

IDP-R2: Sustainable Buildings

Intent

To ensure that the design and construction of buildings within the public realm will contribute to the overall sustainability objectives and targets.

Credit Requirements

GENERAL

All buildings, structures, or temporary structures not required to meet the Pearl Buildings Rating System (PBRs) requirements, must meet the following requirements:

Building Envelope

To ensure the installation of a high performance building envelope, where buildings are air conditioned, all building elements are to have an area weighted average U-value that is equal to or less than the following:

Table IDP-R2a: Maximum Building Envelope U-values

Construction Element	U-value (W/m ² K)
Fenestration	2.20
Roof	0.14
Wall	0.32
Basement Wall	0.28
Floor	0.15

For the above construction elements, the following also needs to be implemented:

- Proposed glazing area to be less than 15% of the conditioned floor area;
- All glazed fenestration to have a maximum Solar Heat Gain Coefficient (SHGC) of 0.3; and
- Infiltration rates are a maximum of 0.35 ach.

Energy Efficient Equipment and Appliances

- All appliances are to have a minimum EU Energy Rating of B or equivalent on an alternative rating scheme;
- All lighting power densities must not exceed the figures as defined in ASHRAE 90.1-2013 Section 9 (space by space method);
- Lighting is to be provided with presence detection to control lighting of intermittently occupied spaces, e.g. employee lunch and break rooms, restrooms, and changing rooms;
- All fans must have a maximum fan power of 0.8 W/l/s; and
- The air conditioning system must have a minimum coefficient of performance (CoP) of 3.4 (tested at AHRI Standard 210/240 conditions or equivalent).

Water Efficient Fixtures, Fittings and Appliances

Flow rates/volumes for fixtures, fittings and appliances must not exceed the following:

Table IDP-R2b: Minimum Water Efficiency

Fixture, Fitting or Appliance	Flow Rates/Volumes
Bathroom Taps	6 litres/min at 413.7 kPa (reference pressure)
Shower Head	9.5 litres/min at 551.6 kPa (reference pressure)
Kitchen Sink Faucet	6 litres/min at 413.7 kPa (reference pressure)
Bidets	6 litres/min at 413.7 kPa (reference pressure)
Urinals	0.5 litres/flushing cycle