

Building Silver LEED® Projects With Masonry Up to 35 Points

The International Masonry Institute (IMI) is a leading provider of masonry training and technical assistance for all stakeholders in the design and construction processes. IMI brings together a unique multidisciplinary staff to deliver the most up-to-date training and technical information. IMI's research and development efforts keep designers at the forefront of the latest products.

IMI staff architects, engineers and construction professionals work closely with designers and builders to provide technical design assistance, project consultations, and even custom training. IMI also operates North America's only professional training programs in all masonry crafts: brick and block, tile, terrazzo, stone, marble, plaster, cement and restorations, delivered to members of the International Union of Bricklayers and Allied Craftworkers (BAC), from apprentices to foremen to instructors. This system instills professional expertise and a commitment to quality.

IMI - your resource for building certified LEED projects with masonry.



1-800-IMI-0988 ♦ www.imiweb.org



As green building practices transform the construction industry, the International Masonry Institute (IMI) is committed to the goal of creating a more sustainable environment. Fortunately, masonry solutions offer immediate and measurable impacts that lead to sustainable buildings. Brick, stone, tile, terrazzo, marble, plaster and cement are signature masonry materials that consistently provide aesthetic excellence and performance value to noteworthy architectural projects.

Masonry plays an important role in realizing Leadership in Energy and Environmental Design (LEED) projects. LEED certification begins at 26 credit points. Masonry's contribution of up to 35 LEED credit points offers a good way to reach LEED certification while protecting and transforming the built environment.

The LEED® Green Building Rating System™ was developed by the U.S. Green Building Council as a national voluntary program to address the design of high performance green buildings. Through its various rating systems, LEED provides guidelines for design. Projects are awarded certifications ranging from Certified (26 - 32 points) to Platinum (52 - 69 points) based on performance credits in five key environmental areas. **Masonry materials support the criteria for achieving up to 35 LEED prerequisites with performance credits in four of the key environmental areas.**

As a premier educator in the masonry industry, IMI will help you use masonry materials to achieve LEED credits in your green projects. The design tool inside offers a list of how masonry materials can contribute to the LEED-NC Rating System.

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The design tool below is provided by The International Masonry Institute. IMI is available to assist you with specific questions related to the use of masonry in your green projects. [For assistance call 1-800-IMI-0988](tel:1-800-IMI-0988) or [visit us on the web at www.imiweb.org](http://www.imiweb.org).

LEED-NC Version 2.2 Masonry Checklist

Sustainable Sites		6 Points
<input type="checkbox"/>	Credit 2 Development Density & Community Connectivity <i>Construct or renovate building on a previously developed site AND in a community with a minimum density of 60,000 square feet per acre net</i> 1) Masonry enables designs that take advantage of challenging urban sites. 2) Small modular units do not require large equipment for delivery and placement. 3) Masonry provides firewall/separation. 4) Minimum staging area required.	1
<input type="checkbox"/>	Credit 5.2 Maximize Open Space <i>Provide a high ratio of open space to development footprint to promote biodiversity.</i> 1) Use load-bearing masonry to stack building program. 2) Use concrete and CMU for below building parking.	1
<input type="checkbox"/>	Credit 6.1 Stormwater Design, Rate and Quantity Control Limit disruption of natural water flows by managing stormwater runoff 1) Permeable masonry units available to address runoff.	1
<input type="checkbox"/>	Credit 6.2 Stormwater Design, Treatment Implement a Stormwater management plan that reduces impervious cover, promotes on-site filtration and eliminates contaminants 1) Use permeable pavers and flexible masonry pavements to allow water to filter back into the ground.	1
<input type="checkbox"/>	Credit 7.1 Heat Island Effect, Non-Roof Reduce heat islands 1) Use light-colored masonry units with a Solar Reflectance Index (SRI) of at least 29. 2) Use open-cell pavers with vegetation.	1
<input type="checkbox"/>	Credit 7.2 Heat Island Effect, Roof Reduce heat islands - minimize impact on microclimate 1) Use light-colored masonry units with a Solar Reflectance Index (SRI) of at least 29. 2) Use open-cell pavers with vegetation.	1
Energy & Atmosphere		10 Points
<input type="checkbox"/>	Credit 1 Optimize Energy Performance Improve energy efficiency above ASHRAE baseline prerequisites 1) The building envelope is an important component of the facility which impacts energy consumption, occupant comfort and indoor air quality. 2) Incorporate energy efficient thermal mass masonry designs to reduce peak heating and cooling loads, shift peak loads to non-peak hours, moderate indoor temperature swings, and reduce size of HVAC systems. 3) Masonry wall assemblies can easily achieve high R-values.	
Materials & Resources		11 Points
<input type="checkbox"/>	Credit 1.1 Building Reuse , Maintain 75% of Existing Walls, Floors & Roof	1
<input type="checkbox"/>	Credit 1.2 Building Reuse , Maintain 100% of existing Walls, Floors & Roof	1
<input type="checkbox"/>	Credit 1.3 Building Reuse , Maintain 50% of Interior Non-Structural Elements 1) Masonry's inherent durability allows for reuse of the entire building or core and shell. Consider reuse of existing masonry building rather than new construction.	1
<input type="checkbox"/>	Credit 2.1 Construction Waste Management , Divert 50% from Disposal	1
<input type="checkbox"/>	Credit 2.2 Construction Waste Management , Divert 75% from Disposal 1) Masonry materials are easily recycled at the jobsite and be crushed and recycled into new materials or aggregates.	1

Indoor Environmental Quality		4 Points
<input type="checkbox"/>	Credit 3.1 Materials Reuse , 5%	1
<input type="checkbox"/>	Credit 3.2 Materials Reuse , 10% 1) Salvage and reuse masonry materials.	1
<input type="checkbox"/>	Credit 4.1 Recycled Content , 10% (post-consumer + 1/2 pre-consumer)	1
<input type="checkbox"/>	Credit 4.2 Recycled Content , 20% (post-consumer + 1/2 pre-consumer) 1) Masonry production uses many post-consumer and post-industrial recycled products. 2) Use materials manufactured with percentage of recycled content. 3) Grout may contain recycled products such as fly ash. 4) Use recycled concrete as an aggregate in new concrete.	1
<input type="checkbox"/>	Credit 5.1 Regional Materials , 10% Extracted, Processed & Manufactured Regionally	1
<input type="checkbox"/>	Credit 5.2 Regional Materials , 20% Extracted, Processed & Manufactured Regionally 1) Masonry materials are available locally and assembled on-site.	1
<input type="checkbox"/>	Credit 3.1 Construction IAQ Management Plan, During Construction <i>Reduce indoor air quality problems resulting from the construction/renovation process to help sustain the comfort and well-being of construction workers and building occupants.</i> 1) Masonry materials are not a food source for mold. 2) Masonry materials are easily protected from moisture during construction.	1
<input type="checkbox"/>	Credit 4.1 Low-Emitting Materials: Adhesives & Sealants: Reduce quantity of indoor contaminants 1) Most masonry materials do not require adhesives or sealants. 2) Ceramic, Stone, and Terrazzo Tiles can be installed with low-VOC adhesives and sealants.	1
<input type="checkbox"/>	Credit 4.2 Low-Emitting Materials: Paints & Coatings: Reduce quantity of indoor contaminants 1) Use Masonry materials such as concrete block or AAC that allow for low-VOC paint applications.	1
<input type="checkbox"/>	Credit 7.1 Thermal Comfort, Design 1) Use Masonry materials such as concrete block or AAC for increased thermal energy resistance. 2) Insulated masonry wall systems provide superior R values for consistent temperatures.	1
Innovation & Design Process		4 Points
Note: ID credits are awarded for exceptional performance above LEED requirements. Below are some areas to consider.		
<input type="checkbox"/>	Credit 1.1 Innovation in Design: Structural advantages 1) Use Structural Masonry systems such as Load Bearing Walls and Post tensioned masonry.	1
<input type="checkbox"/>	Credit 1.2 Innovation in Design: Life-cycle benefits 1) Analyze life-cycle and durability potential of masonry materials.	1
<input type="checkbox"/>	Credit 1.3 Innovation in Design: Acoustic Performance 1) Incorporate masonry elements to address acoustic requirements.	1
<input type="checkbox"/>	Credit 1.4 Innovation in Design: Improved Air Quality 1) Masonry materials improve air quality by reducing the possibility of mold.	1
Masonry Project Totals (pre-certification estimates)		35

Certified 26-32 points **Silver** 33-38 points **Gold** 39-51 points **Platinum** 52-69 points