

PRINCIPLES

SustainAbilities Strategies

DELIVERABLES

W E B S I T E

U W

UW - Project Delivery Group - SustainAbilities Scorecard

Project Name:		Project Description:	PRB / Director Review Dates	
Project Number:				
Gross Sq. Footage:				
PM:				
CM:				
Client Department:		Sustainability Goals for Project: Follow Standard Procedure for sustainability process and include any additional sustainability features.	Pre Design	
Campus:		Cost Summary:	Design	
Project Group:				
Location:				
Kick-Off Meeting with CPO Sustainability Manager:			Construction Docs	
Project Start Date:		Projected Annual Use - Electricity (kWh):	Projected Annual Use - Water (gal):	
Occupancy Date:		Projected Annual Use - Gas (BTU/therm):	Projected Annual Use - GHG (CO ₂ e):	

Checkbox instructions: Type the letter 'a' in the yellow boxes to make a check mark appear.

Cost column instructions: Type one of the following letters (n, a, p, s) in the green boxes to indicate cost to the project for each item: 'n' = neutral cost; 'a' = added cost; 'p' = payback; 's' = savings

Categories	Attempted	Achieved	Standard Practices (Required As Applicable)	Cost	Attempted	Achieved	Better Practices	Cost	Attempted	Achieved	Advanced Practices	Cost	Category Totals
Site	1		Provide a tree protection strategy for the site: 015639				Use rainwater sources for irrigation						Attempted Achieved Achieved out of Total Attempted
	2		Select disease-resistant, pest-resistant, and non-invasive plant species: 329300				Provide electric vehicle charging stations						
	3		Reuse plants & landscape materials: top soil 329300				Design landscapes and green roofs to assist in building temperature cooling						
	4		Plant adaptive landscape materials										
	5		Plant trees to provide solar shading of buildings and paving to reduce heat islands										
	6		Test and amend soil to promote soil and plant health: 329300										
	7		Eliminate the use of pesticides										
	8		Enhance streams, wetlands, and natural habitat areas										
	9		Minimize impervious paving surfaces										
	10		Manage storm water run-off to eliminate pollution and route rain leaders to bioswales or rain gardens										
	11		Located on a previously developed building site										
	12		Specify exterior lighting fixtures - to have full cut off										
	13		Optimize building form and orientation to optimize energy efficiency										
	14		Provide bicycle racks										
		0	0	14 possible		0	0	3 possible		0	0	0 possible	
Energy	15		Reduce annual net energy consumption by 10% for every 3 year increment based upon 2006 WA State Energy Code				Install materials and equipment with a life cycle cost return on investment of at least 10 years				Install materials and equipment with a life cycle cost return on investment of 5 to 7 years		Attempted Achieved Achieved out of Total Attempted
	16		<u>Prepare an energy analysis based upon life cycle costing and include O&M: Forecast carbon emissions</u>				Install submeters for plug and process loads, mechanical equipment, and lighting				Design for annual net zero energy usage		
	17		Install web-based environmental control DDC systems that monitor and manage energy consumption with meters per the FSDG				Specify user occupant equipment with efficiency that is better than energy code requirements				Achieve AIA 2030 Challenge		
	18		Commission building systems, including meters				Design high performance building envelope: solid wall to glazing ratios and orientation (limit glazing to 30-40%)				Design to connect with smart grid technology		
	19		Minimize room volumes for reduced air change requirements				Window glazing: Provide glazing for entire assemblies - U values <0.3, visible light transmittance of >0.6 and solar heat gain coefficient of <0.3				Install on site renewable energy systems		
	20		Air condition critical functions only				Skylights: U=0.60 or lower				Integrate operable window systems with HVAC air flow control		
	21		Naturally ventilate mechanical and electrical rooms, classrooms, and offices				Exterior Doors: U=0.50 or lower				Design battery free wireless switching for lighting (switches work on kinetic energy of the switching		
	22		Install high efficiency transformers and chillers in redundancy to maximize efficiency of equipment				Provide on-site power generation				Design with make up air energy strategies		
	23		Install high efficiency boilers				Install higher R-value insulation than required by energy code				Install ductless heat pumps		
	24		Specify premium efficiency motors and variable frequency drives: 230513 / 230915				Install on-demand ventilation controls including night setback temperature controls				Consider untapped Campus-wide resources such as preheating from sewer and chiller lines		
	25		Incorporate control strategies to limit short cycling of chillers: 236419				Pre-heat water using heat recovery strategies				Achieve a reduction in lighting power density by 20% over code requirements		
	26		Use hot water radiant heating system at glazed exterior wall work areas				Provide lighting occupancy sensors in non-windowed locations and vacancy sensors with manual on/auto off in daylighted spaces				Window coverings: Use dynamic solar controlled automatic shades and blinds with optimum daylighting performance		
	27		Use 100% outside air economizers for HVAC systems				Consider LED lighting for downlights, spotlights, and task lights				Incorporate one of the following: solar water heater; wind power; heat recovery systems; geothermal; displacement ventilation; thermal storage; evaporative cooling to augment or replace mechanical cooling; fuel cells for uninterruptible power systems		
	28		Pressure test duct systems to eliminate leakage: 233113				Design toward operational budget based budgeting						
	29		Install high efficiency lighting lamps and high output ballasts				Investigate use of low cost solar hot water systems						
	30		Window coverings: Block and redirect direct sunlight during occupied times				Reuse heating from ventilation exhaust for hydronic heating						
	31		Automated daylighting controls: Provide photocell controlled lighting with dimming ballasts within 15 feet of window wall and within 45 degrees of skylight openings: 260923				Achieve a reduction in lighting power density by 10% over code requirements						
	32		Shade glazing during building cooling mode				Incorporate solar photovoltaic (PV) technology						
	0	0	18 possible		0	0	18 possible		0	0	13 possible		
Materials	33		Specify durable products with minimal maintenance				Design for adaptive reuse and space change of use				Design building systems for disassembly and reuse		Attempted Achieved Achieved out of Total Attempted
	34		Utilize fly ash to replace 30% of the Portland Cement in concrete (20-25%) 034100 / 034500				Specify products containing rapidly renewable materials				Select building materials based on the Pharos Program		
	35		Provide for collection of recyclables				Specify FSC certified wood products				Provide materials with an appropriate materials/services radius per prerequisite 8 of the Living Building Challenge		
	36		<u>Specify low VOC adhesives, sealants, and sealant primers: YES</u>				Source local materials (500 miles)				Specify materials without persistent bioaccumulative toxic chemicals (PBT)		
	37		<u>Specify carpet and cushion certified by CRI Green Label Plus program</u>				Reuse existing project materials						
	38		Specify asbestos-free materials										
	39		Specify low VOC paints and coatings: 099123										
	40		Specify low VOC adhesive aerosol sprays										
	41		<u>Specify low VOC hard surface flooring: 096516/096519/096900</u>										
	42		<u>Specify low VOC concrete, wood, bamboo, and cork floor finishes (sealer, stain, and finish): 099123</u>										
	43		<u>Specify low VOC clear wood finishes, floor coatings, stains, primers, and shellacs: 099123</u>										
	44		<u>Specify low VOC anti-corrosive and anti-rust paints: 099123</u>										
	45		<u>Specify low VOC tile setting adhesives and grout :093000</u>										
	46		Specify no added urea formaldehyde in wood products: 099123										
	47		<u>Select furnishings that are GREENGUARD certified:</u>										

Categories	Attempted	Achieved	Standard Practices (Required As Applicable)	Cost	Attempted	Achieved	Better Practices	Cost	Attempted	Achieved	Advanced Practices	Cost	Category Totals		
													Attempted	Achieved	Achieved
	48		Energy Star™ compliant roof: 076100										0	0	#####
	49		Specify materials with high recycled content										0	0	#####
	0	0	17 possible		0	0	5 possible		0	0	4 possible				

Water	50		Increase irrigation efficiency: zone irrigation to respond to specific plant needs				Commission plumbing fixtures				Reuse interior water for exterior applications		Attempted	Achieved	Achieved out of Total Attempted
	51		Minimize plumbing fixtures to reduce water consumption: 224000				<u>Implement cooling tower green design</u>				Reuse interior water for interior applications				
	52		Provide electronic sensor faucets and aerators: 224000												
			Specify low flow plumbing fixtures: 0.5 GPF urinals 1.6 Prerinse spray valves 2.2 GPM at 60 psi faucets (SPDT 2.5 GPM) 2.5 GPM at 80 psi showerheads												
	53														
	54		Install closed loop water system (chilled heating hot water and heat recovery system)												
	55		Use chilled water system to cool equipment (no use of city water)												
	0	0	6 possible		0	0	2 possible		0	0	2 possible		0	0	#####

Indoor Environment	56		Select interior finishes to control brightness ratios, glare, and contrast				Design to use daylighting as a primary light source balancing the daylight across the space in over 50% of occupied space				Provide Ultra-Violet Photocatalytic Oxidation (UVPCO) for removal of airborne particles and VOCs		Attempted	Achieved	Achieved out of Total Attempted
	57		Provide ultra quiet transformers near offices and classrooms: (SPDT: Low Voltage 260515)				Install carbon dioxide sensors and monitoring with the HVAC system								
	58		Locate critical task work spaces near daylighted areas				Provide views to the outside for the majority of occupant work areas								
	59		Provide air quality modeling for all new HVAC systems and building air intakes				Negatively exhaust kitchens, restrooms, copy rooms, janitor closets, laundry areas, and chemical storage spaces								
	60		Install walk off mats (10' at primary entrances)				Implement mold resistance strategies for exterior curtain walls, HVAC systems, and materials installations								
	61		Provide air lock vestibules at all air conditioned building entrances and loading dock areas												
	62		Design for flexibility and reuse												
	63		Specify high performance window treatment coverings using an open weave of 5-10%												
	0	0	8 possible		0	0	5 possible		0	0	1 possible		0	0	#####

Beauty and Inspiration	64		Provide a programmatic goal statement of the quality standards and aesthetic aspirations of the project				Provide showers and lockers for bicyclists and joggers				<u>Design to Living Building Challenge rating standards.</u>		Attempted	Achieved	Achieved out of Total Attempted
	65		Prepare a Historic Resource Addendum for buildings 50+ years old (exterior only)				Display building energy and water usage for users education				Design to include features intended solely for human delight - celebration of culture, spirit, and place				
	66		Provide connections to surrounding buildings and outdoor spaces				Design including elements of environmental features, natural shapes and forms, natural patterns and processes, light and space, and human-nature relationships				Provide educational materials to share successful solutions to motivate others to make change				
	67		Provide spaces that promote social interaction												
	68		Provide a public educational program that identifies the sustainable features of the project												
	0	0	5 possible		0	0	3 possible		0	0	3 possible		0	0	#####

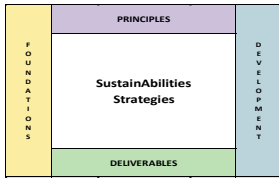
CPO Management Practices	69		Prepare a statement of the life expectancy requirements of the project, by major systems components, determine equipment redundancies, and spare capacities				<u>Implement integrated design processes</u>				Use biomimicry design concepts - incorporating synergistic relationships with the natural environment		Attempted	Achieved	Achieved out of Total Attempted
	70		Prepare a preliminary commissioning plan during design				Hire an exterior envelope consultant to field verify air tightness of the building envelope								
	71		Remove hazardous materials from project location				Provide acoustical consulting services for the project								
	72		Perform a post occupancy evaluation for thermal comfort				Provide an occupant user manual to influence energy usage								
	73		Archive the record documents in a centralized building resource center				Perform 10 month post-occupancy commissioning								
	74		Partner with local utility providers and direct assistance programs to maximize sustainable resources				Collect and provide feedback on products that work or fail								
	75		Complete the utility rebates process with local utilities												
	76		Hire a lighting consultant to evaluate effective lighting of key areas and to provide energy efficiency analysis												
	0	0	8 possible		0	0	6 possible		0	0	1 possible		0	0	#####

Construction	77		Encourage carpooling and public transportation for construction workers				Recycle construction waste -75%				Recycle construction waste - 95%		Attempted	Achieved	Achieved out of Total Attempted
			<u>Require that the jobsite meet the SMACNA IAQ Guidelines for Maintaining Healthy Indoor Air Quality for Occupied Buildings Under Construction, 2nd Edition, Nov. 2007, Ch. 3 (HVAC Protection, Source Control, Pathway Interruption, Housekeeping, Scheduling)</u>				Flush out space at substantial completion, prior to occupancy, with 100% outside air, with air volume of 14,000 CF/SF of floor area (temp >60 degrees/humidity <60%). Space can be flushed out during move in once 3,5000 CF/SF has been achieved. Or, complete air testing per US EPA Method (Indoor Air Pollution) PB90200288								
	78														
	79		Create and implement commissioning plan: 019100												
	80		Use green cleaning practices during construction												
	81		Install MERV 8 filters during construction, and MERV 13 prior to occupancy: 234100												
	82		Implement erosion and sediment control plan												
	83		Recycle construction waste - 50%: 017400										0	0	#####
	0	0	7 possible		0	0	2 possible		0	0	1 possible				

Scorecard Totals															
Standard Practices				Better Practices				Advanced Practices							
0	Attempted			0	Attempted			0	Attempted						
0	Achieved			0	Achieved			0	Achieved						
83	Possible			44	Possible			25	Possible						
0%	Attempted out of Total Possible			0%	Attempted out of Total Possible			0%	Attempted out of Total Possible						
####	Achieved out of Total Attempted			####	Achieved out of Total Attempted			####	Achieved out of Total Attempted						
0%	Achieved out of Total Possible			0%	Achieved out of Total Possible			0%	Achieved out of Total Possible						

Innovation			Category	Description	Attempted	Achieved	Achieved out of Total Attempted
	0	0	Total Innovation		0	0	#####

UW - Project Delivery Group - SustainAbilities Case Study



Project Name: [Project Name](#)
Project Number: [Project Number](#)
Project Delivery Group
University of Washington

Project Data

Square Feet:
Site:
Location:
Construction Cost:
Start Date:
Occupancy Date:

Location

Location

Location

Practices Scoring

Points Achieved

Standard:

Better:

Advanced:

Innovative:

Scope of Work

Accomplishments

Site:

Water:

Energy:

Materials:

Indoor Environment:

Beauty and Inspiration:

Management Practices:

Construction:

The Team

Client:

CPO Contacts:

Design Team:

Construction Team:

