Is Middle Class Entry Possible Without a College Degree?
A Look at Construction & Extraction Jobs in Colorado

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There are 33 high-growth construction and extraction jobs that can move a Colorado family into the middle class, however, this is largely dependent on family type and both adults working. Also, while these jobs can typically move a family into the lower-middle or middle-income range, they rarely can move a family into the upper middle class. Below, we will discuss construction and extraction jobs in Colorado, and their potential for middle class mobility.

In our recent report on middle class families, the Bell examined the size of the middle class in Colorado, what it takes to move into our state’s middle class in terms of income, and the characteristics of our middle class. To do this, we used the income-based definition used by Pew Research Center where a family is considered “middle income” if it makes between two-thirds and double the median family income.

In 2016, the statewide median income was $59,000 across all family types, implying middle income means a family must have earned between $38,900 and $118,000 that year. However, this range varies by family size (see Figure 1 below, from the aforementioned report). This wide range can be broken down into three smaller groups: within Colorado’s middle-income earners in 2016, 49.6 percent of families were upper middle income, 32.1 percent were middle income, and 18.3 percent were lower middle income.

![Figure 1: Colorado Family Income by Middle Income Class and Family Type, 2016](image)

But a middle income doesn’t guarantee a middle class lifestyle, as the latter means having the funds to afford middle class mainstays, like housing, health care, automobile ownership, retirement savings, college savings, and/or vacation. This type of “aspirational” budget often requires income above and beyond that which can simply move a family into one of these middle class categories.
Since wages account for most or all of a Colorado family's income, an individual's occupation is critical for mobility into the middle class and beyond. Thus, the report also considers which jobs are more likely to pay wages enabling entry into the middle-income range, and those more likely to provide wages that could improve a family's economic mobility over time.

In 2016, a majority of Colorado’s middle-income, two-adult families had both adults working, with at least one adult working in a professional or managerial job (which often requires at least a bachelor’s degree). In fact, college degrees are quite common among families in the middle class. Approximately 82 percent of upper-income families, 57 percent of middle-income families, and 33 percent of lower-income families have at least one head of household with a bachelor's degree.

However, when presenting the findings of our middle class report, we were often asked whether a family can achieve a middle class lifestyle without a college education. Construction and extraction jobs were commonly mentioned as alternatives to the professional and managerial jobs that commonly require (increasingly costly) degrees. These jobs tend to pay good wages, have low barriers to entry and on-the-job training, and often have positive wage trajectories for experienced workers. (See Figure A1 in Appendix A for construction and extraction jobs ranked by wage increase over time.)

To answer this question, we gathered data on:
- Common construction and extraction jobs, and 2017 entry and experienced wages for these jobs with faster than average projected growth
- Occupational requirements for these high-growth jobs
- Who occupies these jobs
- Which of these jobs might be able to move a family into the middle class.ii

What we found suggests some families may indeed be able to enter the middle class through jobs in the construction and extraction industries. There are several jobs with high wages, especially for experienced workers, and there are many with sizable wage growth over a career. However, there are almost no jobs that can get a family — especially one with young children — into the upper-income range of the middle class, even when there are two adults working. This is particularly important, as our report shows those in the lower-middle- and middle-income ranges have a more difficult time affording an aspirational middle class budget.iii
Furthermore, these industries are male-dominated, meaning there are (historically) fewer opportunities for women, although efforts are underway in Colorado to address this. Finally, more work must be done in the state to identify areas of over or underrepresentation, by race, in specific jobs.

**Background on Construction & Extraction**

In 2017, the seven most common construction and extraction jobs in Colorado (i.e., those with more than 5,000 workers) were:

- Construction Laborers (21,250)
- Electricians (15,070)
- Supervisors of construction and extraction workers (14,280)
- Carpenters (13,750)
- Operating engineers and equipment operators (9,950)
- Plumbers, pipefitters, and steamfitters (9,260)
- Cement masons and concrete finishers (5,790)

Currently, there are over 163,000 workers in Colorado’s construction and extraction industry, which makes up nearly 7 percent of all jobs in the state.

Of the jobs listed above, all but electricians are set to grow at a faster or much faster than average pace between 2016 and 2026 compared to all other jobs in the U.S. economy. On average, the construction and extraction industries are projected to grow nationally at a faster than average rate during this period, compared to other industries. Of the 50 construction and extraction occupations listed in data from the Bureau of Labor Statistics (BLS), 35 are expected to grow at a faster (25), or much faster (10) than the average pace of all other U.S. jobs.

Average entry level wages for these 35 high-growth jobs were approximately $33,220 in Colorado in 2017, ranging from $23,457 to $49,753. Average experienced wages were about $51,736 in the state and ranged from $36,159 to $87,505. Given the lower end of the middle class range is $38,900, several of these jobs seem, at first glance, to qualify as middle class jobs.

**TABLE 1: CONSTRUCTION & EXTRACTION JOBS LIKELY TO MOVE ANY FAMILY INTO MIDDLE CLASS (2017)**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Entry-Level Wages ($)</th>
<th>Experienced Wages ($)</th>
<th>Number of Jobs</th>
<th>High-Growth Job (Y/N)</th>
</tr>
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<tbody>
<tr>
<td>Elevator Installers &amp; Repairers</td>
<td>49,753</td>
<td>87,505</td>
<td>520</td>
<td>Y</td>
</tr>
<tr>
<td>Supervisors of Construction &amp; Extraction Workers</td>
<td>48,060</td>
<td>82,809</td>
<td>14,280</td>
<td>Y</td>
</tr>
<tr>
<td>Construction &amp; Building Inspectors</td>
<td>41,738</td>
<td>73,290</td>
<td>2,280</td>
<td>Y</td>
</tr>
<tr>
<td>Rotary Drill Operators, Oil &amp; Gas</td>
<td>34,527</td>
<td>62,498</td>
<td>990</td>
<td>Y</td>
</tr>
</tbody>
</table>

**What’s Required?**

BLS data show 27 of these 35 high-growth jobs require at least a high school diploma or equivalent, two require less than a high school diploma, and six require no formal credential. However, BLS data also show there are, on average, higher percentages of workers with at least some college in these high-growth jobs, compared to those construction and extraction jobs with no projected growth (19 percent vs. 6 percent).

While many construction and extraction workers have a high school diploma, or less than high school, these data show there are more college-educated workers in high-growth jobs in these industries, suggesting the jobs with the most growth may attract more educated individuals.
As for training, 11 of the 35 jobs with faster-than-average growth require an apprenticeship, 12 require moderate on-the-job training, and 12 require short on-the-job training.

**FIGURE 3: AVERAGE EDUCATIONAL ATTAINMENT OF WORKERS IN CONSTRUCTION & EXTRACTION JOBS WITH FASTER-THAN-AVERAGE PROJECTED GROWTH**

- Less Than High School: 32%
- High School Diploma/Equivalent: 50%
- Postsecondary Certification: 16%
- Some College: 19%

**FIGURE 4: AVERAGE EDUCATIONAL ATTAINMENT IN CONSTRUCTION & EXTRACTION JOBS WITH AVERAGE OR NO PROJECTED GROWTH**

- Less Than High School: 25%
- High School Diploma/Equivalent: 56%
- Postsecondary Certification: 19%
- Some College: 6%

Who Works in Construction & Extraction?

In 2017, an estimated 163,454 people, or about 7 percent of the state’s workforce, worked in construction in Colorado. By 2027, estimates suggest 220,459 people will work in construction in the state, a ten-year increase of about 35 percent.

Nearly 8 million men and 243,000 women were employed in construction and extraction jobs in the United States in 2017, representing nearly 10 percent of all employed men and less than 1 percent of all employed women. Between 2015 and 2017, Colorado’s construction and extraction workforce was approximately 88 percent men and 12 percent women. This means men are overrepresented by about 38 percent, while women are underrepresented by the same amount.

**FIGURE 5: U.S. WORKING MEN & WOMEN IN CONSTRUCTION & EXTRACTION VS. ALL OTHER INDUSTRIES**

**FIGURE 6: PROPORTION OF MEN & WOMEN IN COLORADO CONSTRUCTION & EXTRACTION**

Between 2015 and 2017, Colorado’s construction and extraction workforce was 88 percent white, 33 percent Hispanic/Latino, less than 2 percent black/African American, and less than 1 percent Asian.

In Colorado construction and extraction jobs, whites are overrepresented compared to the overall Colorado workforce and the total U.S. workforce, but equally represented compared to the U.S. construction and extraction labor force. Hispanics/Latinos are overrepresented compared to the overall Colorado workforce and the total U.S. workforce, but underrepresented compared to the U.S. construction and extraction labor force. Blacks/African Americans and Asians are underrepresented compared to the overall Colorado workforce, the total U.S. workforce and the U.S. construction and extraction labor force.

**TABLE 2: RACE & ETHNICITY IN CONSTRUCTION & EXTRACTION**

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Colorado Construction &amp; Extraction Jobs</th>
<th>U.S. Construction &amp; Extraction Jobs</th>
<th>Colorado Workforce</th>
<th>Total U.S. Workforce</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>88%</td>
<td>88%</td>
<td>84%</td>
<td>78%</td>
</tr>
<tr>
<td>Black/African American</td>
<td>1.6%</td>
<td>6.9%</td>
<td>4.2%</td>
<td>13%</td>
</tr>
<tr>
<td>Asian</td>
<td>0.002%</td>
<td>1.6%</td>
<td>1%</td>
<td>6%</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>33%</td>
<td>36%</td>
<td>21%</td>
<td>17%</td>
</tr>
</tbody>
</table>

**Which Construction & Extraction Jobs Offer Middle Class Entry?**

Below, we identify the number of high-growth construction jobs that can move a two-adult family with children (with one or both adults working), a single-parent family, and a childless family (with one or both adults working) into the middle class. In 2016, only 24 percent of middle class families had young children in the home, demonstrating both the increase in the average age of the middle class (many are older adults with or without adult children), and the difficulty of entering the middle class and staying there when paying for the costs associated with having children, such as child care.

Overall, 33 of the 35 construction and extraction jobs with faster or faster-than-average projected growth could move at least one type of family into the middle class. Several could move multiple family types into the middle class.

**Two-Adult Households**

For two-adult households with children, most jobs that can move a family into the middle class can either move them into the lower-middle-income or middle-income range (see Figure 7 below). Elevator installers and repairers — which has the highest median wages of any construction and extraction job, as well as the highest entry-level, experienced, and average wages — is the only job that could enable two working adults with three children into the upper-middle-income range. (See Appendix B for full list of jobs used for Figures 7-9.)

Jobs that can move a family with both adults working into the lower-middle-income or middle-income ranges include:

- Roofers
- Plumbers, pipefitters, and steamfitters
- Derrick operators, oil and gas.

Jobs that can move a family with one adult working into these income ranges are limited to the two jobs with the highest median income in these industries:

- Elevator installers and repairers
- Supervisors of construction and extraction workers

This is because the working adult would alone have to earn enough to move a family into the middle class, and several construction and extraction jobs don’t provide high enough wages to enable a single person to afford a middle class lifestyle.
Single-Parent Households

For single-parent households with children, the story is similar. In this case, three jobs (elevator installers and repairers, supervisors of construction and extraction workers, and construction and building inspectors) can move a single-parent family with one child into the upper-middle-income range. Jobs that can move single-parent families into the lower-middle-income or middle-income ranges include:

- Rotary drill operators, oil and gas
- Service unit operators, oil and gas
- Reinforcing iron and rebar workers
Childless Households

Finally, for childless households, only two jobs (elevator installers and repairers, and supervisors of construction and extraction workers) could get a family with two working adults into the upper-middle-income range (see Figure 9 below). Jobs that can move childless families into the lower-middle-income or middle-income ranges include those listed above for two-adult households, as well as brickmasons and blockmasons and fence erectors.

It appears several construction and extraction jobs can, in fact, help a family move into the middle class. The data above demonstrate there’s some truth to the claim that construction and extraction jobs may be an alternative to getting into the middle class without earning a costly college degree, but not all of these jobs can help a family afford a middle class lifestyle.

Takeaways & Recommendations

Middle Class Income vs. Middle Class Lifestyle

While there’s evidence that some construction and extraction jobs can get a family into the middle class, one question remains: What part of the middle class? According to our research, only a few high-growth positions in these industries can get a family of any type into the upper-middle-income range. Most of these jobs can get a family into the lower-middle-income or middle-income ranges, but families in these brackets have a more difficult time affording an aspirational middle class budget. While construction and extraction jobs provide a promising avenue for economic mobility, the degree of mobility may not be as pronounced as some believe, and whether or not these workers can live a middle class lifestyle remains to be seen.

While many jobs in these industries are projected to grow at a faster-than-average rate in the coming years, some jobs may be better equipped than others to move families into the middle class. In order to create more opportunities for mobility, enhance wages, and promote economic mobility and family stability over time, the construction and extraction industries must create more opportunities for workers to advance and build on their skills over the course of their careers. Programs that promote lifelong learning, stackable credentialing, and ongoing certification can help ensure workers can grow in their positions and remain employable over time.
Women Underrepresented

Additionally, nearly one-third of high-growth jobs in construction and extraction require an apprenticeship, but recent research on women and workforce training shows women make up only 6 percent of registered apprentices in Colorado. Although women are more likely to complete registered apprenticeships than their male counterparts (40 percent vs. 27 percent), they’re vastly underrepresented in construction apprenticeships, which account for 80 percent of all apprenticeships in Colorado. While a full explanation for this gap is unclear, women report experiencing harassment in male-dominated industries, and say they had to prove their abilities to be treated respectfully by male colleagues.

Because these industries primarily employ men, women have been less able to take advantage of the economic mobility available within them. Apprenticeships and other training programs attempting to grow this workforce must address the issues preventing women from full participation in these industries. Harassment may be a good place to start, but family supports are also important. For example, working parents need child care, but 30 percent of Coloradans live in a child care desert, meaning there aren’t enough licensed child care slots for the number of children who need them. The Center for American Progress correlates child care deserts with lower maternal workforce participation rates. Local economies must find ways to improve child care access and affordability to stimulate growth.

Racial & Ethnic Representation

Compared to the overall Colorado workforce, whites and Hispanics/Latinos are overrepresented, while blacks/African Americans and Asians are underrepresented in Colorado construction and extraction. More work must be done in these industries to determine which groups are represented in various jobs, and if there is any racial or ethnic segmentation in high-paying jobs (such as managers or supervisors) versus lower-paying jobs (such as helpers).

As construction and extraction jobs continue to grow and as programs develop to meet workforce and training needs, policymakers, state agencies, and businesses must work to ensure certain racial or ethnic groups aren’t funneled or tracked into particular segments of these industries (e.g., managers/supervisors vs. laborers), and all groups have an equal opportunity to advance training and enhance wages throughout their careers. (See Figure A3 in Appendix A for a demographic breakdown of some of Colorado’s high-growth construction and extraction jobs.) Where these opportunities are available, the outlook for the state’s economy, and for Colorado families’ economic mobility, is bright.
## Appendix A: Figures

**FIGURE A1: CONSTRUCTION & EXTRACTION JOBS, WITH WAGE INCREASE MEASURE FROM ENTRY LEVEL TO EXPERIENCED**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>2017 Entry-Level Wages ($)</th>
<th>2017 Experienced Wages ($)</th>
<th>Wage Increase Measure ($)</th>
<th>Wage Increase Measure (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elevator Installers &amp; Repairers</td>
<td>49,753</td>
<td>87,505</td>
<td>+37,752</td>
<td>+75.9%</td>
</tr>
<tr>
<td>Supervisors of Construction &amp; Extraction Workers</td>
<td>48,060</td>
<td>82,809</td>
<td>+34,749</td>
<td>+72.3%</td>
</tr>
<tr>
<td>Construction &amp; Building Inspectors</td>
<td>41,738</td>
<td>73,290</td>
<td>+31,552</td>
<td>+75.6%</td>
</tr>
<tr>
<td>Electricians</td>
<td>34,527</td>
<td>62,498</td>
<td>+27,971</td>
<td>+81.0%</td>
</tr>
<tr>
<td>Service Unit Operators, Oil &amp; Gas</td>
<td>35,858</td>
<td>62,234</td>
<td>+26,376</td>
<td>+73.6%</td>
</tr>
<tr>
<td>Tapers</td>
<td>34,184</td>
<td>60,459</td>
<td>+26,275</td>
<td>+76.9%</td>
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<tr>
<td>Plumbers, Pipefitters, &amp; Steamfitters</td>
<td>35,200</td>
<td>59,922</td>
<td>+24,722</td>
<td>+70.2%</td>
</tr>
<tr>
<td>Sheet Metal Workers</td>
<td>32,023</td>
<td>56,259</td>
<td>+24,236</td>
<td>+75.7%</td>
</tr>
<tr>
<td>Boilermakers</td>
<td>40,960</td>
<td>64,950</td>
<td>+23,990</td>
<td>+58.6%</td>
</tr>
<tr>
<td>Reinforcing Iron &amp; Rebar Workers</td>
<td>36,982</td>
<td>60,878</td>
<td>+23,896</td>
<td>+64.6%</td>
</tr>
<tr>
<td>Rail-Track Laying &amp; Maintenance Equipment Operators</td>
<td>46,733</td>
<td>70,492</td>
<td>+23,759</td>
<td>+50.8%</td>
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<tr>
<td>Septic Tank Servicers &amp; Sewer Pipe Cleaners</td>
<td>31,052</td>
<td>54,401</td>
<td>+23,349</td>
<td>+75.2%</td>
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<tr>
<td>Carpenters</td>
<td>29,498</td>
<td>52,805</td>
<td>+23,307</td>
<td>+79.0%</td>
</tr>
<tr>
<td>Structural Iron &amp; Steel Workers</td>
<td>33,784</td>
<td>56,618</td>
<td>+22,834</td>
<td>+67.6%</td>
</tr>
<tr>
<td>Rotary Drill Operators, Oil &amp; Gas</td>
<td>41,531</td>
<td>64,156</td>
<td>+22,625</td>
<td>+54.5%</td>
</tr>
<tr>
<td>Floor Layers, Except Carpet, Wood, &amp; Hard Tiles</td>
<td>28,496</td>
<td>50,428</td>
<td>+21,932</td>
<td>+77.0%</td>
</tr>
<tr>
<td>Extraction Workers, All Other</td>
<td>35,132</td>
<td>56,815</td>
<td>+21,683</td>
<td>+61.7%</td>
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<td>Glaziers</td>
<td>30,483</td>
<td>51,393</td>
<td>+20,910</td>
<td>+68.6%</td>
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<tr>
<td>Tile &amp; Marble Setters</td>
<td>29,045</td>
<td>49,527</td>
<td>+20,482</td>
<td>+70.5%</td>
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<tr>
<td>Pipelayers</td>
<td>33,619</td>
<td>52,792</td>
<td>+19,173</td>
<td>+57.0%</td>
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<td>Stonemasons</td>
<td>23,457</td>
<td>41,138</td>
<td>+17,681</td>
<td>+75.4%</td>
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<tr>
<td>Cement Masons &amp; Concrete Finishers</td>
<td>30,628</td>
<td>50,428</td>
<td>+17,748</td>
<td>+57.1%</td>
</tr>
<tr>
<td>Operating Engineers &amp; Other Const. Equip. Operators</td>
<td>37,381</td>
<td>54,700</td>
<td>+17,319</td>
<td>+46.3%</td>
</tr>
<tr>
<td>Brickmasons &amp; Blockmasons</td>
<td>41,807</td>
<td>59,088</td>
<td>+17,281</td>
<td>+41.3%</td>
</tr>
<tr>
<td>Roustabouts, Oil &amp; Gas</td>
<td>32,614</td>
<td>49,596</td>
<td>+16,982</td>
<td>+52.1%</td>
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<td>Carpet Installers</td>
<td>32,986</td>
<td>49,883</td>
<td>+16,897</td>
<td>+51.2%</td>
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<td>Insulation Workers, Mechanical</td>
<td>33,493</td>
<td>50,086</td>
<td>+16,593</td>
<td>+49.5%</td>
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<tr>
<td>Roofers</td>
<td>29,100</td>
<td>45,644</td>
<td>+16,544</td>
<td>+56.9%</td>
</tr>
<tr>
<td>Helpers – Painters, Paperhangers, Plasterers, &amp; Stucco Masons</td>
<td>25,029</td>
<td>41,022</td>
<td>+15,993</td>
<td>+63.9%</td>
</tr>
<tr>
<td>Misc. Construction &amp; Related Workers</td>
<td>30,602</td>
<td>46,126</td>
<td>+15,524</td>
<td>+50.7%</td>
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<td>Derrick Operators, Oil &amp; Gas</td>
<td>40,812</td>
<td>56,295</td>
<td>+15,483</td>
<td>+37.9%</td>
</tr>
<tr>
<td>Construction Laborers</td>
<td>25,219</td>
<td>40,640</td>
<td>+15,421</td>
<td>+61.1%</td>
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<td>Continuous Mining Machine Operators</td>
<td>50,511</td>
<td>65,368</td>
<td>+14,857</td>
<td>+29.4%</td>
</tr>
<tr>
<td>Paving, Surfacing, &amp; Tamping Equipment Operators</td>
<td>32,404</td>
<td>47,127</td>
<td>+14,723</td>
<td>+45.4%</td>
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<tr>
<td>Drywall &amp; Ceiling Tile Installers</td>
<td>35,212</td>
<td>49,841</td>
<td>+14,629</td>
<td>+41.5%</td>
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<td>Helpers – Construction Trades, All Other</td>
<td>25,744</td>
<td>40,144</td>
<td>+14,370</td>
<td>+55.8%</td>
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<td>Hazardous Materials Removal Workers</td>
<td>33,252</td>
<td>47,493</td>
<td>+14,241</td>
<td>+42.8%</td>
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<td>Earth Drillers, Except Oil &amp; Gas</td>
<td>40,416</td>
<td>54,606</td>
<td>+14,190</td>
<td>+35.1%</td>
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<td>Helpers – Pipelayers, Plumbers, Pipefitters, &amp; Steamfitters</td>
<td>24,233</td>
<td>38,042</td>
<td>+14,190</td>
<td>+58.6%</td>
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<td>Insulation Workers, Floor, Ceiling, &amp; Wall</td>
<td>26,256</td>
<td>39,687</td>
<td>+13,431</td>
<td>+51.2%</td>
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<td>Highway Maintenance Workers</td>
<td>33,356</td>
<td>46,538</td>
<td>+13,182</td>
<td>+39.5%</td>
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<tr>
<td>Occupation</td>
<td>Faster-Than-Average Growth</td>
<td>Much Faster-Than-Average Growth</td>
<td></td>
<td></td>
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<tr>
<td>------------------------------------------------</td>
<td>----------------------------</td>
<td>---------------------------------</td>
<td></td>
<td></td>
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<tr>
<td>Rock Splitters, Quarry</td>
<td>32,472</td>
<td>45,602</td>
<td></td>
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<td>Painters, Construction &amp; Maintenance</td>
<td>31,958</td>
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<td>Fence Erectors</td>
<td>27,096</td>
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<td>Plasterers &amp; Stucco Masons</td>
<td>26,210</td>
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<td>Mining Machine Operators, All Other</td>
<td>40,828</td>
<td>52,560</td>
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<td>Helpers – Brickmasons, Blockmasons, Stonemasons, &amp; Tile &amp; Marble Setters</td>
<td>30,878</td>
<td>40,920</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Floor Sanders &amp; Finishers</td>
<td>33,112</td>
<td>43,135</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helpers – Extraction Workers</td>
<td>32,707</td>
<td>40,025</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fence Erectors</td>
<td>27,096</td>
<td>39,820</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Painters, Construction &amp; Maintenance</td>
<td>31,958</td>
<td>44,849</td>
<td></td>
<td></td>
</tr>
<tr>
<td>helpers – Brickmasons, Blockmasons, Stonemasons, &amp; Tile &amp; Marble Setters</td>
<td>30,878</td>
<td>40,920</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elevator Installers &amp; Repairers</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supervisors of Construction &amp; Extraction Workers</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction &amp; Building Inspectors</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Unit Operators, Oil &amp; Gas</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumbers, Pipefitters, &amp; Steamfitters</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reinforcing Iron &amp; Rebar Workers</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Septic Tank Servicers &amp; Sewer Pipe Cleaners</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Iron &amp; Steel Workers</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotary Drill Operators, Oil &amp; Gas</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Floor Layers, Except Carpet, Wood, &amp; Hard Tiles</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extraction Workers, All Other</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glaziers</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tile &amp; Marble Setters</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pipelayers</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cement Masons &amp; Concrete Finishers</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Engineers &amp; Other Const. Equip. Operators</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brickmasons &amp; Blockmasons</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roustabouts, Oil &amp; Gas</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roofers</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helpers – Painters, Paperhangers, Plasterers, &amp; Stucco Masons</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Misc. Construction &amp; Related Workers</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Derrick Operators, Oil &amp; Gas</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction Laborers</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paving, Surfacing, &amp; Tamping Equipment Operators</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helpers – Construction Trades, All Other</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hazardous Materials Removal Workers</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Earth Drillers, Except Oil &amp; Gas</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helpers – Pipelayers, Plumbers, Pipefitters, &amp; Steamfitters</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fence Erectors</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plasterers &amp; Stucco Masons</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
 Helpers – Brickmasons, Blockmasons, Stonemasons, & Tile & Marble Setters
Floor Sanders & Finishers
Helpers – Extraction Workers
Helpers – Carpenters

*Note: Jobs listed here have faster than average, or much faster than average projected growth, compared to all other jobs in the U.S. economy.

FIGURE A3: COLORADO DEMOGRAPHIC PROFILES, SELECTED HIGH-GROWTH CONSTRUCTION AND EXTRACTION JOBS*

<table>
<thead>
<tr>
<th>Occupation</th>
<th>2017 Median Wages</th>
<th>White</th>
<th>Black</th>
<th>Latino</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elevator Installers &amp; Repairers</td>
<td>$78,862</td>
<td>70%</td>
<td>30%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Supervisors of Construction &amp; Extraction Workers</td>
<td>$66,487</td>
<td>90%</td>
<td>1.1%</td>
<td>24%</td>
<td>96%</td>
</tr>
<tr>
<td>Construction &amp; Building Inspectors</td>
<td>$60,891</td>
<td>86%</td>
<td>0%</td>
<td>60%</td>
<td>95%</td>
</tr>
<tr>
<td>Rotary Drill Operators, Oil &amp; Gas</td>
<td>$56,614</td>
<td>90%</td>
<td>1.5%</td>
<td>31%</td>
<td>100%</td>
</tr>
<tr>
<td>Plumbers, Pipefitters, &amp; Steamfitters</td>
<td>$51,090</td>
<td>87%</td>
<td>1.4%</td>
<td>33%</td>
<td>97%</td>
</tr>
<tr>
<td>Derrick Operators, Oil &amp; Gas</td>
<td>$50,127</td>
<td>90%</td>
<td>1.5%</td>
<td>31%</td>
<td>100%</td>
</tr>
<tr>
<td>Operating Engineers &amp; Other Const. Equip. Operators</td>
<td>$48,333</td>
<td>88%</td>
<td>1.4%</td>
<td>24%</td>
<td>99%</td>
</tr>
<tr>
<td>Earth Drillers, Except Oil &amp; Gas</td>
<td>$47,807</td>
<td>85%</td>
<td>0%</td>
<td>31%</td>
<td>87%</td>
</tr>
<tr>
<td>Structural Iron &amp; Steel Workers</td>
<td>$46,825</td>
<td>84%</td>
<td>0%</td>
<td>19%</td>
<td>90%</td>
</tr>
<tr>
<td>Cement Masons &amp; Concrete Finishers</td>
<td>$42,072</td>
<td>91%</td>
<td>0%</td>
<td>79%</td>
<td>99%</td>
</tr>
<tr>
<td>Hazardous Materials Removal Workers</td>
<td>$42,811</td>
<td>92%</td>
<td>3.5</td>
<td>46%</td>
<td>77%</td>
</tr>
<tr>
<td>Glaziers</td>
<td>$41,714</td>
<td>89%</td>
<td>7.6</td>
<td>28%</td>
<td>99%</td>
</tr>
<tr>
<td>Paving, Surfacing, &amp; Tamping Equipment Operators</td>
<td>$41,477</td>
<td>100%</td>
<td>0%</td>
<td>76%</td>
<td>100%</td>
</tr>
<tr>
<td>Roofers</td>
<td>$38,873</td>
<td>84%</td>
<td>4.8%</td>
<td>66%</td>
<td>98%</td>
</tr>
<tr>
<td>Construction Laborers</td>
<td>$34,848</td>
<td>84%</td>
<td>2.6%</td>
<td>49%</td>
<td>97%</td>
</tr>
<tr>
<td>Plasterers &amp; Stucco Masons</td>
<td>$34,613</td>
<td>81%</td>
<td>0%</td>
<td>76%</td>
<td>100%</td>
</tr>
<tr>
<td>Fence Erectors</td>
<td>$34,261</td>
<td>79%</td>
<td>0%</td>
<td>31%</td>
<td>100%</td>
</tr>
<tr>
<td>Stonemasons</td>
<td>$33,970</td>
<td>89%</td>
<td>1.7%</td>
<td>52%</td>
<td>100%</td>
</tr>
<tr>
<td>Helpers – Construction Trades, All Other</td>
<td>$30,715</td>
<td>86%</td>
<td>0%</td>
<td>60%</td>
<td>95%</td>
</tr>
</tbody>
</table>

*Note: Jobs listed here are high-growth jobs for which Colorado-specific demographic data were available in the IPUMS data, IPUMS-USA, University of Minnesota, www.ipums.org. Persons whose ethnicity is identified as Hispanic or Latino may be of any race.

Appendix B: List of Jobs Used for Figures 7-9

TWO-ADULT HOUSEHOLDS
Two adults, three children, one adult working

Lower Middle Income (LMI): Elevator Installers and Repairers
Supervisors of Construction and Extraction Workers
Construction and Building Inspectors
Rotary Drill Operators, Oil and Gas

Middle Income (MI): None
Upper Middle Income (UMI): None

Two adults, three children, two adults working

LMI: Misc. Construction and Related Workers
Roofers
Floor Sanders and Finishers
Stonemasons
Helpers – Painters, Paperhangers, Plasterers, and Stucco Masons
Helpers – Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters
Construction Laborers
Helpers – Construction Trades, All Other
Helpers – Extraction Workers
Fence Erectors
Plasterers and Stucco Masons
Helpers – Pipelayers, Plumbers, Pipefitters, and Steamfitters
Helpers – Carpenters

MI: Elevator Installers and Repairers
Supervisors of Construction and Workers
Plumbers, Pipefitters, and Steamfitters
Brickmasons and Blockmasons
Extraction Workers, All Other
Structural Iron and Steel Workers
Derrick Operators, Oil and Gas
Operating Engineers and Other Construction Equipment Operators
Earth Drillers, Oil and Gas
Septic Tank Servicers and Sewer Pipe Cleaners
Pipayers
Roustabouts, Oil and Gas
Tile and Marble Setters
Cement Masons and Concrete Finishers
Hazardous Materials Removal Workers
Paving, Surfacing, and Tamping Equipment Operators

UMI: Elevator Installers and Repairers

**Two adults, two children, one adult working**
LMI: Elevator Installers and Repairers
MI: None
UMI: None

**Two adults, two children, two adults working**
LMI: Service Unit Operators, Oil, Gas, and Mining
Reinforcing Iron and Rebar Workers
Plumbers, Pipefitters, and Steamfitters
Extraction Workers, All Other
Structural Iron and Steel Workers
Derrick Operators, Oil and Gas
Operating Engineers and Other Construction Equipment Operators
Earth Drillers, Oil and Gas
Septic Tank Servicers and Sewer Pipe Cleaners
Pipayers
Roustabouts, Oil and Gas
Tile and Marble Setters
Hazardous Materials Removal Workers
Paving, Surfacing, and Tamping Equipment Operators
Misc. Construction and Related Workers
Roofers
Floor Sanders and Finishers
Helpers – Painters, Paperhangers, Plasterers, and Stucco Masons
Helpers – Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters
Helpers – Extraction Workers

MI: Elevator Installers and Repairers
Supervisors of Construction and Extraction Workers
Construction and Building Inspectors
Rotary Drill Operators, Oil and Gas
Brickmasons and Blockmasons

UMI: None

**Two adults, one child, one adult working**
LMI: Elevator Installers and Repairers
Supervisors of Construction and Extraction Workers
MI: None
UMI: None

**Two adults, one child, two adults working**
LMI: Elevator Installers and Repairers
Supervisors of Construction and Extraction Workers
Construction and Building Inspectors
Rotary Drill Operators, Oil and Gas
Reinforcing Iron and Rebar Workers
Plumbers, Pipefitters, and Steamfitters
Brickmasons and Blockmasons
Derrick Operators, Oil and Gas
Operating Engineers and Other Construction Equipment Operators
Earth Drillers, Oil and Gas

**MI:**
Supervisors of Construction and Extraction Workers
Construction and Building Inspectors
Rotary Drill Operators, Oil and Gas
Reinforcing Iron and Rebar Workers
Plumbers, Pipefitters, and Steamfitters
Brickmasons and Blockmasons
Derrick Operators, Oil and Gas
Operating Engineers and Other Construction Equipment Operators
Earth Drillers, Oil and Gas

**UMI:**
Elevator Installers and Repairers

**SINGLE-PARENT HOUSEHOLDS**

**One adult, two children**

**LMI:**
Elevator Installers and Repairers
Supervisors of Construction and Extraction Workers
Construction and Building Inspectors
Rotary Drill Operators, Oil and Gas
Service Unit Operators, Oil, Gas, and Mining
Reinforcing Iron and Rebar Workers
Plumbers, Pipefitters, and Steamfitters
Brickmasons and Blockmasons
Derrick Operators, Oil and Gas

**MI:**
None

**UMI:**
None

**One adult, one child**

**LMI:**
Stonemasons
Construction Laborers
Helpers – Construction Trades, All Other
Fence Erectors
Plasterers and Stucco Masons
Helpers – Pipelayers, Plumbers, Pipefitters, and Steamfitters
Helpers – Carpenters

**MI:**
Rotary Drill Operators, Oil and Gas
Service Unit Operators, Oil, Gas, and Mining
Reinforcing Iron and Rebar Workers
Plumbers, Pipefitters, and Steamfitters
Brickmasons and Blockmasons
Extraction Workers, All Other
Structural Iron and Steel Workers
Derrick Operators, Oil and Gas
Operating Engineers and Other Construction Equipment Operators
Earth Drillers, Oil and Gas
Septic Tank Servicers and Sewer Pipe Cleaners
Pipelayers
Roustabouts, Oil and Gas
Tile and Marble Setters
Cement Masons and Concrete Finishers
Hazardous Materials Removal Workers
Paving, Surfacing, and Tamping Equipment Operators
Misc. Construction and Related Workers
Roofers
Floor Sanders and Finishers
Helpers – Painters, Paperhangers, Plasterers, and Stucco Masons
Helpers – Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters
Helpers – Extraction Workers

**UMI:**
Elevator Installers and Repairers
Supervisors of Construction and Extraction Workers
Construction and Building Inspectors
**CHILDLESS HOUSEHOLDS**

**Two adults, zero children, one adult working**

LMI: Elevator Installers and Repairers
Supervisors of Construction and Extraction Workers
Construction and Building Inspectors
Rotary Drill Operators, Oil and Gas
Reinforcing Iron and Rebar Workers
Plumbers, Pipefitters, and Steamfitters
Brickmasons and Blockmasons
Derrick Operators, Oil and Gas

MI: Elevator Installers and Repairers

UMI: None

**Two adults, zero children, two adults working**

LMI: Stonemasons
Helpers – Painters, Paperhangers, Plasterers, and Stucco Masons
Helpers – Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters
Construction Laborers
Helpers – Construction Trades, All Other
Helpers – Extraction Workers
Fence Erectors
Plasterers and Stucco Masons
Helpers – Pipelayers, Plumbers, Pipefitters, and Steamfitters
Helpers – Carpenters

MI: Construction and Building Inspectors
Rotary Drill Operators, Oil and Gas
Service Unit Operators, Oil, Gas, and Mining
Reinforcing Iron and Rebar Workers
Plumbers, Pipefitters, and Steamfitters
Brickmasons and Blockmasons
Extraction Workers, All Other
Structural Iron and Steel Workers
Derrick Operators, Oil and Gas
Operating Engineers and Other Construction Equipment Operators
Earth Drillers, Oil and Gas
Septic Tank Servicers and Sewer Pipe Cleaners
Pipelayers
Roustabouts, Oil and Gas
Tile and Marble Setters
Cement Masons and Concrete Finishers
Hazardous Materials Removal Workers
Paving, Surfacing, and Tamping Equipment Operators
Misc. Construction and Related Workers
Roofers
Floor Sanders and Finishers

UMI: Elevator Installers and Repairers
Supervisors of Construction and Extraction Workers

---

1. Lower middle income is defined as the range from two-thirds of the median income to the median income; middle income is defined as the range from the median income to 1.66 times the median income; and upper middle income is defined as the range from 1.66 to two times the median income.
2. Note that this approach is not intended to guarantee what jobs will pay a wage high enough to get into the middle class, only which jobs in the construction and extraction industries pay wages that align with upper-middle, middle, and lower-middle incomes, for different family types.
3. This budget includes items such as housing, health care, automobile ownership, retirement savings, college savings, and vacation.
4. Occupations in these industries are labeled 47-xxxx in the BLS data
5. See Figure A2 in Appendix A for these high-growth jobs.