

# Green & Sustainable Building Standards Occupations Labor Market Information Report Laney 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 a significant undersupply of Green & Sustainable Building Standards workers compared to the demand for this cluster of occupations in the Bay region and in the East Bay sub-region (Alameda and Contra Costa Counties.) There is a projected annual gap of about 8,720 students in the Bay region and 2,412 students in the East Bay 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 Laney College and in the region.

## Introduction

This report profiles Green & Sustainable Building Standards Occupations in the 12 county Bay region and in the East Bay sub-region for a proposed new program at Laney College.

- **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%
- **General and Operations Managers (SOC 11-1021):** Plan, direct, or coordinate the operations of public or private sector organizations. Duties and responsibilities include formulating policies, managing daily operations, and planning the use of materials and human resources, but are too diverse and general in nature to be classified in any one functional area of management or administration, such as personnel, purchasing, or administrative services. Excludes First-Line Supervisors.  
 Entry-Level Educational Requirement: Bachelor's degree  
 Training Requirement: None  
 Percentage of Community College Award Holders or Some Postsecondary Coursework: 34%
- **Miscellaneous Construction and Related Workers (SOC 47-4098):** Represent occupations with a wide range of characteristics which do not fit into one of the detailed occupations.  
 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: 0%
- **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%

- Materials Engineers (SOC 17-2131):** Evaluate materials and develop machinery and processes to manufacture materials for use in products that must meet specialized design and performance specifications. Develop new uses for known materials. Includes those engineers working with composite materials or specializing in one type of material, such as graphite, metal and metal alloys, ceramics and glass, plastics and polymers, and naturally occurring materials. Includes metallurgists and metallurgical engineers, ceramic engineers, and welding engineers.

Entry-Level Educational Requirement: Bachelor's degree

Training Requirement: None

Percentage of Community College Award Holders or Some Postsecondary Coursework: 20%

## Occupational Demand

**Table 1. Employment Outlook for Green & Sustainable Building Standards Occupations in Bay Region**

Occupation	2017 Jobs	2022 Jobs	5-Yr Change	5-Yr % Change	5-Yr Openings	Average Annual Openings	10% Hourly Wage	Median Hourly Wage
Construction and Building Inspectors	3,483	3,728	245	7%	2,169	434	\$23.72	\$44.84
General and Operations Managers	68,934	75,221	6,287	9%	34,923	6,985	\$26.80	\$61.22
Miscellaneous Construction and Related Workers	850	920	70	8%	537	107	\$14.47	\$20.95
Construction Managers	12,935	13,936	1,001	8%	5,631	1,126	\$14.74	\$46.04
Materials Engineers	1,556	1,551	(5)	(0%)	603	121	\$39.72	\$57.71
<b>Total</b>	<b>87,759</b>	<b>95,357</b>	<b>7,598</b>	<b>9%</b>	<b>43,863</b>	<b>8,773</b>	<b>\$25.01</b>	<b>\$57.88</b>

Source: EMSI 2019.1

**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 Green & Sustainable Building Standards Occupations in East Bay Sub-Region**

Occupation	2017 Jobs	2022 Jobs	5-Yr Change	5-Yr % Change	5-Yr Openings	Average Annual Openings	10% Hourly Wage	Median Hourly Wage
Construction and Building Inspectors	1,231	1,299	68	6%	743	149	\$26.24	\$45.88
General and Operations Managers	19,300	20,603	1,303	7%	9,239	1,848	\$27.77	\$59.01
Miscellaneous Construction and Related Workers	326	360	34	10%	211	42	\$14.21	\$19.24
Construction Managers	4,110	4,443	332	8%	1,764	353	\$14.71	\$43.56
Materials Engineers	401	420	19	5%	165	33	\$41.38	\$58.65
<b>TOTAL</b>	<b>25,368</b>	<b>27,125</b>	<b>1,757</b>	<b>7%</b>	<b>12,123</b>	<b>2,424</b>	<b>\$25.62</b>	<b>\$55.35</b>

Source: EMSI 2019.1

**East Bay Sub-Region** includes Alameda and Contra Costa Counties

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

**Table 3. Number of Job Postings by Occupation for latest 12 months (March 2018 - Feb 2018)**

Occupation	Bay Region	East Bay
General and Operations Managers (11-1021.00)	18,708	11-1021
Construction Managers (11-9021.00)	7,251	2,019
Construction and Building Inspectors (47-4011.00)	618	248
Materials Engineers (17-2131.00)	263	74
Construction and Related Workers, All Other (47-4099.00)	27	12
Solar Thermal Installers and Technicians (47-4099.02)	9	0
Weatherization Installers and Technicians (47-4099.03)	2	0
<b>Total</b>	<b>26,878</b>	<b>2,353</b>

Source: Burning Glass

**Table 4. Top Job Titles for Green & Sustainable Building Standards Occupations for latest 12 months (March 2018 - Feb 2018)**

Common Title	Bay	East Bay	Common Title	Bay	East Bay
Construction Manager	2,505	712	District Manager	269	71
Operations Manager	1,765	485	Business Manager	250	63
General Manager	757	181	Chief Of Staff	241	19
Assistant Manager	634	152	Area Sales Manager	240	65
Superintendent	577	147	Manager, Operations	193	58
Project Manager	490	139	Operations Lead	165	27
Operations Supervisor	480	194	Product Owner	159	20
Construction Superintendent	457	95	Operations Program Manager	154	58
Business Operations Manager	366	58	Assistant Operations Manager	146	45
Manager In Training	336	112	Senior Operations Manager	143	20
Vice President	311	40	Head, Operations	133	7
Director, Operations	301	49	Director of Construction	130	41
Operations Coordinator	297	109	Vice President of Operations	128	5
Construction Inspector	278	127	Senior Project Manager	121	0

Source: Burning Glass

## Industry Concentration

**Table 5. Industries hiring Green & Sustainable Building Standards Workers 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)
Local Government, Excluding Education and Hospitals (903999)	3,373	3,394	5%	3.8%
Corporate, Subsidiary, and Regional Managing Offices (551114)	2,733	2,905	12%	3.3%
Commercial and Institutional Building Construction (236220)	2,679	2,781	19%	3.1%
Custom Computer Programming Services (541511)	2,443	2,502	17%	2.8%
Residential Remodelers (236118)	2,308	2,406	13%	2.7%
Internet Publishing and Broadcasting and Web Search Portals (519130)	1,857	1,963	42%	2.2%
Plumbing, Heating, and Air-Conditioning Contractors (238220)	1,723	1,755	9%	2.0%
Engineering Services (541330)	1,661	1,675	10%	1.9%
New Single-Family Housing Construction (except For-Sale Builders) (236115)	1,638	1,643	(1%)	1.8%
Electrical Contractors and Other Wiring Installation Contractors (238210)	1,582	1,592	10%	1.8%

Green & Sustainable Building Standards Occupations in 12 County Bay Region and in East Bay Sub-Region, 2019

Computer Systems Design Services (541512)	1,530	1,512	11%	1.7%
Full-Service Restaurants (722511)	1,145	1,142	5%	1.3%
Software Publishers (511210)	935	987	26%	1.1%
All Other Specialty Trade Contractors (238990)	948	957	4%	1.1%
Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology) (541715)	892	934	1%	1.0%

Source: EMSI 2019.1

**Table 6. Top Employers Posting Green & Sustainable Building Standards Occupations in Bay Region and East Bay Sub-Region (March 2018 - Feb 2018)**

Employer	Bay	Employer	Bay	Employer	East Bay
Google Inc.	528	Genentech	63	Kaiser Permanente	57
Facebook	280	Williams-Sonoma	63	CVS Health	53
Gap Inc.	180	United Parcel Service Incorporated	62	Dollar Tree	49
Apple Inc.	153	Tesla	61	24 Hour Fitness	47
Dollar Tree	152	Petco	60	Tesla Motors	44
Amazon	147	Autodesk Incorporated	59	FedEx	35
CVS Health	144	Applied Materials	58	University Of California Berkeley	35
Uber	136	Tesla Motors	58	Workday, Inc	35
Sephora	127	Balfour Beatty	56	Uc San Diego	32
Walmart / Sam's	127	Servicenow	53	Sephora	31
24 Hour Fitness	101	Union Bank	52	Tesla	31
Mitsubishi	93	Visa	52	Petco	26
Cisco Systems Incorporated	91	Paypal	50	University California	26
The Turner Corporation	90	Webcor Builders	47	Gap Inc.	24
cbre	90	Deloitte	46	Lennar Corporation	24
Kaiser Permanente	88	Svb Financial Group	46	Vanir Construction Management Incorporated	24
Jones Lang Lasalle Incorporated	87	Wework	45	Sodexo	23
Salesforce	87	Gilead Sciences	44	United Parcel Service Incorporated	23
Marriott International Incorporated	86	Vanir Construction Management Incorporated	44	The Kleinfelder Group, Inc	22
FedEx	79	Lyft	42	Lawrence Livermore National Laboratory	21
Stanford University	71	Sodexo	42	Marriott International Incorporated	21
LinkedIn Limited	67	Swinerton Builders	42	Mitsubishi	19
University California	65	Vmware Incorporated	42	Union Bank	19

Source: Burning Glass

## Educational Supply

There are 5 community colleges in the Bay Region issuing 53 awards on average annually (last 3 years) on TOP 0957.00 - Civil and Construction Management Technology. There are two colleges in the East Bay Sub-Region issuing 12 awards on average annually (last 3 years) on this TOP code.

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

College	Sub-Region	Headcount	Associates	Certificates	Total
Cabrillo	Santa Cruz & Monterey	229	5	15	20

Green & Sustainable Building Standards Occupations in 12 County Bay Region and in East Bay Sub-Region, 2019

Diablo Valley	East Bay	291	3	3	6
Hartnell	Santa Cruz & Monterey	15	2	1	3
Laney	East Bay	199	4	2	6
San Francisco	Mid-Peninsula	159	3	15	18
Santa Rosa	North Bay	101	0	0	0
<b>Total Bay Region</b>		<b>994</b>	<b>16</b>	<b>37</b>	<b>53</b>
<b>Total East Bay Sub-Region</b>		<b>490</b>	<b>6</b>	<b>5</b>	<b>12</b>

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 large labor market gap in the Bay region with 8,773 annual openings for the Green & Sustainable Building Standards occupational cluster and 53 annual (3-year average) awards for an annual undersupply of 8,720 students. In the East Bay Sub-Region, there is also a gap with 2,424 annual openings and 12 annual (3-year average) awards for an annual undersupply of 2,412 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)	Laney College (All CTE Programs)	State (0957.00)	Bay (0957.00)	East Bay (0957.00)	Laney College (0957.00)
% Employed Four Quarters After Exit	74%	66%	75%	76%	76%	84%
Median Quarterly Earnings Two Quarters After Exit	\$10,550	\$9,865	\$13,011	\$12,813	\$13,558	\$14,180
Median % Change in Earnings	46%	45%	44%	49%	44%	47%
% of Students Earning a Living Wage	63%	61%	78%	76%	76%	79%

Source: Launchboard Pipeline (version available on 3/8/19)

## Skills, Certifications and Education

**Table 9. Top Skills for Green & Sustainable Building Standards Occupations in Bay Region (March 2018 - Feb 2018)**

Skill	Postings	Skill	Postings	Skill	Postings
Budgeting	8,467	Key Performance Indicators (KPIs)	1,550	Business Planning	1,000
Project Management	8,402	Accounting	1,485	SQL	1,000
Scheduling	6,979	Occupational Health and Safety	1,459	Customer Billing	980
Operations Management	5,077	Procurement	1,456	Business Process	958
Customer Service	3,245	Supervisory Skills	1,413	Performance Management	952
Staff Management	3,026	Estimating	1,408	Commercial Construction	951
Construction Management	2,918	Microsoft Project	1,359	Contract Review	933
Quality Assurance and Control	2,389	Process Improvement	1,352	Business Acumen	932
Sales	2,129	Product Management	1,329	Program Management	891

Retail Industry Knowledge	1,754	Project Planning and Development Skills	1,279	Stakeholder Management	890
Customer Contact	1,712	Strategic Planning	1,256	Performance Appraisals	878
Business Development	1,706	Onboarding	1,222	Business Administration	871
Business Operations	1,698	Change Management	1,149	Purchasing	868
Cost Control	1,687	Repair	1,133	Product Development	795
Quality Management	1,627	Salesforce	1,032	Performance Analysis	792

Source: Burning Glass

**Table 10. Certifications for Green & Sustainable Building Standards Occupations in the Bay Region (March 2018 - Feb 2018)**

Note: 84% 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	1,888	Certified Financial Planner (CFP)	41
Project Management Certification	583	Certified Information Systems Security Professional (CISSP)	38
Project Management Professional (PMP)	276	Forklift Operator Certification	37
Leadership In Energy And Environmental Design (LEED) Certified	151	Insurance License	37
First Aid Cpr Aed	149	Certified Protection Professional (CPP)	35
Certified Construction Manager	147	Certified Payroll Professional (CPP)	33
IT Infrastructure Library (ITIL) Certification	132	Welding Certification	33
LEED AP	121	Real Estate Certification	31
Contractors License	103	Certified Information Systems Auditor (CISA)	28
Licensed Professional Engineer	103	Certified Welding Inspector (CWI)	28
Six Sigma Certification	101	OSHA Safety 10 Hour	28
Series 7	96	Food Service Certification	27
ServSafe	73	OSHA Safety 30 Hour	27
Security Clearance	68	Investment Advisor	26
ITIL Certification	60	Certified ScrumMaster (CSM)	25
Registered Nurse	60	Cisco Certified Internetwork Professional (CCIP)	25
Food Handler Certification	59	Master Electrician License	25
Occupational Safety and Health Administration Certification	57	Architecture License	24
Cdl Class C	45	Cdl Class B	23
Safety Trained Supervisor	43	Electrician Certification	23
Lean Six Sigma Certification	42	Six Sigma Black Belt Certification	23

Source: Burning Glass

## Table 11. Education Requirements for Green & Sustainable Building Standards Occupations in Bay Region

Note: 39% 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	2,798 (17%)
Associate Degree	492 (3%)
Bachelor's Degree or Higher	13,126 (80%)

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

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