



Civil engineers

Perform engineering duties in planning, designing, and overseeing construction and maintenance of building structures and facilities, such as roads, railroads, airports, bridges, harbors, channels, dams, irrigation projects, pipelines, power plants, and water and sewage systems. Includes architectural, structural, traffic, and geotechnical engineers.

Cognitive and mental requirements

The qualifications that workers need to use judgement, make decisions, interact with others, and adapt to changes in jobs.

In 2024, more than basic people skills were required for greater than 95 percent of civil engineers, and basic people skills were required for less than 5 percent.

Table 1. Percentage of civil engineers with cognitive and mental requirements, 2024

Requirement	Yes	No
Adaptability: Work schedule variability	12.0	88.0
Pace: Pause control	>99.5	<0.5
Telework	85.3	14.7
Working around crowds	<0.5	>99.5

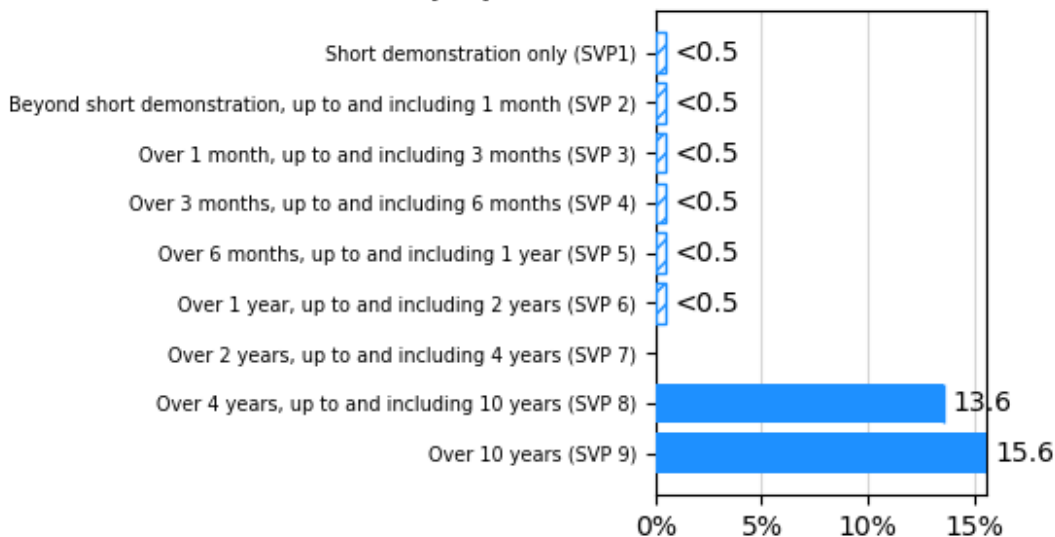
Source: U.S. Bureau of Labor Statistics, Occupational Requirements Survey

Education, training, and experience requirements

The minimum level of formal education required, credentials necessary, on-the-job training, and prior work experience necessary for average performance in jobs.

A bachelor's degree was required for 91.6 percent of civil engineers.

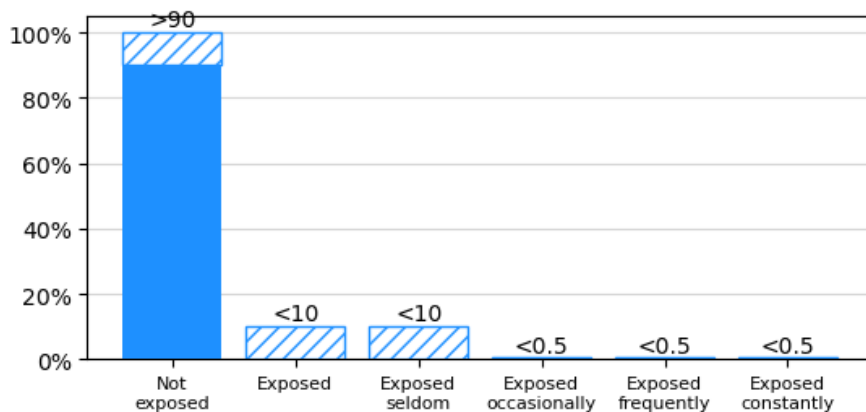
Chart 1. Percentage of civil engineers by specific vocational preparation (SVP) level, 2024



Note: Striped bars represent range estimates where precise value is unpublished.
Source: U.S. Bureau of Labor Statistics, Occupational Requirements Survey



Chart 2. Percentage of civil engineers with wetness exposure and duration, 2024



Note: Striped bars represent range estimates where precise value is unpublished.
Source: U.S. Bureau of Labor Statistics, Occupational Requirements Survey

Environmental conditions

The various tangible or concrete hazards or difficulties that are in the vicinity of where jobs' critical tasks are performed.

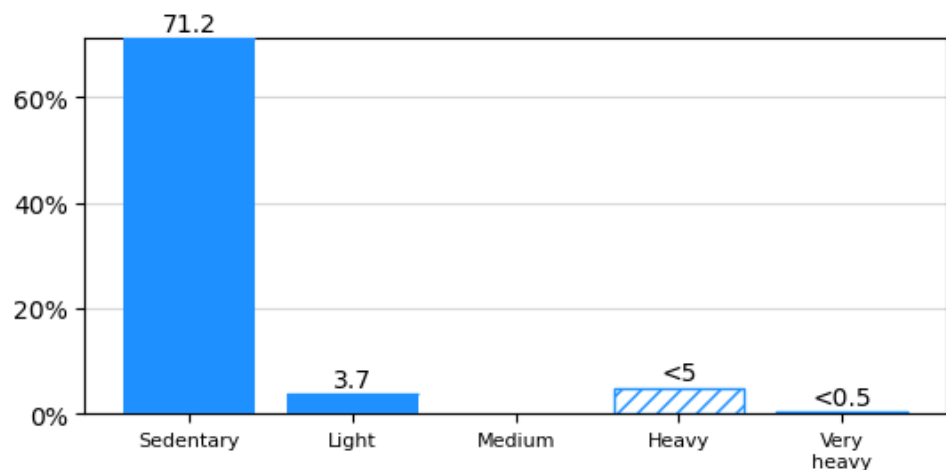
In 2024, a quiet noise exposure was present for 15.8 percent of civil engineers. Another 84.2 percent were exposed to moderate noise, less than 0.5 percent were exposed to loud noise, and less than 0.5 percent to very loud noise. Personal protective equipment (PPE) was used by 3.6 percent of workers to mitigate noise exposure, and was not used by 96.4 percent.

Physical demands

Refer to the physical activities required to perform tasks in jobs. The presence and, in some cases, duration of these activities are published.

The choice to sit or stand when performing critical tasks was available to 93.0 percent of civil engineers. On average, workers spent 81.5 percent of the workday sitting and 18.5 percent of the workday standing.

Chart 3. Percentage of civil engineers by strength level requirements, 2024



Note: Striped bars represent range estimates where precise value is unpublished.
Source: U.S. Bureau of Labor Statistics, Occupational Requirements Survey

Table 2. Percentage of civil engineers with physical demands, 2024

Requirement	Yes	No
Choice of sitting or standing	93.0	7.0

Source: U.S. Bureau of Labor Statistics, Occupational Requirements Survey