



Green Verification Report

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Zip-O Laminators Glulam and Zip-Rim Zip-O Laminators, LLC

GR-L343

Revised June 3, 2024

Products: Zip-O Laminators Glulam and Zip-Rim
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1. Basis of the green verification report:
 - 2020, 2015, and 2012 National Green Building Standard, ICC 700
 - LEED v4.1 Building Design and Construction
 - LEED v4 for New Construction and Major Renovations
 - ANSI A190.1-2022, ANSI A190.1-2017, and ANSI A190.1-2012 recognized in the 2024 International Building Code (IBC) and International Residential Code (IRC), 2021 and 2018 IBC and IRC, and 2015 IBC and IRC, respectively
 - ANSI 117-2020 and ANSI 117-2015 recognized in the 2024 and 2021 IBC and IRC, and 2018 IBC and IRC, respectively
 - CSA O86-19 Engineering Design in Wood
 - CSA O122-16 Structural Glued Laminated Timber recognized in CSA O86-19
 - CSA O177-06 (R2015) Qualification Code for Manufacturers of Structural Glued-Laminated Timber recognized in CSA O86-19
 - APA W210, Green Verification Checklist – ICC 700-2020
 - APA T415, Green Verification Checklist – ICC 700-2015
 - APA Q415, Green Verification Checklist – ICC 700-2012
 - APA Z415 Green Verification Checklist – LEED v4.1
 - APA R415, Green Verification Checklist – LEED v4
 - APA Product Report PR-L338
 - Documentation supporting green product verification
2. Product description:

Zip-O Laminators structural glued laminated timber (glulam) products are used as beams, headers, rafters, purlins, and columns, and are manufactured with the layup combinations in accordance with ANSI 117 and ANSI A190.1, and/or CSA O122. Zip-Rim is a glulam rim board manufactured using a layup combination in accordance with ANSI 117 and ANSI A190.1.
3. Green product verification:

Zip-O Laminators glulam products are manufactured with visually graded and mechanically graded Douglas fir and visually graded Alaska cedar lumber and Zip-Rim products are manufactured with visually graded Douglas fir lumber. Zip-O Laminators glulam and Zip-Rim products are qualified for green construction with points specified in Tables 1 through 5, as independently verified by APA as meeting pertinent criteria of the referenced standards shown in Section 1. Zip-O Laminators glulam products are also eligible to be marked under the USDA BioPreferred Program, as indicated by the label shown in Figure 1.
4. Limitations:
 - a) Zip-O Laminators glulam beams and columns shall be designed in accordance with the code using the design properties specified in ANSI 117 and/or CSA O122.
 - b) Zip-Rim products shall be designed in accordance with the code using the design properties specified in APA Product Report PR-L338.
 - c) Zip-O Laminators glulam beams and columns and Zip-Rim are produced at the Zip-O Laminators' facility in Eugene, OR, under a quality assurance program audited by APA.

- d) This report is subject to re-examination in one year.
5. Identification:
Zip-O Laminators glulam beams and columns and Zip-Rim are identified by a label bearing the manufacturer's name (Zip-O Laminators) and/or trademark, the APA assigned plant number (1120), the product standards for Zip-O Laminators glulam (ANSI 117 and ANSI A190.1, or CSA O122 and CSA O177) or the APA Product Report number PR-L338 for Zip-Rim, the APA logo, the combination symbol for Zip-O Laminators glulam, the report number GR-L343, and a means of identifying the date of manufacture.

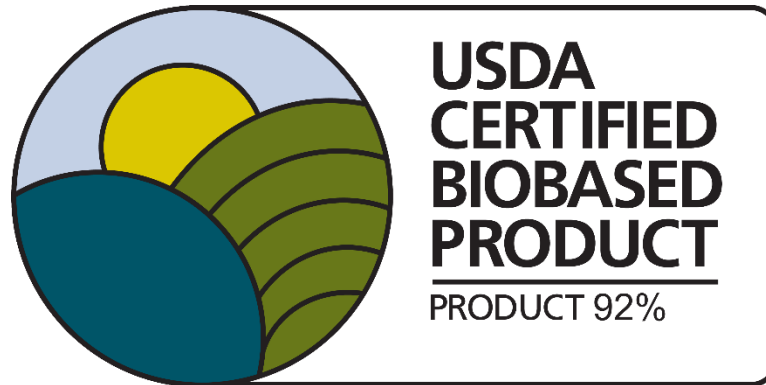


Figure 1. USDA BioPreferred Label for glulam products.

Table 1. 2020 National Green Building Standard ICC 700-2020

Points that have been verified as eligible by APA

	Section/Criteria	Eligible Points	Possible Maximum Points
✓	606.3 Manufacturing energy: Materials manufactured using a minimum of 33% of the primary manufacturing process energy derived from (1) renewable sources, (2) combustible waste sources, or (3) renewal energy credits (RECs) are used for major components of the building	2 for each material	6
✓	608.1 Resource-efficient materials: Products containing fewer materials are used to achieve the same end-use requirements as conventional products	3 for each material	9
✓	901.4(5) Wood materials: A minimum of 85% of material within a product group is manufactured from composite wood products that contain no added urea-formaldehyde or are in accordance with the CARB	4 for each product group	10

Eligible points that are conditional on construction application

	Section/Criteria	Eligible Points	Possible Maximum Points
✓	601.2 Material usage: Structural systems are designed or construction techniques are implemented that reduce and optimize material usage. (1) Minimum structural member or element sizes in accordance with advanced framing techniques or structural design standards are selected, (2) Higher-grade or higher-strength of the same materials than commonly specified for structural elements and components in the building are used and sizes are reduced accordingly, (3) Performance-based structural design is used to optimize lateral force-resisting systems	3 for each system or framing technique	9
✓	601.7(1) (a) Prefinished materials: 35% to less than 50% of the installed materials that have no additional site-applied material for finishing (trims or wall coverings)	1	12
✓	601.7(1) (b) Prefinished materials: 50% to less than 90% of the installed materials that have no additional site-applied material for finishing (trims or wall coverings)	2	
✓	601.7(1) (c) Prefinished materials: 90% or more of the installed materials that have no additional site-applied material for finishing (trims or wall coverings)	5	
✓	606.1(1) Biobased products: Two types of biobased materials are used, each for more than 0.5% of the project's projected building material cost	3	8
✓	606.1(2) Biobased products: Two types of biobased materials are used, each for more than 1% of the project's projected building material cost	6	
✓	606.1(3) Biobased products: For each additional biobased material used for more than 0.5% of the project's projected building material cost	1 each with 2 max	

Table 1. 2020 National Green Building Standard ICC 700-2020 (Continued)
 Eligible points that are conditional on construction application

	Section/Criteria	Eligible Points	Possible Maximum Points
✓	606.2(2) Wood-based products: A minimum of 2 certified wood-based products are used in major components of the building	4	4
✓	609.1 Regional materials: Regional materials are used for major and/or minor components of the building with a minimum of 75% of all products in that component category being sourced regionally	2	10
✓	610.1 Life cycle assessment: A life cycle assessment (LCA) tool is used to select environmentally preferable products or assemblies 610.1.1 Whole-building life cycle assessment: A whole-building LCA is performed in conformance with ASTM E2921 using ISO 14044 compliant life cycle assessment 610.1.2 Life cycle assessment for a product or assembly: An environmentally preferable product or assembly is selected for an application based upon the use of an LCA tool that incorporates data methods compliant with ISO 14044 or other recognized standards that compare the environmental impact of products or assemblies	2 to 3 for each product LCA, 3 to 10 for each assembly LCA	15 for whole-building LCA and product or assembly LCA (15 for whole-building or 10 for product or assembly)
✓	611.1 Product declarations: A minimum of 10 different products installed in the building project, at the time of certificate of occupancy, comply with one of the following sub-sections- 611.1.1 Industry-wide declaration: A type III industry-wide environmental product declaration (EPD) is submitted for each product and is consistent with ISO Standards 14025 and 21930 with at least a cradle-to-gate scope 611.1.2 Product specific declaration: A product specific Type III EPD is submitted for each product that is manufacturer specific for an individual product or product family and in compliance with the goal and scope for the cradle-to-gate requirements in accordance with ISO Standards 14025 and 21930	Counted as 1 product for each industry-wide declaration and 2 products for each product specific declaration	5

Table 1. 2020 National Green Building Standard ICC 700-2020 (Continued)
 Eligible points that are conditional on construction application

	Section/Criteria	Eligible Points	Possible Maximum Points
✓	613.2 Resilient Construction – Minimum structural requirements (base design): The building is designed and constructed in compliance with structural requirements in the IBC or IRC as applicable	2	15
✓	613.3 Resilient Construction – Enhanced resilience (10% above base design): Design and construction practices are implemented to enhance the resilience and durability of the structure by designing and building to forces generated by flooding, snow, wind, or seismic (as applicable) that are 10% higher than the base design	3	
✓	613.4 Resilient Construction – Enhanced resilience (20% above base design): Design and construction practices are implemented to enhance the resilience and durability of the structure by designing and building to forces generated by flooding, snow, wind, or seismic (as applicable) that are 20% higher than the base design	5	
✓	613.5 Resilient Construction – Enhanced resilience (30% above base design): Design and construction practices are implemented to enhance the resilience and durability of the structure by designing and building to forces generated by flooding, snow, wind, or seismic (as applicable) that are 30% higher than the base design	10	
✓	613.6 Resilient Construction – Enhanced resilience (40% above base design): Design and construction practices are implemented to enhance the resilience and durability of the structure by designing and building to forces generated by flooding, snow, wind, or seismic (as applicable) that are 40% higher than the base design	12	
✓	613.7 Resilient Construction – Enhanced resilience (50% above base design): Design and construction practices are implemented to enhance the resilience and durability of the structure by designing and building to forces generated by flooding, snow, wind, or seismic (as applicable) that are 50% higher than the base design	15	

Table 2. 2015 National Green Building Standard ICC 700-2015

Points that have been verified as eligible by APA

	Section/Criteria	Eligible Points	Possible Maximum Points
✓	606.3 Manufacturing energy: Materials manufactured using a minimum of 33% of the primary manufacturing process energy derived from (1) renewable sources, (2) combustible waste sources, or (3) renewal energy credits (RECs) are used for major components of the building	2 for each material	6
✓	608.1 Resource-efficient materials: Products containing fewer materials are used to achieve the same end-use requirements as conventional products	3 for each material	9
✓	901.4(5) Wood materials: A minimum of 85% of material within a product group is manufactured from composite wood products that contain no added urea-formaldehyde or are in accordance with the CARB	4 for each product group	10

Eligible points that are conditional on construction application

	Section/Criteria	Eligible Points	Possible Maximum Points
✓	601.2 Material usage: Structural systems are designed or construction techniques are implemented that reduce and optimize material usage. (1) Minimum structural member or element sizes in accordance with advanced framing techniques or structural design standards are selected, (2) Higher-grade or higher-strength of the same materials than commonly specified for structural elements and components in the building are used and sizes are reduced accordingly, (3) Performance-based structural design is used to optimize lateral force-resisting systems	3 for each system or framing technique	9
✓	601.7(1) Prefinished materials: 90% or more of the installed materials that have no additional site-applied material for finishing (trims or wall coverings)	5	12
✓	601.7(2) Prefinished materials: 50% to less than 90% of the installed materials that have no additional site-applied material for finishing (trims or wall coverings)	2	
✓	601.7(3) Prefinished materials: 35% to less than 50% of the installed materials that have no additional site-applied material for finishing (trims or wall coverings)	1	
✓	606.1(1) Biobased products: Two types of biobased materials are used, each for more than 0.5% of the project's projected building material cost	3	8
✓	606.1(2) Biobased products: Two types of biobased materials are used, each for more than 1% of the project's projected building material cost	6	
✓	606.1(3) Biobased products: For each additional biobased material used for more than 0.5% of the project's projected building material cost	1 each with 2 max	

Table 2. 2015 National Green Building Standard ICC 700-2015 (Continued)

Eligible points that are conditional on construction application

	Section/Criteria	Eligible Points	Possible Maximum Points
✓	609.1 Regional materials: Regional materials are used for major and/or minor components of the building with a minimum of 75% of all products in that component category being sourced regionally	2	10
✓	<p>610.1 Life cycle assessment: A life cycle analysis (LCA) tool is used to select environmentally preferable products or assemblies, or LCA is conducted on the entire building</p> <p>610.1.1 Whole-building life cycle assessment: A whole-building LCA is performed in conformance with ASTM E2921 using ISO 14044 compliant life cycle assessment</p> <p>610.1.2 Life cycle assessment for a product or assembly: An environmentally preferable product or assembly is selected for an application based upon the use of an LCA tool that incorporates data methods compliant with ISO 14044 or other recognized standards that compare the environmental impact of products or assemblies</p>	2 to 3 for each product LCA, 3 to 10 for each assembly LCA	15 for whole-building LCA and product or assembly LCA (15 for whole-building or 10 for product or assembly)

Table 3. National Green Building Standard ICC 700-2012

Points that have been verified by APA

	Section/Criteria	Eligible Points	Possible Maximum Points
✓	606.3 Manufacturing energy: Materials manufactured using a minimum of 33% of the primary manufacturing process energy derived from (1) renewable sources, (2) combustible waste sources, or (3) renewal energy credits (REC's) are used for components of the building	2 for each material	6
✓	608.1 Resource-efficient materials: Products containing fewer materials are used to achieve the same end-use requirements as conventional products	3 for each material	9
✓	901.4(5) Wood materials: A minimum of 85% of material within a product group is manufactured from composite wood products that contain no added urea-formaldehyde or are in accordance with the CARB	4 for each product group	10

Eligible points that are conditional on construction application

	Section/Criteria	Eligible Points	Possible Maximum Points
✓	601.2 Material usage: Structural systems are designed or construction techniques are implemented that reduce and optimize material usage. (1) Minimum structural member or element sizes in accordance with advanced framing techniques or structural design standards are selected, (2) Higher-grade or higher-strength of the same materials than commonly specified for structural elements and components in the building are used and sizes are reduced accordingly, (3) Performance-based structural design is used to optimize lateral force-resisting systems	3 for each system or framing technique	9
✓	601.7(1) Site-applied finishing materials: 90% or more of the installed materials that do not require additional site-applied material for finishing (trims or wall coverings)	5	12
✓	601.7(2) Site-applied finishing materials: 50% to less than 90% of the installed materials that do not require additional site-applied material for finishing (trims or wall coverings)	2	
✓	601.7(3) Site-applied finishing materials: 35% to less than 50% of the installed materials that do not require additional site-applied material for finishing (trims or wall coverings)	1	
✓	606.1(1) Biobased products: Two types of biobased materials are used, each for more than 0.5% of the project's projected building material cost	3	8
✓	606.1(2) Biobased products: Two types of biobased materials are used, each for more than 1% of the project's projected building material cost	6	
✓	606.1(3) Biobased products: For each additional biobased material used for more than 0.5% of the project's projected building material cost	1 each with 2 max	

Table 3. National Green Building Standard ICC 700-2012 (Continued)

Eligible points that are conditional on construction application

✓	606.2(2) Certified wood: A minimum of 2 certified wood-based products are used in major elements of the building such as walls, floors, or roof	4	4
✓	609.1 Regional materials: Regional materials are used for major elements or components of the building	2	10
✓	<p>610.1 Life cycle analysis: A life cycle analysis (LCA) tool is used to select environmentally preferable products or assemblies, or LCA is conducted on the entire building</p> <p>610.1.1 Whole-building life cycle analysis: A whole-building LCA is performed using a life cycle assessment and data compliant with ISO 14044 or other recognized standards</p> <p>610.1.2 Life cycle analysis for a product or assembly: An environmentally preferable product or assembly is selected for an application based upon the use of an LCA tool that incorporates data methods compliant with ISO 14044 or other recognized standards that compare the environmental impact of products or assemblies</p>	<p>2 to 3 for each material, 3 to 10 for each assembly, or 15 for whole-building LCA</p>	<p>10 for each product or assembly, or 15 for whole-building</p>

Table 4. LEED v4.1 Building Design and Construction
 Eligible points that are conditional on construction application

	Section/Criteria	Eligible Points	Possible Maximum Points
✓	<p>EQ Credit: Low Emitting Materials</p> <p><i>Formaldehyde emissions evaluation:</i> Product meets one of the following:</p> <ul style="list-style-type: none"> ▪ Certified as ultra-low-emitting formaldehyde (ULEF) product under EPA Toxic Substances Control Act, Formaldehyde Emission Standards for Composite Wood Products (TSCA, Title VI) (EPA TSCA Title VI) or California Air Resources Board (CARB) Airborne Toxic Control Measure (ATCM) ▪ Certified as no added formaldehyde resins (NAF) product under EPA TSCA Title VI or CARB ATCM ▪ Wood structural panel manufactured according to PS 1-09 or PS 2-10 (or one of the standards considered by CARB to be equivalent to PS 1 or PS 2) and labeled bond classification Exposure 1 or Exterior ▪ Structural wood product^(a) manufactured according to ANSI A190.1 (for structural glued laminated timber), ANSI/APA PRG 320 (for cross-laminated timber), ASTM D5055 (for I-joists), ASTM D5456 (for structural composite lumber), or PS 20-15 (for finger-jointed lumber). 	1-3	3

^(a) The California Department of Public Health (CDPH) Standard v1.1 states that structural wood products are not required to be evaluated for general VOC emissions.

Table 4. LEED v4.1 Building Design and Construction (continued)
 Eligible points that are conditional on construction application

	Section/Criteria	Eligible Points	Possible Maximum Points
✓	<p>MR Credit: Building Life-Cycle Impact Reduction</p> <p>Option 2. Whole-Building Life-Cycle Assessment For new construction (buildings or portions of buildings), conduct a cradle-to grave life-cycle assessment of the project's structure and enclosure and select one or more of the following paths below to earn up to 4 points:</p> <p>Path 1: Conduct a life cycle assessment of the project's structure and enclosure (1 point).</p> <p>Path 2: Conduct a life-cycle assessment of the project's structure and enclosure that demonstrates a minimum of 5% reduction, compared with a baseline building in at least three of the six impact categories listed below, one of which must be global warming potential (2 points).</p> <p>Path 3: Conduct a life cycle assessment of the project's structure and enclosure that demonstrates a minimum of 10% reduction, compared with a baseline building, in at least three of the six impact categories listed below, one of which must be global warming potential (3 points).</p> <p>Path 4: Meet requirements of Path 3 and incorporate reuse and/or salvage materials into the project's structure and enclosure for the proposed design. Demonstrate reductions compared with a baseline building of at least 20% reduction for global warming potential and demonstrate at least 10% reduction in two additional impact categories listed below (4 points).</p> <p>Select at least three of the following impact categories for reduction:</p> <ul style="list-style-type: none"> ▪ global warming potential (greenhouse gases), in CO₂e; ▪ depletion of the stratospheric ozone layer, in kg CFC-11e; ▪ acidification of land and water sources, in moles H⁺ or kg SO₂e; ▪ eutrophication, in kg nitrogen eq or kg phosphate eq; ▪ formation of tropospheric ozone, in kg NO_x, kg O₃ eq, or kg ethene; and ▪ depletion of nonrenewable energy resources, in MJ using CML / depletion of fossil fuels in TRACI. 	1-4	4

Table 4. LEED v4.1 Building Design and Construction (continued)
 Eligible points that are conditional on construction application

	Section/Criteria	Eligible Points	Possible Maximum Points
✓	<p>MR Credit: Environmental Product Declarations</p> <p>Option 1. Environmental Product Declaration (EPD) Use at least 20 different permanently installed products sourced from at least five different manufacturers that meet one of the disclosure criteria below.</p> <ul style="list-style-type: none"> ▪ Life-cycle assessment and environmental product declarations. <ul style="list-style-type: none"> ▪ Products with a publicly available, critically reviewed life-cycle assessment conforming to ISO 14044 that have at least a cradle to gate scope are valued as on whole product for the purposes of credit achievement calculation. ▪ Product-specific Type III EPD – Internally Reviewed. Products with an internally critically reviewed LCA in accordance with ISO 14071. Products with product-specific internal EPDs which conform to ISO 14025 and EN 15804 or ISO 21930 and have at least a cradle to gate scope are valued as one whole product for the purposes of credit achievement calculation. ▪ Industry-wide Type III EPD --. Products with third-party certification (Type III), including external verification, in which the manufacturer is explicitly recognized as a participant by the program operator. Products with industry-wide EPDs, which conform to ISO 14025, and EN 15804 or ISO 21930 and have at least a cradle to gate scope are valued as one whole product for the purposes of credit achievement calculation. ▪ Environmental Product Declarations which conform to ISO 14025 and EN 15804 or ISO 21930 and have at least a cradle to gate scope. <ul style="list-style-type: none"> ▪ Product-specific Type III EPD – Products with third-party certification (Type III), including external verification and external critical review are valued as 1.5 products for the purposes of credit achievement calculation. <p>For credit achievement calculation, products sourced (extracted, manufactured, purchased) within 100 miles (160 km) of the project site are valued at twice their base contributing number of products, up to a maximum of 2 products.</p>	1	1

Table 5. LEED v4 New Construction and Major Renovations

Eligible points that are conditional on construction application

	Section/Criteria	Eligible Points	Possible Maximum Points
✓	<p>EQ Credit: Low Emitting Materials</p> <p>Composite wood evaluation Glued laminated beams are considered compliant if they are made with moisture resistant adhesives meeting ASTM D2559, have no surface treatments with added urea-formaldehyde resins or coatings, and if they are certified according to Structural Glued Laminated Timber (ANSI A109.1), referenced in ID# LI 10466 LEM Composite Wood^(a) (www.usgbc.org/leedaddenda/10466). Zip-O Laminators glulam products are manufactured with adhesives that comply with ASTM D2559.</p>	See LEED v4 for calculation methods	3

^(a) The California Department of Public Health (CDPH) Standard v1.1 states that structural wood products are not required to be evaluated for general VOC emissions.

Table 5. LEED v4 New Construction and Major Renovations (Continued)
 Eligible points that are conditional on construction application

	Section/Criteria	Eligible Points	Possible Maximum Points
✓	<p>MR Credit: Building life-cycle impact reduction</p> <p>Option 4: Whole-building lifecycle assessment For new construction (buildings or portions of buildings), conduct a lifecycle assessment of the project’s structure and enclosure that demonstrates a minimum of 10% reduction, compared with a baseline building, in at least three of the six impact categories listed below, one of which must be global warming potential. No impact category assessed as part of the lifecycle assessment may increase by more than 5% compared with the baseline building.</p> <p>The baseline and proposed buildings must be of comparable size, function, orientation, and operating energy performance as defined in EA Prerequisite Minimum Energy Performance. The service life of the baseline and proposed buildings must be the same and at least 60 years to fully account for maintenance and replacement. Use the same lifecycle assessment software tools and data sets to evaluate both the baseline building and the proposed building, and report all listed impact categories. Data sets must be compliant with ISO 14044.</p> <p>Select at least three of the following impact categories for reduction:</p> <ul style="list-style-type: none"> • global warming potential (greenhouse gases), in CO₂e; • depletion of the stratospheric ozone layer, in kg CFC11; • acidification of land and water sources, in moles H⁺ or kg SO₂; • eutrophication, in kg nitrogen or kg phosphate; • formation of tropospheric ozone, in kg NO_x, kg O₃ eq, or kg ethene; and • depletion of nonrenewable energy resources, in MJ 	3	3

Table 5. LEED v4 New Construction and Major Renovations (Continued)

Eligible points that are conditional on construction application

	Section/Criteria	Eligible Points	Possible Maximum Points
✓	<p>MR Credit: Building product disclosure and optimization – environmental product declarations</p> <p>Option 1: Environmental Product Declaration Use at least 20 different permanently installed products sourced from at least five different manufacturers that meet one of the disclosure criteria below.</p> <ul style="list-style-type: none"> ▪ Product-specific declaration: Products with a publicly available, critically reviewed life-cycle assessment conforming to ISO 14044 that have at least a cradle to gate scope are valued as one quarter (1/4) of a product for the purposes of credit achievement calculation ▪ Environmental Product Declarations which conform to ISO 14025, 14040, 14044, and EN 15804 or ISO 21930 and have at least a cradle to gate scope: <ul style="list-style-type: none"> ▪ Industry-wide (generic) EPD -- Products with third-party certification (Type III), including external verification, in which the manufacturer is explicitly recognized as a participant by the program operator are valued as one half (1/2) of a product for purposes of credit achievement calculation. ▪ Product-specific Type III EPD -- Products with third-party certification (Type III), including external verification in which the manufacturer is explicitly recognized as the participant by the program operator are valued as one whole product for purposes of credit achievement calculation. ▪ USGBC approved program – Products that comply with other USGBC approved environmental product declaration frameworks. <p>For credit achievement calculation, products sourced (extracted, manufactured, purchased) within 100 miles (160 km) of the project site are valued at 200% of their base contributing cost. Structure and enclosure materials may not constitute more than 30% of the value of compliant building products.</p>	1/4 – 1	1

Table 5. LEED v4 New Construction and Major Renovations (Continued)

Eligible points that are conditional on construction application

	Section/Criteria	Eligible Points	Possible Maximum Points
✓	<p>MR Credit: Building product disclosure and optimization – environmental product declaration</p> <p>Option 2: Multi-attribute optimization Use products that comply with one of the criteria below for 50%, by cost, of the total value of permanently installed products in the project. Products will be valued as below.</p> <ul style="list-style-type: none"> ▪ Third party certified products that demonstrate impact reduction below industry average in at least three of the following categories are valued at 100% of their cost for credit achievement calculations. <ul style="list-style-type: none"> ▪ global warming potential (greenhouse gases), in CO₂e; ▪ depletion of the stratospheric ozone layer, in kg CFC-11; ▪ acidification of land and water sources, in moles H⁺ or kg SO₂; ▪ eutrophication, in kg nitrogen or kg phosphate; ▪ formation of tropospheric ozone, in kg Nox or kg ethene; and ▪ depletion of nonrenewable energy resources, in MJ. ▪ USGBC approved program – Products that comply with other USGBC approved multi-attribute frameworks. <p>For credit achievement calculation, products sourced (extracted, manufactured, purchased) within 100 miles (160 km) of the project site are valued at 200% of their base contributing cost. Structure and enclosure materials may not constitute more than 30% of the value of compliant building products.</p>	1	1

Table 5. LEED v4 New Construction and Major Renovations (Continued)

Eligible points that are conditional on construction application

	Section/Criteria	Eligible Points	Possible Maximum Points
✓	<p>MR Credit: Building product disclosure and optimization – sourcing of raw materials</p> <p>Option 1: Raw material source and extraction reporting</p> <p>Use at least 20 different permanently installed products from at least five different manufacturers that have publicly released a report from their raw material suppliers which include raw material supplier extraction locations, a commitment to long-term ecologically responsible land use, a commitment to reducing environmental harms from extraction and /or manufacturing processes, and a commitment to meeting applicable standards or programs voluntarily that address responsible sourcing criteria.</p> <ul style="list-style-type: none"> ▪ Products sourced from manufacturers with self-declared reports are valued as one half (1/2) of a product for credit achievement. ▪ Third-party verified corporate sustainability reports (CSR) which include environmental impacts of extraction operations and activities associated with the manufacturer’s product and the product’s supply chain, are valued as one whole product for credit achievement calculation. <ul style="list-style-type: none"> ▪ For credit achievement calculation, products sourced (extracted, manufactured, and purchased) within 100 miles (160 km) of the project site are valued at 200% of their base contributing cost. For credit achievement calculation, the base contributing cost of individual products compliant with multiple responsible extraction criteria is not permitted to exceed 100% its total actual cost (before regional multipliers) and double counting of single product components compliant with multiple responsible extraction criteria is not permitted and in no case is a product permitted to contribute more than 200% of its total actual cost. <p>Structure and enclosure materials may not constitute more than 30% of the value of compliant building products.</p>	1/2 to 1	1

Table 5. LEED v4 New Construction and Major Renovations (Continued)

Eligible points that are conditional on construction application

	Section/Criteria	Eligible Points	Possible Maximum Points
✓	<p>MR Credit: Building product disclosure and optimization – sourcing of raw materials</p> <p>Option 2: leadership extraction practice Use products that meet the responsible extraction criteria below for at least 25%, by cost, of the total value of permanently installed building products in the project.</p> <ul style="list-style-type: none"> ▪ Wood products. Wood products must be certified by the Forest Stewardship Council or USGBC-approved equivalent. Products meeting wood products criteria are valued at 100% of their cost for the purposes of credit achievement calculation. ▪ Pilot Alternative Compliance Path – Legal Wood: Wood products from Certified Sources as defined by ASTM D7612-10 are valued at 100% of their cost for purposes of credit achievement calculation if the following two conditions are also met: <ul style="list-style-type: none"> ▪ 100% of all wood is verified to be from Legal (non-controversial) Sources as defined by ASTM D7612-10. These components include at a minimum, structural framing and general dimensional framing, flooring, sub-flooring, wood doors and finishes. ▪ 70% (based on cost) of all wood used on the project is from Responsible Sources as defined by ASTM D7612-10. These components include at a minimum, structural framing and general dimensional framing, flooring, sub-flooring, wood doors and finishes. <p>For credit achievement calculation, products sourced (extracted, manufactured, and purchased) within 100 miles (160 km) of the project site are valued at 200% of their base contributing cost. For credit achievement calculation, the base contributing cost of individual products compliant with multiple responsible extraction criteria is not permitted to exceed 100% its total actual cost (before regional multipliers) and double counting of single product components compliant with multiple responsible extraction criteria is not permitted and in no case is a product permitted to contribute more than 200% of its total actual cost.</p> <p>Structure and enclosure materials may not constitute more than 30% of the value of compliant building products.</p>	1	1

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