Integrative Design Credits

ID Prerequisite 1: Integrative Project Planning & Design
Required

Intent

Maximize opportunities for integrative, cost-effective adoption of green design and construction strategies, emphasizing human health as a fundamental evaluative criterion for building design, construction, and operational strategies. Utilize innovative approaches and techniques for green design and construction.

Requirements

Use cross discipline design and decision making, beginning in the programming and pre-design phase. At a minimum, ensure the following process:

- **Owner's Project Requirements Document.** Prepare an Owner's Project Requirements document for the project. Prepare a Health Mission Statement and incorporate it in the Owner's Project Requirements. The health mission statement should address "triple bottom line" values - economic, environmental, and social, and include goals to safeguard the health of building occupants, the local community, and the global environment while creating a high performance healing environment for the building's patients, caregivers, and staff.
- **Preliminary Rating Goals**. As early as practicable and preferably before Schematic Design, conduct a Preliminary LEED meeting including a minimum of four key project team members, in addition to the Owner or Owner's representative. As part of the meeting, create a LEED® action plan that, at a minimum, includes the following:
    - The targeted LEED certification level (Certified, Silver, Gold, or Platinum);
    - The LEED credits that have been selected to meet the targeted certification level; and
    - The primary responsible party selected to meet the LEED requirements for each prerequisite and selected credit.

Integrative Project Team. Assemble and involve a minimum of four of the following project team members from the list below, in addition to the Owner or Owner's representative, and as many as feasible.

- Owner's capital budget manager
- Architect or building designer
- Mechanical Engineer
- Electrical Engineer
- Structural engineer

- Energy Modeler
- Equipment Planner
- Acoustical Consultant
- Telecommunications Designer
- Controls Designer
- Building science or performance testing agents
- Green building or sustainable design consultant
- Facility Green Teams
- Physician and nursing teams
- Facility managers
- Environmental Services staff
- Functional and space programmers
- Interior designer
- Lighting consultant/designer
- Commissioning agent
- Community representatives
- Civil engineering
- Landscape architecture
- Habitat restoration,
- Land planning
- Construction Management or General Contractor
- Life cycle cost analysis; construction cost estimating;
- Other disciplines appropriate to the specific project type.

- **Design Charette** As early as practicable and preferably before schematic design, conduct at least one full-day integrative design charette with the Integrative Project Team as defined above. The goal of the charette shall be to optimize the integration of green strategies across all aspects of the building design, drawing on the expertise of all participants.

SS Credit 9.1: Connection to the Natural World: Places of Respite
1 Point

Intent

To provide outdoor places of respite on the healthcare campus to connect patients, staff, and visitors to the health benefits of the natural environment.

Requirements

- Provide patient, and visitor accessible outdoor places of respite equal to 5% of the net usable program area of the building or project.
- Provide additional dedicated outdoor place(s) of respite for staff equal to 2% of the net usable program area of the building or project.

- Qualifying areas must meet the following requirements:
    - Accessible from within the building or located within 200 feet of a building entrance or access point.
    - Located where no medical intervention or direct medical care is delivered.
    - Open to fresh air, the sky and the natural elements, including seasonal weather.
    - Provide options for shade or indirect sun at a minimum of 1 seating space/ 200 sf of garden area with 1 wheelchair space per 5 seating spaces. Examples of qualifying shade structures include trellises and tree-shaded wheelchair accessible seating areas.
    - Non-smoking areas in compliance with EQ Prerequisite 2.
- In addition, , qualifying areas must comply with the following:
    - Interior atria, greenhouses, solaria or conditioned spaces may be used to meet up to 30% of the required area if 90% of each qualifying space's square footage achieves a direct line of sight to unobstructed views of nature. If views of nature are exterior to the space, calculate lines of sight between 30 inches and 90 inches above the finish floor.
    - Horticulture therapy, other specific clinical special use gardens (Cancer Healing Garden, for example), unavailable to all building occupants, may be used to meet up to 50% of the required area.
    - Universal access natural trails with places to pause, available to visitors, staff and/or patients may be used to meet up to 30% of the required area, provided trail access is available within 200 feet of a building entrance.
    - Exterior places of respite shall comply with the 2010 Guidelines for Design and Construction of Health Care Facilities, section 1.2-6 Design Considerations and Requirements. Existing exterior places of respite on the hospital campus may

be used to comply with this credit, provided that the location of the existing spaces meets the credit requirements.

Note - For the purposes of this credit, “net usable program area” shall be defined as the sum of all interior areas in the project available to house the project’s Program. Areas housing building equipment, vertical circulation, and structure shall be excluded.

EQ Credit 2: Acoustic Environment

1-2 Points

Intent

To provide building occupants with an indoor healing environment free of intrusive or disruptive levels of sound.

Requirements

Follow the intent of the Health Insurance Portability and Accountability Act (HIPAA).

Design the facility to meet or exceed the following sound and vibration criteria in the 2010 Guidelines for the Design and Construction of Health Care Facilities and in the Sound and Vibration for Health Care Facilities January 1, 2010 Version 2.0, including New Guidelines for NICUs (SV Guidelines).

OPTION 1 (1 point)

Sound Isolation

Design sound isolation to achieve speech privacy, acoustic comfort, and minimal annoyance from noise-producing sources. Adequate sound isolation between healthcare facility spaces is achieved when the sound levels at both the source and receiver locations, the background sound at the receiver locations, and the occupant's acoustical privacy and comfort needs are considered.

- Design the facility to meet the 2010 FGI Guidelines Design Criteria for Minimum Sound Isolation Performance between Enclosed Rooms and the Design Criteria for Speech Privacy for Enclosed Room and Open-Plan Spaces.
- Measure or calculate sound isolation values achieved in representative adjacencies as necessary to confirm compliance with criteria as identified in Sections 4.4 & 4.5 of the 2010 FGI Guidelines.

Room Noise

Consider background sound levels generated by all building mechanical-electrical-plumbing systems, air distribution systems and other facility noise sources.

- Design the facility to meet the 2010 FGI Guidelines Minimum-Maximum Design Criteria for Noise in Interior Spaces.
- Measure or calculate sound levels in representative rooms of each type as necessary to confirm compliance with criteria in the ASHRAE 2003 Handbook, Chapter 47, Sound and Vibration Control, Table 34, using a sound level meter that conforms to ANSI S1.4 for type 1 precision sound measurement instrumentation.

OPTION 2 (2 points)

- Achieve Option 1 and

Acoustical Finishes

Specify materials, products systems installation details and other design features to meet the 2010 FGI Guidelines criteria for sound absorption.

- Calculate the room average sound absorption coefficient

  OR

- Test representative unoccupied rooms of each type in the building as necessary to confirm compliance with criteria.

Site Exterior Noise

- Minimize the impact of site exterior noise on building occupants and on the surrounding community: for all exterior noise sources, including road traffic, aircraft flyovers, railroads, on-site heliports, emergency power generators during maintenance testing, outdoor mechanical and building services equipment, to comply with Section 1.4 Classification of Facility Produced Noise Exposure of the 2010 FGI Guidelines (see SV Guidelines).
- Measure and analyze data to determine the 2010 FGI Guidelines Exterior Site Noise Exposure Category (A, B, C, or D – Table 1.3-1: Categorization of hospital sites by exterior ambient sound - see SV Guidelines).
- Design the building envelope composite STC rating based on the 2010 FGI Guidelines for Categorization of Health Care Facility Sites by Exterior Ambient Sound. Show the acoustic basis of design analysis referenced to the contract documents.
- For Exterior Site Exposure Categories A,B,C or D, measure or calculate the exterior building envelope sound isolation performance using methods generally conforming to the current edition of ASTM E966 Standard Guide for Field Measurements of Airborne Sound Insulation of Building Façades and Façade Elements. Conduct tests in representative exterior rooms to confirm compliance with the provisions of Table 1.3-1. Testing of façade noise reduction of buildings in Category A sites is not required.

EQ Credit 3.1: Environmental Quality Management Plan (EQMP): During Construction
1 Point

Intent

To reduce air quality problems, noise and vibration resulting from the construction and/or renovation process in order to help sustain the comfort and well-being of construction workers and building occupants.

Requirements

Develop and implement an Environmental Quality Management Plan (EQMP) for the construction and pre-occupancy phases of the building. Minimize air and noise pollution from during the construction process as prescribed below.
For renovations, additions adjacent to occupied facilities or phased occupancy in new construction:

- Follow the 2010 Guidelines for Design and Construction of Health Care Facilities and the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) to establish an integrated Infection Control Team comprised of the Owner, Designer and Contractor to evaluate infection control risk and document the required precautions in a project-specific plan.
- Utilize the Infection Control Risk Assessment (ICRA) standard published by the American Society of Healthcare Engineering (ASHE) and the U.S. Centers for Disease Control and Prevention (CDC) as a guideline for construction activities to assess risk and to select mitigation procedures.

For all projects:

- Develop and implement a moisture control plan to address measures that will maintain dry conditions to protect stored on-site and installed absorptive materials from moisture damage. Immediately remove from site and properly dispose of any materials susceptible to microbial growth and replace with new, undamaged materials. Also include strategies for protecting the building from moisture intrusion and occupant exposures to dangerous mold spores.

- If permanently installed air handlers are used during construction:

    - Filtration media with a Minimum Efficiency Reporting Value (MERV) of 8 must be used at each return air grille, as determined by ASHRAE 52.2-1999 (with errata but without addenda*). .

- Active outdoor air intakes and return air grilles with filtration media must be protected.
- Temporary filter media must be evaluated and replaced as necessary.
- All filtration media must be replaced immediately prior to occupancy.

- VOC Absorption – Schedule construction procedures to minimize exposure of absorbent materials to VOC (volatile organic compound) emissions. Complete "wet" construction procedures such as painting and sealing before storing or installing "dry" absorbent materials such as carpet or ceiling tiles. These materials accumulate pollutants and release them over time. Store fuels, solvents and other sources of VOCs separately from absorbent materials.

- Tobacco Products – Prohibit the use of tobacco products inside the building and within 50 feet (or greater if local jurisdiction requires it) of the building entrance during construction.

- Noise and Vibration Exposure to Occupants and Construction Crews – Develop a plan based upon the British Standard BS 5228 to reduce noise emissions and vibrations from construction equipment and other non-road engines by specifying low noise emission design or the lowest decibel level available that meets performance requirements in the British Standard to insure it is within acceptable limits to the occupants. Construction crews must wear ear protection in areas where sounds levels exceed 85 dB for extended period of times.