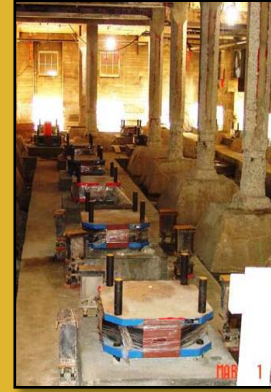




***Restoration:** façade, roof flashing tower repairs



***Seismic Strengthening:** base isolators in basement



***Restoration:** stonework damaged by earthquakes



***Restoration/LEED:** historic restrooms with LEED fixtures



***Reconstruction:** historic arcade after demolition for base isolators



- *Seismic Protection:** base isolators, structural strengthening
 - *Update Systems & Technology:** new HVAC & plumbing, LEED fixtures
 - *ADA Accessibility:** 3 elevator upgrades, ADA lift
 - *Restore Historic Structures:** landscape protection, exterior & interior spaces
 - *Historic Preservation:** protection of spaces/materials throughout project
- "All work undertaken is under the direction of the City's Historic Preservation Monitor"*

<http://www.ci.pasadena.ca.us/cityhall/>

PASADENA CITY HALL

Seismic Upgrade, Rehabilitation & LEED

Pasadena, California

Built 1927

Listed on National Register of Historic Places

Built in California Mediterranean Style

C footprint, 5 stories

LEED Gold

Project dates:2004-2007

Celeste Cuti
Eco-Preservation (Falsetto)
Spring 2009
University of Oregon

Low flow faucets, dual-flush toilets, waterless urinals

No smoking in city hall or on grounds

Reduced car trips, employee showers, bicycle storage

Pasadena City Hall Restoration		LEED™ LEADERSHIP IN ENERGY & ENVIRONMENTAL DESIGN	
42 Achieved Points			
SUSTAINABLE SITES			
REQ	SSp01	Erosion & Sedimentation Control (Required)	
1	SSo01	Site Selection	
1	SSo02	Development Density	
NO	SSo03	Brownfield Redevelopment	
1	SSo04.1	Alternative Transportation: Public Transportation Access	
1	SSo04.2	Alternative Transportation: Bicycle Storage & Changing Rooms	
1	SSo04.3	Alternative Transportation: Alternative Fuel Vehicles	
1	SSo04.4	Alternative Transportation: Parking Capacity	
NO	SSo05.1	Reduced Site Disturbance: Protect or Restore Open Space	
1	SSo05.2	Reduced Site Disturbance: Development Footprint	
NO	SSo06.1	Stormwater Management: Rate and Quantity Reduction	
NO	SSo06.2	Stormwater Management: Treatment	
1	SSo07.1	Heat Island Effect: Non-Roof	
NO	SSo07.2	Heat Island Effect: Roof	
NO	SSo08	Light Pollution Reduction	
WATER EFFICIENCY			
NO	WEo01.1	Water Efficient Landscaping: Reduce by 50%	
NO	WEo01.2	Water Efficient Landscaping: No Potable Water Use OR No Irrigation	
NO	WEo02	Innovative Wastewater Technologies	
1	WEo03.1	Water Use Reduction: 20% Reduction	
1	WEo03.2	Water Use Reduction: 30% Reduction	
ENERGY & ATMOSPHERE			
REQ	EAp01	Fundamental Building Systems Commissioning (Required)	
REQ	EAp02	Minimum Energy Performance (Required)	
REQ	EAp03	CFC Reduction in HVAC/R Equipment (Required)	
1	Ea01.01	Optimize Energy Performance: >= 0% T24-2001 Rehab	
1	Ea01.02	Optimize Energy Performance: >= 4.01% T24-2001 Rehab	
1	Ea01.03	Optimize Energy Performance: >= 6.26% T24-2001 Rehab	
1	Ea01.04	Optimize Energy Performance: >= 8.76% T24-2001 Rehab	
1	Ea01.05	Optimize Energy Performance: >= 12.51% T24-2001 Rehab	
1	Ea01.06	Optimize Energy Performance: >= 17.51% T24-2001 Rehab	
1	Ea01.07	Optimize Energy Performance: >= 22.51% T24-2001 Rehab	
NO	Ea01.08	Optimize Energy Performance: >= 27.51% T24-2001 Rehab	
NO	Ea01.09	Optimize Energy Performance: >= 32.51% T24-2001 Rehab	
NO	Ea01.10	Optimize Energy Performance: >= 37.51% T24-2001 Rehab	
NO	Ea02.1	Renewable Energy: >= 2.51%	
NO	Ea02.2	Renewable Energy: >= 7.51%	
NO	Ea02.3	Renewable Energy: >= 15.51%	
NO	Ea03	Additional Commissioning	
1	Ea04	Ozone Protection	
NO	Ea05	Measurement and Verification	
1	Ea06	Green Power	
LEED-NC v2.1 GOLD CERTIFIED ON 02/28/2008			
MATERIALS & RESOURCES			
REQ	MRp01	Storage & Collection of Recyclables (Required)	
1	MRo01.1	Building Reuse: Maintain 75% Existing Walls, Floors and Roof	
1	MRo01.2	Building Reuse: Maintain 100% Existing Walls: Roofs and Floors	
NO	MRo01.3	Building Reuse: Maintain 100% Existing Shell & 50% Non-Shell	
1	MRo02.1	Construction Waste Management: Divert 50% From Landfill	
NO	MRo02.2	Construction Waste Management: Divert 75% From Landfill	
NO	MRo03.1	Resource Reuse: 5%	
NO	MRo03.2	Resource Reuse: 10%	
1	MRo04.1	Recycled Content: 5% (post-consumer + 1/2 post-industrial)	
1	MRo04.2	Recycled Content: 10% (post-consumer + 1/2 post-industrial)	
1	MRo05.1	Local/Regional Materials: 20% Manufactured Regionally	
1	MRo05.2	Local/Regional Materials: 10% Extracted Regionally (of MRo05.1)	
NO	MRo06	Rapidly Renewable Materials	
NO	MRo07	Certified Wood	
INDOOR ENVIRONMENTAL QUALITY			
REQ	EQp01	Minimum IAQ Performance (Required)	
REQ	EQp02	Environmental Tobacco Smoke (ETS) Control (Required)	
NO	EQo01	Carbon Dioxide (CO2) Monitoring	
1	EQo02	Ventilation Effectiveness	
1	EQo03.1	Construction IAQ Management Plan: During Construction	
1	EQo03.2	Construction IAQ Management Plan: Before Occupancy	
1	EQo04.1	Low-Emitting Materials: Adhesives & Sealants	
1	EQo04.2	Low-Emitting Materials: Paints and Coatings	
1	EQo04.3	Low-Emitting Materials: Carpet	
1	EQo04.4	Low-Emitting Materials: Composite Wood	
NO	EQo05	Indoor Chemical & Pollutant Source Control	
1	EQo06.1	Controllability of Systems: Perimeter Spaces	
NO	EQo06.2	Controllability of Systems: Non-Perimeter Spaces	
1	EQo07.1	Thermal Comfort: Compliance with ASHRAE 55-1992	
NO	EQo07.2	Thermal Comfort: Permanent Monitoring System	
1	EQo08.1	Daylight and Views: Daylight 75% of Spaces	
1	EQo08.2	Daylight and Views: Views for 90% of Spaces	
INNOVATION & DESIGN PROCESS			
1	IDo01.1	Innovation in Design: Sustainable Education	
1	IDo01.2	Innovation in Design: Green Cleaning	
1	IDo01.3	Exemplary Performance: WEc3 >= 40%	
1	IDo01.4	Innovation in Design: ALL Green Power	
1	IDo02	LEED Accredited Professional	

Automatic light shut-off system

Re-established historic window and ceiling heights

Use of green cleaning products

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Pasadena City Hall

LEED Gold

- LEED considered & completed after construction started
- First municipal building to be LEED certified in Pasadena
- Had funding assistance from Pasadena Water & Power
- Pasadena subsequently passed a Green Building Ordinance requiring the adoption of LEED guidelines for privately owned buildings, & LEED Silver for municipal buildings with 5,000 feet or more of new construction