



- **Understanding Expansive Clay and Its Impact on Foundations**
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Health

Examination of the methods used to identify expansive clay in a property

Overview of common soil issues leading to foundation problems and their impact on residential properties

Sure, here's a short essay on the topic:

Soil stabilization techniques improve the longevity of foundation repair service **foundation wall repair service** brickwork.

In residential properties, the health of the soil underneath the foundation plays a crucial role in maintaining the structural integrity of homes. Several common soil issues can lead to significant foundation problems, impacting the longevity and safety of residential buildings. Understanding these issues and their effects is essential for employing sustainable methods to ensure long-term soil health.

One prevalent issue is soil erosion, which occurs when soil is washed away by water or wind. Erosion can undermine the foundation, leading to cracks and instability. This problem is often exacerbated by poor landscaping practices and inadequate drainage systems. To combat erosion, sustainable methods such as planting ground cover, installing retaining walls, and creating proper drainage solutions can be employed.

Another common issue is soil compaction, which happens when soil particles are pressed together, reducing the pore space needed for air and water. Compacted soil can lead to poor drainage and increased pressure on the foundation, causing it to settle unevenly. To address compaction, aeration techniques and the addition of organic matter can help restore soil structure and promote better drainage.

Expansive soils, which swell when wet and shrink when dry, pose a significant threat to foundations. This cyclic movement can cause substantial damage over time. Sustainable practices like soil amendment with gypsum, proper moisture management, and the construction of foundations that accommodate movement can mitigate the effects of expansive soils.

Additionally, contamination from chemicals, oils, and other pollutants can degrade soil quality, affecting plant growth and foundation stability. Implementing practices such as phytoremediation, where plants are used to absorb contaminants, and avoiding the use of harmful chemicals in landscaping can preserve soil health.

In conclusion, addressing these common soil issues through sustainable methods is vital for maintaining the structural integrity of residential properties. By promoting practices that

enhance soil health, we can ensure a stable foundation for homes and contribute to the overall sustainability of our living environments.

Examination of sustainable soil testing and analysis techniques to assess soil conditions before foundation repair

Certainly! When we talk about ensuring long-term soil health while also preparing for foundation repairs, it's crucial to integrate sustainable soil testing and analysis techniques. This approach not only helps in accurately assessing the current soil conditions but also promotes practices that sustain the soil's health over time.

Firstly, sustainable soil testing involves using methods that minimize environmental impact. Traditional soil testing can be resource-intensive, requiring significant amounts of water, chemicals, and energy. In contrast, sustainable techniques focus on reducing these inputs. For instance, employing digital sensors that provide real-time data on soil conditions can cut down on the need for physical samples, thus conserving resources.

Moreover, analyzing soil for foundation repair isn't just about identifying issues like compaction or contamination. It's also about understanding the soil's biological activity, nutrient levels, and organic matter content. These factors play a crucial role in the soil's ability to support plant life and, by extension, the stability of any structure built upon it. Techniques like bio-indicator analysis, which assesses the presence and health of certain organisms in the soil, offer insights into the soil's overall health and its capacity to support both natural ecosystems and human-made structures.

Incorporating sustainable analysis techniques also means looking beyond the immediate needs of foundation repair. It's about adopting a holistic view that considers the long-term implications of our actions on the soil. This might involve Soil Carbon Sequestration Assessments, which not only help in understanding the soil's carbon storage capacity but also its potential to mitigate climate change effects.

Furthermore, engaging local communities and stakeholders in the soil testing process can foster a sense of ownership and responsibility towards soil health. Educational workshops on sustainable soil management practices can empower individuals to contribute to soil conservation efforts, creating a ripple effect that benefits both the immediate area and the broader environment.

In conclusion, examining sustainable soil testing and analysis techniques for assessing soil conditions before foundation repair is not just a technical necessity but a step towards ensuring long-term soil health. By adopting methods that are environmentally friendly, holistic in approach, and inclusive of community participation, we can pave the way for a sustainable future where soil health and structural integrity go hand in hand.

Discussion on the use of eco-friendly materials and methods in foundation repair to minimize environmental impact

When discussing the use of eco-friendly materials and methods in foundation repair, it's essential to highlight the significance of adopting sustainable practices to minimize environmental impact and promote long-term soil health. Foundation repair is a crucial aspect of maintaining structural integrity, but traditional methods often involve materials and techniques that can harm the environment. By shifting towards eco-friendly alternatives, we can achieve effective repairs while also preserving the ecosystem.

One of the primary considerations in eco-friendly foundation repair is the selection of materials. Traditional methods often rely on cement and concrete, which are energy-intensive to produce and contribute to carbon emissions. In contrast, eco-friendly materials such as recycled aggregates, geopolymers, and bio-based composites offer sustainable alternatives. These materials not only reduce the carbon footprint but also provide comparable, if not superior, performance in terms of strength and durability.

Another important aspect is the repair techniques employed. Conventional methods may involve extensive excavation and disruption of the surrounding soil, leading to erosion and habitat destruction. Eco-friendly methods focus on minimizing soil disturbance. Techniques such as soil stabilization using natural binders, injection of sustainable grouts, and the use of permeable materials allow for repairs with less impact on the environment. These methods help maintain soil structure and promote healthier root systems for vegetation, contributing to overall soil health.

Furthermore, the integration of green technologies in foundation repair can enhance sustainability. For instance, the use of microbial-induced calcite precipitation (MICP) is an innovative approach that leverages naturally occurring microorganisms to strengthen soil. This biological method not only reduces the need for chemical additives but also fosters a healthier soil microbiome.

In conclusion, adopting eco-friendly materials and methods in foundation repair is a vital step towards employing sustainable practices for long-term soil health. By choosing materials with lower environmental impact and utilizing techniques that preserve soil integrity, we can ensure that our repair efforts contribute to a healthier planet. This approach not only addresses immediate structural concerns but also supports the broader goal of environmental stewardship.

Strategies for implementing sustainable drainage solutions to prevent soil erosion and waterlogging near foundations

When it comes to preserving long-term soil health and preventing issues such as soil erosion and waterlogging near foundations, employing sustainable drainage solutions is

paramount. Here are several strategies to consider:

First and foremost, integrating permeable paving materials can significantly mitigate water accumulation. Unlike traditional impervious surfaces, permeable pavers allow rainwater to infiltrate the ground, reducing runoff and promoting natural drainage. This not only helps in preventing waterlogging but also aids in replenishing groundwater reserves.

Another effective strategy is the implementation of bioswales and rain gardens. These landscaped areas are designed to capture and filter stormwater runoff, utilizing native vegetation and soil amendments to facilitate infiltration and reduce erosion. By strategically placing bioswales and rain gardens around foundations, property owners can effectively manage stormwater while enhancing the aesthetic appeal of their surroundings.

Furthermore, constructing retention basins or detention ponds can serve as crucial components in sustainable drainage systems. These engineered structures temporarily store stormwater during heavy rainfall events, allowing for gradual release and infiltration into the soil. By regulating water flow and reducing peak discharge rates, retention basins help prevent flooding and soil erosion near foundations.

Incorporating green roofs into building designs offers another innovative solution for sustainable drainage. Green roofs consist of vegetation-covered layers installed on rooftops, which absorb rainwater and reduce runoff. In addition to providing drainage benefits, green roofs offer insulation, improve air quality, and create habitats for urban wildlife.

Additionally, practicing proper land grading and contouring can enhance natural drainage patterns and minimize the risk of waterlogging. By sloping land away from foundations and creating swales or channels to direct water flow, property owners can effectively manage stormwater while preserving soil integrity.

Lastly, educating communities and stakeholders about the importance of sustainable drainage practices is essential for long-term success. By raising awareness and fostering collaboration among residents, developers, and local authorities, we can collectively work towards implementing and maintaining effective drainage solutions that promote soil health and resilience in the face of changing climate conditions.

In conclusion, by adopting a multifaceted approach that incorporates permeable paving, bioswales, retention basins, green roofs, proper land grading, and community engagement, we can effectively implement sustainable drainage solutions to prevent soil erosion and waterlogging near foundations, ultimately safeguarding long-term soil health for generations to come.

Importance of vegetation management and landscaping practices in maintaining soil stability around residential foundations

In the pursuit of long-term soil health, especially around residential foundations, the importance of vegetation management and landscaping practices cannot be overstated. These practices play a crucial role in maintaining soil stability, which is essential for preventing erosion, reducing the risk of foundation damage, and promoting a healthy ecosystem.

Firstly, vegetation acts as a natural barrier against soil erosion. The roots of plants anchor the soil, preventing it from being washed away by rain or blown away by wind. This is particularly important around residential foundations, where soil erosion can lead to significant structural issues. By carefully selecting and managing vegetation, homeowners can create a stable environment that supports both the soil and the structures built upon it.

Additionally, proper landscaping practices contribute to the overall health of the soil. Techniques such as mulching, composting, and the use of native plants can enhance soil fertility and structure. Mulching, for example, helps retain moisture in the soil, reduces weed growth, and adds organic matter as it decomposes. Composting recycles organic waste into nutrient-rich soil amendments, which can be used to improve soil quality around foundations. Native plants, adapted to local conditions, require less water and maintenance, making them a sustainable choice for landscaping.

Furthermore, vegetation management involves regular maintenance practices such as pruning, weeding, and controlling invasive species. These activities help maintain a balanced ecosystem, preventing any single species from dominating and causing harm to the soil structure. Regular monitoring and adjustment of landscaping practices ensure that the soil remains healthy and stable over time.

In conclusion, the employment of sustainable vegetation management and landscaping practices is vital for maintaining soil stability around residential foundations. These practices not only prevent erosion and protect structures but also contribute to the long-term health of the soil. By integrating these methods into residential landscaping, homeowners can ensure a stable and thriving environment for both their properties and the surrounding ecosystem.

Case studies showcasing successful implementation of sustainable methods in residential foundation repair projects

Sure, here's a short essay on the topic:

In recent years, the construction industry has seen a growing emphasis on sustainability, particularly in residential foundation repair projects. By employing sustainable methods, not only can we ensure the longevity and stability of homes, but we also contribute to long-term soil health. Let's delve into some case studies that highlight the successful implementation of these eco-friendly practices.

One notable example is the GreenFix Foundation Repair project in Portland, Oregon. This initiative focused on repairing the foundations of older homes using materials and techniques that minimized environmental impact. Instead of traditional concrete, they opted


for geopolymers concrete, which has a lower carbon footprint and requires less energy to produce. Additionally, they incorporated recycled aggregates into the mix, reducing the need for virgin materials. The result was not only a stronger foundation but also a significant reduction in the project's overall environmental footprint.

Another inspiring case study comes from the EcoFoundations program in Austin, Texas. This project aimed to address soil erosion and foundation instability in residential areas prone to flooding. Instead of relying solely on conventional methods like retaining walls, they implemented bio-engineered solutions. This involved planting native vegetation along the perimeter of properties to stabilize the soil and reduce erosion. Furthermore, they utilized permeable pavers in driveways and walkways to allow rainwater to infiltrate the ground, reducing runoff and promoting groundwater recharge. These sustainable practices not only enhanced the stability of the foundations but also improved the overall health of the surrounding soil.

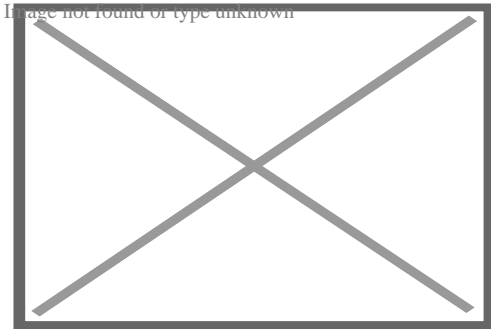
In New York City, the Sustainable Foundations Initiative took a holistic approach to residential foundation repair. They recognized that soil health is intricately linked to the surrounding ecosystem and sought to address this in their projects. One of their key strategies was the use of biochar, a form of charcoal produced from organic waste materials. When incorporated into the soil, biochar has been shown to improve soil structure, increase nutrient retention, and enhance microbial activity. By amending the soil with biochar during foundation repair projects, they not only stabilized the foundations but also promoted long-term soil health and fertility.

These case studies demonstrate that sustainable methods can be effectively implemented in residential foundation repair projects to achieve both structural stability and environmental stewardship. By prioritizing eco-friendly materials, bio-engineered solutions, and holistic approaches to soil health, we can ensure the longevity of our homes while also protecting the natural resources upon which they depend. As the construction industry continues to evolve, it is imperative that we embrace these sustainable practices to create a more resilient and sustainable built environment for future generations.

About building code

 The examples and perspective in this article **may not represent a worldwide view of the subject**. You may improve this article, discuss the issue on the talk page, or create a new article, as appropriate. *(November 2021) (Learn how and when to remove this message)*

Not to be confused with Zoning laws.



Code Violation: This fire-rated concrete block wall is penetrated by cable trays and electrical cables. The hole should be firestopped to restore the fire-resistance rating of the wall. Instead, it is filled with flammable polyurethane foam.

A **building code** (also **building control** or **building regulations**) is a set of rules that specify the standards for construction objects such as buildings and non-building structures. Buildings must conform to the code to obtain planning permission, usually from a local council. The main purpose of building codes is to protect public health, safety and general welfare as they relate to the construction and occupancy of buildings and structures—^[1] for example, the building codes in many countries require engineers to consider the effects of soil liquefaction in the design of new buildings.^[1] The building code becomes law of a particular jurisdiction when formally enacted by the appropriate governmental or private authority.^[2]

Building codes are generally intended to be applied by architects, engineers, interior designers, constructors and regulators but are also used for various purposes by safety inspectors, environmental scientists, real estate developers, subcontractors, manufacturers of building products and materials, insurance companies, facility managers, tenants, and others. Codes regulate the design and construction of structures where adopted into law.

Examples of building codes began in ancient times.^[3] In the USA the main codes are the International Building Code or International Residential Code [IBC/IRC], electrical codes and plumbing, mechanical codes. Fifty states and the District of Columbia have adopted the I-Codes at the state or jurisdictional level.^[4] In Canada, national model codes are published by the National Research Council of Canada.^[5] In the United Kingdom, compliance with Building Regulations is monitored by building control bodies, either Approved Inspectors or Local Authority Building Control departments. Building Control regularisation charges apply in case work is undertaken which should have had been inspected at the time of the work if this was not done.^[6]

Types

[edit]

The practice of developing, approving, and enforcing building codes varies considerably among nations. In some countries building codes are developed by the government agencies or quasi-governmental standards organizations and then enforced across the country by the central government. Such codes are known as the **national building codes** (in a sense they enjoy a mandatory nationwide application).

In other countries, where the power of regulating construction and fire safety is vested in local authorities, a system of model building codes is used. Model building codes have no legal status unless adopted or adapted by an authority having jurisdiction. The developers of model codes urge public authorities to reference model codes in their laws, ordinances, regulations, and administrative orders. When referenced in any of these legal instruments, a particular model code becomes law. This practice is known as 'adoption by reference'. When an adopting authority decides to delete, add, or revise any portions of the model code adopted, it is usually required by the model code developer to follow a formal adoption procedure in which those modifications can be documented for legal purposes.

There are instances when some local jurisdictions choose to develop their own building codes. At some point in time all major cities in the United States had their own building codes. However, due to ever increasing complexity and cost of developing building regulations, virtually all municipalities in the country have chosen to adopt model codes instead. For example, in 2008 New York City abandoned its proprietary *1968 New York City Building Code* in favor of a customized version of the International Building Code.^[7] The City of Chicago remains the only municipality in America that continues to use a building code the city developed on its own as part of the *Municipal Code of Chicago*.

In Europe, the Eurocode: Basis of structural design, is a pan-European building code that has superseded the older national building codes. Each country now has National Annexes to localize the contents of the Eurocodes.

Similarly, in India, each municipality and urban development authority has its own building code, which is mandatory for all construction within their jurisdiction. All these local building codes are variants of a National Building Code,^[8] which serves as model code providing guidelines for regulating building construction activity.

Scope

[edit]



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The purpose of building codes is to provide minimum standards for safety, health, and general welfare including structural integrity, mechanical integrity (including sanitation, water supply, light, and ventilation), means of egress, fire prevention and control, and energy conservation.^[9]^[10]

Building codes generally include:

- Standards for structure, placement, size, usage, wall assemblies, fenestration size/locations, egress rules, size/location of rooms, foundations, floor assemblies, roof structures/assemblies, energy efficiency, stairs and halls, mechanical, electrical, plumbing, site drainage & storage, appliance, lighting, fixtures standards, occupancy rules, and swimming pool regulations
- Rules regarding parking and traffic impact

- Fire code rules to minimize the risk of a fire and to ensure safe evacuation in the event of such an emergency^[citation needed]
- Requirements for earthquake (seismic code), hurricane, flood, and tsunami resistance, especially in disaster prone areas or for very large buildings where a failure would be catastrophic^[citation needed]
- Requirements for specific building uses (for example, storage of flammable substances, or housing a large number of people)
- Energy provisions and consumption
- Grandfather clauses: Unless the building is being renovated, the building code usually does not apply to existing buildings.
- Specifications on components
- Allowable installation methodologies
- Minimum and maximum room ceiling heights, exit sizes and location
- Qualification of individuals or corporations doing the work
- For high structures, anti-collision markers for the benefit of aircraft

Building codes are generally separate from zoning ordinances, but exterior restrictions (such as setbacks) may fall into either category.

Designers use building code standards out of substantial reference books during design. Building departments review plans submitted to them before construction, issue permits [or not] and inspectors verify compliance to these standards at the site during construction.

There are often additional codes or sections of the same building code that have more specific requirements that apply to dwellings or places of business and special construction objects such as canopies, signs, pedestrian walkways, parking lots, and radio and television antennas.

Criticism

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Building codes have been criticized for contributing to housing crisis and increasing the cost of new housing to some extent, including through conflicting code between different administrators.^[11] Proposed improvements include regular review and cost-benefit analysis of building codes,^[12] promotion of low-cost construction materials and building codes suitable to mass production,^[11] reducing bureaucracy, and promoting transparency.^[13]

History

[edit]

Antiquity

[edit]

Building codes have a long history. The earliest known written building code is included in the Code of Hammurabi,^[3] which dates from circa 1772 BC.

The book of Deuteronomy in the Hebrew Bible stipulated that parapets must be constructed on all houses to prevent people from falling off.^[14]

In the Chinese book of rites it mentions that ancestral temples and houses should be a certain standard length in ancient China they measured land in the chu or well field system so it was important to be precise though most of the actual lengths are lost or obscure.^{[15][16]}

In ancient Japan a certain official destroyed a courtiers house because the size was above his rank.^[17]

Modern era

[edit]

France

[edit]

In Paris, under the reconstruction of much of the city under the Second Empire (1852–70), great blocks of apartments were erected^[18] and the height of buildings was limited by law to five or six stories at most.

United Kingdom

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After the Great Fire of London in 1666, which had been able to spread so rapidly through the densely built timber housing of the city, the Rebuilding of London Act 1666 was passed in the same year as the first significant building regulation.^[19] Drawn up by Sir Matthew Hale, the act regulated the rebuilding of the city, required housing to have some fire resistance capacity and authorised the City of London Corporation to reopen and widen roads.^[20] The Laws of the Indies were passed in the 1680s by the Spanish Crown to regulate the urban planning for colonies throughout Spain's worldwide imperial possessions.

The first systematic national building standard was established with the Metropolitan Buildings Act 1844. Among the provisions, builders were required to give the district surveyor two days' notice before building, regulations regarding the thickness of walls, height of rooms, the materials used in repairs, the dividing of existing buildings and the placing and design of chimneys, fireplaces and drains were to be enforced and streets had to be built to minimum requirements.^[21]

The Metropolitan Buildings Office was formed to regulate the construction and use of buildings throughout London. Surveyors were empowered to enforce building regulations, which sought to

improve the standard of houses and business premises, and to regulate activities that might threaten public health. In 1855 the assets, powers and responsibilities of the office passed to the Metropolitan Board of Works.

United States

[edit]

The City of Baltimore passed its first building code in 1891.^[22] The Great Baltimore Fire occurred in February 1904. Subsequent changes were made that matched other cities.^[23] In 1904, a Handbook of the Baltimore City Building Laws was published. It served as the building code for four years. Very soon, a formal building code was drafted and eventually adopted in 1908.

The structural failure of the tank that caused the Great Molasses Flood of 1919 prompted the Boston Building Department to require engineering and architectural calculations be filed and signed. U.S. cities and states soon began requiring sign-off by registered professional engineers for the plans of major buildings.^[24]

More recently, the 2015 Berkeley balcony collapse has prompted updates to California's balcony building codes, set for 2025, which include stricter material requirements, enhanced load-bearing standards, and mandatory inspections which known as SB326 and SB721.^[25] These laws mandate regular inspections every six years for multifamily buildings. Property owners and HOAs are required to address any structural or waterproofing issues identified during inspections to ensure compliance and safety. Failure to comply can result in fines, increased liability, and legal consequences. The updates aim to prevent tragedies like the Berkeley collapse, which was caused by dry rot and structural failure, by ensuring the long-term safety and durability of elevated structures.^[26]

Energy codes

[edit]

The current energy codes^[clarification needed] of the United States are adopted at the state and municipal levels and are based on the International Energy Conservation Code (IECC). Previously, they were based on the Model Energy Code (MEC). As of March 2017, the following residential codes have been partially or fully adopted by states:^[27]

- 2015 IECC or equivalent (California, Illinois, Maryland, Massachusetts, Michigan, Pennsylvania, New Jersey, New York, Vermont, Washington)
- 2012 IECC or equivalent (Alabama, Connecticut, Delaware, District of Columbia, Florida, Iowa, Minnesota, Nevada, Rhode Island, Texas)
- 2009 IECC or equivalent (Arkansas, Georgia, Idaho, Indiana, Kentucky, Louisiana, Montana, Nebraska, New Hampshire, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, South Carolina, Tennessee, Virginia, West Virginia, Wisconsin)

- 2006 IECC or equivalent (Utah)
- 2006 IECC or no statewide code (Alaska, Arizona, Colorado, Kansas, Maine, Mississippi, Missouri, North Dakota, South Dakota, Wyoming)

Australia

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Australia uses the National Construction Code.

See also

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- Building officials
- Construction law
- Earthquake-resistant structures
- Energy Efficiency and Conservation Block Grants
- Outline of construction
- Seismic code
- Uniform Mechanical Code
- Variance (land use) – permission to vary zoning and sometimes building to code

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External links

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- IAPMO Codes Website

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Construction

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- Asbestos Testing and Consultancy Association (ATAC)
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- The Concrete Society
- Construction Management Association of America (CMAA)
- Construction Specifications Institute (CSI)
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- National Association of Home Builders (NAHB)
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- National Fire Protection Association (NFPA)
- National Kitchen & Bath Association (NKBA)
- National Railroad Construction and Maintenance Association (NRC)
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- Urban planning

Other topics

 [Outline](#)  [Category](#)  [Other type unknown](#)

About foundation

 [Other type unknown](#)



Look up ***foundation*** or ***foundations*** in Wiktionary, the free dictionary.

Foundation(s) or **The Foundation(s)** may refer to:

Common uses

[edit]

- Foundation (cosmetics), a skin-coloured makeup cream applied to the face
- Foundation (engineering), the element of a structure which connects it to the ground, and transfers loads from the structure to the ground
- Foundation (evidence), a legal term
- Foundation (nonprofit), a type of charitable organization
 - Foundation (United States law), a type of charitable organization in the U.S.
 - Private foundation, a charitable organization that might not qualify as a public charity by government standards

Arts, entertainment, and media

[edit]

Film and TV

[edit]

- *The Foundation*, a film about 1960s-1970s Aboriginal history in Sydney, featuring Gary Foley
- *The Foundation* (1984 TV series), a Hong Kong series
- *The Foundation* (Canadian TV series), a 2009–2010 Canadian sitcom
- "The Foundation" (*Seinfeld*), an episode
- *Foundation* (TV series), an Apple TV+ series adapted from Isaac Asimov's novels

Games

[edit]

- *Foundation* (video game), a city-building game (2025)
- *Foundation*, an Amiga video game
- The Foundation, a character in 2017 game *Fortnite Battle Royale*

Literature

[edit]

- Foundation (book series), a series of science fiction books by Isaac Asimov
 - *Foundation* (Asimov novel), the first book in Asimov's series, published in 1951
- *Foundation* (b-boy book), by Joseph G. Schloss
- *Foundation* (Lackey novel), a 2008 fantasy novel by Mercedes Lackey

Music

[edit]

- The Foundations, a British soul group
- Foundations (EP), by Serj Tankian

Albums

[edit]

- *Foundation* (Brand Nubian album)
- *Foundation* (Breakage album)
- *Foundation* (Doc Watson album)
- *Foundation* (Magnum album)
- *Foundation* (M.O.P. album)
- *Foundation*, a 1997 compilation album by Die Krupps
- *The Foundation* (Geto Boys album)
- *The Foundation* (Pep Love album), 2005
- *The Foundation* (Zac Brown Band album)
- *The Foundations* (album), by 4 Corners

Songs

[edit]

- "Foundation", a 1983 song by Spandau Ballet from the album *True*
- "Foundation", a 1998 song by Brand Nubian from the eponymous album *Foundation*
- "Foundation", a 2009 song by M.O.P. from the eponymous album *Foundation*
- "Foundation", a 2010 song by Breakage from the eponymous album *Foundation*
- "Foundation", a 2015 song by Years & Years from *Communion*
- "Foundations" (song), by Kate Nash
- "The Foundation" (song), by Xzibit

Other uses in arts, entertainment, and media

[edit]

- *Foundation – The International Review of Science Fiction*, a literary journal
- *The Foundation Trilogy* (BBC Radio), a radio adaption of Asimov's series
- The SCP Foundation, a fictional organization that is often referred to in-universe as "The Foundation"

Education

[edit]

- Foundation degree, a British academic qualification
- Foundation school, a type of school in England and Wales
- Foundation Stage, a stage of education for children aged 3 to 5 in England
- University Foundation Programme, a British university entrance course

Science and technology

[edit]

- Foundation (framework), a free collection of tools for creating websites and web applications by ZURB
- Foundation Fieldbus, a communications system
- Foundation Kit, an Apple API

Companies

[edit]

- Foundation Medicine, a genomic profiling company

See also

[edit]

- All pages with titles beginning with *Foundation*
- All pages with titles beginning with *The Foundation*
- Foundations of mathematics, theory of mathematics

Disambiguation icon

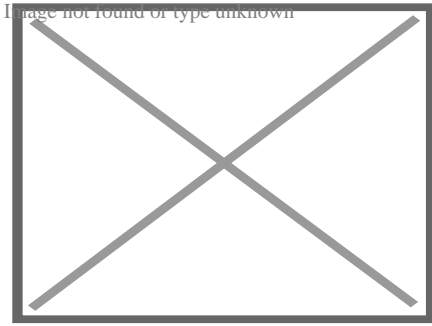
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This disambiguation page lists articles associated with the title **Foundation**.

If an internal link led you here, you may wish to change the link to point directly to the intended article.

About home improvement

For the 1990s sitcom, see Home Improvement (TV series). For other uses, see Home improvement (disambiguation).



Merchandise on display in a hardware store

This article **needs additional citations for verification**. Please help improve this article by adding citations to reliable sources. Unsourced material may be challenged and removed.



Find sources: "Home improvement" – news · newspapers · books · scholar · JSTOR (*June 2008*) (*Learn how and when to remove this message*)



This article **is in list format but may read better as prose**. You can help by converting this article, if appropriate. Editing help is available. (*January 2017*)



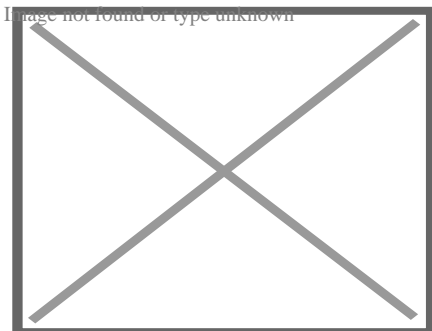
This article **has multiple issues**. Please help **improve it** or discuss these issues on the **talk page**. (*Learn how and when to remove these messages*)

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The concept of **home improvement**, **home renovation** or **remodeling** is the process of renovating, making improvements or making additions to one's home.^[1] Home improvement can consist of projects that upgrade an existing home interior (such as electrical and plumbing), exterior (masonry, concrete, siding, roofing) or other improvements to the property (i.e. garden work or garage maintenance/additions). Home improvement projects can be carried out for a number of different reasons; personal preference and comfort, maintenance or repair work, making a home bigger by adding rooms/spaces, as a means of saving energy, or to improve safety.^[2]

Types of home improvement

[edit]



Man painting a fence

While "home improvement" often refers to building projects that alter the structure of an existing home, it can also include improvements to lawns, gardens, and outdoor structures, such as gazebos and garages. It also encompasses maintenance, repair, and general servicing tasks. Home improvement projects generally have one or more of the following goals.^[citation needed]

Comfort

[edit]

- Upgrading heating, ventilation and air conditioning systems (HVAC).
- Upgrading rooms with luxuries, such as adding gourmet features to a kitchen or a hot tub spa to a bathroom.
- Increasing the capacity of plumbing and electrical systems.
- Waterproofing basements.
- Soundproofing rooms, especially bedrooms and baths.

Maintenance and repair

[edit]

Maintenance projects can include:

- Roof tear-off and replacement.
- Replacement or new construction windows.
- Concrete and masonry repairs to the foundation and chimney.
- Repainting rooms, walls or fences
- Repairing plumbing and electrical systems
- Wallpapering
- Furniture polishing
- Plumbing, home interior and exterior works
- Shower maintenance

Additional space

[edit]

Additional living space may be added by:

- Turning marginal areas into livable spaces such as turning basements into recrooms, home theaters, or home offices – or attics into spare bedrooms.
- Extending one's house with rooms added to the side of one's home or, sometimes, extra levels to the original roof. Such a new unit of construction is called an "add-on"^[3]

Saving energy

[edit]

Homeowners may reduce utility costs with:

- Energy-efficient thermal insulation, replacement windows, and lighting.
- Renewable energy with biomass pellet stoves, wood-burning stoves, solar panels, wind turbines, programmable thermostats,^[4] and geothermal exchange heat pumps (see autonomous building).

Safety, emergency management, security and privacy

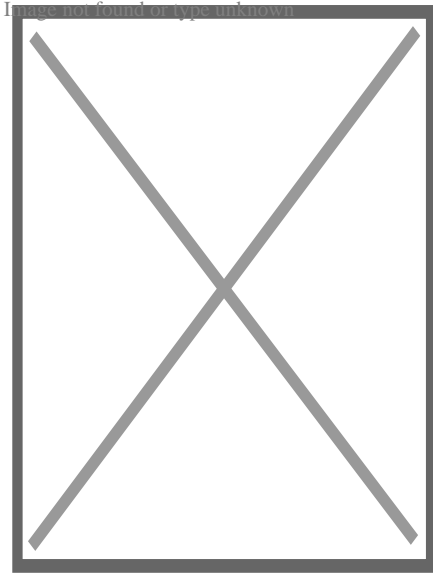
[edit]

The need to be safer or for better privacy or emergency management can be fulfilled with diversified measures which can be improved, maintained or added. Secret compartments and passages can also be conceived for privacy and security.

- Interventions for fire protection and avoidance. Possible examples are fire sprinkler systems for automatic fire suppression, smoke detectors for fire detection, fire alarm systems, or passive fire protection (including some wildfire management strategies).
- Technical solutions to increase protection from natural disasters, or geotechnical and structural safety (e.g. hurricane or seismic retrofit).
- Interventions and additions to increase home safety from other hazards, like falls, electric injuries, gas leaks or home exposure to environmental health concerns.
- Physical security measures:
 - Access control systems and physical barriers, which can include fences, physical door and window security measures (e.g. grilles, laminated glass, window shutters), locks;
 - Security lighting, security alarms and video surveillance.
- Safes and vaults.
- Spaces for emergency evacuation, like emergency exits and rarer escape tunnels.
- Spaces which provide protection in the event of different emergencies: areas of refuge, storm cellars (as protection from tornadoes and other kinds of severe weather), panic rooms, bunkers and bomb shelters (including fallout shelters), etc.
- Home renovations or additions used to increase privacy can be as simple as curtains or much more advanced, such as some structural surveillance counter-measures. They may overlap with physical security measures.
- Public utility outage preparedness, like backup generators for providing power during power outages .

Home improvement industry

[edit]



Screws and bolts in an OBI home improvement store in Poland

Further information: Hardware store

Home or residential renovation is an almost \$300 billion industry in the United States^[5] and a \$48 billion industry in Canada.^[6]^[full citation needed] The average cost per project is \$3,000 in the United States and \$11,000–15,000 in Canada.

Professional home improvement is ancient and goes back to the beginning of recorded civilization. One example is Sergius Orata, who in the 1st century B.C. is said by the writer Vitruvius (in his famous book *De architectura*) to have invented the hypocaust. The hypocaust is an underfloor heating system that was used throughout the Roman Empire in villas of the wealthy. He is said to have become wealthy himself by buying villas at a low price, adding spas and his newly invented hypocaust, and reselling them at higher prices.^[7]

Renovation contractors

[edit]

Perhaps the most important or visible professionals in the renovation industry are renovation contractors or skilled trades. These are the builders that have specialized credentials, licensing and experience to perform renovation services in specific municipalities.

While there is a fairly large "grey market" of unlicensed companies, there are those that have membership in a reputable association and/or are accredited by a professional organization. Homeowners are recommended to perform checks such as verifying license and insurance and checking business references prior to hiring a contractor to work on their house.

Because interior renovation will touch the change of the internal structure of the house, ceiling construction, circuit configuration and partition walls, etc., such work related to the structure of the house, of course, also includes renovation of wallpaper posting, furniture settings, lighting, etc.

Aggregators

[edit]

Aggregators are companies that bundle home improvement service offers and act as intermediary agency between service providers and customers.

In popular culture


[edit]

Home improvement was popularized on television in 1979 with the premiere of *This Old House* starring Bob Vila on PBS. American cable channel HGTV features many do-it-yourself shows, as does sister channel DIY Network.^[8] Danny Lipford hosts and produces the nationally syndicated *Today's Homeowner with Danny Lipford*. Tom Kraeutler and Leslie Segrete co-host the nationally syndicated *The Money Pit Home Improvement Radio Show*.

Movies that poked fun at the difficulties involved include: *Mr. Blandings Builds His Dream House* (1948), starring Cary Grant and Myrna Loy; *George Washington Slept Here* (1942), featuring Jack Benny and Ann Sheridan; and *The Money Pit* (1986), with Tom Hanks and Shelley Long. The sitcom *Home Improvement* used the home improvement theme for comedic purposes.

See also

[edit]

-  not found or type unknown Housing portal
- Home repair
- Housekeeping
- Maintenance, repair and operations

References

[edit]

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- ↑ https://www.collinsdictionary.com/us/dictionary/english/home-improvements
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- ↑ Use a Programmable Thermostat, Common Sense, to Reduce Energy Bills Archived July 19, 2009, at the Wayback Machine, Brett Freeman, oldhouseweb.com
- ↑ "Joint Center for Housing Studies of Harvard University, 2007" *(PDF)*. Archived *(PDF)* from the original on August 7, 2014. Retrieved April 10, 2014.

6. ^ "Canada Mortgage and Housing Corporation - Société canadienne d'hypothèques et de logement". Archived from the original on October 23, 2007. Retrieved October 23, 2007.
7. ^ "Canada Homeowners Community - Example of Low-Cost Advices used by Canadian Homeowners (Community) for Home Improvement that boost the sale of your Home". Canada Homeowners Community. January 12, 2020.
8. ^ Cerone, Daniel (September 17, 1991). "Tim Allen's Power Tools : Television: The comic who had Disney and cable executives abuzz parlayed his luck to develop 'Home Improvement'". *Los Angeles Times*. Archived from the original on June 22, 2015. Retrieved June 16, 2015.

Further reading

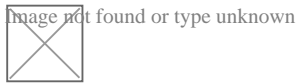
[edit]

- Richard Harris, *Building a Market: The Rise of the Home Improvement Industry, 1914-1960*. Chicago: University of Chicago Press, 2012.
- *Michael W. Litchfield (2012). Chip Harley (ed.). Renovation (4th, Completely revised and updated. ed.). Newtown, Conn.: Taunton Press, Incorporated. ISBN 978-1600854927.*

External links

[edit]

-  Media related to Home improvement at Wikimedia Commons



Wikibooks has a book on the topic of: ***Kitchen Remodel***

- v
- t
- e

Rooms and spaces of a house

- Bonus room
- Common room
- Den
- Dining room
- Family room
- Garret
- Great room
- Home cinema
- Kitchen
 - dirty kitchen
 - kitchenette
- Living room
- Gynaecium
 - harem
- Andron
 - man cave
- Recreation room
 - billiard room
- Shrine
- Study
- Sunroom

Shared rooms

- Bathroom
 - toilet
- Bedroom / Guest room
 - closet
- Bedsit / Miniflat
- Boudoir
- Cabinet
- Nursery

Private rooms

Spaces

- Atrium
- Balcony
- Breezeway
- Conversation pit
- Cubby-hole
- Deck
- Elevator
 - dumbwaiter
- Entryway/Genkan
- Fireplace
 - hearth
- Foyer
- Hall
- Hallway
- Inglenook
- Lanai
- Loft
- Loggia
- Overhang
- Patio
- Porch
 - screened
 - sleeping
- Ramp
- Secret passage
- Stairs/Staircase
- Terrace
- Veranda
- Vestibule

**Technical, utility
and storage**

- Attic
- Basement
- Carport
- Cloakroom
- Closet
- Crawl space
- Electrical room
- Equipment room
- Furnace room / Boiler room
- Garage
- Janitorial closet
- Larder
- Laundry room / Utility room / Storage room
- Mechanical room / floor
- Pantry
- Root cellar
- Semi-basement
- Storm cellar / Safe room
- Studio
- Wardrobe
- Wine cellar
- Wiring closet
- Workshop

Great house areas

- Antechamber
- Ballroom
- Kitchen-related
 - butler's pantry
 - buttery
 - saucery
 - scullery
 - spicery
 - still room
- Conservatory / Orangery
- Courtyard
- Drawing room
- Great chamber
- Great hall
- Library
- Long gallery
- Lumber room
- Parlour
- Sauna
- Servants' hall
- Servants' quarters
- Smoking room
- Solar
- State room
- Swimming pool
- Turret
- Undercroft

Other

- Furniture
- Hidden room
- House
 - house plan
 - styles
 - types
- Multi-family residential
- Secondary suite
- Duplex
- Terraced
- Detached
- Semi-detached
- Townhouse
- Studio apartment

**Architectural
elements**

- Arch
- Balconet
- Baluster
- Belt course
- Bressummer
- Ceiling
- Chimney
- Colonnade / Portico
- Column
- Cornice / Eaves
- Dome
- Door
- Ell
- Floor
- Foundation
- Gable
- Gate
 - Portal
- Lighting
- Ornament
- Plumbing
- Quoins
- Roof
 - shingles
- Roof lantern
- Sill plate
- Style
 - list
- Skylight
- Threshold
- Transom
- Vault
- Wall
- Window

Related

- Backyard
- Driveway
- Front yard
- Garden
 - roof garden
- Home
- Home improvement
- Home repair
- Shed
- Tree house

-  Category: Rooms

About Cook County

Photo

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Things To Do in Cook County

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Sand Ridge Nature Center

4.8 (96)

Photo

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River Trail Nature Center

4.6 (235)

Photo

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Palmisano (Henry) Park

4.7 (1262)

Driving Directions in Cook County

Driving Directions From Palmisano (Henry) Park to

Driving Directions From Lake Katherine Nature Center and Botanic Gardens to

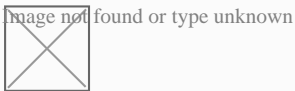
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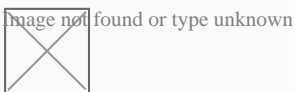
Reviews for



Jeffery James

(5)

Very happy with my experience. They were prompt and followed through, and very helpful in fixing the crack in my foundation.

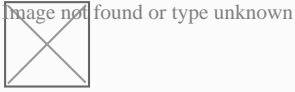


Sarah McNeily

(5)

USS was excellent. They are honest, straightforward, trustworthy, and conscientious. They thoughtfully removed the flowers and flower bulbs to dig where they needed in the yard, replanted said flowers and spread the extra dirt

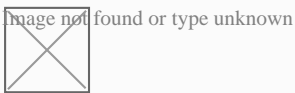
to fill in an area of the yard. We've had other services from different companies and our yard was really a mess after. They kept the job site meticulously clean. The crew was on time and friendly. I'd recommend them any day! Thanks to Jessie and crew.



Jim de Leon

(5)

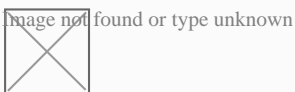
It was a pleasure to work with Rick and his crew. From the beginning, Rick listened to my concerns and what I wished to accomplish. Out of the 6 contractors that quoted the project, Rick seemed the MOST willing to accommodate my wishes. His pricing was definitely more than fair as well. I had 10 push piers installed to stabilize and lift an addition of my house. The project commenced at the date that Rick had disclosed initially and it was completed within the same time period expected (based on Rick's original assessment). The crew was well informed, courteous, and hard working. They were not loud (even while equipment was being utilized) and were well spoken. My neighbors were very impressed on how polite they were when they entered / exited my property (saying hello or good morning each day when they crossed paths). You can tell they care about the customer concerns. They ensured that the property would be put back as clean as possible by placing MANY sheets of plywood down prior to excavating. They compacted the dirt back in the holes extremely well to avoid large stock piles of soils. All the while, the main office was calling me to discuss updates and expectations of completion. They provided waivers of lien, certificates of insurance, properly acquired permits, and JULIE locates. From a construction background, I can tell you that I did not see any flaws in the way they operated and this an extremely professional company. The pictures attached show the push piers added to the foundation (pictures 1, 2 & 3), the amount of excavation (picture 4), and the restoration after dirt was placed back in the pits and compacted (pictures 5, 6 & 7). Please notice that they also sealed two large cracks and steel plated these cracks from expanding further (which you can see under my sliding glass door). I, as well as my wife, are extremely happy that we chose United Structural Systems for our contractor. I would happily tell any of my friends and family to use this contractor should the opportunity arise!



Chris Abplanalp

(5)

USS did an amazing job on my underpinning on my house, they were also very courteous to the proximity of my property line next to my neighbor. They kept things in order with all the dirt/mud they had to excavate. They were done exactly in the timeframe they indicated, and the contract was very details oriented with drawings of what would be done. Only thing that would have been nice, is they left my concrete a little muddy with boot prints but again, all-in-all a great job



Dave Kari

(5)

What a fantastic experience! Owner Rick Thomas is a trustworthy professional. Nick and the crew are hard working, knowledgeable and experienced. I interviewed every company in the area, big and small. A homeowner never wants to hear that they have foundation issues. Out of every company, I trusted USS the most, and it paid off in the end. Highly recommend.

Employing Sustainable Methods for Long Term Soil Health [View GBP](#)

Check our other pages :

- [Setting Up Sump Pumps to Prevent Basement Flooding](#)
- [Evaluating Perimeter Drain Systems for Dry Foundations](#)
- [Adapting Site Plans to Local Rainfall Patterns](#)

United Structural Systems of Illinois, Inc

Phone : +18473822882

City : Hoffman Estates

State : IL

Zip : 60169

Address : 2124 Stonington Ave

Google Business Profile

Company Website : <https://www.unitedstructuralsystems.com/>

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