

# UBC INTEGRATED SUSTAINABILITY PROCESS - Major Capital Projects (updated February 2022)

Phase	Step	Responsibility	Description	Prerequisites	Deliverables	Participants
Pre-Design	<b>Step 1A: Design Brief Development</b>	C&CP	<ul style="list-style-type: none"> <li>Staff develops a guiding framework and a set of design goals and strategies, reflecting the particular project challenges and opportunities</li> <li>Preliminary site analysis, orientation and massing study completed by staff</li> </ul>	Stakeholder engagement	<b>Design Brief (including: the project vision, urban design framework, green building requirements etc) reflecting the design aspirations of stakeholder groups</b>	UBC stakeholders
	<b>Board 1</b>					
	<b>Step 1B: Design Brief Review</b>	Design Team	<ul style="list-style-type: none"> <li>Design Teams to assess and analyse the Design Brief and seek clarification of goals</li> <li>Site visit occurs for architect and landscape architect</li> </ul>	<ul style="list-style-type: none"> <li>Design brief prepared</li> <li>Architect selected</li> <li>Preliminary Owner's Project Requirements</li> </ul>	Comprehensive understanding of the Design Brief document	UBC stakeholders and Design Team
Schematic Design	<b>Step 2: Sustainability Workshop 1</b> <b>IDEAS</b>	Organized by: Design Team	<ul style="list-style-type: none"> <li>The first workshop is a facilitated meeting which provides, using the design brief as a basis, a focus on site conditions, building massing &amp; orientation, building materials, envelope attributes, sustainable energy and water systems, operational parameters and climate resiliency</li> <li><b>Explore ideas for the project based on the Design Brief goals as well as UBC's GBAP goals, targets and vision</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Schedule early enough in schematic design to inform massing decisions and encourage "out of the box" thinking</b></li> <li>Team's initial information analysis complete</li> <li>Preliminary identification of dominant energy loads and indoor, outdoor, and process water demand</li> <li>Owner's Project Requirements received</li> </ul>	<ul style="list-style-type: none"> <li>With input from the entire design team, ideas are discussed which meet the Design Brief goals</li> <li>Additional net positive design possibilities identified which align with UBC policies and GBAP vision</li> <li>Passive design and synergies considered</li> <li><b>Design options identified to be considered for LCA1 evaluation</b></li> <li>LEED: preliminary scorecard, <b>LEED certification level variance requested if applicable</b></li> </ul>	<ul style="list-style-type: none"> <li>Key design team members</li> <li>Key UBC stakeholders</li> <li>Project Manager</li> </ul>
	<b>AUDP Pre-application</b>					
	<b>Step 2: Sustainability Workshop 2</b> <b>TECHNICAL</b>	Organized by: Design Team	<ul style="list-style-type: none"> <li>The second workshop is a facilitated meeting which investigates design strategy synergies that will meet the goals set out in the Design Brief</li> <li>Preliminary energy/ carbon and water budget analysis are presented to verify targets, performance benchmarks, and potential strategies to achieve project goals</li> <li>Explore synergies among systems and components.</li> </ul>	<ul style="list-style-type: none"> <li><b>Schedule with AUDP pre-application meeting during schematic design</b></li> <li>Completed preliminary LCA1</li> <li>Preliminary energy analysis complete</li> <li>Review AUDP comments on sustainable outcomes</li> </ul>	<ul style="list-style-type: none"> <li>Agreement on specific targets for each Design Brief goal</li> <li>Conceptual building envelope design defined</li> <li>Design strategies to address climate readiness identified</li> <li>Preliminary energy performance analysis submitted</li> <li>LCA informs structural and/or envelope system selection</li> <li><b>Low carbon energy systems options defined for life cycle costing</b></li> <li><b>Approach to bird friendly design identified</b></li> <li>LEED: updated LEED scorecard</li> </ul>	<ul style="list-style-type: none"> <li>Key design team members</li> <li>Key UBC stakeholders</li> <li>Project Manager</li> </ul>
<b>Development Permit Process: Advisory Urban Design Panel (AUDP), Development Review Committee (DRC), public open house</b>						
	<b>Board 2</b>					
	<b>Development Permit (DP)</b>					
Design Development	<b>Step 2: Sustainability Workshop 3</b> <b>FINAL</b>	Organized by: Design Team	<ul style="list-style-type: none"> <li>The final workshop is a facilitated meeting which uses <b>interactive energy modeling</b> to evaluate the trade-offs between carbon/energy performance, life cycle cost and system complexity.</li> <li>Review potential energy/carbon reduction strategies to inform and refine energy system and envelope design relative to life cycle costs.</li> </ul>	<ul style="list-style-type: none"> <li><b>Schedule at the end of design development</b></li> <li>Energy model complete</li> </ul>	<ul style="list-style-type: none"> <li>Consensus on carbon reduction, energy conservation and climate ready measures</li> <li>Energy model report (include GHGI for emissions factors at DP)</li> <li>Life cycle costing for low carbon energy system options</li> <li>Energy and GHGI targets finalized</li> <li>LEED: updated LEED scorecard, <b>credit variance requests</b>, LEED Online Project Registration number</li> </ul>	<ul style="list-style-type: none"> <li>Key design team members</li> <li>Key UBC stakeholders</li> <li>Project Manager</li> </ul>
Construction Documents	<b>Step 3: Sustainability Reporting</b>	Design Team	Report on the cross cutting strategies used to achieve performance and process targets for each Design Brief goal and any additional strategies identified during the design process which align with UBC policies.	Submit before BP	<ul style="list-style-type: none"> <li>Meeting minutes and presentations from workshops 1,2 and 3</li> <li>LEED score card and credit variances</li> <li>Final energy model (include appendix showing GHGI using current emissions factors)</li> <li><b>Note: Submit prior to occupancy:</b></li> <li>Measurement and Verification (M&amp;V) plan</li> <li>Commissioning (Cx) Plan</li> <li><b>LCA2 report and submittals</b></li> </ul>	Design Team
	<b>Board 3</b>					
	<b>Building Permit (BP)</b>					
Construction/ Occupancy	<b>Step 4: Report Performance</b>	ID	UBC Staff to report broad outcomes from the project for inclusion in the Board 4 meeting minutes <b>and for consideration by the Better Building Committee. Includes LEED status and energy/carbon metrics performance.</b>	1 year of performance records available	<ul style="list-style-type: none"> <li>Feedback to inform future projects</li> <li>Selected outcomes included in Board 4 report</li> </ul>	UBC stakeholders
	<b>Board 4</b>					