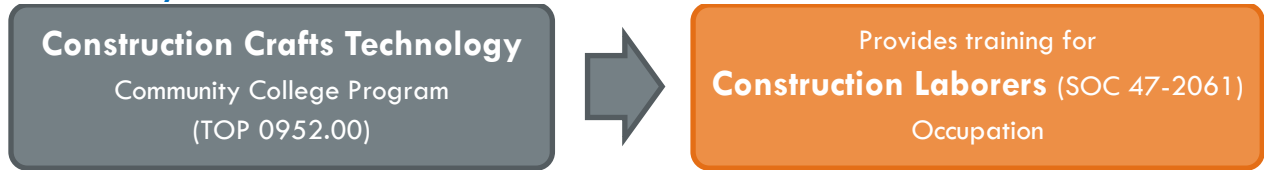


Construction Crafts Technology

Inland Empire/Desert Region (Riverside and San Bernardino counties)

Summary



Over the next five years (2021-2026), employment for construction laborers is projected to



The Inland Empire/Desert Centers of Excellence

 **Recommends**

Construction Crafts Technology Program Expansion to meet the need for more workers in the region

Introduction

This report provides labor market occupational demand and wage research and postsecondary program outcomes related to construction crafts technology. Construction crafts technology programs (TOP 0952.00) prepare students for employment through the instruction of the lay out, fabrication, erection, installation, and repair of buildings, highways, airports, and other structures and fixtures, including framing, construction materials, estimating, blueprint reading, and use of tools (Taxonomy of Programs, 2012). The knowledge, skills, and abilities trained by construction crafts programs prepare students for employment as construction laborers.

Construction Laborers (SOC 47-2061)

Perform tasks involving physical labor at construction sites. May operate hand and power tools of all types: air hammers, earth tampers, cement mixers, small mechanical hoists, surveying, and measuring equipment, and a variety of other equipment and instruments. May clean and prepare sites, dig trenches, set braces to support the sides of excavations, erect scaffolding, and clean up rubble, debris, and other waste materials. May assist other craft workers.

Sample job titles: Construction Laborer, Construction Worker, Drop Crew Laborer, Equipment Operator (EO), Form Setter, Post Framers, Scaffolding Operator, Site Work Laborer, Toolman

Entry-Level Educational Requirement: No formal educational credential

Training Requirement: Less than one-month on-the-job training

Work Experience: None

Incumbent workers with a Community College Award or Some Postsecondary Coursework: 21%

Job Counts and Projections

In 2021, there were 19,397 construction laborer jobs in the region. Regional employment for construction laborers is projected to increase by 6% through 2026; 2,188 job openings are projected annually. Exhibit 1 displays the job counts, five-year projected job growth, annual job openings, and the share of incumbent workers aged 55 years and older in the region.

Exhibit 1. Five-year projections for construction laborers, Inland Empire/Desert Region, 2021-2026

Occupation	2021 Jobs	2026 Jobs	5-Yr % Change	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)	% of workers age 55+
Construction Laborers	19,397	20,638	6%	10,942	2,188	21%

Source: Lightcast 2022.3

An online job advertisements (ad) search for construction laborer jobs was conducted to reveal the employers seeking these workers, including the time it takes to fill positions, earnings information, and in-demand skills. Exhibit 2 shows the number of job ads posted during the last 12 months, October 2021 through September 2022, and the regional and statewide average time to fill these jobs.

On average, employers in the local region fill online job ads for construction laborers in 32 days, five days shorter than the statewide average time to fill. Time to fill information indicates that employers in the region likely face fewer challenges filling open positions than other employers in California.

Exhibit 2. Job ads and time to fill, Inland Empire/Desert Region, October 2021 through September 2022

Occupation	Job Ads	Regional Average Time to Fill (Days)	Statewide Average Time to Fill (Days)
Construction Laborers	883	32	37

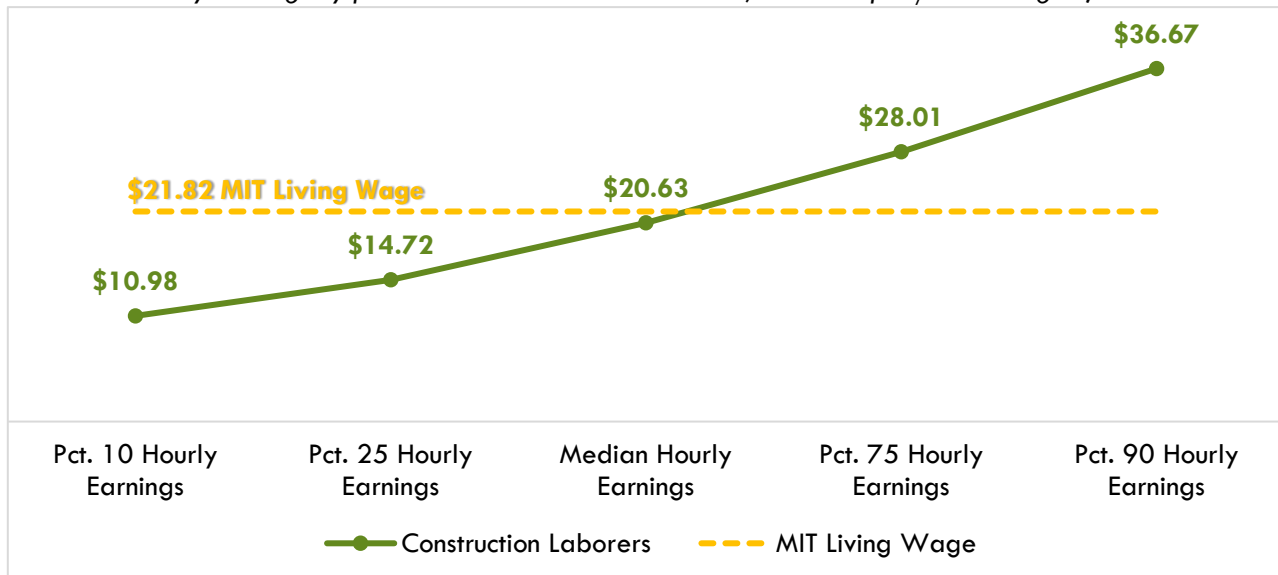
Source: Burning Glass – Labor Insights

Earnings

Community colleges should ensure their training programs lead to employment opportunities that provide a living wage. The MIT living wage calculator estimates that an individual must earn \$21.82 per hour or \$45,386 annually in California (Glasmeier, 2022).

Exhibit 3 displays the hourly earnings for construction laborers in the Inland Empire/Desert Region. The median hourly earnings for construction laborers are below the living wage standard. The 75th percentile hourly earnings for construction laborers surpass the living wage, indicating that at least the top 25% of workers earn a living wage.

Exhibit 3. Hourly earnings by percentile for construction laborers, Inland Empire/Desert Region, 2021



Source: Lightcast 2022.3

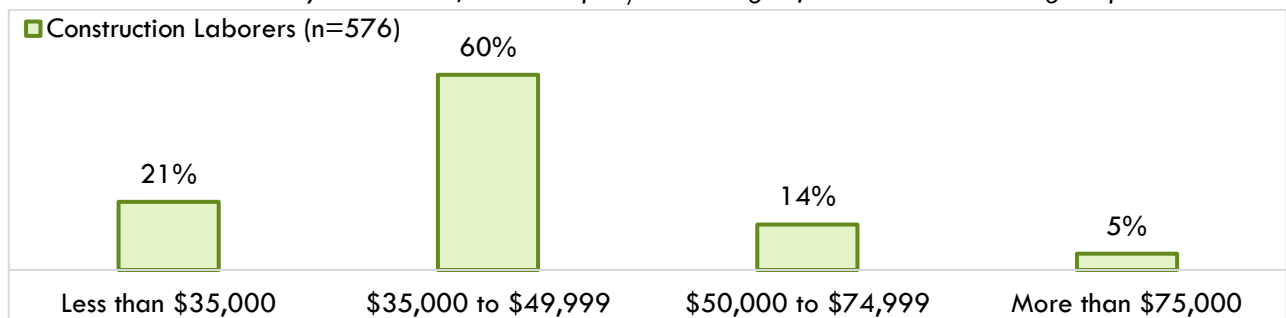
Advertised Salary from Online Job Ads

Exhibit 4 displays online job ad salary data for construction laborers over the last 12 months. Online job ad salary information reveals that employers are willing to pay construction laborers an average annual salary of \$44,000, similar to the region's \$45,386 annual (\$21.82 hourly) MIT living wage standard. Consider the salary information with caution since only 65% (576 out of 883) of online job ads for this occupation provided salary information. The salary figures are prorated to reflect full-time, annual earnings status.

The advertised salary information displayed may be misleading due to Burning Glass Labor Insight's job search tool misinterpreting wage information in job ads. For example, job ads include annual wage ranges, such as "\$33.4K to \$42.2K a year", which Burning Glass interpreted as an hourly figure. Burning Glass then prorates this data to reflect annual earnings, which would be \$69,472 to \$87,776, significantly higher than the employer-provided wage range.

Burning Glass Labor Insight's Market Salary Tool, a machine learning model that provides insight into the likely salary of workers within a specific occupation and a specific set of skills, reveals that the median salary for construction laborers is \$29,916 annually (\$14.38 hourly), below the living wage standard.

Exhibit 4. Advertised salary information, Inland Empire/Desert Region, October 2021 through September 2022



Source: Burning Glass – Labor Insights

Job Titles, Employers, Skills, Education, and Work Experience

Exhibit 5 displays the job titles most frequently used in job ads for construction laborers. Displaying advertised job titles may provide insight into the positions sought by employers posting ads. Besides construction laborer, the most frequently requested job title was general laborer.

Exhibit 5. Job titles most frequently used in construction laborer job ads, Inland Empire/Desert Region, October 2021 through September 2022

Job Titles	Job Ads
Construction Laborer	244
General Laborer	84
General Construction Laborer	71
Construction Worker	52
Construction Coordinator	48
Laborer	34
General Labor Technician	33
All other job titles	317
Total	883

Source: Burning Glass – Labor Insights

Exhibit 6 displays the employers that posted ten or more job ads for construction laborers during the last 12 months. Displaying employer names provides insight into where students may find employment after completing a program. ServiceMaster, a provider of residential and commercial services, posted the most job ads for construction laborers in the region.

Exhibit 6. Employers posting the most job ads for construction laborers, Inland Empire/Desert Region, October 2021 through September 2022

Top Employers	Job Ads
ServiceMaster	35
Cavco Industries	29
Edison International	20
Power Plus	17
Clark Pacific	15
CentiMark Corporation	14
HCI Incorporated	13
McGrath RentCorp	12
Pro Energy Services	11
NPL Construction Company	11
3D Construction	10
All other employers	696
Total	883

Source: Burning Glass – Labor Insights

Exhibit 7 lists a sample of specialized and employability skills employers seek when seeking workers to fill construction laborer positions. Specialized skills are occupation-specific skills that employers request for industry or job competency. Employability skills are foundational skills that transcend industries and occupations; this category is often referred to as "soft skills." The skills requested in job ads may be utilized to guide curriculum development.

Exhibit 7. Sample of in-demand skills from employer job ads, Inland Empire/Desert Region, October 2021 through September 2022

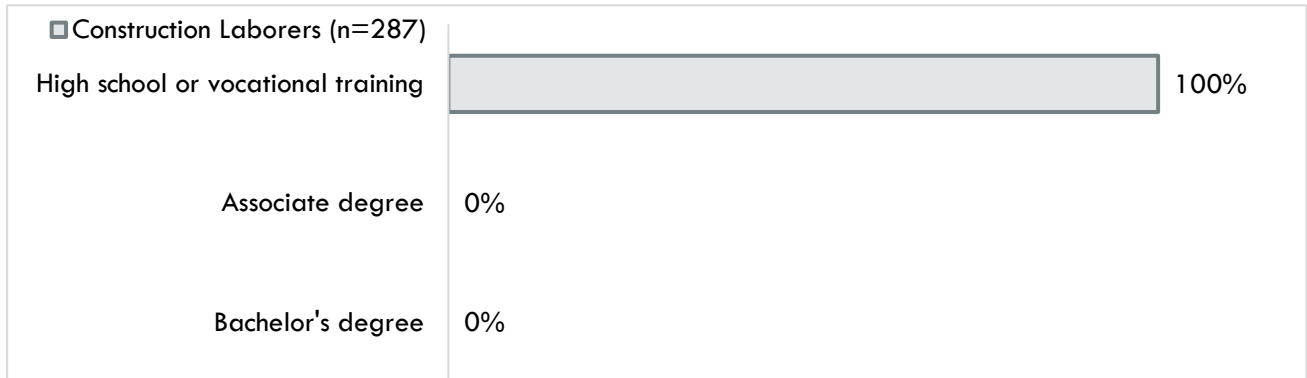
Specialized skills (n=688)	Employability skills
Power Tools	Physical Abilities
Repair	Communication Skills
Hand Tools	Organizational Skills
Forklift Operation	English

Specialized skills (n=688)	Employability skills
Demolition	Work Area Maintenance
Cleaning	Planning
Drywall	Detail-Oriented
Lifting Ability	Troubleshooting

Source: Burning Glass – Labor Insights

Exhibit 8 displays the minimum advertised education requirements for construction laborers. Only one-third of employer job ads (287 ads) included minimum education requirements, indicating that education is not an essential factor for employers. Of the employers posting job ads for construction laborers, all sought candidates with a high school diploma or vocational training.

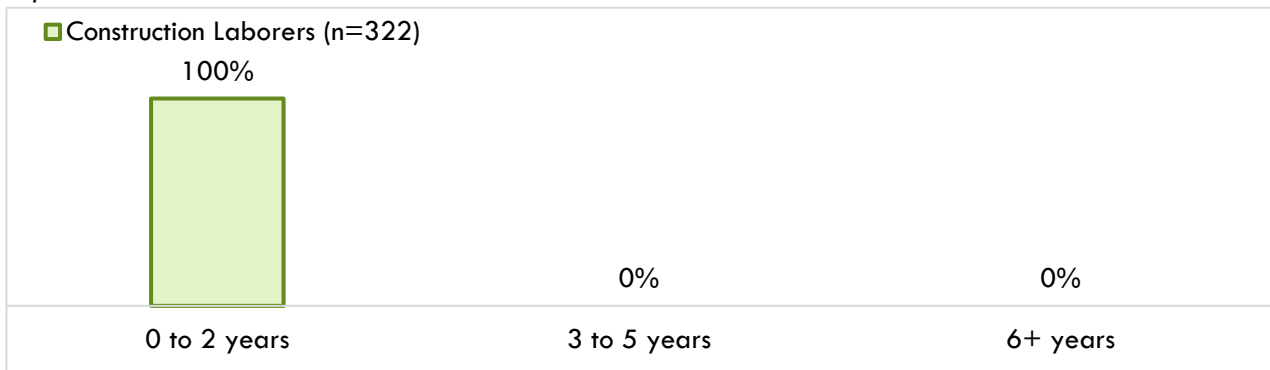
Exhibit 8. Minimum advertised education requirements, Inland Empire/Desert Region, October 2021 through September 2022



Source: Burning Glass – Labor Insights

Exhibit 9 displays the real-time work experience requirements from employer job ads. Work experience requirements were included in 36% of employer job ads (322 ads). All job ads with work experience requirements sought candidates with zero to two years of previous work experience.

Exhibit 9. Real-time work experience requirements, Inland Empire/Desert Region, October 2021 through September 2022



Source: Burning Glass – Labor Insights

Student Completions and Programs Outcomes

Exhibit 10 displays student completions for construction crafts technology programs (TOP 0952.00) over the last three academic years (2019-22). In the previous three academic years, regional community colleges have issued 20 awards annually in construction crafts technology programs. Program completion and student outcome methodologies are found in the appendix.

Exhibit 10. Annual average community college awards for construction crafts technology programs, Inland Empire/Desert Region, Academic Years 2019-2022

TOP 0952.00 – Construction Crafts Technology (Local Program Title)	Academic Year 2019-20	Academic Year 2020-21	Academic Year 2021-22	Total CC Annual Average Awards, Academic Years 2019-22
Mt. San Jacinto (Construction Technology)				0
Noncredit Program	0	0	0	0
Palo Verde College (Building and Construction Technology)				16
Associate Degree	1	0	1	1
Certificate 16 < 30 semester units	2	0	1	1
Certificate 6 < 18 semester units	22	20	0	14
Victor Valley College (Basic Framing and Carpentry/Building Construction/Construction Technology)				4
Associate Degree	2	2	4	3
Certificate 16 < 30 semester units	1	0	4	2
Total	28	22	10	20

Source: MIS Data Mart, COCI

California program outcome data may provide useful insight into the likelihood of success for the proposed program. Community college student outcome information based on the selected TOP code and region is provided in Exhibit 11.

Exhibit 11. 0952.00 – Construction crafts technology strong workforce program outcomes, Inland Empire/Desert Region, Academic Year 2019-2020 (Unless Noted)

Strong Workforce Program Metrics: 0952.00 – Construction Crafts Technology	Inland Empire/Desert Region	California
Unduplicated count of enrolled students (2020-21)	242	3,508
Completed 9+ career education units in one year (2020-21)	39%	37%
Perkins Economically disadvantaged students	80%	68%

Strong Workforce Program Metrics: 0952.00 – Construction Crafts Technology	Inland Empire/Desert Region	California
Students who completed a noncredit CTE or workforce preparation course (2020-21)	39%	74%
Students who earned a degree, certificate, or attained apprenticeship (2020-21)	-	411
Transferred to a four-year institution (transfers)	-	59
Job closely related to the field of study (2018-19)	88%	73%
Median annual earnings (all exiters)	\$31,958	\$38,888
Median change in earnings (all exiters)	53%	26%
Attained a living wage (completers and skills-builders)	60%	53%

Sources: LaunchBoard Community College Pipeline and Strong Workforce Program Metrics

Exhibit 12 displays awards for other postsecondary education providers reported in building and construction technology programs (CIP 46.0415). Completion data is compiled from the Integrated Postsecondary Education Data System (IPEDS) for the most recent three years. Two other regional postsecondary education providers issued 33 awards annually over the last three academic years.

Exhibit 12. Other educational providers building construction technology/technician programs, three-year annual average credentials, Inland Empire/Desert Region, Academic Years 2017-2020

46.0415 – Building Construction Technology/Technician	Academic Year 2017- 2018	Academic Year 2018- 2019	Academic Year 2019- 2020	Other Educational Providers Annual Average Credentials, 2017-2020
CET-Coachella				22
Postsecondary awards	32	24	11	22
CET-Colton				11
Postsecondary awards	10	14	9	11
Total	42	38	20	33

Source: IPEDS

Summary of Findings

The knowledge, skills, and abilities trained by construction crafts programs (TOP 0952.00) prepare students for employment as construction laborers. Construction laborers are projected to have 2,188 annual job openings and increase employment by 6% over the next five years. The median hourly earnings for construction laborers are below the living wage standard. The 75th percentile hourly earnings for construction laborers surpass the living wage, indicating that at least the top 25% of workers earn a living wage.

Regional community colleges have issued 20 awards annually over the last three academic years in construction crafts technology programs (0952.00) in the previous three academic years. Two other regional postsecondary education providers issued 33 awards annually over the last three academic years in programs related to construction crafts technology.

The Centers of Excellence recommends expanding construction crafts programs to meet the regional demand for construction laborers. Colleges considering this program should partner with relevant employers to ensure that students possess the requisite skills to achieve a living wage shortly after exiting a program.

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Appendix: Methodology

Exhibit 10 displays the average annual California Community College (CCC) awards conferred during the three academic years between 2019 and 2022 from the California Community Colleges Chancellor's Office Management Information Systems (MIS) Data Mart. Awards are the combined total of associate degrees and certificates issued during the timeframe, divided by three in this case to calculate an annual average. This is done to minimize the effect of atypical variations that might be present in a single year.

Community college student outcome information is from LaunchBoard and based on the selected TOP code and region. These metrics are based on records submitted to the California Community Colleges Chancellor's Office Management Information Systems (MIS) by community colleges, which come from self-reported student information from CCC Apply and the National Student Clearinghouse. Employment and earnings metrics are sourced from California's Employment Development Department's Unemployment Insurance database records. When available, outcomes for completers are reported to demonstrate the impact that earning a degree or certificate can have on employment and earnings. For more information on the types of students included for each metric, please see the web link for LaunchBoard's Strong Workforce Program Metrics Data Element Dictionary in the References section (LaunchBoard, 2022a). Finally, employment in a job closely related to the field of study comes from self-reported student responses on the CTE Employment Outcomes Survey (CTEOS), administered by Santa Rosa Junior College (LaunchBoard, 2022a).

Job ad data is limited to the information provided by employers and the ability of artificial intelligence search engines to identify this information. Additionally, preliminary calculations by Georgetown Center on Education and the Workforce found that "just 30 to 40 percent of openings for candidates with some college or an associate degree, and only 40 to 60 percent of openings for high school diploma holders appear online" (Carnevale et al., 2014). Online job ads often do not reveal employers' hiring intentions; it is unknown if employers plan to hire one or multiple workers from a single online job ad or collecting resumes for future hiring needs. A closed job ad may not be the result of a hired worker.

Table 1. 2021 to 2026 job growth, wages, entry-level education, training, and work experience required for construction laborers in the Inland Empire/Desert Region (Riverside and San Bernardino Counties combined)

Occupation	2021 Jobs	5-Year Change	5-Year % Change	Annual Openings (New + Replacement Jobs)	Entry-Experienced Hourly Wage (10 th to 90 th percentile)	Median Hourly Wage (50 th percentile)	Average Annual Earnings	Entry-Level Education & On-The-Job-Training	Work Experience Required
Construction Laborers (47-2061)	19,397	10,942	6%	2,188	\$10.98 to \$36.67	\$20.63	\$48,600	No formal educational credential & Less than one month	None

Source: Lightcast 2022.3