



Construction and Energy Management Occupations Labor Market Information Report Cabrillo College

Prepared by the San Francisco Bay Center of Excellence for Labor Market Research
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Recommendation

Based on all available data, there appears to be an “undersupply” of Construction and Energy 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 3,101 students in the Bay region and 152 students in the SC-Monterey Sub-Region.

Introduction

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

This report profiles Construction and Energy Management Occupations in the 12 county Bay region and in the SC-Monterey sub-region for an existing low unit, local certificate for state chaptering at Cabrillo College.

Labor market information (LMI) is not available at the eight-digit SOC Code level for Solar Energy Installation Managers (47-1011.03), therefore the data shown in Tables 1 and 2 is for First-Line Supervisors of Construction Trades and Extraction Workers (at the six digit SOC level) and likely overstates demand for Solar Energy Installation Managers. Tables 3, 4, 6, 9, 10 and 11 use job postings data from Burning Glass at the eight-digit SOC Code level for Solar Energy Installation Managers (47-1011.03).

- **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.
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: 33%
- **First-Line Supervisors of Construction Trades and Extraction Workers (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%

Occupational Demand

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

Occupation	2019 Jobs	2024 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Earning	Median Hourly Wage
Construction Managers	12,662	13,455	793	6%	5,572	1,114	\$30.49	\$51.62
First-Line Supervisors of Construction Trades and Extraction Workers	16,404	17,690	1,286	8%	10,282	2,056	\$30.57	\$42.96
Total	29,066	31,145	2,079	7%	15,854	3,170	\$30.54	\$46.73

Source: EMSI 2020.4

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 Construction and Energy Management Occupations in SC-Monterey Sub-region

Occupation	2019 Jobs	2024 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Earning	Median Hourly Wage
Construction Managers	774	800	26	3%	330	66	\$22.38	\$37.22
First-Line Supervisors of Construction Trades and Extraction Workers	886	938	52	6%	552	110	\$27.20	\$35.38
Total	1,660	1,738	78	5%	882	176	\$24.95	\$36.24

Source: EMSI 2020.4

SC-Monterey Sub-Region includes: Monterey, San Benito, 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 (Dec 2019-Nov 2020)

Occupation	Bay Region	SC-Monterey
Hazardous Materials Removal Workers	164	66
Geological Sample Test Technicians	133	34
Geophysical Data Technicians	64	11
Environmental Engineering Technicians	15	9

Source: Burning Glass

Table 4a. Top Job Titles for Construction and Energy Management Occupations for latest 12 months (Dec 2019-Nov 2020) Bay Region

Title	Bay	Title	Bay
Materials Technician	9	Lead Restoration Technician	5
Hazardous Materials Specialist	9	Asbestos Abatement Technician	5
Geotechnical Field Technician	8	Water/Fire/Demo/Restoration Lead Technician	4
Asbestos And Lead Professional	8	Materials Test Technician, Materials Reliability & Test	4
Material Handling Technician	7	Materials Process Technician	4
Hazardous Materials Technician	7	Lead Av Field Technician	4
Water Restoration & Mold Remediation Technician/Supervisor	6	Hydrographer I/II	4
Water Restoration Lead Technician	5	Db Operator/Locater	4
Material Warehouse Technician	5	Sem Materials Technician	3

Source: Burning Glass

Table 4b. Top Job Titles for Construction and Energy Management Occupations for latest 12 months (Dec 2019- Nov 2020) SC-Monterey Sub-Region

Title	SC-Monterey	Title	SC-Monterey
Water/Fire/Demo/Restoration Lead Technician	4	Damage Restoration Technician	3
Materials Test Technician, Materials Reliability & Test	4	Technical Operator	2
Material Handling Technician	4	Senior Material Specialist	2
Hazardous Materials Specialist	4	Rf Field Tester	2
Asbestos And Lead Professional	4	Restoration Water Technician	2
Water Restoration & Mold Remediation Technician/Supervisor	3	Recycling Area Lead	2
Restoration Lead Technician	3	Materials Distribution Technician – Per Diem - Summit Campus	2
Lead Warehouse Restoration Lead Technician	3	Lead Technician - Asbestos	2
Geotechnical Field Technician	3	Hospital Patient Decontamination - Contractor	2

Source: Burning Glass

Industry Concentration

Table 5. Industries hiring Construction and Energy Management Workers in Bay Region

Industry – 6 Digit NAICS (No. American Industry Classification) Codes	Jobs in Industry (2019)	Jobs in Industry (2024)	% Change (2019-24)	% Occupation Group in Industry (2019)
Commercial and Institutional Building Construction	4,106	4,631	13%	14%
Residential Remodelers	3,945	4,488	14%	14%
New Single-Family Housing Construction (except For-Sale Builders)	2,532	2,609	3%	9%
Electrical Contractors and Other Wiring Installation Contractors	2,296	2,467	7%	8%
Plumbing, Heating, and Air-Conditioning Contractors	1,898	2,074	9%	7%
All Other Specialty Trade Contractors	1,335	1,304	-2%	5%
Local Government, Excluding Education and Hospitals	1,051	1,101	5%	4%
Site Preparation Contractors	984	974	-1%	3%
Painting and Wall Covering Contractors	919	904	-2%	3%
Drywall and Insulation Contractors	732	822	12%	3%

Source: EMSI 2020.4

Table 6. Top Employers Posting Construction and Energy Management Occupations in Bay Region and SC-Monterey Sub-Region (Dec 2019-Nov 2020)

Employer	Bay	Employer	SC-Monterey
Eurofins Scientific	11	Five Star Cleaners	6
Pacific Gas and Electric Company	8	Tesla	5
Stealth Mode Startup Company	6	Sutter Health	5
Five Star Cleaners	6	California Emergency Services	4
Faragon Restoration	6	Restoration Management Company	3

Employer	Bay	Employer	SC-Monterey
Tesla	5	Lucid Motors Inc	3
Sutter Health	5	Cenergy International	3
Restoration Management Company	5	Tesla Motors	2
Ninyo Moore	5	Tesla Energy Operations	2
Compliance Solutions	5	Servpro Of Lafayette/Moraga/Orinda & Napa County	2
Cablecom Llc	5	ServiceMaster	2
911 Remediation Llc	5	Safety Compliance Management	2
Roto Rooter Plumbing Drain	4	Rrs Patient Decontamination Llc	2
Emergency Packout Company	4	Phillips 66	2

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. In the SC-Monterey Sub-Region, there are two (2) community colleges that issued 24 awards on average annually (last 3 years) on this TOP code.

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

College	Subregion	Associate	Certificate Low	Total
Cabrillo	SC-Monterey	6	16	22
Diablo Valley	East Bay	5	4	9
Hartnell	SC-Monterey	2	0	2
Laney	East Bay	5	6	11
San Francisco	Mid-Peninsula	6	19	25
Total		24	45	69

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 3,170 annual openings for the Construction and Energy Management occupational cluster and 69 annual (3-year average) awards for an annual undersupply of 3,101 students. In the SC-Monterey Sub-Region, there is also a gap with 176 annual openings and 24 annual (3-year average) awards for an annual undersupply of 152 students.

Student Outcomes

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

2017-18	Bay All CTE Program	Cabrillo All CTE Program	State 0957.00	Bay 0957.00	SC-Monterey 0957.00	Cabrillo 0957.00
% Employed Four Quarters After Exit	67%	72%	70%	69%	66%	65%
Median Quarterly Earning Two Quarters After Exit	\$11,466	\$11,134	\$13,764	\$14,520	\$14,243	\$16,082
Median % Change in Earning	31%	45%	33%	41%	33%	33%
% of Students Earning a Living Wage	53%	58%	74%	68%	78%	80%

2017-18	Bay All CTE Program	Cabrillo All CTE Program	State 0957.00	Bay 0957.00	SC- Monterey 0957.00	Cabrillo 0957.00
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Source: Launchboard Pipeline (version available on August 2020)

Skills, Certifications and Education

Table 9. Top Skills for Construction and Energy Management Occupations in Bay Region (Dec 2019-Nov 2020)

Skill	Posting	Skill	Posting
Occupational Health and Safety	49	Chemistry	21
Data Entry	40	Predictive / Preventative Maintenance	21
HAZMAT	40	Spreadsheets	21
Hazardous Waste	37	Hazardous Material Handling	19
Forklift Operation	36	Calibration	18
Scheduling	35	Customer Contact	18
Repair	33	Failure Analysis	18
Microscope	30	Physics	18
Personal Protective Equipment (PPE)	30	Calculation	17
Quality Assurance and Control	30	Demolition	17
Cleaning	27	Materials Testing	17
Customer Service	27	Sample Preparation	17
Data Collection	24	Lifting Ability	16
Packaging	23	Procurement	16

Source: Burning Glass

Table 10. Certifications for Construction and Energy Management Occupations in Bay Region (Dec 2019-Nov 2020)

Certification	Posting	Certification	Posting
Driver's License	134	HazMat Operations	4
OSHA Forklift Certification	15	HazMat Awareness	4
Cdl Class C	11	Firefighter II	4
Hazardous Materials Certification	10	Fire Fighter I	4
Certified Industrial Hygienist	10	Airport Firefighter	4
Security Clearance	7	Aerial Rescue and Fire Fighting (ARFF)	4
HazMat Technician	6	First Aid Cpr Aed	3
Certified Pest Control	5	Cdl Class B	3
Asbestos Contractor/Supervisor	5	CDL Class A	3
Hazwoper	4	Asbestos Worker	3

Source: Burning Glass

Note: 49% 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.

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

Education (minimum advertised)	Latest 12 Mos. Postings	Percent 12 Mos. Postings
High school or vocational training	96	51%
Associate's degree	23	12%

Education (minimum advertised)	Latest 12 Mos. Postings	Percent 12 Mos. Postings
Bachelor's degree	68	36%
Master's degree	2	1%

Source: Burning Glass

Note: 50% 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.

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 CCCCCO Data Mart.

Sources

O*Net Online

Labor Insight/Jobs (Burning Glass)

Economic Modeling Specialists International (EMSI)

CTE LaunchBoard 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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