Architecture Design Occupations

Labor Market Analysis: San Diego County   **August 2025**

Summary

NEW PROGRAM RECOMMENDATION?	EVIDENCE OF A SUPPLY GAP?	AT OR ABOVE THE LIVING WAGE?	EXPECTED LEVEL OF EDUCATION
🟢 **Proceed with New Program**	☑ ☐	☑ ☐	☐ Doctorate Degree ☐ Master's Degree ☐ Bachelor's Degree ☑ Associate Degree ☐ Some College or Certificate ☐ HS Diploma or Equivalent ☐ Less Than a HS Diploma ☐ Apprenticeship

SUPPORT FOR PROGRAM MODIFICATION?	NUMBER OF INSTITUTIONS THAT PROVIDE TRAINING	NUMBER OF ANNUAL JOB OPENINGS	
☑ ☐	HIGH	MEDIUM	

The San Diego & Imperial Center of Excellence (COE) developed this brief to assist the region's community colleges with strategic planning and program development. *Architecture Design Occupations* include "Architectural and Civil Drafters," "Drafters, All Other," "Electrical and Electronics Drafters," and "Mechanical Drafters." According to available data, *Architecture Design Occupations* in San Diego County have a labor market demand of 228 annual job openings (while average demand for a single occupation in San Diego County is 289 annual job openings), and nine institutions supply 155 awards for these occupations, suggesting that there is a supply gap in the labor market. On average, entry-level wages are above the living wage. This brief recommends proceeding with developing a new program and supports a program modification because there is a supply gap in San Diego County and these occupations' entry-level wages are above the living wage.

Introduction

This report provides labor market information in San Diego County for the following occupational codes in the Standard Occupational Classification (SOC)[1] system:

- **Architectural and Civil Drafters** (SOC 17-3011): Prepare detailed drawings of architectural and structural features of buildings or drawings and topographical relief maps used in civil engineering projects, such as highways, bridges, and public works. Use knowledge of building materials, engineering practices, and mathematics to complete drawings.
- **Drafters, All Other** (SOC 17-3019): All drafters not listed separately.
- **Electrical and Electronics Drafters** (SOC 17-3012): Prepare wiring diagrams, circuit board assembly diagrams, and layout drawings used for the manufacture, installation, or repair of electrical equipment.
- **Mechanical Drafters** (SOC 17-3013): Prepare detailed working diagrams of machinery and mechanical devices, including dimensions, fastening methods, and other engineering information.

For the purpose of this report, these occupations are referred to as *Architecture Design Occupations*.

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[1] The Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating or disseminating data. https://www.bls.gov/soc/.

Projected Occupational Demand

Between 2023 and 2028, businesses in San Diego County will need to hire 228 employees annually to fill new jobs and backfill jobs due to attrition caused by turnover and retirement, for example (Exhibit 1). Most of this labor market demand comes from Architectural and Civil Drafters, which are projected to have the most annual job openings with 145 openings each year between 2023 and 2028.

Exhibit 1: Number of Jobs for *Architecture Design Occupations* (2023-2028)[2]

Occupational Title	2023 Jobs	2028 Jobs	2023 – 2028 Net Jobs Change	2023 – 2028 % Net Jobs Change	Annual Job Openings (Demand)
Architectural and Civil Drafters	1,405	1,465	60	4%	145
Mechanical Drafters	489	426	- 63	- 13%	36
Electrical and Electronics Drafters	372	378	6	2%	32
Drafters, All Other	195	177	- 18	- 9%	15
Total	2,461	2,446	- 15	- 1%	228

Earnings

According to traditional[3] labor market information (LMI), entry-level hourly earnings for *Architecture Design Occupations* range from $28.51 to $31.90 (Exhibit 2).

Exhibit 2: Hourly Earnings for *Architecture Design Occupations* in San Diego County[4]

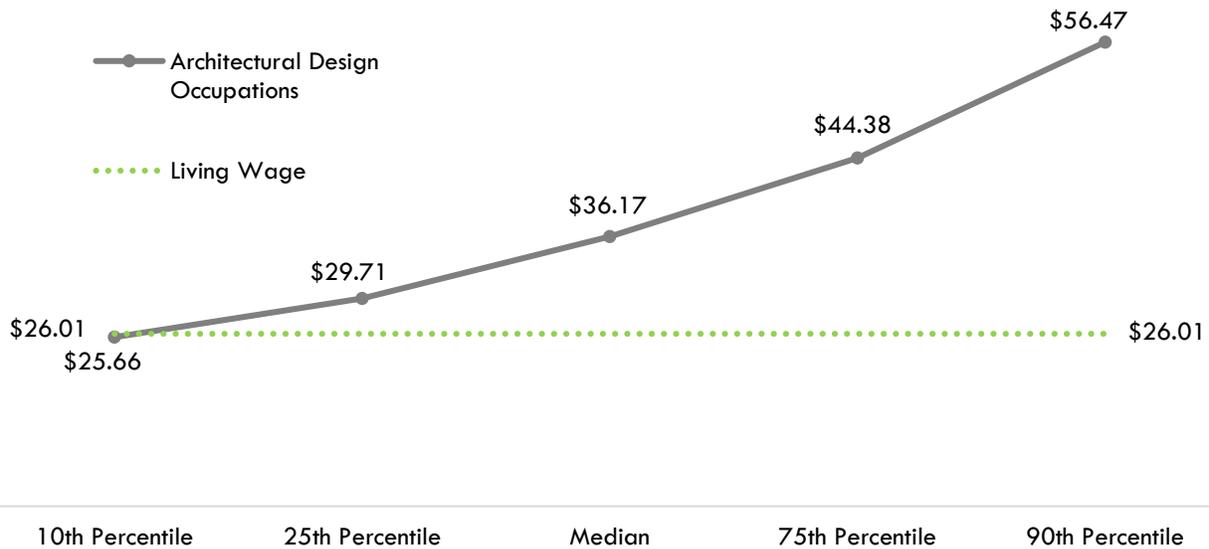| Occupational Title	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
Mechanical Drafters	$31.90	$39.50	$50.32
Architectural and Civil Drafters	$29.83	$36.62	$41.44
Drafters, All Other	$28.59	$32.94	$40.54
Electrical and Electronics Drafters	$28.51	$35.64	$45.21

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[2] Lightcast 2025.02; QCEW, Non-QCEW, Self-Employed.
[3] Traditional LMI is generally historical data captured by the U.S. Bureau of Labor Statistics (BLS) or the California Employment Development Department (EDD). It does not account for recent technological, economic, or legislative changes that may affect labor market demand and wages.
[4] Lightcast 2025.02; QCEW, Non-QCEW, Self-Employed.

On average, the entry-level hourly earnings for employed *Architecture Design Occupations* are $29.71—or $61,796.80 annual salary[5]; this is more than the living wage for a single adult in San Diego County, which is $26.01 per hour (Exhibit 3). [6]

Exhibit 3: Hourly Earnings[7] for *Architecture Design Occupations* in San Diego County[8]

In online job postings, however, employers advertised between $28 to $34 per hour between January 1, 2022 and December 30, 2024 for *Architecture Design Occupations* in San Diego County (Exhibit 4).[9] This suggests that employers in recent years may be increasing wages due to labor market forces that may not be captured in traditional LMI.

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[5] Annualized salaries assume a full-time position with 2,080 hours. Multiplying the hourly wage with 2,080 yields the annual salary.
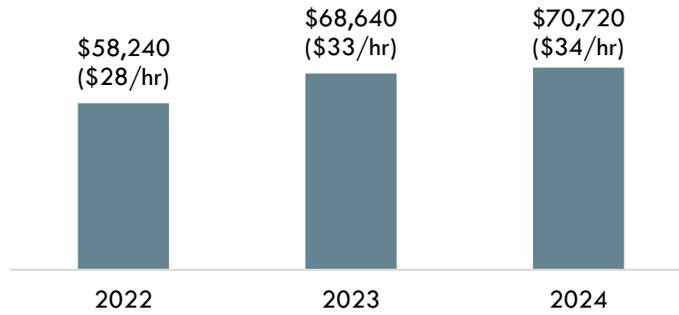[6] Center for Women's Welfare, University of Washington. (2024). The self-sufficiency standard for California 2024. selfsufficiencystandard.org/California.
[7] 10th and 25th percentiles could be considered entry-level wages, and 75th and 90th percentiles could be considered experienced wages for individuals who may have been in the occupation longer, received more training than others, etc.
[8] Lightcast 2025.02; QCEW, Non-QCEW, Self-Employed.
[9] Lightcast 2025.02; "Job Posting Analytics." 2022-2024.

Exhibit 4: Entry-Level Advertised Salaries in Online Job Postings for *Architecture Design Occupations* in San Diego County (2022-2024)

$58,240 ($28/hr)	$68,640 ($33/hr)	$70,720 ($34/hr)
2022	2023	2024

*Hourly wages are rounded to the nearest dollar amount.

Expected Level of Education

According to traditional LMI (data reported to EDD and BLS), *Architecture Design Occupations* have a national educational attainment of an associate degree (Exhibit 5).[10]

Exhibit 5: National Educational Attainment for *Architecture Design Occupations*[11]

Occupational Title	Typical Entry-Level Education
Architectural and Civil Drafters	Associate degree
Drafters, All Other	Associate degree
Electrical and Electronics Drafters	Associate degree
Mechanical Drafters	Associate degree

Online job postings between January 1, 2022 and December 31, 2024 in San Diego County had a bachelor's degree as the most requested educational requirement for *Architecture Design Occupations*; however, employers also expected the following certifications (Exhibit 6).[12]

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[10] Lightcast 2025.02; QCEW, Non-QCEW, Self-Employed.
[11] Lightcast 2025.02; QCEW, Non-QCEW, Self-Employed.
[12] Lightcast 2025.02; "Job Posting Analytics." 2022-2024.

Exhibit 6: Top Certifications for *Architecture Design Occupations*

in San Diego County in Online Job Postings (2022-2024)[13]

1. Architecture License
2. Engineer in Training
3. Security Clearance
4. LEED Accredited Professional (AP)
5. Secret Clearance
6. Professional Engineer (PE) License
7. NICET Certification (National Institute For Certification In Engineering Technologies)
8. Architect Registration Examination
9. LEED Green Associate
10. Solidworks Certification

Educational Supply

Educational supply for an occupation can be estimated by analyzing the number of awards in related Taxonomy of Programs (TOP) or Classification of Instructional Programs (CIP) codes. There are eight TOP codes and 12 CIP codes related to *Architecture Design Occupations* (Exhibit 7).

Exhibit 7: Related TOP and CIP Codes for *Architecture Design Occupations*[14]

TOP or CIP Code	TOP or CIP Program Title
TOP 0201.00	Architecture and Architectural Technology
TOP 0953.00	Drafting Technology
TOP 0953.10	Architectural Drafting
TOP 0953.20	Civil Drafting
TOP 0953.30	Electrical, Electronic, and Electro-Mechanical Drafting
TOP 0953.40	Mechanical Drafting
TOP 0953.60	Technical Illustration
TOP 1009.00	Applied Design
CIP 04.0401	Environmental Design/Architecture
CIP 04.0901	Architectural Technology/Technician
CIP 15.0101	Architectural Engineering Technology/Technician
CIP 15.1301	Drafting and Design Technology/Technician, General
CIP 15.1302	CAD/CADD Drafting and/or Design Technology/Technician
CIP 15.1303	Architectural Drafting and Architectural CAD/CADD
CIP 15.1304	Civil Drafting and Civil Engineering CAD/CADD
CIP 15.1305	Electrical/Electronics Drafting and Electrical/Electronics CAD/CADD
CIP 15.1306	Mechanical Drafting and Mechanical Drafting CAD/CADD

[13] Lightcast 2025.02; "Job Posting Analytics." 2022-2024.
[14] This brief uses a conservative estimate of program supply and only calculates awards from the TOP code listed in Exhibit 7.

TOP or CIP Code	TOP or CIP Program Title
CIP 50.0401	Design and Visual Communications, General
CIP 50.0404	Industrial and Product Design
CIP 50.0410	Illustration

According to TOP data, six community colleges supply the region with awards for these occupations: Cuyamaca College, MiraCosta College, Palomar College, San Diego City College, San Diego Mesa College, and Southwestern College. According to CIP data, three non-community-college institutions supply the region with awards: Escondido Adult School, Newschool of Architecture and Design, and University of California-San Diego (Exhibit 8).

Exhibit 8: Number of Awards (Certificates and Degrees) Conferred by Postsecondary Institutions (Program Year 2020-21 Through Program Year 2023-24 Average)

TOP6 or CIP Code	TOP6 or CIP Program Title	3-Yr Annual Average CC Awards (PY21-22 to PY23-24)	Other Educational Institutions 3-Yr Annual Average Awards (PY20-21 to PY22-23)	Total Average Supply (PY20-21 to PY22-23)
0201.00	Architecture and Architectural Technology	**42**	**0**	**42**
	MiraCosta	**9**	**0**	
	• Associate degree	4	0	
	• Certificate 30 < 60 units	5	0	
	Palomar	**13**	**0**	
	• Associate degree	6	0	
	• Certificate 16 < 30 units	7	0	
	San Diego Mesa	**8**	**0**	
	• Associate degree	8	0	
	Southwestern	**12**	**0**	
	• Associate degree	10	0	
	• Certificate 30 < 60 units	2	0	
0953.00	Drafting Technology	**47**	**0**	**47**

TOP6 or CIP Code	TOP6 or CIP Program Title	3-Yr Annual Average CC Awards (PY21-22 to PY23-24)	Other Educational Institutions 3-Yr Annual Average Awards (PY20-21 to PY22-23)	Total Average Supply (PY20-21 to PY22-23)
	MiraCosta	**16**	**0**	
	• Associate degree	5	0	
	• Certificate 30 < 60 units	1	0	
	• Certificate 16 < 30 units	5	0	
	• Certificate 6 < 18 units	5	0	
	Palomar	**24**	**0**	
	• Associate degree	6	0	
	• Certificate 16 < 30 units	10	0	
	• Certificate 8 < 16 units	8	0	
	San Diego City	**0**	**0**	
	• Certificate 16 < 30 units	0	0	
	Southwestern	**7**	**0**	
	• Associate degree	4	0	
	• Certificate 16 < 30 units	2	0	
	• Certificate 6 < 18 units	1	0	
0953.10	Architectural Drafting	**14**	**0**	**14**
	Cuyamaca	**4**	**0**	
	• Associate degree	2	0	
	• Certificate 16 < 30 units	2	0	
	Palomar	**10**	**0**	
	• Associate degree	4	0	
	• Certificate 16 < 30 units	6	0	
0953.30	Electrical, Electronic, and Electro-Mechanical Drafting	**3**	**0**	**3**
	Palomar	**3**	**0**	
	• Associate degree	1	0	
	• Certificate 16 < 30 units	2	0	

TOP6 or CIP Code	TOP6 or CIP Program Title	3-Yr Annual Average CC Awards (PY21-22 to PY23-24)	Other Educational Institutions 3-Yr Annual Average Awards (PY20-21 to PY22-23)	Total Average Supply (PY20-21 to PY22-23)
0953.40	Mechanical Drafting	**18**	**0**	**18**
	Cuyamaca	**5**	**0**	
	• Associate degree	2	0	
	• Certificate 16 < 30 units	3	0	
	MiraCosta	**5**	**0**	
	• Associate degree	2	0	
	• Certificate 16 < 30 units	2	0	
	• Certificate 6 < 18 units	1	0	
	Palomar	**8**	**0**	
	• Certificate 8 < 16 units	8	0	
1009.00	Applied Design	**3**	**0**	**3**
	MiraCosta	**3**	**0**	
	• Certificate 6 < 18 units	3	0	
	Palomar	**0**	**0**	
	• Associate degree	0	0	
15.1302	CAD/CADD Drafting and/or Design Technology/Technician	**0**	**7**	**7**
	Escondido Adult School	**0**	**7**	
	• Certificates < 1 year	0	7	
50.0401	Design and Visual Communications, General	**0**	**16**	**16**
	University of California-San Diego	**0**	**16**	
	• Bachelor's degree	0	16	
50.0404	Industrial and Product Design	**0**	**5**	**5**
	Newschool of Architecture and Design	**0**	**5**	
	• Bachelor's degree	0	5	
			Total	**155**

Demand vs. Supply

Comparing labor demand with labor supply[15] suggests that there is a supply gap for these occupations in San Diego County, with 228 annual openings and 155 awards. Comparatively, there are 2,116 annual openings in California and 2,859 awards, suggesting that there is an oversupply across the state (Exhibit 9).[16]

Exhibit 9: Labor Demand (Annual Openings) Compared with Labor Supply (Average Annual Awards)

	Demand (Annual Openings)	Supply (Annual Awards)	Supply Gap or Oversupply
San Diego	228	155	**73**
California	2,116	2,859	**- 743**

Please note: This is a basic analysis of supply and demand of labor. The data does not include workers currently in the labor force who could fill these positions or workers who are not captured by publicly available data. This data should be used to discuss the potential gaps or oversupply of workers; however, it should not be the only basis for determining whether or not a program should be developed.
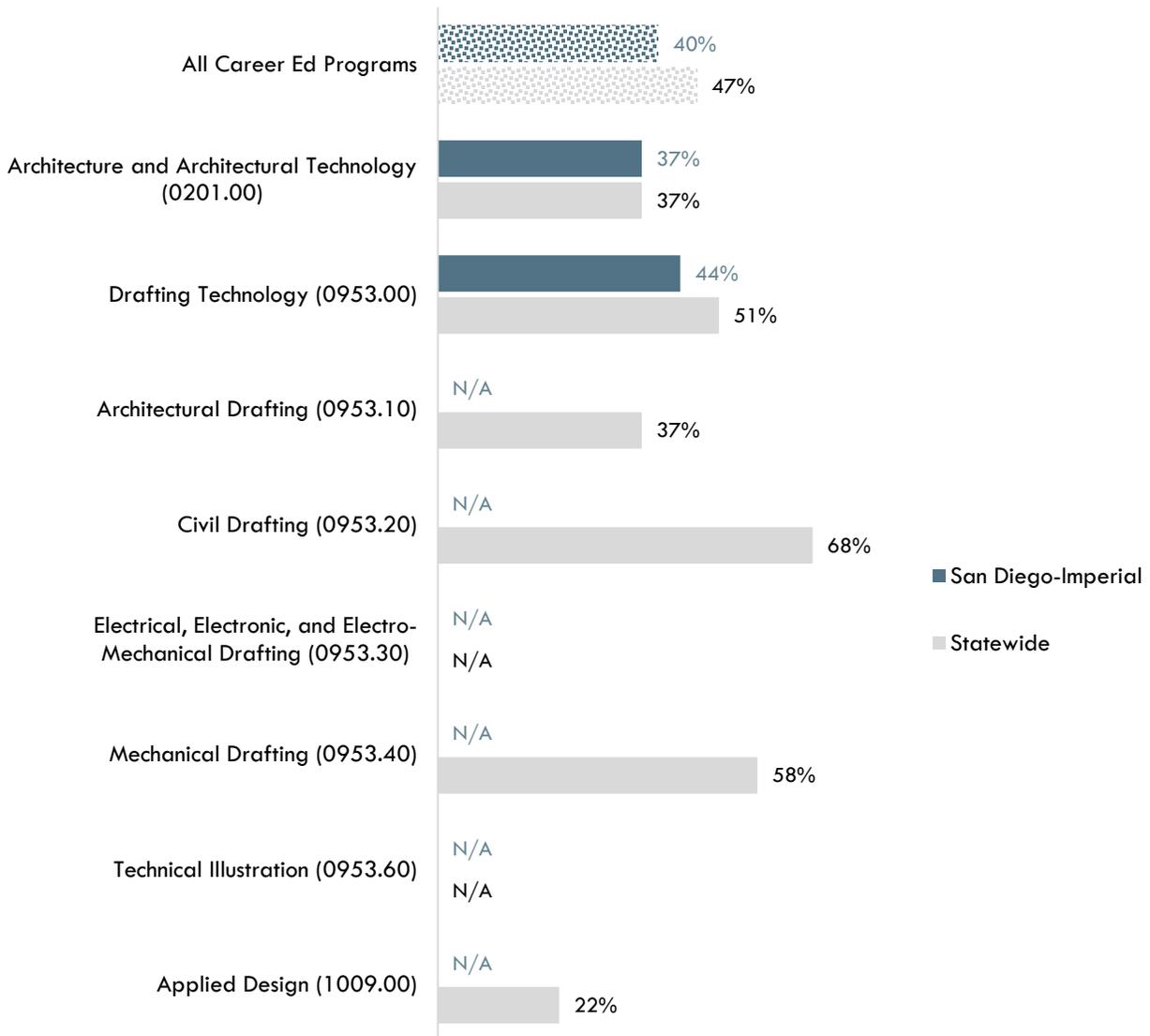
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[15] Labor supply can be found from two different sources: Lightcast or the California Community Colleges Chancellor's Office MIS Data Mart. Lightcast uses CIP codes while MIS uses TOP codes. Different coding systems result in differences in the supply numbers.
[16] "Supply and Demand," Centers of Excellence Student Outcomes, coeccc.net/our-resources.

Student Outcomes and Regional Comparisons

According to the California Community Colleges DataVista, 37 to 44% of students in the San Diego-Imperial region earned a living wage after completing a program related to *Architecture Design Occupations,* compared to 22 to 68% statewide and 47% of students in Career Education programs in general across the state (Exhibit 10).[17]

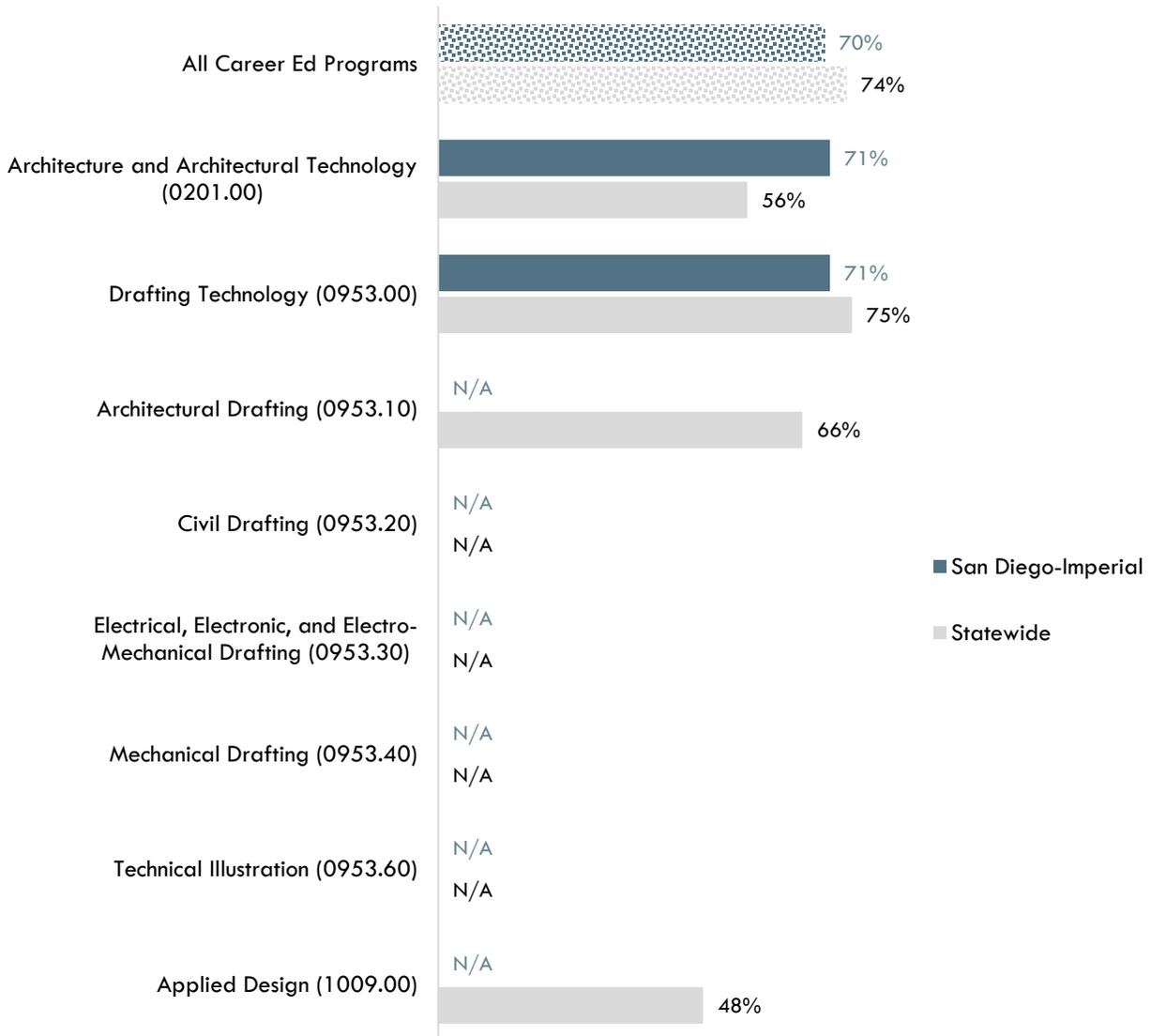**Exhibit 10: Percentage of Students Who Earned a Living Wage by Program, PY2022-23[18]**

Legend: San Diego-Imperial, Statewide

Program	San Diego-Imperial	Statewide
All Career Ed Programs	40%	47%
Architecture and Architectural Technology (0201.00)	37%	37%
Drafting Technology (0953.00)	44%	51%
Architectural Drafting (0953.10)	N/A	37%
Civil Drafting (0953.20)	N/A	68%
Electrical, Electronic, and Electro-Mechanical Drafting (0953.30)	N/A	N/A
Mechanical Drafting (0953.40)	N/A	58%
Technical Illustration (0953.60)	N/A	N/A
Applied Design (1009.00)	N/A	22%

"N/A" indicates insufficient data

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[17] DataVista, California Community Colleges, datavista.ccccco.edu/.
[18] Most recent year with available data is Program Year 2022-23. Among completers and skills builders who exited, the percentage of students who attained a living wage.

According to the California Community Colleges DataVista, 71% of students in the San Diego-Imperial region obtained a job closely related to their field of study after completing a program related to *Architecture Design Occupations,* compared to 48 to 75% statewide and 74% of students in Career Education programs in general across the state (Exhibit 11).[19]

Exhibit 11: Percentage of Students in a Job Closely Related to Field of Study by Program, PY2021-22[20]

"N/A" indicates insufficient data

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[19] DataVista, California Community Colleges, datavista.cccco.edu/.
[20] Most recent year with available data is Program Year 2021-22. Percentage of Students in a Job Closely Related to Field of Study: Among students who responded to the CTEOS, the percentage reporting employment in the same or similar field as their program of study.

Employers

Between January 1, 2022 and December 31, 2024, the top five employers in San Diego County for *Architecture Design Occupations* were Actalent, GPAC, NV5, Michael Baker International, and Stantec based on online job postings (Exhibit 12).

Exhibit 12: Top Employers for *Architecture Design Occupations* in San Diego County[21]

Top Employers	
• Actalent	• General Atomics
• GPAC	• Saiful Bouquet Structural Engineers
• NV5	• CDM Smith
• Michael Baker International	• Gensler
• Stantec	• CyberCoders

Skills

Exhibit 13 lists the top specialized, soft, and software skills that appeared in online job postings between January 1, 2022 and December 31, 2024.

Exhibit 13: Top Skills for *Architecture Design Occupations* in San Diego County[22]

Specialized Skills	Soft Skills	Software Skills
• Project Management	• Communication	• AutoCAD
• Computer-Aided Design	• Detail Oriented	• Autodesk Revit
• Construction	• Coordinating	• Microsoft Office
• 3D Modeling	• Problem Solving	• AutoCAD Civil 3D
• Building Information Modeling	• Planning	• SketchUp
• Architectural Drawing	• Management	• Microsoft Excel
• Civil Engineering	• Research	
• Construction Management	• Writing	
	• Presentations	
	• Organizational Skills	
	• Verbal Communication Skills	
	• Leadership	

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[21] Lightcast 2025.02; "Job Posting Analytics." 2022-2024.
[22] Lightcast 2025.02; "Job Posting Analytics." 2022-2024.

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