# POTENTIAL LEED® CREDITS FOR DROJO GREEN STRUCTURES

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## RESIDENTIAL PROJECTS: LEED® FOR HOMES

### ENERGY & ATMOSPHERE [EA]

#### PERFORMANCE PATH

**EA 1: Optimize Energy Performance**
***Maximum 34 Points***

Using the Performance Pathway, buildings are awarded points based upon their overall energy performance and measured by a Home Energy Rating Scale (HERS). A home's HERS index is calculated by a certified energy rater and takes into account the insulation, results of a blower door test, HVAC, lighting, and other relevant aspects.

LEED® points are allocated on a scale ranging from 0 points for ENERGY STAR™ and 34 points for a net zero energy home. Homes must meet ENERGY STAR™ requirements as a prerequisite for this credit.

#### PRESCRIPTIVE PATH

**EA 2.1: Insulation**
***Maximum 2 Points***

Contractors must install insulation which meets or exceeds the requirements stipulated in the 2004 International Energy Conservation Code (IECC), and are given points for exceeding this standard. Structurally Insulated Panels (SIPs) are listed as an exception to this requirement, and must alternately pass a visual inspection using the ENERGY STAR™ SIP Visual Inspection Form.

**EA 3: Air Filtration**
***Maximum 3 Points***

Well-sealed, air-tight DROJO homes have a proven track record of achieving extremely low levels of air filtration. Homes are awarded points based upon blower door test results, with a maximum of 3 points possible.

### MATERIALS & RESOURCES [MR]

**MR 1.4: Framing Efficiencies**
***Maximum 3 Points***

Projects are given one point for each SIP system utilized: walls, roof, and floor. DROJO panels are manufactured for all three purposes.

### MR 1.5: Off-Site Fabrication
***Maximum 4 Points***

This credit can be awarded to homes with pre-cut SIPs in the walls, roof, and/or floor. If SIPs are cut on site, or only used in the walls and/or roof, no point should be awarded for this credit. Points may instead be awarded in the MR 1.4 category.

### MR 2.2 Environmentally Preferable Materials
***Maximum 2 Points***

Depending upon their use, SIPs should be treated as two different components: framing and insulation. If the requirements for either or both are met, points should be awarded accordingly. (MR 03-04)

### MR 3.2: Construction Waste Reduction
***Maximum 3 Points***

Using prefabricated SIPs panels decreases the amount of on-site construction waste, helping contractors qualify for waste reduction points. Waste reduction points are given on a scale ranging from 0 to 3 depending upon the amount of waste generated per square foot of the home.

## COMMERCIAL PROJECTS: LEED® FOR BUSINESSES

DROJO panels are also well-suited for commercial projects. Potential credits for DROJO panels in commercial projects (when LEED® 2009 for New Construction and Major Renovations rating system is used) are listed below. It must be understood, however, that the variables involved in commercial construction can differ widely from one project to another. Therefore, if you have a commercial project and seek LEED® certification, we offer assistance on a per-project-basis.

## LEED® 2009 (V3.0): NEW CONSTRUCTION & MAJOR RENOVATIONS

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### ENERGY & ATMOSPHERE [EA]

### EA 1: Optimize Energy Performance
***Maximum 19 Points***

DROJO wall SIPs are ENERGY STAR™ compliant provide not only structural integrity but superlative insulation. The EPS component of the panel is solid (except where wire chases are incorporated) and does not contain voids nor allow air movement through the walls.

In a study conducted by energy scientists at the Oak Ridge National Laboratory, the stated R-Value of virtually every product on the market, evaluated in “real world conditions,” showed drastic improvement re thermal breaks (i.e., corners, windows, doors, and stud walls) when using SIPs.

Example: A 2” x 6” stud wall, measuring 24” on center and with R-19 fiberglass batts, tested out with an R-Value of 13.7. The SIPs wall tested at R-21.7. In other words, SIPs out-performed a 2” x 6” stud wall by 58%. (ASHRAE Journal March 1996, Christian and Kosny)

## MATERIALS & RESOURCES [MR]

**MR 2: Construction Waste Management**
***Maximum 2 Points***

DROJO panels produce little to no waste on the job site, whether commercial or residential.

**MR 4: Recycled Content**
***Maximum 2 Points***

DROJO SIPs are made of steel and Expanded Polystyrene (EPS) infill. The steel used in the manufacture of DROJO SIPs is considered “green” because it contains a minimum of 25% recycled steel, and is 100% recyclable.

The recycled content value of a material assembly is determined by weight. The recycled fraction of the assembly is multiplied by the cost of the assembly to determine the recycled content value.

**MR 5: Regional Materials *Maximum 2 Points***

The use of building materials or products which have been extracted, harvested, recovered and/or manufactured within 500 miles of the project site, for a minimum of 10% or 20% (based upon cost) of the total materials value.

## REGIONAL PRIORITY [RP]

**RP 1: Regional Priority**
***Maximum 4 Points***

## INNOVATION IN DESIGN [ID]

**ID 1: Innovation in Design**
***Maximum 1 Point***

REFERENCES:

http://www.thermocoremo.com/sip_visual_inspection_form.pdf
(ENERGY STAR™ SIPs Visual Inspection Form)

http://www.usgbc.org/ShowFile.aspx?DocumentID=3638
(LEED® for Homes: Search “SIP")

http://www.usgbc.org/ShowFile.aspx?DocumentID=8868
(LEED® 2009 for New Construction and Major Renovations)

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