

LEED AP Building Design + Construction (LEED AP BD+C)

1. Which of the following are control measures recommended by the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) for the Indoor Environmental Quality Credit, Construction Indoor Air Quality Management Plan?

A. Source control

B. Material selection

C. Contractor training

D. Pre-construction meeting

Answer(s): A

2. A school wants to incorporate natural daylighting in classrooms on all sides of the building. What can the project design team explain to the school district about how this strategy will affect the operational energy cost?

A. Heat gain will reduce the air conditioning load

B. Having the lights off reduces the electricity use

C. Reduction in lighting fixture use reduces re-lamping

D. There would be passive solar heating benefits to all of the classrooms

Answer(s): B

3. Which of the following is required in determining the baseline for Water Efficiency Prerequisite, Indoor Water Use Reduction?

A. Duration of use

B. Building floor area

C. Make and model of fixtures

D. Proposed design fixture flow rates

Answer(s): C

4. A new Science Education Center is pursuing LEED certification. Which of the following strategies could be submitted to earn an Innovation in Design credit?

A. The selection of energy-efficient LED fixtures for all of the building's lighting

B. The installation of an air-purifying facade material on the front entrance of the building

C. The integration of rainwater management strategies to achieve a Regional Priority Credit

D. The implementation of a comprehensive metering strategy to measure three individual energy end uses

Answer(s): B

5. A building owner in an arid climate is trying to design an outdoor lunch area for the tenants. Which landscaping strategy is important to employ in order to reduce water demand?

A. Large maple trees for shading

B. Xeriscaping landscape beds

C. Turf grass area for picnic benches

D. Tropical flowers next to park benches

Answer(s): B

6. Which of the following is required for a cooling tower or evaporative condenser in Water Efficiency Prerequisite, Indoor Water Use Reduction?

A. Alkalinity testing and ENERGY STAR rating

B. Non potable water sources and bacteria testing

C. Water treatment calculations and system performance narrative

D. Makeup water meters, conductivity controllers and overflow alarms

Answer(s): D

7. A project's total site area is 240,000 ft² (22 297 m²) and the building footprint is 40,000 ft² (3 716 m²). How much outdoor space and vegetated space must it provide to earn Sustainable Sites Credit, Open Space?

A. 60,000 ft² (5 574 m²) of outdoor space of which 15,000 ft² (1 394 m²) must be vegetated

B. 60,000 ft² (5 574 m²) of outdoor space of which 50,000 ft² (4 645 m²) must be vegetated

C. 72,000 ft² (6 689 m²) of outdoor space of which 18,000 ft² (1 672 m²) must be vegetated

D. 72,000 ft² (6 689 m²) of outdoor space of which 60,000 ft² (5 574 m²) must be vegetated

Answer(s): C

8. The owner has stated a desire to provide a variety of non-automobile commuting options for the future occupants.

A. Location and Transportation Credit, Reduced Parking Footprint and Location and Transportation Credit, Access to Quality Transit

B. Location and Transportation Credit, Surrounding Density and Diverse Uses and Sustainable Sites Credit, Open Space

C. Location and Transportation Credit, Access to Quality Transit and Location and Transportation Credit, Sensitive Land Protection

D. Sustainable Sites Credit, Heat Island Reduction and Location and Transportation Credit, Bicycle Facilities

Answer(s): A

9. Which rating system is being used if all of the credits below have been submitted towards certification?

A. Building Design and Construction: Schools

B. Building Design and Construction: Healthcare

C. Building Design and Construction: Hospitality

D. Building Design and Construction: Data Centers

Answer(s): C

10. The Required Breathing Zone Outdoor Airflow V_{bz} for a new banking facility is 0.120 CFM/ft² (0.6 L/s/m²).

A. 0.144 CFM/ft² (0.73 L/s/m²)

B. 0.156 CFM/ft² (0.79 L/s/m²)

C. 0.168 CFM/ft² (0.85 L/s/m²)

D. 0.30 CFM/ft² (1.5 L/s/m²)

Answer(s): A

11. A project team compares a life-cycle assessment (LCA) model to a baseline design to determine the reductions in six impact categories. One impact category exceeds the baseline by 7%. Which alternative analyses should the team run to check different impact measurements?

A. Change the orientation of the design case building

B. Optimize the slab depth of the design case building

C. Decrease the gross floor area of the baseline building

D. Increase the wall mass and types of windows in the baseline building

Answer(s): B

12. What is a benefit of including the public in a charrette for a new school before the pre-design phase?

A. Neighbors can plan for future construction

B. It will help streamline the permitting process

C. Potential partnerships with the community can be revealed

D. The owner can determine financial strategies based on the public's input

Answer(s): C

13. A project team wants to educate the facility manager on the installed building systems to improve Indoor Environmental Quality. They want the facility manager to maintain the systems so that they will continue to function as intended. Which of the following should be provided to the facility manager?

A. Vendor invoices for mechanical equipment

B. Preventive maintenance plan for the building

C. As-built drawings and copies of material submittals

D. A copy of the credit documentation for the credits that were approved by Green Business Certification Inc. (GBCI)

Answer(s): B

14. A developer is considering an urban infill site for a new commercial building rather than a rural greenfield site adjacent to a stream. Which of the following is an economic advantage of the infill site?

A. Protects greenfields and farmland

B. Preserves habitat and natural resources

C. Reduces need for new utility infrastructure

D. Reduces potential damage to an existing stream

Answer(s): C

15. A project team seeking certification for a new school is attempting to achieve Materials and Resources Credit, Construction and Demolition Waste Management, Option 2. Reduction of Total Waste Material. What strategy can be taken to meet the requirements of this credit?

A. Track waste materials per occupant

B. Track waste materials used on site

C. Document total waste by project cost

D. Document total waste per building floor area

Answer(s): D

16. Which individual occupant lighting control meets the requirements of Indoor Environmental Quality Credit, Interior Lighting?

A. Two Level (on, off)

B. Three Level (on, 25%, off)

C. Three Level (on, 50%, off)

D. Three Level (on, 75%, off)

Answer(s): B

17. Which of the following strategies can be used to achieve a point in Innovation Credit, Innovation, Option 1.

A. Achieve 60% reduction in outdoor water use

B. Implement an employee engagement and education plan

C. Use on site renewable energy for 8% of the total energy needs

D. Purchase green power for 100% of the total project energy use

Answer(s): B

18. Under Energy and Atmosphere Prerequisite, Fundamental Commissioning and Verification, a current facilities requirements and operations and maintenance plan must contain which information necessary to operate the building efficiently?

A. Any changes in schedules or setpoints for different seasons, days of the week, and times of day

B. Only changes in schedules or setpoints for peak usages during seasons, days of the week, and times of day

C. Any changes in schedules during peak times, or for different seasons, peak-usage days of the week, and times of day

D. Any changes in schedules or setpoints focusing on only the hottest and coldest periods of the seasons, peak-use days of the week, and times of day

Answer(s): A

19. In the energy modeling of a building envelope, which of the following U-values should be considered as an assembly U-value?

A. Wall

B. Steel

C. Glass

D. Concrete

Answer(s): A

20. Which of the following characteristics are a requirement of a compliant water meter?

A. Must be digital

B. Must be permanently installed

C. Must transmit data to a remote location

D. Must be capable of storing data for 36 months

Answer(s): B
