January 2017 Construction INDUSTRY PROFILE

for Arapahoe & Douglas Counties Colorado WIOA Central Planning Region



Arapahoe/Douglas WORKFORCE BOARD C O L O R A D O

So DOUGLAS COUNTY

CONSTRUCTION Background

CONSTRUCTION EMPLOYMENT

While the Colorado construction industry added roughly 21,400 jobs since the recession low of 112,500 workers, the sector currently remains nearly 34,000 jobs below the pre-recession peak of 167,800 workers. Total construction employment increased nearly 6 percent between 2013 and 2014 and, according to The Colorado Business Economic Outlook, it will rise an additional 4.3 percent in 2015. By 2023, total construction employment is expected to increase almost 47%, adding nearly 60,000 jobs in the state. Approximately 40,000 of these positions are projected to be in the specialty trades.

WORKFORCE

Some business owners report turning down projects and experiencing project delays due to the inability to find workers to fill positions. At the same time as we anticipate adding 40,000 new jobs in the specialty trades by 2023, skilled workers will also leave the workforce for retirement or movement to other industries. It's estimated for every four workers leaving the trades, only one will enter the field to replace them.

CONSTRUCTION VALUE

The value of construction is expected to rise 11.5 percent in 2015 to nearly \$13.4 billion. Infrastructure construction has been particularly active in the Metro Denver area with the opening of the new Denver Union Station in 2014 and on-going FasTracks construction. The Regional Transportation District (RTD) broke ground on the North Metro Rail Line (opening 2018) and obtained approval for the Southeast Light Rail extension into Lone Tree. RTD expects to open five new projects in 2016 consisting of the East, Gold, and I-225 rail lines, a portion of the Northwest rail line, and the U.S. 36 Bus Rapid Transit Corridor.

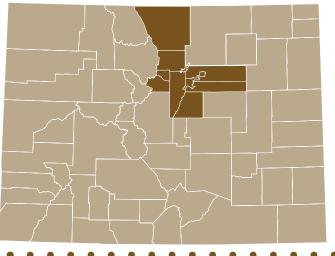
RESIDENTIAL

Rapid population growth in Colorado has strained the residential real estate market and fostered growth in residential construction as developers respond to increased demand for housing. Multi-family construction is expected to increase 5.3 percent in 2015, with an additional 11,500 units permitted in 2015. Single-family permits are expected to rise 16 percent to 21,300 total permits. In 2014, residential construction was valued at \$6.5 billion, representing 54 percent of total construction value, and values are expected to rise to nearly \$7.4 billion in 2015. A recent Sunday Denver Post front-page article focused on the "Housing Squeeze" and raised concerns over how "rising costs could move from a personal crisis to an economic drag" for families—and the state's economy. Another Post story noted that renters "need to make \$35 per hour, or almost 4½ times Colorado's minimum wage" to afford the median metro Denver rental rate.

NON-RESIDENTIAL

Non-residential construction activity varies across the state, depending upon regional employment growth. In Metro Denver, all four commercial property types (office, industrial, flex, and retail) recorded declining vacancy rates and rising average lease rates. As a result, new buildto-suit and speculative construction projects occurred throughout the region. About 1.2 million square feet of new office space was completed, the most since 2009. As the industrial vacancy rate dropped to historic low values, about 2.6 million square feet of new industrial space was added to the market, the highest amount since 2002. Major projects completed in Metro Denver in 2014 included the Charles Schwab Campus world headquarters, One Union Station, Cornerstar Health Plaza, multiple buildings at the Enterprise Business Center, the Benjamin West headquarters, and a ViaWest data center. Continued strong demand for healthcare services furthered new construction activity in the medical sector. Some of the completed projects included the National Jewish Health-St. Joseph Hospital, the Platte Valley Medical Center, and three health and wellness centers opened by Centura Health. Projects continuing construction in 2015 include expansions at Swedish Medical Center, Littleton Adventist Hospital, and Craig Hospital. Other major projects include the Gaylord Hotel in Aurora, CSU Stadium in Fort Collins and the City of Champions in Colorado Springs. With strong population growth and a rapidly expanding economy, construction activity in both the residential and commercial markets is expected to continue at a birsk pace. Low vacancy rates and high average lease rates will keep demand for new commercial construction elevated. The demand for hear trist single-family home. The sector will continue to face labor shortages through the year along with rising construction costs, slowing development; but overall, the construction sector in Colorado is expected to expand and flourish through 2015.

Rankings



Business Insider ranked Colorado's economy the **third best** in the country, based on recent change in housing prices, nonfarm payroll growth, unemployment rate, GDP per capita, average weekly wage, and state government surplus and deficit.

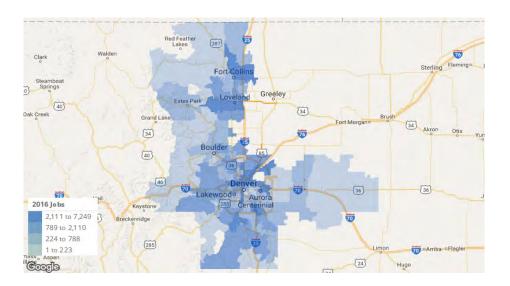
Forbes ranked Metro Denver **sixth of fastest** growing cities in 2015. Factors that earned us this standing included our 4 percent unemployment rate 2.66 percent job growth rate.

According to Money magazine, Denver is **the best** city to live in the West. The ranking called Metro Denver a "mecca for millennials" and that the city has relatively affordable real estate and great access to recreation.

WalletHub ranked three Metro Denver cities among **the best** in the country for first-time home buyers: Centennial ranked third, Longmont ranked ninth, and Thornton ranked 10th.

CONSTRUCTION Employment Concentrations

This map show where the highest concentration of employment are in the construction sector, by county, within the metro Denver area.



Top Employment Concentrations by County

County	2016 Jobs	Business Establishments	National Location Quotient
Adams County, CO	63,209	1,348	2.28
Arapahoe County, CO	45,862	1,645	1.31
Denver County, CO	40,380	1,630	0.87
Jefferson County, CO	32,789	2,019	1.45
Larimer County, CO	23,264	1,235	1.38
Douglas County, CO	20,648	932	1.48
Boulder County, CO	16,273	814	0.70
Broomfield County, CO	4,559	160	0.84
Clear Creek, CO	517	37	0.98
Gilpin County, CO	264	21	0.37

Source: EMSI 2016.4 – QCEW Employees, Non-QCEW Employees & Self-Employed Class of Worker

CONSTRUCTION Competitive Wage Analysis

This table shows employment within the Colorado Central Planning Region in the top 20 occupations in the sector. Regional wage ranges and the median wage are shown, with yellowed cells indicating where wage offers may have to fall to attract and retain qualified candidates based on labor supply (applicants per job opening).

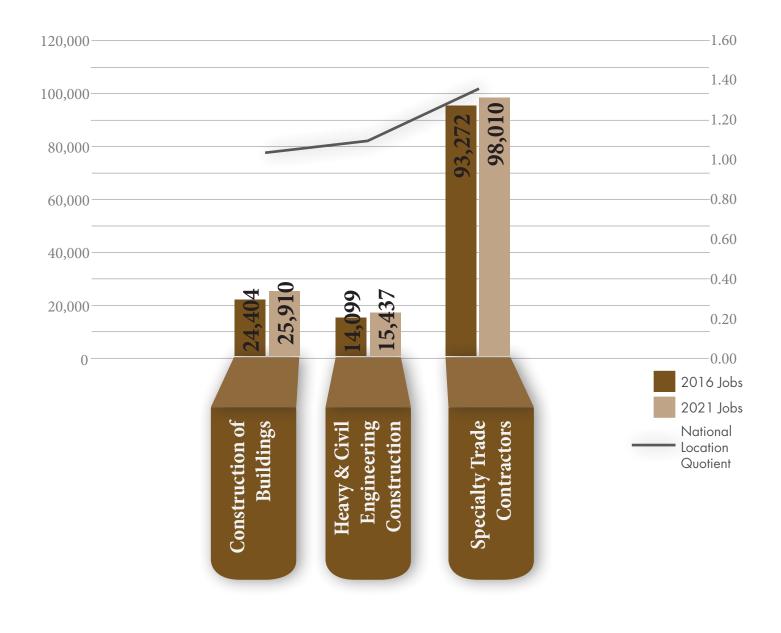
SOC Code	Description	Total Number Employed	Annual Openings	Available Applicants	Applicar Per Job Opening	Media		25th Percentile Wage	Average Wage	75th Percentile Wage	90th Percentile Wage
13-1051	Cost Estimators	2,452	149	72	0.48	\$32.29	\$17.79	\$22.98	\$30.98	\$38.88	\$48.62
43-9061	Office Clerks, General	2,507	1,351	792	0.59	\$18.71	\$10.29	\$13.30	\$17.38	\$23.01	\$28.91
49-9021	Heating, Air Conditioning & Refrigeration Mechanics & Installers	3,813	161	127	0.79	\$25.60	\$16.90	\$20.72	\$25.50	\$29.72	\$35.65
43-6014	Secretaries & Admin Assistants, Except Legal, medical & Executive	3,483	1,055	1,071	1.01	\$18.22	\$11.65	\$14.37	\$17.78	\$22.00	\$26.10
11-1021	General & Operations Managers	2,663	1,381	1,613	1.17	\$64.77	\$24.40	\$35.58	\$54.23	\$84.55	\$123.58
11-9199	Managers, All Other	1,637	420	556	1.32	\$43.55	\$26.70	\$33.19	\$40.60	\$50.72	\$64.03
43-3031	Bookkeeping, Accounting & Auditing Clerks	1,878	320	530	1.65	\$19.18	\$11.51	\$14.83	\$18.45	\$22.89	\$27.76
47-2181	Roofers	2,282	95	173	1.81	\$17.14	\$12.40	\$13.85	\$16.57	\$20.28	\$23.71
47-2111	Electricians	11,579	524	994	1.90	\$22.84	\$13.72	\$16.54	\$21.36	\$28.04	\$34.16
47-2061	Construction Laborers	17,214	745	1,437	1.93	\$15.23	\$10.70	\$12.78	\$15.03	\$17.32	\$20.36
47-2211	Sheet Metal Workers	2,014	80	184	2.30	\$22.20	\$15.03	\$18.15	\$21.67	\$26.03	\$30.49
47-2073	Operating Engineers & other Constructions Equipment Operators	3,796	154	375	2.44	\$22.06	\$16.40	\$18.82	\$21.78	\$25.29	\$28.69
11-9021	Construction Managers	5,566	140	342	2.44	\$37.93	\$22.73	\$27.37	\$35.85	\$44.79	\$56.38
47-2152	Plumbers, Pipefitters & Steamfitters	5,837	194	483	2.48	\$23.71	\$15.65	\$18.16	\$22.67	\$29.34	\$33.91
47-2141	Painters, Construction & Maintenance	4,727	148	388	2.62	\$16.37	\$12.09	\$14.42	\$16.52	\$18.48	\$20.38
47-1011	First-Line Supervisors of Construction Trades & Extraction Workers	8,160	218	735	3.37	\$30.91	\$19.25	\$23.78	\$29.27	\$35.98	\$44.00
47-2031	Carpenters	13,209	309	1,077	3.48	\$19.01	\$12.50	\$15.36	\$18.73	\$22.15	\$25.43
47-2051	Cement Masons & Concrete Finishers	3,132	69	245	3.56	\$17.76	\$12.66	\$14.15	\$17.15	\$21.15	\$24.66
47-2081	Drywall & Ceiling Tile Installers	2,262	28	170	6.04	\$19.36	\$15.18	\$17.11	\$19.53	\$21.67	\$23.34
41-3099	Sales Reps, Services, All Other	1,715	675	5,501	8.15	\$32.3	3 \$12.22	\$18.11	\$27.19	\$40.19	\$58.54

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Source: EMSI 2016.4 QCEW Employees, Non-QCEW Employees & Self-Employed Class of Worker

CONSTRUCTION Industry Growth

This table shows projected yearly job growth through 2021. The National Location Quotient shows the relative concentration of employment in this industry in the Colorado Central Planning Region versus the national average. For example, with a Location Quotient of 1.37, you would read, "employment is 1.37 times more concentrated in the Colorado Central Planning Region than the national average."



CONSTRUCTION Hidden Job Market

The construction industry is booming, and leaders in the industry report increasing shortages of workers at all levels, but especially in the skilled trades. Traditionally, many jobs in this sector are not listed, rather outreach is done by word of mouth through existing workers.

The table below shows what is called the 'hidden job market' by comparing the average number of monthly hires to the average number of monthly listings. In cases where there are more listings than hires, the hidden job market is weak. In cases where there are many more hires than listings, it means that the hidden job market is strong.

Green – strong hidden job market, most hiring done through word of mouth

Blue – strong hidden job market, significant hiring through word of mouth

Yellow – increased listings are necessary, suggesting word of mouth isn't as effective

Orange – weak hidden job market, most hiring done through listings

Red – very weak hidden job market, virtually all hiring done through listings

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ccupation (SOC)	Avg Monthly Postings	Avg Monthly Hires	Hires Per Listing		
Sheet Metal Workers	19	184	9.68		
Carpenters	92	867	9.42		
Office Clerks, General	260	2,111	8.12		
Drywall & Ceiling Tile Installers	1	193	27.57		
Cement Masons & Concrete Finishers	16	288	18.00		
Construction Laborers	97	1,357	13.99		
Operating Engineers & Other Construction Equipment Operators	31	385	12.42		
Roofers	27	181	6.70		
Plumbers, Pipefitters & Steamfitters	128	429	3.35		
First-Line Supervisors of Construction Trades & Extraction Workers	230	686	2.98		
Heating, Air Conditions, & Refrigeration Mechanics & Installers	104	300	2.88		
Cost Estimators	96	272	2.83		
Secretaries & Admin Assistants, Except Legal, Medical & Executive	1,053	2,715	2.58		
Painters, Construction & Maintenance	117	263	2.25		
Electricians	416	926	2.23		
General & Operations Managers	1,021	1,970	1.93		
Bookkeeping, Accounting & Auditing Clerks	848	1,332	1.57		
Construction Managers	350	387	1.11		
Sales Representatives, Services, All Other	1,370	1,206	0.88		
Managers, All Other	1,223	289	0.24		

CONSTRUCTION Top Jobs

Top Jobs Currently Listed in the Metro Denver, Last 120 Days



CONSTRUCTION Staffing Patterns

Here are the top 20 jobs in the industry, by number employed and educational attainment level.



Cement Masons & Concrete Finishers

SOC Code: 47-2051 2016 Jobs: 3,265 Annual Openings: 69 Regional Completions: 0 Completers/Opening: 0.00

Construction Laborers

SOC Code: 47-2061 2016 Jobs: 19,160 Annual Openings: 745 Regional Completions: 17 Completers/Opening: 0.02

Drywall & Ceiling Tile Installers

SOC Code: 47-2081 2016 Jobs: 2,272 Annual Openings: 28 Regional Completions: 0 Completers/Opening: 0.00

Painters, Construction & Maintenance

SOC Code: 47-2141 2016 Jobs: 5,173 Annual Openings: 148 Regional Completions: 6 Completers/Opening: 0.04

Roofers

SOC Code: 47-2181 2016 Jobs: 2,303 Annual Openings: 95 Regional Completions: 0 Completers/Opening: 0.00



Sales Representatives, Services, All Other SOC Code: 47-3099 2016 Jobs: 18,970 Annual Openings: 675 Regional Completions: 55 Completers/Opening: 0.08

Secretaries & Administrative Assistants, Except Legal, Medical & Executive SOC Code: 43-6014 2016 Jobs: 42,821 Annual Openings: 1,055 Regional Completions: 45 Completers/Opening: 0.04

Office Clerks, General

SOC Code: 43-9061 2016 Jobs: 31,667 Annual Openings: 1,351 Regional Completions: 0 Completers/Opening: 0.00

First-Line Supervisors of Construction Trades & Extraction Workers SOC Code: 43-6014 2016 Jobs: 9,802 Annual Openings: 218 Regional Completions: 947 Completers/Opening: 4.34

Carpenters

SOC Code: 47-2031 2016 Jobs: 14,355 Annual Openings: 309 Regional Completions: 53 Completers/Opening: 0.17

Operating Engineers & Other Construction Equipment Operators SOC Code: 47-2073 2016 Jobs: 5,005 Annual Openings: 154 Regional Completions: 4 Completers/Opening: 0.03

Electricians

SOC Code: 47-2111 2016 Jobs: 13,251 Annual Openings: 524 Regional Completions: 681 Completers/Opening: 1.30

Plumbers, Pipefitters & Steamfitters

SOC Code: 47-2152 2016 Jobs: 6,436 Annual Openings: 194 Regional Completions: 56 Completers/Opening: 0.29

Sheet Metal Workers

SOC Code: 47-2211 2016 Jobs: 2,456 Annual Openings: 80 Regional Completions: 41 Completers/Opening: 0.51



Bookkeeping, Accounting & Auditing Clerks

SOC Code: 43-3031 2016 Jobs: 21,187 Annual Openings: 320 Regional Completions: 335 Completers/Opening: 1.05

Heating, Air Conditioning, & Refrigeration Mechanics & Installers SOC Code: 49-9021 2016 Jobs: 4,689

Annual Openings: 161 Regional Completions: 227 Completers/Opening: 1.41



General & Operations Managers

SOC Code: 11-1021 2016 Jobs: 30,440 Annual Openings: 1,381 Regional Completions: 6,084 Completers/Opening: 4.40

Construction Managers

SOC Code: 11-9021 2016 Jobs: 6,462 Annual Openings: 140 Regional Completions: 5,928 Completers/Opening: 42.22

Managers, All Other

SOC Code: 11-9199 2016 Jobs: 10,492 Annual Openings: 420 Regional Completions: 6,490 Completers/Opening: 15.46

Cost Estimators

SOC Code: 13-1051 2016 Jobs: 3,582 Annual Openings: 149 Regional Completions: 6,656 Completers/Opening: 44.67

CONSTRUCTION Top Five

Below are the top five core skills, workplace skills, certifications and companies in the construction industry.



- 1 Oral & Written Communication
- 2 Integrity
- **3** Detail Oriented
- 4 Microsoft Office
 - 5 Self-starting, Self-motivated

Workplace Skills

- Electrical Systems
- Quality Control or Assurance
- 3 Customer Relationship Managment
- 4 Salesforce CRM SFDC
- 5 Bilding Information Modeling (BIM)

Certifications

- 1 Driver's License
- 2 OSHA Certification
- 3 Commercial Driver's License (CDL)
- 4 General Contractor
- 5 Accounting

<u>Companies</u>

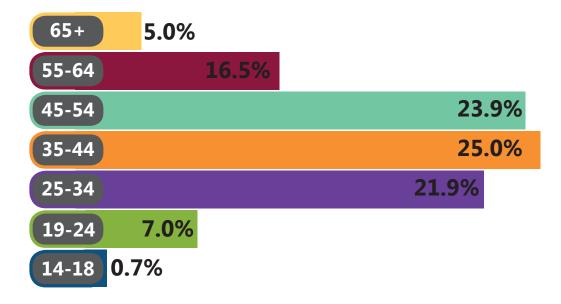
- 1 Boulder Valley School District
- 2 Colorado State Government
- B Richmond American Homes
- 🕨 RK Mechanical
- 5 Kelly Mitchell

CONSTRUCTION Age Bands & Volume

Age Bands

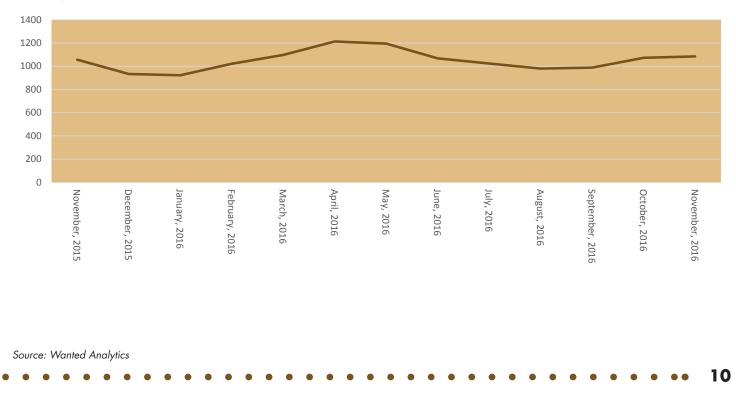
It is helpful to know the age bands in a sector, because if there is a substantial percentage of people above 55 years old, it means there will be opportunity as retirements happen.

Based on Age Distribution, Arapahoe/Douglas Works! has developed a way to measure the 'age gap' in an industry by comparing the number of workers over age 45 to the number under age 34. Age gap is shown both as a percentage and a count.



Listing

This graph shows the week over week volume of listings in Metro Denver





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