

PRINCIPLES

SustainAbilities Strategies

DELIVERABLES

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UW - Capital Planning and Development - SustainAbilities Scorecard

Project Name:		Project Description:	PRB / Director Review Dates	
Project Number:				
Gross Sq. Footage:				
PM:				
CM:		Sustainability Goals for Project: Follow Standard Procedure for sustainability process and include any additional sustainability features.	Pre Design	
Client Department:				
Campus:		Cost Summary:	Design	
Project Group:	Small Projects Delivery Team (<\$300K)			
Location:				
Kick-Off Meeting with CPO Sustainability Manager:				
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 (CO2e):	

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		0	0	#####
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			Prepare an energy analysis based upon life cycle costing and include O&M: Forecast carbon emissions					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		0	0	#####
Materials	33			Specify durable products with minimal maintenance					Design for adaptive reuse and space change of use					Design building systems for disassembly and reuse		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			Specify low VOC adhesives, sealants, and sealant primers: YES					Source local materials (500 miles)					Specify materials without persistent bioaccumulative toxic chemicals (PBT)				
	37			Specify carpet and cushion certified by CRI Green Label Plus program					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			Specify low VOC hard surface flooring: 096516/096519/096900														
	42			Specify low VOC concrete, wood, bamboo, and cork floor finishes (sealer, stain, and finish): 099123														
	43			Specify low VOC clear wood finishes, floor coatings, stains, primers, and shellacs: 099123														
	44			Specify low VOC anti-corrosive and anti-rust paints: 099123														
	45			Specify low VOC tile setting adhesives and grout : 093000														
	46			Specify no added urea formaldehyde in wood products: 099123														

Categories	Attempted	Achieved	Standard Practices (Required As Applicable)	Cost	Attempted	Achieved	Better Practices	Cost	Attempted	Achieved	Advanced Practices	Cost	Category Totals		
			Select furnishings that are GREENGUARD certified:										Attempted	Achieved	Achieved out of
	47														
	48		Energy Star™ compliant roof; 076100												
	49		Specify materials with high recycled content												
	0	0	17 possible		0	0	5 possible		0	0	4 possible		0	0	#####
Water			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
	50														
	51		Minimize plumbing fixtures to reduce water consumption: 224000				Implement cooling tower green design				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												0	0	#####
	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				
			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
	56														
	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								
			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								
	59												0	0	#####
	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				
			Provide a programmatic goal statement of the quality standards and aesthetic aspirations of the project				Provide showers and lockers for bicyclists and joggers				Design to Living Building Challenge rating standards		Attempted	Achieved	Achieved out of Total Attempted
	64														
	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				
			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				
	66														
	67		Provide spaces that promote social interaction										0	0	#####
	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				
			Prepare a statement of the life expectancy requirements of the project, by major systems components, determine equipment redundancies, and spare capacities				Implement integrated design processes				Use biomimicry design concepts - incorporating synergistic relationships with the natural environment		Attempted	Achieved	Achieved out of Total Attempted
	69														
	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								
			Perform a post occupancy evaluation for thermal comfort				Provide an occupant user manual to influence energy usage								
	72												0	0	#####
	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				
			Encourage carpooling and public transportation for construction workers				Recycle construction waste -75%				Recycle construction waste - 95%		Attempted	Achieved	Achieved out of Total Attempted
	77														
			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)				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										0	0	#####
			Install MERV 8 filters during construction, and MERV 13 prior to occupancy: 234100												
	81														
	82		Implement erosion and sediment control plan												
	83		Recycle construction waste - 50%: 017400												
	0	0	7 possible		0	0	2 possible		0	0	1 possible				

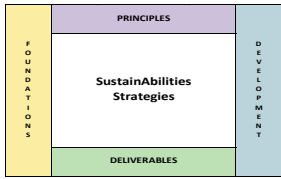
Scorecard Totals																		
Standard Practices				Better Practices				Advanced Practices										
0	Attempted			0	Attempted			0	Attempted									
0	Achieved			0	Achieved			0	Achieved									
83	Possible			44	Possible			25	Possible									
0%	Attempted out of Total Possible			0%	Attempted out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

Categories

Attempted	Achieved	Standard Practices (Required As Applicable)	Cost	Attempted	Achieved	Better Practices	Cost	Attempted	Achieved	Advanced Practices	Cost
0	0	Total Innovation									

Category Totals		
0	0	####

UW - Capital Projects Office - SustainAbilities Case Study



Project Name: [Project Name](#)
Project Number: [Project Number](#)
Capital Projects Office
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:

