

**Program Endorsement Brief: 0957.20/Construction Inspection
Building Construction Sustainability Certificate**
Los Angeles/Orange County Center of Excellence, September 2020

Summary Analysis

Program Endorsement:	Endorsed: All Criteria Met	<input checked="" type="checkbox"/>	Endorsed: Some Criteria Met	<input type="checkbox"/>	Not Endorsed	<input type="checkbox"/>
Program Endorsement Criteria						
Supply Gap:	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		
Meets Living Wage: (Entry-Level, 25th)	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		
Typical Entry-Level Education:	HS Diploma or Less	Some College/ Cert./AA	Bachelor's Degree	Graduate Degree		
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Emerging Occupation(s)						
	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		

The Los Angeles/Orange County Center of Excellence for Labor Market Research (COE) prepared this report to provide Los Angeles/Orange County regional labor market supply and demand data related to three middle-skill occupations: Construction Managers (11-9021), First-Line Supervisors of Construction Trades and Extraction Workers (47-1011), and Construction and Building Inspectors (47-4011); and two emerging occupations: Environmental Compliance Inspectors (13-1041.01) and Sustainability Specialists (13-1199.05). Middle-skill occupations typically require some postsecondary education, but less than a bachelor's degree.¹ Although Construction Managers (11-9021) typically require a bachelor's degree, they are considered middle-skill because approximately one-third of workers in the field have completed some college or an associate degree. This report is intended to help determine whether there is demand in the local labor market that is not being met by the supply from community college programs that align with the relevant occupations.

Based on the available data, there appears to be a supply gap for occupations related to building construction sustainability in the region. **Therefore, the COE endorses this proposed program.** Reasons include:

Demand:

- Over the next five years, there is projected to be **5,038 jobs available annually** in the region due to new job growth and replacements, **which is more than the 53 awards conferred annually** by educational institutions in the region.

¹ The COE classifies middle-skill jobs as the following:

- All occupations that require an educational requirement of some college, associate degree or apprenticeship;
- All occupations that require a bachelor's degree, but also have more than one-third of their existing labor force with an educational attainment of some college or associate degree; or
- All occupations that require a high school diploma or equivalent or no formal education, but also require short- to long-term on-the-job training where multiple community colleges have existing programs.

- Within Los Angeles County, **all of the annual job openings** for these building construction sustainability occupations have **entry-level wages above the county's living wage** (\$15.04/hour).²
- Within the LA/OC region, **70% of the annual job openings** for occupations related to building construction sustainability **typically require a high school diploma**.
 - However, the national-level educational attainment data indicates **between 32.3% and 44.9% of workers in the field have completed some college or an associate degree**.

Supply:

- There are **6 community colleges** in the region that issue awards related to construction management and/or inspection, conferring an average of **52 awards annually** between 2016 and 2019.
- Between 2014 and 2017, there was an average of **1 award conferred annually** in a related training program by a non-community college institution within the region.

Occupational Demand

Exhibit 1, on the following page, shows the five-year occupational demand projections for these occupations related to building construction sustainability. In Los Angeles/Orange County, the number of jobs related to these occupations is projected to increase by 6% through 2024. There will be more than 5,000 job openings per year through 2024 due to new job growth and replacements.

This report includes employment projection data by Emsi which uses EDD information. Emsi's projections are modeled on recorded (historical) employment figures and incorporate several underlying assumptions, including the assumption that the economy, during the projection period, will be at approximately full employment. To the extent that a recession or labor shock, such as the economic effects of COVID-19, can cause long-term structural change, it may impact the projections. At this time, it is not possible to quantify the impact of COVID-19 on projections of industry and occupational employment. Therefore, the projections included in this report do not take the impacts of COVID-19 into account.

² Living wage data was pulled from California Family Needs Calculator on 8/20/2020. For more information, visit the California Family Needs Calculator website: <https://insightcced.org/2018-family-needs-calculator/>.

Exhibit 1: Occupational demand in Los Angeles and Orange Counties³

Geography	2019 Jobs	2024 Jobs	2019-2024 Change	2019-2024 % Change	Annual Openings
Los Angeles	31,104	32,637	1,533	5%	3,322
Orange	15,168	16,337	1,169	8%	1,716
Total	46,272	48,975	2,703	6%	5,038

Wages

The labor market endorsement in this report considers the entry-level hourly wages for these occupations related to building construction sustainability in Los Angeles County as they relate to the county's living wage. Orange County wages are included below in order to provide a complete analysis of the LA/OC region. Detailed wage information, by county, is included in Appendix A.

Los Angeles County—All of the annual openings for these occupations have entry-level wages above the living wage for one adult (\$15.04 in Los Angeles County).⁴ Typical entry-level hourly wages are in a range between \$21.31 and \$33.86. Experienced workers can expect to earn wages between \$44.35 and \$59.00, which are higher than the living wage estimate. Los Angeles County's average wages are below the average statewide wage of \$41.46 for these occupations.

Orange County—All of the annual openings for these occupations have entry-level wages above the California Family Needs Calculator hourly wage (living wage) for one adult (\$17.36 in Orange County). Typical entry-level hourly wages are in a range between \$27.64 and \$32.68. Experienced workers can expect to earn wages between \$48.83 and \$68.55, which are higher than the living wage estimate. Orange County's average wages are above the average statewide wage of \$41.46 for these occupations.

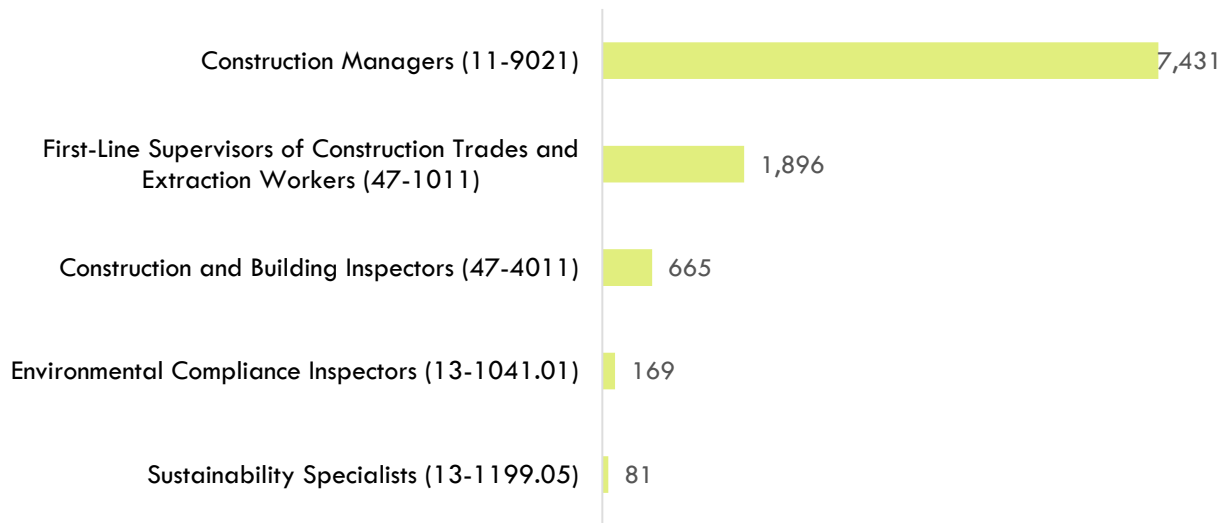
Job Postings

There were 10,242 online job postings related to building construction sustainability occupations listed in the past 12 months. Of these job postings, 73% were for Construction Managers (11-9021), 19% were for First-Line Supervisors of Construction Trades and Extraction Workers (47-1011), 6% were for Construction and Building Inspectors (47-4011), 2% were for Environmental Compliance Inspectors (13.1041.01), and 1% were for Sustainability Specialists (13-1199.05). Exhibit 2 displays the breakdown by number of job postings for each of these five occupations. The highest number of job postings were for construction managers, construction superintendents, superintendents, project managers, and construction inspectors. The top skills were: project management, scheduling, budgeting, construction management, and quality assurance and control. The top three employers, by number of job postings, in the region were: TJG Civil Engineers and Land Planners/Commercial Construction, CBRE, and AECOM Technology.

³ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

⁴ Living wage data was pulled from California Family Needs Calculator on 8/20/2020. For more information, visit the California Family Needs Calculator website: <https://insightcced.org/2018-family-needs-calculator/>.

Exhibit 2: Job Postings Data by Occupation, Last 12 months (n=10,242)



It is important to note that the job postings data included in this section reflects online job postings listed in the past 12 months and does not yet demonstrate the impact of COVID-19. While employers have generally posted fewer online job postings since the beginning of the pandemic, the long-term effects are currently unknown.

Educational Attainment

The Bureau of Labor Statistics (BLS) lists a bachelor's degree as the typical entry-level education for Construction Managers, and a high school diploma as the typical entry-level education for First-Line Supervisors of Construction Trades and Extraction Workers and Construction and Building Inspectors. In the LA/OC region, the majority of annual job openings (70%) typically require a high school diploma. However, the national-level educational attainment data indicates 32.3% and 44.9% of workers in the field have completed some college or an associate degree. Of the 52% of building construction sustainability job postings listing a minimum education requirement in Los Angeles/Orange County, 73% (3,832) requested a bachelor's degree, 23% (1,237) requested a high school diploma and 4% (208) requested an associate degree.

Educational Supply

Community College Supply—Exhibit 3, on the following page, shows the three-year average number of awards conferred by community colleges in the related TOP codes: Civil and Construction Management Technology (0957.00) and Construction Inspection (0957.20). The colleges with the most completions in the region are: Fullerton, Coastline, and Pasadena. Over the past 12 months, there was one other related program recommendation request from a regional community college.

Exhibit 3: Regional community college awards (certificates and degrees), 2016-2019

TOP Code	Program	College	2016-2017 Awards	2017-2018 Awards	2018-2019 Awards	3-Year Award Average
0957.00	Civil and Construction Management Technology	LA Valley	1	5	6	4
		Mt San Antonio	8	3	-	4
		LA Subtotal	9	8	6	8
		Fullerton	4	11	12	9
		OC Subtotal	4	11	12	9
Supply Subtotal/Average			13	19	18	17
0957.20	Construction Inspection	Pasadena	13	9	7	10
		LA Subtotal	13	9	7	10
		Coastline	5	12	15	11
		Fullerton	7	8	11	9
		Saddleback	6	3	10	6
		OC Subtotal	18	23	36	26
Supply Subtotal/Average			31	32	43	35
Supply Total/Average			44	51	61	52

Non-Community College Supply—Is important to consider the supply from four-year institutions in the region that provide training programs for building construction sustainability occupations. Exhibit 4 shows the annual and three-year average number of awards conferred by this institution in the related Classification of Instructional Programs (CIP) Code: Construction Management (52.2001). Due to different data collection periods, the most recent three-year period of available data is from 2014 to 2017. Between 2014 and 2017, four-year colleges in the region conferred an average of one award annually in related training programs.

Exhibit 4: Regional non-community college awards, 2014-2017

CIP Code	Program	College	2014-2015 Awards	2015-2016 Awards	2016-2017 Awards	3-Year Award Average
52.2001	Construction Management	Learnet Academy Inc	1	1	-	1
Supply Total/Average			1	1	0	1

Appendix A: Occupational demand and wage data by county

Exhibit 5. Los Angeles County

Occupation (SOC)	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
Construction Managers (11-9021)	12,005	12,629	624	5%	1,012	\$21.31	\$36.77	\$59.00
First-Line Supervisors of Construction Trades and Extraction Workers (47-1011)	16,130	16,929	799	5%	1,914	\$24.96	\$33.92	\$44.35
Construction and Building Inspectors (47-4011)	2,970	3,079	109	4%	397	\$33.86	\$43.46	\$51.92
Total	31,104	32,637	1,533	5%	3,322			

Exhibit 6. Orange County

Occupation (SOC)	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
Construction Managers (11-9021)	5,667	6,097	430	8%	509	\$27.64	\$47.34	\$68.55
First-Line Supervisors of Construction Trades and Extraction Workers (47-1011)	8,359	9,050	691	8%	1,052	\$28.87	\$38.03	\$48.83
Construction and Building Inspectors (47-4011)	1,142	1,190	48	4%	154	\$32.68	\$42.45	\$50.83
Total	15,168	16,337	1,169	8%	1,716			

Exhibit 7. Los Angeles and Orange Counties

Occupation (SOC)	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	Annual Openings
Construction Managers (11-9021)	17,672	18,727	1,055	6%	1,521
First-Line Supervisors of Construction Trades and Extraction Workers (47-1011)	24,489	25,979	1,490	6%	2,967
Construction and Building Inspectors (47-4011)	4,112	4,269	157	4%	551
Total	46,272	48,975	2,703	6%	5,038

Appendix B: Sources

- O*NET Online
- Labor Insight/Jobs (Burning Glass)
- Economic Modeling Specialists, International (Emsi)
- Bureau of Labor Statistics (BLS)
- Employment Development Department, Labor Market Information Division, OES
- California Community Colleges Chancellor's Office Management Information Systems (MIS)
- California Family Needs Calculator, Insight Center for Community Economic Development
- Chancellor's Office Curriculum Inventory (COCI 2.0)

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