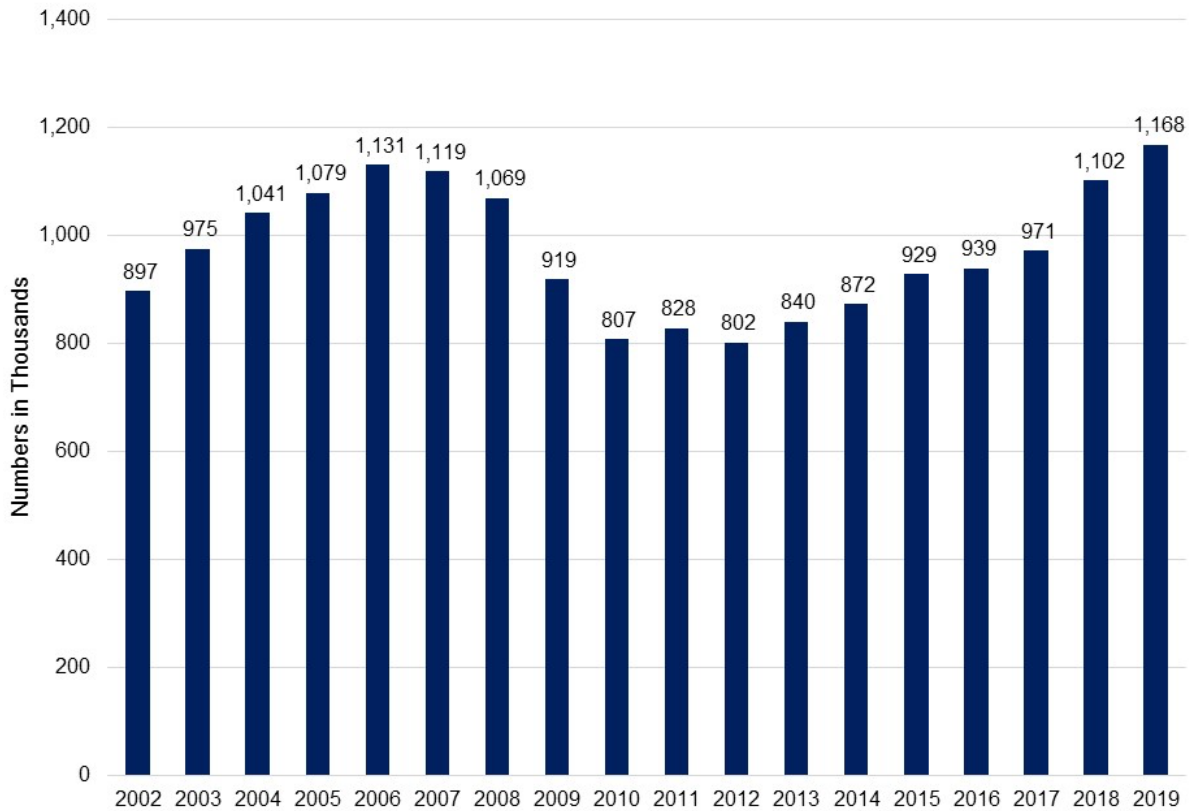


Women in Construction

The number of women employed in the construction industry grew substantially in 2019 rising to around 1.2 million, surpassing the peak of pre-recession employment level. As the construction skilled labor shortage remains a key challenge, adding new workers is an important goal of the industry. Bringing additional women into the construction labor force represents a potential opportunity for the future. Here we explore the state of women in the construction industry using labor force statistics from the Current Population Survey (CPS).

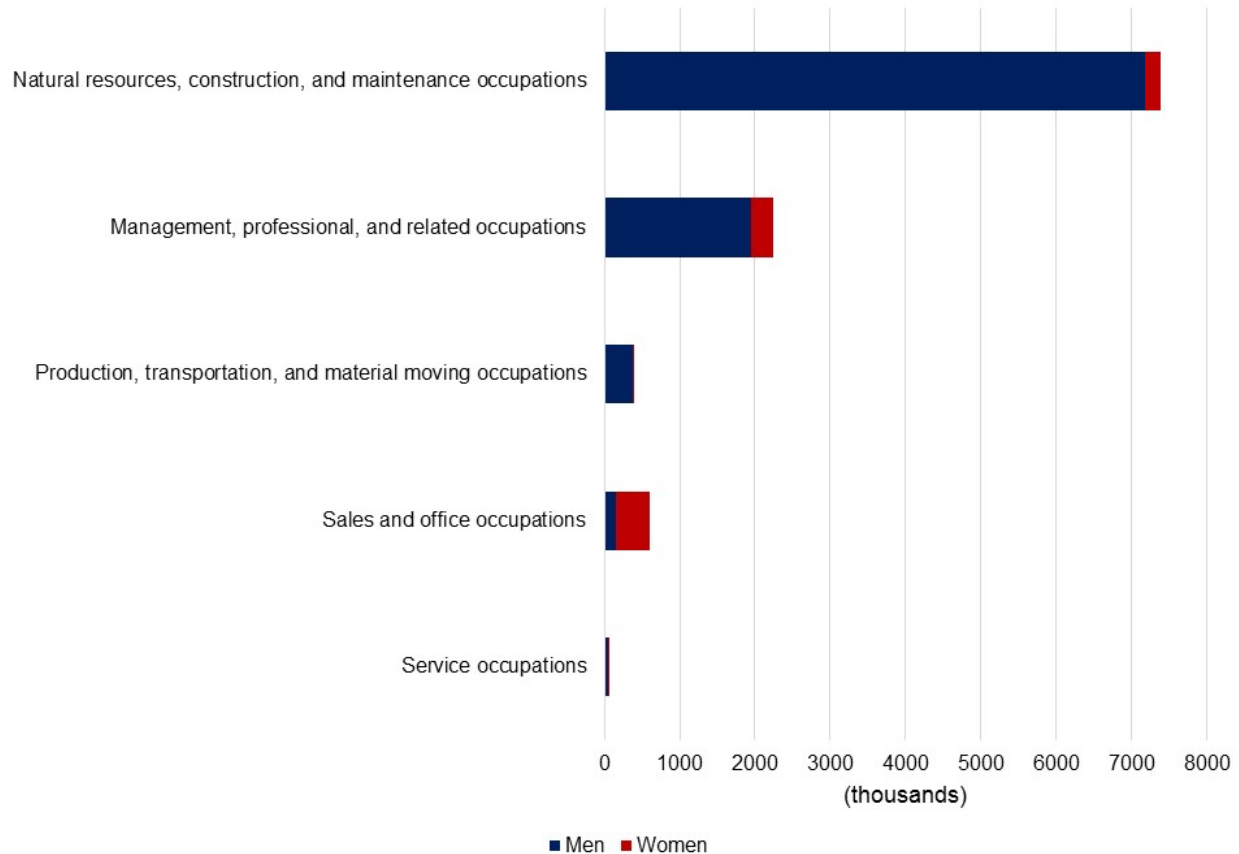
During the Great Recession, the number of female construction workers declined sharply by almost 30 percent to 807,000 by 2010. From 2010 to 2017, the total slowly expanded to around 970,000 but remained below the peak of pre-recession levels. The number of women working in construction increased to almost 1.2 million in 2019, up by 6% from 2018 after a 13% increase in 2017. This puts the 2019 total above the peak of pre-recession levels of 1.13 million.

Women in Construction 2002 – 2019



Overall, the share of women in construction increased to 10.3% in 2019. According to the Current Population Survey, women in the construction are mostly involved in such occupations as office and administrative support, management, business and financial operations. Sales and office occupations employed the largest number of women within the construction industry. For example, women accounted for 74 percent of workers in sales and office occupations, including 446,000 women in office and administrative support, and 35,000 in sales and related occupations in 2019. More than 418,000 women were engaged in management, professional, and related occupations. While construction and maintenance occupations account for the largest number of employees in construction, and is where additional workers are needed, women comprised only 3 percent of the such occupations.

Construction Workers by Occupation Categories and Gender

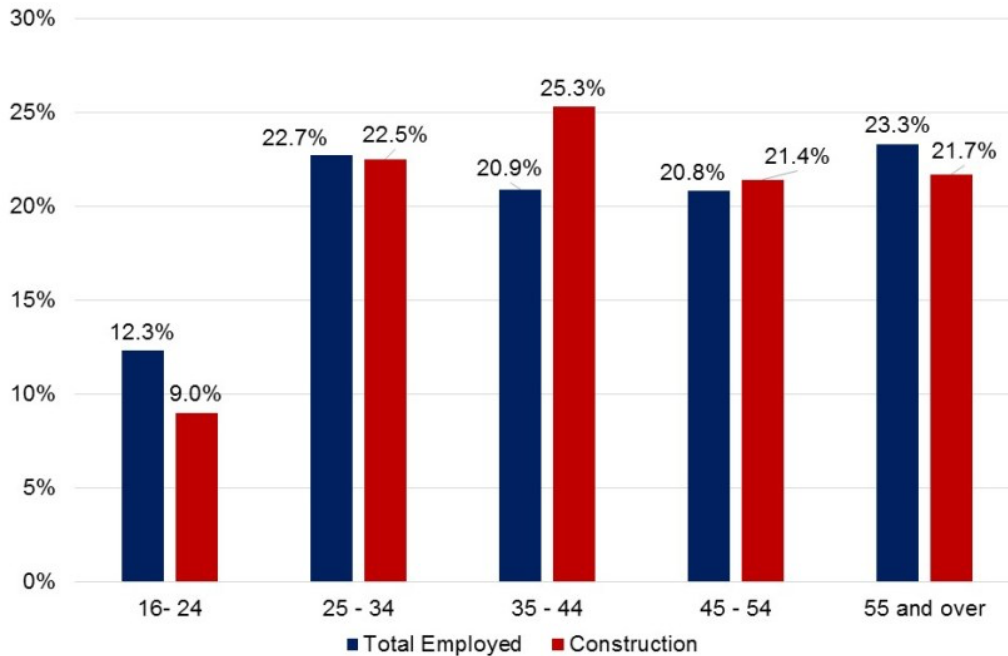


Age Distribution of the Construction Labor Force

Labor force statistics from the 2018 Current Population Survey (CPS) show that the construction industry continues to struggle to attract younger workers. Compared to the workforce in all industries, construction has a relatively smaller share of younger workers, but a larger proportion of workers in their prime-working age. While workers under the age of 25 comprised 12% of the US labor force, their share in the construction industry reached only 9% in 2018.

Around 69% of construction workforce were in the prime working years of 25-54, compared to 64% in overall workforce. The share of workers ages 55 and older was close to 22% in construction, implying that a substantial portion of workforce would retire in near future. The relative greater share of workers in construction in the 35-55 age group, mostly Gen X-ers, reveals the current challenge. Gen X is a smaller generational group than the Baby Boomers were.

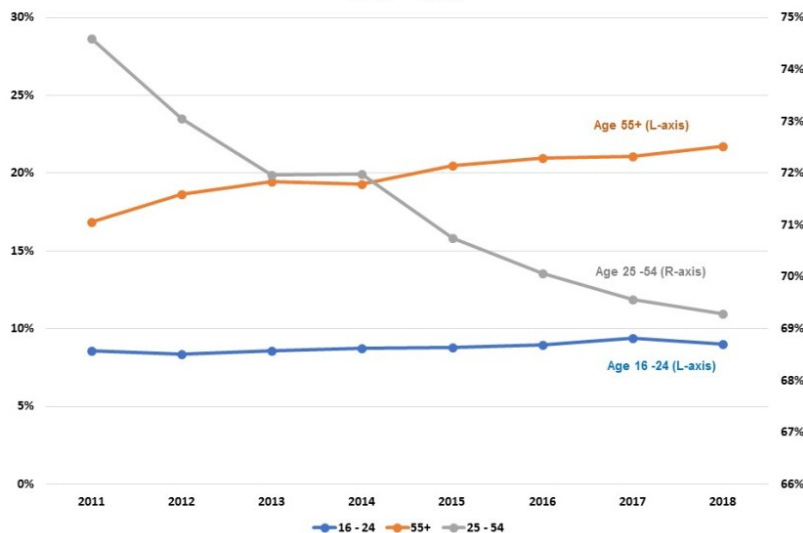
Age Breakdown: Construction Industry vs All Industries 2018



Source: 2018 Current Population Survey

Analysis of the age distribution of construction workers over time reveals that the construction workforce is aging, with the share of older workers ages 55+ rising from less than 17% in 2011 to almost 22% in 2018. At the same time, the proportion of workers ages 25 to 54 declined from 75% to 69%. This change in age composition of construction labor force is largely because the youngest Baby Boomer are now entering the 55+ age group.

Distribution of Construction Employment by Age 2011 – 2018



Wages in Construction

According to the 2019 Bureau of Labor Statistics Occupational Employment Statistics (OES) Survey data and analysis by the National Association of Home Builders (NAHB), half of payroll workers in construction earn more than \$49,030 and the top 25% make at least \$68,690. In comparison, the U.S. median wage is \$39,810, while the top quartile (top 25%) makes at least \$64,240.

Year over year, median wages in construction outpaced the national median wages once again, 3.7% vs 3%. Median wages of various construction trades rose even faster. Terrazzo workers and finishes registered a jump in median wages of over 20%. Median wages of stonemasons and tapers increased by over 7%. Roofers saw their wages rise by 5.6%. Median wages of insulation workers rose 5.4%, plasterers and stucco masons – 5%.

Wages of multiple entry-level construction trades showed rapid growth as well. Median wages of carpenters' helpers increased by over 7%. The wage gains by brickmasons' and roofers' helpers averaged 6% and 5.6%, respectively.

The OES publishes wages for 364 occupations in construction. Out of these, only 55 are construction trades. The other industry workers are in finance, sales, administration and other off-site activities.

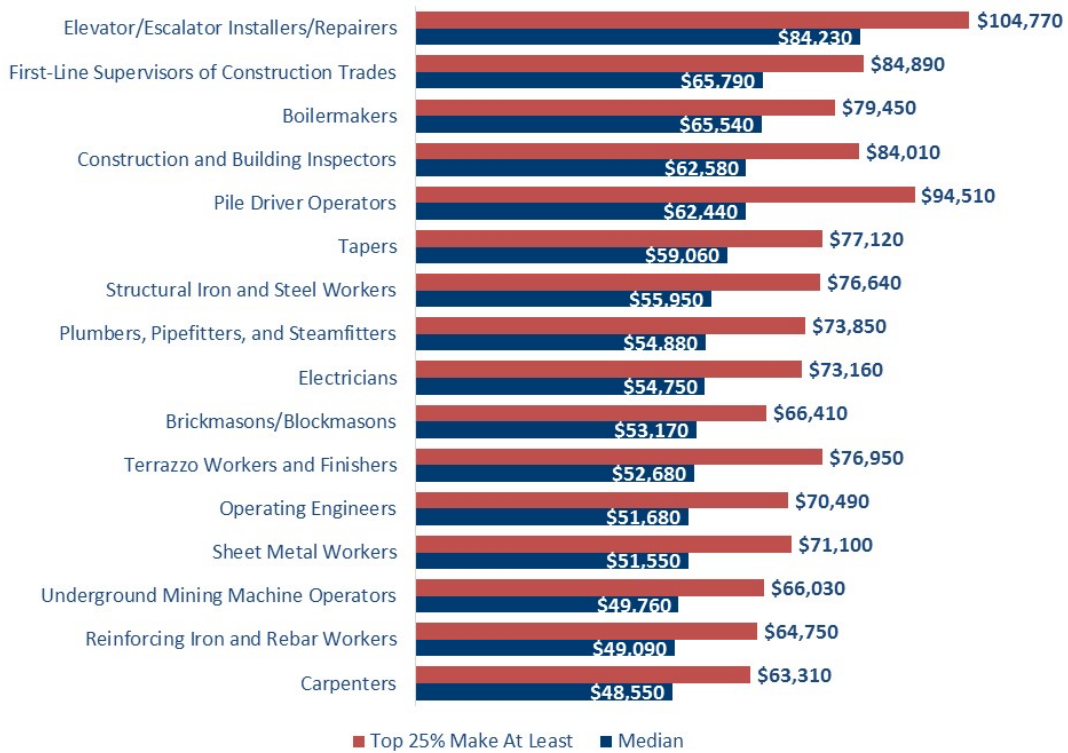
The highest paid occupation in construction is Chief Executive Officers (CEO) with half of CEOs making over \$167,910 per year. Lawyers working in construction are next on the list with the median wages of \$140,480 and the top 25 percent on the pay scale earning over \$197,340 annually. Out of the next 16 highest paid trades in construction, 15 are various managers. The highest paid managers in construction are architectural and engineering managers, with half of them making over \$134,860 and the top quartile earning at least \$169,870.

Highest Paid Occupations in Construction, 2019



Among construction trades, elevator installers top the median wages list with half of them earning over \$84,230 a year, and the top 25% making at least \$104,770. First-line supervisors of construction trades are next on the list, with half of them making over \$65,790 and top quartile earning at least \$84,890. Boilermakers are close third highest paid construction craft. Half of these craftsmen working in construction earn over \$65,540, and the highest paid 25% bring in at least \$78,250.

Highest Paid Construction Occupations in Construction, 2019



In general, construction trades that require more years of formal education, specialized training or licensing tend to offer higher annual wages. Median wages of construction and building inspectors are \$62,580 and the wages in the top quartile of the pay scale exceed \$84,010. Half of plumbers in construction earn over \$54,880, with the top quartile making over \$73,850. Electricians’ wages are similarly high.

Carpenters are one of the most prevalent construction trades in the industry. The trade requires less formal education. Nevertheless, the median wages of carpenters exceed the national median. Half of carpenters working in construction earn over \$48,550, and the highest paid 25% earn at least \$63,310 annually.



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The Home Builders Institute (HBI) trains skilled workers for the building industry. Through pre-apprenticeship training, certification programs and job placement services, HBI provides graduates—high school students, at-risk youth, veterans, transitioning military personnel, justice-involved youth and adults, and displaced workers—with the skills and experience they need to build a career and change their lives. Visit [hbi.org](https://www.hbi.org) for more information.