



# OCCUPATIONAL OUTLOOK HANDBOOK

## Architectural and Engineering Managers Summary

Quick Facts: Architectural and Engineering Managers	
2021 Median Pay	\$152,350 per year \$73.25 per hour
Typical Entry-Level Education	Bachelor's degree
Work Experience in a Related Occupation	5 years or more
On-the-job Training	None
Number of Jobs, 2020	197,800
Job Outlook, 2020-30	4% (Slower than average)
Employment Change, 2020-30	8,100

### What Architectural and Engineering Managers Do

Architectural and engineering managers plan, direct, and coordinate activities in architectural and engineering companies.

### Work Environment

Most architectural and engineering managers work in offices, although some may also work in research laboratories and industrial production plants or at construction sites. Most work full time and some work more than 40 hours a week.

### How to Become an Architectural or Engineering Manager

Architectural and engineering managers typically need at least a bachelor's degree and considerable work experience as an architect or engineer.

### Pay

The median annual wage for architectural and engineering managers was \$152,350 in May 2021.

### Job Outlook

Employment of architectural and engineering managers is projected to grow 4 percent from 2020 to 2030, slower than the average for all occupations.

Despite limited employment growth, about 14,700 openings for architectural and engineering managers are projected each year, on average, over the decade. Most of those openings are expected to result from the need to replace workers who transfer to different occupations or exit the labor force, such as to retire.

### State & Area Data

Explore resources for employment and wages by state and area for architectural and engineering managers.

### Similar Occupations

Compare the job duties, education, job growth, and pay of architectural and engineering managers with similar occupations.

### More Information, Including Links to O\*NET

Learn more about architectural and engineering managers by visiting additional resources, including O\*NET, a source on key characteristics of workers and occupations

## What Architectural and Engineering Managers Do

Architectural and engineering managers plan, direct, and coordinate activities in architectural and engineering companies.

### Duties

- Architectural and engineering managers typically do the following:
- Make detailed plans for the development of new products and designs
- Determine staff, training, and equipment needs
- Propose budgets for projects and programs
- Hire and supervise staff
- Lead research and development projects to produce new products, processes, or designs
- Check the technical accuracy of their staff's work
- Ensure the soundness of methods their staff uses
- Coordinate work with other staff and managers

Architectural and engineering managers use their knowledge of architecture or engineering to oversee a variety of activities. They may direct and coordinate building activities at construction sites or activities related to production, operations, quality assurance, testing, or maintenance at manufacturing sites.

Architectural and engineering managers are responsible for developing the overall concept of a new product or for solving the technical problems that prevent the completion of a project. To accomplish this, they must determine technical goals and produce detailed plans.

Architectural and engineering managers spend a great deal of time coordinating the activities of their staff with the activities of other staff or

organizations. They often confer with other managers, including those in finance, production, and marketing, as well as with contractors and equipment and materials suppliers.

In addition, architectural and engineering managers must know how to prepare budgets, hire staff, and supervise employees. They propose budgets for projects and programs and determine staff, training, and equipment needs. These managers must also hire people and assign them specific parts of each project to carry out. Architectural and engineering managers supervise the work of their employees, set schedules, and create administrative procedures.

## Work Environment

Architectural and engineering managers held about 197,800 jobs in 2020. The largest employers of architectural and engineering managers were as follows:

- Manufacturing 34%
- Architectural, engineering, and related services 27
- Government 9
- Scientific research and development services 6
- Management of companies and enterprises 5

Most architectural and engineering managers work in offices, although some may also work in research laboratories and industrial production plants or at construction sites.

### Work Schedules

Most architectural and engineering managers work full time and some work more than 40 hours a week. These managers are often under considerable pressure to meet deadlines and budgets.

## How to Become an Architectural or Engineering Manager

Architectural and engineering managers typically need at least a bachelor's degree and considerable work experience as an architect or engineer.

### Education

Architectural and engineering managers typically need at least a bachelor's degree in engineering or architecture.

Some also obtain business management skills by completing a master's degree in engineering management (MEM or MsEM) or technology management (MSTM) or a master's degree in business administration (MBA). Some workers earn their master's degree before advancing to management positions, and others earn it while they work as a manager. Typically, those who prefer to manage in technical areas pursue an MsEM or MSTM and those interested in more general management skills earn an MBA.

Engineering management programs usually include classes in accounting, engineering economics, financial management, industrial and human resources management, and quality control.

Technology management programs typically provide instruction in production and operations management, project management, computer applications, quality control, safety and health issues, statistics, and general management principles.

### Work Experience in a Related Occupation

Managers advance to their positions after years of employment as an architect or engineer. They usually have experience working on difficult or complex projects, developing designs, solving problems, and making decisions. Before moving up to a management position, they also typically gain experience leading engineering teams.

### Important Qualities

**Analytical skills.** Architectural and engineering managers must evaluate information carefully and solve complex problems.

**Communication skills.** Architectural and engineering managers oversee staff and work together with other levels of management. They must effectively communicate orders and lead teams to meet goals.

**Detail oriented.** Architectural and engineering managers must pay attention to detail. Their duties require an understanding of complex systems since a minor error can cause major problems.

**Math skills.** Architectural and engineering managers use calculus and other advanced mathematics to develop new products and processes.

**Organizational skills.** Architectural and engineering managers keep track of many workers, schedules, and budgets simultaneously.

## Pay

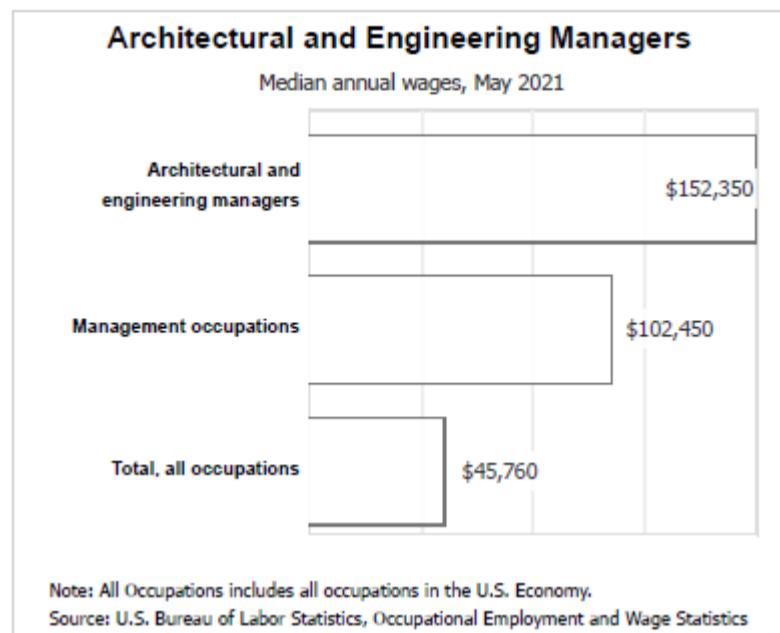
The median annual wage for architectural and engineering managers was \$152,350 in May 2021. The median wage is the wage at which half the workers in an occupation earned more than that amount and half earned less. The lowest 10 percent earned less than \$99,350, and the highest 10 percent earned more than \$208,000.

In May 2021, the median annual wages for architectural and engineering managers in the top industries in which they worked were as follows:

- Scientific research and development services \$187,240
- Management of companies and enterprises 164,060
- Manufacturing 151,890
- Architectural, engineering, and related services 151,870
- Government 135,150

In addition, some architectural and engineering managers may receive more benefits such as expense accounts and bonuses than workers who are not managers.

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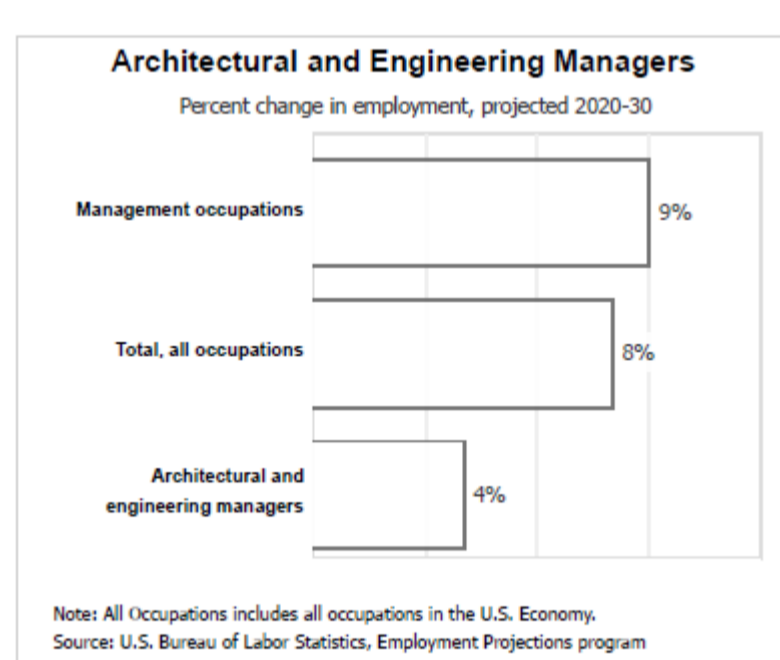
## Job Outlook

Employment of architectural and engineering managers is projected to grow 4 percent from 2020 to 2030, slower than the average for all occupations.

Despite limited employment growth, about 14,700 openings for architectural and engineering managers are projected each year, on average, over the decade. Most of those openings are expected to result from the need to replace workers who transfer to different occupations or exit the labor force, such as to retire.

### Employment

Employment growth will largely reflect the growth of the industries in which these managers are employed. Demand for civil engineering services is expected to continue as the nation's aging infrastructure requires expansion and repair. Mechanical and electrical engineering services should also be needed for projects such as wind turbine farms and other renewable energy construction and design.



## Employment projections data for architectural and engineering managers, 2020-30

### Architectural and engineering managers

#### SOC Code:

11-9041

#### Employment, 2020:

197,800

#### Projected Employment, 2030:

205,900

#### Change, 2020-30 (Percent):

4

#### Change, 2020-30 (Numeric):

8,100

#### Employment By Industry:

[Get data](#)

## State & Area Data

### Occupational Employment and Wage Statistics (OEWS)

The Occupational Employment and Wage Statistics (OEWS) program produces employment and wage estimates annually for over 800 occupations. These estimates are available for the nation as a whole, for individual states, and for metropolitan and nonmetropolitan areas. The link(s) below go to OEWS data maps for employment and wages by state and area.

- [Architectural and engineering managers](#)

### Projections Central

Occupational employment projections are developed for all states by Labor Market Information (LMI) or individual state Employment Projections offices. All state projections data are available at [www.projectionscentral.com](http://www.projectionscentral.com)

Information on this site allows projected employment growth for an occupation to be compared among states or to be compared within one state. In addition, states may produce projections for areas; there are links to each state's websites where these data may be retrieved.

### CareerOneStop

CareerOneStop includes hundreds of occupational profiles with data available by state and metro area. There are links in the left-hand side menu to compare occupational employment by state and occupational wages by local area or metro area. There is also a salary info tool to search for wages by zip code.

## Similar Occupations

This table shows a list of occupations with job duties that are similar to those of architectural and engineering managers.

### Aerospace Engineers

#### Job Duties:

Aerospace engineers design primarily aircraft, spacecraft, satellites, and missiles.

#### Entry-Level Education:

Bachelor's degree

#### 2021 Median Pay:

\$122,270

### Architects

#### Job Duties:

Architects plan and design houses, factories, office buildings, and other structures.

#### Entry-Level Education:

Bachelor's degree

#### 2021 Median Pay:

\$80,180

### Civil Engineers

#### Job Duties:

Civil engineers design, build, and supervise infrastructure projects and systems.

#### Entry-Level Education:

Bachelor's degree

#### 2021 Median Pay:

\$88,050

### Construction Managers

#### Job Duties:

Construction managers plan, coordinate, budget, and supervise construction projects from start to finish.

#### Entry-Level Education:

Bachelor's degree

#### 2021 Median Pay:

\$98,890

### Electrical and Electronics Engineers

**Job Duties:**

Electrical engineers design, develop, test, and supervise the manufacture of electrical equipment.

**Entry-Level Education:**

Bachelor's degree

**2021 Median Pay:**

\$101,780

**Industrial Engineers****Job Duties:**

Industrial engineers devise efficient systems that integrate workers, machines, materials, information, and energy to make a product or provide a service.

**Entry-Level Education:**

Bachelor's degree

**2021 Median Pay:**

\$95,300

**Industrial Production Managers****Job Duties:**

Industrial production managers oversee the operations of manufacturing and related plants.

**Entry-Level Education:**

Bachelor's degree

**2021 Median Pay:**

\$103,150

**Materials Engineers****Job Duties:**

Materials engineers develop, process, and test materials used to create a wide range of products.

**Entry-Level Education:**

Bachelor's degree

**2021 Median Pay:**

\$98,300

**Mechanical Engineers****Job Duties:**

Mechanical engineers design, develop, build, and test mechanical and thermal sensors and devices.

**Entry-Level Education:**

Bachelor's degree

**2021 Median Pay:**

\$95,300

**Nuclear Engineers****Job Duties:**

Nuclear engineers research and develop the processes, instruments, and systems used to derive benefits from nuclear energy and radiation.

**Entry-Level Education:**

Bachelor's degree

**2021 Median Pay:**

\$120,380

## Contacts for More Information

For information on architecture and engineering management programs, visit

[ABET](#)

[American Institute of Architects](#)

[Association of Technology, Management, and Applied Engineering](#)

**CareerOneStop**

For a career video on architectural and engineering managers, visit

[Architectural and engineering managers](#)

**O\*NET**

[Architectural and Engineering Managers](#)

[Biofuels/Biodiesel Technology and Product Development Managers](#)