



# Labor Market Analysis for Program Recommendation

## Architecture Occupations

### Santa Rosa Junior College

Prepared by the Bay Region Center of Excellence for Labor Market Research

October 2024

#### Recommendation

Based on all available data, there appears to be an “undersupply” of Architecture workers compared to the demand for this cluster of occupations in the Bay Region and in the North Bay Sub-Region (Marin, Napa, Solano, Sonoma counties). There is a projected annual gap of about 1,915 students in the Bay Region and 161 students in the North Bay Sub-Region.

#### Introduction

This report provides student outcomes data on employment and earnings for TOP 0201.00 - Architecture and Architectural Technology programs in the state and region. It is recommended that these data be reviewed to better understand how outcomes for students taking courses on this TOP code compare to potentially similar programs at colleges in the state and region, as well as to outcomes across all CTE programs at Santa Rosa Junior College and in the region.

This report profiles Architecture Occupations in the 12 county Bay Region and in the North Bay Sub-Region for program recommendation at Santa Rosa Junior College.

- **Architectural and Engineering Managers (11-9041):** Plan, direct, or coordinate activities in such fields as architecture and engineering or research and development in these fields.  
Entry-Level Educational Requirement: Bachelor’s degree  
Training Requirement: None  
Percentage of Community College Award Holders or Some Postsecondary Coursework: 12%
- **Architects, Except Landscape and Naval (17-1011):** Plan and design structures, such as private residences, office buildings, theaters, factories, and other structural property.  
Entry-Level Educational Requirement: Bachelor’s degree  
Training Requirement: Internship/residency  
Percentage of Community College Award Holders or Some Postsecondary Coursework: 6%
- **Architectural and Civil Drafters (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.  
Entry-Level Educational Requirement: Associate’s degree  
Training Requirement: None  
Percentage of Community College Award Holders or Some Postsecondary Coursework: 58%
- **Civil Engineering Technologists and Technicians (17-3022):** Apply theory and principles of civil engineering in planning, designing, and overseeing construction and maintenance of structures and facilities under the

direction of engineering staff or physical scientists.

Entry-Level Educational Requirement: Associate's degree

Training Requirement: None

Percentage of Community College Award Holders or Some Postsecondary Coursework: 50%

## Occupational Demand

**Table 1. Employment Outlook for Architecture Occupations in the Bay Region**

Occupation	2023 Jobs	2028 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Earning	Median Hourly Wage
Architectural and Engineering Managers	13,531	14,301	770	6%	5,115	1,023	\$87	\$104
Architects, Except Landscape and Naval	5,809	6,003	194	3%	2,060	412	\$40	\$55
Architectural and Civil Drafters	3,594	3,700	106	3%	1,811	362	\$31	\$37
Civil Engineering Technologists and Technicians	1,827	1,914	86	5%	934	187	\$34	\$40
<b>Total</b>	<b>24,761</b>	<b>25,918</b>	<b>1,157</b>	<b>5%</b>	<b>9,920</b>	<b>1,984</b>	<b>\$64</b>	<b>\$78</b>

Source: Lightcast 2024.3

The Bay Region includes: Alameda, Contra Costa, Marin, Monterey, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano and Sonoma Counties

**Table 2. Employment Outlook for Architecture Occupations in the North Bay Sub-Region**

Occupation	2023 Jobs	2028 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Earning	Median Hourly Wage
Architectural and Engineering Managers	652	686	34	5%	241	48	\$69	\$84
Architects, Except Landscape and Naval	652	668	15	2%	231	46	\$35	\$48
Architectural and Civil Drafters	425	435	11	3%	213	43	\$29	\$36
Civil Engineering Technologists and Technicians	248	263	16	6%	131	26	\$31	\$37
<b>Total</b>	<b>1,977</b>	<b>2,052</b>	<b>75</b>	<b>4%</b>	<b>816</b>	<b>163</b>	<b>\$44</b>	<b>\$56</b>

Source: Lightcast 2024.3

North Bay Sub-Region includes: Marin, Napa, Solano, Sonoma Counties

## Job Postings in the Bay Region and North Bay Sub-Region

**Table 3. Number of Job Postings by Occupation for the last 12 months**

Occupation	Bay Region	North Bay
Architectural and Engineering Managers	4,426	175
Architects, Except Landscape and Naval	592	16
Architectural and Civil Drafters	579	39
Civil Engineering Technologists and Technicians	93	26

Source: Lightcast 2024.3; "Job Posting Analytics." Oct. 2023 - Sep. 2024

**Table 4a. Top Job Titles in Job Postings for Architecture Occupations in the Bay Region**

Title	Bay	Title	Bay
Engineering Managers	330	Vice Presidents of Engineering	77
Engineering Program Managers	311	Program Managers	66
Directors of Engineering	215	Engineering Project Leads	60
Project Architects	115	Principal Engineers	45
Designers	112	Heads of Engineering	40
Chief Engineers	106	Heavy Civil Project Managers	33
Architectural Designers	104	CPU Architects	32
Architects	81	Design Managers	27
Electrical Project Managers	79	Engineering Directors	26

Source: Lightcast 2024.3; "Job Posting Analytics." Oct. 2023 - Sep. 2024

**Table 4b. Top Job Titles in Job Posting for Architecture Occupations in the North Bay Sub-Region**

Title	North Bay	Title	North Bay
Directors of Engineering	27	Vocational Job Coaches	5
Engineering Managers	17	Architectural Designers	4
Civil Engineering Technicians	12	Architecture Designers	4
Chief Engineers	8	Assistant Directors of Utilities	4
Architectural Drafters	6	Civil Project Engineers	4
Electrical Project Managers	6	Engineering Coordinators	4
Heavy Civil Project Managers	6	Mechanical Engineering Managers	4
Engineering Project Leads	5	Piping Designers	4
Program Managers	5	Assistants/Associates	3

Source: Lightcast 2024.3; "Job Posting Analytics." Oct. 2023 - Sep. 2024

## Industry Concentration

**Table 5. Industries Hiring for Architecture Occupations in the Bay Region**

Industry - 6 Digit NAICS (No. American Industry Classification) Codes	Jobs in Industry (2023)	Jobs in Industry (2028)	% Change (2023-28)	% Occupation Group in Industry (2023)
Engineering Services	4,736	4,872	3%	19%
Architectural Services	4,455	4,624	4%	18%
Semiconductor and Related Device Manufacturing	1,142	1,202	5%	5%

Industry - 6 Digit NAICS (No. American Industry Classification) Codes	Jobs in Industry (2023)	Jobs in Industry (2028)	% Change (2023-28)	% Occupation Group in Industry (2023)
Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)	1,122	1,246	11%	5%
Electronic Computer Manufacturing	935	1,036	11%	4%
Landscape Architectural Services	900	865	-4%	4%
Local Government, Excluding Education and Hospitals	736	782	6%	3%
Research and Development in Biotechnology (except Nanobiotechnology)	641	752	17%	3%
Surveying and Mapping (except Geophysical) Services	561	613	9%	2%
Building Inspection Services	517	609	18%	2%

Source: Lightcast 2024.3

**Table 6. Top Employers Posting Architecture Occupations in the Bay Region and the North Bay Sub-Region**

Employer	Bay	Employer	North Bay
Apple	499	Restoration Hardware	8
Meta	123	GPAC	7
GPAC	94	Raytheon Technologies	7
Applied Materials	59	Hogan Land Services	6
Google	49	Marin Municipal Water District	5
CyberCoders	44	Santa Rosa Junior College	5

Source: Lightcast 2024.3; "Job Posting Analytics." Oct. 2023 - Sep. 2024

## Educational Supply

There are seven community colleges in the Bay Region issuing 69 awards on average annually (last 3 years ending 2021-23) on TOP 0201.00 - Architecture and Architectural Technology. In the North Bay Sub-Region, there is one community college that issued two awards on average annually (last 3 years) on this TOP code.

**Table 7. Community College Awards on TOP 0201.00 - Architecture and Architectural Technology in the Bay Region**

College	Subregion	Associate Degree	High unit Certificate	Low unit Certificate	Total
Chabot	East Bay	7	5	0	12
Diablo Valley	East Bay	17	0	9	26
Laney	East Bay	3	1	0	4
Marin	North Bay	2	0	0	2
San Francisco	Mid-Peninsula	8	0	2	10
San Mateo	Mid-Peninsula	5	0	0	5
West Valley	Silicon Valley	7	2	1	10
<b>Total</b>	<b>-</b>	<b>49</b>	<b>8</b>	<b>12</b>	<b>69</b>

College	Subregion	Associate Degree	High unit Certificate	Low unit Certificate	Total
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Source: Data Mart

Note: The annual average for awards is 2020-21 to 2022-23.

## Gap Analysis

Based on the data included in this report, there is a labor market gap in the Bay Region with 1,984 annual openings for the Architecture occupational cluster and 69 annual (3-year average) awards for an annual undersupply of 1,915 students. In the North Bay Sub-Region, there is also a gap with 163 annual openings and 2 annual (3-year average) awards for an annual undersupply of 161 students.

## Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0201.00 - Architecture and Architectural Technology**

Metric Outcomes	Bay All CTE Program	Santa Rosa Junior College All CTE Program	State 0201.00	Bay 0201.00	North Bay 0201.00	Santa Rosa Junior College 0201.00
Students with a Job Closely Related to Their Field of Study	74%	76%	67%	70%	100%	100%
Median Annual Earnings for SWP Exiting Students	\$53,090	\$46,746	\$37,118	\$50,077	\$35,267	\$41,700
Median Change in Earnings for SWP Exiting Students	24%	31%	30%	29%	41%	49%
Exiting Students Who Attained the Living Wage	54%	61%	47%	47%	49%	56%

Source: Launchboard Strong Workforce Program Median of 2018 to 2021.

## Skills, Certifications and Education

**Table 9. Top Skills in Job Postings for Architecture Occupations in the Bay Region**

Skill	Posting	Skill	Posting
Project Management	1,778	Machine Learning	475
Engineering Management	916	Product Management	440
Computer Science	849	Software Engineering	414
New Product Development	773	Artificial Intelligence	409
Construction	660	Python (Programming Language)	408
Autodesk Revit	578	Mechanical Engineering	404
AutoCAD	538	Construction Management	398
Marketing	522	Continuous Improvement Process	397

Skill	Posting	Skill	Posting
Electrical Engineering	504	Automation	385
Scalability	499	Workflow Management	346

Source: Lightcast 2024.3; "Job Posting Analytics." Oct. 2023 - Sep. 2024

**Table 10. Certifications in Job Postings for Architecture Occupations in the Bay Region**

Certification	Posting
Project Management Professional Certification	124
American Production and Inventory Control Society (APICS) Certification	15
Project Management Certification	15
Product Certification	14

Source: Lightcast 2024.3; "Job Posting Analytics." Oct. 2023 - Sep. 2024

**Table 11. Education Requirements for Architecture Occupations in the Bay Region**

Education Level	Job Postings	% of Total
High school or GED	170	3%
other	179	3%
Bachelor's degree & higher	5,493	94%

Source: Lightcast 2024.3; "Job Posting Analytics." Oct. 2023 - Sep. 2024

Note: 33% of records have been excluded because they do not include a degree level. As a result, the chart above may not be representative of the full sample.

## Methodology

Occupations for this report were identified by use of job descriptions and skills listed in O\*Net. Labor demand data is sourced from Lightcast occupation and job postings data. Educational supply and student outcomes data is retrieved from multiple sources, including CCCCO Data Mart and CTE Launchboard.

## Sources

O\*Net Online  
 Lightcast  
 CTE LaunchBoard [www.calpassplus.org](http://www.calpassplus.org)  
 Launchboard  
 Statewide CTE Outcomes Survey  
 Employment Development Department Unemployment Insurance Dataset  
 Living Insight Center for Community Economic Development  
 Chancellor's Office MIS system

## Contacts

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