

TRANSPORTATION, WAREHOUSING & UTILITIES

MIDDLE-SKILL JOBS IN THE LOS ANGELES BASIN

Transportation and Warehousing includes industries providing transportation of passengers and cargo, warehousing and storage for goods, scenic/sightseeing transportation, and support activities related to modes of transportation. Utilities are firms engaged in the provision of utility services, including electric power, natural gas, steam supply, water supply, and sewage removal.

Demand for the transportation and warehousing services industry is susceptible to fluctuations, as it is tied to economic growth. The success of large sectors, like manufacturing, retail, construction, and automotive is expected to maintain industry strength. Furthermore, urbanization and increasing population density will provide new opportunities for developing mass transit systems.

The greatest trend that industry leaders are currently capitalizing on is the rise of electronic commerce. As businesses and consumers interact more online and traditional store models decline in popularity, demand for delivery services has skyrocketed. The growth of digital transactions has also created significant demand for warehousing space, as retailers look to build up larger inventories off-site.

Technology will play a key role in the industry's workforce development, as certain tasks will become automated to reduce costs and enhance service. Some technological advances will improve the productivity of current workers. For example, route optimization services lessen fuel costs and help shipments reach their destination faster, while transportation-sharing applications connect shippers and local truckers to facilitate "last-mile" delivery. In addition, new management systems are allowing administrators to more efficiently oversee fleets of vehicles or warehouse operations, using information technology like GPS and RFID tags to accurately track and manage goods. However, certain innovations are poised to negatively impact employment. Autonomous driving technology and unmanned vehicles, that are being explored for commercial freight, as well as warehouse automation of pick and pack operations, will lower spending on crews and related support systems and replace the jobs of some workers.

Utilities are also at the forefront of technological innovation, as companies respond to consumer demand for increased control over their energy usage. In response, firms are increasing their investment in innovation and research efforts to improve the cost, performance, and scalability of its services. In response, firms are increasing their investment in innovation and research efforts to improve the cost, performance, and scalability of their services. The industry as a whole will face significant demand in the future, and companies that can make their services more efficient by effectively harnessing technology will come out on top.

THE INDUSTRY IN THE L.A. BASIN

2017 JOBS:

274,420

2017 AVERAGE ANNUAL WAGES

Transportation Industry:

Transportation: **\$64,850**

Warehousing: **\$53,330**

Utilities: **\$112,930**

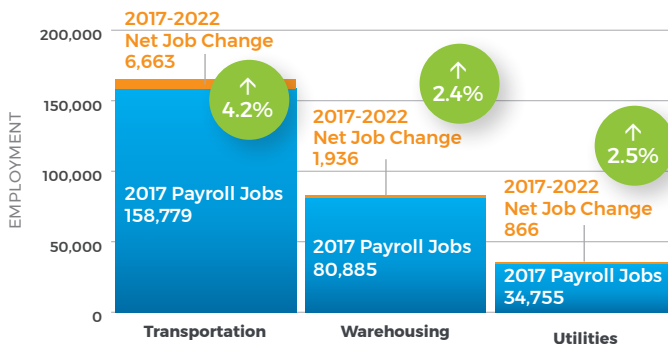
L.A. Basin Average: **\$62,450**

TOTAL OPENINGS 2017-2022

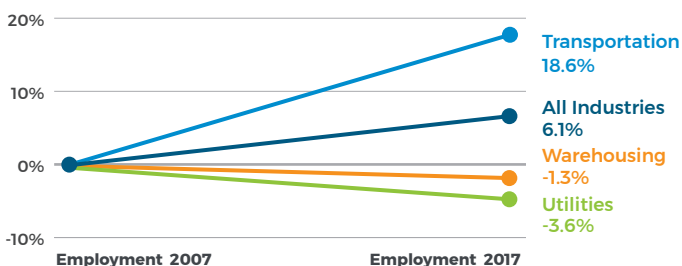
Middle-Skill Jobs in Industry: **40,550**

Target Occupations, ALL Industries: **4,680**

TRANSPORTATION, WAREHOUSING & UTILITIES INDUSTRY OUTLOOK



CHANGE IN EMPLOYMENT FROM 2007-2017



CHANGE IN REAL WAGES FROM 2007-2017



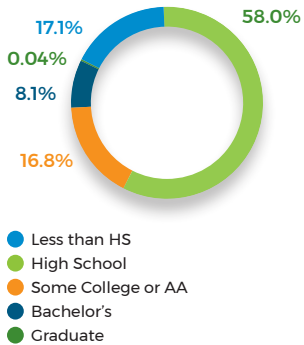
EXHIBITS

Employment in transportation, warehousing, and utilities is expected to grow in the L.A. Basin to over 283,000 by 2022, with a projected 25,000 openings between 2017 and 2022. Each of these three industries will add jobs at a rate between 2 and 5 percent over the period.

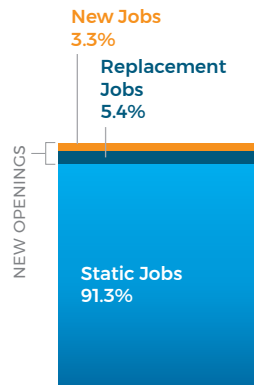
In terms of employment and real wage growth, from 2007 to 2017, transportation has been the most successful; its overall employment has grown by nearly 20 percent and real wages have moderately increased. Warehousing and utilities have underperformed relative to the regional industry average, their employment decreased over the period and real wages remained relatively flat or declined.

There is a significant share of middle-skill jobs in the transportation, warehousing, and utilities sector, nearly half of projected job openings between 2017 and 2022 are expected to be middle-skill. Of all workers hired in the sector in 2017, approximately 49.5 percent completed at least some college education, while the rest had only attained a high school diploma or less.

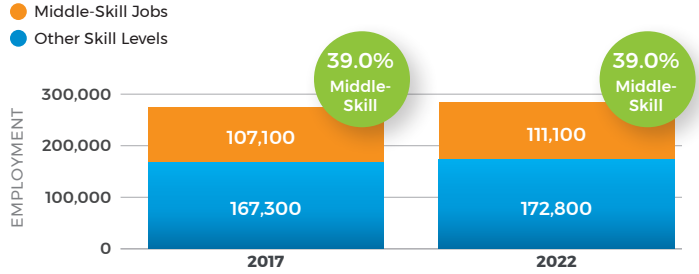
MINIMUM ENTRY-LEVEL EDUCATION REQUIREMENTS FOR TRANSPORTATION, WAREHOUSING & UTILITIES IN 2017



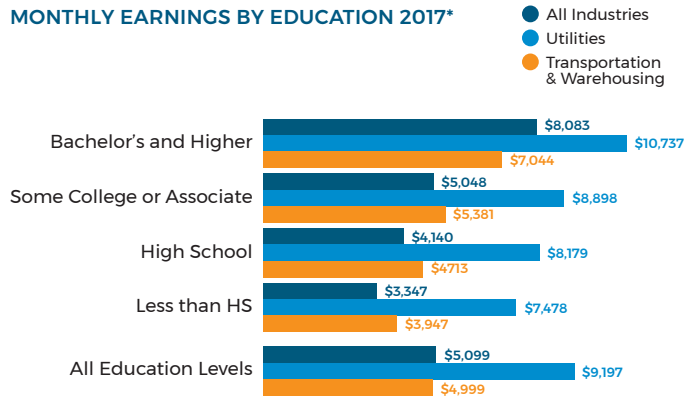
283,880 JOBS IN 2022 (24,762 NEW OPENINGS)



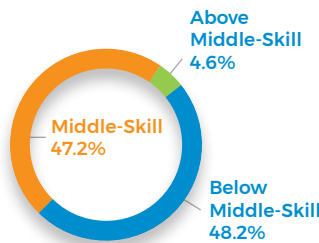
MIDDLE-SKILL JOB SHARE IN INDUSTRY 2017 AND 2022



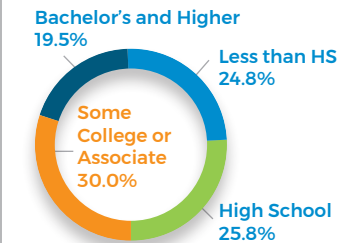
MONTHLY EARNINGS BY EDUCATION 2017*



SKILL CLASSIFICATIONS OF TOTAL OPENINGS 2017-2022



ALL WORKERS* HIRED IN TRANSPORTATION, WAREHOUSING & UTILITIES 2017



* Workers aged 25 years and over Source: US Census Bureau

Target Middle-Skill Occupations in the Industry

Middle-skill occupations predicted to have significant job prospects over the next five years and that stand to benefit from investment into postsecondary non-degree and career education programs include the following:

SOC	Target Middle-Skill Occupation	TRANSPORTATION INDUSTRY		TOTAL ALL INDUSTRIES		
		2017 Jobs	5-Year Total Openings	2017 Jobs	5-Year Total Openings	Median Hourly Wage
49-3011	Aircraft Mechanics and Service Technicians	4,175	1,203	5,510	1,587	\$31.66
49-9051	Electrical Power-Line Installers and Repairers	1,622	364	845	398	\$22.00
13-1081	Logisticians	975	310	7,070	2,244	\$38.98
49-2095	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	949	242	949	242	\$37.00
49-2091	Avionics Technicians	414	129	453	208	\$33.07

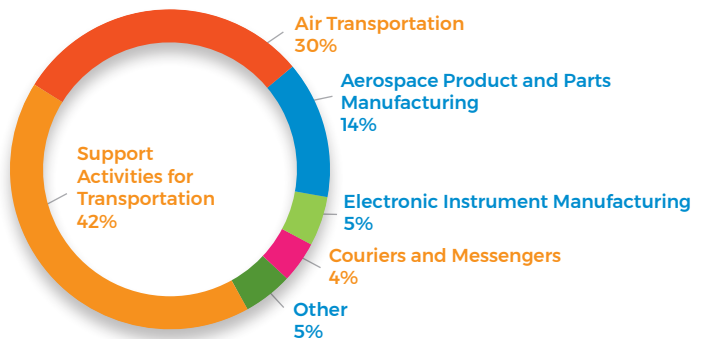
Aircraft Mechanics and Service Technicians (SOC 49-3011)

Aircraft mechanics and service technicians diagnose, adjust, repair, or overhaul aircraft engines and assemblies, such as hydraulic and pneumatic systems. Includes helicopter and aircraft engine specialists.

COMMUNITY COLLEGE PROGRAMS IN THE L.A. BASIN

Awards	2015	2016	2017
Aeronautical & Aviation Technology	43	45	52
Aviation Airframe Mechanics	84	73	104
Aviation Powerplant Mechanics	90	68	110
Aircraft Fabrication	No Completions		
Total	217	186	266

INDUSTRY DISTRIBUTION OF WORKERS IN L.A. BASIN IN 2017



AGE DISTRIBUTION OF WORKERS IN L.A. BASIN IN 2017



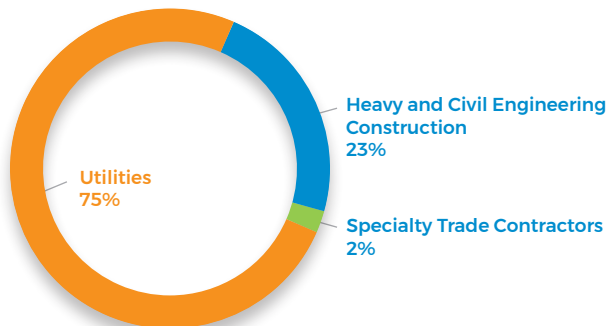
Electrical Power-Line Installers and Repairers (SOC 49-9051)

Electrical power-line installers and repairers install or repair cables or wires used in electrical power or distribution systems. May erect poles and light- or heavy-duty transmission towers.

COMMUNITY COLLEGE PROGRAMS IN THE L.A. BASIN

Awards	2015	2016	2017
Electrical	178	140	177

INDUSTRY DISTRIBUTION OF WORKERS IN L.A. BASIN IN 2017



AGE DISTRIBUTION OF WORKERS IN L.A. BASIN IN 2017



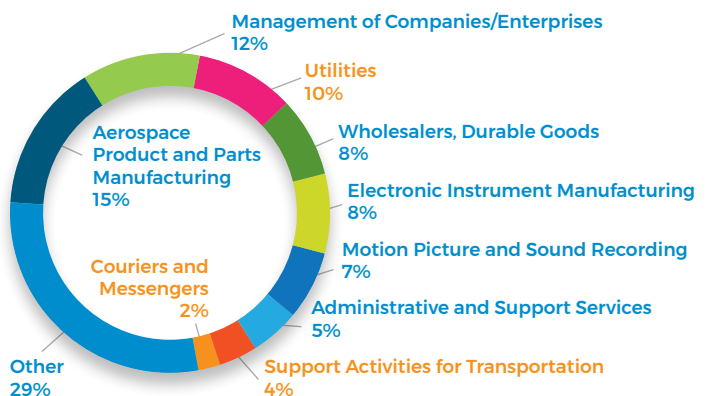
Logisticians (SOC 13-1081)

Logisticians analyze and coordinate the logistical functions of a firm or organization. Responsible for the entire life cycle of a product, including acquisition, distribution, internal allocation, delivery, and final disposal of resources.

COMMUNITY COLLEGE PROGRAMS IN THE L.A. BASIN

Awards	2015	2016	2017
Logistics & Materials Transportation	218	161	226

INDUSTRY DISTRIBUTION OF WORKERS IN L.A. BASIN IN 2017



AGE DISTRIBUTION OF WORKERS IN L.A. BASIN IN 2017



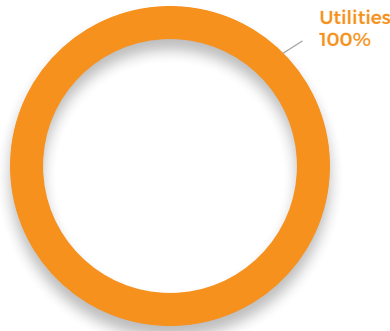
Electrical and Electronics Repairers, Powerhouse, Substation, and Relay (SOC 49-2095)

Electrical and electronics repairers (powerhouse, substation and relay) inspect, test, repair, or maintain electrical equipment in generating stations, substations, and in-service relays.

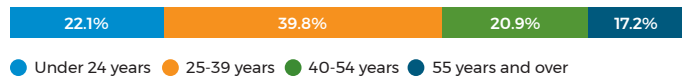
COMMUNITY COLLEGE PROGRAMS IN THE L.A. BASIN

Awards	2015	2016	2017
Electronics & Electric Technology	354	366	335
Electrical Systems & Power Transmission	25	1	4
Total	379	367	339

INDUSTRY DISTRIBUTION OF WORKERS IN L.A. BASIN IN 2017



AGE DISTRIBUTION OF WORKERS IN L.A. BASIN IN 2017



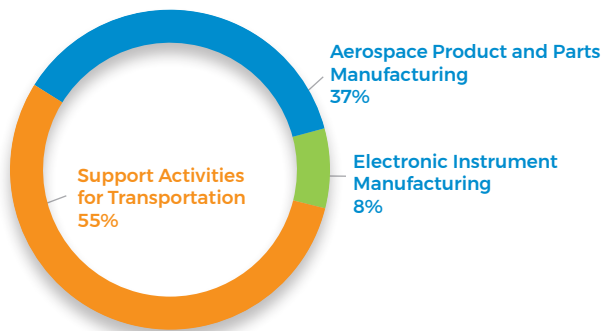
Avionics Technicians (SOC 49-2091)

Avionics technicians install, inspect, test, adjust, or repair avionics equipment, such as radar, radio, navigation, and missile control systems in aircraft or space vehicles.

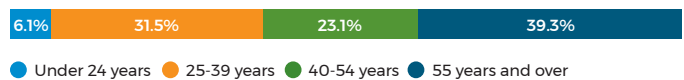
COMMUNITY COLLEGE PROGRAMS IN THE L.A. BASIN

Awards	2015	2016	2017
Aeronautical & Aviation Technology	43	45	52
Aircraft Electronics (Aviation)	No Completions		
Aircraft Fabrication	No Completions		

INDUSTRY DISTRIBUTION OF WORKERS IN L.A. BASIN IN 2017



AGE DISTRIBUTION OF WORKERS IN L.A. BASIN IN 2017



For more information about middle-skill jobs in the L.A. Basin, visit www.CompetitiveWorkforce.LA