

# **SBGD - Part D – Consultant Scopes of Work**

## **1. Green Building Consultant Scope of Work**

The following scope of work is a list of minimum requirements that shall be included in the scope of the Green Building Consultant.

The Green Building Consultant shall work with the project team to ensure achievement of all owner project requirements related to sustainability. These requirements include planning, delivery and documentation for The City's Minimum Sustainability Performance Requirements and any green building certification objectives.

The Green Building Consultant shall provide a record of all major project team sustainability discussions that result in a project decision being made. This record may be the Owner's Project Requirements (OPR) Tracking Sheet or as standalone meeting minutes.

The Green Building Consultant is responsible for coordinating any necessary work with the commissioning team, the energy modeling team and the rest of the project team. Lines of communications should be established at the initiation of a project.

All reports, minutes, and deliverables prepared by the Green Building Consultant shall be provided directly to The City Project Manager and the Sustainable Building Policy Steward within Corporate Analytics and Innovation.

### **Pre-Design**

#### **Schematic Design**

##### **1. Sustainability Design Workshop**

Host a sustainability design workshop and necessary follow-up meetings with all members of the project team to develop strategies to accomplish all sustainability objectives identified in the OPR Tracking Sheet including the Minimum Sustainability Performance Requirements and any green building certification objectives. This may take place as part of the general owner's project requirements workshop.

For LEED projects develop strategies and documentation as required for the Integrative Process credit.

##### **2. Sustainable Building Policy Compliance Work Plan**

Develop and issue a Sustainable Building Policy work plan. This work plan shall include:

- All steps to achieve and document Minimum Sustainability Performance Requirements and any green building certification requirements (ex. how LEED credits will be documented).
- If applicable, a developed certification planning summary document, such as a LEED scorecard, identifying targeted strategies to achieve project certification goals.
- Project team members responsible for completing and documenting each sustainability item.
- Expected timelines to complete each item.

For LEED projects, review, discuss and if needed submit any relevant Credit Interpretation Requests (CIR).

##### **3. Schematic Design Report**

Work with the project team throughout schematic design to ensure agreed upon sustainability strategies have been included in the project design and schematic design report. Include items outlined in the Sustainable Building Policy Compliance Work Plan as described above.

##### **4. LEED Design Application Preparation (if applicable)**

If the project is pursuing LEED certification work with the project team and prepare all LEED design application documentation that can be completed at this phase of the project.

### **Deliverables Summary**

- Sustainability design workshop and follow-up meeting minutes
- Sustainable Building Policy Compliance Work Plan
- Sustainability Section within the Schematic Design Report
- If applicable, begin collecting any LEED “design stage” documentation

## **Design Development**

### **5. Design Development Progress Update**

Work with the project team throughout design development to ensure sustainability strategies identified during schematic design have been included in the project design.

### **6. LEED Online Registration**

If the project is pursuing LEED certification, register the project using LEED Online under the most current and applicable version of LEED.

Ensure City staff, including the project manager and The Policy Steward, have LEED Online access by adding them to the project team.

### **7. Design Development Update Report**

Work with the project team throughout design development and provide The City with a sustainability update report at the end of the design development stage.

### **8. LEED Design Application Preparation (if applicable)**

If the project is pursuing LEED certification continue work with the project team to prepare all LEED design application documentation that can be completed at this phase of the project.

### **Deliverables Summary**

- Design development sustainability update report
- LEED Online registration
- Preparation of all LEED Design Application credits that can be completed at DD

## **Construction Documents**

### **9. Sustainability Specifications**

Prepare sustainability specifications for inclusion in the design documents. Provide all versions of the sustainability specifications to The City Project Manager, The City Policy Steward and the coordinating professional of record for review and inclusion in the project specification package.

### **10. Construction Documents**

Work with the project team throughout the construction documents process to ensure agreed upon sustainability strategies have been included in the project design (drawings and specification). The green building consultant will need to work with the coordinating professional of record to ensure sustainability items that will be included in other sections of the specification package satisfy requirements from a sustainability perspective (such as the erosion and sediment control plan).

### **11. Tender Construction Documents**

Verify that all the sustainability strategies have been appropriately addressed in the Tender Construction Documents.

## **12. LEED Design Application Submission (if applicable)**

If the project is pursuing LEED certification, work with the project team and prepare all remaining LEED design application documentation.

Submit the LEED design application to via LEED Online before the completion of the Construction Documents phase. All targeted credits identified by the LEED rating system, as applicable for submission in the design application, must be included in this submission.

Respond to USGBC reviewer comments on the application as appropriate to complete the LEED Design Application process.

## **13. Construction Documents Update Reports**

Provide The City with sustainability update reports at all defined milestones during the Construction Documents stage of the project (i.e. 75% and tender).

### **Deliverables Summary**

- Sustainability content for the project specification package.
- OPR tracking sheet update at defined major milestones.
- If applicable, the compilation of all LEED Design Application credits.
- Submit the LEED Design Application using LEED Online, including all targeted credits that can be submitted during the design application.
- Construction Document update reports at all defined milestones

## **Bid & Award**

## **Construction Administration**

### **14. Sustainability Construction Kickoff Workshop**

Host a sustainability construction kick-off workshop with the general contractor, relevant trades, and The City of Calgary to review owner's project requirements, contractor scopes and finalize any construction related sustainability strategies not yet fully developed. Establish lines of communication and update between the construction team, the owner's consultant team and the rest of the design team.

At this meeting define appropriate sustainability reporting periods (i.e. monthly, quarterly, etc.) as defined below.

### **15. Site Visits**

Conduct at least four sustainability site visits throughout the Construction Administration phase to inspect the implementation of appropriate sustainability measures.

After each site visit, issue a report to The City of Calgary project manager and The Policy Steward. Copy the coordinating professional of record and the general contractor.

### **16. Sustainability Reporting**

Work with the project team and provide construction sustainability update reports to The City of Calgary project manager and The Policy steward. Copy the coordinating professional of record and the general contractor. Provide the reports in accordance with the agreed upon reporting periods.

These reports shall include the current detailed status of all construction related sustainability items throughout the construction process. If the project is pursuing LEED certification, this will include but is not limited to, the following LEED credits:

- Building Life-Cycle Impact Reduction / Interiors Life-Cycle Impact Reduction
- Building Product Disclosure and Optimization – Environmental Product Declarations
- Building Product Disclosure and Optimization – Sourcing of Raw Materials
- Building Product Disclosure and Optimization – Material Ingredients
- Construction and Demolition Waste Management
- Construction Indoor Air Quality Management Plan
- Low-Emitting Materials

## **17. LEED Construction Application Preparation (if applicable)**

If the project is pursuing LEED certification work with the project team, prepare all LEED construction application documentation as early as possible during the Construction Administration phase of the project.

### **Deliverables Summary**

- Sustainability Construction Kickoff Workshop
- Sustainability update reports including reports from at least four site visits
- LEED Construction Application credit documentation prepared as available

## **Close Out**

### **18. Sustainable Building Policy Compliance Submission**

Prepare and submit all documentation required to demonstrate compliance with The Sustainable Building Policy to The City Project Manager and The Policy Steward. This will require close collaboration with the design and construction teams.

If the project is pursuing LEED certification work with the project team to prepare all remaining LEED construction application documentation. Submit the LEED construction application to the USGBC via LEED Online before the completion of the close out phase. Respond to CaGBC/USGBC reviewer comments of the application as appropriate to complete the LEED construction application process and copy The City project manager and The Policy Steward on all correspondence.

### **Deliverables Summary**

- Sustainable Building Policy Compliance Submission
- LEED Construction Application via LEED Online (if applicable).

## **Initiation of Operations**

### **Prior to Warranty Expiration**

### **Annually**

## Appendix – Sample RFP

The intent of this scope of work is to ensure The City is well supported in the identification and execution of the OPR as they relate to the sustainability of the lifecycle of the building project. This scope of work is also intended to ensure the Project is completed in alignment with Calgary's Council approved Sustainable Building Policy, Version 3.0, 2019. The Building Performance Optimization Consultant Team (the Consultant) will consist of multi-disciplinary subject matter experts with a common objective of identifying design strategies that will contribute to addressing The City's building performance objectives while also providing oversight during building design through post-construction, confirming whether the performance measures were successfully integrated by the Architect and Contractor.

Proposed relevant performance measures include, but are not limited to, those identified in **Table 1** below. Some of these measures will be specified by the Consultant, while the execution will be delivered by the Contractor

*Table 1: Relevant Sustainability Performance Measures*

Performance Measure Category	Proposed Performance Measure <sup>1</sup>
Integrative Design Process	The project will be delivered in a manner, starting with pre-design, that will ensure cross-disciplinary synergies are identified, documented and tracked with regards to their integration into design and construction. The Owners Representative Team is to execute an integrated project delivery process and develop a list of Owner's Project Requirements that will be tracked and updated throughout the project.
Optimization Energy Performance	By the completion of Detailed Design, whole building energy simulation will demonstrate a 40% improvement over the National Energy Code for Buildings (NECB) 2011 (as it relates to both energy consumption and energy costs).
Enhanced Commissioning	The project will undergo enhanced systems commissioning following the requirements of LEED Version 4.0 credit Enhanced Commissioning Option 1. Path1. Enhanced Systems Commissioning and Option 2. Envelope Commissioning.
Green Power and Carbon Offsets	The project will conform to The City of Calgary's Council approved objective to ensure all electricity consumed at City owned and operated facilities originates from renewable sources. Contact a Policy Steward or the Energy Management Office for consultation.
Enhanced Refrigerant Management	Use either low-impact refrigerants or no refrigerants.
Future Resiliency Planning	Design the facility to be solar PV ready and electric vehicle charging station ready.

<sup>1</sup> Note: Performance measures are summarized here to provide potential Proponents with an understanding of what measures are aligned with various City policies and objectives as they relate to triple-bottom-line sustainability. These are subject to further investigation and acceptance during the Pre-Design stage of project development.

Indoor Water Use Reduction	Achieve a minimum designed non-process plumbing fixture water savings of 35% above the defined LEED v4 baseline and do not exceed maximum fixture flow/flush rates provided by The City.
Stormwater Management	Manage stormwater on-site using green stormwater infrastructure. Manage the 90th percentile of rainfall events onsite or achieve natural land cover conditions for runoff.
Responsible Landscaping	Design landscaping in a manner that reduces potable water use, manages stormwater, promotes biodiversity, and is accessible for facility occupant / visitor use.
Multimodal Accessibility	Design the site providing priority access to pedestrians, cyclists, and public transit users. Ensure these groups can access the facility in a dignified and safe manner.
Indoor Air Quality Management	Develop and implement an indoor air quality management plan for the project.
Construction and Demolition Waste Management	Divert at least 80% of non-hazardous construction and demolition waste from landfill.
Occupant Health & Wellness	Ensure the comfort of those who occupy building spaces will be top of mind. This will be achieved by targeting the provision of natural light, natural ventilation, the ability to easily control temperature in spaces and by ensuring spaces are accessible and closely consider how occupants use and interact with spaces in the building.
GREEN BUILDING CERTIFICATION OBJECTIVE	INCLUDE OBJECTIVE IF APPLICABLE

## 1.1 Green Building Design Coordination and Certification

The green building discipline lead will be responsible for assuring the quality of the work completed by all sub-consultants making up the Consultant.

The green building discipline lead will assign a team lead, assigned to coordinate the services provided by the Consultant team, and will be a LEED (Leadership in Energy and Environmental Design) accredited professional.

Building certification objectives will be established during the schematic design phase, with recommendations on certification options and targets to be made by the Consultant to the City Representative. The Stakeholders and the Project Sponsor will review the options identified by the Consultant and will evaluate whether certification will be pursued. Options may include, but are not limited to, LEED Version 4.0 for Building Design & Construction, Passive House and the WELL Building Standard to name a few. A decision on which, if any certification pathway is pursued, will be informed by the Schematic Design Report from the Project Sponsor based on the recommendations provided by the Consultant and City subject matter experts. However, The City recognizes that to achieve LEED certification, some preliminary work needs to be completed during pre-design and schematic design phase to ensure the project is on-track to certification, should that pathway be selected. As such, these elements have been reflected in the scope of work for the Consultant below.

Table 2 below is a summary of anticipated deliverables from the Consultants green buildings discipline lead. The table is written as though LEED certification will be pursued but will be adjusted accordingly if an alternative sustainability compliance path is selected. The deliverables will remain the same regardless of the certification pathway:

*Table 2: Green Building Consultant Deliverables*

Project Phase	Deliverable	Description
Pre-Design & Schematic Design	Sustainability Design Charrette	Host a sustainability design workshop and necessary follow-up meetings with all members of the project team to develop strategies to accomplish all sustainability objectives identified in the OPR Tracking Sheet. Include the development of strategies and LEED documentation for the Integrative Process LEED credit.
	Sustainable Building Policy Compliance and LEED Certification Workplan	Develop a workplan that will include: <ul style="list-style-type: none"> <li>• All steps to achieve and document Minimum Sustainability Performance Requirements and LEED V4 certification including details for how all LEED credits will be documented.</li> <li>• The project team members responsible for completing each of the above steps.</li> <li>• Expected timelines for achievement of the above steps.</li> <li>• A developed LEED scorecard identifying sufficient targeted credits to achieve project certification goals.</li> <li>• Discuss and submit Credit Interpretation Ruling (CIRs) if clarifications or exemptions are needed for specialty buildings</li> </ul>
	Schematic Design Report	Work with the Architect throughout schematic design to ensure agreed upon sustainability strategies have been included in the schematic design report and project design. Provide a summary report of findings including a preliminary LEED scorecard to The City project manager and The Policy Steward.
	LEED "Design Stage" Application Preparation and Submission	Work with the Architect and City Representative and begin to prepare all LEED design application documentation that can be completed at this phase of the project.
Design Development	Design Development Progress Update	Work with the Architect and City Representative throughout design development to ensure sustainability strategies identified during schematic design have been included in the project design.
	LEED Online Registration	Register the project using LEED Online under the most current and applicable version of LEED. Ensure City staff, including the project manager and The Policy

		Steward, have LEED Online access by adding them to the project team.
	Progress Report	Work with the Architect throughout design development and provide The City with a sustainability update report at the end of the design development stage identifying the success of the project in addressing the agreed upon sustainability strategies.
	LEED "Design Stage" Application Preparation and Submission	Continue working with the Architect to prepare all LEED design application documentation that can be completed at this phase of the project.
Construction Documents	Sustainability Specifications	Prepare sustainability specifications for inclusion in the design documents. Provide all versions of the sustainability specifications to The City Project Manager, The City Policy Steward and the coordinating professional of record for review and inclusion in the project specification package.
	Construction Documents	Ensure agreed upon sustainability strategies have been included in the project design (drawings and specification). The green building consultant will need to work with the coordinating professional of record to ensure sustainability items that will be included in other sections of the specification package satisfy requirements from a sustainability perspective (such as the erosion and sediment control plan).
	Bid Documents Review	Verify all the sustainability strategies have been appropriately addressed in the Bid Documents.
	LEED Design Application Submission	Submit the LEED design application to the Canada Green Building Council via LEED Online before the completion of the Contract Document phase. All targeted credits identified by the LEED rating system as applicable for submission in the Design Application must be included in this submission. Respond to reviewer comments of the application as appropriate to complete the LEED Design Submission Application process.
	Construction Documents Update Report	Provide The City with sustainability update reports at all defined milestones during the Construction Documents stage of the project (i.e. 75% and tender).
Construction Administration	Sustainability Construction Kick-off Workshop	Host a sustainability construction kick-off workshop with the general contractor, relevant trades, the architect and The City of Calgary to review owner's project

		<p>requirements, contractor scopes and finalize any construction related sustainability strategies not yet fully developed. Establish lines of communication and update between the construction team, the owner's consultant team and the rest of the design team.</p> <p>Define appropriate sustainability reporting periods at this workshop.</p>
	Site Visits	<p>Conduct at least four sustainability site visits throughout the Construction Administration phase to inspect the implementation of appropriate sustainability measures.</p> <p>After each site visit, issue a report to The City of Calgary project manager and The Policy Steward. Copy the coordinating professional of record and the general contractor.</p>
	Sustainability Reporting	<p>Work with the project team and provide construction sustainability update reports to The City of Calgary project manager and The Policy steward. Copy the coordinating professional of record and the general contractor. Provide the reports in accordance with the agreed upon reporting periods.</p>
	Construction Application Preparation	<p>Work with the project team to prepare all LEED construction application documentation as early as possible during the Construction Administration phase of the project.</p>
Post Construction Services	LEED Construction Application Submission	<p>Within 8 months after substantial completion, submit the LEED construction application to the Canada Green Building Council via LEED Online.</p> <p>Respond to reviewer comments as appropriate to complete the LEED Construction Application process and copy The City project manager and The Policy Steward on all correspondence.</p>