

C1 PDD – SPARC Appendix (Sustainable Design Approach)

Energy Use

The designer will analyze energy use (electricity, liquid fuel, natural gas) and capital cost for the C1 expansion and provide options for reducing energy use by 5%, 10%, and 20% below Washington State Energy Code. Examples include but are not limited to dynamic glass, static glass with low solar heat gain coefficient, shading devices, regenerative elevators, etc. On-site renewable energy generation may be considered by the designer to offset energy use to meet this goal. The Port's Century Agenda goal is to meet all increased energy demand through conservation and/or renewables. Energy use reduction must meet the Port's existing design standards.

Materials

The Port is committed to reducing the embodied carbon of building materials. During design, prior to contractor bid document completion, the design team will provide the Port Environmental staff with technical specifications for various materials (concrete, steel, and gypsum) proposed for use on the project. Materials will be selected that meet the structural and safety standards required for this project, with the lowest appropriate embodied carbon per unit. The design team is responsible for collaborating with Port Environmental staff to ensure that selected materials are compliant with LEED requirements and Port Standards.

Water Use Reduction

The designer will analyze water use and associated cost for the C1 expansion and provide options for reducing water use by 10% and 20% below Uniform Plumbing Code 2015 and Washington State Amendments. Areas of reduction could include but are not limited to indoor water use, outdoor water use, process water demand, rainwater capture, etc. Water use reduction must meet the Port's existing design standards.

LEED

The most current version of LEED Building Design and Construction (BD+C) Silver Certification (Port anticipates it will be version 4.1) will be required for the C1 Expansion.

The LEED integrative process credit requires exploratory discovery analysis during the pre-design and design phases to identify synergistic attainment opportunities across disciplines and systems. The intent is to support early high-performance analysis with the project. Discovery items required by this credit include "simple box" energy analysis, preliminary water budget analysis, and associated implementation strategies with both items.

The C1 project is required to achieve the following LEED points in the following categories:

- 1 point under the Integrative Process
- 2 points under the Building Product Disclosure and Optimization- Environmental Product Declarations credit
- At least 2 credits under the Construction Waste Management credit.

The following LEED scorecard may be used to guide which credits to explore for this project:



Total Project Score

Yes	Likely	Unlikely	No
50	6	7	66

Yes	Likely	Unlikely	No	Points Possible
1	0	0	0	1
1				

Integrative Process Points Possible: 1

Credit	Description
Credit 1	Integrative Process

Yes	Likely	Unlikely	No	Points Possible
10	0	0	23	16
1			2	
2			3	
5			1	
2			1	
			1	

Location and Transportation Points Possible: 16

Credit	Description
Credit 1	LEED ND Location
Credit 2	Sensitive Land Protection
Credit 3	High Priority Site
Credit 4	Surrounding Density and Diverse Uses
Credit 5	Access to Quality Transit
Credit 6	Bicycle Facilities
Credit 7	Reduced Parking Footprint
Credit 8	Green Vehicles

Yes	Likely	Unlikely	No	Points Possible
5	0	0	5	10
1			2	
			1	
3			2	
1			2	

Sustainable Sites Points Possible: 10

Credit	Description
Prereq 1	Construction Activity Pollution Prevention
Credit 1	Site Assessment
Credit 2	Site Development: Protect or Restore Habitat
Credit 3	Open Space
Credit 4	Rainwater Management
Credit 5	Heat Island Reduction
Credit 6	Light Pollution Reduction

Yes	Likely	Unlikely	No	Points Possible
5	0	0	6	11
1			1	
2			4	
2			2	
1			2	

Water Efficiency Points Possible: 11

Credit	Description
Prereq 1	Outdoor Water Use Reduction
Prereq 2	Indoor Water Use Reduction
Prereq 3	Building-Level Water Metering
Credit 1	Outdoor Water Use Reduction
Credit 2	Indoor Water Use Reduction
Credit 3	Cooling Tower Water Use
Credit 4	Water Metering

Yes	Likely	Unlikely	No	Points Possible
8	2	0	23	33
1			3	
4	2		12	
1			2	
			3	
			1	
			2	

Energy and Atmosphere Points Possible: 33

Credit	Description
Prereq 1	Fundamental Building Commissioning and Verification
Prereq 2	Minimum Energy Performance
Prereq 3	Building-Level Energy Metering
Prereq 4	Fundamental Refrigerant Management
Credit 1	Enhanced Commissioning
Credit 2	Optimize Energy Performance
Credit 3	Advanced Energy Metering
Credit 4	Demand Response
Credit 5	Renewable Energy Production
Credit 6	Enhanced Refrigeration Management
Credit 7	Green Power and Carbon Offsets

Yes	Likely	Unlikely	No	Points Possible
10	0	3	0	13
1				
4		1		
2		1		
1		1		
2				

Materials and Resources Points Possible: 13

Prereq	Description
Prereq 1	Storage and Collection of Recyclables
Prereq 2	Construction and Demolition Waste Management Planning
Credit 1	Building Life-Cycle Impact Reduction
Credit 2	Environmental Product Declarations
Credit 3	Sourcing of Raw Materials
Credit 4	Material Ingredients
Credit 5	Construction Waste Management

Yes	Likely	Unlikely	No	Points Possible
6	4	4	3	16
1		2		
1	2			
1				
	2			
1			1	
1			2	
1		2		
1				

Indoor Environmental Quality Points Possible: 16

Prereq	Description
Prereq 1	Minimum IAQ Performance
Prereq 2	Environmental Tobacco Smoke (ETS) Control
Credit 1	Enhanced Indoor Air Quality Strategies
Credit 2	Low-Emitting Materials
Credit 3	Construction IAQ Management Plan
Credit 4	Indoor Air Quality Assessment
Credit 5	Thermal Comfort
Credit 6	Interior Lighting
Credit 7	Daylight
Credit 8	Quality Views
Credit 9	Acoustic Performance

Yes	Likely	Unlikely	No	Points Possible
6	0	0	0	6
1				
1				
1				
1				
1				

Innovation and Design Points Possible: 6

Credit	Description
Credit 1.1	Innovation in Design: Salmon Safe Certification
Credit 1.2	Innovation in Design: O+M Starter Kit
Credit 1.3	Innovation in Design: Food Donation Program
Credit 1.4	Innovation in Design:
Credit 1.5	Innovation in Design:
Credit 2	LEED Accredited Professional

Yes	Likely	Unlikely	No	Points Possible
0	0	0	6	4
			1	
			1	
			1	
			1	
			1	

Regional Priority Credits Points Possible: 4

Credit	Description
Credit 1.1	RPC 1
Credit 1.2	RPC 2
Credit 1.3	RPC 3
Credit 1.4	RPC 4
Credit 1.5	RPC 5
Credit 1.6	RPC 6

Color Key:
 Green indicates a credit achieved through the Master Site, additional project work likely required
 Red indicates a credit that should not be pursued on this project
 Blue indicates a credit that should be pursued on this project

Waste Management

The designer will provide options to minimize the visibility of waste transportation and deliveries to and from tenant spaces and public areas. The designer will provide costs and benefits associated with those options.

All dining-related ADR tenant spaces will be designed to accommodate dishwashers to reduce need for disposable service ware.

Innovation

The Port encourages innovation and is interested to see sustainable building design concepts for the C1 Expansion. Innovation techniques must have past precedent from the last three years and available performance data for review.

Consistent with the Port's Architectural Standards relating to biophilic design, the design team will develop at least three project-specific biophilic design options with associated costs to provide occupant benefits including stress reduction and relaxing passenger spaces.

Transportation and Employee Support

The Port requires that the design team develop project-specific design options to support employees that commute via active transportation, public transportation, or other non-drive alone modes. Cost for all options must be included.