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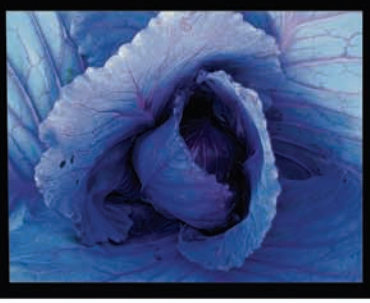
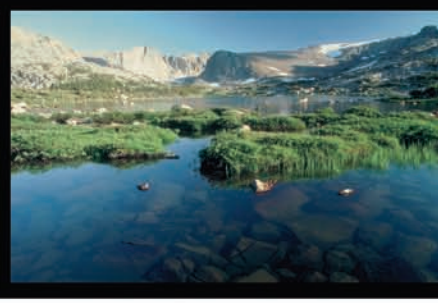
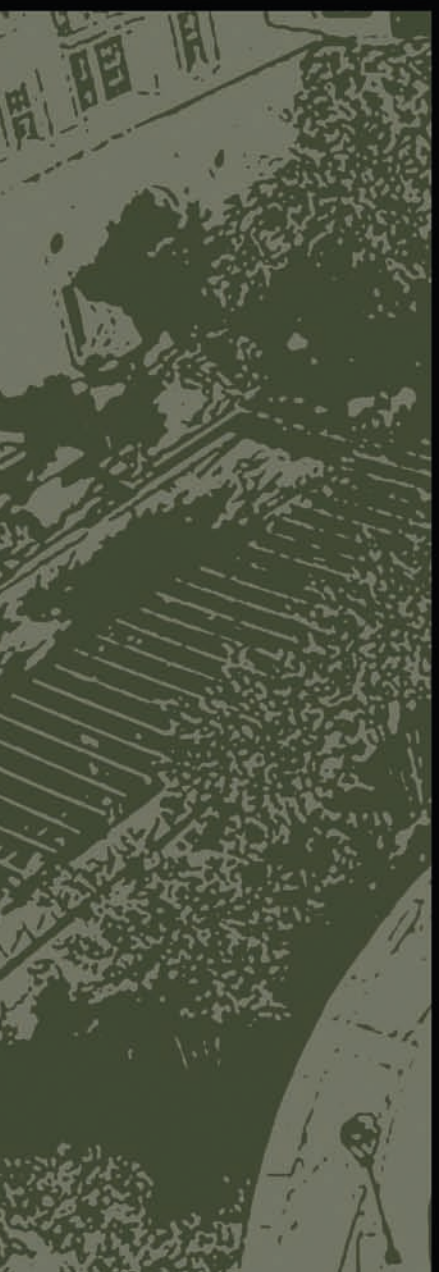
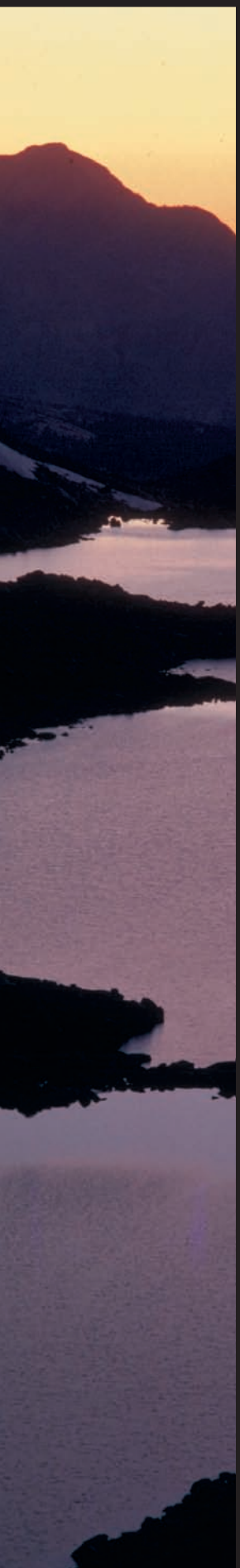
Big River Industries, Inc.

The LEED® Green Building Rating System



The following LEED® credits are areas where Big River lightweight aggregates (LWA) can

SUSTAINABLE SITES

Stormwater Management: Rate and Quantity - Credit 6.1 (1 Point)

Intent: Limit disruption and pollution of natural water flows by managing stormwater runoff.

Big River LWA can be used as part of the landscaping design to reduce the amount of storm water runoff. Because of their porosity the LWA particles can absorb a significant portion of the "first flush" of stormwater. Big River LWA enhances the soil's ability to drain and filter stormwater, reducing runoff.

Storm Water Management: Treatment - Credit 6.2 (1 Point)

Intent: Limit disruption of natural water flows by eliminating storm water runoff, increasing on-site infiltration and eliminating contaminants.

Big River LWA can be used to construct rain gardens, bio-retention areas, and bioswales to treat the site's stormwater. It provides an excellent environment for beneficial microbial action to remove contaminants from the stormwater.

Heat Island Effect: Non-Roof - Credit 7.1 (1 Point)

Intent: Reduce heat islands (thermal gradient differences between developed and undeveloped areas) to minimize impact on microclimate and human and wildlife habitat.

Big River LWA can be used in structural soil for tree planting in and around paved areas. LWA structural soil provides a strong, stable subgrade for paving, while maintaining a superior growing medium for tree roots. The open grading of LWA structural soil provides spaces for root growth to prevent heaving of the pavement often associated with trees growing adjacent to sidewalks, parking areas and streets.

Heat Islands Effect: Roof - Credit 7.2 (1 Point)

Intent: Reduce heat islands (thermal gradient differences between developed and undeveloped areas) to minimize impact on microclimate and human and wildlife habitat.

Big River LWA is the key ingredient of a superior, lightweight growing medium for both intensive and extensive green roofs.

WATER EFFICIENCY

Water Efficient Landscaping: Reduce by 50% - Credit 1.1 (1 Point)
Water Efficient Landscaping: No Potable Use or No Irrigation Credit 1.2 (1 Point)

Intent: Limit or eliminate the use of potable water for landscape irrigation.

The porosity and absorption of Big River LWA helps manage water use, while reducing compaction, increasing soil porosity, and maintaining soil temperature. The aggregate particles absorb moisture during wet periods and slowly release it, along with any soluble nutrients, for plant use during dry periods.

Innovative Wastewater Technologies - Credit 2 (1 Point)

Intent: Reduce generation of wastewater and potable water demand, while increasing the local aquifer recharge.

Big River LWA can be used as part of an on-site sewage treatment system. Because of their porous cellular structure, the aggregate particles provide an environment suitable for beneficial microbial action for waste decomposition and wastewater filtration.

ENERGY & ATMOSPHERE

Minimum Energy Performance - Prerequisite 2

Intent: Establish the minimum level of energy efficiency for the base building and systems.

The thermal efficiency of lightweight concrete and masonry building components manufactured with Big River LWA can maximize the energy performance of the building, ensuring compliance with ASHRAE 90.1 or the local energy code.

Optimize Energy Performance - Credit 1 (1 to 10 Points)

Intent: Achieve increasing levels of energy performance above the prerequisite standard to reduce environmental impacts associated with excessive energy use.

Lightweight concrete masonry and structural lightweight concrete provide more thermal resistance than ordinary concrete and masonry, while maintaining the benefits of thermal mass. Concrete and masonry building components made with Big River LWA optimize the combination of R-values, thermal mass, and low thermal bridging to contribute significant energy cost savings compared with minimum compliance with ASHRAE 90.1. When combined with other energy saving systems, lightweight concrete and masonry can contribute toward earning multiple points in this Credit category.

MATERIALS AND RESOURCES

Building Reuse: Maintain 75% of Existing Walls, Floors and Roof - Credit 1.1 (1 Point)
Building Reuse: Maintain 100% of Existing Walls, Floors and Roof - Credit 1.2 (1 Point)
Building Reuse: Maintain 100% of Shell/Structure and 50% of Non-Shell/Non-Structure - Credit 1.3 (1 Point)

Intent: Extend the life cycle of existing building stock, conserve resources, retain cultural resources, reduce waste and reduce environmental impacts of new buildings as they relate to materials and manufacturing and transport.

Lightweight concrete masonry and structural lightweight concrete made with Big River LWA have been utilized in the reuse of countless buildings. By utilizing lightweight concrete building components, existing building can

often be renovated for a change in use while using original structural components and shell.

Recycled Content: 5% (Post-Consumer + 1/2 Pre-Consumer) - Credit 4.1 (1 Point)
Recycled Content: 10% (Post-Consumer + 1/2 Pre-Consumer) - Credit 4.2 (1 Point)
Intent: Increase demand for building products that incorporate recycled content materials, therefore reducing impacts resulting from extraction and processing of new virgin materials.

Big River LWA is a manufactured material engineered to optimize the structural efficiency and energy efficiency of lightweight concrete products. Although the coarse aggregate is not a recycled material, the structural concrete and concrete products made with Big River LWA often also contain recycled materials, such as fly ash, allowing them to contribute to these credits. Big River fine LWA is a by-product of coarse aggregate production, and may be counted towards the pre-consumer content of concrete products.

Regional Materials: 20% Manufactured Regionally - Credit 5.1 (1 Point)
Regional Materials: 50% Extracted Regionally - Credit 5.2 (1 Point)
Intent: Increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the regional economy and reducing the environmental impacts resulting from transportation.

Lightweight concrete products used for building materials are manufactured with Big River LWA at numerous facilities in close proximity to almost every building site (Credit 5.1). The reduced weight of these products, a direct result of using Big River LWA, allows more products to be delivered per truckload, further reducing the environmental impacts resulting from transportation. Big River LWA is manufactured at facilities in Livingston, AL and Erwinville, LA. The 500-mile radius from these manufacturing locations encompasses many project locations (Credit 5.2). However, for most projects, including those more than 500 miles from Big River facilities, the lightweight concrete products made with Big River LWA contain less than 50% of this material, while the majority of the raw materials are extracted or manufactured locally. In such cases, this credit can still be earned, even when the project is located more than 500 miles from our facility.

INDOOR ENVIRONMENTAL QUALITY

Thermal Comfort: Compliance with ASHRAE 55-1992 - Credit 7.1 (1 Point)
Intent: Provide a thermally comfortable environment that supports the productivity and well being of building occupants.

Lightweight concrete masonry and structural lightweight concrete made with Big River LWA are thermally efficient building materials. They have higher R-values than ordinary concrete materials, and their thermal mass slows heat flow through them. The result is a more stable indoor environment.

INNOVATION & DESIGN PROCESS

Innovation in Design - Credits 1.1 through 1.4 (4 Possible Points)
Intent: To provide design teams and projects the opportunity to be awarded points for exceptional performance above the requirements set by the LEED Green Building Rating System and/or innovative performance in Green Building categories not specifically addressed by the LEED Green Building Rating System.

Suggested Credit 1.1 - (1 Point) – Efficient Use of Materials - The use of lightweight concrete building materials manufactured with Big River LWA allows delivery of more building products on each truck, compared to ordinary concrete products. This decreases the number of truckloads required to deliver the same volume of product. As a result, the project benefits from reduced delivery costs, less fuel is consumed, and the community receives the benefit of reduced air and noise pollution and less traffic congestion.

Suggested Credit 1.2 - (1 Point) – Fire Safety - Lightweight concrete masonry and structural lightweight concrete provide superior fire resistance, compared to ordinary concrete products. Because lightweight concrete slows the flow of heat through the wall or floor, the required fire rating can be achieved with a smaller volume of concrete (thinner floors and walls). This reduction in thickness means less concrete materials are used in the project, less raw materials are consumed and less transportation is required. All these benefits are obtained while providing enhanced fire safety for the building occupants.

Suggested Credit 1.3 - (1 Point) – Mold Prevention and Abatement. Lightweight concrete masonry and structural lightweight concrete made with Big River LWA do not contribute to "sick building syndrome" because they do not provide a food source for mold. Should mold occur in other building materials applied to a lightweight concrete substrate, the mold can be removed without damage to the substrate, reducing the economic and environmental impacts of the clean-up.

Suggested Credit 1.4 - (1 Point) – Sound Absorption - Lightweight concrete masonry and structural lightweight concrete made with Big River LWA provide the superior sound transmission class (STC) for which concrete materials are known, while improving on the noise reduction coefficient (NRC) of ordinary concrete. In fact, lightweight concrete masonry walls have been shown to absorb twice as much sound as ordinary concrete masonry walls. Noise abatement through superior sound absorption enhances the comfort and productivity of the building occupants.

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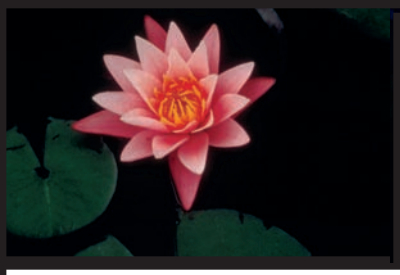

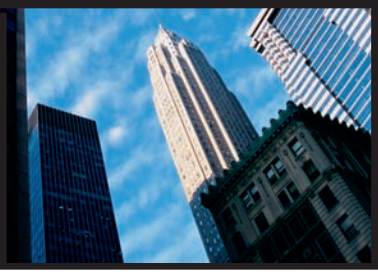

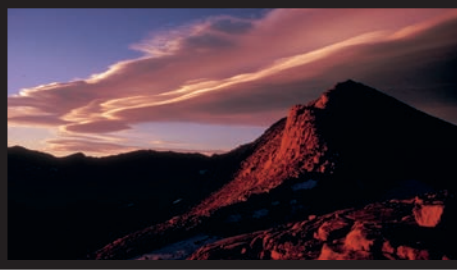

The **Weight** of the Matter

Our Commitment to Sustainable Development

Big River Industries is committed to sustainable development through the use of its products. Building materials made with Big River expanded clay lightweight aggregates help to increase thermal efficiency and reduce energy consumption, conserving valuable natural resources. Big River LWA's unique properties can be used in site development to mitigate stormwater runoff and reduce heat island effects. Responsible construction will ensure that the needs of today are met without compromising the future.

What is Big River LWA?

Big River LWA is a ceramic material produced by expanding and vitrifying select clay in a rotary kiln. This process makes Big River LWA structurally strong, physically stable, durable, environmentally inert, lightweight, with excellent thermal insulation properties. It is a non-toxic, absorptive aggregate that will not degrade, compress, shrink, soften or rot. Big River's manufacturing facilities have extensive programs and equipment to ensure protection of the local environment. Preserving clean air and water and minimizing solid waste are top priorities.

Big River LWA and LEED®

The use of Big River LWA in building designs will contribute to obtaining credits toward LEED® Certification. The Leadership in Energy and Environmental Design (LEED®) Green Building Rating System represents the U.S. Green Building Council's effort to provide a national standard for what constitutes a "green building." Through its use as a design guideline and third-party certification tool, it aims to improve occupant well-being, environmental performance and economic returns of buildings using established and innovative practices, standards and technologies. The LEED® rating system has six categories: Sustainable Sites (14 possible points), Water Efficiency (5 possible points), Energy and Atmosphere (17 possible points), Materials and Resources (13 possible points), Indoor Environmental Quality (15 possible points), and Innovation and Design Process (5 possible points). Projects obtain credits in these categories to achieve certification. A building becomes LEED Certified after receiving a minimum of 26 points from the USGBC. Silver certification is achieved if at least 33 points are earned, Gold with at least 39 points, and Platinum certification is awarded if a minimum of 52 points are earned.