

Concrete Mason

At a Glance

Concrete masons mix, pour, and smooth concrete. They help make everything from skyscrapers to driveways.

16 Career Clusters

Architecture & Construction

Earnings

Earnings Range: 11 - 31/hr

Level of Education

- High School
- 2-Year College or Technical Training

Core Tasks

- Build forms to the right dimensions to hold wet concrete as it hardens
- Mix concrete to the correct consistency
- Pour concrete into the forms
- Level off the top of the concrete and smooth out the surface
- Apply finishes such as putting small gravel chips in the surface for a pebble finish

Attributes & Abilities

- Physically fit
- Work well as part of a team
- Hand-eye coordination
- Communication skills

Workplace

- Most work for concrete contractors or general contractors
- Some work for concrete product manufacturers
- Work outdoors most of the time
- A lot of exposure to mud and dust
- Must wear safety boots and hard hats, and many wear kneepads

Job Description

There are countless structures made of concrete across the country. Just think of the Hoover Dam and the Empire State Building. For each of these structures, someone had to mix, lay, and finish the concrete. This is the work of concrete masons.

Concrete is a hardened mixture of cement, sand, gravel, and water. It is used for many construction projects. Dams and skyscrapers may leap to mind when you think of big concrete structures. But bridges and roads also use vast amounts of concrete.

Before the concrete is poured, a frame or "form" is built to hold it as it hardens. On some jobs concrete masons set the forms. Other times, construction laborers do it under the supervision of the mason. Masons make sure the forms are at the right depths and properly lined up.

Once the forms are set, masons direct the pouring of the wet concrete. They supervise workers who use shovels and other tools to spread it. Using a tool called a straightedge, workers level off the top of the concrete. Then, they smooth or "float" the surface with a long-handled tool called a bull float.

Masons might shape the corners of the concrete to prevent it from chipping. To do this, they press an edger between the forms and the concrete. This results in rounded edges, which are less likely to chip. They use a tool called a groover to make joints or grooves that also help control cracking.

The next step is to trowel the surface using either hand or power trowels. These are small, rectangular metal tools. They remove imperfections and bring the fine cement paste to the surface. Troweling back and forth across the concrete provides a good smooth finish.

There are different finishes masons can apply to concrete. They may brush the surface with a broom for a coarse finish. They may put small gravel chips on the surface for a pebble finish. Some surfaces, such as ceilings and walls, remain exposed after they remove the forms.

For a final, finished look, masons may have to chip away loose concrete. They do this with a hammer and chisel. They may also have to fill holes in the surface with cement paste.

Some masons also work with terrazzo. This is used on top of finished concrete. It creates marble-chip walkways, floors, and patios. Others restore the stonework on old buildings.

Working Conditions

Most concrete masons work for concrete contractors or for general contractors. They work on projects such as:

- bridges
- highways
- dams
- buildings
- sidewalks

A few work for concrete product manufacturers. Masons who work in terrazzo are usually employed by contractors. They install decorative floors and wall panels. Few concrete masons are self-employed.

Concrete work is fast and strenuous. Most finishing is done at floor level and involves a lot of bending and kneeling. Masons also work on scaffolds. They often need to carry heavy equipment and materials.

Many masons wear kneepads to prevent sore knees. Kneepads also prevent the chemical burns that are caused by kneeling on concrete. Waterproof boots are worn when working in wet concrete. Other protective gear includes hard hats and safety glasses. Some also wear respirators to filter out cement dust.

A lot of this work is done outside. Work may need to be stopped during bad weather conditions, like freezing rain.

Concrete masons usually work 40 hours a week. They often work longer hours during the summer. They do more concrete work during this time. They tend to start their day early in the morning.

Earnings

Concrete masons tend to earn from about \$13 to \$33 an hour. For those who work full time, that is about \$27,000 to \$68,000 a year. Median earnings for all concrete masons are about \$19 an hour, or \$39,000 a year.

Apprentices start out making a percentage of the wage qualified masons earn. They usually start at 50 to 65% of the wage. They receive steady raises as they progress through their training.

Income depends on experience and location. It also depends on whether the job is unionized. Those who belong to unions typically earn higher wages than those who do not. The highest wages tend to be made by those in supervisory positions. Overtime pay rates depend on the employer or union contract.

Those who work full time often get benefits. These can include paid sick days and vacation pay. They may also get dental coverage.

Massachusetts Wages

Occupation: Cement Masons and Concrete Finishers

Level of Experience	Hourly	Annual
Entry Wage	\$16.67	\$34,670
Median Wage	\$21.02	\$43,720
Experienced Wage	\$26.81	\$55,760

Source: U.S. Department of Labor, Bureau of Labor Statistics <http://www.bls.gov>

Massachusetts Outlook

Occupation: Cement Masons and Concrete Finishers

Employment

2014	1,290
2024	1,340

Change

Number	50
Percentage	4.1

Annual Average Openings

Total	Growth	Replacement
20	--	--

Source: Projections Central <http://www.projectionscentral.com>

Education

Many concrete masons enter this field through an apprenticeship. Another option is an informal on-the-job training program.

An apprenticeship program takes 3 to 4 years. They are offered through local contractors and trade associations. They are also offered through unions. In these programs, you work full time with trained masons. You also take classes where you study applied math, blueprint reading, and safety.

If you get informal training, you start out as a helper to masons. You begin by doing simple tasks. For example, you may do edging and jointing. You then progress to more complicated tasks. It is helpful to take courses in masonry during this period. Courses are offered at many 2-year colleges and technical schools.

To work as an apprentice or helper, you will need to find an employer who will hire you. They often prefer you to have a high school diploma.

High school courses in drafting and blueprint reading are useful. Math and shop classes are handy as well.

A driver's license is also helpful. You may have to drive to the job site.

Related College Programs

- Concrete Finishing/Concrete Finisher
- Mason/Masonry
- Construction Trades, General

Other Suggested Qualifications

Good general health is necessary as a lot of heavy lifting and strenuous activity is involved. You should also have good hand-eye coordination and manual dexterity. In addition, you should be a good team player and get along well with others. In particular, good communication skills will help foster the teamwork and cooperation required to complete many concrete masonry projects. High school courses in drafting, blueprint reading, math, and shop are useful. A driver's license is also helpful because you may have to drive to the job site.

Sample High School Program of Study

This Program of Study can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals.

Construction Architecture & Construction

Grade 9	Grade 10	Grade 11	Grade 12
English/Language Arts			
English/Language Arts I	English/Language Arts II	English/Language Arts III Technical Writing	English/Language Arts IV
Math			
Algebra I	Geometry	Algebra II	Construction Math Statistics
Science			
Earth or Life or Physical Science	Biology	Physics	Chemistry
Social Studies/Sciences			

Grade 9	Grade 10	Grade 11	Grade 12
State History Civics or World History	U.S. History	Economics Psychology	
Career & Technical Courses			
Introduction to the Built Environment	The Language of Architecture and Construction Information Technology Applications	Safety, Health and the Workplace Environment Principles of Construction	Applications in Construction

States' Career Clusters Initiative, 2008, www.careerclusters.org.

Important

- Check with your advisor to make sure that your course selections satisfy your graduation requirements.
- Courses available may vary from school to school.

Sample Career Path

People take different pathways through their careers, but no one starts at the top. This is an example of how the earnings, education and experience requirements, and responsibilities might progress for someone in this occupation.

Level 1

Sample Title	Apprentice
Earnings	\$10 to \$16 an hour
Requirements	<ul style="list-style-type: none"> • High school diploma • Find an employer willing to hire you as an apprentice

Level 2

Sample Title	Journey-Level Mason
Earnings	\$16 to \$24 an hour
Requirements	<ul style="list-style-type: none"> • Completion of apprenticeship

Level 2

Responsibilities	Mixing cement; applying cement; smoothing; finishing.
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Level 3

Sample Title	Foreperson
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Earnings	\$22 to \$31 an hour
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Requirements	<ul style="list-style-type: none">• At least 5 years of experience• A good understanding of how other trades work• Good communication and supervisory skills
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Responsibilities	Supervising and coordinating all the people on a site from the different construction trades.
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Related Careers

Here are some other occupations that you might be interested in. Click on an occupation name to learn more.

- Boilermaker
- Bricklayer / Stonemason
- Carpenter
- Construction Tradesperson
- Drywaller
- Electrician
- Flooring Installer
- Glazier
- Ironworker
- Millwright
- Pipefitter
- Plasterer
- Plumber
- Sheet Metal Worker
- Tilesetter

Related Military Careers

- Construction Specialist

Career Clusters

Career Clusters are groups or families of occupations that share common characteristics such as knowledge requirements, skill sets, and/or goals.

Architecture & Construction

National Employment by Industry

Industry	% Employed
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Construction	87
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Source: O*Net Online, Browse by Industry, US Department of Labor
<http://online.onetcenter.org/find/industry>

Other Resources

Mason Contractors Association of America (MCAA)

A national trade organization for masonry contractors and suppliers. Scroll over Careers and click on Career Information to get great information about masonry and becoming a mason.
<http://www.masoncontractors.org>

Operative Plasterers' and Cement Masons' International Association (OPCMIA)

This organization represents plasterers and cement masons. Scroll over About OPCMIA and click on Our Industry to learn more about the plaster and concrete industries.
<http://www.opcmia.org>

Building Advantage – Apprenticeship Program

This organization aims to raise awareness about construction and trade unions. Here you can find excellent career videos to help you learn more about a variety of careers.
<http://www.buildingadvantage.org/apprenticeship>

Masonry Magazine

An online magazine about masonry in general. Scroll over Magazine on the left to find access to the archives or to the current issue.
<http://www.masonrymagazine.com>

International Masonry Institute (IMI)

This organization offers masonry training through an alliance with the International Union of Bricklayers and Allied Craftworkers and their contractors. Click on Training for more information.
<http://www.imiweb.org>

ConcreteNetwork.Com

News, information, and links for concrete masons and related workers.
<http://www.concretenetwork.com>

Choose Construction

This is a career and education guide for students focusing on the construction industry in the US. Click on Career Options to discover different careers.
<http://www.chooseconstruction.org>

ConstructMyFuture.Com

This is a career and education guide focusing on the construction industry. Click on Jobs to discover different careers.
<http://www.constructmyfuture.com/students>

Home Builders Institute (HBI)

HBI provides training for careers in the building industry. Scroll over Programs and click on Career & Certification Services to learn more about the services they offer.
<http://www.hbi.org>

United States Department of Labor – Employment & Training Administration

Visit this website to learn more about apprenticeships. Search the site for more information on apprenticeship opportunities.
<http://www.doleta.gov/oa>

Occupational Outlook Handbook – Cement Masons and Terrazzo Workers

Career information from the US Department of Labor.

<http://www.bls.gov/ooh/Construction-and-Extraction/Cement-mason-and-terrazzo-workers.htm>