



## Requirements

Beginning in pre-design and continuing throughout the design phases, identify and use opportunities to achieve synergies across disciplines and building systems described below. Use the analyses to inform the owner's project requirements (OPR), basis of design (BOD), design documents, and construction documents.

### Energy-Related Systems

#### Discovery:

Perform a preliminary "simple box" energy modeling analysis before the completion of schematic design that explores how to reduce energy loads in the building and accomplish related sustainability goals by questioning default assumptions. Assess at least two potential strategies associated with each of the following:

- Site conditions. Assess shading, exterior lighting, hardscape, landscaping, and adjacent site conditions.
- Massing and orientation. Assess massing and orientation affect HVAC sizing, energy consumption, lighting, and renewable energy opportunities.
- Basic envelope attributes. Assess insulation values, window-to-wall ratios, glazing characteristics, shading, and window operability.
- Lighting levels. Assess interior surface reflectance values and lighting levels in occupied spaces.
- Thermal comfort ranges. Assess thermal comfort range options.
- Plug and process load needs. Assess reducing plug and process loads through programmatic solutions (e.g., equipment and purchasing policies, layout options).
- Programmatic and operational parameters. Assess multifunctioning spaces, operating schedules, space allotment per person, teleworking, reduction of building area, and anticipated operations and maintenance.

#### Implementation:

Document how the above analysis informed design and building form decisions in the project's OPR and BOD and the eventual design of the project, including the following, as applicable:

- Building and site program;
- Building form and geometry;
- Building envelope and façade treatments on different orientations;
- Elimination and/or significant downsizing of building systems (e.g., HVAC, lighting, controls, Exterior materials, interior finishes, and functional program elements); and
- Other systems.

## AND

### Water-Related Systems

#### Discovery:

Perform a preliminary water budget analysis before the completion of schematic design that explores how to reduce potable water loads in the building and accomplish related sustainability goals. Assess and estimate the project's potential nonpotable water supply sources and water demand volumes, including the following:

- *Indoor water demand.* Assess flow and flush fixture design case demand volumes, calculated in accordance with WE Prerequisite Indoor Water-Use Reduction.
- *Outdoor water demand.* Assess landscape irrigation design case demand volume calculated in accordance with WE Credit Outdoor Water-Use Reduction.
- *Process water demand.* Assess kitchen, laundry, cooling tower, and other equipment demand volumes, as applicable.
- *Supply sources.* Assess all potential nonpotable water supply source volumes, such as on-site rainwater and graywater, municipally supplied nonpotable water, and HVAC equipment condensate.

#### Implementation:

Document how the above analysis informed building and site design decisions in the project's OPR and BOD. Demonstrate how at least one on-site nonpotable water supply source was analyzed to reduce the burden on municipal supply or wastewater treatment systems by contributing to at least two of the water demand components listed above. Demonstrate how the analysis informed the design of the project, including the following, as applicable:

- plumbing systems;
- sewage conveyance and/or on-site treatment systems;
- rainwater quantity and quality management systems;
- landscaping, irrigation, and site elements;
- roofing systems and/or building form and geometry; and
- other systems.