GAIA *profitability through sustainability*

LEED + ENERGY MODELING + COMMISSIONING

WINDWARD SCHOOL

LOS ANGELES, CA

LEED-SCHOOLS v2.0 FACTS

LEED GOLD	**44** of 79
Sustainable Sites :	**12** of 16
Water Efficiency :	**4** of 7
Energy and Atmosphere :	**8** of 17
Materials and Resources :	**4** of 13
Indoor Environmental Quality :	**10** of 20
Innovation and Design :	**6** of 6

42,500 sq ft

Construction : Education | **Type :** School

PROJECT TEAM

Owner : Windward School
Architect : Pica & Sullivan
General Contractor : Speer Construction
Mechanical Engineer : MB&A
Electrical Engineer : California Industrial
Plumbing Engineer : MB&A
Landscape Architect : Carter Romanek
LEED Consultant / Energy Model : Gaia

50% less potable water use annually due to high-efficiency plumbing fixtures

54% less potable water is used for landscaping due to drought-tolerant plants and high-efficiency irrigation

85% of construction waste was diverted from landfills

LEED ACCOMPLISHMENTS

Sustainable Sites

- A "cool roof" of reflective material was installed to reduce heat island effect and cooling load
- Preferred parking for low-emitting, fuel-efficient and carpool vehicles
- Joint use of facility with other community organizations

Water Efficiency

- Drought-tolerant plants and high-efficiency irrigation systems were installed to reduce the use of potable water for irrigation by 54%
- High-efficiency water closets, lavatory faucets and waterless urinals were installed to reduce water use for the building by 50%

Energy and Atmosphere

- Efficient lighting and HVAC design reduces energy consumption by 21%
- Enhanced commissioning verified optimal performance of building systems

Materials and Resources

- 85% of construction waste was diverted from landfills
- Over 20% of total building materials contain recycled content

Indoor Environmental Quality

- Interior finishes (including carpet, paint, coatings, adhesives, sealants, composite wood and agrifiber products) were selected with low levels of volatile organic compounds (VOC's) to reduce indoor air contamination

Innovation and Design

- Bike to school program and incentives
- School as a teaching tool
- Low impact cleaning equipment policy

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LEED-SCHOOLS v2.0 SCORECARD

Owner : Windward
Project : Windward School
Location : Los Angeles, CA
Certification : LEED Gold

GAIA

12 0 4 Sustainable Sites — POSSIBLE POINTS 16

Y	?	N			
Y			Prereq 1	**Construction Activity Pollution Prevention**	Required
Y			Prereq 2	**Environmental Site Assessment**	Required
1			Credit 1	**Site Selection**	1
1			Credit 2	**Development Density & Community Connectivity {EB}**	1
		1	Credit 3	**Brownfield Redevelopment**	1
1			Credit 4.1	**Alternative Transportation,** Public Transportation Access **{EB}**	1
1			Credit 4.2	**Alternative Transportation,** Bicycle Use	1
1			Credit 4.3	**Alternative Transportation,** Low-Emitting & Fuel-Efficient Vehicles	1
1			Credit 4.4	**Alternative Transportation,** Parking Capacity	1
		1	Credit 5.1	**Site Development,** Protect & Restore Habitat	1
1			Credit 5.2	**Site Development,** Maximize Open Space	1
1			Credit 6.1	**Stormwater Design,** Quantity Control	1
1			Credit 6.2	**Stormwater Design,** Quality Control	1
1			Credit 7.1	**Heat Island Effect,** Non-Roof	1
1			Credit 7.2	**Heat Island Effect,** Green Roof	1
		1	Credit 8	**Light Pollution Reduction**	1
		1	Credit 9	**Site Master Plan**	1
1			Credit 10	**Joint Use of Facilities**	1

4 0 3 Water Efficiency — POSSIBLE POINTS 7

Y	?	N			
1			Credit 1.1	**Water Efficient Landscaping,** Reduce by 50%	1
		1	Credit 1.2	**Water Efficient Landscaping,** No Potable Use or No Irrigation	1
		1	Credit 2	**Innovative Wastewater Technologies**	1
1			Credit 3.1	**Water Use Reduction,** 20% Reduction	1
1			Credit 3.2	**Water Use Reduction,** 30% Reduction	1
1			Credit 3.3	**Water Use Reduction,** 40% Reduction	1
		1	Credit 4	**Process Water Use Reduction,** 20% Reduction	1

8 0 9 Energy & Atmosphere — POSSIBLE POINTS 17

Y	?	N			
Y			Prereq 1	**Fundamental Commissioning of the Building Energy Systems**	Required
Y			Prereq 2	**Minimum Energy Performance**	Required
Y			Prereq 3	**Fundamental Refrigerant Management**	Required
5		5	Credit 1	**Optimize Energy Performance** (2pt Minimum) **{EB}**	2-10
1		2	Credit 2	**On-Site Renewable Energy**	1-3
1			Credit 3	**Enhanced Commissioning {EB}**	1
		1	Credit 4	**Enhanced Refrigerant Management**	1
		1	Credit 5	**Measurement & Verification {EB}**	1
1			Credit 6	**Green Power**	1

{EB} - Credit Can Assist in Certification Under LEED for Existing Buildings

4 0 9 Materials & Resources — POSSIBLE POINTS 13

Y	?	N			
Y			Prereq 1	**Storage & Collection of Recyclables**	Required
		1	Credit 1.1	**Building Reuse,** Maintain 75% of Existing Walls, Floors & Roof	1
		1	Credit 1.2	**Building Reuse,** Maintain 95% of Existing Walls, Floors & Roof	1
		1	Credit 1.3	**Building Reuse,** Maintain 50% of Interior Non-Structural Elements	1
1			Credit 2.1	**Construction Waste Management,** Divert 50% from Disposal	1
1			Credit 2.2	**Construction Waste Management**, Divert 75% from Disposal	1
		1	Credit 3.1	**Materials Reuse,** 5%	1
		1	Credit 3.2	**Materials Reuse,** 10%	1
1			Credit 4.1	**Recycled Content,** 10% (Post-Consumer + 1/2 Pre-Consumer) **{EB}**	1
		1	Credit 4.2	**Recycled Content,** 20% (Post-Consumer + 1/2 Pre-Consumer) **{EB}**	1
1			Credit 5.1	**Regional Materials,** 10% Extracted, Processed & Manufactured Regionally **{EB}**	1
		1	Credit 5.2	**Regional Materials,** 20% Extracted, Processed & Manufactured Regionally **{EB}**	1
		1	Credit 6	**Rapidly Renewable Materials {EB}**	1
		1	Credit 7	**Certified Wood {EB}**	1

10 0 10 Indoor Environmental Quality — POSSIBLE POINTS 20

Y	?	N			
Y			Prereq 1	**Minimum IAQ Performance**	Required
Y			Prereq 2	**Environmental Tobacco Smoke (ETS) Control**	Required
Y			Prereq 3	**Minimum Acoustical Performance**	Required
1			Credit 1	**Outdoor Air Delivery Monitoring**	1
		1	Credit 2	**Increased Ventilation**	1
1			Credit 3.1	**Construction IAQ Management Plan,** During Construction	1
		1	Credit 3.2	**Construction IAQ Management Plan,** Before Occupancy	1
4			Credit 4	**Low-Emitting Materials**	1-4
		1	Credit 5	**Indoor Chemical & Pollutant Source Control**	1
		1	Credit 6.1	**Lighting System Design & Controllability**	1
1			Credit 6.2	**Thermal Comfort,** Controllability	1
1			Credit 7.1	**Thermal Comfort,** Design **{EB}**	1
1			Credit 7.2	**Thermal Comfort,** Verification **{EB}**	1
		3	Credit 8.1	**Daylight & Views,** Daylighting for 75% of Spaces **{EB}**	1-3
		1	Credit 8.2	**Daylight & Views,** Views for 90% of Spaces	1
		2	Credit 9	**Enhanced Acoustical Performance**	1-2
1			Credit 10	**Mold Prevention**	1

6 0 0 Innovation & Design — POSSIBLE POINTS 6

Y	?	N			
1			Credit 1.1	**Innovation in Design,** Water Farm for Santa Monica (Dual Use of Site)	1
1			Credit 1.2	**Innovation in Design,** Bike to School Program/Incentives	1
1			Credit 1.3	**Innovation in Design,** Smart Certified Materials	1
1			Credit 1.4	**Innovation in Design,** SS 5.2 Maximize Open Space	1
1			Credit 2	**LEED Accredited Professional**	1
1			Credit 3	**School as a Teaching Tool**	1

44 0 35 Project Totals — POSSIBLE POINTS 69

Certified: 29-36 Points **Silver:** 37-43 Points **Gold:** 44-57 Points **Platinum:** 58-79 Points