

SECTION 018113.16

WELLNESS DESIGN REQUIREMENTS – WELL v1.0 NEW & EXISTING BUILDING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes general requirements and procedures for compliance with certain IWBI WELL preconditions and features needed for Project to obtain WELL Silver certification based on IWBI's "WELL v1.0 New & Existing Building."
 - 1. Other WELL preconditions and features needed to obtain WELL certification depend on product selections and may not be specifically identified as WELL requirements. Compliance with requirements needed to obtain WELL preconditions and features may be used as one criterion to evaluate substitution requests and comparable product requests.
 - 2. A copy of WELL Project checklist is attached to the end of this Section for information only.
 - a. Some WELL preconditions and features needed to obtain the indicated WELL certification depend on Architect's design and other aspects of Project that are not part of the Work of the Contract.

1.2 DEFINITIONS

- A. WELL: IWBI's "WELL v1.0 New & Existing Building."
- B. Definitions that are a part of on "WELL v1.0 New & Existing Building" apply to this Section.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.4 ADMINISTRATIVE REQUIREMENTS

- A. Respond to questions and requests from Architect and IWBI about WELL features that are the responsibility of Contractor, that depend on product selection or product qualities, or that depend on Contractor's procedures until IWBI has made its determination on Project's WELL certification application. Document responses as informational submittals.
- B. Submit documentation to GBCI and respond to questions and requests from GBCI about WELL features that are the responsibility of Contractor, that depend on product selection or product qualities, or that depend on Contractor's procedures until GBCI has made its determination on Project's WELL certification application.

1. Document correspondence with GBCI as informational submittals.

1.5 GENERAL INFORMATION

- A. Introduction- These guideline specifications are designed to be modified as needed for use in the development and major renovation of any existing and Building office space. This document sections provide an overview of wellness design requirements that might be appropriate to WELL projects. When these sections are used in an actual project specification, specific requirements must be inserted throughout the construction documents to ensure compliance with the sustainable building intent.
- B. Summary: Sources of WELL Guidance- General information about WELL
The WELL Building Standard® is an evidence-based system for measuring, certifying and monitoring the performance of building features that impact health and well-being. WELL is administered by the International WELL Building Institute™ (IWBI), a public benefit corporation whose mission is to improve human health and well-being through the built environment. WELL is third-party certified by Green Business Certification Inc. (GBCI), which administers LEED certification and LEED professional credentialing. WELL is the predominant framework for health and wellness implemented by a sustainable design and performance for any type of building in the World. WELL Certification is achieved when projects demonstrate all Preconditions. Higher certification levels above Silver can be achieved by pursuing Optimization Features.

1.6 DOCUMENTATION REQUIREMENTS

- A. WELL Certification requires documentation as well as a series of onsite performance tests known as Performance Verification Audit prior to final certification review. Documentation includes:
 1. Annotated project documents;
 2. Drawings;
 3. Letters of Assurance from the project team.

Projects must submit all required documentation before Performance Verification can begin.
- B. Performance Verification- Consists of a site visit, during which the WELL Assessor completes visual inspections to verify documentation, and performance tests to evaluate air and water quality, noise, light and temperature levels, and other environmental parameters applicable to WELL requirements.
- C. Certification- WELL Certification recognizes that the project has successfully documented compliance with all features and passed Performance Verification.
- D. Recertification and Documentation Submission- Recertification ensures that the project maintains the same high level of design, maintenance, and operations over time.

E. All the WELL Optimization are not addressed in the product requirements part of Section 01 81 13 because the achievement of those credits is determined by choices made in site- selection or design, and it is not affected by product choices. Some of these are addressed in other parts of the specification, others are not. The designer will need to ensure that all Preconditions have been addressed. A list of required preconditions is provided here:

1. Scope of Work - WELL New & Existing Building Preconditions

a. Concept: Air

- 1) 01- Air Quality Standards
- 2) 02- Smoking Ban
- 3) 03- Ventilation Effectiveness
- 4) 04- VOC Reduction
- 5) 05- Air Filtration
- 6) 06- Microbe and Mold Control
- 7) 07- Construction Pollution Management
- 8) 08- Healthy Entrance
- 9) 09- Cleaning Protocol
- 10) 10- Pesticide Management
- 11) 11- Fundamental material safety
- 12) 12- Moisture Management
- 13) 15- Increased Ventilation
- 14) 17- Direct Source Ventilation
- 15) 18- Air Quality Monitoring and Feedback
- 16) 20- Outdoor Air Systems
- 17) 22- Pest Control
- 18) 26- Enhanced Material Safety
- 19) 28- Cleanable Environment
- 20) 29 – Cleaning Equipment

b. Concept: Water

- 1) 30- Fundamental water quality
- 2) 31- Inorganic contaminants
- 3) 32- Organic contaminants
- 4) 33- Agricultural contaminants
- 5) 34- Public water additives
- 6) 35—Periodic Water Quality Testing
- 7) 36- Water Treatment
- 8) 37- Drinking Water Promotion

- c. Concept: Nourishment
 - 1) 38- Fruits and vegetables
 - 2) 39- Processed food
 - 3) 40- Food allergies
 - 4) 41- Hand washing
 - 5) 42- Food contamination
 - 6) 43- Artificial ingredients
 - 7) 44- Nutritional information
 - 8) 45- Food advertising
 - 9) 48- Special Diets
 - 10) 50- Food Storage
 - 11) 52- Mindful Eating

- d. Concept: Light
 - 1) 53- Visual lighting design
 - 2) 54- Circadian lighting design
 - 3) 55- Electric light glare control
 - 4) 56- Solar glare control
 - 5) 57- Low-Glare Workstation Design
 - 6) 58- Color Quality
 - 7) 59-Surface Design
 - 8) 61- Right to Light
 - 9) 62- Daylight Modelling
 - 10) 63- Daylight Fenestration

- e. Concept: Fitness
 - 1) 65- Activity incentive programs
 - 2) 68- Physical Activity Spaces
 - 3) 69- Active Transportation Support
 - 4) 70- Fitness Equipment
 - 5) 71- Active Furnishings

- f. Concept: Comfort
 - 1) 72- ADA accessible design standards
 - 2) 73- Ergonomics: visual and physical
 - 3) 75- Internally generated noise
 - 4) 74- Exterior Noise Intrusion
 - 5) 75- Internally Generated Noise
 - 6) 76- Thermal Comfort
 - 7) 77- Olfactory Comfort
 - 8) 78- Reverberation Time
 - 9) 79- Sound Masking
 - 10) 80- Sound Reducing Surfaces
 - 11) 81- Sound Barriers
 - 12) 82- Individual Thermal Comfort

- g. Concept: Mind
 - 1) 84- Health and wellness awareness
 - 2) 85- Integrative design
 - 3) 86- Post-occupancy surveys
 - 4) 87- Beauty and design I
 - 5) 88- Biophilia I – qualitative
 - 6) 89- Adaptable Spaces
 - 7) 92- Building Health Policy
 - 8) 95- Stress Addiction Treatment
 - 9) 96- Altruism
 - 10) 98- Organizational Transparency
 - 11) 99- Beauty and Design II
 - 12) 100- Biophilia II - Quantitative

1.7 APPLICABLE STANDARDS AND GUIDELINES

A. General Requirements

1. All work under this contract shall be done in strict accordance with all applicable Federal, State, and Local regulations, standards and codes governing for green building and sustainable design and construction, such as CALGreen.
2. The most recent edition of any relevant regulation, standard, document or code shall be in effect. Where conflict among the requirements or with these specifications exists the most stringent requirements shall be utilized.

1.8 EXECUTION

A. Integrative Design

1. All work under this contract shall be done in strict accordance with all applicable Federal, State, and Local regulations, standards and codes governing for green building and sustainable design and construction, such as CALGreen.
2. The most recent edition of any relevant regulation, standard, document or code shall be in effect where conflict among the requirements or with these specifications, the most stringent requirement shall be utilized.

B. Stakeholders charrette

Prior to the design and programming of the project, all stakeholders, including at a minimum the owner, architects, engineers and facilities management team, meet to: Perform a values assessment and alignment exercise within the team to inform any project goals as well as strategies to meet occupant expectations.

1. Discuss the needs of the occupants, focusing on wellness.
2. Set future meetings to stay focused on the project goals and to engage future stakeholders who join the process after the initial meeting, such as contractors and sub-contractors.

C. Development plan

A written document detailing the building's health-oriented mission is produced with the consent of All stakeholders, incorporating all of the following:

1. Building site selection, taking into account public transportation.
2. WELL Concepts of air, water, nourishment, light, fitness, comfort and mind.
3. Plans for implementation of the above analyses and decisions.
4. Operations and maintenance plans for facility managers and building policy requirements related to wellness.

D. Stakeholders orientation

Upon construction completion, the designers, owners, managers and facilities staff must:

1. Tour the building as a group.
2. Discuss how building operations will support adherence to the WELL Building Standard.

1.9 DESIGN TEAM REQUIREMENTS

A. Follow the following conditions for particulate matter and inorganic gasses:

1. Carbon monoxide less than 9 ppm.
2. PM_{2.5} less than 15 µg/m³.
3. PM₁₀ less than 50 µg/m³.
4. Ozone less than 51 ppb.

B. The following conditions shall meet in projects with regularly occupied spaces at or below grade:

1. Radon less than 4 pCi/L in the lowest occupied level of the project.

C. Design the ventilation system as one of the following requirements is met for all spaces:

1. Ventilation rates comply with all requirements set in ASHRAE 62.1-2013 (Ventilation Rate Procedure or IAQ Procedure).
2. Project complies with all requirements set in any procedure in ASHRAE 62.1-2013 (including the Natural Ventilation Procedure) and demonstrate that ambient air quality within 1 mi of the building is compliant with either the U.S. EPA's NAAQS or passes the Air Quality Standards feature in the WELL Building Standard for at least 95% of all hours in the previous year.

D. Design demand controlled ventilation spaces as follow:

For all spaces 500 ft² or larger with an actual or expected occupant density greater than 25 people per 1,000 ft², one of the following requirements is met:

1. A demand controlled ventilation system regulates the ventilation rate of outdoor air to keep carbon dioxide levels in the space below 800 ppm.
2. Projects that have met the Operable windows feature demonstrate that natural

ventilation is sufficient to keep carbon dioxide levels below 800 ppm at intended occupancies.

- E. Encourage filter accommodation, when recirculated air is used.
The following requirements shall meet the ventilation assemblies in the main air ducts for recirculated air:
 - 1. Rack space and fan capacity is in place for future carbon filters.
 - 2. The system is able to accommodate additional filters.

- F. Promote particle filtration. One of the following requirements is met:
 - 1. MERV 13 (or higher) media filters are used in the ventilation system to filter outdoor air.
 - 2. Project demonstrates that for 95% of all hours in a calendar year, ambient outdoor PM₁₀ and PM_{2.5} levels measured within 1 mi of the building are below the limits set in the WELL Air Quality Standards Feature.

- G. In buildings that rely on a mechanical system for cooling, one of the following requirements is met:
 - 1. Ultraviolet lamps (using a wavelength of 254 nm so as not to generate ozone) are employed on the cooling coils and drain pans of the mechanical system supplies. Irradiance reaching the cooling coil and drain pan, including the plenum corners, is modeled.

- H. The project contains features beauty and mindful design intended for all of the following:
 - 1. Human delight.
 - 2. Celebration of culture.
 - 3. Celebration of spirit.
 - 4. Celebration of place.
 - 5. Meaningful integration of public art.

- I. Design permanent entryway walk-off systems to capture particulates from occupant shoes at all regularly used entrances to the project.
One of the following is installed and is maintained on a weekly basis:
 - 1. Permanent entryway system comprised of grilles, grates or slots, which allow for easy cleaning underneath, at least the width of the entrance and 10 ft. long in the primary direction of travel.
 - 2. Rollout mats, at least the width of the entrance and 10 ft. long in the primary direction of
 - a. travel.
 - 3. Material manufactured as an entryway walk-off system, at least the width of the entrance and 10 ft. long in the primary direction of travel.

- J. Project entryway with an air seal.
One of the following is in place to slow the movement of air from outdoors to indoors within mechanically ventilated main building entrances:
1. Building entry vestibule with two normally-closed doorways.
 2. Revolving entrance doors.
 3. At least 3 normally-shut doors that separate occupied space from the outdoors. For example, a space on the fifth-floor could be separated by the exterior building doors, the first-floor elevator doors and the fifth-floor elevator doors. This option is applicable only for buildings whose entrance lobby is not a regularly occupied space.
 4. In areas where building vestibules and revolving entrance doors are not common architectural elements, the requirements of Part 2 (Entryway Seal) may be met by controlling building pressure according to the following requirements:
 - a. An indoor pressure sensor must be installed in the building lobby and near any other entrance to the building from the outside. The pressure sensor must be capable of providing automatic readings on a frequency of at least one per hour.
 - b. The project team must specify the targeted building pressurization levels for these locations for when the building is in both cooling mode and heating mode. The pressure levels must keep outside air from entering the building (more than standard practice), allow occupants to open and close doors easily, and must not cause undue condensation or other moisture problems due to exfiltration through the building envelope. To document this alternative path, the project team must provide the following in the documentation application submission:
 - c. A narrative describing the targeted building pressurization levels for both cooling mode and heating mode.
 - d. A narrative (and other supporting documentation as necessary) demonstrating that the pressure levels keep outside air from entering the building (more than standard practice), allow occupants to open and close doors easily, and do not cause undue condensation or other moisture problems due to exfiltration through the building envelope.
 - e. Indoor pressure readings demonstrating one day of pressure sensor readings from a cooling period, and one day of pressure sensor readings from a heating period. The exhaust and supply sequences must be provided to demonstrate that the desired pressure readings will be achieved.
- K. Specify mercury-containing equipment and devices as restricted in accordance with the below guidelines:
1. Project does not specify or install new mercury containing thermometers, switches and electrical relays.
 2. Project develops a plan to upgrade current mercury-containing lamps to low-mercury or mercury free lamp technology per limits specified in Appendix C, Table A5.

3. Illuminated exit signs only use Light-Emitting Diode (LED) or Light-Emitting Capacitor (LEC) lamps.
 4. No mercury vapor or probe-start metal halide high intensity discharge lamps are in use.
- L. All water being delivered to the project area except water not designated for human contact meets the following requirements:
1. Turbidity of the water sample is less than 0.3 NTU.
- M. All water being delivered to the project area except water not designated for human contact meets the following requirements:
1. Total coliforms (including E. coli) are not detected in the sample.
- N. All water being delivered to the project area for human consumption meets the following limits:
1. Lead less than 0.01 mg/L.
 2. Arsenic less than 0.01 mg/L.
 3. Antimony less than 0.006 mg/L.
 4. Mercury less than 0.002 mg/L.
 5. Nickel less than 0.012 mg/L.
 6. Copper less than 1.0 mg/L.
 7. Styrene less than 0.0005 mg/L.
 8. Benzene less than 0.001 mg/L.
 9. Ethylbenzene less than 0.3 mg/L.
 10. Polychlorinated biphenyls less than 0.0005 mg/L.
 11. Vinyl chloride less than 0.002 mg/L.
 12. Toluene less than 0.15 mg/L.
 13. Xylenes (total: m, p and o) less than 0.5 mg/L.
 14. Tetrachloroethylene less than 0.005 mg/L.
 15. Atrazine less than 0.001 mg/L.
 16. Simazine less than 0.002 mg/L.
 17. Glyphosate less than 0.70 mg/L.
 18. 2,4-Dichlorophenoxyacetic acid less than 0.07 mg/L.
 19. Nitrate less than 10 mg/L nitrogen.
 20. Total trihalomethanes less than 0.08 mg/L.
 21. Total haloacetic acids less than 0.06 mg/L.
 22. Fluoride less than 4.0 mg/L.
- O. All water being delivered to the project area for human consumption or showers/baths meets the following limits:
1. Residual chlorine less than 0.6 mg/L.
 2. Residual chloramine less than 4 mg/L.

P. Bathroom and kitchen sinks meet the following requirements:

1. Sink column of water is at least 25 cm [10 inches] in length.
2. The handwashing basin is at least 23 cm [9 inches] in width and length.

Q. Adequate light levels for broad variety of activities at workstations or desks:

1. The ambient lighting system is able to maintain an average light intensity of 215 lux [20 fc] or more, measured on the horizontal plane, 0.76 m [30 inches] above finished floor. The lights may be dimmed in the presence of daylight, but they are able to independently achieve these levels.
2. The ambient lighting system is zoned in independently controlled banks no larger than 46.5 m² [500 ft²] or 20% of open floor area of the room (whichever is larger).
3. If ambient light is below 300 lux [28 fc], task lights providing 300 to 500 lux [28 to 46 fc] at the work surface are available upon request.

R. Brightness Management Strategies:

Design spaces to maintain luminance balance in spaces, which takes into considerations at least two of the following:

1. Brightness contrasts between main rooms and ancillary spaces, such as corridors and stairwells, if present.
2. Brightness contrasts between task surfaces and immediately adjacent surfaces, including adjacent visual display terminal screens.
3. Brightness contrasts between task surfaces and remote, non-adjacent surfaces in the same room.
4. The way brightness is distributed across ceilings in a given room.

S. Melanopic light intensity for work areas:

At least one of the following requirements is met:

1. Light models or light calculations (which may incorporate daylight) show that at least 250
2. Equivalent melanopic lux is present at 75% or more of workstations, measured on the vertical plane facing forward, 4 ft. above finished floor (to simulate the view of the occupant). This light level is present for at least 4 hours per day for every day of the year.
3. For all workstations, electric lights (which may include task lighting) provide maintained illuminance on the vertical plane of equivalent melanopic lux, greater than or equal to the lux
4. Recommendations in the Vertical (Ev) Targets for the 25-65 category in Table B1 of IES-ANSI RP-1-12. For example, Reception Desks are provided with 150 equivalent melanopic lux from the electric lights.

T. Stimulate electric light glare control.

Lamps with the following luminance in regularly occupied spaces are shielded by the angles listed below or greater:

1. Less than 20,000 cd/m², including reflected sources: no shielding required.
2. 20,000 to 50,000 cd/m²: 15°.
3. 50,000 to 500,000 cd/m² : 20°.
4. 500,000 cd/m² and above: 30°.

U. Promote glare minimization

At workstations and desks, the following requirement is met:

1. Bare lamps and luminaire surfaces more than 53° above the center of view (degrees above horizontal) have luminances less than 8,000 cd/m².

V. Encourage solar glare control

1. In the windows:

At least one of the following is present for all glazing less than 7 ft. above the floor in regularly occupied spaces:

- a. Interior window shading or blinds that are controllable by the occupants or set to automatically
- b. Prevent glare.
- c. External shading systems that are set to prevent glare.
- d. Variable opacity glazing, such as electrochromic glass, which can reduce transmissivity by 90% or more.

2. Daylight Management:

At least one of the following is required for all glazing greater than 7 ft. above the floor in regularly occupied spaces:

- a. Interior window shading or blinds that are controllable by the occupants or set to automatically prevent glare.
- b. External shading systems that are set to prevent glare.
- c. Interior light shelves to reflect sunlight toward the ceiling.
- d. A film of micro-mirrors on the window that reflects sunlight toward the ceiling.
- e. Variable opacity glazing, such as electrochromic glass, which can reduce transmissivity by 90% or more.

W. Incorporate ADA accessible design standards for all spaces.

The following requirement is met:

1. Projects comply with current ADA Standards for Accessible Design.

X. Promote a sound pressure level to avoid exterior noise intrusion

Each regularly occupied space meets the following sound pressure level as measured when the space and adjacent spaces are unoccupied, but within 1 hour of normal business hours:

1. Average sound pressure level from outside noise intrusion does not exceed 50

dBa.

- Y. Create a mechanical ventilated environment following the standard for thermal comfort. All spaces in mechanically-ventilated projects meet the design, operating and performance criteria:
 - 1. ASHRAE Standard 55-2013 Section 5.3, Standard Comfort Zone Compliance.
- Z. Follow the following standard for all naturally-ventilated spaces:
 - 1. ASHRAE Standard 55-2013 Section 5.4, Adaptive Comfort Model.

1.10 OWNER REQUIREMENTS:

- A. Prohibit Indoor smoking and provide a building policy or local code that reflects the following:
 - 1. Smoking and the use of e-cigarettes is prohibited inside the building.
- B. Follow the following instructions for outdoor smoking:
Provide signage to indicate smoking ban:
 - 1. Within 25 ft. (or the maximum extent allowable by local codes) of all
 - a. entrances, operable windows and building air intakes.
 - 2. Smoking ban on all decks, patios, balconies, rooftops and other regularly occupied exterior building spaces.
 - 3. The hazards of smoking, in all areas beyond 7.5m of the building entrances (if smoking is permitted in this areas). These signs are to be placed along all walkways with a distance of not more than 100ft between signs.
- C. Sponsor an air filtration maintenance.
To verify that the filtration system continues to operate as designed, projects must annually provide IWBI with:
 - 1. Records of air filtration maintenance, including evidence that filters have been properly maintained as per the manufacturer's recommendations.
- D. Support cooling coil mold reduction.
In buildings that rely on a mechanical system for cooling, one of the following requirements is met:
 - 1. Ultraviolet lamps (using a wavelength of 254 nm so as not to generate ozone) are employed on the cooling coils and drain pans of the mechanical system supplies.
 - 2. Irradiance reaching the cooling coil and drain pan, including the plenum corners, is modeled.

3. Building policy states that all cooling coils are inspected on a quarterly basis for mold growth and cleaned if necessary. Dated photos demonstrating adherence are provided to the IWBI on an annual basis.
- E. Include mold inspections, when the following are present:
1. Signs of discoloration and mold on ceilings, walls or floors.
 2. Signs of water damage or pooling.
- F. Incorporate a sustainable pesticide management plan to follow all pesticides and herbicides used on plants:
1. Pesticide and herbicide use is minimized by creating a use plan based on Chapter 3 of the San Francisco Environment Code Integrated Pest Management (IPM) program.
 2. Only pesticides with a hazard tier ranking of 3 (least hazardous) as per The City of San Francisco Department of the Environment's (SFE) Reduced-Risk Pesticide List are used.
- G. Accomplish exterior liquid water and moisture.
A point-by-point narrative describes how liquid water from outside the building is addressed, responding to the nature and intensity of wetting based on the project's site and climate, and includes the following leading concerns:
1. Site drainage, including the impact of any site irrigation.
 2. The local water table.
 3. Building penetrations (especially windows and plumbing/electrical/mechanical penetrations).
 4. Porous building materials connected to exterior sources of liquid water.
- H. Manage interior liquid water and mold.
A point-by-point narrative describes how liquid water from interior sources is addressed, including these leading concerns:
1. Plumbing leaks.
 2. "Hard-piped" plumbing appliances (appliances such as clothes washers exposed to building water
 3. Pressure even when not in use).
 4. Porous building materials connected to interior sources of liquid water.
 5. New building materials with "built-in" high moisture content or building materials wetted during construction but now on the inside of the building.
- I. Administrate building and systems condensation.
A point-by-point narrative describes how condensation is addressed, including these leading concerns:
1. High interior relative humidity levels, particularly in susceptible areas like bath and laundry rooms and below-grade spaces.

2. Air leakage which could wet either exposed interior materials or interstitially “hidden” materials.
 3. Cooler surfaces, such as basement or slab-on-grade floors, or closets/cabinets on exterior walls.
 4. Oversized air conditioning units.
- J. Material selection and protection.
A point-by-point narrative describes how moisture-tolerant materials have been selected and/or moisture sensitive materials (MSP) are being protected, considering these leading concerns:
1. Exposed entryways and glazing.
 2. Porous cladding materials.
 3. Finished floors in potentially damp or wet rooms such as basements, bathrooms and kitchens.
 4. Interior sheathing in damp or wet rooms.
 5. Sealing and storing of absorptive materials during construction.
- K. Meet the following conditions when foods, beverages, snacks and meals are sold or distributed- on a daily basis- on the premises by (or under contract with) the project owner:
1. No beverage with more than 30 g of sugar per container is sold or distributed through catering services, vending machines or pantries. Bulk containers of 1.9 L (2 quart) or larger are exempt from this requirement.
 2. In beverage vending machines and on food service menus, at least 50% of slots or listings are products that have 15 g of sugar or less per 240 mL [8 oz.] serving.
 3. No individually sold, single-serving, non-beverage food item contains more than 30 g of sugar.
 4. In any foods where a grain flour is the primary ingredient by weight, a whole grain must be the primary ingredient.
 5. Do not contain partially-hydrogenated oil.
- L. Clearly indicate if the food contains the following allergens:
1. Peanuts.
 2. Fish.
 3. Shellfish.
 4. Soy.
 5. Milk and dairy products.
 6. Egg.
 7. Wheat.
 8. Tree nuts.
 9. Gluten, in compliance with the definitions and restrictions set forth by the FDA in 21 C.F.R. § 101.91.
- M. Promote health and wellness awareness through a WELL building standard guide.
Explanatory guides allow occupants to familiarize themselves with and benefit from

features that are incorporated into the project, as well as gain a broader understanding of health and wellness factors beyond the built environment. The following is provided:

1. A guide (available to all occupants) describing the WELL Building Standard features pursued by the project.

N. Sponsor a health and wellness library.

A digital and/or physical library of resources is provided that focuses on mental and physical health and meets the following criteria:

1. Contains at least one book title or one magazine subscription for every 20 occupants (no more than 20 titles are required).
2. Is prominently displayed and readily available to all occupants.

1.11 GENERAL CONTRACTOR REQUIREMENTS

A. Select Volatile Substances only if the following conditions are met:

1. Formaldehyde levels less than 27 ppb.
2. Total volatile organic compounds < 500 µg/m³.

B. Choose interior Paints and Coating as follow.

The VOC limits of newly applied paints and coatings meet one of the following requirements:

1. 100% of installed products meet California Air Resources Board (CARB) 2007, Suggested Control Measure (SCM) for Architectural Coatings, or South Coast Air Quality Management District (SCAQMD) Rule 1113, effective June 3, 2011 for VOC content.
2. At minimum 90%, by volume, meet the California Department of Public Health (CDPH) Standard Method v1.1-2010 for VOC emissions.
3. Applicable national VOC content regulations or conduct testing of VOC content in accordance with ASTM D2369-10; ISO 11890, part 1; ASTM D6886-03; or ISO 11890-2.

C. Elect interior Adhesives and Sealants as follow.

The VOC limits of newly applied adhesives and sealants meet one of the following requirements:

1. 100% of installed products meet South Coast Air Quality Management District (SCAQMD) Rule 1168, July 1 2005 for VOC content.
2. At minimum 90%, by volume, meet the California Department of Public Health (CDPH) Standard Method v1.1-2010 for VOC emissions.
3. Applicable national VOC content regulations or conduct testing of VOC content in accordance with ASTM D2369-10; ISO 11890, part 1; ASTM D6886-03; or ISO 11890-2.

- D. Select flooring systems only as follow.
The VOC content of all newly installed flooring must meet all limits set by the following, as applicable:
1. California Department of Public Health (CDPH) Standard Method v1.1-2010.
 2. Insulation
- E. Elect thermal and acoustic insulation in ceilings and walls as follow.
The VOC content of all newly installed thermal and acoustic insulation in ceilings and walls must meet all limits set by the following, as applicable:
1. California Department of Public Health (CDPH) Standard Method v1.1-2010.
- F. Select furniture and furnishings only as follow.
The VOC content of at least 95% (by cost) of all newly purchased furniture and furnishings within the project scope must meet all limits set by the following, as applicable:
1. ANSI/BIFMA e3-2011 Furniture Sustainability Standard sections 7.6.1 and 7.6.2, tested in accordance with ANSI/BIFMA Standard Method M7.1-2011.
- G. Follow the respective activities during the construction phase in order to minimize the air pollution.
1. Duct protection.
 - a. To prevent pollutants from entering the ventilation system, all ducts are either:
 - 1) Sealed and protected from possible contamination during construction.
 - 2) Vacuumed out prior to installing registers, grills and diffusers.
 2. Filter replacement.
To prevent pollutants from entering the air supply post-occupancy, if the ventilation system is operating during construction, the following requirement is met:
 - a. All filters are replaced prior to occupancy.
- H. VOC absorption management.
To prevent building materials from absorbing and later releasing VOCs emitted by other (source) materials during construction, the following requirements are met:
1. A secure area is designated to store and protect absorptive materials, including but not limited to carpets, acoustical ceiling panels, fabric wall coverings, insulation, upholstery and furnishings.

2. Wet materials, including but not limited to adhesives, wood preservatives and finishes, sealants, glazing compounds, paints and joint fillers are installed and allowed to fully cure, prior to installation of absorptive materials.
 3. Hard finishes requiring adhesive installation are installed and allowed to dry for a minimum of 24 hours, prior to installation of absorptive materials.
- I. Dust containment and removal.
The following procedures are followed during building construction:
1. All active areas of work are isolated from other spaces by sealed doorways or windows or through the use of temporary barriers.
 2. Walk-off mats are used at entryways to reduce the transfer of dirt and pollutants.
 3. Saws and other tools use dust guards or collectors to capture generated dust.
- J. Encourage asbestos and lead restriction.
All newly-installed building materials meet the following materials composition requirements:
1. No asbestos.
 2. Not more than 100 ppm (by weight) added lead.
- K. Promote lead abatement.
For repair, renovation or painting on buildings constructed prior to any applicable laws banning or restricting lead paint, lead evaluation and abatement is conducted in accordance with the following guidelines:
1. An on-site investigation of the commercial space conducted by a certified risk assessor or inspector technician to determine the presence of any lead-based hazards in paint, dust and soil using the definitions in U.S. EPA 40 CFR Part 745.65 for residential dwellings or child-occupied facilities.
 2. All commercial and institutional spaces found to have lead-based hazards must adhere to U.S. EPA 40 CFR Part 745.227 work practice standards for conducting lead-based paint activities, as outlined for multi-family dwellings.
 3. Adherence to final rules, as they are proposed by the U.S. EPA, regarding the lead renovation, repair and painting program for public and commercial buildings (RIN: 2070-AJ56) supersedes adherence to definitions and protocols outlined in U.S. EPA 40 CFR Part 745 for residential dwellings or child-occupied facilities.
- L. Promote asbestos abatement.
To reduce hazards in buildings constructed prior to any applicable laws banning or restricting asbestos, the following testing, evaluation and abatement is conducted:
1. Projects conduct asbestos inspection every three years through an accredited professional per Asbestos Hazard Emergency Response Act (AHERA)'s Asbestos Model Accreditation Plan (MAP), National Standards for Hazardous Air Pollutants (NESHAP), accredited asbestos consultant (State or local equivalent) or by a U.S. EPA accredited company experienced in asbestos assessment.

2. In accordance with the Asbestos Hazard Emergency Response Act (AHERA), development, maintenance and update of asbestos management plans, including all necessary actions to minimize asbestos hazards: repair, encapsulation, enclosure, maintenance and removal, follow protocol detailed in the Asbestos-Containing Materials in Schools Rule (40 CFR part 763).
 3. Projects conduct post-abatement clearance in accordance with Asbestos Hazard Emergency Response Act (AHERA) Asbestos-Containing Materials in Schools (40 CFR part 763).
- M. Promote polychlorinated biphenyl abatement.
Any projects undergoing current renovation or demolition which were constructed or renovated between 1950 and the institution of any applicable laws banning or restricting PCBs carry out the following:
1. Conduct evaluation and abatement of materials in accordance with the U.S. EPA Steps to Safe PCB Abatement Activities.
 2. Conduct removal and safe disposal of PCB-containing fluorescent light ballasts in accordance with the U.S. EPA guidelines.
- N. Test all the HVAC system after installed, as follow:
1. After substantial completion and prior to occupancy, the HVAC system undergoes testing and balancing.

END OF SECTION 18113.16