

LEED V4 TRAINING

INTEGRATED PLANNING PROCESS






1

INTEGRATED PLANNING PROCESS

TITLE		D/C	SCORE
IP	PREREQUI SITE	1 HOLISTIC PLANNING AND DESIGN	D PREREQUISITE
IP	CREDIT	1 INTEGRATED PROJECT PROCESS	D 1

2



2

Copyright Notice

This document and all of its contents are the intellectual property of ECOBUILD® Green Buildings Construction Engineering Energy Consultancy Limited. Unauthorized copying, reproduction, modification, distribution, or use—whether for public, commercial, or non-commercial purposes—is strictly prohibited. The content is protected under national and international copyright and trademark laws. Any infringement may result in legal action. ECOBUILD® reserves the right to pursue legal remedies against individuals or entities violating these rights.

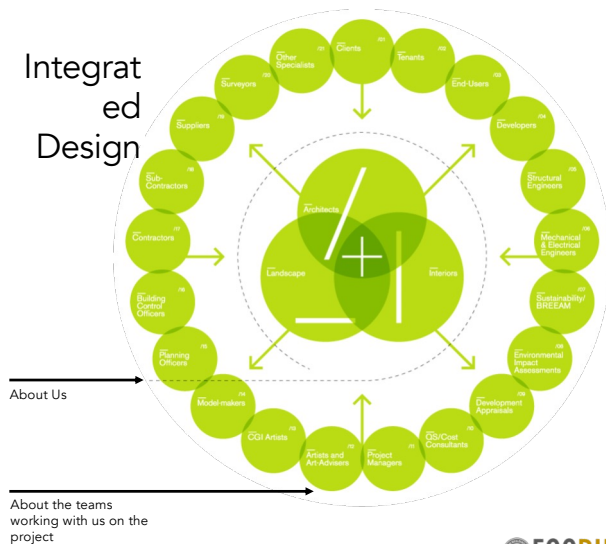
IP PREREQUISITE 1: HOLISTIC PLANNING AND DESIGN

PURPOSE

A comprehensive, integrated project planning and design process calculates the interactions of all building and site systems based on a recurring analysis loop, workshops, implementation, and performance feedback.

This prerequisite focuses on creating a general framework for an integrated project planning and design process. It requires an integrated approach that outlines the strategies and objectives of the project's guiding documents.

Integrated design reaches a conclusion through early analysis of the relationships between systems to support high-performance and cost-effective project outputs.



3



3

PREREQUISITE 1: INTEGRATED PLANNING AND DESIGN

REQUIREMENTS

Prepare the Employer Project Requirements Document.

Prepare the Project Requirements document, that is, the OPR document of the project owner, the Employer.

Develop a health mission statement and include it in the OPR. The health mission statement should address the values of the "triple bottom line", namely economic, environmental, and social gains.

While creating a high-performance improvement environment for building users such as patients, caregivers, and staff, goals and strategies should be added to the document for protecting the health of the building's inhabitants, the local community, and the global environment.



The image includes the integrated design process and the benefits of this process.

4



4

IP PREREQUISITE 1: HOLISTIC PLANNING AND DESIGN

REQUIREMENTS

Pre-Design Rating Goals Must Be Established

In the process that starts with pre-design and continues through the design stages, it is necessary to utilize opportunities to create synergy between disciplines and building systems, and to make identifications.

To determine the project owner's needs in the project, that is, to establish the criteria that form the basis of OPR and design, the use of design documents and construction documents for information and analysis purposes is the implementation of a holistic project planning and design process.

Projects that begin after the programming and pre-design phase must complete prerequisite requirements as early as possible and preferably before the schematic design phase.



The visual shows the integrated design process and the benefits of this process.

5



5

IP PREREQUISITE 1: INTEGRATED PLANNING AND DESIGN

INTEGRATED PROJECT TEAM

- Project Owner or Budget Manager
- Architect or Building Designer
- Mechanical Engineer
- Structural Engineer
- Energy Modeling Specialist
- Building Equipment Planner
- Acoustic Consultant
- Telecommunications Designer
- Controllers Checks
- Food Service Consultant - Kitchen
- Infection Control Personnel
- Building Science or Performance Testing Experts
- Green Building or Sustainable Design Consultant
- Lighting Designer
- Facility Green Operations Officers
- Physician and Nursing Teams
- Facility Managers
- Environmental Services Personnel
- Function and Volume Programmers
- Commissioning Firm
- Community Representatives
- Construction Engineer
- Landscape Architect
- Ecologist
- Urban Planner
- Construction Manager or General Contractor
- Life Cycle Cost Analyst; Construction Cost Estimator
- Lighting Designer
- Other Disciplines

6



6

STEPS

Step 1: Identification of the Project Team

An integrated project team should be formed with at least 4 members, in addition to the project owner or representative, at the beginning of the design process or prior to design.

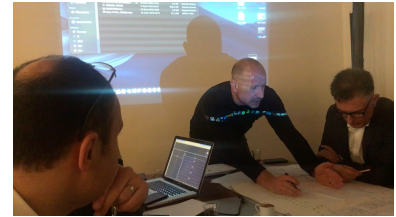
Step 2: Preparation for the Integrated Design Meeting

Information should be gathered about local climate, site conditions, waste treatment infrastructure, energy load distribution, water resources, transportation options, and potential building characteristics.

Step 3: Integrated Design Meeting

The first integrated design meeting should be conducted with the project team, in line with the project owner's goals, including fulfilling budget, timeline, functional requirements, quality and performance expectations, and the expectations of building users.

Step 4: Documentation of Project Goals and Performance Objectives



INTEGRATED DESIGN MEETING

7

7

IP PRECONDITION 1: HOLISTIC PLANNING AND DESIGN

REQUIRED DOCUMENTS

- ▶ Holistic process work forms,
- ▶ Employer requirements study in accordance with BD+C Guide



INTEGRATED DESIGN MEETING



8

ECOBUILD

8

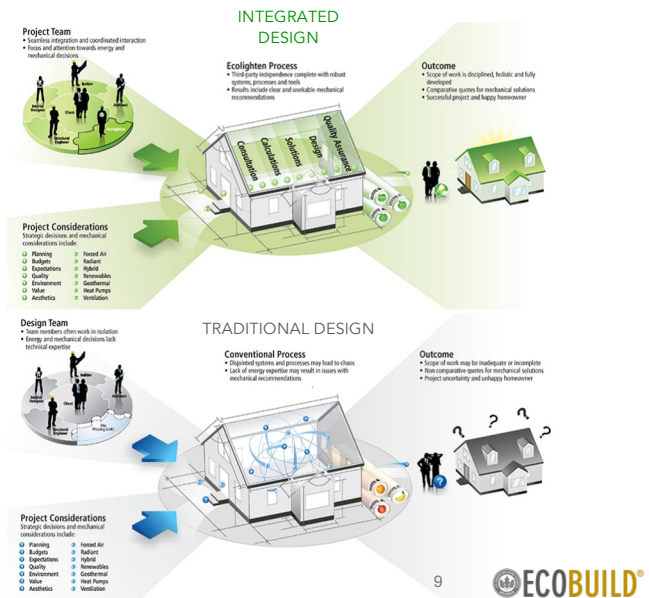
IP PREREQUISITE 1: INTEGRATED PLANNING AND DESIGN

REFERENCES STANDARDS

- Integrative Process (IP) ANSI Consensus National Standard Guide© 2.0 for Design and Construction of Sustainable Buildings and Communities

DIFFERENCE BETWEEN LEED V3 - V4

- This is a new prerequisite title.



9

IP CREDIT 1: INTEGRATED PROJECT PROCESS

OBJECTIVE

The main objective is to achieve results by identifying the relationships between systems through an early analysis, to support the creation of high-performance and cost-effective projects.

The goal is to utilize and identify opportunities to create synergy between disciplines and building systems, starting from the pre-design process and continuing through the design phases.

It is essential to use design documents and construction documents for informational and analytical purposes to determine the project owner's project requirements (OPR) and the criteria that form the basis of the design (BOD).



10

10

IP CREDIT 1: INTEGRATED PROJECT PROCESS

REQUIREMENTS

Energy Related Systems Strategy

Initially, building energy modeling should be done as a simple volume form before the schematic designs are completed.

Based on the results of this modeling and design assumptions, measures that need to be taken to ensure sustainability in the building and reduce energy loads will emerge.

To achieve this goal, at least 2 of the strategies listed in the next screenshot should be selected and implemented.



1
1

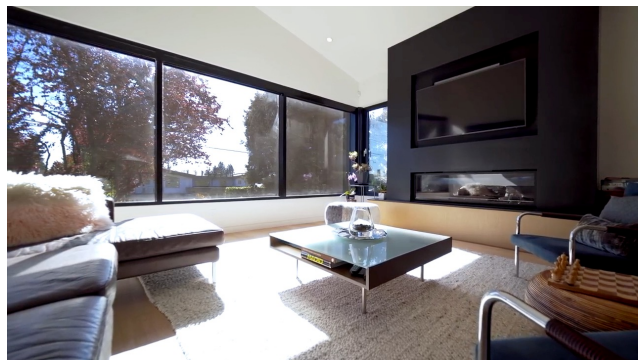


11

IP CREDIT 1: INTEGRATED PROJECT PROCESS

STEPS

- It is necessary to show how all the strategies listed above will reflect in the OPR and BOD documents and demonstrate the outcomes affecting the design listed below as much as possible.
- Building and Site Program
- Building Shape and Geometry
- Building Envelope and Facade Improvements (for different building locations)
- Significant reduction or elimination of building operating systems, such as HVAC, lighting controls, exterior facade elements.



The visual shows the building geometry and the results of the design process.

1
2



12

IP CREDIT 1: INTEGRATED PROJECT PROCESS

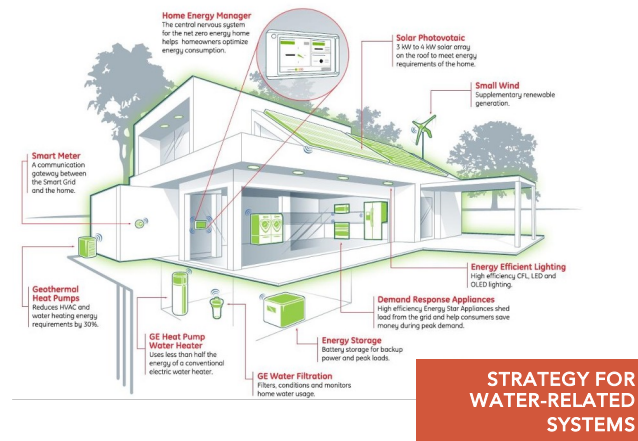
REQUIREMENTS

Strategy for Water-Related Systems

Before the schematic design is completed, the Building Water Analysis and the resulting "Water Budget" must be prepared.

The Water Analysis should seek answers to the question of how we can reduce the consumption of "drinking water" within the building.

Additionally, it is necessary to evaluate the potential demand for "non-potable water" in the building project through the strategies presented on the next screen:

1
3

13

IP CREDIT 1: INTEGRATED PROJECT PROCESS

STEPS

Building Interior Water Demand: Evaluating the water needs based on the conditions of water usage reduction calculated according to the principles of water efficiency.

Building Exterior Water Demand: Assessing the water consumption amounts in landscape irrigation design according to the principles of water efficiency (WE) and the reduction of exterior water usage credit title.

Process Water Demand: It is necessary to determine the demand values for kitchens, laundries, cooling towers, and other equipment.

Supply Sources: The volumes of all non-potable water sources must be identified, for example; on-site rainwater and graywater sources, water supplied by the municipality, and HVAC equipment condensate waters should be considered as a whole.

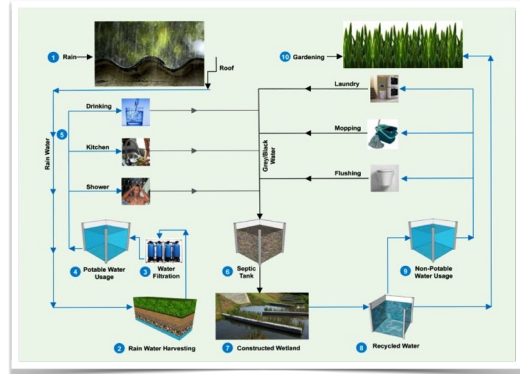
1
4

14

IP CREDIT 1: INTEGRATED PROJECT PROCESS

STEPS

- It is necessary to report how the analyses presented in the previous image affected the building and site design decisions of OPR and BOD. It is required to show at least one water source without drinking water and/or a wastewater treatment system that indicates the low use of drinking water provided by the Municipality in the field. During the design phase, it should be demonstrated which of the systems listed below have been implemented to reduce the water usage burden:
- Water Supply Systems
- Sewer systems and/or onsite treatment systems
- Rainwater quantity and quality management systems
- Landscaping, irrigation, and site elements
- Roof systems and/or building form and geometry, and
- Other systems

1
5

15

IP CREDIT 1: INTEGRATED PROJECT PROCESS

NECESSARY DOCUMENTS

- Holistic process working forms
- Energy and water analysis tables

REFERENCE STANDARDS

- Integrative Process (IP) ANSI Consensus National Standard Guide© 2.0 for Design and Construction of Sustainable Buildings and Communities

DIFFERENCE BETWEEN LEED V3 - V4

- It is a new credit title.

1
6

16

Copyright Notice

This document and all of its contents are the intellectual property of ECOBUILD® Green Buildings Construction Engineering Energy Consultancy Limited. Unauthorized copying, reproduction, modification, distribution, or use—whether for public, commercial, or non-commercial purposes—is strictly prohibited. The content is protected under national and international copyright and trademark laws. Any infringement may result in legal action. ECOBUILD® reserves the right to pursue legal remedies against individuals or entities violating these rights.