

Minutes

GBI Consensus Body Meeting #22

BSR/GBI 01-2016

Webinar

Tuesday, August 16th, 2016 11:00 AM ET to 3:00 PM ET

AND

Wednesday, August 17th, 2016 11:00 AM ET to 3:00 PM ET

Attendance:

No	Name	Organization(s)	8-16-2016	8-17-2106			
1	Gregg Bergmiller	S/L/A/M Collaborative	Absent	Absent			
2	Paul Bertram	Kingspan Insulated Panels, Inc.	X	X			
3	Allan Bilka	International Code Council	X	X			
4	Jeff Bradley	American Wood Council	X	X			
5	William Carroll	American Chemistry Council	X (by Proxy)	X (by Proxy)			
6	Chris Dixon	NBBJ (rep. self)	X	X			
7	Nicole Dovel-Moore	CTA Architects Engineers	X	X			
8	Amber Dzikowicz	NSF International	Absent	Absent			
9	David Eldridge	Grumman/Butkus Assoc.	X	X			
10	William Freeman	Resilient Floor Covering Institute	X	X			
11	Susan Gitlin	U.S. EPA	X	X			
12	Don Horn	GSA	X	X			
13	Josh Jacobs	UL Environment	X	X			
14	Greg Johnson	Johnson Consulting Services, Greenscape Alliance	X (by Proxy until arrival at 1:40 pm ET)	X			
15	Karen Joslin		X	X			
16	Malee Kaolawanich	NIH (rep. self)	X	Absent			
17	Rachel Minnery	AIA	Absent	Absent			
18	Charles Kibert	University of Florida	X	Absent			
19	Gary Keclik	Keclik Associates	Absent	X			

20	Jennifer Kowalonek	Alfred Benesch & Company	Absent	Absent			
21	Thomas Pape	Alliance for Water Efficiency	X	X			
22	Tien Peng	National Ready Mix Concrete Assn.	X	X			
23	Jane Rohde	JSR Assoc. Inc., Vinyl Institute	X	X			
24	Gord Shymko	G.F. Shymko & Associates, Inc.	X	X			
25	Kent Sovocool	Southern Nevada Water Authority	X	X			
26	Steve Strawn	JELD-WEN	Absent	Absent			
27	George Thompson	Chemical Compliance Systems, Inc.	X	X (by Proxy)			
28	Angela Tin	American Lung Assn.	Absent	Absent			
29	Douglas Tucker	Misubishi Electric Cooling & Heating	X	X			
30	Erika Winters Downey	American Institute of Steel Construction	X	X (by Voting Alternate)			
Voting Alternates							
	Abby Brokaw	American Lung Assn. (voting Alternate for Angela Tin)					
	Paul Karrer	AIA (Alternate for Rachel Minnery)					
	Bill Hoffman	UL Environment (Voting Alternate for Josh Jacobs)					
	Lance Davis	GSA (Voting Alternate for Don Horn)					
	D'Lane Wisner	D'Lane Wisner (Voting Alternate for William Carroll)					
	Mark Thimons	(Voting alternate for Erika Winters-Downey)					
	John Cross	American Institute of Steel Construction		X			

		(Voting Alternate for Erika Winters-Downey)					
TOTALS			22/30	22/30			
Visitors							
	Martha VanGeem	Self (Principal Engineer)	X	X			
	Mike Cudahy	Plastic Pipe and Fittings Association	X	X			
Staff/Consultants							
	Michael Lehman	Chair	Absent	X			
	Vicki Worden	Executive Director, GBI					
	Emily Randolph	Secretariat Asst., GBI	X	X			
	Micah Thomas	Staff, GBI					
	Maria Woodbury	Secretariat, GBI	X	X			
	Chelsea Amaio	Staff, GBI					
	Kim Goldsworthy	Roberts-Rules Consulting	X	X			

Tuesday, August 16, 2016

Welcome & Roll Call

Secretariat, Maria Woodbury welcomed participants and conducted roll call by to establish quorum. The anti-trust statement was reviewed and participants were requested to comply with it fully.

Woodbury reviewed the participation options, stating that while observers are welcome to participate in the discussion, only Consensus Body Members are able to vote. Participants were reminded to raise hands should they desire to add something new to the discussion and staff would then call on them in order.

At this meeting, no members voted using a voting alternate. There were 2 members voting via proxy (Jeff Bradley for Greg Johnson and Jane Rohde for William Carroll).

Woodbury informed participants that the approved Code of Conduct has been distributed and that each participant must return it signed to the secretariat prior to September 30th, 2016.

Woodbury informed participants that Consensus Body chair Mike Lehman had an unexpected conflict arise and that vice chair Charles Kibert would take responsibility for chairing the meeting. David Eldridge would act as vice chair and assume chairmanship while Kibert reported in his capacity as chair of the Materials Subcommittee.

Administrative Procedures and Related Matters

The Agenda was reviewed and it was agreed with no objection that the discussion of the Old Business would be held until the next day when Water chair, Kent Sovocool could be present.

MOTION: A motion was made, seconded, and carried to approve the minutes from the previous Consensus Body Meeting #21 on August 9th, 2016

None Opposed

None Abstained

Discussion of Public Comments

Materials (Presented by Charles Kibert, chair of the Materials Subcommittee.) Kibert handed chair of the Consensus Body meeting to David Eldridge.

- **7 – 14. Substantive. 10.2.1.1**

- **Comment: 10.2.1.1** A minimum of twenty products includes **“can provide”** one or more of the following that at a minimum evaluates the *cradle-to-gate product life cycle*: Third party verified Type III Environmental Product Declarations (EPD) according to ISO 21930, “either product-specific or industry average”;
 - Third party Multiple Attribute Product Certification; and/or
 - Third party verified product life cycle assessment based upon ISO 14040 and 14044
- **Reason:** This section is not specific as to whether product-specific or industry average EPD’s will be allowed. For industries like the steel industry, an industry average EPD is more feasible and representative of the installed product than a fabricator specific product EPD. EPDs are intended to reflect the impacts of the installed product. In the case of structural steel that is the fabricated product including the impacts of fabrication not the material originating at the steel mill. In the US there are nearly 2,000 steel fabricators many of whom are small, family businesses.

The creation of a fabricator shop specific EPD would be an economic impossibility for many of these firms. In addition, shop specific EPDs would not accurately reflect the impacts associated with that shop’s operations.

As each project is different, each structural section required by a project is a separate “product”. If during a given period of time a shop worked on many projects that required large beams with little fabrication, that shop’s associated EPD would show a minimal level of impacts. But if that same shop fabricated steel for a project that required a large number of small beams with more complex fabrication requirements, the increasing level of impacts would not be reflected in the “producer” EPD that was based on the earlier projects.

In this case the more accurate measurement of impacts would be based on an industry average reflecting the marketplace mix of product requirements. As written, the section could be interpreted to only allow product specific EPD’s.

- **Proposed Response:** Accept with modification: “Product manufacturers provide one or more of the following for a minimum of 20 products” – As products can have one or

more EPDs/Certification/Product Life Cycle Assessments; i.e. carpet. Include “either product-specific or industry average”

- **Subcommittee Vote:** 9 in favor, 2 abstained.

MOTION: The motion was made and seconded to accept the recommendation of the Subcommittee.

VOTE: The motion carried with 15 in favor, none opposed, and 3 abstained.

None Opposed

Abstained: Susan Gitlin, Josh Jacobs, Allan Bilka

- **6 – 1. General. 10.4.1.1:**

- **Comment:** We commend the Green Building Initiative for recognizing the value of third party audited forest certification systems in for sustainable buildings. In particular, we appreciate and applaud the inclusion of the American Tree Farm System® in the list of recognized Forest Certification Systems.
- **Reason:** Informed by almost 75 years of working with America's small-scale woodland owners, ATFS remains the only certification system specifically designed for family forestland owners. Developed by an independent panel of experts, representing academia, conservation organizations, federal and state governments, landowners and foresters, the 2015-2020 AFF Standards of Sustainability for Forest Certification upon which ATFS certification is based, were expressly developed for the size, scale and intensity of the small, family forestland ownership in the United States. Further, ATFS is more than certification; it is a nationwide network of more than 82,000 landowners sustainably managing 24 million certified acres. This extensive network is supported by a cadre of professional foresters and dedicated volunteers that are locally rooted in their communities, working directly with landowners to provide them with the tools that they need to manage their woods sustainably.
- **Proposed Response:** Accept as Noted.
- **Subcommittee Vote:** 8 in favor, 1 abstained

MOTION: The motion was made and seconded to accept the proposed response.

Discussion took place on the Motion:

- Clarification was requested that there were no language changes to the Standard as a result of this comment. It was confirmed that no language changes were made

VOTE: The motion carried with 16 in favor, none opposed, and 4 abstained.

None Opposed

Abstained: Susan Gitlin, Erika Winters-Downey, Thomas Pape, Tien Peng

- **42 – 7. Substantive. 10.4.1:**

- **Comment:** 10.4.1 Product Sustainable Materials Single Attributes
Maximum = ~~20~~ 10 points
Points are earned where the Product Sustainable Attribute Material is between 11% and 29% or greater:
 - ~~Twenty~~ Ten points are earned for 29% or greater.
 - ~~Nineteen~~ Ten points are earned for 28%.
 - ~~Eighteen~~ Nine points are earned for 27%.
 - ~~Seventeen~~ Nine points are earned for 26%.
 - ~~Sixteen~~ Eight points are earned for 25%.
 - ~~Fifteen~~ Eight points are earned for 24%.
 - ~~Fourteen~~ Seven points are earned for 23%.
 - ~~Thirteen~~ Seven points are earned for 22%.

- ~~Twelve~~ Six points are earned for 21%.
- ~~Eleven~~ Six points are earned for 20%.
- ~~Ten~~ Five points are earned where for 19%.
- ~~Nine~~ Five points are earned where for 18%.
- ~~Eight~~ Four points are earned where for 17%.
- ~~Seven~~ Four points are earned for 16%.
- ~~Six~~ Three points are earned for 15%.
- ~~Five~~ Three points are earned for 14%.
- ~~Four~~ Two points are earned for 13%.
- ~~Three~~ Two points are earned for 12%.
- ~~Two~~ One points are earned for 11%.

- **Reason:** We support the multiple pathways involving scientific and multi-attribute approaches to material selection, and especially, LCA and EPD's as the highest rungs on the materials and product selection ladder.

There is a place for multi-attribute standards. However, single attribute methods just aren't scientific and are reaching the end of their usefulness in green building. Simply being biobased or containing recycled content does not a green product make.

We recommend renaming section 10.4.1 properly, as "Single Attributes", and reducing the points to encourage the use of LCA and EPD or risk assessment, which is scored even lower than single attribute –currently restricted to just 15 points.

We would eventually like to see single attributes as a decision-making tool removed entirely. Maybe GBI is where that step takes place first.

- **57 – 7. Substantive. 10.4.1:**

- **Comment:** 10.4.1 Product Sustainable-Materials Single Attributes

Maximum = ~~20~~ 10 points Points are earned where the Product Sustainable Attribute Material is between 11% and 29% or greater:

- ~~Twenty~~ Ten points are earned for 29% or greater.
- ~~Nineteen~~ Ten points are earned for 28%.
- ~~Eighteen~~ Nine points are earned for 27%.
- ~~Seventeen~~ Nine points are earned for 26%.
- ~~Sixteen~~ Eight points are earned for 25%.
- ~~Fifteen~~ Eight points are earned for 24%.
- ~~Fourteen~~ Seven points are earned for 23%.
- ~~Thirteen~~ Seven points are earned for 22%.
- ~~Twelve~~ Six points are earned for 21%.
- ~~Eleven~~ Six points are earned for 20%.
- ~~Ten~~ Five points are earned where for 19%.
- ~~Nine~~ Five points are earned where for 18%.
- ~~Eight~~ Four points are earned where for 17%.
- ~~Seven~~ Four points are earned for 16%.
- ~~Six~~ Three points are earned for 15%.
- ~~Five~~ Three points are earned for 14%.
- ~~Four~~ Two points are earned for 13%.
- ~~Three~~ Two points are earned for 12%.
- ~~Two~~ One points are earned for 11%.

- **Reason:** We support the multiple pathways involving scientific and multi-attribute approaches to material selection, and especially, LCA and EPD's as the highest rungs on the materials and product selection ladder.
There is a place for multi-attribute standards. However, single attribute methods just aren't scientific and are reaching the end of their usefulness in green building. Simply being biobased or containing recycled content does not a green product make.
We recommend renaming section 10.4.1 properly, as "Single Attributes", and reducing the points to encourage the use of LCA and EPD or risk assessment, which is scored even lower than single attribute –currently restricted to just 15 points.
We would eventually like to see single attributes as a decision-making tool removed entirely. Maybe GBI is where that step takes place first.
- **Proposed Response:** Accept as modified. Leave the title as is. Not all of them are single attributes.
- **Subcommittee Vote:** 5 in favor, 3 opposed
- **Note:** There is concern that this subject should have been delayed to take a more holistic view of point reallocation.
- **12 – 3. Substantive. 10.4:**
 - **Comment:** Clarify how the scoring works.
 - **Reason:** This credit is extremely confusing. Presumably, this credit is based on achieving materials criteria for a certain percentage of total building value, but that is not at all clear in the text.
 - **Proposed Response:** Reject. The basis for the scoring is based on cost of the material content which is found in the language. Other edits have been made to clarify the intent of the language.
 - **Subcommittee Vote:** 6 in favor, 1 abstained.

MOTION: The motion was made and seconded to accept the first two comments [42-7 & 57 – 7] and reject the third comment [12 – 3] as the Subcommittee suggested.

Discussion took place on the Motion:

- One speaker asked that the Consensus Body consider removing "Sustainable" from the title, stating that this might be too "grandiose" a description for single attributes.

AMENDMENT: The amendment was made and seconded to remove "Sustainable" from the title as per the speaker's suggestion.

Objections were raised on the Amendment.

Discussion took place on the Amendment:

- It was stated that materials attributes aren't necessarily sustainable.
- Multiple members spoke in opposition to the Amendment. Concern was raised that it would be more confusing to leave Sustainable out of the title. The opinion was raised that removing Sustainable would dilute the title too much. It was stated that the current title denotes the purpose of the section.
- The argument was raised that every single credit in the Standard is about sustainability and having Sustainable in the title is redundant.
- The question was raised about why the Subcommittee did not recommend the addition of "single" and it was clarified that not all Materials Attributes listed are single attributes.

VOTE: The amendment failed with 7 in favor, 11 opposed, and 2 abstained.

Opposed: Allan Bilka, Chris Dixon, Gord Shymko, George Thompson, Bill Freeman, Jeff Bradley, Greg Johnson, Erika Winters-Downey, Charles Kibert, Jane Rohde, Bill Carroll

Abstained: Doug Tucker, Josh Jacobs

Discussion took place on the original Motion:

- One participant spoke against reducing the points.
- It was stated that the Subcommittee felt that 20 points was too many for gathering up materials attributes.
- The opinion was stated that the points weighting shouldn't be changed
- Concern was raised about addressing points piecemeal.
- The suggestion was made for the Consensus Body to agree in principle, but no Amendment was made.

VOTE: The motion carried with 15 in favor, 4 opposed, and 2 abstained

Opposed: Chris Dixon, Jeff Bradley, Greg Johnson, Nicole Dovel-Moore

Abstained: Tien Peng, Malee Kaolawanich

- **10 – 2. General. 10.4**
 - **Comment:** Credible sources of data, such as the USDA project to provide bio-based content for commercial wood products, will improve the utility of this standard. A useful attribute of the standard would be inclusion of a directory with this type of information.
 - **Reason:** None Given
 - **Proposed Response:** Accept as Noted.
 - **Subcommittee Vote:** 7 in favor, 2 abstained

MOTION: The motion was made and seconded to accept the Subcommittee's recommendation.

Discussion took place on the Motion:

- It was stated that since the commenter is requesting a directory and the Consensus Body won't be providing a directory, then the comment should be rejected, not accepted.
- Discussion took place around whether the Consensus Body would be obligated to create a directory if the motion to "accept as noted" carried. It was clarified that Accept as Noted does not obligate the Consensus Body to implement the suggested change.
- It was stated that the directory might be appropriate as an appendix if there is a longer list of resources.
- It was reiterated that the response needs to state that the Consensus Body will not be providing a directory.
- The statement was made that a database in the back of the Standard wouldn't be possible, but a list of website with references might be helpful.
- The opinion was raised that the Consensus Body should close the door to these directories and not accept this comment.
- It was clarified that the commenter is looking for sources of data, not actual data.
- The suggestion was made to amend the response to say something along the lines of "The Consensus Body agrees with the spirit of what the commenter is saying but is unsure whether the commenter is referring to a database or sources of information. Request that the commenter come back with more information"

AMENDMENT: The amendment was made and seconded to request back to the commenter: "Please provide a suggested source directory."

Objections were raised to the Amendment.

SUBSTITUTION TO THE AMENDMENT: The substitution was made and seconded to change the amendment to say "The committee agrees in principle that such a directory may be useful. However,

we cannot provide the directory and invite the commenter to provide sources for such a directory for consideration.”

Objections were raised to the Substitution.

Discussion took place on the Substitution to the Amendment:

- The opinion was stated that the Consensus Body should not say that the comment is being accepted.
- It was stated that “Accept as noted” has a strong legal connotation. It does not mean that the comment is being accepted in totality. There is more information that describes the conditions of the acceptance.

VOTE ON SUBSTITUTION: The substitution carried with 12 in favor, 7 opposed, and 3 abstained.

Opposed: Bill Freeman, Susan Gitlin, Josh Jacobs, Thomas Pape, Don Horn, Jane Rohde, Bill Carroll

Abstained: Allan Bilka, Doug Tucker, Malee Kaolawanich

AMENDMENT: The Amendment was made and seconded to change to add “for purposes of reference material” to the end of the response.

Opposition was raised to the Amendment.

Discussion took place on the Amendment:

- The opinion was raised that this Amendment doesn’t add anything and the speaker was opposed to the Amendment.
- It was stated that the Consensus Body doesn’t want a directory added to the body of the Standard as a criterion.

VOTE ON AMENDMENT: The Amendment failed with 5 in favor, 13 opposed, and 3 abstained.

Opposed: Allan Bilka, Chris Dixon, George Thompson, Bill Freeman, Jeff Bradley, Greg Johnson, Josh Jacobs, Paul Bertram, Thomas Pape, Don Horn, Jane Rohde, Bill Carroll, Tien Peng

Abstained: Nicole Dovel-Moore, Susan Gitlin, Malee Kaolawanich

MAIN MOTION AS VOTED BELOW: Accept as noted. the committee agrees in principle that such a directory may be useful, however we cannot provide the directory and invite the commenter to provide sources for such a directory for consideration.

VOTE ON MOTION: The Motion failed with 8 in favor, 12 opposed, and 3 abstained.

Opposed: Karen Joslin, Allan Bilka, Bill Freeman, Susan Gitlin, Jeff Bradley, Greg Johnson, Erika Winter-Downey, Josh Jacobs, Thomas Pape, Don Horn, Jane Rohde, Bill Carroll

Abstained: Gord Shymko, Nicole Dovel-Moore, Malee Kaolawanich

MOTION: The motion was made and seconded to Reject. The committee agrees in principle that such a directory may be useful, however we cannot provide the directory and invite the commenter to provide sources for such a directory for consideration.

VOTE: The motion carried with 20 in favor, none opposed, and 2 abstained.

None Opposed

Abstained: Karen Joslin, Gord Shymko

- **1 – 5. General. 10.4.1**
 - **Comment:** Add clarification to 10.4.1.
 - **Reason:** It is not clear from the description how the percentage should be calculated. Is % based on full building model? Is there a cutoff? Or is intention for documentation of % recycled/biobased for individual building components? This should be clarified.

- **Proposed Response:** Accept. “Points are awarded based on the following and final adding values reported by percentages of materials, by **material** cost,
- **Subcommittee Vote:** 9 in favor.

MOTION: The motion was made and seconded to accept the Subcommittee’s recommendation.

- The question was raised whether the commenter’s question is truly being answered with this response.

VOTE: The motion carried with 17 in favor, 4 opposed, and 2 abstained.

Opposed: Allan Bilka, Nicole Dovel-Moore, Jane Rohde, Bill Carroll

Abstained: Josh Jacobs, Thomas Pape

- **18 – 17. Editorial. 13:**
 - **Comment:** APPENDICES
 - **Reason:** None Given
 - **Proposed Response:** Accept
- **41 – 4. Substantive. Appendix A:**
 - **Comment:** ~~However, the first step to support the science of chemical and product risk assessments has already been accomplished by the publication of the consensus nation standard (NSF/GCI/ANSI-355, 2011). This~~ The NSF/GCI/ANSI-355, 2011 standard not only identifies...
 - **Reason:** Regarding Appendix A. Appendix A refers to NSF/GCI/ANSI-355 as the first step in promoting product risk assessment. Please note that the purpose of 355 was not to promote product risk assessment. Rather “The purpose of the Greener Chemicals and Processes Information Standard is to provide the chemical enterprise with a voluntary and standardized way to define and report the primary categories of information, their respective data elements, and data quality objectives.” If necessary please consult with the NSF standards department for additional clarification.
 - **Proposed Response:** Accept.
- **52 – 65. Substantive. 13**
 - **Comment:** Remove Appendix A.
 - **Reason:** Green Globes (and the GBI) is a green building management tool and is not responsible for nor in the position to be experts in risk assessment and associated risk assessment sciences. The tool rewards risk assessment and, as such, is an obvious supporter and advocate for the scientific process of risk assessment. Adding an Appendix dedicated to providing background information on risk assessment is not necessary for the GBI nor the users of Green Globes. Users can achieve points without Appendix A information. There are ample resources (courses, books, professionals) that can provide information on risk assessment methods, data, and sciences to users should they need such assistance. The draft Appendix detracts from the overall aim of the document. In addition, the Appendix contains examples that appear to be reactionary, may be controversial, and are inaccurate statements about risk assessment. The draft contains generalizations and colloquialisms that skew the Appendix toward opinion piece instead of informed, science-based background information. Examples of specific concerns: Using an “X” between the terms hazard and exposure implies that risk is a mathematical (multiplicative) relationship; this is not accurate. We do not know what Paracelsus said or thought about risk assessment. References assigning attribution, such as “According to Paracelsus, the risk from a chemical or

product...” and other similar phrases are misleading.

Risk is a probability that depends on the severity of a hazard and the likelihood of exposure to that hazard. This does not seem to be captured in the Appendix.

Examples of acceptable risk and risk minimization that include pregnant women, vaccines, DDT, and food are potentially controversial and detract from the overall point. Many statements are heavy with generalizations and colloquial language that shows bias. For example, from Pg. 106/112, Chemicals in consumer products (what about other types of products) can be used at minimal risk (to whom? What is minimal? Does it vary depending on population?) through proper engineering controls (what is proper? Who decides?) during manufacture (what about at other product life cycle stages) and by minimizing exposures during use (how), thereby reducing the risk to acceptable levels (what acceptable levels? And to whom?)

Using bold and capital letters to make the point is unprofessional and unnecessary in this document.

- **Proposed Response:** Accept as Modified.
- **49 – 33. Substantive. 13.**
 - **Comment:** Delete
 - **Reason:** Who wrote this piece? It doesn't show an author. Was this peer reviewed? Why is this in the standard? I would take this out and have it as a stand-alone piece and reference it where needed. There are many references in here that are not properly cited.
 - **Proposed Response:** Accept.
 - **For All Responses:** The Appendix will be removed from the Standard and will available on the GBI Website and referenced as an informational reference in the Standard. The white Paper will be revised and approved by the Risk Assessment Working Group and Materials Subcommittee.
 - **Subcommittee Vote:** Unanimously in favor

MOTION: The motion was made and seconded to accept the Subcommittee's recommendations on all four comments [18 – 17, 41 – 4, 52 – 65, & 49 – 33].

Discussion took place on the Motion:

- Clarification was provided that each comment will be accepted or accepted with modification, using the same qualifying statement.

VOTE: The motion carried with 22 in favor, none opposed, and none abstained.

None Opposed

None Abstained

-Kibert resumed the Chair of the Consensus Body

Indoor Environmental Quality

(Presented by Chris Dixon, Vice Chair of the Indoor Environmental Quality Subcommittee)

- **2 – 1. General. 10.3.1 (Sent from Materials to IEQ)**
 - **Comment:** This section is a rational method for assessing chemical and product risks. For naturally occurring chemicals such as formaldehyde and vocs, there should be consideration for comparing product-based exposure versus exposure from some established natural background levels and for human occupancy and activities.
 - **Reason:** Natural background exposures should be considered as a baseline.

- **Proposed Response:** Reject. Natural background emissions are taken into account with the VOC product criteria and the VOC building criteria. The possibility of testing for background VOC was considered impractical.
- **Subcommittee Vote:** 6 in favor, none opposed, 1 abstained

MOTION: The motion was made and seconded to accept the Subcommittee's response.

VOTE: The motion carried with 19 in favor, none opposed, and 3 abstained.

None Opposed

Abstained: Susan Gitlin, Jeff Bradley, Greg Johnson

- **3 – 1. Substantive. 11.5.4**

- **Comment: ~~11.5.4.1~~ Reverberation Time (RT) in quiet areas and all other areas where speech intelligibility is important does not exceed the following values as applicable:**
 - ~~Offices: 0.6 to 0.8 seconds;~~
 - ~~School classrooms: 0.4 to 0.6 seconds;~~
 - ~~Presentation spaces (conference rooms, training rooms, etc.): 0.4 to 0.6 seconds; and~~
 - ~~All other spaces: 1.5 seconds.~~

11.5.4 Reverberation Time or Ceiling Noise Reduction Coefficient (NRC)¹

11.5.4.1 Either the reverberation time of the room (RT) or the Noise Reduction Coefficient¹ (NRC) rating of the ceiling complies with the following values.

- Offices (enclosed): RT 0.6 seconds or NRC 0.75
- Offices (open): RT 0.4 seconds or NRC 0.90
- School classrooms: RT 0.6 seconds or NRC 0.80
- Presentation and meeting spaces: RT 0.5 seconds or NRC 0.80
- **Healthcare:**
 - Patient/resident care areas: 0.5 seconds or NRC 0.90
 - Medication safety zones: 0.5 seconds or NRC 0.90
 - Exam/treatment rooms: 0.5 seconds or NRC 0.90
 - Activity/waiting areas: 1.5 seconds or NRC 0.75
- **Music Rooms:**
 - Performance: 1.8 seconds
 - Rehearsal (large group): 1.5 seconds
 - Practice (individual or small group): 1.0 second
 - All other spaces where speech intelligibility, concentration, privacy or sleep/relaxation is required: RT 1.0 seconds or NRC 0.80.

¹ A prerequisite of using the ceiling Noise Reduction Coefficient criterion instead of the reverberation time criterion is that the average ceiling height in the room or space is not greater than 12 feet above the finish floor. If the average ceiling height exceeds 12 feet, the reverberation

- **Reason:** The proposed changes are based on the following:
 1. Healthcare specific spaces are not listed. A reverberation time of 1.5 seconds (as currently indicated) implies that there is not enough sound absorption in the room to provide patients and elder- residents auditory privacy, to reduce noise for undisturbed sleep, relaxation and healing and to safely and accurately work with medications. *Therefore we have added healthcare specific spaces to the list.*
 2. The section description says "not to exceed value", yet a range of values is given. This contradiction could confuse users of the protocol, making them think that there is a range within which the actual value must fall in order to comply with the protocol.

Therefore we have provided a single, not-to exceed, value by striking out the lower part of the current range.

3. In many spaces such as corridors, open office areas, nurses' stations, etc. that do not have boundary walls and the proportions to setup a reverberant field, the use of reverberation time as a metric is not advisable. In other simple, enclosed rooms such as classrooms, gymnasiums, etc. reverberation time is a good metric to use. In many rooms, areas and spaces, especially in healthcare facilities, the primary sound absorption is provided by the ceiling. Wall and floor absorption is not used as frequently because of maintenance concerns the potential relationship between porous materials and the transmission of infectious pathogens. The ceiling(s) being the only sound-absorptive surface is common in other types of facilities too, especially in sustainable designs where carpeting is used less frequently.

It is extremely time consuming and laborious to calculate or measure reverberation time in every room of a facility to check compliance with the protocol. We dare to suggest that in many cases people are not able to do all these calculations and measurements. A more efficient metric to use in many cases is the ceiling Noise Reduction Coefficient (NRC) rating. *We propose adding ceiling Noise Reduction Coefficient as an alternate means of showing compliance when the average ceiling height is less than 12 feet above the finish floor.* Yet, we do not propose this alternate method for all room types. In some cases, reverberation time should be the only available metric for compliance with the protocol.

Implementing this proposed revision will mean that both the designer and the assessor can very efficiently check compliance for many (not all) rooms simply by reviewing the finish schedule and specifications for the ceiling Noise Reduction Coefficient. For other more critical rooms, they will still need to calculate reverberation time.

The ceiling Noise Reduction Coefficients proposed are based on various sources. For offices, they are based on the GSA P100 Standard for Federal Office Buildings (2010). For schools, they are based on ANSI/ASA S12.60. For healthcare, they are based on Evidence Based Design from The Center for Health Design. Applicable excerpts have been attached.

Note: Please note that the basic concept of using both reverberation time and ceiling NRC is already in place in other standards and guidelines. Refer to AS- NZS 2107 as an example.

- **Proposed Response:** Accept with modification. Music Rooms and related subparagraphs omitted. Acoustical performance of these types of spaces vary greatly depending on type of music being played, and room size and configuration. It is not uncommon for these types of spaces to have the ability to change the acoustic characteristics depending on the need.
- **Subcommittee Vote:** 7 in favor, 2 abstained.

MOTION: The motion was made and seconded to accept the Subcommittee's recommendations.

Discussion took place on the Motion:

- It was stated that this motion includes an alternate pathway, improving upon what we had for this Section.

- One participant spoke in favor of the change, stating that having the option without the requirement is beneficial.

AMENDMENT: The amendment was made and seconded to add “either the maximum reverberation time...” “following values” adding “as applicable.”

Objections were raised to the Amendment.

Discussion took place on the Amendment:

- Concern was raised that there were no acoustics experts present to verify that this is the correct course of action.

MOTION TO WITHDRAW: The motion was made to withdrawing the Amendment. There was not a second to the motion and Objections were raised to withdrawing the amendment. The Amendment was NOT withdrawn.

AMENDMENT TO THE AMENDMENT: The motion was made and seconded to amend the amendment to add “or the minimum Noise Reduction Coefficient...”

Discussion took place on the Amendment:

- The question was raised whether this was a complete sentence.

There were no objections to the Amendment to the Amendment.

VOTE ON THE AMENDED AMENDMENT: The Amended Amendment carried with 12 in favor, 2 opposed, and 6 abstained.

Opposed: Chris Dixon, Thomas Pape

Abstained: Kent Sovocool, Susan Gitlin, Erika Winters-Downey, Josh Jacobs, Tien Peng, Jeff Bradley

Discussion took place following the Amended Motion:

- It was stated that the final paragraph is incomplete and doesn’t make sense. The incomplete sentence needs to be struck.

AMENDMENT: The motion was made and seconded to strike the full final footnote in 11.5.4.1.

MOTION TO REFER TO SUBCOMMITTEE: The motion was made and seconded to send back to the IEQ Subcommittee.

Discussion took place on the Motion:

- One member stated there is a correlation problem here where values don’t match up the way one would expect.

VOTE: The motion carried with 19 in favor, none opposed, and 2 abstained.

None Opposed

Abstained: Jane Rohde, Bill Carroll

Whole Document Comments:

(Presented by Charles Kibert)

- **9 – 2. Substantive. 3.3 Table 3**
 - **Comment:** If criterion conflicts with best practices based on regional or sub-regional climactic differences.
 - **Reason:** Adding sub regional to this table allows users of the standard additional flexibility up front when reviewing/using the standard.
 - **Proposed Response:** Reject. Regional climatic differences encompass sub-regions. The standard therefore provides sufficient flexibility for site conditions.

MOTION: The motion was made and seconded to accept the proposed response.

VOTE: The motion carried with 21 in favor, none opposed, and none abstained.

None Opposed

None Abstained

- **9 – 1. Substantive. 3.2 Table 2**
 - **Comment:** ~~2. attain a minimum percentage of points in each environmental assessment area as denoted in Table 2 (Also remove from Table 2)~~
 - **Reason:** Flexibility for users of the standard is a key benefit of the GG standard. Allowing projects with innovative components and green design elements to have flexibility when applying the standard is important.
 - **Proposed Response:** Reject. It is the professional judgment of the Consensus Body that a balanced approach to sustainable building yields broader benefits.

MOTION: The motion was made and seconded to accept the proposed response.

Discussion took place on the Motion:

- The concern was raised that this reduces the flexibility of the Standard and the speaker stated their opposition to the motion.
- It was stated that having minimum percentages of points in each Assessment Area ensures balance and the speaker stated their support of the motion.

VOTE: The motion carried with 15 in favor, 3 opposed, and 2 abstained.

Opposed: Greg Johnson, Allan Bilka, Jeff Bradley

Abstained: Malee Kaolawanich, Paul Bertram

- **14 – 17. General. 12**
 - **Comment:** ASHRAE Standards such as 160 and 90.1 are ANSI approved and should be consistently categorized in section 12 References and Guidelines. For example, ASHRAE 90.1-2013 is listed under both ANSI Standards and ASHRAE Standards, but improperly named under ASHRAE.
 - **Reason:** None Given
 - **Proposed Response:** Accept with modification. Standards will be identified by the organization serving as Secretariat.

MOTION: The motion was made and seconded to accept the recommended response.

Discussion took place on the Motion:

- It was clarified that GBI staff have not yet verified the correct designations and this will be part of the editorial process.

VOTE: The motion carried with 20 in favor, none opposed, and none abstained.

None Opposed

None Abstained

- **50 – 16. Substantive. 12.**
 - **Comment:** ICC 2012 and 2015 are listed. Is this wise?
 - **Reason:** As noted above, having different reference years in the same document sets up potential conflicts.
 - **Proposed Response:** Reject. These have been chosen intentionally on a case-by-case basis.

MOTION: The motion was made and seconded to accept the recommended response.

VOTE: The motion carried with 17 in favor, 1 opposed, and none abstained.

Opposed: Don Horn

None Abstained

- **50 – 15. Substantive. 12.**

- **Comment:** Not all of the ASHRAE versions that are currently referenced throughout the document are listed here.
- **Reason:** As noted above, there are multiple version years noted. Based on resolution of those comments, fix the references.
- **Proposed Response:** Staff will verify that all references are listed appropriately

MOTION: The motion was made and seconded to accept as noted and have staff verify.

Discussion took place on the Motion:

- Clarification was provided that Staff will verify that all references are listed as part of the editing process.

VOTE: The motion carried with 18 in favor, none opposed, and none abstained.

None Opposed

None Abstained

MOTION: The motion was made, seconded, and carried to adjourn Part I of Meeting #22.

None Opposed.

None Abstained.

--Meeting adjourned: 2:21PM ET--

Part II:

Wednesday, August 17, 2016

Welcome & Roll Call

Secretariat, Maria Woodbury welcomed participants and conducted roll call to establish quorum. The anti-trust statement was reviewed and participants were requested to comply with it fully.

Woodbury reviewed the participation options, stating that while observers are welcome to participate in the discussion, only Consensus Body Members are able to vote. Participants were reminded to raise hands should they desire to add something new to the discussion and staff would then call on them in order.

At this meeting, one member voted using a voting alternate (John Cross for Erika Winters-Downey). There were two members voting via proxy (William Freeman for George Thompson and Jane Rohde for William Carroll).

Administrative Procedures and Related Matters

Chair, Mike Lehman reminder participants not to repeat a comment or discussion point that has already been said as avoiding circular arguments will help speed the process.

Discussion of public comments

Site

(Presented by Greg Johnson, Site Subcommittee Vice Chair.)

• **36 – 5. Substantive. 7.1.2.3**

- **Comment:** Define “wildland-urban interface area”.
- **Reason:** I’m not sure many design professionals are familiar with this concept or would know what legislative body to contact to get more information.
- **Proposed Response:** Accept as modified. Added to the end of sentence “as established by the legislative body with jurisdiction” and “with jurisdiction” to the N/A. It is up to the particular jurisdiction to determine where the wildland-urban interface area lies, and this standard cannot predict what specific definition the jurisdiction will use. Rather than specify a definition, therefore, we will add a few informational references to the credit.

Following are two examples of published definitions of the wildland-urban interface area:

The International Code Council’s 2015 International Wildland-Urban Interface Code defines the wildland-urban interface area as “that geographical area where structures and other human development meets or intermingles with wildland or vegetative fuels.” The recent Federal Executive Order 13728, Wildland-Urban Interface Federal Risk Mitigation, refers to USDA’s The 2010 Wildland-Urban Interface of the Conterminous United States for determining whether a building is in a wildland urban interface. The USDA document broadly describes the wildland urban interface as “the area where structures and other human development meet or intermingle with undeveloped wildland” and, more specifically, defines it in this way:

WUI Definition (WUIs are composed of both interface and intermix communities.)

Intermix: Areas with ≥ 6.18 houses per km² and ≥ 50 percent cover of wildland vegetation

Interface: Areas with ≥ 6.18 houses per km² and < 50 percent cover of vegetation located < 2.4 km of an area ≥ 5 km² in size that is ≥ 75 percent vegetated

- **Subcommittee Vote:** 4 in favor, 3 opposed, 1 abstained

MOTION: The motion was made and seconded to accept the Subcommittee’s recommendation.

VOTE: The motion carried with 19 in favor, none opposed, and none abstained.

None Opposed

None Abstained

• **52 – 9. Substantive. 7.2.1.4:**

- **Comment:** Revise as follows: ~~The site is located within .25 mi (0.4 km) of a~~ A path for bicycles is provided directly from bicycle parking facilities to a public bicycle path, multi-user path, or on a road with an existing bicycle lane.
- **Reason:** Three points is a lot of points for merely locating the site a quarter mile away from a bicycle path. Points should only be awarded if the building is directly connected to a bicycle path such that a bicyclist can bicycle directly from the road or path to the bicycle parking facilities.
- **Proposed Response:** Accept as modified. “7.2.1.4 ~~The site~~ A building entrance is located within 0.25 mi (0.4 km) of a public bicycle path, multi-user path, or on a road with an existing dedicated bicycle lane.
A bicycle lane or multi-user path connects the public path or lane to the building entrance.”

- **Subcommittee Vote:** 7 in favor, 1 abstained.

MOTION: The motion was made and seconded to accept as modified using the proposed response.

Discussion took place on the Motion:

- Concern was raised that it is not always possible for a building to be connected to a public path and that there should be a non-applicable added.
- It was stated that the Subcommittee proposed the addition language that states that a bicycle network connect within 5 miles of a transit stop. The Subcommittee wanted to push new constructions to build with this in mind.

VOTE: The motion carried with 15 in favor, 1 opposed, and 3 abstained.

Opposed: Nicole Dovel-Moore

Abstained: Jeff Bradley, Bill Freeman, George Thompson

- **36 – 9. Substantive. 7.2.1.4:**

- **Comment:** Recommend adding requirement of a safe bike route to a residential area or transit hub.
- **Reason:** Need to have some requirement that the bike lanes actually provide usable connectivity.
- **Proposed Response:** Accept as modified using the following language. “The path, lane, or associated bicycle network connects within 5 mi. (X km) to a transit stop as described in 7.2.1.1 or to developed residential land of at least 8 dwelling units per acre.”
- **Subcommittee Vote:** 6 in favor, 2 abstained

MOTION: The motion was made and seconded to accept as modified using the subcommittee’s proposed response.

Discussion took place on the Motion:

- The question was raised whether this response truly accepts the comment as modified. Some participants felt that it does.
- It was clarified that projects need to comply with all three criteria in order to earn the three points. It is an all or nothing credit.

AMENDMENT: The amendment was made and seconded to insert an “and” between each of the 3 paragraphs of language to clarify.

Discussion took place on the Amendment:

- The question was raised regarding why points couldn’t be earned for doing one of the three. It was reiterated that this is intended to be an all or nothing credit.
- Concern was raised that the credit is getting too complex and may discourage people from attempting to achieve it.
- The opinion was raised that having a path that’s close but not connected is still better than not being close to a path.
- It was stated that it’s not useful if the bike path isn’t accessible for occupants or the path leads to nowhere.
- The opinion was raised that the path should connect to a bike rack, not the building entrance.

VOTE ON AMENDMENT: The Amendment carried with 12 in favor, 3 opposed, and 4 abstained.

Opposed: Don Horn, Jeff Bradley, Greg Johnson

Abstained: David Eldridge, John Cross, Paul Bertram, Chris Dixon

VOTE ON MOTION: The amended motion carried with 13 in favor, 4 opposed, and 2 abstained.

Opposed: Jeff Bradley, John Cross, Greg Johnson, Don Horn

Abstained: Chris Dixon, David Eldridge

- **52 – 22. Substantive. 7.4.2:**

- **Comment:** Revise as follows: Site plans, including all areas of hardscape;
- **Reason:** The inclusion of areas of hardscape is important for documentation of 7.4.1.2 and is also relevant for 7.4.1.1.
- **Proposed Response:** Accept
- **Subcommittee Vote:** 5 in favor, 1 opposed, 2 abstained

MOTION: The motion was made and seconded to accept the response.

VOTE: The motion carried with 16 in favor, 1 opposed, and 2 abstained.

Opposed: Allan Billka

Abstained: John Cross, Chris Dixon

- **34 – 17. Substantive. 7.4.1.2:**

- **Comment:** Remove this line item and add points to 7.4.1.1.2
- **Reason:** Not clear on 4 pt benefit; natural buffers are an exceptional resource to be protected but such is typically done by the state natural resources administration via permit requirements.
- **Proposed Response:** Reject. State requirements may not be applicable on privately owned properties such as those that would apply for GBI certification.
- **Subcommittee Vote:** 8 in favor, none opposed, none abstained.

MOTION: The motion was made and seconded to accept to reject using the proposed response.

VOTE: The motion carried with 18 in favor, none opposed, and 1 abstained.

None Opposed

Abstained: Jeff Bradley

- **52 – 21. Substantive. 7.4.1.2:**

- **Comment:** In the right-hand column, add: “Not applicable where no natural water bodies exist on or within 100 feet of the site.”
- **Reason:** This buffer is important. However, the points should only be awarded when a conscious decision is made to place structures and hardscapes away from a waterbody. When no such waterbodies exist, the points should not be available.
- **Proposed Response:** Reject. The current language of the Standard already restricts points to appropriate sites.
- **Subcommittee Vote:** 7 in favor, 1 abstained.

MOTION: The motion was made and seconded to reject the comment using the proposed response.

VOTE: The motion carried with 18 in favor, 1 opposed, and 1 abstained.

Opposed: Allan Billka

Abstained: Susan Gitlin

- **36 – 14. Substantive. 7.4.1.1.2:**

- **Comment:** The site retains at least 95th percentile storm~~% of the total average annual rainfall~~ volume as per a site water balance assessment, to be included in the *stormwater* management report.
- **Reason:** Other stormwater design guidance refers to storm volume, not total annual volume. I recommend changing the standard to address single storm volume for consistency with other regulations and project requirements.
- **Proposed Response:** Accept as Modified. We made an editorial change to insert “the”.
- **Subcommittee Vote:** 7 in favor, none opposed, none abstained.

MOTION: The motion was made and seconded to accept as modified using proposed response.

•

VOTE: The motion carried with 19 in favor, none opposed, and 1 abstained.

None Opposed

Abstained: Thomas Pape

• **34 – 15. Substantive. 7.4.1.1.2:**

- **Comment:** Clarify this requirement: is it to RETAIN the 95th percentile storm or 95% of average annual total rainfall
- **Reason:** The terms "retain" or "detain" are too often used interchangeably by persons not well grounded in the discipline. The difference in meaning can be addressed in the technical manual but I would suggest capitalizing the intended word or add in parenthesis "(not just detain)". If the intent is to retain 95% of total rain, it is unlikely many project will meet such criteria (although I am an advocate for encouraging such).
- **Proposed Response:** Accept as modified. The language has been corrected to address the 95th percentile storm, but we disagree that it is necessary to capitalize the word "retain"
- **Subcommittee Vote:** 7 in favor, 1 opposed, none abstained.

MOTION: The motion was made and seconded to accept the proposed response.

Discussion took place on the Motion:

- It was stated that detain isn't an accurate enough word choice and that retain should be changed to "managed".
- It was determined that this discussion point isn't related to the comment being addressed.

VOTE: The motion carried with 20 in favor, none opposed, and none abstained.

None Opposed

None Abstained

• **29 – 4. Substantive. 7.3.1.3:**

- **Comment:** Add these points to the description of 7.3.1 additive to the paths? Otherwise this isn't part of 7.3.1 as 7.3.1.3.
- **Reason:** None Given
- **Proposed Response:** Accept in principle. Restructure to provide clarity and consistency.
- **Subcommittee Vote:** 7 in favor, 1 opposed, 2 abstained

MOTION: The motion was made and seconded to accept as modified using the proposed response

Discussion took place on the Motion:

- It was clarified that this change will be made by GBI staff during an editing phase and that the final edited document will go to the Consensus Body for approval prior to the second Public Comment Period.

VOTE: The motion carried with 20 in favor, none opposed, and none abstained.

None Opposed

None Abstained

• **52 – 28. Substantive. 7.5.1.5.2:**

- **Comment:** Delete the section.
- **Reason:** 7.5.1.5.2 is not clear (maturation at a 5-year growth rate?), and provides a point for something that should be self-evident, i.e., give a plant enough room to

achieve its full growth potential. Moreover, how would the assessor evaluate this? The point could be better allocated.

- **Proposed Response:** Accept by deleting 7.5.1.5.2.
- **Subcommittee Vote:** 6 in favor, none opposed, none abstained.

MOTION: The motion was made and seconded to accept the comment using proposed response.

VOTE: The motion carried with 20 in favor, none opposed, and none abstained.

None Opposed

None Abstained

- **31 – 4. Substantive. 7.5.1.5:**

- **Comment: 7.5.1.5** The landscape design shows that plants are located on the site as follows:

- **7.5.1.5.1:** Plants with similar water requirements are grouped together; and

- **7.5.1.5.2:** Plants are spaced to allow for maturation at a 5-year growth rate and trees at a 10-year maturation.

Maximum = 3 points or N/A

- Two points are earned if plants are grouped according to water requirements.

- One point is earned if plants are spaced to allow for maturation.

- Not applicable where all of the landscaping is a preserved natural area or where there is no

room for landscaping

- **Reason:** 7.5.1.5.2 spacing trees at a 5-year maturation will cause overcrowding as the plants mature. There should be a longer time for trees since their growth rate is slower than other plants. Crowding the plants to get quicker cover eventually causes additional maintenance problems, including an increase in water to maintain them in an over-crowded condition.
- **Proposed Response:** Accept as modified. The committee agrees with your point, but will be deleting the section 7.5.1.5.2 entirely.
- **Subcommittee Vote:** 6 in favor, none opposed, none abstained

MOTION: The motion was made and seconded to reject. The committee agrees with your point but will be deleting the section.

Discussion took place on the Motion:

- It was stated that we are taking a different approach to this section by deleting it, but the response to each comment should stand on its own. The speaker felt the response should be “Accept as modified”.

VOTE: The motion carried with 19 in favor, none opposed, and 2 abstained.

None Opposed

Abstained: Susan Gitlin, Thomas Pape

- **34 – 20. Substantive. 7.5.1.5.1:**

- **Comment:** Delete this section

- **Reason:** This is part of good professional practice which would be implicit 7.5.1.1

- **Proposed Response:** Reject. While the committee agrees that it should be standard practice, many landscapes are not designed this way. This practice is important to water use efficiency.

- **Subcommittee Vote:** 6 in favor, none opposed, none abstained.

MOTION: The motion was made and seconded to reject the comment using the proposed response.

Discussion took place on the Motion:

- It was stated that plants would never be grouped based on water needs. Concern was raised that if we're trying to get people to do landscape not needing irrigation, this is an artificial and arbitrary labeling. It was stated that if you don't need irrigation, this grouping method still accommodates that.
- It was stated that it's not appropriate to reject the comment if we're adding language. The preference is to not require any additional water. The intent of this was not to give points to projects that didn't require irrigation.

MOTION TO WITHDRAW: The motion was made and seconded to withdraw the motion.

Objections were raised to withdrawing the motion.

Discussion took place on the Withdrawal:

- The concern was expressed that modifying the response would not address the commenter's concern and the speaker felt the comment should be sent back to the Subcommittee.
- It was clarified that choosing not to irrigate is a points option in the Standard under the Water Assessment Area. The sentiment was expressed that this overall credit should be moved to the Water Efficiency Assessment Area.

VOTE ON WITHDRAWAL: The motion carried with 17 in favor, 1 opposed, and 1 abstained.

Opposed: Susan Gitlin

Abstained: Allan Billka

MOTION WITHDRAWN

MOTION TO REFER TO SUBCOMMITTEE: The motion was made and seconded to refer to subcommittee

Discussion took place on the Motion:

- The question was raised whether this credit needs to be non-applicable when there is no irrigation system. The Consensus Body was reminded that the decisions being made will go out for another round of Public Comment. The speaker was opposed to referring back to the Subcommittee, stating that this was a simple question.
- It was stated that this is more than a non-applicable issue and the credit needs to be looked at comprehensively before the next round of comments due to the major changes that have been made.
- The question was raised if there are environmental benefits to grouping plants based on water needs. It was stated that it's always possible that irrigation could be added later, so grouping plants based on water use is better. Another participant stated that they have not seen a point where it's beneficial or encouraged to group plants together in this way.
- The opinion was raised that this comment is misplaced and referring it back to Subcommittee isn't ideal.
- It was stated that this comment should be rejected. This entire discussion is technically new business.

VOTE ON REFERRAL: The motion to refer to subcommittee failed with 6 in favor, 9 opposed, and 2 abstained

Opposed: Allan Billka, Jeff Bradley, Josh Jacobs, John Cross, Greg Johnson, Paul Bertram, Gary Keclik, Jane Rohde, Bill Carroll

Abstained: Doug Tucker, Thomas Pape

MOTION: The motion was made and seconded to reject the comment. The concerns raised can be addressed in new business.

Discussion took place on the Motion:

- It was stated that there is only a requirement for plants spaced together. This should be deleted. The speaker spoke in opposition to the motion.
- It was stated that this has likely been addressed in another area. The points won't be left as-is.

VOTE: The voted tied with 8 in favor, 8 opposed, and 1 abstained. The Chair broke the tie by voting in favor of the motion. The Motion carried with 9 in favor, 8 opposed, and 1 abstained.

Opposed: Karen Joslin, Allan Billka, Jeff Bradley, Greg Johnson Thomas Pape, Don Horn, Jane Rohde, Bill Carroll

Abstained: Gord Shymko

Discussion took place on the Reason:

- Concern was raised that the reason that accompanied the response might not be relevant. There was not opposition to retaining the reason.

--15 minute break--

Water Efficiency:

(Presented by Subcommittee Chair, Kent Sovocool)

Old Business

- **52 – 35. Substantive. 9.6.2.2**
 - **Comment:** Establish a new subsection for alternate sources of water for outdoor uses other than irrigation. The alternative sources of water could be reclaimed, harvested or reused water, condensates, etc. They could be used for evaporative cooling, wash waters, and construction, e.g., cement or other materials that require water.
 - **Reason:** The system should incentivize the uses of alternative water sources for outdoor activities excluding irrigation consistent with the points awarded for indoor uses of recycled or harvest rainwater. (5-10 points.)
 - **Proposed Response:** Accept as modified. 9.6.2.1 has been revised. The committee is not establishing a new subsection, but changing 9.6.2.1 to incorporate other uses besides irrigation.
 - **Subcommittee Vote:** 5 in favor, none opposed, none abstained.

FROM MEETING #21:

MOTION: The motion was made and seconded to accept the comment as modified using the proposed response.

AMENDMENT: The amendment was made and seconded to add “remove the last bullet item” to the proposed response.

Objections were raised on the Amendment.

Meeting #22: Discussion took place on the Amendment:

- The point was made that if landscaping is truly adaptive and native, not needing additional irrigation, and landscaping plans to do terracing for water storage; points are denied unless the last line is taken out. Or, a whole new section could be added to provide points for doing this action. This method is more environmentally friendly.

- It was clarified that there is a maximum reward where this is done already in the Standard. It was stated that the other section is about installed irrigation. This is about the use of alternate methods for collecting water.
- Concern was raised that this whole section is problematic. “Beneficial use of water” is entirely subjective.
 - Point of Order:** Participants were reminded that the discussion should be reserved for removing the last bullet.
 - The previous speaker responded that the discussion was pertinent to section, stating that the whole section should be deleted.
- The question was raised if participants on the call truly believe irrigation has no benefit.
- It was clarified that the “N/A” at the top of the column will be removed during editorial process if the last bullet is removed.

VOTE ON AMENDMENT: The amendment carried with 9 in favor, 5 opposed, and 5 abstained.

Opposed: Jeff Bradley, Greg Johnson, Gary Keclik, Jane Rohde, Bill Carroll

Abstained: Nicole Dovel-Moore, Chris Dixon, Paul Bertram, Doug Tucker, Tien Peng

Discussion took place on the Amended Motion:

- Concern was raised that users could game the system the way this language is currently structured. It was stated that the formula is not structured in a quantifiable metric of how much water is being saved, or thresholds to underpin the percentages.
- One speaker stated that in theory project can have scorched earth and not be irrigating and still earn points.

AMENDMENT: The amendment was made and seconded to say “Not applicable where the landscape area is less than 5000SF.”

Discussion took place on the Amendment:

- The question was raised whether the new language meant landscape area or vegetative area?
- It was stated that the language should read, “for any vegetative area that is less than twice the footprint of the building.”
 - One participant spoke in disagreement stating that if a project has an alternate water supply they wouldn’t be able to get points.

SUBSTITUTION TO THE AMENDMENT: The motion was made and seconded to substitute the following language into the amendment: “Not applicable where the vegetative landscape area is less than the footprint of the building.”

Discussion took place on the Substitution:

- Concern was raised that there is a fundamental problem with the proposed substitution.
- It was stated that the credit originally it refers to “outdoor use” but really only means irrigation. The Water Subcommittee revised the language in an effort to incorporate more than irrigation.
- It was stated that “Beneficial use” refers to a purpose that is more than just having water freely go down the street or on the land.
- Concern was raised that there are many properties where landscape area does not equal footprint size. The speaker was against the substitution.
- A person spoke in agreement that it needs to be much smaller.

VOTE ON SUBSTITUTION: The substitution carried with 7 in favor, 6 opposed, and 7 abstained

Opposed: Chris Dixon, Susan Gitlin, Kent Sovocool, Gary Keclik, Gord Shymko, Tien Peng

Abstained: Bill Freeman, George Thompson, Jeff Bradley, Josh Jacobs, John Cross, Jane Rohde, Bill Carroll

AMENDMENT TO THE AMENDMENT: The amendment was made to say “the vegetative landscape area is less than 20% of the footprint of the building.”

Discussion took place on the Amendment to the Amendment:

- Concern was raised that this is an inherent problem throughout the Standard. The suggestion on the table could be replicated in other parts of the Standard.
- The opinion was raised that this should be taken offline to a small group task force. Concern was raised that the topic is not ready to be voted at the Consensus Body level.

There was no second to the Amendment to the Amendment.

Discussion took place on the Original Substituted Amendment:

- Concern was raised that the credit is becoming unattainable and would discourage people that otherwise could get the points.
- It was stated that 15 points is an inordinate number of points for a 10ftx10ft of landscape. The speaker stated they would support the change if it were a smaller amount of points for smaller square footage.
- The suggestion was made to say 5,000 ft.² or the footprint of the building.
- The opinion was reiterated that this needs to be taken offline. Concern was raised that this is too complicated for the Consensus Body to address at this time.

MOTION TO REFER TO SUBCOMMITTEE: The motion was made and seconded to return this item to the Water Subcommittee for additional work.

Discussion took place on the Motion:

- One speaker spoke in support of this motion and additionally stated that the Subcommittee should consider changing the points structure so it's not a barrier. The speaker also felt that “beneficial use” should be further clarified.

VOTE: The motion carried with 18 in favor, none opposed, and 1 abstained.

None Opposed

Abstained: Thomas Pape

• **57 – 6. Substantive. 9.6.1**

- **Comment:** 9.6.1.1 Maximum = ~~10~~ 20 points
Points are earned where a percentage of water for nonpotable uses will be harvested on-site or reclaimed:
 - ~~Ten~~ Twenty points are earned for greater than 75%.
 - ~~Eight~~ Sixteen points are earned for 51-75%.
 - ~~Six~~ Twelve points are earned for 25%-50%.
 - ~~Three~~ Six points are earned for 15%-24%.
 - No points are earned for less than 15%. 9.6.1.2
- 2 ~~4~~ points
- **Reason:** Use or pre-piping for alternate sources of water for indoor non-potable water would seem to have a more significant impact on potable water use than the current point scaling.
Use of alternate water, especially harvested rainwater for flushing fixtures, laundry, or other non-potable applications could conserve significant amounts and Zurn PEX recommends doubling the section points to be more in line with the benefit.
- **Proposed Response:** Accept. Noting that points are in flux at this time.
- **Subcommittee Vote:** 4 in favor, none opposed, none abstained

MOTION: The motion was made and seconded to accept the Subcommittee's recommendation.

Discussion took place on the Motion:

- It was stated that this is a similar issue as before. Concern was raised that these are the wrong metrics and that percentages don't work for these Sections.
- One speaker felt that since this Standard is intended to be a one-size-fits-all for many different building types, then percentage is the best way.
- Concern was raised that if points are being added, we need to know where they are coming from.

VOTE: The motion carried with 14 in favor, 2 opposed, and 3 abstained.

Opposed: Jeff Bradley, Greg Johnson

Abstained: Allan Bilka, Thomas Pape, Tien Peng

- **34 – 35. Editorial. 9.6.3**
 - **Comment:** Add points to this section from 9.4
 - **Reason:** This is the future and should be encouraged; glad to see this added but wish more points were allocated
 - **Proposed Response:** Reject on the basis that the commenter did not provide a clear explanation as to why additional points are warranted.
 - **Subcommittee Vote:** 4 in favor, none opposed, none abstained.

MOTION: The motion was made and seconded to accept the subcommittee's recommendation to reject.

VOTE: The motion carried with 18 in favor, none opposed, and 1 abstained.

None Opposed

Abstained: Susan Gitlin

- **22 – 6. Substantive. 9.7.1.5:**
 - **Comment:** Tenant water use is *metered* where tenants use more than an estimated ~~1,000~~ 500 gal/day or 12,000 gal/month or 150,000gal/year.
 - **Reason:** As a large water utility we would like to more metering and sub metering especially for customers that use a large quantity of water. We feel the original thresholds are too high and that it could be easy to manipulate data to get below an estimated use of 1,000 gal/day.
- **33 – 8. Substantive. 9.7.1.5:**
 - **Comment:** Statement: "Tenant water use is individually metered in each case where a tenants is predicted to use more than ~~an estimated~~ 1,000 gal/day"
 - **Reason:** The provision as written provides a large loophole because of a lack of clarity. Proposed clarification to specify that individual tenants are metered, **NOT** a collective metering of all tenants with one meter in those cases where collective water use exceeds 1,000 gallons per day.
- **45 – 4. General/Substantive. 9.7.1.5:**
 - **Comment:** N/A: section needs clarification and rewrite
 - **Reason:** Metering and submetering are not clearly defined. In fact, they appear interchangeable by definition. "Metered" usually suggests a connection which is billed by a utility. Submetered, usually suggests a connection downstream of a utility meter that is owned and operated by the property. It isn't usually feasible to "mete" a cooling tower, they are more often "submetered" it isn't clear if I only get points for metering tenants that use over 100 gpd or if that is just a recommended threshold. In general, if

this section doesn't get more attention, I think you'll find it creates an extraordinary amount of confusion.

- **Proposed Response:** Accept as modified. Include informational references. Sub-metering in multi-tenant buildings is a practice that has been shown to result in water savings when tenants are provided access to their consumption data and billed according to that consumption, rather than a pre-proportioned amount of the development's total water bill. The assignments of points based upon percentage of implementation is consistent with other parts of the guidance. 10 points is a more appropriate value for this based upon likely savings and the points percentage allocation methodology.
- **Subcommittee Vote:** 4 in favor, none opposed, none abstained.

MOTION: The motion was made and seconded to accept as modified per the Subcommittee's recommendation

Discussion took place on the Motion:

- One speaker stated their support for the motion, opining that the modifications to the language were "terrific"

VOTE: The motion carried with 17 in favor, none opposed, and 2 abstained.

None Opposed

Abstained: Jeff Bradley, Greg Johnson

New Business:

No New Business was proposed but concern was raised about the idea that previous Consensus Body decisions can be overturned by the introduction of old issues as new business.

It was stated that New Business is addressed on a case-by-case basis in the interest of creating the best GBI Standard

The suggestion was made that perhaps GBI could create a standard/rule that polices this better.

Lehman stated that he would welcome any ideas or suggestions for making the process smoother.

Review of Schedule/Status Update:

- Next Meeting August 31st: 11am-3pm EDT
- Woodbury reminded members to return their signed copy of the Code of Conduct by September 30th.

Randolph reported that the Consensus Body voted on a total of 17 comments on Part II of the meeting and voted on a total of 42 comments over the course of the two-day-long Meeting #22. The Consensus Body has now completed the comment queue and is 94% of the way through responding to comments. There are roughly 40 to 50 comments remaining.

MOTION: The motion was made, seconded and carried to adjourn Part II of CB Meeting #22.

None Opposed

None Abstained

--Meeting adjourned: 2:22PM ET--