** Architectural Drafters**

**Labor Market Information Report**

**Napa Valley College**

Prepared by the San Francisco Bay Center of Excellence

for Labor Market Research

February 2019

# Recommendation

Based on all available data, there appears to be an undersupply of Architectural Drafters compared to the demand for this occupation in the Bay region and in the North Bay sub-region (Marin, Napa, Solano and Sonoma Counties). The gap is about 460 students annually in the Bay region and 57 students annually in the North Bay sub-region.

This report also provides student outcomes data on employment and earnings for programs on TOP 0953.10 - Architectural Drafting in the state and region. It is recommended that this 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 Napa Valley College and in the region.

# Introduction

This report profiles Architectural Drafters in the 12 county Bay region and in the North Bay sub-region for a proposed new program at Napa Valley College. Labor market information (LMI) from EMSI is not available at the eight-digit SOC Code level for Architectural Drafters (17-3011.01), therefore the data shown in Tables 1 and 2 is for Architectural and Civil Drafters - SOC 17-301, at the six digit SOC level and likely overstates demand for Architectural Drafters. Burning Glass job postings data is available for Architectural Drafters and is included in Tables 3, 4, 6, 9, and 10 of this report.

|  |
| --- |
| * **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. |
| *Entry-Level Educational Requirement: Associate's degree* |
| *Training Requirement: None* |
| *Percentage of Community College Award Holders or Some Postsecondary Coursework: 61%* |

# Occupational Demand

**Table 1. Employment Outlook for Architectural Drafters in Bay Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation | 2017 Jobs | 2022 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Architectural and Civil Drafters | 4,596 | 4,946 | 349 | 8% | 2,354 | 471 | $21.52 | $29.19 |

*Source: EMSI 2018.4*

**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 Architectural Drafters in North Bay Sub-Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation | 2017 Jobs | 2022 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Architectural and Civil Drafters | 607 | 625 | 18 | 3% | 283 | 57 | $20.47 | $27.51 |

*Source: EMSI 2018.4*

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

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

**Table 3. Number of Job Postings by Occupation for latest 12 months (Nov 2017 - Oct 2018)**

|  |  |  |
| --- | --- | --- |
| Occupation | Bay Region | North Bay |
| Architectural Drafters (17-3011.01) | 52 | 10 |

*Source: Burning Glass*

**Table 4. Top Job Titles for Architectural Drafters for latest 12 months (Nov 2017 - Oct 2018)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Common Title | Bay | North Bay | Common Title | Bay | North Bay |
| Autocad Draughter | 24 | 8 | Architectural Technician | 1 |  |
| Architectural Draftsman | 5 | 1 | Autocad Drafter | 1 |  |
| Cad Draughter | 5 |  | Entry Landscape Draftsman | 1 | 1 |
| Truss Designer | 5 |  | Junior Architect/Draftsman | 1 |  |
| Cad Drafter | 4 |  | Must Build A Truss | 1 |  |
| Computer Aided Drafting / Design ( Cad ) Drafting Technologist | 2 |  | Revit Architect/Technician | 1 |  |
| Active & Energetic Teen Supervision | 1 |  |  |  |  |

*Source: Burning Glass*

# Industry Concentration

**Table 5. Industries hiring Architectural Drafters in Bay Region**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Industry – 6 Digit NAICS (No. American Industry Classification) Codes | Jobs in Industry (2017) | Jobs in Industry (2022) | % Change (2017-22) | % in Industry (2017) |
| Architectural Services (541310) | 1,492 | 1,513 | 10% | 32.6% |
| Engineering Services (541330) | 1,394 | 1,401 | 9% | 30.2% |
| Landscape Architectural Services (541320) | 303 | 307 | (5%) | 6.6% |
| Surveying and Mapping (except Geophysical) Services (541370) | 171 | 174 | 12% | 3.8% |
| Building Inspection Services (541350) | 117 | 118 | 9% | 2.5% |
| Commercial and Institutional Building Construction (236220) | 87 | 89 | 17% | 1.9% |
| Residential Remodelers (236118) | 83 | 85 | 11% | 1.8% |
| New Single-Family Housing Construction (except For-Sale Builders) (236115) | 78 | 78 | 1% | 1.7% |
| Local Government, Excluding Education and Hospitals (903999) | 68 | 68 | 6% | 1.5% |
| Plumbing, Heating, and Air-Conditioning Contractors (238220) | 56 | 56 | 9% | 1.2% |

*Source: EMSI 2018.4*

**Table 6. Top Employers Posting Jobs for Architectural Drafters in Bay Region and North Bay Sub-Region (Nov 2017 - Oct 2018)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Employer | Bay | Employer | Bay | Employer | North Bay |
| Peloros | 4 | Healthy Buildings Incorporated | 1 | Integrated Design Studio Inc | 1 |
| Nancy Van Natta Associates | 3 | Infiniti | 1 |  |  |
| Pivotal Retail Group | 3 | Integrated Design Studio Incorporated | 1 |  |  |
| Salas O'brien | 2 | Mh Architects | 1 |  |  |
| Sandia Corporation | 2 | Must Build A Truss | 1 |  |  |
| Healthy Buildings Inc | 1 | Oculus Architects Inc | 1 |  |  |
| Adler Architecture | 1 | Raker Architects Llp | 1 |  |  |
| Bay Alarm | 1 | Realtime Ornamental Iron Inc | 1 |  |  |
| Building Component Supply Inc | 1 | San Francisco Bay Area Rapid Transit District | 1 |  |  |
| Daniel M Swain, Architect Aia | 1 | Tds Architects | 1 |  |  |

*Source: Burning Glass*

# Educational Supply

There are two community colleges in the Bay Region issuing 11 awards annually on TOP 0953.10 - Architectural Drafting. There are no colleges in the North Bay sub-region issuing awards.

**Table 7. Awards on TOP 0953.10 - Architectural Drafting in the Bay Region**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| College | Sub-Region | Headcount | Associates | Certificates | Total |
| **Deanza** | Silicon Valley |  |  |  |  |
| **Evergreen** | Silicon Valley | 24 |  |  |  |
| **Hartnell** | Santa Cruz & Monterey |  |  | 3 | 3 |
| **Marin** | North Bay | 40 |  |  |  |
| **San Francisco** | Mid-Peninsula | n/a |  | 8 | 8 |
| **San Jose City** | Silicon Valley | 12 |  |  |  |
| **Total Bay Region** | | **76** | **0** | **11** | **11** |
| **Total North Bay Sub-Region** | | **40** | **0** | **0** | **0** |

# *Source: IPEDS, Data Mart and Launchboard*

NOTE: Headcount of students who took one or more courses is for 2016-17. The annual average for awards is 2014-17 unless there are only awards in 2016-17. The annual average for other postsecondary is for 2013-16.

# Gap Analysis

Based on the data included in this report, there is a labor market gap in the Bay region with 471 annual openings for Architectural Drafters and 11 annual awards for an annual undersupply of 460 students. In the North Bay sub-region, there is also a gap with 57 annual openings and no annual awards for an annual undersupply of 57 students.

# Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0953.10 - Architectural Drafting**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 2015-16 | Bay  (All CTE Programs) | Napa Valley College (All CTE Programs) | State (TOP 0953.10) | Bay  (TOP 0953.10) | North Bay (TOP 0953.10) | Napa Valley College (TOP 0953.10) |
| % Employed Four Quarters After Exit | 75% | 82% | 60% | 63% | n/a | n/a |
| Median Quarterly Earnings Two Quarters After Exit | $13,996 | $10,923 | $9,362 | $14,239 | n/a | n/a |
| Median % Change in Earnings | 40% | 77% | 71% | n/a | n/a | n/a |
| % of Students Earning a Living Wage | 63% | 65% | 59% | n/a | n/a | n/a |

*Source: Launchboard Pipeline (version available on 11/9/18)*

# Skills and Education

**Table 9. Top Skills for Architectural Drafters in Bay Region (Nov 2017 - Oct 2018)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Skill | Postings | Skill | Postings | Skill | Postings |
| AutoCAD | 41 | Bill of Materials | 5 | Adobe Indesign | 3 |
| Building Design | 12 | Computer Aided Drafting/Design (CAD) | 5 | Calculation | 3 |
| Revit | 10 | 3D Modeling / Design | 4 | Customer Service | 3 |
| SketchUp | 8 | Architectural Design | 4 | Floor Plans | 3 |
| Interior Design | 7 | Building Codes | 4 | Industrial Design | 3 |
| Shop Drawings | 7 | Quality Assurance and Control | 4 | Industrial Engineering Industry Expertise | 3 |
| Adobe Photoshop | 6 | Space Planning | 4 | Interior Architecture | 3 |
| Design Software | 6 | Technical Drawings | 4 | Prepare Working Drawings | 3 |
| Project Management | 6 | Adobe Acrobat | 3 | Schematic Design | 3 |
| Architectural Drafting | 5 | Adobe Illustrator | 3 | Adobe Creative Suite | 2 |

*Source: Burning Glass*

**Table 10. Education Requirements for Architectural Drafters in Bay Region**

Note: 58% of records have been excluded because they do not include a degree level. As a result, the chart below may not be representative of the full sample.

|  |  |
| --- | --- |
| Education (minimum advertised) | Latest 12 Mos. Postings |
| High school or vocational training | 2 (9%) |
| Associate Degree | 3 (14%) |
| Bachelor’s Degree or Higher | 17 (77%) |

*Source: Burning Glass*

# Methodology

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

# Sources

O\*Net Online

Labor Insight/Jobs (Burning Glass)

Economic Modeling Specialists International (EMSI)

CTE LaunchBoard [www.calpassplus.org/Launchboard/](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

For more information, please contact:

* Doreen O’Donovan, Data Research Analyst, for Bay Area Community College Consortium (BACCC) and Centers of Excellence (CoE), [doreen@baccc.net](mailto:doreen@baccc.net) or (831) 479-6481
* John Carrese, Director, San Francisco Bay Center of Excellence for Labor Market Research, [jcarrese@ccsf.edu](mailto:jcarrese@ccsf.edu) or (415) 267-6544