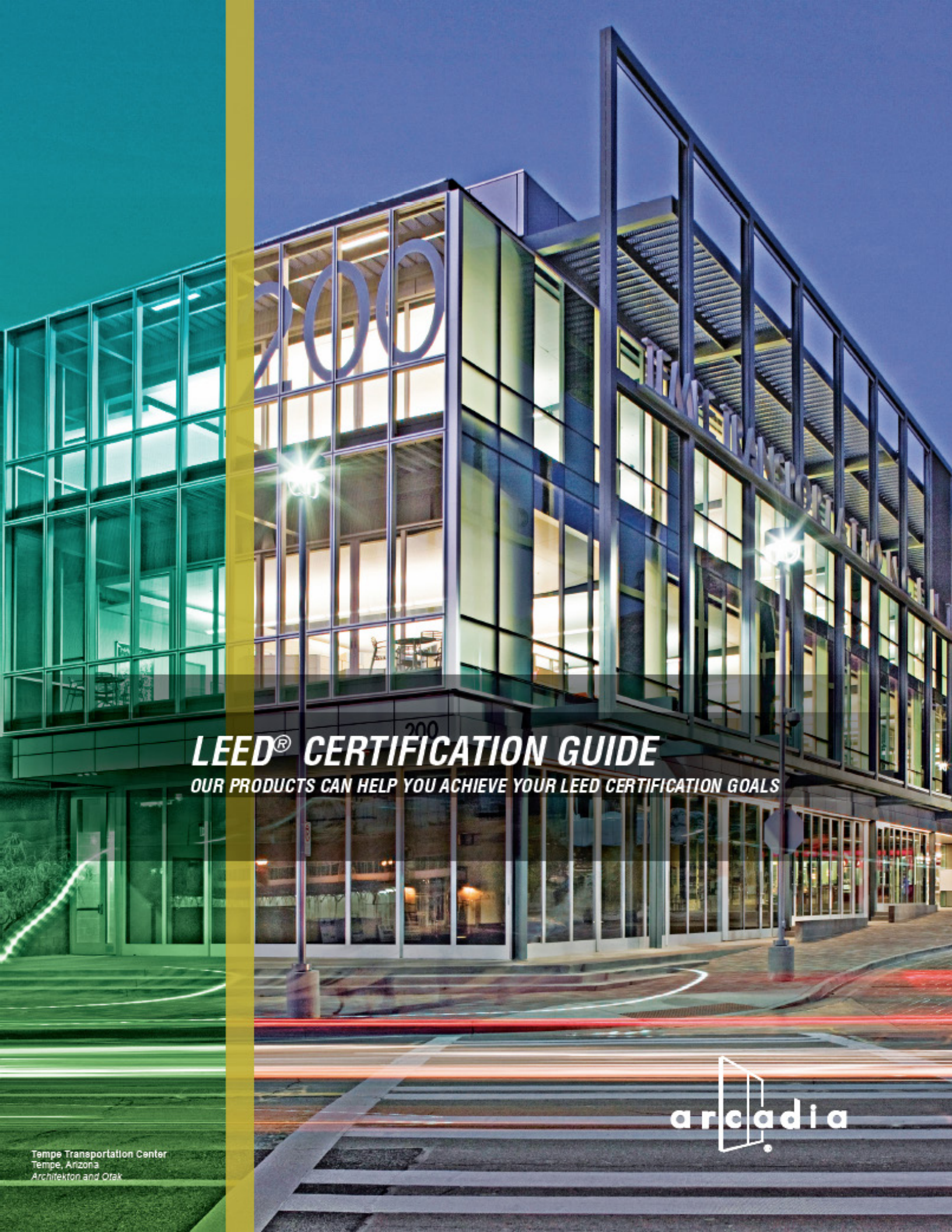


LEED® CERTIFICATION GUIDE

OUR PRODUCTS CAN HELP YOU ACHIEVE YOUR LEED CERTIFICATION GOALS

arcadia

Tempe Transportation Center
Tempe, Arizona
Architekton and Otak

LEED PLATINUM

The Casey Condominiums - Portland, Oregon
GBD Architects

LEED® / SUSTAINABILITY

Arcadia is proud to build products and systems that comply with the LEED (Leadership in Energy and Environmental Design) Green Building Rating System.

In today's world, the challenge to our environment has never been greater. Arcadia has been leading the way by offering quality solutions and materials for a better, greener world.

Arcadia's leadership in green materials development has created the opportunity to help our environment and to enhance the value of our products for architects and building professionals worldwide.

We are continuing to develop and offer products that help earn LEED credits in multiple categories. We're proud to be a part of your commitment to sustainable design.

arcadia PRODUCTS AND STANDARD PRACTICE OF CARE

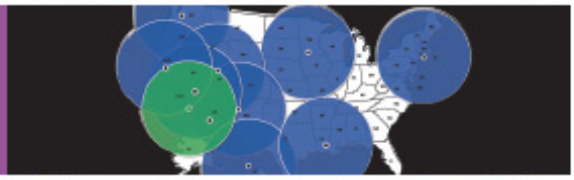
HIGH-PERFORMANCE THERMAL PRODUCTS -
Thermally insulated systems optimize energy performance.

ARCHITECTURAL GRADE OPERABLE WINDOWS -
Thermally insulated window optimize energy performance.

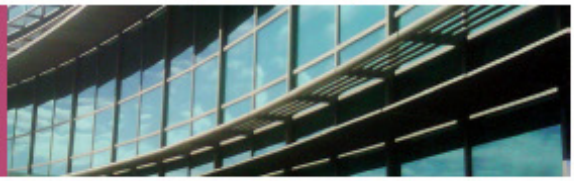
ANODIZED & PAINT COATINGS -
Anodized and painted finishes, with no VOC's, which improves overall air quality.

USE OF RECYCLED ALUMINUM -
The weighted scrap content of our extrusions averages 47.9%

NATIONWIDE INFRASTRUCTURE -
Local manufacturing qualifies in most cases for LEED points, provided the project site is less than 500 miles from point of recovery of the scrap.

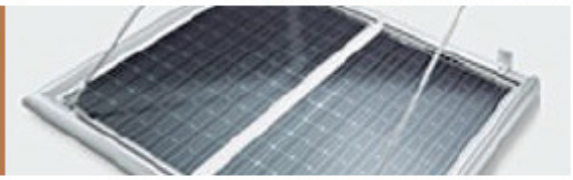


SUNSHADE -
Reduces solar heat gain, for greater energy savings.



LIGHT SHELF / DAYLIGHTING -
Reduces power consumption by bringing natural light into the space.

PHOTOVOLTAIC SUNSHADE -
Reduces solar heat gain, while converting solar radiation into power.



SEALANTS -
Low VOC sealants improve overall air quality.

SLOPED GLAZING & SKYLIGHT -
Brings more natural light into a space to improve work environment.

PHOTOVOLTAIC CURTAINWALL / SLOPE GLAZING -
Reduces solar heat gain, while converting solar radiation into power.

INDOOR ENVIRONMENTAL QUALITY	Potential Credits	LEED REQUIREMENTS
2 Increased Ventilation Provide additional outdoor air ventilation to improve indoor air quality for improved occupant comfort, well-being and productivity.	1	For mechanically ventilated spaces, increase breathing zone outdoor air ventilation rates to all occupied spaces by at least 30% above the minimum rates required by ASHRAE Standard 62.1-2007 as determined by EQ Prerequisite 1. For naturally ventilated spaces, design natural ventilation systems for occupied spaces to meet the recommendations set forth in the Carbon Trust "Good Practice Guide 237" [1998] **RELATED PRODUCTS** ARCHITECTURAL GRADE OPERABLE WINDOWS
4.1 Low-Emitting Materials - Adhesives and Sealants Reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants	1	All adhesives and sealants used on the interior of the building must comply with the following requirements as applicable to the project scope: • Adhesives, Sealants and Sealant Primers must comply with South Coast Air Quality Management District (SCAQMD) Rule #1168. **RELATED PRODUCT** SEALANTS
4.2 Low-Emitting Materials - Paints and Coatings Reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants.	1	Paints and coatings used on the interior of the building must comply with the following criteria as applicable to the project scope: • Architectural paints and coatings applied to interior walls and ceilings must not exceed the volatile organic compound (VOC) content limits established in Green Seal Standard GS-11, Paints, 1st Edition, May 20, 1993. • Anti-corrosive and anti-rust paints applied to interior ferrous metal substrates must not exceed the VOC content limit of 250 g/L (2 lb/gal) established in Green Seal Standard GC-03, Anti-Corrosive Paints, 2nd Edition, January 7, 1997. • Clear wood finishes, floor coatings, stains, primers, sealers, and shellacs applied to interior elements must not exceed the VOC content limits established in South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings, rules in effect on January 1, 2004. **RELATED PRODUCT** ANODIZED & PAINT COATINGS
6.2 Controllability of Systems: Thermal Comfort Provide a high level of thermal comfort system control by individual occupants or specific groups in multi-occupant spaces to promote the productivity, comfort and well-being of building occupants.	1	Provide individual comfort controls for 50% (minimum) of the building occupants to enable adjustments to suit individual task needs and preferences. In certain areas, operable windows can be used in lieu of comfort controls. The areas of operable window must meet the requirements of ASHRAE 62.1-2007 paragraph 5.1 Natural Ventilation. **RELATED PRODUCT** ARCHITECTURAL GRADE OPERABLE WINDOWS
7.1 Thermal Comfort - Design Provide a comfortable thermal environment that promotes occupant productivity and well-being.	1	Design heating, ventilating and air conditioning (HVAC) systems and the building envelope to meet the requirements of ASHRAE Standard 55-2004, Thermal Comfort Conditions for Human Occupancy **RELATED PRODUCTS** ARCHITECTURAL GRADE OPERABLE WINDOWS HIGH-PERFORMANCE THERMAL PRODUCTS
8.1 Daylight and Views (Daylight 75% of Spaces) Provide for the building occupants with a connection between indoor spaces and the outdoors through the introduction of daylight and views into the regularly occupied areas of the building.	1	**OPTION 1**: Simulation Demonstrate through computer simulations that 75% or more of all regularly occupied spaces achieve defined daylight illuminance levels of a minimum of 25fc and a maximum of 500fc. **OPTION 2**: Prescriptive Use a combination of side-lighting and/or top-lighting to achieve a total Daylighting Zone that is at least 75% (1 point) of all the regularly occupied spaces. **OPTION 3**: Any of the above calculation methods may be combined to document the minimum daylight illumination in at least 75% of all regularly occupied spaces. The different methods used in each space must be clearly recorded on all building plans. **OPTION 4**: Measurement Demonstrate, through records of indoor light measurements, that a minimum daylight illumination level of 25 foot-candles has been achieved in at least 75% of all regularly occupied areas. **RELATED PRODUCTS** LIGHT SHELF / DAYLIGHTING SUNSHADE SLOPED GLAZING & SKYLIGHT HIGH-PERFORMANCE THERMAL PRODUCTS
8.2 Daylight & Views (Views 90% of Spaces) Provide for the building occupants with a connection between indoor spaces and the outdoors through the introduction of daylight and views into the regularly occupied areas of the building.	1	Achieve direct line of sight to the outdoor environment via vision glazing between 2'6" and 7'6" above finish floor for building occupants in 90% of all regularly occupied areas. **RELATED PRODUCTS** ARCHITECTURAL GRADE OPERABLE WINDOWS HIGH-PERFORMANCE THERMAL PRODUCTS

ENERGY & ATMOSPHERE

	Potential Credits	LEED REQUIREMENTS
1 Optimize Energy Performance Achieve increasing levels of energy performance above the prerequisite standard to reduce environmental impact associated with excessive energy use.	1-19 (1-19) (1) (1-3)	***Select one of the three compliance path options below.*** **OPTION 1: Whole Building Energy Simulation** Demonstrate a percentage improvement in the proposed building performance rating compared to the baseline building performance rating per ASHRAE/IESNA Standard 90.1-2007 (with errata but without addenda) by a whole building project simulation using the Building Performance Rating Method in Appendix G of the Standard. **OPTION 2: Prescriptive Compliance Path** Comply with the prescriptive measures of the ASHRAE Advanced Energy Design Guide appropriate to the project scope. Project teams must fully comply with all applicable criteria as established in the Advanced Energy Design Guide for the climate zone in which the building is located. **OPTION 3: Prescriptive Compliance Path:** Advanced Buildings™ Core Performance™ Guide Comply with the prescriptive measures identified in the Advanced Buildings™ Core Performance™ Guide developed by the New Buildings Institute. **RELATED PRODUCTS** LIGHT SHELF / DAYLIGHTING · SUNSHADE ARCHITECTURAL GRADE OPERABLE WINDOWS · HIGH-PERFORMANCE THERMAL PRODUCTS
2 On-site Renewable Energy Encourage and recognize increasing levels of self-supply through renewable technologies to reduce environmental impact associated with fossil fuel energy use.	1-7	Use on-site renewable energy systems to offset building energy cost. Calculate project performance by expressing the energy produced by renewable systems as a percentage of the building annual energy cost and using the table below to determine the number of points possible: RENEWABLE ENERGY / POINT(S): 1% / 1; 3% / 2; 5% / 3; 7% / 4; 9% / 5; 11% / 6; 13% / 7 **RELATED PRODUCTS** PHOTOVOLTAIC CURTAINWALL / SLOPE GLAZING · PHOTOVOLTAIC SUNSHADE

MATERIALS & RESOURCES

	Potential Credits	LEED REQUIREMENTS
4.1 Recycled Content: 10% Increase demand for building products that incorporate recycled content materials, therefore reducing the impact resulting from extraction and processing of virgin materials.	1	Use materials with recycled content, such that the sum of postconsumer recycled content plus one-half of the pre-consumer content constitutes at least 10% (based on cost) of the total value of the materials in the project. **STANDARD PRACTICE OF CARE** USE OF RECYCLED ALUMINUM
4.2 Recycled Content: 20% Increase demand for building products that incorporate recycled content materials, therefore reducing the impact resulting from extraction and processing of virgin materials.	(4.1) + 1	Use materials with recycled content, such that the sum of postconsumer recycled content plus one-half of the pre-consumer content constitutes at least 20% (based on cost) of the total value of the materials in the project. **STANDARD PRACTICE OF CARE** USE OF RECYCLED ALUMINUM
5.1 Regional Materials: 10% Extracted, Processed and Manufactured Regionally Increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the use of indigenous resources and reducing the environmental impact resulting from transportation.	1	Use building materials or products that have been extracted, harvested or recovered, as well as manufactured within 500 miles of the project site for a minimum of 10% (based on cost) of the total materials value. If only a fraction of a product or material is extracted / harvested / recovered and manufactured locally, then only that percentage (by weight) shall contribute to the regional value. **STANDARD PRACTICE OF CARE** USE OF RECYCLED ALUMINUM · NATIONWIDE INFRASTRUCTURE
5.2 Regional Materials: 20% Extracted, Processed and Manufactured Regionally Increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the use of indigenous resources and reducing the environmental impact resulting from transportation.	(5.1) + 1	Use building materials or products that have been extracted, harvested or recovered, as well as manufactured within 500 miles of the project site for a minimum of 10% (based on cost) of the total materials value. If only a fraction of a product or material is extracted / harvested / recovered and manufactured locally, then only that percentage (by weight) shall contribute to the regional value. **STANDARD PRACTICE OF CARE** USE OF RECYCLED ALUMINUM · NATIONWIDE INFRASTRUCTURE

Corporate Location

2301 East Vernon Avenue
Vernon, CA 90058

Ph 323.269.7300
Fx 323-269-7390

info@arcadiainc.com

Washington Location

7830 S. 196th Street
Kent, Washington 98032

Ph 425-869-7300
Fx 253-395-4234

Arizona Location

2510 West Geneva Drive
Tempe, AZ 85282

Ph 602-437-2514
Fx 602-437-2515

New Mexico Location

4705 Mcleod Road N.E.
Albuquerque, NM 87109

Ph 505-341-4222
Fx 505-341-4225

Nevada Location

1850 East Maule Avenue
Las Vegas, NV 89119

Ph 702-798-7300
Fx 702-798-7305

Connecticut Location

60 Bonner Street
Stamford, CT 06902

Ph 203-316-8000
Fx 203-316-8200

Hawaii Location

94-410 Uke'e Street, Bldg #A
Waipahu, HI 96797

Ph 808-678-9700
Fx 808-676-8663

Northern California Location

2187 Alpine Way
Hayward, CA 94545

Ph 510-783-4990
Fx 510-783-1149

Sacramento Location

2324 Del Monte Street
Sacramento, CA 95691

Ph 916-375-1478
Fx 916-375-1523

arcadia

arcadiainc.com