

IQ

Who is NOT required to have
chain-of-custody
documentation for FSC-
certified wood?



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IA

End User



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2Q

Who defines prime
farmland?



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2A

The U.S. Department of
Agriculture



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3Q

**Where must short-term
bicycle storage be located?**



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3A

**within 100 feet (30 metres)
walking distance of any main
entrance.**



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4Q

**Where must long-term
bicycle storage be located?**



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4A

**within 100 feet (30 metres)
walking distance of any
functional entry.**



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5Q

Where is access to quality transit measured?



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5A

A functional entry is a building opening designed to be used by pedestrians and open during regular business hours. It does not include any door exclusively designated as an emergency exit or a garage door not designed as a pedestrian entrance.



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6Q

When using the calculation method for light pollution reduction, how far apart can the calculation points be?



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6A

No more than 5 feet (1.5 metres) apart



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7Q

When renovating an abandoned or blighted building, what percent of the building must be maintained?



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7A

at least 50% by surface area of the existing structure, enclosure, and interior structural elements.



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8Q

When reducing total waste material for C&D Waste Management, what is the maximum amount of waste allowed?



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8A

2.5 lbs per SF (12.2 kg per m²) of waste for the building's floor



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9IQ

Who is NOT required to have
chain-of-custody
documentation for FSC-
certified wood?



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7A

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10Q

What standards must all
EPDs abide by?



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10A

"ISO standards 14025,
14040, 14044, and EN 15804
or
ISO 21930"



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IIQ

Any individual energy end use that represents



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IIA

percent of the building's total annual consumption have an advanced energy metre? 10%



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I2Q

Any roof used to shade covered parking for heat island reduction must meet what requirements?



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I2A

"1. a three-year-old SRI of at least 32; 2. a vegetated roof; 3. a roof covered by energy generation systems."



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I3Q

At a minimum, projects must provide a dedicated area for the collection and storage of what five (5) materials?



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I3A

Paper, corrugated cardboard, glass, plastics, and metals



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I4Q

At what height must air samples be collected for IAQ assessment?



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I4A

3 to 6 feet (900 to 1,800 mm) above the floor to represent the breathing zone



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I5Q

**At what height should
daylight measurements be
taken?**



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I5A

**9 AM on the first equinox
(March 21 or September 21)
and 3 PM on the second
equinox**



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I6Q

**At what heights should CO2
sensors be placed for
breathing zone
requirements?**



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I6A

**between 3 and 6 feet above
the floor.**



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I7Q

At what percentage must an outdoor air delivery monitoring system generate an alarm for insufficient airflow values or carbon dioxide?



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I7A

10% variation from design values



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I8Q

Carbon offsets can be used to mitigate what types of emissions from green power and carbon offsets?



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I8A

Scope 1 or Scope 2 emissions



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19Q

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chain-of-custody
documentation for FSC-
certified wood?



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19A

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20Q

A cradle-to-gate assessment
is required for what material
disclosure?



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20A

Each of the three types of
EPDs requires at least a
cradle-to-gate scope.



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21Q

**Define the Development
Footprint**



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21A

**The total land area of a
project site is covered by
buildings, streets, parking
areas, and other typically
impermeable surfaces
constructed as part of the
project.**



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22Q

**Does building envelope
commissioning have to be
completed for fundamental
commissioning?**



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22A

**No. It must be documented in
the OPR and BOD. It is not
required unless the project
team pursues EA Credit
Enhanced Commissioning,
Option 2.**



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23Q

For a project with open space,
what minimum rainfall must
be managed?



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23A

95th Percentile



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24Q

For a whole-building life-
cycle assessment, what is the
service life of the baseline
building?



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24A

60 years



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25Q

For increased ventilation,
How much must mechanically
ventilated spaces increase
outdoor air ventilation rates
required by ASHRAE 62.1?



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25A

30% above rates required by
ASHRAE 62.1



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26Q

For innovation credit when
pursuing Option I, what must
the team identify?



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26A

Intent of proposed innovation
credit, proposed
requirement(s) for
compliance, proposed
submittals, and strategies
used to meet the
requirement(s)



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27Q

**Who is NOT required to have
chain-of-custody
documentation for FSC-
certified wood?**



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27A

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28Q

**For previously developed or
graded sites, how much
habitat needs to be restored?**



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28A

**30% (including the building
footprint) of all portions of
the site**



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29Q

For school projects, what areas can be excluded from soil restoration criteria to restore or protect habitat?



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29A

Athletic fields



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30Q

For schools to achieve the site master plan, how many other credits must be met?



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30A

"At least 4 out of 6 of these credits: LT Credit High Priority Site, SS Credit Site Development—Protect or Restore Habitat, SS Credit: Open Space, SS Credit Rainwater Management, SS Credit Heat Island Reduction, SS Credit Light Pollution Reduction



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31Q

How can reductions beyond
30% be achieved for outdoor
water use reduction?



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31A

How can reductions beyond
30% be achieved for outdoor
water use reduction?



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32Q

How can reductions be
achieved for WE Prerequisite
Outdoor Water Use
Reduction?



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32A

"Plant species selection AND
irrigation efficiency.
Alternative water sources
CANNOT be used for the
prerequisite"



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33Q

How close does a functional entry or bicycle storage need to be to a bicycle network?



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33A

Within 200-yards (180-metres) walking or bicycling distance



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34Q

How does a project confirm that natural ventilation is an effective strategy?



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34A

Follow the CIBSE flow diagram.



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35Q

How do you calculate an FTE?



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35A

An 8-hour occupant has an FTE value of 1.0; a part-time occupant has a FTE value based on work hours per day divided by 8.



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36Q

How is a Phase II
Environmental Site
Assessment more in depth?



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36A

A further investigation that collects original samples of soil, groundwater, or building materials to analyse for quantitative



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37Q

How is preferred parking defined?



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37A

The parking spots closest to the main entrance of a building (exclusive of spaces designated for handicapped persons). For Employee parking refers to the spots that are closest to the entrance used by employees.



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38Q

How is the total number of vehicle parking spaces calculated for heat island reduction?



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38A

The number of parking spaces within the LEED project boundary (including motorcycle parking). Do not count bicycle parking spaces.



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39Q

**How long must an advanced
energy metering system store
data?**



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39A
36 months



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40Q

**How long must a project
commit to sharing metering
data with USGBC, and when
must the sharing begin?**



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40A
**a five-year period beginning
on the date the project
accepts LEED certification or
typical occupancy, whichever
comes first.**



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41Q

How long must permanent entryway systems be in the primary direction of travel for enhanced IAQ strategies?



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41A

10' (3 metres) in the primary direction of travel at regularly used exterior entrances.



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42Q

How many bike racks are required for a commercial building?



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42A

short-term storage for at least 2.5% of all peak visitors (no fewer than 4 spaces per building) and long-term storage for 5% of all regular building occupants (no fewer than 4 spaces per building).



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43Q

How many bike racks are required for the residential project?



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43A

Short-term storage for at least 2.5% of all peak visitors (no fewer than 4 spaces per building) and long-term storage for 30% of all regular building occupants



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44Q

How many conditions are there where the lighting boundary can be different than the property boundary?



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44A

There are three conditions. The exceptions are not listed here due to their length (see the reference guide).



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45Q

How many EVSE stations must
be installed for green
vehicles?



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45A

2% of all parking spaces
(preferred parking spaces
may not be counted).



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46Q

How many modes must
lighting systems be able to
operate in?



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46A

3: On, off, and mid-level



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47Q

How many potential strategies must be assessed for each energy-related building aspect for integrative design?



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47A

At least two strategies must be assessed for each of the six aspects.



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48Q

How many preferred parking spaces are required for green vehicles?



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48A

Provide preferred parking for green vehicles for 5% of the total vehicle parking capacity of the site.



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49Q

How many qualifying products must be sourced for exemplary performance in product disclosure?



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49A

At least 40 qualifying products



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50Q

How many shower and changing facilities are required for a commercial project?



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50A

At least one for the first 100 FTE and one additional for every 150 regular building occupants thereafter.



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51Q

How much outdoor space
must be provided for open
space?



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51A

30% of the total site area
(including the building
footprint) or greater



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52Q

How much preferred parking
is required for a reduced
parking footprint?



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52A

5% of the total parking
spaces after reductions are
made from the base ratios.



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53Q

How much rainfall must be managed for a project with a zero lot line and a minimum density of 1.5 FAR?



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54A

85th Percentile



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55Q

How often must advanced metres be able to report data?



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55A

Hourly, daily, monthly, and annually



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56Q

If the bug rating method is used to meet the uplift requirements, does the method also have to be used to meet the light trespass requirements?



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56A

No. Project teams can use the BUG method or calculation method for uplift and use the same or a different method for light trespass.



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57Q

Process energy is considered to include, but is not limited to what?



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57A

Miscellaneous Equipment, Computers, Elevators, Escalators, Kitchen Cooking & Refrigeration Equipment, Laundry Washing & Drying, Lighting Exempt from Power Allowance (e.g., Medical Equipment), and Other (e.g., Waterfall or Fountain Pumps)



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58Q

RECs can be used to mitigate
what types of emissions for
green power and carbon
offsets?



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58A

Scope 2: Use of electricity



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59Q

Regulated or non-process
energy includes



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59A

Lighting (interior, parking
garage, surface parking,
façade, or building grounds)
HVAC, service water heating
for domestic or space
heating purposes



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60Q

Shade and architectural devices used for heat island reduction must have at least what three-year aged solar reflectance?



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60A

"0.28. If the three-year age information is not available, use materials with an initial SR of at least 0.33."



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6IQ

Structure and enclosure materials may not constitute more than what percent of compliant building products for material disclosure and optimisation?



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6IA
30%



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62Q

Views into the interior atria
may be used to meet what
percent of the required area
for quality views?



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62A

30%



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63Q

What acoustic issues need to
be considered for acoustic
performance?



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63A

HVAC background noise
Sound transmission
Reverberation time. Sound
reinforcement and masking
systems



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64Q

What amount of financial support can be provided to restore or protect habitat?



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64A

\$0.40 / SF (\$4 / m2)



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65Q

What areas are excluded from outdoor water use reduction calculations?



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65A

Nonvegetated surfaces (permeable and impermeable pavement) are excluded. Athletic fields, food gardens, and playgrounds can be included or excluded at the project teams' discretion.



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66Q

What areas can be excluded from the vegetation and soil requirements to restore or protect habitat?



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66A

vegetated landscape areas that are constructed to accommodate rainwater infiltration.



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67Q

What are some ways to capture rainwater to prevent runoff?



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67A

LID and green infrastructure



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68Q

What are the acceptable
corporate sustainability
reporting (CSR) frameworks?



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68A

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69Q

Who defines prime
farmland?



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69A

"Global Reporting Initiative (GRI)
Sustainability Report, Organisation for
Economic Co-operation and Development
(OECD) Guidelines for Multinational
Enterprises, UN Global Compact:
Communication of Progress, and ISO
26000:2010 Guidance on Social
Responsibility" (56 KB)



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70Q

What are the benefits of commissioning?



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70A

Reduced Energy Use, Lower Operating Costs, Reduced Contractor Callbacks, Better Building Documentation, Improved Occupant Productivity, and Verification that Systems Perform with Owners' Project Requirements



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71Q

What are the distance limitations when providing financial support to protect or restore habitat?



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71A

Financial support must be provided to a nationally or locally recognised land trust or conservation organisation within the same EPA Level III ecoregion or the project's state (or within 100 miles of the project [160 kilometres] for projects outside the U.S.). For U.S. projects, the land trust must be accredited by the Land Trust Alliance.



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72Q

What are the distances for access to quality transit?



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72A

1/4 mile (400 metre) walking distance of existing or planned bus, streetcar, or rideshare stops, or within a 1/2 mile (800 metre) walking distance of existing or planned bus rapid transit stops, light or heavy rail stations, commuter rail stations or ferry terminals



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73Q

What are the eligible types of systems for renewable energy production?



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73A

Photovoltaic systems, wind energy systems, solar thermal systems, Biofuel-based electrical systems, Geothermal heating or electric systems, Low-impact hydroelectric power systems, Wave and tidal power systems



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74Q

Who is NOT required to have
chain-of-custody
documentation for FSC-
certified wood?



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74A

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75Q

What are the five (5) areas
of SMACNA standards for
recommended IAQ control
measures?



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75A

HVAC protection: source
control Pathway interruption
Housekeeping Scheduling



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76Q

What are the five categories of diverse uses?



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76A

-Food retail; -community-serving retail; -services; -civil and community facilities
Community anchor uses
(BD&C and ID&C only)



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77Q

What are the four kinds of views?



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77A

view factor of 3 or greater"
head height of the vision glazing, -Views with a located within the distance of three times the exterior of the glazing, -Unobstructed views objects at least 25 feet (7.5 meters) from the (1) flora, fauna, or sky; (2) movement; and (3) Views that include at least two of the following: different directions at least 90 degrees apart, -
"-Multiple lines of sight to vision glazing in



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78Q

What are the general
emission evaluation
standards associated with
low-emitting adhesives and
sealants?



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78A

California Department of
Public Health (CDPH)
Standard Method v1.1-2010
and German AGBB Testing
and Evaluation Scheme
(2010)



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79Q

What are the IESNA lighting
zones?



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79A

LZ0: Wilderness; LZ1: Dark
(parks, rural areas); LZ2: Low
(residential, light industrial);
LZ3: Medium (commercial,
industrial, high density
residential); LZ4: High (metro
areas).



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80Q

What are the light pollution reduction requirements for internally illuminated exterior signs?



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80A

Do not exceed a luminance of 200 cd/m² (nits) during nighttime hours and 2000 cd/m² (nits) during daytime hours.



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81Q

What are the minimum surrounding density requirements?



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81A

**0.5 non-residential density (FAR) and 7 residential density (DU/acre) (or 22,000 SF).
acre of buildable land combined density**



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82Q

What are the minimum percent thresholds for debris to be recycled or salvaged for construction and demolition waste management?



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82A

50% = 1 point; 75% = 2 points.



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83Q

What are the minimum weekday and weekend trips for projects with commuter rail or ferry service only?



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83A

24 weekdays, 6 weekends



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84Q

What are the minimum
weekday and weekend trips
for projects with multiple
transit types (bus, streetcar,
rail, or ferry)?



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84A

72 weekdays, 40 weekends



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85Q

What are the priority
designations for high-priority
sites?



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85A

"- site listed by the EPA National Priorities List, Federal
Empowerment Zone site, Federal Enterprise Community
site, Federal Renewal Community site, Department of the
Treasury

Community Development Financial Institutions fund
qualified low-income communities, sited in a U.S.
Department of Housing and Urban Development's
qualified census tract or difficult development area,
cal equivalent programme administered at the national
level for projects outside the U.S." 71b



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86Q

**What are the requirements
for diverse uses?**



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86A

Construct or renovate a building or a space within a building such that the building's main entrance is within 1/2 mile (800 metres) walking distance of the main entrance for four to seven (1 point) or eight or more (2 points) existing and publicly available diverse uses.



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87Q

**What are the requirements
for surrounding density?**



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87A

Locate on a site whose surrounding existing density within a 1/4 mile (400-metre) radius of the project boundary meets either the "separate residential and nonresidential densities" or "combined density" values.



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88Q

What are the six (6)
components of ASHRAE 90.1?



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88A

Building envelope, HVAC,
service water heating, power,
lighting, and other
equipment



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89Q

What are the six (6) primary
comfort factors associated
with ASHRAE 55?



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89A

Metabolic Rate, Clothing
Insulation, Air Temperature,
Radiant Temperature, Air
Speed, Humidity



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90Q

What are the six impact categories of a life-cycle assessment?



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90A

"Global warming potential" (greenhouse gases), depletion of the stratospheric ozone layer, acidification of land and water sources, eutrophication, formation of tropospheric ozone, and depletion of nonrenewable energy resources"



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91Q

What are the three (3) basic methods for ventilating buildings?



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91A

Mechanical ventilation (active ventilation), natural ventilation (passive ventilation), and mixed-mode ventilation (both mechanical and natural ventilation)



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92Q

What are the three (3) compliance path options described in "Optimise Energy Performance" (EA Prerequisite 2)?



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92A

"Option 1. Whole Building Energy Simulation; Option 2. Prescriptive Compliance Path: ASHRAE 50% Advanced Energy Design Guide Option 3: Prescriptive Compliance Path: Advanced Buildings Core Performance Guide"



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93Q

What are the three (3) options to achieve IEQ credit daylight?



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93A

"Option 1. Simulation: spatial daylight autonomy and annual sunlight exposure, Option 2. Simulation: luminance calculations; Option 3: measurement"

94Q

What are the three options
for high priority sites?



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94A

"Option 1: Historic district;
Option 2: Priority
designation; Option 3:
Brownfield remediation."



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95Q

What are the three types of
EPDs, and what is the product
value of each type?



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95A

"Product-specific
declaration: 1/4 of a product,
industry-wide (generic) EPD:
1/2 of a product, product-
specific Type III EPD: 1
product"



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96Q

What are the thresholds for
renewable energy production
credits?



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96A

"LEED BD+C (except Core and
Shell): 1%, 5%, 10% LEED
BD+C:
Core and Shell: 1%, 3%, 5%"



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97Q

What are the two (2)
building flush-out paths a
project can consider for IAQ
assessment?



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97A

14,000 Cubic Feet of Outdoor Air per
SF of Floor Area @ 60°F & 60%
relative humidity OR 3,500 Cubic Feet
of Outdoor Air per SF of Floor Area @ a
Minimum Rate of .30 (cfm) until
reaching 14,000 Cubic Feet per SF



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98Q

What are the two (2) options
for enhanced refrigerant
management?



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98A

"Option 1: No refrigerants or
low-impact refrigerants;
Option 2: Calculation of
Refrigeration Impact"



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99Q

What are the two (2) options
for indoor air quality
assessment?



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99A

Option 1. Flush-out; Option
2. Air testing



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I00Q

What are the two (2) options
to determine electricity use
for green power and carbon
offsets?



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I00A

Option I. Use the calculated
energy consumption results
from EA Prerequisite:
Minimum Energy
Performance or Option
2. Estimate electricity use
using the CBECS database



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I01Q

What are the types of
responsible extraction criteria
for the sourcing of raw
materials?



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I02A

"Extended producer
responsibility, bio-based
materials, wood products,
material reuse, and recycled
content."



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I03Q

What are the types of sensitive sites to avoid building on?



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I03A

"Prime farmland, flood plain, endangered species habitat, and land within 50' (15 metres) of Wetlands are areas of land within 100 feet (30 metres) of a water body."



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I04Q

What biofuel systems are not eligible for renewable energy production?



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I04A

Combustion of municipal solid waste or forestry biomass waste other than mill residue, coated wood, or treated wood.



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I05Q

What causes skyglow?



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I06A

Stray light from unshielded light sources and light reflecting off surfaces then enters the atmosphere and illuminates and reflects off dust, debris, and water vapour.



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I07Q

What Cradle-to-Cradle certified products count towards material ingredient optimisation?



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I07A

Cradle to Cradle certification attempts to measure the environmental and social sustainability of your invention in five categories: material health, material reutilization, renewable energy & carbon management, water stewardship, and social fairness.



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I09Q

What dBA must background noise from HVAC equipment be reduced to for minimum acoustic performance?



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I09A
40 dBA



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I10Q

What device is used to regulate humidity and temperature, making building systems more energy efficient?



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I10A
An economizer



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IIIQ

What calculations need to be
done for construction and
demolition waste
management?



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II2A

Weight or volume



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II3Q

What documents get created
during fundamental
commissioning and
verification?



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II4A

"CX report, current facility
requirements, operations,
and maintenance plan."



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115Q

What does not qualify as material diverted from disposal for the CDWMP?



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116A

Alternative daily cover (ACD) and land-clearing debris



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117Q

What do the owner's project requirements typically include?



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117A

Owner and user requirements; environmental and sustainability goals; energy efficiency goals; indoor environmental quality requirements; equipment and system expectations; building occupant and O&M personnel requirements



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119Q

What energy-related building aspects must be considered for the integrative process?



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119A

Site conditions, massing, and orientation Basic envelope attributes, Lighting levels, thermal comfort ranges, Plug and process load needs



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120Q

What energy-related systems must be commissioned?



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120A

"-Mechanical, including HVAC&R equipment and controls, Electrical lighting and daylighting controls, Plumbing, including domestic hot water systems, and renewable energy systems."



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I21Q

What energy sources must be metered in a building?



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I22A

"-Electricity, natural gas, fuel oil, other fossil fuels, biofuels, district chilled water, steam, and hot water."

2. Estimate electricity use using the CBECS database.



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I23Q

What exterior lighting is exempt from the uplighting and light trespass requirements?



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I23A

"Specialised lighting for transportation, Lighting for façade and landscape lighting in MLO lighting zones 3 and 4, Lighting for theatrical purposes, government-mandated roadway lighting; hospital emergency departments, including associated helipads; Lighting for the national flag in MLO lighting zones 2, 3, or 4; internally illuminated signage"



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I24Q

**What factor is used to
determine the optimisation
of the MR credits?**



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I24A

**Use products that comply
with the criteria of each credit
based on the cost of the
products compared to the
total value of permanently
installed products.**



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I25Q

**What filtration media is
required for enhanced IAQ
strategies?**



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I25A

**MERV 13 or F7 (CEN Standard
EN 779-2002)**



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I26Q

What fixtures and fittings must be included in the indoor water use reduction calculations?



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I26A

Water closets, urinals, lavatory faucets, showers, kitchen sink faucets, and pre-rinse spray valves



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I27Q

What four fundamental strategies can increase energy performance?



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I27A

Orientation, Site Energy Sources, an Efficient Envelope, and Energy Recovery Systems



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I28Q

**What frequency must
metered data be compiled
for building level-water
metering?**



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I28A

**Monthly and annual
summaries**



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I29Q

**What generates both
electrical power and thermal
energy from a single fuel
source?**



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I29A

**Combined Heat and Power
(CHP) or cogeneration**



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I30Q

What hazardous waste stream categories require safe collection, storage, and disposal?



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I30A

Choose two of these three:
Batteries, mercury-containing lamps, or
electronic waste



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I31Q

What indoor water use reduction percentage demonstrates exemplary performance?



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I31A
55%



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I32Q

What information must be inventoried for a site assessment?



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I32A

"Topography, Hydrology, Climate, Vegetation, Soils, Human Use, Human Health Effects"



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I33Q

What international alternative compliance path is available for material ingredient optimisation?



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I33A

REACH Optimisation



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I34Q

What is a BAS?



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I34A

Building Automation System (BAS), which uses computer-based monitoring to coordinate, organise, and optimise building control subsystems, including lighting, equipment scheduling, and alarm reporting,



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I35Q

What is a BUG rating?



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I35A

A luminaire classification system that classifies luminaries in terms of backlight (B), uplight (U), and glare(G) (taken from the IES/IDA Model Lighting Ordinance). BUG ratings supersede the former cutoff ratings.



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I36Q

What is an example of a monoculture planting that would not help with restoring or protecting habitat?



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I36A

Turf grass



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I37Q

What is a Phase I Environmental Site Assessment?



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I37A

A report prepared for a real estate holding that identifies potential or existing environmental contamination liabilities



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I38Q

**What is a three-year-old SR
(or SRI)?**



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I38A

**A solar reflectance or solar
reflectance index rating that
is measured after three years
of weather exposure**



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I39Q

**What is considered a densely
occupied space when
monitoring CO₂
concentrations in
mechanically ventilated
spaces?**



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I39A

**25 people or more per 1,000
square feet**



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I40Q

What is load shedding?



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I40A

an intentional action by a utility to reduce the load on the system. Load shedding is usually conducted during emergency situations, such as capacity shortages, system instability, or voltage control.



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I41Q

What is required for a project team to establish for construction and demolition waste management planning?



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I41A

Waste diversion goals



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I42Q

**What is required for the
construction IAQ
management plan?**



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I42A

**"Meet or exceed SMACNA
guidelines; protect absorptive
materials stored on-site, Use MERV
8 (F5) filters on operating air
handlers, Prohibit smoking in the
building and within 25 feet (7.5
metres).
of entrances."**



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I43Q

**What is required for LEED
Accredited Professional
Credit?**



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I43A

**One LEED AP with a specialty
appropriate for the project**



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I44Q

What is required for a reduced parking footprint?



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I44A

"Do not exceed the minimum local code requirements, A percent reduction from a baseline (20% or 40% depending on what other credits are achieved)"



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I45Q

What is Technical Release (TR) 55?



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I45A

An approach to hydrology in which watersheds are modelled to calculate storm runoff volume, peak rate of discharge, hydrographs, and storage volumes, developed by the former USDA Soil Conservation Service



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I46Q

What is the building requirement for projects in places without a legally adopted flood hazard map?



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I46A

Cannot build on a floodplain subject to a 1% or greater chance of flooding in any given year.



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I47Q

What is the contract period for demand response?



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I47A

A minimum of one year with the intention of multiyear renewal



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I48Q

**What is the discounted
parking rate for green
vehicles?**



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I48A

20% discount



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I49Q

**What is the minimum
distance that ALL naturally
ventilated spaces must be
from an operable wall or roof
opening to the outdoors?**



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I49A

25' feet



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I50Q

What is the duration and percentage a project must engage in to earn points under Green Power and Carbon Offsets?



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I50A

5-year contract AND 50% provision of the project's energy from green power, carbon offsets, or renewable energy certificates



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I51Q

What is the location valuation factor for the optimisation and disclosure credits?



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I51A

Products and materials that are extracted, manufactured, and purchased within 100 miles (160 km) of the project value are valued at 200% of their cost.



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I53Q
What is the maximum
background noise level
allowed for HVAC equipment
in classrooms required for
minimum acoustic
performance (IEQ
Prerequisite 3)?

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I53A
45 dBA

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I54Q
What is the maximum
distance on a bicycle network
that destinations (diverse
use, school or employment
centre, quality transit) must
be?

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I54A
within a 3-mile (4,800
metre) bicycle distance of the
project boundary.

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I55Q

What is the maximum
number of points a project
can earn for exemplary
performance?



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I55A

2 Points



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I56Q

What is the maximum
number of points a project
can earn for IN Credit
Innovation for the innovation
option?



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I56A

4 Points



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I57Q

**What is the maximum
number of points a project
can earn for pilot credits?**



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I57A

4 Points



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I58Q

**What is the maximum
number of points a project
can earn for regional priority
credits?**



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I58A

4 Points



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I59Q

What is the minimum number of products required for the disclosure option of the MR credits?



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I59A

At least 20 different permanently installed products were sourced from at least five different manufacturers.



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I60Q

What is the minimum percent reuse required for building and material reuse?



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I60A

At least 25% from off site or on site as a percentage of the surface area.



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I61Q

What is the threshold for an ASE simulation?



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I61A

**1,000 lux of direct sunlight
for more than 250 hours of
the year between 8 AM and 6
PM local time for a full
calendar year**



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I62Q

What is the threshold for an sDA simulation?



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I62A

**300 lux for 50% of the hours
between 8 AM and 6 PM
local time for a full calendar
year**



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I63Q

What is the typical permitted distance for Environmental Tobacco Smoke (ETS) Control (IEQ Prerequisite 2)?



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I63A
25' feet



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I64Q

What is WaterSense?



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I64A

WaterSense is a partnership programme sponsored by the EPA that helps consumers identify water-efficient products and programmes.



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I65Q

What LEED ND certification designations are eligible for LEED ND location credit?



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I65A

"-LEED ND Pilot, Stage 2 LEED ND Certified Plan, -LEED ND Pilot, Stage 3 LEED ND Certified Project, LEED 2009, Stage 2 pre-certified LEED ND Plan, LEED 2009, Stage 3 LEED ND Certified Neighbourhood Development, LEED v4 LEED ND Certified Plan, LEED v4 LEED ND Certified Built Project" (I42b)



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I66Q

To what MERV rating must mechanically ventilated buildings design HVAC systems to filter supply air prior to occupancy?



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I66A

MERV 13 (F7) or higher



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I67Q

What minimum number of cooling tower cycles would earn a project 2 points?



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I67A

a 10-cycle minimum.



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I68Q

What minimum number of waste streams must be diverted for C&D Waste Management?



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I68A

Divert at least 50% of the total C&D material, including at least three material streams.



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I69Q

What minimum percent of parking spaces must be placed under cover for Heat Island Reduction Option 2, Parking Under Cover?



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I69A

75%



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I70Q

What minimum percent reduction of outdoor water use is required from a calculated baseline?



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I70A

30% reduction from the calculated baseline for the site's peak watering month



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I71Q

What must a bicycle network connect to?



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I71A

**"At least one of the following:
-at least 10 diverse uses; -a school or employment centre if the project's total floor area is 50% or more. residential; a bus rapid transit stop; a light or heavy rail station; commuter rail station, or ferry terminal."**



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I72Q

What must be done for cooling tower water use?



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I72A

A one-time potable water analysis measuring at least the required five control parameters



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I73Q

**What must outdoor space be
to qualify as "open space"?**



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I73A

Physically accessible



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I74Q

**What must your erosion
control plan adhere to?**



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I74A

**2003 EPA Construction
General Permit (or local
standards, whichever is more
stringent)**



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I75Q

What percentage of regularly occupied floor area must achieve daylight illumination for IEQ Credit Daylight?



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I75A

75% = 1 point



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I76Q

What percentage of regularly occupied floor area must have a direct line of sight to the outdoors via vision glazing for IEQ credit views?



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I76A

75% = 1 point



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I77Q

What percentage of the building's occupants must have individual comfort controls for thermal comfort?



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I77A

At least 50% of individual occupant spaces and 100% of all shared multi-occupant spaces



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I78Q

What percentage of the building's occupants must have individual lighting controls for interior lighting?



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I78A

At least 90% of individual occupant spaces and 100% of shared multi-occupant spaces



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I79Q

**What optional systems can
be submetered for water
metering?**



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I79A

**"Two or more of the following:
Irrigation, indoor plumbing
fixtures and fittings, domestic
hot water, boilers, reclaimed
water, and other processed
water"**



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I80Q

**What percent of a building
must be maintained for
historic building reuse?**



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I80A

**There is no minimum
requirement. The historic
designation must be
maintained, however.**



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I81Q
What percent of open space
must be vegetated?



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I81A
25% minimum



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I82Q
What percent of runoff must
be managed for the 95th
percentile rainfall event?



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I83A
100%



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I84Q

What percent of water distribution must be metered for irrigation, indoor plumbing fixtures, domestic hot water, or other process water?



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I85A

80% must be metered.



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I85Q

What percent reduction is required for WE Credit Outdoor Water Use Reduction?



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I85A

50% from the calculated baseline for the site's peak watering month.



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I86Q

What reduction is automatically earned when installing smart irrigation controls for WE Credit outdoor water use reduction?



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I86A

15% from the baseline



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I87Q

What reduction is required for demand response?



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I87A

At least 10% of the estimated peak electricity demand



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I89Q

What refrigerant management procedure governs reducing the annual leakage of CFC-based refrigerants to 5% or less?



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I89A

EPA Clean Air Act, Title VI,
Rule 608



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I90Q

What should be included in a sustainable landscape plan?



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I90A

List all plant species, noting whether or not they are native or adapted; info about invasive species and pests those plants may harbour; best maintenance practises for the chosen plants, and site maps showing boundaries for the protected habitat areas.



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I91Q

What should be used to designate a site as prime farmland and identify its soil classification?



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I91A

Natural Resources Conservation Service (or local equivalent)



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I92Q

What should be used to estimate the water storage capacity of a site during a site assessment?



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I92A

Urban Hydrology for Small Watersheds, Technical Release 55 (TR-55) or local equivalent for projects outside the U.S.



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193Q
What should the Basis of Design include?



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193A
Primary Design Assumptions, Standards, and Narrative Descriptions



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194Q
What slope is important for the heat island effect on the roof?



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194A
2:12 slope; > means steeped slope and requires an initial SRI of 39 or greater; 2:12 _ means low slope and requires an SRI of 82 or greater.



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I95Q

What standards are acceptable for material ingredient optimization?



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I95A

GreenScreen v1.2 Benchmark
Cradle-to-Cradle Certified
REACH Optimization
(International Alternative
Compliance Path)



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I96Q

What standards must be followed for thermal comfort design?



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I96A

"Option 1: ASHRAE Standard
55-10 OR, Option 2: IOS and
CEN Standards"



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197Q

What three components are part of monitoring-based commissioning (MBCx)?



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197A

Permanent energy monitoring systems, real-time energy analysis, and ongoing commissioning



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198Q

What tool is used to benchmark building performance for integrative design?



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198A

EPA's Target Finder



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199Q

What two simulations are
required for daylighting,
Option I simulation?



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199A

sDA and ASE



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200Q

What type of location must a
historic district project be
located in for it to be a high-
priority site?



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200A

on an infill location



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201Q
What type of water is
municipally supplied
reclaimed or recycled water?



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201A
Using EPA's WaterSense
Water Budget Tool



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202Q
What types of demand
response programmes are
acceptable?



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202A
Semi-automated and
automated (not manual)



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203Q

What types of equipment are not subject to the Fundamental Refrigerant Management requirements?



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203A

Small HVAC units (less than 0.5 lbs [225 grammes] of refrigerant), standard refrigerators, small water coolers



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204Q

What types of outdoor spaces qualify as open space?



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204A

" - paving or turf that accommodates outdoor social activities, -- paving or turf that encourages physical activity, -year-round garden space, community gardens, preserved or created habitat



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205Q

What types of rooms would require negative air pressure, self-closing doors, deck-to-deck partitions, or hard-lid ceilings for interior cross-contamination prevention?



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205A

Garages, housekeeping and laundry areas, and copying and printing rooms



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206Q

What water-related building aspects must be considered for the integrative process?



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206A

Interior water demand
Outdoor water demand
Process water demand
Supply sources



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207Q

When an organisation or agency is providing space for shared use by students, what should be included?



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207A

Auditorium, gym, cafeteria, one or more classrooms, swimming pool, or playing field



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208Q

When can a vegetated roof count towards vegetation for open space?



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208A

When a project has a density of 1.5 FAR



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209Q

When can certification be
revoked?



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209A

Certification may be revoked
from any LEED project upon
gaining knowledge of non-
compliance with any
applicable MPR. If such a
circumstance occurs,
registration and/or
certification fees will not
be refunded.



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210Q

When can planned stops and
stations count towards access
to quality transit?



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210A

when they are sited, funded,
and under construction by
the date of the certificate of
occupancy and are complete
within 24 months of that
date.



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211Q

When can wetlands count as open space?



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211A

Wetlands or naturally designed ponds may count as open space if the side slope gradients average 1:4 (vertical to horizontal) or less and are vegetated.



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212Q

When conducting a whole-building life-cycle assessment, what are the min/max reductions of the impact categories?



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212A

A minimum of 10% in at least 3 impact categories (of which one must be GHG emissions), and do not exceed any impact category by more than 5% compared to a baseline building.



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213Q

When do the daylight
simulations for Option 2
Simulation: Illuminance
calculations occur?



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213A

30 inches (750 mm) above
the finished floor for the
default workplane height



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214Q

When is a 40% reduction
from the base ratios of the
ITE Transportation Planning
Handbook required for a
reduced parking footprint?



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214A

When a project earns EITHER
LT Credit Surrounding Density
and Diverse Uses or LT Credit
Access to Quality Transit



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215Q

**When managing a percentile
of rainfall events, what
minimum amount of
historical rainfall data is
required?**



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215A

10 years' worth



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216Q

**When managing rainwater
using natural land cover
conditions, what must be
done?**



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**Manage on site the annual
increase in runoff volume
from the natural land cover
condition to the post-
developed condition.**



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