

K-tect™

SUSTAINABLE BUILDING SYSTEMS



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K-tect™ potential points in LEED v. 3.0 for Green Building Design and Construction, LEED for Schools, and LEED for Core and Shell Unless otherwise identified, all suggested LEED Credits apply to the New Construction, Core & Shell and Schools LEED Green Building Rating Systems

Under the LEED for Green Building Design and Construction (LEED v3) categories suggested, K-tect™ Sustainable Building Systems may both directly and indirectly assist building teams in obtaining up to 35 LEED points and additional points, depending on the design strategies employed and the building type.

K-tect Sustainable Building Systems may also potentially assist with 5 Innovation in Design points as well as an additional Regional Priorities point.

DESCRIPTION	POINTS	LEED REQUIREMENTS	K-tect PERFORMANCE	OUTSTANDING ATTRIBUTES
EA Prerequisite 2: Minimum Energy Performance	Prerequisite	K-tect Sustainable Building Systems assist with compliance with ANSI/ASHRAE 90.1-2007 and California Title 24-2005, which are the minimum energy performance levels for LEED projects.	K-tect Sustainable Building sections provide excellent thermal protection within the building envelope (R-4 to R-5 per inch) and contribute to maximizing the energy performance of its buildings.	K-tect Sustainable Building Systems assist with compliance with the ASHRAE Energy Guides for K-12 School Buildings, Core and Shell, and the LEED Green Building Rating System for Commercial and Institutional Buildings.
EA Credit 1: Optimize Energy Performance	1-19	A building envelope with K-tect Sustainable Building sections complies with ANSI/ASHRAE/IESNA 90.1-2007 and California's Title 24-2005.	K-tect Sustainable Building sections provide excellent thermal protection within the building envelope (R-4 to R-5 per inch) and contribute to maximizing the energy performance of its buildings. The steel stud framing of K-tect are structural yet the sections are free of any thermal bridging because the structural steel studs are embedded in the EPS insulating core.	With the thermal reflective properties of the optional Neopor insulating core in K-tect Sustainable Building Systems, the enhanced building envelope has the potential to further improve energy performance, especially in comparison to extruded polystyrene wall systems.
MR Credit 1.1: Building Reuse	1-5	K-tect Sustainable Building sections can remain on site during a major addition or renovation to an existing building to conserve resources, reduce waste and reduce environmental impacts as related to materials manufacturing and transportation.	K-tect Sustainable Building Systems are part of the building envelope and have the durability and potential for an extended lifecycle, even beyond a building type's initial use.	The potential for a project team to gain several points by leaving K-tect structural sections in place is highly probable because the building envelope comprises a large portion of the existing structural walls, floors and roof assembly.
MR Credit 2: Construction Waste Management	1-2	K-tect Sustainable Building sections can assist in diverting construction waste from entering the waste stream and incinerators as the sections can be recycled and little excess product is generated at building sites.	K-tect Sustainable Building Systems are manufactured off site, therefore, very little construction waste is generated at the job site and the normal levels of construction waste are simply not generated with K-tect Sustainable Building Systems.	Field fabrication of wood wall, floor and roofing systems and other structural systems can lead to tons of scrap sent to the landfill or incinerator. Packaging of K-tect sections for delivery by truck or rail is kept to a minimum to save on any additional waste.
MR Credit 3: Materials Reuse	1-2	The refurbished K-tect structural section can make up to 5% or 10%, based on cost, of the total value of the materials on the project.	K-tect Sustainable Building Systems are manufactured with deconstruction in mind. A building envelope created with K-tect Sustainable Building sections can easily be disassembled for reuse in another building project or major renovation as required by the LEED rating system.	The reuse potential of K-tect Sustainable Building Systems can reduce the energy intensive demand and environmental impact of extracting raw materials and their processing.
MR Credit 4: Recycled Content	1-2	All materials in K-tect wall, floor and roof systems are 100 percent recyclable and the steel includes both post-consumer and pre-consumer recycled content base on the ISO 14021 standard.	In addition to having lower embodied energy, high-recycled-content steel results in a lower impact associated with mining waste and pollution.	K-tect Sustainable Building Systems may save up to 24 old-growth trees when compared to an average timber framed home using virgin materials.
MR Credit 5: Regional Materials	1-2	Raw materials that have been extracted, harvested or recovered and then processed and manufactured all within 500 miles of the building site can qualify for one to two LEED points. If only a fraction of the product is regional then the weight of that portion of the product is used to calculate the percentage of all the regional materials used in the building.	K-tect fabricating facilities are located in Las Vegas, Nevada (Zip Code: 89120) and in North Kingstown, Rhode Island (Zip Code: 02852). Call to locate the facility nearest to your building site at 702-451-7155.	Licensed fabricators of K-tect Sustainable Building Systems are located within close proximity to nearly any building site in the United States for up to two potential LEED points with K-tect systems. One point is available for using 10% by weight of regional materials and a second point for 20% with K-tect.
IEQ Prerequisite 2: Environmental Tobacco Smoke (ETS) Control	Prerequisite	The project team must minimize the exposure for building occupants to tobacco smoke, by either banning smoking in the building or utilizing a designated smoking room designed to contain, capture and remove smoke from tobacco. Smoking is prohibited in all LEED for Schools buildings.	If only a fraction of the product is considered regional under the LEED requirements then the weight of that portion of the product is used to calculate the percentage of all the regional materials use in the building.	Licensed fabricators of K-tect Sustainable Building Systems are located within close proximity to nearly any building site in the United States for up to two potential LEED points with K-tect systems. One point is available for using 10% by weight of regional materials and a second point for 20% with K-tect.
IEQ Prerequisite 3: Minimum Acoustical Performance (LEED Schools only)	Prerequisite	Classrooms must be designed with sufficient sound-adsorptive learning spaces for students to be able to hear the teachers above outside noise, such as aircraft and air conditioning units.	K-tect Sustainable Building Systems provide superior acoustical performance through walls and between stories of a building and therefore can enhance the potential for students to gain an enhanced academic performance and teachers do not strain their voices to be heard.	K-tect Sustainable Building Systems typically exceed standards such as the ANSI Standard S12.60-2002 requirement in LEED, especially sections addressing background noise levels from outside sources such as air handlers and infrequent background noise from transportation sources such as aircraft and ground vehicles.

Reference: LEED Reference Guide for Green Building Design and Construction, for the Design, Construction and Major Renovations of Commercial and Institutional Buildings including Core & Shell and K-12 School Projects, 2009 Edition.
Reference: U.S. Green Building Council, Innovation in Design Credit Catalog, March 2008 Update. Visit www.usgbc.org/LEED2009 for full details. Compiled for kama Energy Efficient Building Systems, Inc., May 2009 by Green Apple Group, LLC., an independent sustainability consulting and marketing firm.

DESCRIPTION	POINTS	LEED REQUIREMENTS	K-tect PERFORMANCE	OUTSTANDING ATTRIBUTES
IEQ Credit 4.6: Low-Emitting Materials-Ceilings and Wall Systems (LEED Schools only)	1	The design team must limit indoor air contaminants in the ceiling and wall systems that could be odorous, irritating, and/or harmful to the comfort and well-being of installers and building occupants.	K-tect Sustainable Building sections exceed the California Department of Health Services Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers, including 2004 Addenda.	The expanded polystyrene insulating core in all K-tect Sustainable Building Systems is GREENGUARD® certified. All GREENGUARD® certified products are listed on the Collaborative for High Performance Schools (CHPS), Low-Emitting Materials Table. Only products on the CHPS Low-Emitting Materials Table or GREENGUARD® certified products are eligible to contribute a IEQ Credit 4.6 LEED point.
IEQ Credit 7.1: Thermal Comfort-Design	1	Provide a comfortable temperature range for the people occupying the building to enhance their productivity and well-being. A comfortable thermal environment is defined by the requirements of ASHRAE Standard 55-2004.	Designing a building envelope with K-tect Sustainable Building Systems can assist project teams in providing a comfortable thermal environment that meets or exceeds the requirements of ASHRAE Standard 55-2004, Thermal Environmental Conditions for Human Occupancy.	The goal of a comfortable indoor environment for increased worker productivity and well-being can often be exceeded when K-tect Sustainable Building Systems are specified for the building envelope and a properly sized HVAC system is installed.
IEQ Credit 9.1: Enhanced Acoustical Performance (LEED for Schools only)	1	Design a building shell for learning in which teacher-student communication is enhanced through better acoustical design. The design must meet the Sound Transmission Class (STC) requirements of ANSI Standard S12.60-2002, Acoustical Performance Criteria, Design Requirements and Guidelines for Schools.	K-tect Sustainable Building Systems provide superior acoustical performance through walls and between stories of low-rise building and therefore can enhance the potential for students to improve academic performance and teachers do not strain their voices to be heard.	K-tect typically exceeds standards such as the ANSI Standard S12.60-2002 requirement in LEED, especially sections addressing background noise levels from outside sources such as air handlers aircraft and ground vehicles.
EA Credit 4, Enhanced Refrigeration Management	1-2	The project team must reduce any potential ozone-depleting refrigerants in compliance with the Montreal Protocol in order to minimize any of the building's potential contributions to climate change.	Because an energy-conserving building envelope can reduce the size and extend the life span of an HVAC&R unit(s), the exemplary thermal performance of K-tect sections can indirectly assist with a point in this LEED Category.	In some climates, mechanical cooling and refrigeration equipment may not be necessary in buildings constructed with K-tect and the proper mechanical ventilation and operable windows. In buildings with or without refrigerants, K-tect can assist in minimizing contributions to climate change and ozone depletion.
Relevant Innovation in Design (ID) LEED Credits: K-tect Sustainable Building Systems are so innovative and exceptional in their energy and environmental performance and design that this new building system solution could gain one of more LEED Innovation in Design points. The architect can also gain previously unattainable environmental friendly design versatility because K-tect Sustainable Building sections can be built to any shape including curved walls and multi-story structures.				
ID EA NC Credit 1: 100% Energy Cost Budget Reduction	1	The project team must demonstrate a savings equal to at least 5% of the regulated building energy budget used in EA Credit 1.	K-tect Sustainable Building Systems provide excellent thermal protection within the building envelope (R-4 to R-5 per inch) and contribute to maximizing the energy performance of the building. The steel stud framing of K-tect is structural yet free of any thermal bridging because the structural steel studs are embedded in the EPS insulating core.	Because energy conservation with K-tect Sustainable Building Systems can assist greatly with a lower energy budget for buildings, the LEED project team can often gain an ID Credit for significantly exceeding the energy efficiency requirement in EA Credit 1: Optimize Energy Performance and gain an ID Credit.
ID MR NC Credit 2: Efficient Use of Structural Material	1	The project team must demonstrate quantifiable savings associated with the efficient use of structural materials and reduce raw materials required and associated environmental impacts while maintaining structural integrity.	K-tect Sustainable Building Systems can reduce environmental impacts associated with structural material manufacturing and transportation due to the various potential efficient arrangements of the structural steel and the lightweight nature of the product's core material.	K-tect Sustainable Building sections can be sized and configured for a reduction in weight compared to conventional steel and wood framing systems, including development of a "diagrid" diagonal structural system.
ID SS/IEQ NC Credit 3: Integrated Pest Management	1	The project team is required to implement an Integrated Pest Management (IPM) program that utilizes environmentally-friendly control methods. The submittal must include a detailed program with procedures for inspection, monitoring, pesticide use and storage, building occupant notification when pesticides are necessary, and preference for non-toxic or less toxic options.	K-tect Sustainable Building Systems include structural control measures, required as part of the comprehensive compliance program to satisfy the USGBC that an IPM is being followed by the project team, rather than simple reliance on pesticides and insecticides.	K-tect Sustainable Building Systems are simply not a food source for termites and other pests, keeping away potential threats to the building structure and its occupants with a built-in pest control instead of needing a chemical-based approach to pest management.
ID (EQ NC) Credit 4: Post-Occupancy Survey	1	Building teams committed to evaluating the comfort levels of the building occupants after they arrive can gain a point here if they follow the previously accepted requirements of the Council. The post-occupancy survey must measure the environmental variable based on those in ASHRAE Standard 55-2004 and develop a corrective plan if more than 20% of occupants are not satisfied with the heating and cooling, lighting and security conditions of the building after 18 months in the facility.	K-tect Sustainable Building Systems offer high energy efficiency and the potential for high thermal comfort of the building occupants for the life of the building.	The reduction in air infiltration with K-tect Sustainable Building Systems reduces drafts and hot and cold spots within the interior space for better outcomes on surveys of occupant thermal comfort.
Relevant Regional Priority LEED Credits	1	The LEED project administrator enters the zip code of the building site and can choose to address up to four of the region's environmental priorities.	K-tect Sustainable Building Systems improve energy and environmental performance and, therefore, can help project teams add points for addressing Regional Priority LEED Credits, especially MR Credit 2: Construction Waste Management, which is a priority in nearly all regions.	Additional regional environmental priority may be identified by the LEED v3.0 project team, and addressed by designing the building with K-tect Sustainable Building Systems for more potential LEED points.

DISCLAIMER:
The enclosed LEED for Green Building Design and Construction Green Building Rating System credit references are suggestions as to where K-tect Sustainable Building Systems™ may apply in earning points for LEED registered projects. LEED certification is granted to projects, not products, by a panel at the U.S. Green Building Council, however, the products and processes employed on LEED registered projects impact the achievement of LEED certification and the level attained. The LEED applicant is responsible for determining the product attributes that will help provide LEED certification of a building.
Under the LEED for Green Building Design and Construction (LEED v3.0) categories suggested, K-tect Sustainable Building Systems can both directly and indirectly assist building teams in obtaining up to 35 LEED points and more LEED points, depending on the design strategies employed and the building type.

K-tect Sustainable Building Systems can potentially help with 5 Innovation in Design points as well as an additional Regional Priorities point as suggested above. The USGBC warns that an ID Credit awarded on one project does not mean that a second ID Credit will be awarded on a subsequent project. Still, K-tect Sustainable Building Systems could potentially assist with one or possibly all of the available points in the Innovation in Design credit category. LEED v3.0 awards the following certification levels based on the following point totals: Certified 40-49 points
Silver 50-59 points
Gold 60-79 points
Platinum 80 points and above

K-tect Sustainable Building Systems can also contribute to earning points in other LEED Green Building Rating Systems, including LEED programs for homes, commercial interiors, retail, laboratories, neighborhoods, and operations and maintenance of existing buildings. While LEED is the national benchmark for sustainable design and construction of virtually every type of building that can be contemplated, K-tect Sustainable Building Systems will also help building teams comply with other regional and national green building standards and programs, such as the EnergyStar and the Green Building Initiative's Green Globes program.
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