

MINUTES
GBI Consensus Body for New Construction- Call #4
Webinar/Teleconference
March 4, 2024, from 12:00 to 2:00 p.m. ET

NOTE ALL TIMES ARE EASTERN TIME

Consensus Body Members in Attendance

Full Name	Company	3/4/24	3/8/23	3/1/23	10/13/22
Senthil Arunachalam	BTU Engineers, LLC	N/A	N/A	N/A	X
Jeff Bradley	American Wood Council	X (left early)	X	X	X (arrived late)
Karen Butler	EPA, Office of Air and Radiation	X	X	X	X
Virgil Campaneria (Chair)	Gurri Matute PA	X	X	X	X
Michael Cudahy	PPFA - PPEF	Absent	X	X	X
Larry Eisenberg	Ovus Partners 360	X	X (Proxy Shymko)	X	X
Tehmina Husain	Merrick and Company	Absent	X	Absent	Absent
Josh Jacobs	WAP Sustainability	X (left early)	Absent	Absent	X
Ashley Langenfeld	Hoefer Welker	X	X	X	X (arrived late, left early)
Michael Lehman	ConTech Lighting	X	X	X	X
John Mullen	IAPMO	X	X	X	X
James O'Brien	Independent Environmental Consultant	X	X	X	X
Thomas Pape	BMP (representing AWE)	N/A	N/A	N/A	Absent
Max Puchtel	American Institute of Steel Construction	X	Absent	X (left early)	X
Jane Rohde	JSR Associates, Inc.	X	Absent	X	Absent
Gord Shymko	G. F. Shymko & Associates Inc.	N/A	X	X	X

Stephen Szoke	American Concrete Institute	X (left early)	X	X	X
Sumayyah Theron	Cyclone Energy Group	X (left early)	N/A	N/A	N/A
Angela Tin	American Lung Association	X	X	X (Proxy O'Brien)	X

Voting Alternates in Attendance

Full Name	Organization	3/4/24	3/8/23	3/1/23	10/13/22
John Cross	American Institute of Steel Construction		X		X

Interested Parties in Attendance

Full Name	Organization	3/4/24	3/8/23	3/1/23	10/13/22
Rob Brooks	Rob Brooks Associate				X
Ron Burke	Alliance for Water Efficiency		X		
Steve Kooy	BIFMA				X
Viken Koukounian	K.R. Moeller Associates Ltd.		X		
Matthew Lemay	NRMCA				X
Julian Mills – Beale	NRMCA		X		
Niklas Moeller	LogiSon Acoustic Network	X			

Staff in Attendance

Full Name	Organization	3/4/24	3/8/23	3/1/23	10/13/22
Emily Marx	Secretariat, GBI	X	X	X	X
Sara Rademacher	Staff, GBI	X	X	X	X

Roll Call & Welcome

Secretariat Emily Marx welcomed everyone to the meeting, reviewed the GBI Anti-Trust Policy, Code of Conduct policy and notified participants that the call was being recorded for the purpose of preparing minutes. No objections or concerns were raised. She invited any interested parties to participate in the discussion of a particular topic they are interested in.

Marx reviewed the Consensus Body for New Construction roster and noted the three interest categories, General Interest, Producer, and User. She informed the group of the recent retirement of Gord Shymko and had new member Sumayyah Theron give a short introduction of herself. Marx stated that there is balance on the Consensus Body for New Construction.

Administrative Items

Chair Virgil Campaneria welcomed everyone to the meeting. Campaneria reviewed the agenda and asked if anyone had any comments or concerns. There were no comments or concerns.

MOTION: A Motion was made, seconded, and carried unanimously to approve the agenda as presented.

Campaneria reviewed the #2 minutes from March 1, 2023, and the #3 minutes from March 8, 2023, and asked if anyone had any comments or concerns. There were no comments or concerns.

MOTION: A Motion was made and seconded to approve the #2 minutes from March 1, 2023, and the #3 minutes from March 8, 2023, as presented.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 11 in favor, 0 opposed, 2 abstained.

Abstain: Jeff Bradley, Josh Jacobs

Indoor Environment Public Comment/Proposed Revision Review

The Indoor Environment Subcommittee Chair reviewed each proposed revision before placing a motion.

NCIE112

Proposed Revision: 11.2.6.1 An occupancy policy prohibits smoking within the building. Signage is posted at every building entrance prohibiting smoking and the use of electronic cigarettes within 25 ft. (7.6 m) of the any building entrance, operable window, or outdoor air intake when within the prerogative of the building owner and/or the authority having jurisdiction.

Smoking is defined as the inhalation of smoke of burning tobacco, use of electronic-cigarettes, cannabis, or other substances encased in items such as (but not limited to) cigarettes, pipes, and cigars for recreational or medical use.

1 point

Reason: CB Discussion on 3/1/23

- There was a question on how cannabis would be considered under the criteria, and it was asked if the text should be updated to revise 'tobacco' to be more generic.
- It was noted that this could be changed through an amendment to the motion.

- A member of the Indoor Environment Subcommittee stated that the subcommittee discussed this topic at length, and it was agreed that the inclusion of ‘other substances’ covered cannabis.
- There was some agreement to add ‘or cannabis’ after tobacco to ensure there is no confusion.
- There was discussion on smoke free campuses where there would be no need to put signage on a building. The inclusion of ‘operable windows’ was also discussed, and it was noted that this revision needs to be further explored by the subcommittee.
- It was argued that there should be additional consideration of approved smoking areas.
- It was asked how this could be assessed in the real world, and an assessor explained how he would award for this revision.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 13 in favor, 0 opposed, 0 abstained.

Sumayyah Theron left the meeting.

NCIE201 & NCIE235

NCIE201 Proposed Revision: 11.3.1.2 Regularly occupied ~~task areas~~ spaces are designed to have clear views to the exterior or atria within 25 ft. (7.6 m) from a window.

NCIE201 Reason: Define task areas or switch to regularly occupied spaces (already defined)?

NCIE235 Proposed Revision: Regularly occupied space: a room or enclosed space designed for human occupancy in which individuals for an hour or more at one time perform activities for which the space has been specifically designed.

MOTION: The Motion was made and seconded to accept the proposed revisions for NCIE201.

Discussion took place on the Motion:

- It was asked if there is a definition for ‘space.’
- A member stated that the definition of regularly occupied spaces is a space that is regularly occupied for an hour or more at one time. Another member stated that this is generally the definition in codes.
- There was an agreement to add a definition for spaces. A definition was agreed on for regularly occupied spaces.

AMENDMENT: The Motion was made and seconded to accept the definition for regularly occupied space as “a space that is regularly occupied by person(s) for an hour or more at one time.”

Discussion took place on the Amendment:

- There was no discussion.

AMENDMENT VOTE: The Motion carries with 11 in favor, 0 opposed, 1 abstained.

Abstain: Jeff Bradley

Discussion took place on the Motion:

- Although a definition for ‘space’ or ‘task area’ did not exist in the standard, a definition for ‘regularly occupied space’ was found. Both definitions were reviewed and the current definition in the standard was revised with language approved previously at the meeting.

AMENDMENT: The Motion was made and seconded to further revise the definition for regularly occupied space to “a room or enclosed space designed for human occupancy in which individuals for an hour or more at one time perform activities for which the space has been specifically designed.”

Discussion took place on the Amendment:

- A member stated that ‘or enclosed space’ should be removed. There was discussion on scenarios with cubicles.

AMENDMENT VOTE: The Motion carries with 12 in favor, 0 opposed, 0 abstained.

Discussion took place on the Motion:

- There was discussion on spaces that may be required to have privacy. The criteria and point hierarchy were reviewed and it was noted that those spaces would be taken into account in the overall percentages.

VOTE: The Motion carries with 12 in favor, 0 opposed, 0 abstained.

NCIE202

Proposed Revision: 11.3.4.2 All luminaires are RoHS compliant with EU Directive 2011/65/EU of the European Parliament. RoHS specifies maximum levels for the following ~~six~~ ten restricted materials:

- Lead (Pb): < 1000 ppm;
- Mercury (Hg): < 1000 ppm;
- Cadmium (Cd): < 100 ppm;
- Hexavalent Chromium: (Cr VI) < 1000 ppm;
- Polybrominated Biphenyls (PBB): < 1000 ppm; ~~and~~
- Polybrominated Diphenyl Ethers (PBDE): < 1000 ppm;
- Bis(2-Ethylhexyl) phthalate (DEHP): < 1000 ppm;
- Benzyl butyl phthalate (BBP): < 1000 ppm;
- Dibutyl phthalate (DBP): < 1000 ppm; and
- Diisobutyl phthalate (DIBP): < 1000 ppm.

Certification is provided by the luminaire manufacturer.

Maximum = 2 points

- Two points are earned for compliance with all luminaires.
- One point is earned for at least 50% compliance of all luminaires.
- No points are earned for at <50% compliance of all luminaires.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 12 in favor, 0 opposed, 0 abstained.

NCIE203

Proposed Revision: The building is oriented such that both the ratio of the west fenestration to the total fenestration and the ratio of the east fenestration to the total fenestration is between $\frac{1}{4}$ and $\frac{1}{6}$.

Maximum = 10 points

- Ten points are earned where the ratio is $\leq \frac{1}{6}$.
- Six points are earned where the ratio $\leq \frac{1}{5}$ to $> \frac{1}{6}$.
- Two points are earned where the ratio is $\leq \frac{1}{4}$ to $> \frac{1}{5}$.

Reason: Question: Do you know how the approach to these calculations should be done? It is somewhat confusing as the question is asking about two separate ratios but the response is for one ratio, so is the assumption that both ratios need to be within the same range? How would an assessor handle if one ratio qualified for point but the other did not?

Additionally, it appears there is some confusion with the assessment guidance. The guidance states the building should be oriented such that the ratio of the west fenestration to the total fenestration and the ratio of the east fenestration to the total fenestration is between $\frac{1}{4}$ and $\frac{1}{6}$.

However full points are awarded if the ratio is less than or equal to $\frac{1}{6}$, but per the assessment guidance it says it should be between $\frac{1}{4}$ and $\frac{1}{6}$, which would be a ratio greater than $\frac{1}{6}$?

Assessor Feedback: First, I am pleased to see that the NC 21 finally addresses buildings that are not oriented N-S, E-S. After reviewing this twice, I agree with Paul's observations. If I were an assessor, I would pro – rate as Paul suggests between the two ratios. I have also noted in the past that there is another circumstance where assessor judgment is appropriate – climates where it is neutral or even beneficial to have more N-W exposure; the Pacific coastal region from N.Cal to Alaska comes to mind.

The ANSI Committee notes on the updating of this criterion for NC 21 may help clarify how the two (2) ratios were intended to earn credit.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 12 in favor, 0 opposed, 0 abstained.

NCIE204

Proposed Revision: 11.3.1.1 Regularly occupied floor area achieves a minimum daylight factor (DF) of at least 2 (excluding all direct sunlight penetration where window shades/treatments are not available or not used).

Assessment Guidance:

Estimate the DF for a daylight space that has vertical windows using the following formula:

$DF = 0.1 \times PG$, where:

DF = daylight factor

PG = percentage of glass to floor area (area of the windows/floor area)

Reason: Regarding the daylight question, there is no guidance on how to determine “all direct sunlight penetration”. Direct sunlight is not good, but window treatments are typically added to block direct sunlight.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was discussion on whether ‘floor area’ should be replaced with ‘spaces’ The definition of both was discussed and there was some agreement to keep floor area.
- There was discussion on window shades and how the building is developed and whether the criteria are enhancing occupant experience and creating a greener building.
- It was argued that this is a ‘stretch goal’ for the industry, but the criteria could be reviewed again and potentially improved during the continuous maintenance of the New Construction Standard.

VOTE: The Motion carries with 11 in favor, 0 opposed, 1 abstained.

Abstain: James O’Brien

NCIE205

Proposed Revision: 11.1 AIR VENTILATION AND QUALITY (~~35~~ 37 POINTS)

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- It was asked where the points are coming from to increase the points in this section. The Secretariat stated that the majority of points came from Acoustics Comfort and Thermal Comfort.

VOTE: The Motion carries with 12 in favor, 0 opposed, 0 abstained.

NCIE206

Proposed Revision: 6.1.1.1 The quantity of ventilation for the building is compliant with one of the following:

- ANSI/ASHRAE Standard 62.1-2019; Ventilation for Acceptable Indoor Air Quality;
- The ICC International Mechanical Code (ICC IMC 2018);
- IAPMO UMC (2018): Uniform Mechanical Code;
- ANSI/ASHRAE/ASHE Standard 170-2017, Ventilation of Health Care Facilities; OR
- Local codes or standards (if more stringent).

~~9~~ 11 points

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 12 in favor, 0 opposed, 0 abstained.

NCIE207

Proposed Revision: 11.1.2.1. The following strategies are implemented for ventilation systems when used:

1. For mechanical ventilation systems, the zone air distribution effectiveness Ez value is greater than or equal to 0.9 in all regularly occupied spaces, excluding circulation and transitional spaces.
2. Natural ventilation systems are designed in accordance with Section 6.4 of ANSI/ASHRAE Standard 62.1- 2019, or are designed using professionally accepted sophisticated analytical methods such as computational fluid dynamics.

The Ez value is determined using Table 11.1.2.1.

9 11 points

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 12 in favor, 0 opposed, 0 abstained.

NCIE208

Proposed Revision: 6.1.3.2 Interior liners that could harbor microbial growth AND/OR erode in the air stream are not used in any outdoor air, return air, and supply air ductwork, or any fan, coil, terminal, or other devices exposed to the airstream.

3 5 points or N/A

- Not applicable where a building does not have ductwork with radiant systems and operable windows.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 12 in favor, 0 opposed, 0 abstained.

NCIE209

Proposed Revision: 11.2 SOURCE CONTROL AND MEASUREMENT OF INDOOR POLLUTANTS (~~34~~ 40 POINTS)

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 11 in favor, 0 opposed, 1 abstained.

Abstain: Jeff Bradley

NCIE210

Proposed Revision: 11.2.1.1 Adhesives and sealants (not including carpet adhesives) that are applied on site within, or part of, the building envelope's continuous plane of air tightness comply with VOC content limits for 90% of products by volume AND/OR VOC emissions criteria for 70% of products by volume.

Maximum = ~~3~~ 4 points

- Two points are earned where 70% of products by volume comply with VOC emissions criteria.
- ~~One~~ Two additional points ~~is~~ are earned where 90% of products by volume comply with VOC content limits.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 12 in favor, 0 opposed, 0 abstained.

NCIE233

Proposed Revision: 11.2.1.1 Adhesives and sealants ~~(not including carpet adhesives)~~ that are applied on site within, or part of, the building envelope's continuous plane of air tightness comply with VOC content limits for 90% of products by volume AND/OR VOC emissions criteria for 70% of products by volume.

Table 11.2.1.1 ~~(excluded from excerpt)~~

VOC Emissions Criteria

VOC emissions results are determined by either the California Department of Public Health's Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, Version 1.2, ~~February~~ January 2017; or UL 2821 Ed.1 – 2021 GREENGUARD Certification Program Method for Measuring and Evaluating Chemical Emissions from Building Materials, Finishes and Furnishings, ~~2013~~.

Provide documentation indicating the product does not have VOC emissions exceeding compliance with the requirements as stated in the Standard Private Office Scenario in CDPH Standard Method V1.2 or a certification by a ~~certification~~ certifying body accredited to ISO/IEC 17065:2012 and with relevant certification program in the scope of its accreditation.

Maximum = 3 points

- Two points are earned where 70% of products by volume comply with VOC emissions criteria.
- One point is earned where 90% of products by volume comply with VOC content limits.

Reason: Feedback: Across the board, could eliminate the exception as all adhesives would comply through “FloorScore®”, “Greenguard”, or “Indoor Advantage” typically. Also note that there would be a section on VOC Content – that would include SCAQMD Rule 1168 for content of Adhesives and Sealants.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 12 in favor, 0 opposed, 0 abstained.

NCIE233

Proposed Revision: 6.2.1.2 Paints and coatings applied on site within, or are a part of, the building’s continuous plane of air tightness comply with VOC content limits detailed in CARB 2007 SCM for 90% of products by volume AND/OR VOC emissions criteria) for 70% of products by volume.

VOC Emissions Criteria

VOC emissions results are determined by the California Department of Public Health’s Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, Version 1.2, ~~February~~ January 2017; or UL 2821 Ed.1 – 2021 GREENGUARD Certification Program Method for Measuring and Evaluating Chemical Emissions from Building Materials, Finishes and Furnishings, ~~2013~~.

Provide documentation indicating the product does not have VOC emissions exceeding compliance with the requirements as stated in the Standard Private Office Scenario in CDPH Standard Method V1.2 or a certification by a certification body accredited to ISO/IEC 17065:2012 and with relevant certification program in the scope of its accreditation.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 12 in favor, 0 opposed, 0 abstained.

NCIE211

Proposed Revision: 11.2.1.2 Paints and coatings applied on site within, or are a part of, the building’s continuous plane of air tightness comply with VOC content limits detailed in CARB 2007 SCM for 90% of products by volume AND/OR VOC emissions criteria) for 70% of products by volume.

Maximum = ~~3~~ 4 points

- Two points are earned where 70% of products by volume comply with VOC emissions criteria.

- ~~One~~ Two additional points ~~is~~ are earned where 90% of products by volume comply with VOC content limits.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 11 in favor, 0 opposed, 1 abstained.

Abstain: Steve Szoke

NCIE234

Original Proposed Revision: 11.2.1.3 Interior products will comply with prescribed limits of product emissions.

Table 11.2.1.3 (excluded from excerpt)

VOC emissions are determined by a third-party laboratory that is accredited to ISO/IEC 17025 with the specified test method listed in the scope of its accreditation. VOC emissions results are determined by California Department of Public Health (CDPH) “Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers,” V 1.2, 2017, Standard Private Office Scenario. ~~Alternatively, VOC emission results are determined by UL 2821 “GREENGUARD Certification Program Method for Measuring and Evaluating Chemical Emissions from Building Materials, Finishes and Furnishings,” March 2013, Table 2 Office Model and Section 34.1 Allowable Limits for GREENGUARD Certification Gold.~~

Approved Proposed Revision: 11.2.1.3 Interior products will comply with prescribed limits of product emissions.

Table 11.2.1.3 (excluded from excerpt)

VOC emissions are determined by a third-party laboratory that is accredited to ISO/IEC 17025 with the specified test method listed in the scope of its accreditation. VOC emissions results are determined by California Department of Public Health (CDPH) “Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers,” V 1.2, 2017, Standard Private Office Scenario. Alternatively, VOC emission results are determined by UL 2821 Ed.1 – 2021 “GREENGUARD Certification Program Method for Measuring and Evaluating Chemical Emissions from Building Materials, Finishes and Furnishings,” ~~March 2013~~, Table 2 Office Model and Section 34.1 Allowable Limits for GREENGUARD Certification Gold.

Reason: Feedback: I believe the UL Greenguard references the CPDH – so could delete the UL Greenguard reference in this section. The Greenguard portion is for the certification itself – like FloorScore and SCS Indoor Advantage. All of the certifications and ASHRAE reference CPDH, which is the actual test methodology.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- A member stated that the UL reference should still be in the standard because GREENGUARD goes further than CDPH.
- There was an agreement to revise the proposal to just update the reference to the 2021 version.

VOTE: The Motion carries with 12 in favor, 0 opposed, 0 abstained.

Jeff Bradley left the meeting.

NCIE212

Proposed Revision: 11.2.1.4 Furniture, casework, cabinets, work stations, and seating all comply with prescribed limits of VOC emissions AND/OR are certified.

Note: certified means compliance with any of the certifications listed per Table 11.2.1.4: Furniture and Furnishings VOC Emissions.

Maximum = ~~3~~ 6 points

- ~~One~~ Two points ~~is~~ are earned when 100% by cost of installed furniture products comply with ANSI/BIFMA e3 Section 7.6.1.
- ~~One~~ Two points ~~is~~ are earned when 90% by cost of installed furniture products comply with ANSI/BIFMA e3 Section 7.6.2.
- ~~One~~ Two points ~~is~~ are earned when 70% by cost of installed furniture products comply with ANSI/BIFMA e3 Section 7.6.3.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 11 in favor, 0 opposed, 0 abstained.

NCIE235

Original Proposed Revision: Furniture, casework, cabinets, work stations, and seating all comply with prescribed limits of VOC emissions AND/OR are certified.

Note: certified means compliance with any of the certifications listed per Table 11.2.1.4: Furniture and Furnishings VOC Emissions.

Table 11.2.1.4: Furniture and Furnishings VOC Emissions (~~excluded from Excerpt~~)

VOC Emissions Criteria

VOC emissions are determined by a third-party laboratory that is accredited to ISO/IEC 17025:2017 with the specified test method listed in the scope of its accreditation. VOC emissions results are determined by ANSI/BIFMA M7.1-2011(R2016) Standard Test Method for Determining VOC Emissions From Office Furniture Systems, Components and Seating. ~~Alternatively, VOC emission results may be determined by UL 2821 "GREENGUARD Certification Program Method for Measuring and Evaluating Chemical Emissions from Building Materials, Finishes and Furnishings," 2013 Table 2 Office Model and Section 34.1 Allowable Limits for GREENGUARD Gold Certification.~~ To determine acceptability of the emission results, VOC product emission concentrations are estimated per testing procedures from ANSI/BIFMA e3-2019, 7.6.1, 7.6.2, and 7.6.3.

Approved Proposed Revision: Furniture, casework, cabinets, work stations, and seating all comply with prescribed limits of VOC emissions AND/OR are certified.

Note: certified means compliance with any of the certifications listed per Table 116.2.1.4: Furniture and Furnishings VOC Emissions.

Table 11.2.1.4: Furniture and Furnishings VOC Emissions (**excluded from Excerpt**)

VOC Emissions Criteria

VOC emissions are determined by a third-party laboratory that is accredited to ISO/IEC 17025:2017 with the specified test method listed in the scope of its accreditation. VOC emissions results are determined by ANSI/BIFMA M7.1-2011(R2016) Standard Test Method for Determining VOC Emissions From Office Furniture Systems, Components and Seating. Alternatively, VOC emission results may be determined by UL 2821 Ed.1 – 2021 “GREENGUARD Certification Program Method for Measuring and Evaluating Chemical Emissions from Building Materials, Finishes and Furnishings,” ~~2013~~ Table 2 Office Model and Section 34.1 Allowable Limits for GREENGUARD Gold Certification. To determine acceptability of the emission results, VOC product emission concentrations are estimated per testing procedures from ANSI/BIFMA e3-2019, 7.6.1, 7.6.2, and 7.6.3.

Reason: Feedback: I believe the UL Greenguard references the CPDH – so could delete the UL Greenguard reference in this section. The Greenguard portion is for the certification itself – like FloorScore and SCS Indoor Advantage. All of the certifications and ASHRAE reference CPDH, which is the actual test methodology.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- It was argued that the reference should stay in the standard but be updated to the 2021 version.

VOTE: The Motion carries with 11 in favor, 0 opposed, 0 abstained.

NCIE213

Proposed Revision: 11.2.2 Pre-Occupancy Indoor Air Quality Testing

Two paths are available for assessing 11.2.2.

- 11.2.2A Path A: Indoor Air Quality (IAQ) Pre-Occupancy Testing: ~~6~~ 4 points

OR

- 11.2.2B Path B: Total Volatile Organic Compounds (TVOC): ~~3~~ 2 points

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 10 in favor, 1 opposed, 0 abstained.

Opposed: Josh Jacobs

NCIE214

Proposed Revision: 11.2.2A.1 To determine that the indoor air quality is acceptable upon Substantial Completion but prior to occupancy, the buildings indoor environments are tested using the U.S. EPA’s Compendium of Methods for the Determination of Toxic Organic Pollutants in Ambient Air, TO-1, TO-

11, TO-15, TO-17, and/or ASTM D 5197-16 Standard Test Method for Determination of Formaldehyde and Other Carbonyl Compounds in Air (Active Sampler Methodology). The testing takes place after construction ends and prior to occupancy.

~~6~~4 points

Reason: For clarification

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 10 in favor, 1 opposed, 0 abstained.

Opposed: Josh Jacobs

NCIE215

Proposed Revision: 11.2.2B.1 Upon Substantial Completion, but prior to occupancy, conduct a TVOC indoor air sampling and laboratory analysis of collected samples as follows:

~~3~~2 points

- ~~Three~~ Two points are earned where the test is conducted. There are no pass/fail criteria for conducting this test.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 10 in favor, 1 opposed, 0 abstained.

Opposed: Josh Jacobs

NCIE216

Proposed Revision: 11.2.4.1 The building water systems conform with ASHRAE 188-2018, Legionellosis: Risk Management for Building Water Systems.

~~6~~3 points

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- It was argued that the previous revisions were to reduce points on pre-occupancy air quality, and this is to increase points for water quality. Both criteria are for when occupants aren't in the building. It was stated that it does not appear consistent to lower one and increase another when valuing occupancy safety when there are no occupants in the building.

VOTE: The Motion carries with 7 in favor, 1 opposed, 3 abstained.

Opposed: Josh Jacobs

Abstain: Karen Butler, Jane Rohde, Angela Tin

NCIE233

Proposed Revision: 11.2.4.1 The building water systems conform with ASHRAE 188-2018, Legionellosis: Risk Management for Building Water Systems.

3 points or N/A

Not applicable if both 5.1 and 5.2 in ASHRAE 188-2018 are satisfied.

Reason: Assessor Feedback: I think the criteria should either be restated or an NA should be provided. The criteria states, “The building water systems conform . . .”. While it may be that the “building” is in conformance with the standard because of exemption due to Sections 5.1 & 5.2, the “building water systems” would not necessarily be in conformance.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 11 in favor, 0 opposed, 0 abstained.

NCIE217

Proposed Revision: 11.3 LIGHTING DESIGN AND SYSTEMS (~~32~~ 37 POINTS)

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 10 in favor, 0 opposed, 1 abstained.

Abstain: Josh Jacobs

NCIE218

Proposed Revision: 11.3.2.1 Regularly occupied spaces meet the Recommended Illuminance for the Locations/Tasks in Table 11.3.2.1-A and Table 11.3.2.1-B.

“Recommended vertical and horizontal illuminance targets” are found in the IES Lighting Handbook, 10th Edition, Table 22.2 and Applications Sections 21-37 OR Table 11.3.2.1-A: IES Illuminance Categories and Table 11.3.2.1-B: IES Task/Location Categories.

Lighting levels may be increased or decreased by 10% (max.) based on Occupant Age, Visual Performance Requirements, or other weighting factors as detailed in the IES Lighting Handbook, 10th Edition Table 4.1, the following weighting factors:

Maximum = ~~5~~ 6 points

- ~~Five~~ Six points are earned where $\geq 90\%$ of occupied floor area meets the IES Illuminance recommendations.
- Four points are earned where $\geq 70\%$ to $< 90\%$ of occupied floor area meets the IES Illuminance recommendations.

- Two points are earned where $\geq 50\%$ to $< 70\%$ of occupied floor area meets the IES Illuminance recommendations.
- No points are earned where $< 50\%$ of occupied floor area meets the IES Illuminance recommendations.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 11 in favor, 0 opposed, 0 abstained.

NCIE219

Proposed Revision: 6.3.2.2 Luminance ratios do not exceed the following as per IESNA for tasks:

- 3:1 between the task and adjacent surroundings;
- 10:1 between the task and remote (non-adjacent) surfaces; and
- 20:1 between the brightest and darkest surface in the field of view; or 8:1 between rows of luminaires where there is indirect lighting and where ceiling luminance exceeds 124.1 fL (425 cd/m²).

3 ~~2~~ points or N/A

- Not applicable where spaces are designed such that source/task eye geometry do not require IESNA Standard VDT compliant luminaires.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 11 in favor, 0 opposed, 0 abstained.

NCIE220

Proposed Revision: 11.3.2.3 Install luminaires with a luminance less than 6,500 candela per square meter (cd/m²) between 45 and 90 degrees from nadir as documented on manufacturer specification sheets OR install luminaires that have 50% or more of their light directed down with a Unified Glare Rating (UGR) of <19 using lighting calculation software to measure the UGR of the general lighting in the space or the tabular method for calculating the UGR of a single luminaire.

~~The average luminance does not exceed the following values for given luminaire angles where there is direct lighting:~~

- ~~• 248.1 fL (850 cd/m²) at 65° from the vertical;~~
- ~~• 102.2 fL (350 cd/m²) at 75° from the vertical; or~~
- ~~• 51.1 fL (175 cd/m²) at 85° from the vertical.~~

~~2~~ 3 points or N/A

~~• Not applicable where spaces are designed such that source/task eye geometry do not require IESNA Standard VDT compliant luminaires.~~

Reason: Regarding the question about foot-lamberts, the term is obsolete and was discontinued in 2018. The reference to “IESNA Standard VDT” is obsolete as well.

Assessment Guidance: Select one of the criteria and submit compliance documentation demonstrating the general lighting or individual luminaires deliver a UGR of <19.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 11 in favor, 0 opposed, 0 abstained.

NCIE221

Proposed Revision: 6.3.3.3 Regularly occupied spaces use no more than 50% direct only general lighting. Direct only general lighting limits Direct Glare to no more than 50° above horizontal; Direct Glare includes direct view of the light source and luminances over 2,335 fL (8,000 cd/m²).

~~3~~-2-points

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 11 in favor, 0 opposed, 0 abstained.

NCIE222

Proposed Revision: 6.3.3.4 Individual control of primary workspace lighting is provided for at least 90% of occupants.

“Control” may either be dimming from 100% to at least 10% or stepped dimming with at least three (3) steps: 100%, 50% and 0%.

Maximum = ~~3~~ 2-points

- ~~Three~~ Two points are earned for continuous dimming of at least 10% to 100%.
- ~~Two~~ One point ~~is~~ earned for stepped dimming or switching with at least three steps (100%, 50%, 0%).

Reason:

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 11 in favor, 0 opposed, 0 abstained.

NCIE223

Proposed Revision: Maximum = 12 ~~14~~ points or N/A

- Office Occupancies/Areas

- o Twelve ~~Fourteen~~ points are earned where thermal control zones are designed to be ≤500 ft² (46.5 m²) for open areas or ≤750 ft² (69.7 m²) for a single room.

- o Ten points are earned where thermal control zones are designed to be ≤1000 ft² (92.9 m²) for open areas or ≤1200 ft² (111.5 m²) for single rooms.

- o Not applicable where there are no office occupancies/areas.

- Educational Occupancies/Areas:

- o Twelve ~~Fourteen~~ points are earned where classrooms AND/OR teaching labs thermal control zones are designed to be <1500 ft² (139.4 m²).

- o Not applicable where there are no educational occupancies/areas.

- Healthcare Occupancies/Areas:

- o Twelve ~~Fourteen~~ points are earned where thermal control zones are designed to be ≤500 ft² (46.5 m²).

- o Ten points are earned where thermal control zones are designed to be ≤1000 ft² (92.9 m²).

- o Not applicable where there are no healthcare occupancies/areas.

- Open-Area Mercantile and Assembly Occupancies/Areas:

- o Twelve ~~Fourteen~~ points are earned where thermal control zones are designed to be ≤2500 ft² (232.3 m²) for spaces exceeding 5000 ft² (464.5 m²) and ≤1500 ft² (139.4 m²) for spaces ≤5000 ft² (464.5 m²).

- o Not applicable where there are no open-area mercantile and assembly occupancies/areas.

- Not applicable for other occupancies/areas.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 11 in favor, 0 opposed, 0 abstained.

NCIE224

Proposed Revision: 6.4.2.1 The HVAC systems and building are designed to provide a thermal environment in conformance with ANSI/ASHRAE Standard 55-2017, Thermal Environmental Conditions for Human Occupancy. Exceedance hours for regularly occupied spaces do not exceed 300 hours per year.

6-~~9~~ points or N/A

- Not applicable where the occupancy is outside the purview of 55-2017.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 10 in favor, 0 opposed, 1 abstained.

Abstain: Max Puchtel

NCIE225

Proposed Revision: 11.5 ACOUSTICAL PRIVACY AND COMFORT (~~26~~ 18 POINTS)

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- It was asked what the rationale is for reducing the topic when it is very important for occupant comfort.
- It was noted that projects gave feedback that it is very difficult to achieve because of its complexity.
- An interested party stated that the topic is very important and perhaps there are not enough points attributed to it to entice projects to complete the criteria.
- The process to review changes was discussed and it was argued that these changes have been reviewed previously.
- The criteria of sound masking were reviewed, and it was noted that how it currently is stated is not accurate and effective.
- It was argued that if it was found that too few projects are completing this topic, then it should be reduced but still included in the standard.
- It was stated that because the criteria were vetted at length beforehand, the changes should be approved and then with the continuous maintenance process, it can be further reviewed and improved on to make it more successful.

VOTE: The Motion carries with 9 in favor, 1 opposed, 1 abstained.

Opposed: Ashley Langenfeld

Abstain: Steve Szoke

Josh Jacobs and Steve Szoke left the meeting.

MOTION: The Motion was made and seconded to send all revisions and comments on 11.5.1.2 back to the Indoor Environment Subcommittee.

Discussion took place on the Motion:

- There was discussion on the process to review and approve revisions and whether the revisions proposed for 11.5.1.2 should be reviewed further by the Indoor Environment Subcommittee.

VOTE: The Motion carries with 3 in favor, 2 opposed, 4 abstained.

Opposed: Angela Tin, Mike Lehman

Abstain: Jane Rohde, Karen Butler, Max Puchtel, John Mullen

Review Schedule

Marx reminded members that the next meeting is on Wednesday, March 6, 2024, from 1:00-3:00pm ET.



MOTION: The motion was made, seconded, and carried unanimously to adjourn.

Meeting adjourned at 2:00 PM EST.