



GAIA *profitability through sustainability*

LEED + ENERGY MODELING + COMMISSIONING



30,000 sq ft

Construction : Commercial | Type : Office

PROJECT TEAM

Owner / Project Manager : Port of Long Beach

Prime Design Team : Moffatt & Nichol

Architect : Caldwell Architects

General Contractor : FTR International

Structural Engineer : McLean & Schultz

Mechanical / Plumbing Engineer : Maroko & Shwe, Inc.

Electrical Engineer : MDC Engineers

Landscape Architect : Melendrez

LEED Consultant : Gaia

35% reduction in energy use due to efficient lighting and HVAC equipment

45% less potable water used annually through the use of high-efficiency plumbing fixtures

82% of construction waste was diverted from landfills



PORT OF LONG BEACH
PIER G OPERATIONS BUILDING
LONG BEACH, CA



LEED-NC v2.2 FACTS

LEED GOLD

42 of 69

Sustainable Sites :	5 of 14
Water Efficiency :	4 of 5
Energy and Atmosphere :	8 of 17
Materials and Resources :	7 of 13
Indoor Environmental Quality :	13 of 15
Innovation and Design :	5 of 5

LEED ACCOMPLISHMENTS

Sustainable Sites

- Preferred parking for low-emitting, fuel-efficient and carpool vehicles
- Stormwater runoff debris is screened, separated and captured to reduce environmental impact on waterways
- Highly reflective roof materials reduce building heat absorption to minimize impact on microclimate and habitat

Water Efficiency

- High efficiency water closets, lavatory faucets and waterless urinals were installed to reduce water use for the building by 45%*

Energy and Atmosphere

- Efficient lighting & HVAC design reduces energy consumption by 35%
- Enhanced commissioning verified optimal performance of building systems

Materials and Resources

- Comprehensive construction waste management plan diverted 82% of waste from landfills
- Over 30% of total building materials are composed of recycled content*
- Over 20% of total building materials were extracted, processed and manufactured locally (within 500 miles)
- Over 70% of wood-based materials and products are certified in accordance with the Forest Stewardship Council

Indoor Environmental Quality

- Interior finishes (adhesives, sealants, paints, coatings, carpet and composite wood) were selected with low levels of volatile organic compounds (VOC's) to reduce indoor air contamination
- Designed with abundant daylighting and views to improve energy-efficiency and occupant comfort and productivity
- Increased occupant controls for thermal and lighting systems to promote comfort, productivity and well-being of building occupants

*Achieved Innovation & Design points through exemplary performance

LEED-NC v2.2 SCORECARD



Owner / Project Manager : Port of Long Beach

Project : Pier G Operations Building

Location : Long Beach, CA

Certification : LEED Gold

5 0 9

Sustainable Sites

POSSIBLE POINTS 14

Y	2	N				
			Prereq 1	Construction Activity Pollution Prevention	Required	1
Y			Credit 1	Site Selection		1
			Credit 2	Development Density & Community Connectivity {EB}		1
			Credit 3	Brownfield Redevelopment		1
			Credit 4.1	Alternative Transportation, Public Transportation Access (ID) {EB}		1
			Credit 4.2	Alternative Transportation, Bicycle Storage & Changing Rooms (ID)		1
			Credit 4.3	Alternative Transportation, Low-Emitting & Fuel-Efficient Vehicles (ID)		1
			Credit 4.4	Alternative Transportation, Parking Capacity 5% (ID)		1
			Credit 5.1	Site Development, Protect & Restore Habitat 50% (75%)		1
			Credit 5.2	Site Development, Maximize Open Space 25% (50%)		1
			Credit 6.1	Stormwater Design, Quantity Control		1
			Credit 6.2	Stormwater Design, Quality Control		1
			Credit 7.1	Heat Island Effect, Non-Roof 50% (100%)		1
			Credit 7.2	Heat Island Effect, Green Roof 50% (100%) Cool Roof 75%		1
			Credit 8	Light Pollution Reduction		1

4 0 1

Water Efficiency

POSSIBLE POINTS 5

Y	2	N				
			Credit 1.1	Water Efficient Landscaping, Reduce by 50%		1
			Credit 1.2	Water Efficient Landscaping, No Potable Use or No Irrigation		1
			Credit 2	Innovative Wastewater Technologies, 50% (100%)		1
			Credit 3.1	Water Use Reduction, 20% Reduction (Process Load 10%)		1
			Credit 3.2	Water Use Reduction, 30% Reduction (40%)		1

8 0 9

Energy & Atmosphere

POSSIBLE POINTS 17

Y	2	N				
			Prereq 1	Fundamental Commissioning of the Building Energy Systems	Required	1
Y			Prereq 2	Minimum Energy Performance	Required	1
Y			Prereq 3	Fundamental Refrigerant Management	Required	1
			Credit 1	Optimize Energy Performance, 10.5% - 42.5% (45.5%) {EB}	1-10	1
			Credit 2	On-site Renewable Energy, 2.5%, 7.5%, 12.5%, (17.5%)	1-3	1
			Credit 3	Enhanced Commissioning {EB}		1
			Credit 4	Enhanced Refrigerant Management		1
			Credit 5	Measurement & Verification {EB}		1
			Credit 6	Green Power, 35% (70%)		1

7 0 6

Materials & Resources

POSSIBLE POINTS 13

Y	2	N				
			Prereq 1	Storage & Collection of Recyclables	Required	1
			Credit 1.1	Building Reuse, Maintain 75% of Existing Walls, Floors & Roof		1
			Credit 1.2	Building Reuse, Maintain 95% of Existing Walls, Floors & Roof		1
			Credit 1.3	Building Reuse, Maintain 50% of Interior Non-Structural Elements		1
			Credit 2.1	Construction Waste Management, Divert 50% from Disposal		1
			Credit 2.2	Construction Waste Management, Divert 75% from Disposal (95%)		1
			Credit 3.1	Materials Reuse, 5%		1
			Credit 3.2	Materials Reuse, 10% (15%)		1
			Credit 4.1	Recycled Content, 10% (Post-Consumer + 1/2 Pre-Consumer) {EB}		1
			Credit 4.2	Recycled Content, 20% (Post-Consumer + 1/2 Pre-Consumer) (30%) {EB}		1
			Credit 5.1	Regional Materials, 10% Extracted, Processed & Manufactured Regionally {EB}		1
			Credit 5.2	Regional Materials, 20% Extracted, Processed & Manufactured Regionally (40%) {EB}		1
			Credit 6	Rapidly Renewable Materials, 2.5% (5%) {EB}		1
			Credit 7	Certified Wood, FSC 50% of all Wood Used (95%) {EB}		1

13 0 2

Indoor Environmental Quality

POSSIBLE POINTS 15

Y	2	N				
Y			Prereq 1	Minimum IAQ Performance	Required	1
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	Required	1
			Credit 1	Outdoor Air Delivery Monitoring {EB}		1
			Credit 2	Increased Ventilation		1
			Credit 3.1	Construction IAQ Management Plan, During Construction		1
			Credit 3.2	Construction IAQ Management Plan, Before Occupancy		1
			Credit 4.1	Low-Emitting Materials, Adhesives & Sealants		1
			Credit 4.2	Low-Emitting Materials, Paints & Coatings		1
			Credit 4.3	Low-Emitting Materials, Carpet Systems		1
			Credit 4.4	Low-Emitting Materials, Composite Wood & Agrifiber Products		1
			Credit 5	Indoor Chemical & Pollutant Source Control		1
			Credit 6.1	Controllability of Systems, Lighting		1
			Credit 6.2	Controllability of Systems, Thermal Comfort {EB}		1
			Credit 7.1	Thermal Comfort, Design {EB}		1
			Credit 7.2	Thermal Comfort, Verification {EB}		1
			Credit 8.1	Daylight & Views, Daylight 75% of Spaces (95%) {EB}		1
			Credit 8.2	Daylight & Views, Views for 90% of Spaces (ID) {EB}		1

5 0 0

Innovation & Design

POSSIBLE POINTS 5

Y	2	N				
			Credit 1.1	Innovation in Design, 40% Water Use Reduction		1
			Credit 1.2	Innovation in Design, 100% Green Power		1
			Credit 1.3	Innovation in Design, Awareness & Education Program		1
			Credit 1.4	Innovation in Design, 30% Recycled Content		1
			Credit 2	LEED Accredited Professional		1

42 0 27

Project Totals

POSSIBLE POINTS 69

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

Certified: 26-32 Points Silver: 33-38 Points Gold: 39-51 Points Platinum: 52-69 Points