

**Labor Market Analysis: 0957.00 – Civil and Construction Management Technology
Construction Management (CMGT) – Associate of Science (A.S.) degree**
Los Angeles Center of Excellence, September 2024

Program Endorsement:	Endorsed: All Criteria Met <input checked="" type="checkbox"/>	Endorsed: Some Criteria Met <input type="checkbox"/>	Not Endorsed <input type="checkbox"/>
Program Endorsement Criteria			
Supply Gap:	Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>
Living Wage: (Entry-Level, 25th)	Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>
Education:	Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>
Emerging Occupation(s)			
	Yes <input type="checkbox"/>		No <input checked="" type="checkbox"/>

SUMMARY

This report analyzes whether local labor market demand is being met by community college programs aligned with the identified middle-skill occupations¹ or whether a shortage of workers exists. Labor market demand is measured by annual job openings while education supply is measured by the number of awards (degrees and certificates) conferred on average each year.

Based on the available data, there appears to be a supply gap for the three identified middle-skill occupations in the region. Furthermore, entry-level wages exceed the self-sufficiency standard wage in both Los Angeles and Orange counties, and approximately one-third of current workers in the field have completed some college or an associate degree.

Recommendation: Due to all three program endorsement criteria being met, the Los Angeles Center of Excellence for Labor Market Research (LA COE) endorses this proposed program.

Key Findings

Supply Gap

- 4,525 annual job openings are projected in the region through 2028. This number is greater than the three-year average of 1,218 awards conferred by educational institutions in the region.

Living Wage

- All three occupations in this report have entry-level wages **above** Los Angeles County's self-sufficiency standard hourly wage (\$18.10/hour).²

¹ Middle-skill occupations typically require some postsecondary education, but less than a bachelor's degree. The COE classifies middle-skill jobs as the following:

- All occupations that require an educational requirement of some college, associate degree or apprenticeship;
- All occupations that require a bachelor's degree, but also have more than one-third of their existing labor force with an educational attainment of some college or associate degree; or
- All occupations that require a high school diploma or equivalent or no formal education, but also require short- to long-term on-the-job training where multiple community colleges have existing programs.

² Self-Sufficiency Standard wage data was pulled from The Self-Sufficiency Standard Tool for California. For more information, visit: <http://selfsufficiencystandard.org/california>.

Educational Attainment

- 52% of the annual job openings typically require a bachelor's degree for middle-skill occupations related to construction management in the LA/OC region.
- 29%-38% of workers in the field have completed some college or an associate degree, according to national educational attainment data.

Community college supply

- 16 community colleges issued awards related to construction management in the greater LA/OC region.
- 625 awards (degrees and certificates) were conferred on average each year between 2021 and 2023.

Other postsecondary supply

- 8 educational institutions in the LA/OC region have conferred awards in programs related to construction management over the past three years.
- 593 awards were conferred on average each year by other postsecondary institutions throughout the greater LA/OC region between 2020 and 2022.

TARGET OCCUPATIONS

LA COE prepared this report to provide regional labor market and postsecondary supply data related to three middle-skill occupations. Although two of the occupations in this report typically require a bachelor's degree, they are considered middle-skill because approximately one-third of workers in the field have completed some college or an associate degree. [For full occupation descriptions, please see Appendix.](#)

- **Construction Managers (11-9021)**³
- **Cost Estimators (13-1051)**⁴
- **First-Line Supervisors of Construction Trades and Extraction Workers (47-1011)**⁵

OCCUPATIONAL DEMAND

Exhibit 1 shows the five-year occupational demand projections for these middle-skill construction management occupations. In the greater Los Angeles/Orange County region, the number of jobs related to these occupations is projected to increase by 3% through 2028. There will be more than 4,500 job openings per year through 2028 due to job growth and replacements. The majority of jobs in 2023 for these middle-skill construction management occupations (67%) were located in Los Angeles County.

³ [Construction Managers \(bls.gov\)](#)

⁴ [Cost Estimators \(bls.gov\)](#)

⁵ [First-Line Supervisors of Construction Trades and Extraction Workers \(bls.gov\)](#)

Exhibit 1: Current employment and occupational demand, Los Angeles and Orange counties⁶

Geography	2023 Jobs	2028 Jobs	2023-2028 Change	2023-2028 % Change	Annual Openings
Los Angeles	35,744	36,785	1,040	3%	3,003
Orange	17,552	18,262	710	4%	1,522
Total	53,296	55,047	1,751	3%	4,525

Detailed Occupation Data

Exhibit 2 displays the current employment and projected occupational demand for each of the target occupations in Los Angeles County. Positive scores for automation resilience⁷ reflect a lower-than-average threat of the occupation(s) being replaced by automation, while negative scores reflect a greater-than-average risk of automation. The average percentage of workers aged 55+ across all occupations in the Los Angeles/Orange County region is 27%; occupations with a larger share of workers aged 55 and older typically have greater replacement needs to offset the amount of impending retirements. On average, 81% of workers across all occupations in California are employed full-time. These target occupations exceed that ratio, which lends them to full-time employment opportunities at a high rate.

Exhibit 2: Current employment, projected occupational demand, percentage of workers aged 55+, Los Angeles County⁸

Occupation	2023 Jobs	2028 Jobs	5-Yr % Change	Annual Openings	Auto-mation Resilience	% Aged 55 and older	% Full Time Workers
Construction Managers	15,163	15,796	4%	1,208	11.4	34%	92%
Cost Estimators	4,841	4,863	0%	405	3.5	43%	100%
First-Line Supervisors of Construction Trades and Extraction Workers	15,740	16,126	2%	1,390	(6.2)	32%	98%
Total	35,744	36,785	3%	3,003	-	-	-

⁶ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

⁷ Automation resilience is calculated based on the percentage of time spent on high-risk compared to low-risk work, the number of high-risk jobs in compatible occupations, and the overall industry automation risk.

⁸ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

WAGES

The labor market endorsement in this report considers the entry-level hourly wages for these middle-skill construction management occupations in Los Angeles County as they relate to the county's self-sufficiency standard wage. Orange County wages are included below in order to provide a complete analysis of the greater Los Angeles/Orange County region.

Los Angeles County

All three occupations have entry-level wages above the self-sufficiency standard wage for one adult (\$18.10 in Los Angeles County). Typical entry-level hourly wages are in a range between \$22.31 and \$30.04. (Exhibit 3). Experienced workers can expect to earn wages between \$49.38 and \$66.92.

Exhibit 3: Earnings for occupations in Los Angeles County

Occupation	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)	Median Annual Earnings*
Construction Managers	\$22.31	\$43.37	\$66.92	\$90,200
Cost Estimators	\$28.97	\$37.55	\$49.38	\$78,100
First-Line Supervisors of Construction Trades and Extraction Workers	\$30.04	\$40.65	\$53.43	\$84,600

*Rounded to the nearest \$100

Orange County

All three occupations have entry-level wages above the self-sufficiency standard wage for one adult (\$20.63 in Orange County). Typical entry-level hourly wages are in a range between \$31.39 and \$38.42 (Exhibit 4). Experienced workers can expect to earn wages between \$53.09 and \$78.63.

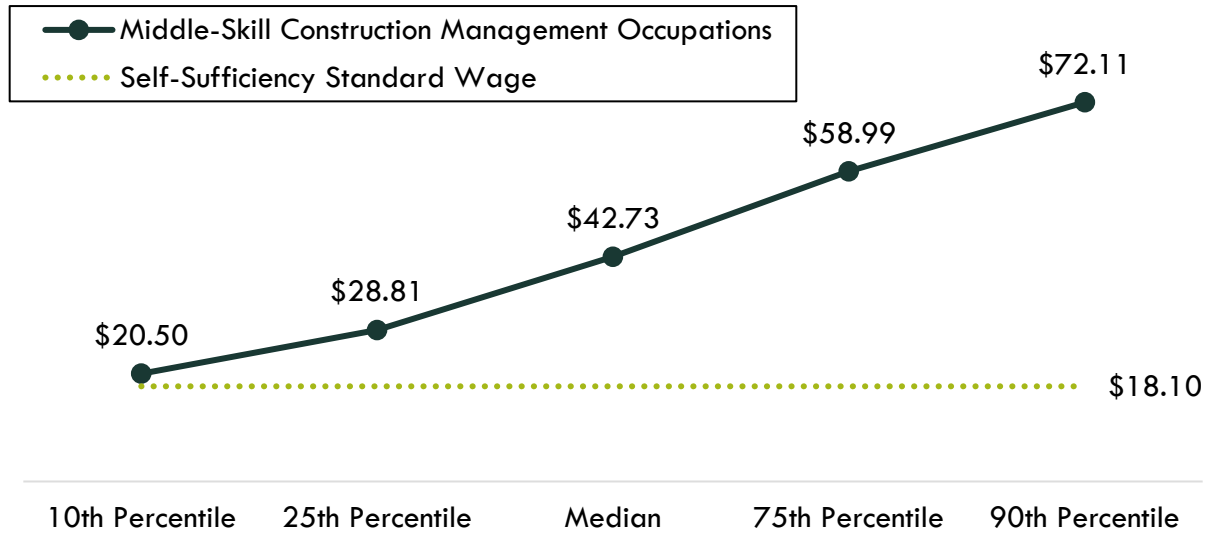
Exhibit 4: Earnings for occupations in Orange County

Occupation	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)	Median Annual Earnings*
Construction Managers	\$38.42	\$55.90	\$78.63	\$116,300
Cost Estimators	\$31.39	\$40.52	\$53.09	\$84,300
First-Line Supervisors of Construction Trades and Extraction Workers	\$34.11	\$45.48	\$58.49	\$94,600

*Rounded to the nearest \$100

Across the greater Los Angeles and Orange County region, the average entry-level hourly earnings for the occupations in this report are \$28.81; this is above the living wage for one single adult in Los Angeles County (\$18.10). Exhibit 5 shows the average hourly wage for the occupations in this report, for entry-level to experienced workers.

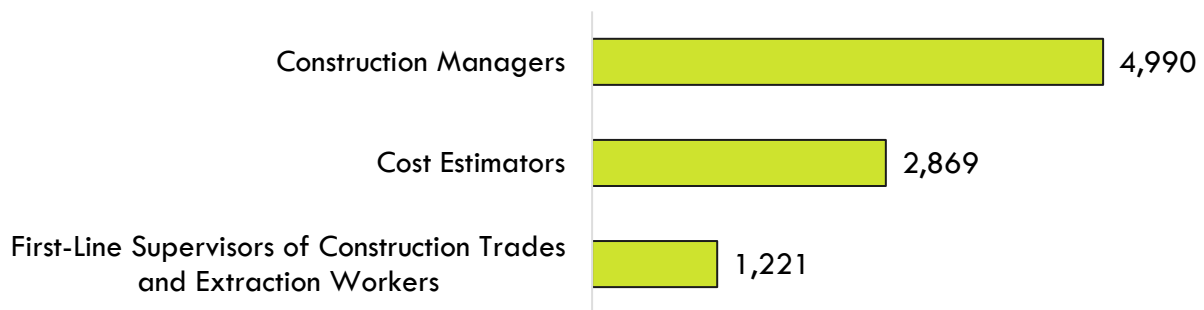
Exhibit 5: Average hourly earnings for middle-skill construction management occupations, Los Angeles and Orange counties



JOB POSTINGS

There were 9,080 online job postings related to construction management listed in the past 12 months in Los Angeles and Orange counties. Exhibit 6 displays the number of job postings by occupation. The majority of job postings (55%) were for *construction managers*, followed by *cost estimators* (32%) and *first-line estimators of construction trades and extraction workers* (13%).

Exhibit 6: Job postings by occupation (last 12 months), Los Angeles and Orange counties



Job postings were analyzed for the most common job titles, skills, and employers associated with the target occupations in this report (Exhibit 7).

Exhibit 7: Most commonly requested job titles, skills, and employers in job postings, Los Angeles and Orange counties

Top Job Titles	Top Skills	Top Employers
<ul style="list-style-type: none"> • Construction project managers • Estimators • Construction superintendents • Construction estimators • Electrical estimators • Design managers • Construction foremen 	<ul style="list-style-type: none"> • Construction • Project management • Subcontracting • Construction management • Change orders • Project schedules • Construction submittals • Building codes • Procurement 	<ul style="list-style-type: none"> • GPAC* • CyberCoders* • Jobot* • JLM Strategic Talent Partners* • PageGroup* • Aerotek* • CBRE • HILL International

*Staffing companies

In the greater Los Angeles/Orange County region, 49% of the construction management job postings listed a minimum educational requirement. The number and percentage of job postings by educational level appear in exhibit 8.

Exhibit 8: Education levels requested in job postings for construction management occupations, Los Angeles and Orange counties

Education Level	Job Postings	% of Job Postings
Bachelor's degree	3,268	74%
Associate degree	213	5%
High school diploma or vocational training	930	21%

EDUCATIONAL ATTAINMENT

In the greater Los Angeles/Orange County region, the majority of annual job openings (52%) typically require a bachelor's degree (Exhibit 9). However, the national-level data indicates between 29% and 38% of workers in the field have completed some college or an associate degree as their highest level of educational attainment. The Bureau of Labor Statistics (BLS) lists the following typical entry-level education levels for the occupations in this report:

Exhibit 9: Entry-level education preferred by employers nationally, Bureau of Labor Statistics

Occupation	Education Level
Construction Managers	Bachelor's degree
Cost Estimators	Bachelor's degree
First-Line Supervisors of Construction Trades and Extraction Workers	High school diploma or equivalent

EDUCATIONAL SUPPLY

Community College Supply

Exhibit 10 shows the annual and three-year average number of awards conferred by community colleges in programs that have historically trained for the occupations of interest. The colleges with the most completions in the region are LA Trade-Tech, Santiago Canyon, and LA Southwest.

Exhibit 10: Regional community college awards (certificates and degrees), 2021-2023

TOP Code	Program	College	2020-21 Awards	2021-22 Awards	2022-23 Awards	3-Year Average
0952.00	Construction Crafts Technology	El Camino	2	7	7	5
		LA Mission	-	-	11	4
		LA Southwest	79	23	75	59
		LA Trade-Tech	-	-	55	18
		Long Beach	39	40	30	36
		Pasadena	-	-	1	0
		LA Subtotal	120	70	179	123
		Fullerton	7	4	16	9
		Orange Coast	14	22	41	26
		Santa Ana	85	31	14	43
		OC Subtotal	106	57	71	78
Supply Subtotal/Average			226	127	250	201
0952.10	Carpentry	LA Southwest	-	23	9	11
		LA Trade-Tech	38	42	43	41
		LA Subtotal	38	65	52	52
		Santiago Canyon	-	1	4	2
		OC Subtotal	-	1	4	2
Supply Subtotal/Average			38	66	56	53
0952.20	Electrical	LA Trade-Tech	135	147	150	144
		LA Subtotal	135	147	150	144
		Coastline	-	1	-	0
		Irvine	21	12	31	21
		Orange Coast	-	3	-	1
		Santiago Canyon	33	-	137	57
OC Subtotal	54	16	168	79		
Supply Subtotal/Average			189	163	318	223

TOP Code	Program	College	2020-21 Awards	2021-22 Awards	2022-23 Awards	3-Year Average
0952.60	Masonry, Tile, Cement, Lath and Plaster	Orange Coast	-	3	3	2
		OC Subtotal	-	3	3	2
Supply Subtotal/Average			-	3	3	2
0957.00	Civil and Construction Management Technology	Citrus	6	5	9	7
		LA Valley	5	5	11	7
		Mt San Antonio	13	10	17	13
		LA Subtotal	24	20	37	27
		Fullerton	7	14	17	13
		Santa Ana	-	2	1	1
		OC Subtotal	7	16	18	14
Supply Subtotal/Average			31	36	55	41
0957.20	Construction Inspection	Pasadena	20	14	18	17
		LA Subtotal	20	14	18	17
		Coastline	12	14	31	19
		Fullerton	5	10	7	7
		Saddleback	8	1	7	5
		Santiago Canyon	17	11	15	14
Supply Subtotal/Average			62	50	78	63
2102.10	Public Works	Citrus	7	13	32	17
		LA Trade-Tech	2	6	7	5
		LA Subtotal	9	19	39	22
		Santiago Canyon	18	21	19	19
		OC Subtotal	18	21	19	19
Supply Subtotal/Average			27	40	58	42
Supply Total/Average			573	485	818	625

Other Postsecondary Supply

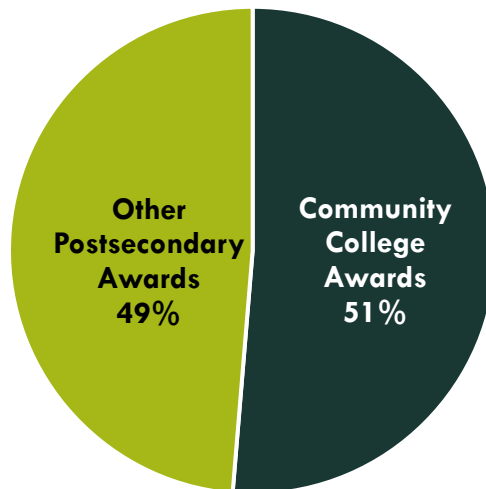
For a comprehensive regional supply analysis, it is important to consider the supply from other institutions in the region that provide training programs for construction management. Exhibit 11 shows the number of awards conferred by these institutions in relevant programs. Due to different data collection periods, the most recent data is from 2020 to 2022. Between 2020 and 2022, other postsecondary college institutions in the region conferred an average of 593 sub-baccalaureate awards. Sub-baccalaureate awards include associate degrees, postsecondary awards, and other academic awards that typically take fewer than four years to complete.

Exhibit 11: Other regional postsecondary awards, 2020-2022

CIP Code	Program	Postsecondary Institution	2019-20 Awards	2020-21 Awards	2021-22 Awards	3-Year Average
46.0302	Electrician	Baldwin Park Adult & Community Education	61	74	75	70
		Capstone College	4	23	29	19
		InterCoast Colleges-Santa Ana	35	12	9	19
		InterCoast Colleges-West Covina	86	54	84	75
		Southern California Institute of Technology	190	281	268	246
		UEI College-Huntington Park	-	-	120	40
		UEI College-West Covina	6	144	220	123
52.2001	Construction Management, General	Learnet Academy	-	1	3	1
Supply Total/Average			382	589	808	593

Exhibit 12 shows the proportion of community college awards conferred in the greater Los Angeles/Orange County region compared to the number of other postsecondary awards for the programs in this report. The majority of awards conferred in these programs are awarded by community colleges in the greater Los Angeles/Orange County region.

Exhibit 12: Percentage of community college awards compared to other postsecondary institution awards in the Los Angeles/Orange County region



APPENDIX: OCCUPATION DESCRIPTIONS

LA COE prepared this report to provide regional labor market supply and demand data related to these target occupations:

- **Construction Managers (11-9021)** Plan, direct, or coordinate, usually through subordinate supervisory personnel, activities concerned with the construction and maintenance of structures, facilities, and systems. Participate in the conceptual development of a construction project and oversee its organization, scheduling, budgeting, and implementation. Includes managers in specialized construction fields, such as carpentry or plumbing.⁹
- **Cost Estimators (13-1051)** Prepare cost estimates for product manufacturing, construction projects, or services to aid management in bidding on or determining price of product or service. May specialize according to particular service performed or type of product manufactured.¹⁰
- **First-Line Supervisors of Construction Trades and Extraction Workers (47-1011)** Directly supervise and coordinate activities of construction or extraction workers.¹¹

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DATA SOURCES

- O*NET Online
- Lightcast (formerly Emsi)
- Bureau of Labor Statistics (BLS)
- California Employment Development Department, Labor Market Information Division, OES
- California Community Colleges Chancellor's Office Management Information Systems (MIS)
- Self-Sufficiency Standard at the Center for Women's Welfare, University of Washington
- Chancellor's Office Curriculum Inventory (COCI 2.0)

Important Disclaimer: All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. Efforts have been made to qualify and validate the accuracy of the data and the reported findings; however, neither the Centers of Excellence, COE host District, nor California Community Colleges Chancellor's Office are responsible for applications or decisions made by recipient community colleges or their representatives based upon components or recommendations contained in this study.

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⁹ [Construction Managers \(bls.gov\)](#)

¹⁰ [Cost Estimators \(bls.gov\)](#)

¹¹ [First-Line Supervisors of Construction Trades and Extraction Workers \(bls.gov\)](#)