**Construction Management Occupations**

**Labor Market Information Report**

**Gavilan College**

Prepared by the San Francisco Bay Center of Excellence

for Labor Market Research

May 2020

# Recommendation

Based on all available data, there appears to be an undersupply of Construction Management workers compared to the demand for this cluster of occupations in the Bay region and in the SC-Monterey sub-region (Monterey, San Benito, and Santa Cruz Counties). There is a projected annual gap of about 6,003 students in the Bay region and 308 students in the SC-Monterey Sub-Region.

This report also provides student outcomes data on employment and earnings for programs on TOP 0957.00 - Civil and Construction Management Technology 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 Gavilan College and in the region.

# Introduction

This report profiles Construction Management Occupations in the 12 county Bay region and in the SC-Monterey sub-region for a proposed new program at Gavilan College.

|  |
| --- |
| * **Cost Estimators (SOC 13-1051):** Prepare cost estimatesfor 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. |
| Entry-Level Educational Requirement: Bachelor's degree |
| Training Requirement: Moderate-term *on-the-job training* |
| Percentage of Community College Award Holders or Some Postsecondary Coursework: 39% |
| * **Construction Managers (SOC 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. |
| Entry-Level Educational Requirement: Bachelor's *degree* |
| Training Requirement: Moderate-term *on-the-job training* |
| Percentage of Community College Award Holders or Some Postsecondary Coursework: 32*%* |
| * **First-Line Supervisors of Construction Trades and Extraction Workers (SOC 47-1011):** Directly supervise and coordinate activities of construction or extraction workers. |
| Entry-Level Educational Requirement: High *school diploma or equivalent* |
| Training Requirement: None |
| Percentage of Community College Award Holders or Some Postsecondary Coursework: 32*%* |
| * **Production, Planning, and Expediting Clerks (SOC 43-5061):** Coordinate and expedite the flow of work and materials within or between departments of an establishment according to production schedule. Duties include reviewing and distributing production, work, and shipment schedules; conferring with department supervisors to determine progress of work and completion dates; and compiling reports on progress of work, inventory levels, costs, and production problems. Excludes "Weighers, Measurers, Checkers, and Samplers, Recordkeeping" (43-5111). |
| Entry-Level Educational Requirement: High *school diploma or equivalent* |
| Training Requirement: Moderate-term *on-the-job training* |
| Percentage of Community College Award Holders or Some Postsecondary Coursework: 40*%* |
| * **Construction and Building Inspectors (SOC 47-4011):** Inspect structures using engineering skills to determine structural soundness and compliance with specifications, building codes, and other regulations. Inspections may be general in nature or may be limited to a specific area, such as electrical systems or plumbing. |
| Entry-Level Educational Requirement: High *school diploma or equivalent* |
| Training Requirement: Moderate-term *on-the-job training* |
| Percentage of Community College Award Holders or Some Postsecondary Coursework: 45*%* |

# Occupational Demand

**Table 1. Employment Outlook for Construction Management Occupations in Bay Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation | 2019 Jobs | 2024 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 25% Hourly Wage | Median Hourly Wage |
| Cost Estimators | 8,349 | 9,003 | 654 | 8% | 4,949 | 990 | $29.16 | $39.30 |
| Construction Managers | 13,269 | 14,361 | 1,092 | 8% | 6,090 | 1,218 | $31.52 | $49.74 |
| First-Line Supervisors of Construction Trades and Extraction Workers | 16,134 | 17,736 | 1,602 | 10% | 10,532 | 2,106 | $29.48 | $41.19 |
| Production, Planning, and Expediting Clerks | 11,143 | 11,675 | 532 | 5% | 6,486 | 1,297 | $21.80 | $27.71 |
| Construction and Building Inspectors | 3,273 | 3,483 | 210 | 6% | 2,303 | 461 | $34.84 | $47.43 |
| **TOTAL** | **52,169** | **56,258** | **4,090** | **8%** | **30,359** | **6,072** | **$28.64** | **$40.58** |

*Source: EMSI 2020.1*

**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 Construction Management Occupations in SC-Monterey Sub-Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation | 2019 Jobs | 2024 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 25% Hourly Wage | Median Hourly Wage |
| Cost Estimators | 456 | 494 | 38 | 8% | 273 | 55 | $26.68 | $31.85 |
| Construction Managers | 858 | 900 | 41 | 5% | 363 | 73 | $22.81 | $36.02 |
| First-Line Supervisors of Construction Trades and Extraction Workers | 944 | 1,003 | 59 | 6% | 582 | 116 | $26.01 | $34.65 |
| Production, Planning, and Expediting Clerks | 523 | 551 | 28 | 5% | 308 | 62 | $15.97 | $22.13 |
| Construction and Building Inspectors | 197 | 208 | 11 | 6% | 136 | 27 | $16.08 | $25.67 |
| **TOTAL** | **2,978** | **3,155** | **178** | **6%** | **1,662** | **332** | **$22.77** | **$31.82** |

*Source: EMSI 2020.1*

**SC-Monterey Sub-Region** includes Monterey, San Benito, and Santa Cruz Counties

### Job Postings in Bay Region and SC-Monterey Sub-Region

**Table 3. Number of Job Postings by Occupation for latest 12 months (May 2019 - April 2020)**

| Occupation | Bay Region | SC-Monterey |
| --- | --- | --- |
| Construction Managers | 8,096 | 100 |
| Production, Planning, and Expediting Clerks | 4,182 | 98 |
| Cost Estimators | 2,621 | 50 |
| First-Line Supervisors of Construction Trades and Extraction Workers | 1,550 | 43 |
| Construction and Building Inspectors | 602 | 27 |
| Solar Energy Installation Managers | 72 | 0 |
| **TOTAL** | **17,123** | **318** |

*Source: Burning Glass*

**Table 4a. Top Job Titles for Construction Management Occupations for latest 12 months (May 2019 - April 2020) Bay Region**

|  |  |  |  |
| --- | --- | --- | --- |
| Common Title | Bay | Common Title | Bay |
| Construction Manager | 2,902 | Service Advisor | 208 |
| Estimator | 1,364 | Assistant Superintendent | 159 |
| Construction Superintendent | 834 | Senior Project Manager | 144 |
| Scheduler | 788 | Project Estimator | 138 |
| Project Manager | 643 | Foreman | 136 |
| Superintendent | 589 | Electrical Estimator | 116 |
| Logistics Coordinator | 380 | Material Coordinator | 110 |
| Construction Estimator | 365 | Project Coordinator | 108 |
| Production Coordinator | 279 | Cost Analyst | 107 |
| Construction Inspector | 259 | Inspector | 103 |
| Inventory Coordinator | 238 | Director of Construction | 100 |
| Operations Coordinator | 215 | Captain | 100 |
| Expeditor | 211 | Senior Superintendent | 99 |
| Assistant Manager | 211 | Construction Foreman | 94 |

**Table 4b. Top Job Titles for Construction Management Occupations for latest 12 months (May 2019 - April 2020) SC-Monterey Sub- Region**

|  |  |  |  |
| --- | --- | --- | --- |
| Common Title | SC-Monterey | Common Title | SC-Monterey |
| Construction Manager | 35 | Logistics Coordinator | 5 |
| Production Control Clerk | 21 | General Foreman | 5 |
| Estimator | 19 | Assistant Superintendent | 5 |
| Construction Superintendent | 16 | Transportation Coordinator | 4 |
| Project Manager | 13 | Parts Coordinator | 4 |
| Inventory Coordinator | 13 | Expeditor | 4 |
| Foreman | 12 | Construction Repair Lead | 4 |
| Construction Estimator | 12 | Construction Inspector | 4 |
| Superintendent | 9 | Tortilleria Clerk | 3 |
| Scheduler | 9 | Supply Chain Technician | 3 |
| Inspector | 9 | Production Coordinator | 3 |
| Service Advisor | 8 | Director of Facilities | 3 |
| Civil Construction Estimator | 7 | Cost Analyst | 3 |
| Production Clerk | 5 | Building Inspector | 3 |

*Source: Burning Glass*

# Industry Concentration

**Table 5. Industries hiring Construction Management Workers in Bay Region**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Industry – 6 Digit NAICS (No. American Industry Classification) Codes | Jobs in Industry (2019) | Jobs in Industry (2022) | % Change (2019-24) | % Occupation Group in Industry (2019) |
| Commercial and Institutional Building Construction (236220) | 5,107 | 5,889 | 15% | 10% |
| Residential Remodelers (236118) | 4,390 | 5,028 | 15% | 8% |
| New Single-Family Housing Construction (except For-Sale Builders) (236115) | 2,995 | 3,120 | 4% | 6% |
| Electrical Contractors and Other Wiring Installation Contractors (238210) | 2,876 | 3,109 | 8% | 6% |
| Plumbing, Heating, and Air-Conditioning Contractors (238220) | 2,755 | 3,075 | 12% | 5% |
| Local Government, Excluding Education and Hospitals (903999) | 2,328 | 2,444 | 5% | 4% |
| All Other Specialty Trade Contractors (238990) | 1,663 | 1,720 | 3% | 3% |
| Site Preparation Contractors (238910) | 1,229 | 1,277 | 4% | 2% |
| Painting and Wall Covering Contractors (238320) | 1,207 | 1,245 | 3% | 2% |
| Engineering Services (541330) | 1,195 | 1,282 | 7% | 2% |
| Drywall and Insulation Contractors (238310) | 1,045 | 1,185 | 13% | 2% |
| Roofing Contractors (238160) | 811 | 872 | 8% | 2% |
| Corporate, Subsidiary, and Regional Managing Offices (551114) | 802 | 838 | 4% | 2% |
| Highway, Street, and Bridge Construction (237310) | 785 | 800 | 2% | 2% |

*Source: EMSI 2020.1*

**Table 6. Top Employers Posting Construction Management Occupations in Bay Region and SC-Monterey Sub-Region (May 2019 - April 2020)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Employer | Bay | Employer | Bay | Employer | SC-Monterey |
| Jobot | 289 | Jones Lang Lasalle Inc. | 46 | Pacific Scientific Energetic Materials Co | 5 |
| Tjg Civil Engineers And Land Planners | 125 | Swinerton Builders | 43 | Monterey County California | 5 |
| CBRE | 108 | Kaiser Permanente | 42 | Fortive Corp. | 5 |
| Johnson Construction Management | 107 | Hire Resolve | 41 | California State University | 5 |
| Williams-Sonoma | 92 | Tjg Commercial Construction | 39 | Pajaro Valley Unified School District | 4 |
| Pacific Gas and Electric Co | 82 | Nova Partners | 38 | Monterey Bay Aquarium | 4 |
| AECOM Technology Corp. | 68 | Goliath Construction Consulting | 38 | Joby Aviation | 4 |
| The Turner Corp. | 62 | Rosendin Electric Inc. | 37 | Granite Construction Inc. | 4 |
| Webcor Builders | 58 | Lennar Corp. | 36 | Vanir Construction Management Inc. | 3 |
| Balfour Beatty | 58 | Tesla | 34 | Pebble Beach Resorts | 3 |
| Emcor Group | 56 | Marriott International Inc. | 33 | Monterey Peninsula Engineering | 3 |
| Mastec Inc. | 54 | Cupertino Electric Inc. | 33 | KB Home | 3 |
| Toll Brothers Inc. | 53 | Battle Consulting And Management | 33 | Jacobs Vehicle Systems, Inc | 3 |
| Rosendin | 49 | Sunrun | 32 | Hyatt | 3 |
| Jacobs Engineering Group Inc. | 49 | Facebook | 32 | Danaher Corp. | 3 |
| Vanir Construction Management Inc. | 48 | Swinerton Inc. | 31 | County Monterey | 3 |
| Milestone Technologies Inc. | 46 | Suffolk Construction | 31 | City Santa Cruz | 3 |

*Source: Burning Glass*

# Educational Supply

There are five (5) community colleges in the Bay Region issuing 69 awards on average annually (last 3 years ending 2018-19) on TOP 0957.00 - Civil and Construction Management Technology. There are two colleges in the SC-Monterey Sub-Region issuing 24 awards on average annually (last 3 years) on this TOP code.

**Table 7. Awards on TOP 0957.00 - Civil and Construction Management Technology in Bay Region**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| College | Sub-Region | Associates | Certificate Low Unit | Total |
| Cabrillo | Santa Cruz-Monterey | 6 | 16 | 22 |
| Diablo Valley | East Bay | 5 | 4 | 9 |
| Hartnell | Santa Cruz-Monterey | 2 |  | 2 |
| Laney | East Bay | 5 | 6 | 11 |
| San Francisco | Mid-Peninsula | 6 | 19 | 25 |
| **Total Bay Region** | | **24** | **45** | **69** |
| **Total SC-Monterey Sub-Region** | | **8** | **16** | **24** |

# Source: Data Mart

Note: The annual average for awards is 2016-17 to 2018-19.

# Gap Analysis

Based on the data included in this report, there is a large labor market gap in the Bay region with 6,072 annual openings for the Construction Management occupational cluster and 69 annual (3-year average) awards for an annual undersupply of 6,003 students. In the SC-Monterey Sub-Region, there is also a gap with 332 annual openings and 24 annual (3-year average) awards for an annual undersupply of 308 students.

# Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0957.00 - Civil and Construction Management Technology**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 2015-16 | Bay  (All CTE Programs) | Gavilan College (All CTE Programs) | State (0957.00) | Bay (0957.00) | SC-Monterey (0957.00) | Gavilan College (0957.00) |
| % Employed Four Quarters After Exit | 74% | 85% | 63% | 72% | 50% | n/a |
| Median Quarterly Earnings Two Quarters After Exit | $10,550 | $24,296 | $9,201 | $9,832 | $3,488 | n/a |
| Median % Change in Earnings | 46% | 27% | 50% | 57% | n/a | n/a |
| % of Students Earning a Living Wage | 63% | 84% | 53% | 53% | n/a | n/a |

*Source: Launchboard Pipeline (version available on 5/14/20)*

# Skills, Certifications and Education

**Table 9. Top Skills for Construction Management Occupations in Bay Region (May 2019 - April 2020)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Skill | Postings | Skill | Postings | Skill | Postings |
| Project Management | 7,392 | Contract Review | 1,194 | Customer Billing | 722 |
| Scheduling | 7,035 | Customer Contact | 1,190 | Building Codes | 703 |
| Budgeting | 5,774 | Logistics | 1,121 | Punch List | 684 |
| Construction Management | 5,025 | Repair | 1,091 | Accounting | 674 |
| Estimating | 3,247 | Quality Management | 1,059 | Plumbing | 665 |
| Quality Assurance and Control | 2,470 | Sales | 948 | Business Development | 622 |
| Microsoft Project | 2,036 | Civil Engineering | 930 | Supervisory Skills | 613 |
| Customer Service | 1,953 | Managing Subcontractors | 916 | Residential Construction | 601 |
| Procurement | 1,772 | Contract Preparation | 855 | Design and Construction | 590 |
| Cost Control | 1,649 | Purchasing | 847 | Request for Proposal (RFP) | 567 |
| Occupational Health and Safety | 1,613 | Primavera | 798 | SAP | 553 |
| Project Planning and Development Skills | 1,354 | Request for Information (RFI) | 790 | Renovation | 538 |
| Cost Estimation | 1,339 | Procore | 778 | Inventory Management | 533 |
| Commercial Construction | 1,333 | Construction Industry Knowledge | 739 | Design-Build | 532 |
| Staff Management | 1,316 | Spreadsheets | 734 | Data Entry | 530 |

*Source: Burning Glass*

**Table 10. Certifications for Construction Management Occupations in Bay Region (May 2019 - April 2020)**

Note: 76% of records have been excluded because they do not include a certification. As a result, the chart below may not be representative of the full sample.

|  |  |  |  |
| --- | --- | --- | --- |
| Certification | Postings | Certification | Postings |
| Driver's License | 2,175 | CDL Class C | 69 |
| Project Management Certification | 560 | Security Clearance | 53 |
| Project Management Professional (PMP) | 276 | Electrical Certification | 40 |
| Certified Construction Manager | 211 | Master Electrician License | 39 |
| Leadership In Energy And Environmental Design (LEED) Certified | 199 | Forklift Operator Certification | 39 |
| First Aid CPR AED | 166 | American Production and Inventory Control Society (APICS) Certification | 38 |
| LEED AP | 159 | Registered Architect | 36 |
| Licensed Professional Engineer | 146 | North American Board of Energy Practitioners (NABCEP) | 35 |
| Occupational Safety and Health Administration Certification | 123 | Certified in Production and Inventory Management (CPIM) | 35 |
| Contractors License | 121 | OSHA Safety 10 Hour | 32 |
| Electrician Certification | 91 | National Council of Architectural Registration Boards (NCARB) | 32 |
| OSHA Safety 30 Hour | 80 | Safety Trained Supervisor | 30 |

*Source: Burning Glass*

**Table 11. Education Requirements for Construction Management Occupations in Bay Region**

Note: 42% 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 | Percent 12 Mos. Postings |
| High school or vocational training | 2,701 | 28% |
| Associate Degree | 335 | 3% |
| Bachelor’s Degree or Higher | 6,742 | 69% |

*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, 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