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## American National Standards

### Call for comment on proposals listed

This section solicits public comments on proposed draft new American National Standards, including the national adoption of ISO and IEC standards as American National Standards, and on proposals to revise, reaffirm or withdraw approval of existing American National Standards. A draft standard is listed in this section under the ANSI-accredited standards developer (ASD) that sponsors it and from whom a copy may be obtained. Comments in connection with a draft American National Standard must be submitted in writing to the ASD no later than the last day of the comment period specified herein. Such comments shall be specific to the section(s) of the standard under review and include sufficient detail so as to enable the reader to understand the commenter's position, concerns and suggested alternative language, if appropriate. Please note that the ANSI Executive Standards Council (ExSC) has determined that an ASD has the right to require that interested parties submit public review comments electronically, in accordance with the developer's procedures.

#### Ordering Instructions for "Call-for-Comment" Listings

1. **Order from the organization indicated for the specific proposal.**
2. **Use the full identification in your order, including the BSR prefix; for example, Electric Fuses BSR/SAE J554.**
3. **Include remittance with all orders.**
4. **BSR proposals will not be available after the deadline of call for comment.**

Comments should be addressed to the organization indicated, with a copy to the Board of Standards Review, American National Standards Institute, 25 West 43rd Street, New York, NY 10036. Fax: 212-840-2298; e-mail: [psa@ansi.org](mailto:psa@ansi.org)

\* Standard for consumer products

## Comment Deadline: December 1, 2019

### ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

#### *Addenda*

BSR/ASHRAE Addendum b to ANSI/ASHRAE Standard 15-2019, Safety Standard for Refrigeration Systems (addenda to ANSI/ASHRAE Standard 15-2019)

This addendum changes the definitions of "listed" and adds the definition of "labeled" to Section 3.1.

[Click here to view these changes in full](#)

Send comments (with optional copy to [psa@ansi.org](mailto:psa@ansi.org)) to: <http://www.ashrae.org/standards-research--technology/public-review-drafts>

BSR/ASHRAE Addendum c to BSR/ASHRAE Standard 185.1-202x, Method of Testing UV-C Lights for Use in Air-Handling Units or Air Ducts to Inactivate Airborne Microorganisms (addenda to ANSI/ASHRAE Standard 185.1-2015)

This addendum serves two purposes. The first is to correct the airflow rate to 2000 cfm. The second is to provide guidance in the QA testing to make sure that test labs are performing the tests in the same way.

[Click here to view these changes in full](#)

Send comments (with optional copy to [psa@ansi.org](mailto:psa@ansi.org)) to: <http://www.ashrae.org/standards-research--technology/public-review-drafts>

BSR/ASHRAE Addendum g to ANSI/ASHRAE Standard 34-2019, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2019)

This addendum adds the zeotropic refrigerant blend R-470B in Table 4-2.

[Click here to view these changes in full](#)

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BSR/ASHRAE/ICC/USGBC/IES Addendum ao to BSR/ASHRAE/ICC/USGBC/IES Standard 189.1-202x, Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/ICC/USGBC/IES Standard 189.1-2017)

Addendum ao to 189.1-2017 makes various changes to improve the clarity of Section 7 and create greater consistency with Standard 90.1. The climate zone requirements have been moved from Appendix A to Section 7.3.1.1. The term "occupant sensor" has been changed to "occupancy sensor." Sections 7.3.1 and 7.4 have also been revised to ensure that the requirements of 189.1 are updated and clearly distinguished in comparison to 90.1.

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### AWPA (ASC O5) (American Wood Protection Association)

#### *Revision*

BSR O5.2-202x, Structural Glued Laminated Timber for Utility Structures (revision of ANSI O5.2-2012)

This standard covers requirements for manufacturing and quality control of structural glued laminated timber of Southern Pine, Coastal Douglas-fir, Hem-Fir, and other species of similar treatability for electric power and communication structures. The requirements are based on those in American National Standard for Structural Glued Laminated Timber, ANSI/AITC A190.1. This standard is supplemental to ANSI/AITC A190.1 and provides descriptions of the special manufacturing and design requirements for glued laminated utility structures.

[Click here to view these changes in full](#)

Send comments (with optional copy to [psa@ansi.org](mailto:psa@ansi.org)) to: <https://asco5.org/contact/>

**NSF (NSF International)****Revision**

BSR/NSF 49-202x (i92r8), Biosafety Cabinetry - Design, Construction, Performance, and Field Certification (revision of ANSI/NSF 49-2018)

This Standard applies to Class II (laminar flow) biosafety cabinetry designed to minimize hazards inherent in work with agents assigned to biosafety levels 1, 2, 3, or 4. It also defines the tests that shall be passed by such cabinetry to meet this Standard. This Standard includes basic requirements for the design, construction, and performance of biosafety cabinets (BSCs) that are intended to provide personnel, product, and environmental protection; reliable operation; durability and structural stability; cleanability; limitations on noise level; illumination; vibration; and motor / blower performance.

[Click here to view these changes in full](#)

Send comments (with optional copy to [psa@ansi.org](mailto:psa@ansi.org)) to: [arose@nsf.org](mailto:arose@nsf.org)

BSR/NSF 49-202x (i130r2), Biosafety Cabinetry - Design, Construction, Performance, and Field Certification (revision of ANSI/NSF 49-2018)

This Standard applies to Class II (laminar flow) biosafety cabinetry designed to minimize hazards inherent in work with agents assigned to biosafety levels 1, 2, 3, or 4. It also defines the tests that shall be passed by such cabinetry to meet this Standard. This Standard includes basic requirements for the design, construction, and performance of biosafety cabinets (BSCs) that are intended to provide personnel, product, and environmental protection; reliable operation; durability and structural stability; cleanability; limitations on noise level; illumination; vibration; and motor / blower performance.

[Click here to view these changes in full](#)

Send comments (with optional copy to [psa@ansi.org](mailto:psa@ansi.org)) to: [arose@nsf.org](mailto:arose@nsf.org)

BSR/NSF 426-202x (i8r1), Environmental Leadership and Corporate Social Responsibility Assessment of Servers (revision of ANSI/NSF 426-2018)

This Standard defines environmental and corporate social responsibility performance criteria for computer servers as defined in the Energy Star Server specification. This Standard establishes criteria for multiple levels of environmental leadership and corporate social responsibility performance throughout the product life cycle, relating to energy efficiency; management of substances; preferable materials use; product packaging; design for repair, reuse and recycling; product longevity; responsible end-of-life management; and corporate responsibility.

[Click here to view these changes in full](#)

Send comments (with optional copy to [psa@ansi.org](mailto:psa@ansi.org)) to: [jslomka@nsf.org](mailto:jslomka@nsf.org)

**UL (Underwriters Laboratories, Inc.)****Revision**

BSR/UL 493-202x, Standard for Safety for Thermoplastic-Insulated Underground Feeder and Branch-Circuit Cables (revision of ANSI/UL 493-2018)

Correction to reference to Vertical Tray Flame Test, Revised 6.1.7 and 6.1.8.

[Click here to view these changes in full](#)

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BSR/UL 1203-202x, Standard for Safety for Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations (revision of ANSI/UL 1203-2019)

This proposal provides clarification of the thread requirements in Table 10.2.

[Click here to view these changes in full](#)

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BSR/UL 1773-202x, Standard for Safety for Termination Boxes (revision of ANSI/UL 1773-2018)

The intent of this proposal for UL 1773 is to increase the voltage threshold to 1000 volts and to expand requirements for insulation materials.

[Click here to view these changes in full](#)

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BSR/UL 4248-19-202x, Standard for Safety for Fuseholders - Part 19: Photovoltaic Fuseholders (revision of ANSI/UL 4248-19-2015)

(1) Change of ambient temperature to 50C.

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## Comment Deadline: December 16, 2019

### **AAFS (American Academy of Forensic Sciences)**

#### ***New Standard***

BSR/ASB Std 125-202x, Organizational and Foundational Standard for Medicolegal Death Investigation (new standard)

This document outlines the minimal requirements, fundamental activities, general procedures, facilities, and personnel that are the basic components of a medicolegal death investigation system. This document provides an overarching description of educational frameworks, operational roles, and processes for the medicolegal death investigation system.

Single copy price: Free

Obtain an electronic copy from: Document and comments template can be viewed on the AAFS Standards Board website at: <http://www.asbstandardsboard.org/notice-of-standard-development-and-coordination/>

Order from: Document will be provided electronically and free of charge on AAFS Standards Board website [www.asbstandardsboard.org](http://www.asbstandardsboard.org).

Send comments (with optional copy to [psa@ansi.org](mailto:psa@ansi.org)) to: [asb@aafs.org](mailto:asb@aafs.org)

### **ASABE (American Society of Agricultural and Biological Engineers)**

#### ***Reaffirmation***

BSR/ASABE AD5674-2004 SEP2015 (R202x), Tractors and machinery for agricultural and forestry - Guards for power take-off (PTO) drive shafts - Strength and wear tests and acceptance criteria (reaffirm a national adoption ANSI/ASABE AD5674-2015)

Specifies laboratory tests for determining the strength and wear resistance of guards for power take-off (PTO) drive-shafts on tractors and machinery used in agriculture and forestry, and their acceptance criteria. It is intended to be used in combination with ASAE S207 or more fully with AD5673-2. It is applicable to the testing of PTO drive-shaft guards and their restraining means. It is not applicable to the testing of guards designed and constructed to be used as steps.

Single copy price: \$44.00 (ASABE Members); \$65.00 (Non-members)

Obtain an electronic copy from: [vangilder@asabe.org](mailto:vangilder@asabe.org)

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BSR/ASABE AD730:2009 W/Amd. 1:2014 MAR2015 Cor. 1 (R202x), Agricultural wheeled tractors - Rear-mounted three-point linkage - Categories 1N, 1, 2N, 2, 3N, 3, 4N, and 4 (reaffirm a national adoption ANSI/ASABE AD730:2009 W/Amd. 1-2015)

Specifies the dimensions and requirements of the three-point linkage for the attachment of implements or equipment to the rear of agricultural wheeled tractors.

Single copy price: \$44.00 (ASABE Members); \$65.00 (Non-members)

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BSR/ASABE S598 JAN2010 (R202x), Procedure for Sampling, Measuring and Reporting Commingled Crop in Combine Harvest of a Subsequent Crop (reaffirmation of ANSI/ASABE S598 JAN2010 (R2014))

This standard establishes a method to estimate the percentage of commingled grain or seed from a previously harvested crop present in that of the next crop subsequently harvested by a combine harvester. A standardized estimate of the level (percentage) of commingled grain present after cleaning all or parts of a combine harvester and/or flushing with a quantity of grain is produced from these procedures. Because of differences among various large- and small-seeded crop varieties as well as other harvest factors, estimates from this procedure should only be used as a comparative guide between machine treatments using these procedures and not as an absolute value of maximum commingled grain percentage for all crop conditions or any single sample value from one of the crops tested. This standard is without warranty of any kind, either expressed or implied. In no event shall the producers of this standard be liable for any damages including lost profits; lost savings; or other indirect, incidental, or consequential damages arising out of the use or inability to use this standard.

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BSR/ASABE S607 OCT2007 (R202x), Ventilating Manure Storages to Reduce Entry Risk (reaffirmation of ANSI/ASABE S607 OCT2007 (R2014))

The primary purpose of this standard is to reduce risk from asphyxiation, poisoning, and explosions when entering confined space manure storages by specifying the positive pressure, forced ventilation requirements, including ventilation system layout, air exchange rates, and minimum ventilation times, for evacuation of contaminant gases from, and replenishment of oxygen into, empty or nearly empty covered or partially covered confined-space, on-farm, manure storages, reception tanks, agitation tanks and other similar containers that hold/contain manure prior to entry.

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BSR/ASABE/ISO 3776-3-2009 OCT2015 (R202x), Tractors and machinery for agriculture - Seat belts - Part 3: Requirements for assemblies (reaffirm a national adoption ANSI/ASABE/ISO 3776-3:2015)

Specifies the requirements for pelvic restraint (seat) belt assemblies intended to be used by the operators of agricultural tractors and self-propelled machinery.

NOTE: Seat belt assemblies that meet the requirements of UNECE R16:2000, Clause 6, but excluding 6.4 of that regulation, or seat belt assemblies complying with the requirements of SAE J386 are deemed to comply with the requirements of this part of ISO 3776.

Single copy price: \$44.00 (ASABE Members); \$65.00 (Non-members)

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BSR/ASAE EP389.2 JUN1993 (R202x), Auger Flighting Design Considerations (reaffirmation of ANSI/ASAE EP389.2 JUN1993 (R2015))

This Engineering Practice is a guide for designing conveyor augers using steel helicoid flighting and for specifying helicoid flighting as generally used in agricultural equipment.

Single copy price: \$44.00 (ASABE Members); \$65.00 (Non-members)

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BSR/ASAE S331.6-2015 (R202x), Implement Power Take-Off Drive Shaft Specifications (reaffirmation of ANSI/ASAE S331.6-2015)

The purpose of this Standard is to establish multiple categories of universal joint drive shafts with two subsets of telescoping members each, one heavy duty (HD) and one regular duty (RD). The intended use of the drive shafts is between tractor power take-off (PTO) shafts and power input connections (PIC), or any universal joint application within the implement. The PTO drive shaft from the tractor PTO to the (PIC) is considered a part of the implement. This Standard does not provide for dimensional interchangeability from one implement to another.

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## BSR/ASAE S343.4-2015 (R202x), Terminology for Combines and Grain Harvesting (reaffirmation of ANSI/ASAE S343.4-2015)

The purpose of this Standard is to establish terminology pertinent to grain combine design and performance. It is intended to improve communication among engineers and researchers and to provide a basis for comparative listing of machine specifications.

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## BSR/ASAE S377-1990 (R202x), Application of Remote Linear Control Devices to Lawn and Garden Ride-on Tractor Attachments and Implements (reaffirmation of ANSI/ASAE S377-1990 (R2015))

The purpose of this Standard is to establish common mounting and clearance dimensions for remote linear control devices as applied to lawn and garden ride-on tractor attachments and implements with such other specifications as are necessary to accomplish the following objectives: (1) To permit use of any make or model of attachment or implement adapted for control by a remote linear control device; and (2) To facilitate changing the remote linear control device from one attachment or implement to another.

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## BSR/ASAE S355.5 SEP2015 (R202x), Safety Practices for Agricultural Front-End Loaders (reaffirmation of ANSI/ASAE S355.5 MONYEAR-2015)

This Standard provides a uniform method of warning owners, bystanders, and operators of the potential hazards encountered in the operation and servicing of agricultural tractors equipped with agricultural front-end loaders. This Standard emphasizes that hazard control and accident prevention are dependent upon the awareness, concern, and prudence of personnel involved in the operation, transport, and maintenance of equipment. Annex A includes safe practice messages to enhance safety in the operation and servicing of such equipment.

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## BSR/ASAE S392.2 APR2005 (R202x), Cotton Module Builder and Transporter Standard (reaffirmation of ANSI/ASAE S392.2 APR2005 (R2015))

The purpose of this Standard is to provide uniform equipment size guidelines for manufacturers that produce cotton module builders and transporters. Standardization will allow harvesting equipment, module builders, transporters, and module covers from various manufacturers to be used compatibly throughout the cotton industry and so avoid problems caused by incompatible equipment dimensions. This Standard also promotes consideration of safety in equipment operation and transport and in the transporting of seed cotton modules on highways.

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## BSR/ASAE S418.1 OCT2010 (R202x), Dimensions for Cylindrical Hydraulic Couplers for Lawn and Garden Tractors (reaffirmation of ANSI/ASAE S418.1 OCT2010 (R2014))

The purpose of this Standard is to establish interface dimensions of cylindrical hydraulic couplers frequently used by the equipment industry to connect hydraulic remote cylinders and other hydraulic devices to lawn and garden tractors and to permit interchangeable use of remote cylinders and other hydraulic devices on different makes of tractors when designed for this use.

Single copy price: \$44.00 (ASABE Members); \$65.00 (Non-members)

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**ASC X9 (Accredited Standards Committee X9, Incorporated)****Reaffirmation**

BSR X9.110-2008 (R202x), Transfer of Location of Electronic Contracts (reaffirmation of ANSI X9.110-2008 (R2013))

This specification describes a method of transfer for electronic contracts, or electronic records between two disparate Electronic Vaults across a private or public network. The methods and approach described in this standard prescribe the requirements necessary to maintain compliance with legislation for Electronic Chattel Paper, defined in revised UCC Article 9, Section 105.

Single copy price: \$60.00

Obtain an electronic copy from: [ambria.frazier@x9.org](mailto:ambria.frazier@x9.org)

Order from: Ambria Frazier, (410) 267-7707, [Ambria.frazier@x9.org](mailto:Ambria.frazier@x9.org)

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**ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)****Addenda**

BSR/ASHRAE Addendum a to ANSI/ASHRAE Standard 15-2019, Safety Standard for Refrigeration Systems (addenda to ANSI/ASHRAE Standard 15-2019)

This addendum provides capacity factors for over-pressure protection of pressure vessels and pressure equipment for a number of new refrigerants and expands the coverage of capacity factors for existing refrigerants based on the design pressure for the portion of the system being pressure-protected.

Single copy price: \$35.00

Obtain an electronic copy from: <http://www.ashrae.org/standards-research--technology/public-review-drafts>

Order from: [standards.section@ashrae.org](mailto:standards.section@ashrae.org)

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**ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)****New Standard**

BSR/ASHRAE Standard 204-202x, Method of Test for Rating Micro Combined Heat and Power Devices (new standard)

The purpose of ASHRAE Standard 204-202x is to provide a uniform laboratory test method for determining the net electrical power generating performance and thermal power recovery performance of micro-combined heat and power devices, referred to as micro-cogeneration devices. The standard specifies the equipment and instrumentation required, test methods, and calculation procedures.

Single copy price: \$35.00

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**ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)****Reaffirmation**

BSR/ASHRAE Standard 26-2010 (R202x), Mechanical Refrigeration and Air Conditioning Installations Aboard Ship (reaffirmation of ANSI/ASHRAE Standard 26-2010)

This standard provides the minimum general requirements for the design, construction, installation, operation, inspection, and maintenance of mechanical refrigeration and air conditioning equipment aboard ships to permit the safe, efficient, and reliable operation of such systems.

Single copy price: \$35.00

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BSR/ASHRAE Standard 28-1996 (R202x), Method of Testing Flow Capacity of Refrigerant Capillary Tubes (reaffirmation of ANSI/ASHRAE Standard 28-1996 (R2010))

This standard provides uniform methods for laboratory testing the flow capacity of refrigerant capillary tubes.

Single copy price: \$35.00

Obtain an electronic copy from: <http://www.ashrae.org/standards-research--technology/public-review-drafts>

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BSR/ASHRAE/NEMA Standard 201-2016 (R202x), Facility Smart Grid Information Model (reaffirmation of ANSI/ASHRAE/NEMA Standard 201-2016)

The purpose of this standard is to define an abstract, object-oriented information model to enable appliances and control systems in homes, buildings, and industrial facilities to manage electrical loads and generation sources in response to communication with a "smart" electrical grid and to communicate information about those electrical loads to utility and other electrical service providers.

Single copy price: \$35.00

Obtain an electronic copy from: <http://www.ashrae.org/standards-research--technology/public-review-drafts>

Order from: [standards.section@ashrae.org](mailto:standards.section@ashrae.org)

Send comments (with optional copy to [psa@ansi.org](mailto:psa@ansi.org)) to: <http://www.ashrae.org/standards-research--technology/public-review-drafts>

## ASME (American Society of Mechanical Engineers)

### Revision

BSR/ASME A120.1-202x, Safety Requirements for Powered Platforms and Traveling Ladders and Gantries for Building Maintenance (revision of ANSI/ASME A120.1-2014)

This Standard establishes safety requirements for powered platforms (scaffolds) for buildings where window cleaning and related services are accomplished by means of suspended equipment at heights in excess of 35 ft (11 m) above a safe surface (e.g., grade, street, floor, or roof level). Additionally, this Standard establishes safety requirements for permanent traveling ladders and gantries (TLG).

Single copy price: Free

Obtain an electronic copy from: <http://cstools.asme.org/publicreview>

Order from: Terrell Henry, ASME; [ansibox@asme.org](mailto:ansibox@asme.org)

Send comments (with optional copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Elijah Dominguez, (212) 591-8521, [domingueze@asme.org](mailto:domingueze@asme.org)

## AWWA (American Water Works Association)

### Revision

BSR/AWWA C115/A21.15-202x, Flanged Ductile-Iron Pipe with Ductile-Iron or Gray-Iron Threaded Flanges (revision of ANSI/AWWA C115/A21.15-2011)

This standard describes 3-in. through 64-in. (80-mm through 1,600-mm) flanged ductile-iron or gray-iron threaded flanged for potable water, wastewater, and reclaimed service. Flanged pipe and flanges are rated for a maximum working pressure of 250 psi (1,720 kPa). However, 24-in. (600-mm) and smaller flanged joints with ductile-iron flanges may be rated for a maximum working pressure of 350 psi (2,413 kPa).

Single copy price: Free

Obtain an electronic copy from: [ETSsupport@awwa.org](mailto:ETSsupport@awwa.org)

Order from: AWWA, Attn: Vicki N. David, [vdavid@awwa.org](mailto:vdavid@awwa.org)

Send comments (with optional copy to [psa@ansi.org](mailto:psa@ansi.org)) to: AWWA, Attn: Paul J. Olson, [polson@awwa.org](mailto:polson@awwa.org)

## HL7 (Health Level Seven)

### Withdrawal

ANSI/HL7 V3ITSHDATA RF, R1-2014, HL7 Version 3 Standard: hData Record Format, Release 1 (withdrawal of ANSI/HL7 V3ITSHDATA RF, R1-2014)

The hData Record Format defines a machine-readable file format (root.xml) that describes the resources located at an hData service endpoint and the URLs needed to access them through RESTful services. The root file is accessed by clients to determine the capabilities of the service endpoint, and its conformance to one or more predefined profiles. The hData Record Format, together with the OMG hData RESTful Transport, defines an implementable solution for exchanging health resources, including, but not limited to, FHIR resources.

Single copy price: Free to members and non-members

Obtain an electronic copy from: [Karenvan@HL7.org](mailto:Karenvan@HL7.org)

Order from: Karen Van Henteryck, (734) 677-7777, [Karenvan@HL7.org](mailto:Karenvan@HL7.org)

Send comments (with optional copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Same

## IES (Illuminating Engineering Society)

### *New Standard*

BSR/IES LM-90-202x, IES Approved Method: Measuring and Quantifying Temporal Light Artifacts (TLA) (new standard)

Define and describe the method of measurements, calculated quantities, and reporting structure related to TLA. In addition, the method describes the required measurement tolerances, in order to reduce the effect of measurement sensitivities in calculated quantities.

Single copy price: \$25.00

Obtain an electronic copy from: pmcgillicuddy@ies.org

Order from: Patricia McGillicuddy, (917) 913-0027, pmcgillicuddy@ies.org

Send comments (with optional copy to psa@ansi.org) to: Same

## NENA (National Emergency Number Association)

### *New Standard*

BSR/NENA STA-011.1-202x, NENA Standards for 9-1-1 Professional Education (new standard)

This work will provide standards related to 9-1-1 professional education to aid in the development of degree programs for Public Safety Telecommunicators and individuals who work on 9-1-1 systems. This effort will ensure the 9-1-1 industry has a reliable work force both for PSAP operations and to manage, design, construct and maintain the 9-1-1 system and its many components. This effort will also ensure that programs provide a basic level of knowledge and skill, no matter where they may be located.

Single copy price: Free

Obtain an electronic copy from: Download at [https://dev.nena.org/higherlogic/ws/public/document?document\\_id=17325&wg\\_id=7f25e42e-de2f-4b22-a2a1-08407fb96049](https://dev.nena.org/higherlogic/ws/public/document?document_id=17325&wg_id=7f25e42e-de2f-4b22-a2a1-08407fb96049) or contact darnold@nena.org.

Order from: Download at [https://dev.nena.org/higherlogic/ws/public/document?document\\_id=17325&wg\\_id=7f25e42e-de2f-4b22-a2a1-08407fb96049](https://dev.nena.org/higherlogic/ws/public/document?document_id=17325&wg_id=7f25e42e-de2f-4b22-a2a1-08407fb96049) or contact darnold@nena.org.

Send comments (with optional copy to psa@ansi.org) to: Delaine Arnold, darnold@nena.org, 727-312-3230

## SCTE (Society of Cable Telecommunications Engineers)

### *Revision*

BSR/SCTE 203-202x, Product Environmental Requirements for Cable Telecommunications Facilities - Test Methods (revision of ANSI/SCTE 203-2014)

This document specifies physical, environmental, electrical, and sustainability test procedures to evaluate equipment compliance with requirements defined in ANSI/SCTE 186-2012.

Single copy price: \$50.00

Obtain an electronic copy from: admin@standards.scte.org

Order from: Global Engineering Documents, (800) 854-7179, www.global.ihs.com

Send comments (with optional copy to psa@ansi.org) to: admin@standards.scte.org

## TIA (Telecommunications Industry Association)

### *New Standard*

BSR/TIA 455-82-C-202x, FOTP-82 - Fluid Penetration Test for Fluid-Blocked Fiber Optic Cable (new standard)

Revise ANSI/TIA 455-82B to: (1) Update the default test length for water penetration samples from 1m to 3m; (2) Update the sample length for retest from 3m to 40m; (3) Consider the impact of the length change on test duration; and (5) Update the treatment of dry water-blocked cable.

Single copy price: \$65.00

Obtain an electronic copy from: standards@tiaonline.org

Order from: TIA; standards@tiaonline.org

Send comments (with optional copy to psa@ansi.org) to: Same

## **TMA (The Monitoring Association)**

### **Revision**

BSR/TMA CS-V-01-202x, Alarm Confirmation, Verification and Notification Procedures (revision and redesignation of ANSI/TMA CS-V-01-201x)

This standard defines methods by which false notifications for signals received from security systems can be greatly reduced. It has been proven that confirming and verifying an alarm signal by a supervising station will drastically reduce false notifications. This standard takes confirmation to its next level by defining multiple attempt confirmation and biometric, audio, and video confirmation.

Single copy price: Free

Obtain an electronic copy from: <https://tma.us/wp-content/uploads/2019/10/CS-V-01-2019-Rev-6.pdf>

Order from: [bginn@tma.us](mailto:bginn@tma.us)

Send comments (with optional copy to [psa@ansi.org](mailto:psa@ansi.org)) to: <https://tma.us/form-for-proposals-on-tma-standards-online/>

## **UL (Underwriters Laboratories, Inc.)**

### **Reaffirmation**

BSR/UL 1426-2010 (R202x), Standard for Safety for Electrical Cables for Boats (reaffirmation of ANSI/UL 1426-2010 (R2015))

Reaffirmation and Continuance of the fifth edition of the Standard for Safety for Electrical Cables for Boats, UL 1426, as an American National Standard.

Single copy price: Free

Obtain an electronic copy from: <https://csds.ul.com/Home/ProposalsDefault.aspx>

Order from: <http://www.shopulstandards.com>

Send comments (with optional copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Follow the instructions in the following website to enter comments into the CSDS Work Area: <https://csds.ul.com/Home/ProposalsDefault.aspx>

BSR/UL 1655-2009a (R202x), Standard for Community-Antenna Television Cables (reaffirmation of ANSI/UL 1655-2009a (R2014))

(1) Reaffirmation and continuance of the 2nd Edition of the Standard for Community-Antenna Television Cables, UL 1655, as an American National Standard and a National Standard of Canada.

Single copy price: Free

Obtain an electronic copy from: <https://csds.ul.com/Home/ProposalsDefault.aspx>

Order from: <http://www.shopulstandards.com>

Send comments (with optional copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Follow the instructions in the following website to enter comments into the CSDS Work Area: <https://csds.ul.com/Home/ProposalsDefault.aspx>

## **UL (Underwriters Laboratories, Inc.)**

### **Revision**

BSR/UL 347-202x, Standard for Safety for Medium-Voltage AC Contactors, Controllers, and Control Centers (revision of ANSI/UL 347-2016)

The proposed new seventh edition of the Standard for Medium-Voltage AC Contactors, Controllers, and Control Centers, UL 347, is applicable to ac contactors applied at voltages in the range of 1501V to 15kV, and metal-enclosed contactor-based controllers, control centers, and other control assemblies and associated equipment applied at voltages in the range of 751V to 15kV, designed for operation at frequencies of 50 or 60 Hz on three-phase systems. These requirements cover equipment intended for use in ordinary (non-hazardous) locations and installed in accordance with the applicable local installation codes and standards (see Annex A, Item 1). These requirements, as modified by the applicable national standards for fire pump controllers, also cover fire pump controllers (see Annex A, Item 2).

Single copy price: Free

Obtain an electronic copy from: <https://csds.ul.com/Home/ProposalsDefault.aspx>

Order from: <http://www.shopulstandards.com>

Send comments (with optional copy to [psa@ansi.org](mailto:psa@ansi.org)) to: Follow the instructions in the following website to enter comments into the CSDS Work Area: <https://csds.ul.com/Home/ProposalsDefault.aspx>

## **Notice of Withdrawn ANS by an ANSI-Accredited Standards Developer**

In accordance with clause 4.2.1.3.2 Withdrawal by ANSI-Accredited Standards Developer of the ANSI Essential Requirements, the following American National Standards have been withdrawn as an ANS.

### **ASIS (ASIS International)**

ANSI ASIS PSC.3-2013, Maturity Model for the Phased Implementation of a Quality Assurance Management System for Private Security Service Providers

Questions may be directed to: Aivelis Opicka, (703) 518-1439, [standards@asisonline.org](mailto:standards@asisonline.org)

# Call for Members (ANS Consensus Bodies)

Directly and materially affected parties who are interested in participating as a member of an ANS consensus body for the standards listed below are requested to contact the sponsoring standards developer directly and in a timely manner.

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## ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

**Office:** 1791 Tullie Circle NE  
Atlanta, GA 30329

**Contact:** Tanisha Meyers-Lisle

**Phone:** (678) 539-1111

**E-mail:** tmlisle@ashrae.org

BSR/ASHRAE Standard 26-2010 (R202x), Mechanical Refrigeration and Air Conditioning Installations Aboard Ship (reaffirmation of ANSI/ASHRAE Standard 26-2010)

BSR/ASHRAE Standard 28-1996 (R202x), Method of Testing Flow Capacity of Refrigerant Capillary Tubes (reaffirmation of ANSI/ASHRAE Standard 28-1996 (R2010))

## AWPA (ASC O5) (American Wood Protection Association)

**Office:** P.O. Box 361784  
Birmingham, AL 35236-1784

**Contact:** Colin McCown

**Phone:** (205) 733-4077

**E-mail:** colin@awpa.com

BSR O5.2-202x, Structural Glued Laminated Timber for Utility Structures (revision of ANSI O5.2-2012)

## CTA (Consumer Technology Association)

**Office:** 1919 South Eads Street  
Arlington, VA 22202

**Contact:** Veronica Lancaster

**Phone:** (703) 907-7697

**E-mail:** vlancaster@cta.tech

BSR/CTA 774-D-202x, TV Receiving Antenna Performance Presentation and Measurement (revision and redesignation of ANSI/CTA 774-C-2014)

BSR/CTA 2045.1-2014 (R202x), Modular Communications Interface for Firmware Transfer Message Set (reaffirmation of ANSI/CTA 2045.1-2014)

BSR/CTA 2045.3-2014 (R202x), Modular Communications Interface for Thermostat Message Set (reaffirmation of ANSI/CTA 2045.3-2014)

BSR/CTA 2048-A-202x, Host and Router Profiles for IPv6 (revision and redesignation of ANSI/CTA 2048-2014)

## ECIA (Electronic Components Industry Association)

**Office:** 13873 Park Center Road  
Suite 315  
Herndon, VA 20171

**Contact:** Laura Donohoe

**Phone:** (571) 323-0294

**E-mail:** ldonohoe@ecianow.org

BSR/EIA 364-05C-202x, Contact Insertion, Release and Removal Force Test Procedure for Electrical Connectors (revision and redesignation of ANSI/EIA 364-05B-2009 (R2015))

## IES (Illuminating Engineering Society)

**Office:** 120 Wall Street, Floor 17  
New York, NY 10005

**Contact:** Patricia McGillicuddy

**Phone:** (917) 913-0027

**E-mail:** pmcgillicuddy@ies.org

BSR/IES LM-37-202x, Approved Method: IES Guide for Determination of Average Luminance (Calculated) for Indoor Luminaires (new standard)

BSR/IES LM-90-202x, IES Approved Method: Measuring and Quantifying Temporal Light Artifacts (TLA) (new standard)

## NECA (National Electrical Contractors Association)

**Office:** 3 Bethesda Metro Center  
Suite 1100  
Bethesda, MD 20814

**Contact:** Aga Golriz

**Phone:** (301) 215-4549

**E-mail:** Aga.golriz@necanet.org

BSR/NECA 701-202x, Standard for Energy Management, Demand Response and Energy Solutions (revision of ANSI/NECA 701-2013)

## NEMA (ASC C137) (National Electrical Manufacturers Association)

**Office:** 1300 N 17th St Suite 900  
Rosslyn, VA 22209

**Contact:** Michael Erbesfeld

**Phone:** (703) 841-3262

**E-mail:** Michael.Erbesfeld@nema.org

BSR/C137.8-202X, Standard for Lighting Systems - Lighting Control User Interface Elements (new standard)

**NEMA (National Electrical Manufacturers Association)**

**Office:** 1300 North 17th Street  
Rosslyn, VA 22209

**Contact:** Muhammad Ali

**Phone:** (703) 841-3288

**E-mail:** muhammad.ali@nema.org

BSR/IEC 60529-201x, Degrees of Protection Provided by Enclosures (IP Code) (identical national adoption) (national adoption of IEC 60529 with modifications and revision of ANSI/IEC 60529-2004 (R2011))

BSR/NEMA 250-201x, Enclosures for Electrical Equipment (1000 Volts Maximum) (revision of ANSI/NEMA 250-2008)

**NSF (NSF International)**

**Office:** 789 N. Dixboro Road  
Ann Arbor, MI 48105-9723

**Contact:** Allan Rose

**Phone:** (734) 827-3817

**E-mail:** arose@nsf.org

BSR/NSF 49-202x (i130r2), Biosafety Cabinetry - Design, Construction, Performance, and Field Certification (revision of ANSI/NSF 49-2018)

BSR/NSF 426-202x (i8r1), Environmental Leadership and Corporate Social Responsibility Assessment of Servers (revision of ANSI/NSF 426-2018)

**PLASTICS (Plastics Industry Association)**

**Office:** 1425 K Street, NW  
Suite 500  
Washington, DC 20005

**Contact:** Jennifer Jones

**Phone:** (202) 974-5217

**E-mail:** jjones@plasticsindustry.org

BSR/PLASTICS B151.27-202X, Safety Requirements for Robot / Injection Molding Machine Systems (revision and redesignation of ANSI/SPI B151.27-2013)

**TIA (Telecommunications Industry Association)**

**Office:** 1320 North Courthouse Road  
Suite 200  
Arlington, VA 22201

**Contact:** Teesha Jenkins

**Phone:** (703) 907-7706

**E-mail:** standards@tiaonline.org

BSR/TIA 455-82-C-202x, FOTP-82 - Fluid Penetration Test for Fluid-Blocked Fiber Optic Cable (new standard)

BSR/TIA 455-191-C-202x, FOTP-191 IEC 60793-1-45 Optical Fibres - Part 1-45: Measurement Methods and Test Procedures - Mode Field Diameter (identical national adoption of IEC-60793-1-45)

## **Call for Members (ANS Consensus Bodies)**

### **Call for Committee Members**

#### **ASC O1 – Safety Requirements for Woodworking Machinery**

Are you interested in contributing to the development and maintenance of valuable industry safety standards? The ASC O1 is currently looking for members in the following categories:

- General Interest
- Government
- Producer
- User

If you are interested in joining the ASC O1, contact WMMA Associate Director Jennifer Miller at [jennifer@wmma.org](mailto:jennifer@wmma.org).

# Final Actions on American National Standards

The standards actions listed below have been approved by the ANSI Board of Standards Review (BSR) or by an ANSI-Audited Designator, as applicable.

## **AAFS (American Academy of Forensic Sciences)**

### ***New Standard***

ANSI/ASB Std 036-2019, Standard Practices for Method Validation in Forensic Toxicology (new standard): 10/29/2019

## **APTech (ASC CGATS) (Association for Print Technologies )**

### ***Revision***

ANSI CGATS.9-2019, Graphic technology Graphic arts transmission densitometry measurements Term in equations, image elements and procedures (revision of ANSI CGATS.9-2007 (R2012)): 10/24/2019

## **ASME (American Society of Mechanical Engineers)**

### ***Reaffirmation***

ANSI/ASME B30.21-2014 (R2019), Lever Hoists (formerly Manually Lever Operated Hoists) (reaffirmation of ANSI/ASME B30.21-2014): 10/29/2019

## **ECIA (Electronic Components Industry Association)**

### ***Reaffirmation***

ANSI/EIA 971-2014 (R2019), 4 mm Embossed Carrier Taping of Micro-Sized Surface Mount Components for Automatic Handling (reaffirmation of ANSI/EIA 971-2014): 10/24/2019

## **EOS/ESD (ESD Association, Inc.)**

### ***Revision***

ANSI/ESD S6.1-2019, ESD Association Standard for the Protection of Electrostatic Discharge Susceptible Items -Grounding (revision of ANSI/ESD S6.1-2014): 10/28/2019

## **HPS (ASC N13) (Health Physics Society)**

### ***Reaffirmation***

ANSI N13.35-2009 (R2019), Specifications for the Bottle Manikin Absorption Phantom (reaffirmation of ANSI N13.35-2009): 10/24/2019

## **IES (Illuminating Engineering Society)**

### ***New Standard***

ANSI/IES TM-21-2019, IES Approved Method: Projecting Long Term Lumen, Photon and Radiant Flux Maintenance of LED Light Sources (new standard): 10/28/2019

## **ITI (INCITS) (InterNational Committee for Information Technology Standards)**

### ***New National Adoption***

INCITS/ISO/IEC 19592-1:2016 [2019], Information technology - Security techniques - Secret sharing - Part 1: General (identical national adoption of ISO/IEC 19592-1:2016): 10/24/2019

INCITS/ISO/IEC 19592-2:2017 [2019], Information technology - Security techniques - Secret sharing - Part 2: Fundamental mechanisms (identical national adoption of ISO/IEC 19592-2:2017): 10/24/2019

INCITS/ISO/IEC 19896-1:2018 [2019], IT security techniques - Competence requirements for information security testers and evaluators - Part 1: Introduction, concepts and general requirements (identical national adoption of ISO/IEC 19896-1:2018): 10/24/2019

INCITS/ISO/IEC 19896-2:2018 [2019], IT security techniques - Competence requirements for information security testers and evaluators - Part 2: Knowledge, skills and effectiveness requirements for ISO/IEC 19790 testers (identical national adoption of ISO/IEC 19896-2:2018): 10/24/2019

INCITS/ISO/IEC 19896-3:2018 [2019], IT security techniques - Competence requirements for information security testers and evaluators - Part 3: Knowledge, skills and effectiveness requirements for ISO/IEC 15408 evaluators (identical national adoption of ISO/IEC 19896-3:2018): 10/24/2019

INCITS/ISO/IEC 27034-3:2018 [2019], Information technology - Application security - Part 3: Application security management process (identical national adoption of ISO/IEC 27034-3:2018): 10/24/2019

INCITS/ISO/IEC 27034-5:2017 [2019], Information technology - Security techniques - Application security - Part 5: Protocols and application security controls data structure (identical national adoption of ISO/IEC 27034-5:2017): 10/24/2019

INCITS/ISO/IEC 27034-6:2016 [2019], Information technology - Security techniques - Application security - Part 6: Case studies (identical national adoption of ISO/IEC 27034-6:2016): 10/24/2019

INCITS/ISO/IEC 27034-7:2018 [2019], Information technology - Application security - Part 7: Assurance prediction framework (identical national adoption of ISO/IEC 27034-7:2018): 10/24/2019

INCITS/ISO/IEC 27035-1:2016 [2019], Information technology - Security techniques - Information security incident management - Part 1: Principles of incident management (identical national adoption of ISO/IEC 27035-1:2016): 10/24/2019

INCITS/ISO/IEC 27035-2:2016 [2019], Information technology - Security techniques - Information security incident management - Part 2: Guidelines to plan and prepare for incident response (identical national adoption of ISO/IEC 27035-2:2016): 10/24/2019

INCITS/ISO/IEC 27036-1:2014 [2019], Information technology - Security techniques - Information security for supplier relationships - Part 1: Overview and concepts (identical national adoption of ISO/IEC 27036-1:2014): 10/24/2019

INCITS/ISO/IEC 27036-2:2014 [2019], Information technology - Security techniques - Information security for supplier relationships - Part 2: Requirements (identical national adoption of ISO/IEC 27036-2:2014): 10/24/2019

INCITS/ISO/IEC 27036-3:2013 [2019], Information technology - Security techniques - Information security for supplier relationships - Part 3: Guidelines for information and communication technology supply chain security (identical national adoption of ISO/IEC 27036-3:2013): 10/24/2019

INCITS/ISO/IEC 27036-4:2016 [2019], Information technology - Security techniques - Information security for supplier relationships - Part 4: Guidelines for security of cloud services (identical national adoption of ISO/IEC 27036-4:2016): 10/24/2019

INCITS/ISO/IEC 27050-1:2016 [2019], Information technology - Security techniques - Electronic discovery - Part 1: Overview and concepts (identical national adoption of ISO/IEC 27050-1:2016): 10/24/2019

INCITS/ISO/IEC 27050-2:2018 [2019], Information technology - Electronic discovery - Part 2: Guidance for governance and management of electronic discovery (identical national adoption of ISO/IEC 27050-2:2018): 10/24/2019

INCITS/ISO/IEC 20889:2018 [2019], Privacy enhancing data de-identification terminology and classification of techniques (identical national adoption of ISO/IEC 20889:2018): 10/24/2019

INCITS/ISO/IEC 27004:2016 [2019], Information technology - Security techniques - Information security management - Monitoring, measurement, analysis and evaluation (identical national adoption of ISO/IEC 27004:2016): 10/24/2019

INCITS/ISO/IEC 27005:2018 [2019], Information technology - Security techniques - Information security risk management (identical national adoption of ISO/IEC 27005:2018): 10/24/2019

INCITS/ISO/IEC 27007:2017 [2019], Information technology - Security techniques - Guidelines for information security management systems auditing (identical national adoption of ISO/IEC 27007:2017 and revision of INCITS/ISO/IEC 27007:2011 [R2017]): 10/24/2019

INCITS/ISO/IEC 27018:2019 [2019], Information technology - Security techniques - Code of practice for protection of personally identifiable information (PII) in public clouds acting as PII processors (identical national adoption of ISO/IEC 27018:2019): 10/24/2019

INCITS/ISO/IEC 29101:2018 [2019], Information technology - Security techniques - Privacy architecture framework (identical national adoption of ISO/IEC 29101:2018): 10/24/2019

INCITS/ISO/IEC 29134:2017 [2019], Information technology - Security techniques - Guidelines for privacy impact assessment (identical national adoption of ISO/IEC 29134:2017): 10/24/2019

INCITS/ISO/IEC 29146:2016 [2019], Information technology - Security techniques - A framework for access management (identical national adoption of ISO/IEC 29146:2016): 10/24/2019

INCITS/ISO/IEC 29147:2018 [2019], Information technology - Security techniques - Vulnerability disclosure (identical national adoption of ISO/IEC 29147:2018): 10/24/2019

INCITS/ISO/IEC 18031:2011/AM 1:2017 [2019], Information technology - Security techniques - Random bit generation - Amendment 1: Deterministic random bit generation (identical national adoption of ISO/IEC 18031:2011/Amd 1:2017): 10/24/2019

INCITS/ISO/IEC 27011:2016/COR 1:2018 [2019], Information technology - Security techniques - Code of practice for Information security controls based on ISO/IEC 27002 for telecommunications organizations - Technical Corrigendum 1 (identical national adoption of ISO/IEC 27011:2016/Cor 1:2018): 10/24/2019

INCITS/ISO/IEC 29100:2011/AM1:2018 [2019], Information technology - Security techniques - Privacy framework - Amendment 1: Clarifications (identical national adoption of ISO/IEC 29100:2011/AM1:2018): 10/24/2019

### **Reaffirmation**

INCITS 452-2009 [R2019], Information technology - AT Attachment-8 ATA/ATAPI Command Set (ATA8-ACS) (reaffirmation of INCITS 452-2009 [R2014]): 10/29/2019

INCITS 532:2014 [R2019], Information Technology - Vocabulary Description and Management (reaffirmation of INCITS 532-2014): 10/29/2019

INCITS/ISO/IEC 9798-4:1999 [R2019], Information Technology - Security techniques - Entity authentication - Part 4: Mechanisms using a cryptographic check function (formerly ANSI/ISO/IEC 9798-4:1999) (reaffirm a national adoption INCITS/ISO/IEC 9798-4:1999 [R2014]): 10/29/2019

INCITS/ISO/IEC 19794-1:2011/AM1:2013 [R2019], Information technology - Biometric data interchange formats - Part 1: Framework - Amendment 1: Conformance testing methodology (reaffirm a national adoption INCITS/ISO/IEC 19794-1:2011/AM1:2013 [2014]): 10/29/2019

INCITS/ISO/IEC 19794-4:2011/COR1:2012 [R2019], Information technology - Biometric data interchange formats - Part 4: Finger image data - Technical Corrigendum 1 (reaffirm a national adoption INCITS/ISO/IEC 19794-4:2011/COR1:2012 [2014]): 10/29/2019

INCITS/ISO/IEC 19794-4:2011/AM1:2013 [R2019], Information technology - Biometric data interchange formats - Part 4: Finger image data - Amendment 1: Conformance testing methodology and clarification of defects (reaffirm a national adoption INCITS/ISO/IEC 19794-4:2011/AM1:2013 [2014]): 10/29/2019

INCITS/ISO/IEC 19794-5:2011/AM1:2014 [R2019], Information technology - Biometric data interchange formats - Part 5: Face image data - Amendment 1: Conformance testing methodology and clarification of defects (reaffirm a national adoption INCITS/ISO/IEC 19794-5:2011/AM1:2014 [2014]): 10/29/2019

INCITS/ISO/IEC 29109-1:2009/COR 1:2010 [R2019], Information technology - Conformance testing methodology for Biometric Data Interchange Records as defined in ISO/IEC 19794 - Part 1: Generalized conformance testing methodology - Technical Corrigendum 1 (reaffirm a national adoption INCITS/ISO/IEC 29109-1:2009/COR 1:2010 [2014]): 10/29/2019

INCITS/ISO/IEC 11404:2007 [R2019], Information technology - General-Purpose Datatypes (GPD) (reaffirm a national adoption INCITS/ISO/IEC 11404:2007 [R2014]): 10/29/2019

#### **Withdrawal**

INCITS 377-2009 [R2014], Information technology - Finger Pattern Data Interchange Format (withdrawal of INCITS 377-2009 [R2014]): 10/29/2019

INCITS 407-2005 [R2015], Information technology - BIOS Enhanced Disk Drive Services - 3 (EDD-3) (withdrawal of INCITS 407-2005 [R2015]): 10/29/2019

INCITS 407-2005/Erratum 1-2009 [R2014], Information technology - BIOS Enhanced Disk Drive Services - 3 (EDD-3) - Erratum 1 (withdrawal of INCITS 407-2005/Erratum 1-2009 [R2014]): 10/29/2019

INCITS 423.3-2009 [R2014], Information technology - Conformance Testing Methodology - Part 3: Conformance Testing Methodology for INCITS 377-2004, Finger Pattern Data Interchange Format (withdrawal of INCITS 423.3-2009 [R2014]): 10/29/2019

### **NSF (NSF International)**

#### **Revision**

ANSI/NSF 14-2019 (i102r1), Plastics Piping System Components and Related Materials (revision of ANSI/NSF 14-2018): 10/28/2019

### **PMI (Project Management Institute)**

#### **New Standard**

ANSI/PMI 19-006-2019, Standard for Earned Value Management (EVM) (new standard): 10/29/2019

### **SCTE (Society of Cable Telecommunications Engineers)**

#### **New Standard**

ANSI/SCTE 42-2019, IP Multicast for Digital MPEG Networks (new standard): 10/28/2019

ANSI/SCTE 53-2019, Methods for Asynchronous Data Services Transport (new standard): 10/28/2019

ANSI/SCTE 55-1-2019, Digital Broadband Delivery System: Out of Band Transport - Part 1: Mode A (new standard): 10/28/2019

ANSI/SCTE 55-2-2019, Digital Broadband Delivery System: Out of Band Transport - Part 2: Mode B (new standard): 10/28/2019

### **UL (Underwriters Laboratories, Inc.)**

#### **Revision**

ANSI/UL 639-2019, Standard for Safety for Intrusion-Detection Units (revision of ANSI/UL 639-2012 (R2018)): 10/24/2019

ANSI/UL 810-2019, Standard for Safety for Capacitors (revision of ANSI/UL 810-2014): 10/29/2019

ANSI/UL 827-2019b, Standard for Safety for Central-Station Alarm Services (revision of ANSI/UL 827-2019): 10/18/2019

ANSI/UL 1238-2019a, Standard for Safety for Control Equipment for Use with Flammable Liquid Dispensing Devices (revision of ANSI/UL 1238-2019): 10/28/2019

ANSI/UL 2565-2019, Standard for Safety for Industrial Metalworking and Woodworking Machine Tools (revision of ANSI/UL 2565-2013 (R2017)): 10/24/2019

# Project Initiation Notification System (PINS)

ANSI Procedures require notification of ANSI by ANSI-accredited standards developers (ASD) of the initiation and scope of activities expected to result in new or revised American National Standards (ANS). Early notification of activity intended to reaffirm or withdraw an ANS and in some instances a PINS related to a national adoption is optional. The mechanism by which such notification is given is referred to as the PINS process. For additional information, see clause 2.4 of the ANSI Essential Requirements: Due Process Requirements for American National Standards.

Following is a list of proposed actions and new ANS that have been received recently from ASDs. Please also review the section in Standards Action entitled "American National Standards Maintained Under Continuous Maintenance" for additional or comparable information with regard to standards maintained under the continuous maintenance option. Use the following Public Document Library url to access PDF & EXCEL reports of approved & proposed ANS: [List of Approved and Proposed ANS](#)

Directly and materially affected interests wishing to receive more information or to submit comments are requested to contact the standards developer directly within 30 days of the publication of this announcement.

## AAFS (American Academy of Forensic Sciences)

Contact: Teresa Ambrosius, (719) 453-1036, [tambrosius@aafs.org](mailto:tambrosius@aafs.org)  
410 North 21st Street, Colorado Springs, CO 80904

### New Standard

BSR/AAFS ASB BPR 052-202x, Best Practice Recommendation for the Detection of Footwear and Tire Impression Evidence (new standard)

Stakeholders: Footwear and tire examiners; forensic science training and education providers; prosecutors and defense attorneys; judges and juries researchers.

Project Need: This document provides stakeholders an overview of best practice methods for detecting footwear and tire impressions. It may guide forensic science trainees and their trainers and provide attorneys and the trier of fact a baseline on how to judge the methods of collection of footwear and tire evidence.

This document provides best practice recommendations for personnel responsible for detecting footwear and tire impressions. These recommendations optimize the detection of impressions. The methods included in this document may not cover all aspects of unusual or uncommon conditions. This document is not intended as a substitute for training in the detecting of footwear and tire impression evidence. Completion of a training program and experience in these skills is essential to understanding and applying the recommendations outlined in this document.

BSR/AAFS ASB Std 137-202x, Standard for Examination and Documentation of Footwear and Tire Impression Evidence (new standard)

Stakeholders: Footwear and tire examiners, forensic service provider customers.

Project Need: This document will provide the first standard covering what the minimum requirement should be for casework documentation.

This standard provides the examination process and minimum documentation requirements for relevant observations and conclusions/interpretations encountered during footwear/tire tread examinations. The required documentation as outlined in this standard will allow for an appropriate review. This document is not all inclusive of the examinations that may be requested or conducted.

## ANS (American Nuclear Society)

Contact: Kathryn Murdoch, (708) 579-8268, [kmurdoch@ans.org](mailto:kmurdoch@ans.org)  
555 North Kensington Avenue, La Grange Park, IL 60526

### Revision

BSR/ANS 19.3-202x, Steady-State Neutronics Methods for Power Reactor Analysis (revision of ANSI/ANS 19.3-2011 (R2017))

Stakeholders: Nuclear-power generation utilities, reactor designers and vendors, nuclear regulators.

Project Need: Revision needed to update some of the methodology and topics.

This standard provides guidance for developing, validating, and utilizing steady-state neutronics methods to calculate neutron reaction-rate spatial distributions, power distributions, and effective multiplication constants of nuclear power reactors and to provide guidelines by which the adequacy of design calculations may be demonstrated. It covers reactor physics calculations for the entire nuclear industry, from fast to thermal power reactors. This standard does not endorse or exclude the application of any methodology that has been adequately verified, validated, tested, and demonstrated to yield reliable reactor physics parameters.

## CSA (CSA America Standards Inc.)

Contact: David Zimmerman, (216) 524-4990, david.zimmerman@csagroup.org  
8501 E. Pleasant Valley Road, Cleveland, OH 44131

### **New Standard**

BSR/CSA NGV 4.7-202X, Automatic Valves for Use in Natural Gas Vehicle Fueling Stations (new standard)

Stakeholders: Consumers, manufacturers, gas suppliers.

Project Need: Safety.

This standard contains safety requirements for the material, design, and testing of automatic pressure-operated valves for high-pressure natural gas service, referred to in this standard as valves, including those for use on compressed natural gas vehicle fueling systems. This standard applies to pneumatically actuated valves, check valves, and excess flow valves.

### **Revision**

BSR/CSA NGV 4.4-202X, Breakaway Devices for Natural Gas Dispensing Hoses and Systems (revision and redesignation of ANSI/IAS NGV 4.4/CSA 12.54-1999 (R2019))

Stakeholders: Consumers, manufacturers, gas suppliers.

Project Need: Safety.

This standard applies to newly produced compressed Natural Gas Vehicle (NGV) dispenser shear valves and fueling hose emergency breakaway shutoff devices, which are intended to: (1) Minimize the escape of natural gas by automatically shutting off the flow of gas from the dispenser and control the depressurization of the hose; (2) Minimize damage to the vehicle and dispenser when a vehicle is driven off with the nozzle attached to the vehicle's fueling receptacle; and (3) Automatically shut off the flow of gas in the event of a vehicular collision with a fuel dispenser that results in the displacement of the dispenser from its gas supply connection. It is not applicable to Vehicle Refueling Appliances.

BSR/CSA NGV 6.1-202x, Compressed natural gas (CNG) fuel storage and delivery systems for road vehicles (revision and redesignation of ANSI/CSA NGV 6.1-2018)

Stakeholders: Natural gas vehicle manufacturers, CNG infrastructure, regulators.

Project Need: Safety.

Standard for the design, installation, inspection, repair, and maintenance of the fuel storage and delivery system installed in on-road vehicles for use with compressed natural gas (CNG). This includes fuel systems on self-propelled vehicles for the provision of motive power. This standard does not apply to (a) stationary engines; (b) mobile equipment using natural gas as a fuel for other than propulsion; or (c) electronic components or controls strategy of a fuel management system.

BSR/IAS NGV 4.6-202x, Manually Operated Valves for Natural Gas Dispensing Systems (revision and redesignation of ANSI/IAS NGV 4.6/CSA 12.56-1999 (R2019))

Stakeholders: Consumers, manufacturers, gas suppliers.

Project Need: Safety.

This standards contains safety requirements for the material, design, manufacture, and testing of manually operated valves for high-pressure natural gas. These requirements do not apply to cylinder shut-off valves.

## CTA (Consumer Technology Association)

Contact: Veronica Lancaster, (703) 907-7697, vlancaster@cta.tech  
1919 South Eads Street, Arlington, VA 22202

### **Reaffirmation**

BSR/CTA 2045.1-2014 (R202x), Modular Communications Interface for Firmware Transfer Message Set (reaffirmation of ANSI/CTA 2045.1-2014)

Stakeholders: Consumers, manufacturers, service providers, retailers, utility providers.

Project Need: To reaffirm ANSI/CTA 2045.1.

This specification is an extension of the ANSI/CTA 2045-A Modular Communications Interface (MCI) for Energy Management Specification. It presents messages and methods that enable reprogramming the SGD firmware over the MCI interface.

BSR/CTA 2045.3-2014 (R202x), Modular Communications Interface for Thermostat Message Set (reaffirmation of ANSI/CTA 2045.3-2014)

Stakeholders: Consumers, manufacturers, service providers, retailers, utility providers.

Project Need: To reaffirm ANSI/CTA 2045.3.

This specification is an extension of the ANSI/CTA 2045-A Modular Communications Interface (MCI) for Energy Management Specification. It presents messages and methods for thermostat-based functionality.

**Revision**

BSR/CTA 774-D-202x, TV Receiving Antenna Performance Presentation and Measurement (revision and redesignation of ANSI/CTA 774-C-2014)

Stakeholders: Consumers, manufacturers, retailers.

Project Need: Revise ANSI/CTA 774-C.

This standard defines test and measurement procedures for use by manufacturers of television receive antennas who wish to categorize their antennas in accordance with CTA 2028-A, Color Codes for Outdoor TV Receiving Antennas, for use with the CTA TV Antenna Selector Program [www.AntennaWeb.org](http://www.AntennaWeb.org). Essential elements include procedures to determine antenna gain, front-to-back ratio, average gain to null ratio, directivity, and distortion performance of active antennas with integrated amplifiers.

BSR/CTA 2048-A-202x, Host and Router Profiles for IPv6 (revision and redesignation of ANSI/CTA 2048-2014)

Stakeholders: Consumers, manufacturers, service providers, retailers.

Project Need: To revise ANSI/CTA 2048.

This document is to identify the required features and capabilities for stand-alone routers and hosts with support for IPv6 and related necessary protocols. Additional items to consider are support for IPv6 transition technologies and support for PCP (port configuration protocol). These requirements are referenced to available technical standards such as RFCs.

**ECIA (Electronic Components Industry Association)**

Contact: *Laura Donohoe, (571) 323-0294, [ldonohoe@ecianow.org](mailto:ldonohoe@ecianow.org)  
13873 Park Center Road, Suite 315, Herndon, VA 20171*

**Revision**

BSR/EIA 364-05C-202x, Contact Insertion, Release and Removal Force Test Procedure for Electrical Connectors (revision and redesignation of ANSI/EIA 364-05B-2009 (R2015))

Stakeholders: Electronics, electrical and telecommunications industries.

Project Need: Revise and redesignate current the American National Standard.

This standard establishes a test method to determine the forces required to insert contacts into and remove contacts from their normal position in a connector.

**IES (Illuminating Engineering Society)**

Contact: *Patricia McGillicuddy, (917) 913-0027, [pmcgillicuddy@ies.org](mailto:pmcgillicuddy@ies.org)  
120 Wall Street, Floor 17, New York, NY 10005*

**New Standard**

BSR/IES LM-37-202x, Approved Method: IES Guide for Determination of Average Luminance (Calculated) for Indoor Luminaires (new standard)

Stakeholders: Lighting practitioners, electrical engineers, architects, interior designers, regulatory agencies, lighting laboratories, luminaire and light source manufacturers.

Project Need: The methods of calculating average luminance, contained in this Guide, cover various open bottom apertures as well as flat and drop-lensed units including units, with multiple openings in the light emitting area. The candela values of interest are obtained by means of IES techniques for relative or absolute photometry, and are not obtained from field measurements in application. NOTE: Average luminaire luminance is not a reliable indicator of either direct or reflected glare due to potential luminance non-uniformity.

The concept and limitations of average luminance is addressed in this document. Although simple projected area examples are presented and more detailed area calculation methods are developed for reference purposes in Annex A, it remains the user's responsibility to seek out the most appropriate methods or formulas each time he or she determines the actual projected areas for a specific luminaire.

## **NECA (National Electrical Contractors Association)**

Contact: *Aga Golriz, (301) 215-4549, Aga.golriz@necanet.org*  
*3 Bethesda Metro Center, Suite 1100, Bethesda, MD 20814*

### **Revision**

BSR/NECA 701-202x, Standard for Energy Management, Demand Response and Energy Solutions (revision of ANSI/NECA 701-2013)

Stakeholders: Electrical contractors, specifiers, electrical workers, inspectors, building owners, maintenance engineers.

Project Need: National Electrical Installation Standards developed by NECA with other industry partners are the first performance standards in electrical construction that go beyond the minimum safety requirements of the National Electrical Code to clearly define what is meant by installing products and systems "in a neat and workmanlike manner".

This standard describes methods and procedures used for performing energy conservation surveys; controlling and managing energy consumptions; implementing the smart grid and demand response; and developing, implementing, and evaluating energy conservation measures for residential, commercial, and industrial applications.

## **NEMA (ASC C137) (National Electrical Manufacturers Association)**

Contact: *Michael Erbesfeld, (703) 841-3262, Michael.Erbesfeld@nema.org*  
*1300 N 17th St Suite 900, Rosslyn, VA 22209*

### **New Standard**

BSR/C137.8-202X, Standard for Lighting Systems Lighting Control User Interface Elements (new standard)

Stakeholders: Producers, users, general interest.

Project Need: Standard user interface elements enable efficient and effective use of lighting control devices. Standard user interface elements have a long history of success in areas such as vehicles and communication. This standard extends generally accepted user interface principles to the control of lighting. When users of lighting controls have difficulty in understanding the capabilities or status of the controls or lights, it leads to substandard and frustrating lighting service, wasted energy, and often both. A lighting control user interface standard can substantially reduce this problem. This standard will improve user understanding of lighting controls through consistent user interface language, iconography, position, and orientation.

This standard specifies user interface elements for use with lighting controls. It is applicable to hardware controls, software applications, displays, and documentation. This standard applies to user interface elements such as: Lighting Control in General, Switching Control, Brightness Control, Dynamic Control, Color Control, and Other Lighting Control Topics. This standard addresses visual control elements (terms, symbols, and colors), dynamic elements (indication and actuation), audio elements (sounds and words), and tactile elements (identification and actuation). This standard may incorporate generally accepted international symbols. This standard does not address ergonomic or safety issues associated with the deployment of user interface elements.

## **NFPA (National Fire Protection Association)**

Contact: *Dawn Michele Bellis, (617) 984-7246, dbellis@nfpa.org*  
*One Batterymarch Park, Quincy, MA 02169*

### **Revision**

BSR/NFPA 1990-202x, Standard for Protective Ensembles for Hazardous Material and Emergency Medical Operations (revision, redesignation and consolidation of ANSI/NFPA 1991-2017, ANSI/NFPA 1992-2018, ANSI/NFPA 1994-2018, ANSI/NFPA 1999-2018)

Stakeholders: Manufacturers, users, installers/maintainers, labor, enforcing authority, insurance, consumers, special experts, and research and testing.

Project Need: Public interest and need.

This standard shall specify the minimum design, performance, testing, documentation, and certification requirements for the following: (1) Vapor-protective ensembles for hazardous materials emergencies and CBRN terrorism incidents; (2) Liquid splash-protective ensembles and clothing for hazardous materials emergencies; (3) Protective ensembles for first responders to hazardous materials emergencies and CBRN terrorism incidents; and (4) Protective clothing and ensembles for emergency medical operations.

## **PLASTICS (Plastics Industry Association)**

Contact: Jennifer Jones, (202) 974-5217, [jjones@plasticsindustry.org](mailto:jjones@plasticsindustry.org)  
1425 K Street, NW, Suite 500, Washington, DC 20005

### **Revision**

BSR/PLASTICS B151.27-202X, Safety Requirements for Robot / Injection Molding Machine Systems (revision and redesignation of ANSI/SPI B151.27-2013)

Stakeholders: Suppliers, producers, users, integrators.

Project Need: New technology incorporated, updating external references, removing redundant information.

This standard specifies the safety requirements for the design, implementation, set-up, operation, maintenance, and modification of robot / Injection Molding Machine (IMM) systems. A robot / IMM system is comprised of a robot system(s) operating within the volume of the mold areas guarding of an IMM.

## **TIA (Telecommunications Industry Association)**

Contact: Teesha Jenkins, (703) 907-7706, [standards@tiaonline.org](mailto:standards@tiaonline.org)  
1320 North Courthouse Road, Suite 200, Arlington, VA 22201

### **New National Adoption**

BSR/TIA 455-191-C-202x, FOTP-191 IEC 60793-1-45 Optical Fibres - Part 1-45: Measurement Methods and Test Procedures - Mode Field Diameter (identical national adoption of IEC-60793-1-45)

Stakeholders: Manufacturing and end users of optical fiber.

Project Need: Update standard.

The current version of this document references an IEC version with errors. The most recent version of the IEC document addresses these errors, but we have not yet adopted the newest version.

## **UL (Underwriters Laboratories, Inc.)**

Contact: Anne Marie Jacobs, (919) 549-0954, [annemarie.jacobs@ul.org](mailto:annemarie.jacobs@ul.org)  
12 Laboratory Dr., Research Triangle Park, NC 27709

### **New National Adoption**

BSR/UL 60335-2-69-202x, Standard for Safety for Household And Similar Electrical Appliances - Safety - Part 2-69: Particular requirements for wet and dry vacuum cleaners, including power brush, for commercial use (national adoption with modifications of IEC 60335-2-69)

Stakeholders: Manufacturers, supply chain and users of wet and dry vacuum cleaners, including power brush, for commercial use.

Project Need: A need has been identified for an IEC-based, US/CAN standard covering wet and dry vacuum cleaners, including power brush, for commercial use. There is currently no such standard that deals with the safety of equipment including backpack vacuum cleaners, dust extractors, and centrally cited vacuum cleaners.

This International Standard deals with the safety of electrical motor-operated vacuum cleaners, including backpack vacuum cleaners, and dust extractors, for wet suction, dry suction, or wet and dry suction, intended for commercial indoor or outdoor use with or without attachments. They may be provided with a blowing or inflating function. It also deals with the safety of centrally sited vacuum cleaners, excluding the installation of the system. They are not equipped with a traction drive, and mains and battery-powered systems are covered. This standard also applies to machines handling hazardous dust, such as asbestos.

## **UL (Underwriters Laboratories, Inc.)**

Contact: Elizabeth Northcott, (847) 664-3198, Elizabeth.Northcott@ul.org  
333 Pfingsten Road, Northbrook, IL 60062

### **New Standard**

BSR/UL 62841-4-1000-202x, Standard for Safety for Electric Motor-Operated Hand-Held Tools, Transportable Tools and Lawn and Garden Machinery - Safety: Particular Requirements for Utility Machines (new standard) (new standard)

Stakeholders: Manufacturers, retailers, consumers.

Project Need: A need has been identified for a standard covering battery power-assisted utility carts, wagons, and wheelbarrows, referred to generally as “utility machines”. The standard will address foreseeable risks of personal injury during use, where no requirements currently exist. The standard is initially intended to meet the needs of the U.S. market.

This standard applies to battery power-assisted utility carts, wagons, and wheelbarrows, referred to generally as “utility machines”. Utility machines are intended to be attended and controlled by an operator in physical contact (physical presence) with the utility machine at all times; they are not intended to be operated unattended or operate automatically. Utility machines are intended for use to convey inanimate goods, materials, or equipment on land, typically gardens and construction sites; they are not intended for transporting the operator or any passengers.

# American National Standards Maintained Under Continuous Maintenance

The ANSI Essential Requirements: Due Process Requirements for American National Standards provides two options for the maintenance of American National Standards (ANS): periodic maintenance (see clause 4.7.1) and continuous maintenance (see clause 4.7.2). Continuous maintenance is defined as follows:

The standard shall be maintained by an accredited standards developer. A documented program for periodic publication of revisions shall be established by the standards developer. Processing of these revisions shall be in accordance with these procedures. The published standard shall include a clear statement of the intent to consider requests for change and information on the submittal of such requests. Procedures shall be established for timely, documented consensus action on each request for change and no portion of the standard shall be excluded from the revision process. In the event that no revisions are issued for a period of four years, action to reaffirm or withdraw the standard shall be taken in accordance with the procedures contained in the ANSI Essential Requirements.

The Executive Standards Council (ExSC) has determined that for standards maintained under the Continuous Maintenance option, separate PINS announcements are not required. The following ANSI Accredited Standards Developers have formally registered standards under the Continuous Maintenance option

- **AAMI (Association for the Advancement of Medical Instrumentation)**
- **AARST (American Association of Radon Scientists and Technologists)**
- **AGA (American Gas Association)**
- **AGSC-AGRSS (Auto Glass Safety Council)**
- **ASC X9 (Accredited Standards Committee X9, Incorporated)**
- **ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)**
- **ASME (American Society of Mechanical Engineers)**
- **ASTM (ASTM International)**
- **GBI (Green Building Initiative)**
- **HL7 (Health Level Seven)**
- **IES (Illuminating Engineering Society)**
- **ITI (InterNational Committee for Information Technology Standards)**
- **MHI (Material Handling Industry)**
- **NAHBRC (NAHB Research Center, Inc.)**
- **NBBPVI (National Board of Boiler and Pressure Vessel Inspectors)**
- **NCPDP (National Council for Prescription Drug Programs)**
- **NEMA (National Electrical Manufacturers Association)**
- **NISO (National Information Standards Organization)**
- **NSF (NSF International)**
- **PRCA (Professional Ropes Course Association)**
- **RESNET (Residential Energy Services Network, Inc.)**
- **SAE (SAE International)**
- **TCNA (Tile Council of North America)**
- **TIA (Telecommunications Industry Association)**
- **UL (Underwriters Laboratories, Inc.)**

To obtain additional information with regard to these standards, including contact information at the ANSI Accredited Standards Developer, please visit ANSI Online at [www.ansi.org/asd](http://www.ansi.org/asd), select "Standards Activities," click on "Public Review and Comment" and "American National Standards Maintained Under Continuous Maintenance." This information is also available directly at [www.ansi.org/publicreview](http://www.ansi.org/publicreview)

Alternatively, you may contact the Procedures & Standards Administration department (PSA) at [psa@ansi.org](mailto:psa@ansi.org) or via fax at 212-840-2298. If you request that information be provided via E-mail, please include your E-mail address; if you request that information be provided via fax, please include your fax number. Thank you.

# ANSI-Accredited Standards Developers Contact Information

The addresses listed in this section are to be used in conjunction with standards listed in PINS, Call for Comment and Final Actions. This section is a list of developers who have submitted standards for this issue of *Standards Action* – it is not intended to be a list of all ANSI-Accredited Standards Developers. Please send all address corrections to Standards Action Editor at [standact@ansi.org](mailto:standact@ansi.org).

<p><b>AAFS</b> American Academy of Forensic Sciences 410 North 21st Street Colorado Springs, CO 80904 Phone: (719) 453-1036 Web: <a href="http://www.aafs.org">www.aafs.org</a></p>	<p><b>AWPA (ASC 05)</b> American Wood Protection Association P.O. Box 361784 Birmingham, AL 35236-1784 Phone: (205) 733-4077 Web: <a href="http://www.awpa.com">www.awpa.com</a></p>	<p><b>IES</b> Illuminating Engineering Society 120 Wall Street, Floor 17 New York, NY 10005 Phone: (917) 913-0027 Web: <a href="http://www.ies.org">www.ies.org</a></p>	<p><b>PLASTICS</b> Plastics Industry Association 1425 K Street, NW Suite 500 Washington, DC 20005 Phone: (202) 974-5217 Web: <a href="http://www.plasticsindustry.org">www.plasticsindustry.org</a></p>
<p><b>ANS</b> American Nuclear Society 555 North Kensington Avenue La Grange Park, IL 60526 Phone: (708) 579-8268 Web: <a href="http://www.ans.org">www.ans.org</a></p>	<p><b>AWWA</b> American Water Works Association 6666 W. Quincy Ave. Denver, CO 80235 Phone: (303) 347-6178 Web: <a href="http://www.awwa.org">www.awwa.org</a></p>	<p><b>ITI (INCITS)</b> InterNational Committee for Information Technology Standards 700 K Street NW Suite 600 Washington, DC 20001 Phone: (202) 737-8888 Web: <a href="http://www.incits.org">www.incits.org</a></p>	<p><b>PMI (Organization)</b> Project Management Institute 14 Campus Blvd Newtown Square, PA 19073-3299 Phone: (313) 404-3507 Web: <a href="http://www.pmi.org">www.pmi.org</a></p>
<p><b>APTech (ASC CGATS)</b> Association for Print Technologies 1896 Preston White Drive Reston, VA 20191 Phone: (703) 264-7200 Web: <a href="http://www.printtechnologies.org">www.printtechnologies.org</a></p>	<p><b>CSA</b> CSA America Standards Inc. 8501 E. Pleasant Valley Road Cleveland, OH 44131 Phone: (216) 524-4990 Web: <a href="http://www.csagroup.org">www.csagroup.org</a></p>	<p><b>NECA</b> National Electrical Contractors Association 3 Bethesda Metro Center Suite 1100 Bethesda, MD 20814 Phone: (301) 215-4549 Web: <a href="http://www.neca-neis.org">www.neca-neis.org</a></p>	<p><b>SCTE</b> Society of Cable Telecommunications Engineers 140 Philips Rd Exton, PA 19341 Phone: (800) 542-5040 Web: <a href="http://www.scte.org">www.scte.org</a></p>
<p><b>ASABE</b> American Society of Agricultural and Biological Engineers 2950 Niles Road Saint Joseph, MI 49085 Phone: (269) 932-7015 Web: <a href="http://www.asabe.org">www.asabe.org</a></p>	<p><b>CTA</b> Consumer Technology Association 1919 South Eads Street Arlington, VA 22202 Phone: (703) 907-7697 Web: <a href="http://www.cta.tech">www.cta.tech</a></p>	<p><b>NEMA (ASC C137)</b> National Electrical Manufacturers Association 1300 N 17th St Suite 900 Rosslyn, VA 22209 Phone: (703) 841-3262 Web: <a href="http://www.nema.org">www.nema.org</a></p>	<p><b>TIA</b> Telecommunications Industry Association 1320 North Courthouse Road Suite 200 Arlington, VA 22201 Phone: (703) 907-7706 Web: <a href="http://www.tiaonline.org">www.tiaonline.org</a></p>
<p><b>ASC X9</b> Accredited Standards Committee X9, Incorporated 275 West Street Suite 107 Annapolis, MD 21401 Phone: (410) 267-7707 Web: <a href="http://www.x9.org">www.x9.org</a></p>	<p><b>ECIA</b> Electronic Components Industry Association 13873 Park Center Road Suite 315 Herndon, VA 20171 Phone: (571) 323-0294 Web: <a href="http://www.ecianow.org">www.ecianow.org</a></p>	<p><b>NENA</b> National Emergency Number Association 16603 Meadow Cove Street Tampa, FL 33624-1283 Phone: (727) 312-3230 Web: <a href="http://www.nena.org">www.nena.org</a></p>	<p><b>TMA</b> The Monitoring Association 8150 Leesburg Pike, Suite 700 Vienna, VA 22182 Phone: (703) 242-4670 Web: <a href="http://www.csaaul.org">www.csaaul.org</a></p>
<p><b>ASHRAE</b> American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. 1791 Tullie Circle, NE Atlanta, GA 30329 Phone: (404) 636-8400 Web: <a href="http://www.ashrae.org">www.ashrae.org</a></p>	<p><b>EOS/ESD</b> ESD Association, Inc. 7900 Turin Rd., Bldg. 3 Rome, NY 13440 Phone: (315) 339-6937 Web: <a href="http://www.esda.org">www.esda.org</a></p>	<p><b>NFPA</b> National Fire Protection Association One Batterymarch Park Quincy, MA 02169 Phone: (617) 984-7246 Web: <a href="http://www.nfpa.org">www.nfpa.org</a></p>	<p><b>UL</b> Underwriters Laboratories, Inc. 12 Laboratory Dr. Research Triangle Park, NC 27709 Phone: (919) 549-0954 Web: <a href="http://www.ul.com">www.ul.com</a></p>
<p><b>ASME</b> American Society of Mechanical Engineers Two Park Avenue M/S 6-2B New York, NY 10016-5990 Phone: (212) 591-8489 Web: <a href="http://www.asme.org">www.asme.org</a></p>	<p><b>HL7</b> Health Level Seven 3300 Washtenaw Avenue Suite 227 Ann Arbor, MI 48104 Phone: (734) 677-7777 Web: <a href="http://www.hl7.org">www.hl7.org</a></p>	<p><b>NSF</b> NSF International 789 N. Dixboro Road Ann Arbor, MI 48105-9723 Phone: (734) 214-6219 Web: <a href="http://www.nsf.org">www.nsf.org</a></p>	
	<p><b>HPS (ASC N13)</b> Health Physics Society 1313 Dolley Madison Blvd #402 McLean, VA 22101 Phone: (703) 790-1745 Web: <a href="http://www.hps.org">www.hps.org</a></p>		



# ISO & IEC Draft International Standards

This section lists proposed standards that the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) are considering for approval. The proposals have received substantial support within the technical committees or subcommittees that developed them and are now being circulated to ISO and IEC members for comment and vote. Standards Action readers interested in reviewing and commenting on these documents should order copies from ANSI.

## Comments

Comments regarding ISO documents should be sent to ANSI's ISO Team (isot@ansi.org); comments on ISO documents must be submitted electronically in the approved ISO template and as a Word document as other formats will not be accepted.

Those regarding IEC documents should be sent to Tony Zertuche, General Secretary, USNC/IEC, at ANSI's New York offices (tzertuche@ansi.org). The final date for offering comments is listed after each draft.

## Ordering Instructions

**ISO and IEC Drafts can be made available by contacting ANSI's Customer Service department. Please e-mail your request for an ISO or IEC Draft to Customer Service at sales@ansi.org. When making your request, please provide the date of the Standards Action issue in which the draft document you are requesting appears.**

## ISO Standards

### ACOUSTICS (TC 43)

ISO 8297/DAMd1, Acoustics - Determination of sound power levels of multisource industrial plants for evaluation of sound pressure levels in the environment - Engineering method - Amendment 1 - 11/17/2019, \$33.00

ISO/DIS 717-1, Acoustics - Rating of sound insulation in buildings and of building elements - Part 1: Airborne sound insulation - 1/12/2020, \$82.00

### ANAESTHETIC AND RESPIRATORY EQUIPMENT (TC 121)

ISO/DIS 81060-3, Non-invasive sphygmomanometers - Part 3: Clinical investigation of continuous automated measurement type - 1/6/2020, \$102.00

### CERAMIC TILE (TC 189)

ISO/DIS 17889-1, Ceramic tiling systems - Sustainability for ceramic tiles and installation materials - Part 1: Specification for ceramic tiles - 1/11/2020, \$119.00

### CRANES (TC 96)

ISO/DIS 4301-2, Cranes - Classification - Part 2: Mobile cranes - 1/11/2020, FREE

### EQUIPMENT FOR FIRE PROTECTION AND FIRE FIGHTING (TC 21)

ISO/DIS 6182-17, Fire protection - Automatic sprinkler systems - Part 17: Requirements and test methods for pressure reducing valves - 1/12/2020, FREE

### HUMAN RESOURCE MANAGEMENT (TC 260)

ISO/DIS 30415, Human resource management - Diversity and inclusion - 12/21/2019, \$88.00

### INFORMATION AND DOCUMENTATION (TC 46)

ISO/DIS 23404, Information and documentation - Papers and boards used for conservation - Measurement of impact on paper cellulose - 1/12/2020, \$46.00

### NUCLEAR ENERGY (TC 85)

ISO/DIS 23466, Design criteria for the thermal insulation of reactor coolant system main equipments and piping of PWR nuclear power plants - 1/11/2020, FREE

### PETROLEUM PRODUCTS AND LUBRICANTS (TC 28)

ISO/DIS 22192, Bunkering of marine fuel using the Coriolis mass flow meter (MFM) system - 1/16/2020, \$119.00

### STEEL (TC 17)

ISO/DIS 15177, Steel sheet, hot-rolled twin-roll cast, of commercial quality - 1/17/2020, \$46.00

## ISO/IEC JTC 1, Information Technology

ISO/IEC DIS 27035-3, Information technology - Information security incident management - Part 3: Guidelines for ICT incident response operations - 1/16/2020, \$98.00

## IEC Standards

9/2542(F)/CDV, IEC 61992-6/AMD2 ED1: Amendment 2 - Railway applications - Fixed installations - DC switchgear - Part 6: DC switchgear assemblies, /2019/12/2

11/265/FDIS, IEC 61854 ED2: Overhead lines - Requirements and tests for spacers, 2019/12/6

11/266/FDIS, IEC 61897 ED2: Overhead lines - Requirements and tests for Aeolian vibration dampers, 2019/12/6

14/1035/NP, PNW 14-1035: Power transformer and reactor fittings - Devices suitable for use in communication networks, /2019/12/2

26/693/CD, IEC 60974-11 ED4: Arc welding equipment - Part 11: Electrode holders, 2020/1/17

26/691/CD, IEC 60974-13 ED2: Arc welding equipment - Part 13: Welding clamp, 2020/1/17

26/689/CD, IEC 60974-1 ED6: Arc welding equipment - Part 1: Welding power sources, 2020/1/17

26/690/CD, IEC 60974-8 ED3: Arc welding equipment - Part 8: Gas consoles for welding and plasma cutting systems, 2020/1/17

- 29/1040/NP, PNW 29-1040: Electroacoustics - Measurement microphones - Part 9: Specifications for transfer standard microphones, 2020/1/17
- 34D/1511/FDIS, IEC 60598-2-1 ED2: Luminaires - Part 2-1: Particular requirements - Fixed general purpose luminaires, 2019/12/6
- 34D/1497/CDV, IEC 60598-2-23 ED2: Luminaires - Part 2: Particular requirements - Section 23: Extra low voltage lighting systems for ELV light sources, 2020/1/17
- 46/746/CD, IEC 62037-8 ED1: Measurement of passive intermodulation generated by objects exposed to RF radiation, 2020/1/17
- 46F/492/FDIS, IEC 61169-61 ED1: Radio-frequency connectors - Part 61: Sectional specification for RF coaxial connectors with 9.5 mm inner diameter of outer conductor with quick lock coupling series Q4.1-9.5, 2019/12/6
- 48B/2765/CD, IEC 61076-2-115 ED1: Connectors for electrical and electronic equipment - Product requirements - Part 2-115: Circular connectors - Detail specification for 12P connectors with 2 A rated current signal and metal housing circular connectors with straight push-pull locking and degree of protection IP65/IP67, 2020/1/17
- 51/1318A/NP, PNW 51-1318: Test methods for electrical and magnetic properties of magnetic powder cores, 020/1/3/
- 57/2158/DC, Draft IEC TR 61850-90-13 ED1, Communication networks and systems for power utility automation - Part 90-13: Deterministic Networking Technologies, 2019/12/6
- 77B/805A/CDV, IEC 61000-4-20 ED3: Electromagnetic compatibility (EMC) - Part 4-20: Testing and measurement techniques - Emission and immunity testing in transverse electromagnetic (TEM) waveguides, /2019/11/2
- 79/629/CDV, IEC 62692 ED1: Alarm and electronic security systems - Digital door lock systems - Requirements and test methods, 2020/1/17
- 80/943/FDIS, IEC 61162-460/AMD1 ED2: Amendment 1 - Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 460: Multiple talkers and multiple listeners - Ethernet interconnection - Safety and security, 2019/12/6
- 90/444/CD, IEC 61788-22-2 ED1: Normal state resistance and critical current measurement - high-Tc Josephson junction, 2020/1/17
- 100/3332/NP, PNW 100-3332: Portable multimedia equipment - Determination of battery duration - Powered loudspeaker equipment, 2020/1/17
- 116/429/FDIS, IEC 60335-2-107/AMD1 ED2: Amendment 1 - Household and similar electrical appliances - Safety - Part 2-107: Particular requirements for robotic battery powered electrical lawnmowers, 2019/12/6
- 116/430/FDIS, IEC 62841-3-9 ED2: Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety - Part 3-9: Particular requirements for transportable mitre saws, 2019/12/6
- 121A/330/CD, IEC 60947-5-1 ED5: Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices, 2020/2/14
- 121B/92/CDV, IEC 61439-2 ED3: Low-voltage switchgear and controlgear assemblies - Part 2: Power switchgear and controlgear assemblies, 2020/1/17
- SyCSmartCities/113/CD, IEC TS 63235 ED1: Systems Reference Deliverable (SRD) - Smart City System - Methodology for concepts building, 2020/1/17
- JTC1-SC25/2919/DTS, ISO/IEC TS 29125/AMD1 ED1: Amendment 1 - Information technology - Telecommunications cabling requirements for remote powering of terminal equipment, 2020/1/17



# Newly Published IEC Standards

Listed here are new and revised standards recently approved and promulgated by IEC – the International Electrotechnical Commission. Most are available at the ANSI Electronic Standards Store (ESS) at [www.ansi.org](http://www.ansi.org). All paper copies are available from Standards resellers (<http://webstore.ansi.org/faq.aspx#resellers>).

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## **ELECTRIC TRACTION EQUIPMENT (TC 9)**

[IEC 60077-5 Ed. 2.0 b:2019](#), Railway applications - Electric equipment for rolling stock - Part 5: Electrotechnical components - Rules for HV fuses, \$199.00

[S+ IEC 60077-5 Ed. 2.0 en:2019 \(Redline version\)](#), Railway applications - Electric equipment for rolling stock - Part 5: Electrotechnical components - Rules for HV fuses, \$259.00

## **ELECTROACOUSTICS (TC 29)**

[IEC 60118-13 Ed. 5.0 b:2019](#), Electroacoustics - Hearing aids - Part 13: Requirements and methods of measurement for electromagnetic immunity to mobile digital wireless devices, \$164.00

## **LAMPS AND RELATED EQUIPMENT (TC 34)**

[IEC 62386-332 Ed. 1.0 b cor.1:2019](#), Corrigendum 1 - Digital addressable lighting interface - Part 332: Particular requirements - Input devices - Feedback, \$0.00

## **SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES (TC 61)**

[IEC 60335-2-84 Ed. 3.0 b:2019](#), Household and similar electrical appliances - Safety - Part 2-84: Particular requirements for toilet appliances, \$117.00

[S+ IEC 60335-2-84 Ed. 3.0 en:2019 \(Redline version\)](#), Household and similar electrical appliances - Safety - Part 2-84: Particular requirements for toilet appliances, \$152.00

## **SWITCHGEAR AND CONTROLGEAR AND THEIR ASSEMBLIES FOR LOW VOLTAGE (TC 121)**

[IEC 62026-3 Ed. 3.0 b cor.2:2019](#), Corrigendum 2 - Low-voltage switchgear and controlgear - Controller-device interfaces (CDIs) - Part 3: DeviceNet, \$0.00

## **IEC Technical Reports**

### **NUCLEAR INSTRUMENTATION (TC 45)**

[IEC/TR 63214 Ed. 1.0 en:2019](#), Nuclear power plants - Control rooms - Human factors engineering, \$117.00

# Proposed Foreign Government Regulations

## Call for Comment

U.S. manufacturers, exporters, regulatory agencies and standards developing organizations may be interested in proposed foreign technical regulations notified by Member countries of the World Trade Organization (WTO). In accordance with the WTO Agreement on Technical Barriers to Trade (TBT Agreement), Members are required to notify proposed technical regulations that may significantly affect trade to the WTO Secretariat in Geneva, Switzerland. In turn, the Secretariat issues and makes available these notifications. The purpose of the notification requirement is to provide global trading partners with an opportunity to review and comment on the regulations before they become final.

The USA Inquiry Point for the WTO TBT Agreement is located at the National Institute of Standards and Technology (NIST) in the Standards Coordination Office (SCO). The Inquiry Point distributes the notified proposed foreign technical regulations (notifications) and makes the associated full-texts available to U.S. stakeholders via its online service, Notify U.S. Interested U.S. parties can register with Notify U.S. to receive e-mail alerts when notifications are added from countries and industry sectors of interest to them.

To register for Notify U.S., please visit <http://www.nist.gov/notifyus/>.

The USA WTO TBT Inquiry Point is the official channel for distributing U.S. comments to the network of WTO TBT Enquiry Points around the world. U.S. business contacts interested in commenting on the notifications are asked to review the comment guidance available on Notify U.S. at <https://tsapps.nist.gov/notifyus/data/guidance/guidance.cfm> prior to submitting comments.

For further information about the USA TBT Inquiry Point, please visit: <https://www.nist.gov/standardsgov/what-we-do/trade-regulatory-programs/usa-wto-tbt-inquiry-point>

Contact the USA TBT Inquiry Point at:(301) 975-2918; Fax: (301) 926-1559; E-mail: [usatbtep@nist.gov](mailto:usatbtep@nist.gov) or [notifyus@nist.gov](mailto:notifyus@nist.gov).

# Information Concerning

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## American National Standards

### Call for Members

#### INCITS Executive Board – ANSI Accredited SDO and US TAG to ISO/IEC JTC 1, Information Technology

The InterNational Committee for Information Technology Standards (INCITS), an ANSI accredited SDO, is the forum of choice for information technology developers, producers and users for the creation and maintenance of formal de jure IT standards. INCITS' mission is to promote the effective use of Information and Communication Technology through standardization in a way that balances the interests of all stakeholders and increases the global competitiveness of the member organizations.

The INCITS Executive Board serves as the consensus body with oversight of its 40+ Technical Committees. Additionally, the INCITS Executive Board has the international leadership role as the US Technical Advisory Group (TAG) to ISO/IEC JTC 1, Information Technology.

Membership in the INCITS Executive Board is open to all directly and materially affected parties in accordance with INCITS membership rules. To find out more about participating on the INCITS Executive Board, contact Jennifer Garner at [jgarner@itic.org](mailto:jgarner@itic.org) or visit <http://www.incits.org/participation/membership-info> for more information.

Membership in all interest categories is always welcome; however, the INCITS Executive Board seeks to broaden its membership base in the following categories:

- Service Providers
- Users
- Standards Development Organizations and Consortia
- Academic Institutions

### Society of Cable Telecommunications

#### ANSI Accredited Standards Developer

SCTE, an ANSI-accredited SDO, is the primary organization for the creation and maintenance of standards for the cable telecommunications industry. SCTE's standards mission is to develop standards that meet the needs of cable system operators, content providers, network and customer premises equipment manufacturers, and all others who have an interest in the industry through a fair, balanced and transparent process.

SCTE is currently seeking to broaden the membership base of its consensus bodies and is interested in new members in all membership categories to participate in new work in fiber-optic networks, advanced advertising, 3D television, and other important topics. Of particular interest is membership from the content (program and advertising) provider and user communities.

Membership in the SCTE Standards Program is open to all directly a materially affected parties as defined in SCTE's membership rules and operating procedures. More information is available at [www.scte.org](http://www.scte.org) or by e-mail from [standards@scte.org](mailto:standards@scte.org).

## ANSI Accredited Standards Developers

### Reaccreditation

#### Air Conditioning, Heating and Refrigeration Institute (AHRI)

#### Comment Deadline: December 2, 2019

The Air-Conditioning, Heating and Refrigeration Institute (AHRI), an ANSI member and Accredited Standards Developer (ASD), has submitted revisions to its currently accredited operating procedures for documenting consensus on AHRI-sponsored American National Standards, under which it was last reaccredited in 2016.

The revised procedural document is a significant rewrite of AHRI's currently accredited procedures, and will apply to any standards projects initiated after September 1, 2019. Existing projects with an estimated completion date between September 1, 2019 and July 1, 2020 shall continue to work under AHRI's currently accredited procedures with one modification: To align with the new AHRI Bylaws (September 2019) and the new committee naming system, the former Product Sections and Engineer Committees will be renamed Consensus Standards Project Committees (CSPC) and Working Groups (WG), respectively. All existing projects with an estimated timeline of completion beyond July 1, 2020 will be transferred and continue to be processed under the new (September 2019) procedures as of that date. As these revisions appear to be substantive in nature, the reaccreditation process is initiated.

To obtain a copy of the revised procedures or to offer comments, please contact: Ms. Ladan Bulookbashi, Manager, Standards, Air-Conditioning, Heating and Refrigeration Institute, 2311 Wilson Blvd., Suite 400, Arlington, VA 22201; phone: 703.600.0327; e-mail: [lbulookbashi@ahrinet.org](mailto:lbulookbashi@ahrinet.org). You may view/download a copy of the revisions during the public review period at the following URL: [www.ansi.org/accredPR](http://www.ansi.org/accredPR). Please submit any public comments on the revised procedures to AHRI by December 2, 2019, with a copy to the ExSC Recording Secretary in ANSI's New York Office (E-mail: [Jthomps@ANSI.org](mailto:Jthomps@ANSI.org)).

# International Organization for Standardization (ISO)

## ISO Proposal for a New Field of ISO Technical Activity

### Surfaces with Biocidal and Antimicrobial Properties

**Comment Deadline: November 15, 2019**

AFNOR, the ISO member body for France, has submitted to ISO a proposal for a new field of ISO technical activity on surfaces with biocidal and antimicrobial properties, with the following scope statement:

Standardization of test methods used to assess the biocidal performance and efficacy of any surfaces with antimicrobial activities, including their compatibility with different families of disinfectants and cleaning agents. Such methods aim at evaluating the biocidal activity (i.e. that which irreversibly inactivates microorganism) and at differentiating it from the biostatic activity (i.e. the inhibition of the growth of microorganisms).

The field of covers the assessment of surfaces displaying intrinsic biocidal properties and of surfaces processed by any means so as to deliver biocidal properties.

Areas of interest include medical and veterinary applications, aerospace, agriculture, food hygiene and other industrial fields, institutional and domestic applications.

Excluded: Toxicological and ecotoxicological surface testing methods, antimicrobial activities of textile products.

Anyone wishing to review the proposal can request a copy by contacting ANSI's ISO Team ([isot@ansi.org](mailto:isot@ansi.org)), with a submission of comments to Steve Cornish ([scornish@ansi.org](mailto:scornish@ansi.org)) by close of business on Friday, November 15, 2019.

## U.S. Proposal for a New Field of ISO Technical Activity

### Incentives, Rewards and Recognition

**Comment Deadline: November 15, 2019**

ANSI has received a request from the Incentive Federation Inc. to submit to ISO a proposal for a new field of ISO technical activity on Incentives, Rewards and Recognition, with the following scope statement:

Standardization in the field of incentives, rewards, and recognition will include classification, terminology and nomenclature, management practices and metrics that comprise the development, delivery, assessment and control of third-party acknowledgement and motivation solutions. Covered subjects would include products and services from third party companies that develop incentives, rewards, and recognition program development, program management, training, measurement and analytics, supply chain management, financial management and other related functions where organizational management applies defined methods to acknowledge or motivate employee performance and productivity or to increase customer acquisition, satisfaction, retention and loyalty. Incentives, reward, and recognition systems for performance improvements in sales, safety, engagement, retention and other business functional environments are also within scope. Intrinsic incentives, rewards, and recognition, non-material and those unique to the organizational or national cultures are also in scope (i.e. verbal appreciation, physical acknowledgement between parties, gifts of local cultural significance, corporate gifting, rewards points, traditional achievement and service awards, certificates and trophies.) Out of scope are the normal compensation and benefits programs that organizations provide to remunerate employees for expected performance from client organizations, e.g. cash compensation, health benefits, etc.

Anyone wishing to review the proposal can request a copy by contacting ANSI's ISO Team ([isot@ansi.org](mailto:isot@ansi.org)), with a submission of comments to Steve Cornish ([scornish@ansi.org](mailto:scornish@ansi.org)) by close of business on Friday, November 15, 2019.

# U.S. Technical Advisory Groups (TAG)

## Application for Accreditation

### U.S. Technical Advisory Group (TAG) to ISO TC 321, Transaction Assurance in E-Commerce

**Comment Deadline: December 2, 2019**

ASC X9, Inc. has submitted an Application for Accreditation for a new proposed U.S. Technical Advisory Group (TAG) to ISO TC 321, Transaction assurance in E-commerce, and a request for approval as TAG Administrator. The proposed TAG intends to operate using the Model Operating Procedures for U.S. Technical Advisory Groups to ANSI for ISO Activities as contained in Annex A of the ANSI International Procedures.

To obtain a copy of the TAG application or to offer comments, please contact: Ms. Janet Busch, Program Manager, Accredited Standards Committee X9, 275 West Street, Suite 107, Annapolis, MD 21401; phone: 410.267.7707; e-mail: [janet.busch@x9.org](mailto:janet.busch@x9.org). Please submit any comments to the ASC X9, Inc. by December 2, 2019 (please copy [jthomps@ansi.org](mailto:jthomps@ansi.org)).



## American National Standards (ANS) – Where to find Procedures, Guidance, Interpretations and More...

Please visit ANSI's website ([www.ansi.org](http://www.ansi.org)) for resources that will help you to understand, administer and participate in the American National Standards (ANS) process. Documents posted at these links are updated periodically as new documents and guidance are developed, whenever ANS-related procedures are revised, and routinely with respect to lists of proposed and approved ANS. The main ANS-related link is [www.ansi.org/asd](http://www.ansi.org/asd) and here are some direct links as well as highlights of information that is available:

- *ANSI Essential Requirements: Due process requirements for American National Standards* (always current edition): [www.ansi.org/essentialrequirements](http://www.ansi.org/essentialrequirements)
- ANSI Standards Action (weekly public review announcements of proposed ANS and standards developer accreditation applications, listing of recently approved ANS, and proposed revisions to ANS-related procedures): [www.ansi.org/standardsaction](http://www.ansi.org/standardsaction)
- Accreditation information – for potential developers of American National Standards (ANS): [www.ansi.org/sdoaccreditation](http://www.ansi.org/sdoaccreditation)
- ANS Procedures, ExSC Interpretations and Guidance (including a slide deck on how to participate in the ANS process and the BSR-9 form): [www.ansi.org/asd](http://www.ansi.org/asd)
- Lists of ANSI-Accredited Standards Developers (ASDs), Proposed ANS and Approved ANS: [www.ansi.org/asd](http://www.ansi.org/asd)
- American National Standards Key Steps: [www.ansi.org/anskeysteps](http://www.ansi.org/anskeysteps)
- American National Standards Value: [www.ansi.org/ansvalue](http://www.ansi.org/ansvalue)
- ANS Web Forms for ANSI-Accredited Standards Developers - PINS, BSR8|108, BSR11, Technical Report: [www.ansi.org/PSAWebForms](http://www.ansi.org/PSAWebForms)
- Information about standards Incorporated by Reference (IBR): [www.ansi.org/ibr](http://www.ansi.org/ibr)
- ANSI - Education and Training: [www.standardslearn.org](http://www.standardslearn.org)

If you have a question about the ANS process and cannot find the answer quickly, please send an email to [psa@ansi.org](mailto:psa@ansi.org).

Please also visit Standards Boost Business at [www.standardsboostbusiness.org](http://www.standardsboostbusiness.org) for resources about why standards matter, testimonials, case studies, FAQs and more.

If you are interested in purchasing an American National Standard, please visit <https://webstore.ansi.org/>

## **National Electrical Safety Code (NESC) 2022 Preprint – Opportunity for Public Comment**

The NESC 2022 Preprint contains over 500 change proposals and initial NESC Subcommittee recommendations that form the basis for soliciting public during an 8-month public comment period that opens 1 July 2019 and concludes 1 March 2020. This publication has been prepared to provide all interested persons an opportunity to study and comment on the Proposed Revisions to be incorporated into the 2022 Edition of the National Electrical Safety Code (NESC). The NESC Preprint provides the full text of each proposal to revise the 2017 Edition of the NESC together with the recommendation of the subcommittee that has cognizance of the rule addressed by the Change Proposal (CP). Public comment is invited on the disposition for each initial recommendation.

Several key topics addressed through change proposals include:

- A comprehensive revision of Section 14, Storage Batteries to recognize new battery technologies, applications, and their hazards
- A new section covering new and emerging electric generation station technologies focusing on photovoltaic (PV) generating stations
- Consolidation of antenna rules into a single location to clarify the required antenna rules and to treat antennas as equipment consistently throughout the code
- Clearance rules for guys and guy anchors
- Strength and loading rules addressing wind maps, ice maps, 60-foot exclusion, etc.
- Additive constant (k-Factor)

To submit a public comment(s) on change proposals contained in the NESC Preprint, see <https://standards.ieee.org/products-services/nesc/form.html>. All public comments help to shape final recommendations made by NESC Technical Subcommittees to form the 2022 NESC. Please note that after this initial public comment opportunity, a final public comment period will be announced in ANSI Standards Action.

To obtain a copy of the NESC Preprint, see [https://www.techstreet.com/ieee/products/2072811?utm\\_source=web&utm\\_medium=adpromo&utm\\_campaign=nesc&utm\\_term=ansi&utm\\_content=purchase](https://www.techstreet.com/ieee/products/2072811?utm_source=web&utm_medium=adpromo&utm_campaign=nesc&utm_term=ansi&utm_content=purchase)

**IEEE Member price:**

\$99 PDF

\$119 Print on Demand

**IEEE Non-member price:**

\$119 PDF

\$149 Print on Demand



**BSR/ASHRAE Addendum b to  
ANSI/ASHRAE Standard 15-2019**

# **First Public Review Draft**

## **Proposed Addendum b to Standard 15-2019, Safety Standard for Refrigeration Systems**

**First Public Review (October 2019) (Draft  
shows Proposed Changes to Current Standard)**

This draft has been recommended for public review by the responsible project committee. To submit a comment on this proposed standard, go to the ASHRAE website at [www.ashrae.org/standards-research--technology/public-review-drafts](http://www.ashrae.org/standards-research--technology/public-review-drafts) and access the online comment database. The draft is subject to modification until it is approved for publication by the Board of Directors and ANSI. Until this time, the current edition of the standard (as modified by any published addenda on the ASHRAE website) remains in effect. The current edition of any standard may be purchased from the ASHRAE Online Store at [www.ashrae.org/bookstore](http://www.ashrae.org/bookstore) or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

This standard is under continuous maintenance. To propose a change to the current standard, use the change submittal form available on the ASHRAE website, [www.ashrae.org](http://www.ashrae.org).

The appearance of any technical data or editorial material in this public review document does not constitute endorsement, warranty, or guaranty by ASHRAE of any product, service, process, procedure, or design, and ASHRAE expressly disclaims such.

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**ASHRAE, 1791 Tullie Circle, NE, Atlanta GA 30329-2305**

## First Public Review Draft

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## FOREWORD

*This addendum changes the definitions of “listed” and adds the definition of “labeled” to section 3.1.*

*[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~striketrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]*

### Addendum b to 15-2019

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## 3. DEFINITIONS

### 3.1 Defined Terms

***labeled:*** equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the authority having jurisdiction and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

***listed:*** ~~equipment or materials included in a list published by an *approved*, nationally recognized testing laboratory, inspection agency, or other organization concerned with product evaluation that maintains periodic inspection of production of *listed* equipment or materials and whose listing states either that the equipment or material meets nationally recognized standards or has been tested and found suitable for use in a *specified* manner.~~

equipment, materials, or services included in a list published by an organization that is acceptable to the authority having jurisdiction and concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose listing states that either the equipment, material, or service meets appropriate designated standards or has been tested and found suitable for a specified purpose.



**BSR/ASHRAE Addendum c to  
ANSI/ASHRAE Standard 185.1-2015**

**Public Review Draft**

**Proposed Addendum c to Standard  
185.1-2015, Method of Testing UV-C  
Lights for Use in Air-Handling Units or  
Air Ducts to Inactivate Airborne  
Microorganisms**

**First Public Review (November 2019)  
(Draft shows Proposed Changes to Current Standard)**

This draft has been recommended for public review by the responsible project committee. To submit a comment on this proposed standard, go to the ASHRAE website at [www.ashrae.org/standards-research--technology/public-review-drafts](http://www.ashrae.org/standards-research--technology/public-review-drafts) and access the online comment database. The draft is subject to modification until it is approved for publication by the Board of Directors and ANSI. Until this time, the current edition of the standard (as modified by any published addenda on the ASHRAE website) remains in effect. The current edition of any standard may be purchased from the ASHRAE Online Store at [www.ashrae.org/bookstore](http://www.ashrae.org/bookstore) or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

This standard is under continuous maintenance. To propose a change to the current standard, use the change submittal form available on the ASHRAE website, [www.ashrae.org](http://www.ashrae.org).

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## FOREWORD

This addendum serves two purposes. The first is to correct the airflow rate to 2000 cfm. The second is to provide guidance in the QA testing to make sure that test labs are performing the tests in the same way.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

4.1.2 Temperature within the test duct shall be  $21^{\circ}\text{C} \pm 2.2^{\circ}\text{C}$  ( $70^{\circ}\text{F} \pm 4^{\circ}\text{F}$ ), relative humidity shall be between 40% to 60%, and ~~airflow rate~~ velocity shall be ~~3400 cmh (2000 cfm), which corresponds to 2.54 m/s (500 fpm)~~  $2.39 \pm 0.1$  mps ( $470 \pm 20$  fpm). Test air shall be discharged outdoors, indoors, or recirculated.

## 5. APPARATUS QUALIFICATION TESTING

- 5.1 Apparatus Qualification Tests.** Apparatus qualification tests shall verify quantitatively that the test rig and sampling procedures are capable of providing reliable bioaerosol measurements. Table 1 shows system qualification measurement requirements. All tests shall be performed as detailed in Section 5 of ASHRAE 52.2 except as noted here. Tests already performed to meet the ASHRAE 52.2 requirements at  $0.93 \text{ m}^3/\text{s}$  (1970 cfm) will be considered adequate except as noted.
- 5.2 Velocity Uniformity in the Test Duct.** The velocity uniformity test shall comply with ANSI/ASHRAE Standard 52.2<sup>1</sup> and shall be performed at an air velocity rate of  ~~$2.5439$  mps  $\pm 0.05$  mps ( $470500$  fpm  $\pm 10$  fpm)~~.
- 5.3 Bioaerosol Concentration Uniformity in the Test Duct.** Bioaerosol uniformity shall be conducted per the instructions for the Concentration Uniformity test in Section 5.3 of ANSI/ASHRAE 52.2<sup>1</sup> using an inert tracer particle. Particle concentrations shall be measured in the range of 1 to 5  $\mu\text{m}$ . The aerosol for this test shall be injected in the same location that the bioaerosol will be.
- 5.4 Inert Downstream Mixing of Aerosol.** This test shall be performed per the instructions for the downstream mixing test specified in Section 5 of ASHRAE 52.2. Data for particles above 5  $\mu\text{m}$  may be ignored in the calculations as the bioaerosols used in 185.1 will be below 5  $\mu\text{m}$ .
- 5.5 100% Efficiency Test.** A bioaerosol efficiency test using either acceptable organism shall be run using a HEPA or ULPA filter as the test device to ensure that the test duct and sampling system are capable of providing a  $>99\%$  efficiency measurement. The test procedures of Section 6 of ASHRAE Standard 185.1 shall be used.
- 5.5.6 Duct Leakage Test.** A duct leakage test shall be conducted per Section 5.9 of ANSI/ASHRAE 52.2<sup>1</sup> with the exception that ~~of~~ the test acceptability level will be determined based on anticipated duct pressure during actual testing. The duct pressure shall be based on the values expected being conducted at a ~~with an air cleaner, light baffles, and any other items that must be in the rig during a standard test at an~~ air velocity of  ~~$2.5439$  mps ( $500470$  fpm)~~ with an additional 500 Pa (2 in. of water). This test is performed by sealing the duct at inlet HEPA filter bank and at the ASME flow nozzle locations, followed by metering in air to achieve a steady duct pressure. The flow rate of the metering air (equal to the leakage flow) is measured for a range of duct pressures.
- 5.5.7 No Light Control Test.** A lights-on/lights-off test shall be performed for each test device per the correlation test of Section 5.8 of ANSI/ASHRAE Standard 52.2<sup>1</sup> and will to confirm any bioaerosol baseline losses within the test duct. If the device blocks a substantial portion of the duct cross section, a ~~A~~ test shall be performed without a test device in place may be performed instead of the lights-off test to check the adequacy of the overall duct, sampling, measurement, and aerosol generator. ~~The no device test will be performed as a quality check against the lights-off test with the bioaerosols and to confirm the bioaerosol nonkill removal efficiency of the UV-based systems. This test must be done in conjunction with each lights-on test and for each microorganism. The procedures described in Section 6 shall be used for this test with the exception that the lamps will be off or the device will be out of the duct.~~

**5.8 OPC Zero Count Test shall be performed per Section 5 of ASHRAE 52.2.****5.9 OPC Sizing Accuracy Test shall be performed per Section 5 of ASHRAE 52.2.****TABLE 1 System Qualification Measurement Requirements**

<b>Parameter</b>	<b>Control Limit</b>
Air velocity uniformity Based on traverse measurements over a nine-point cross-sectional grid at the test flow rate. The velocity measurements shall be made with an instrument having an accuracy of 10% with 0.05m/s (approximately 10 fpm) resolution.	CV <sup>a</sup> < 10%
Inert aerosol concentration uniformity Based on traverse measurements over a nine-point cross-sectional grid at the test flow rate. Performed upstream of the test section.	CV < 15%
Inert downstream mixing Based on nine-point perimeter injection grid at the test section and center-of-duct readings at the downstream probe locations.	Efficiency >99%
100% efficiency test Based on HEPA filter test.	
100% penetration (correlation test)	<del>Particle</del> <i>Acceptable</i>
<i>Size Range</i>	<i>Penetration Range</i>
0.3 to 1 µm	0.90 to 1.10
1 to 3 µm	0.80 to 1.20
3 to 10 µm	0.70 to 1.30
OPC <sup>b</sup> upper concentration limit <del>Based on limiting the concentration to below the level corresponding to the onset of coincidence error.</del>	<del>No predetermined level, but must be established prior to testing.</del>
Aerosol generator response time.	No predetermined level.
Duct leakage Ratio of leak rate to test flow rate. <del>Determined by sealing the duct at inlet HEPA filter bank and at the ASME flow nozzle locations, followed by metering in air to achieve a steady duct pressure. The flow rate of the metering air (equal to the leakage flow) is measured for a range of duct pressures.</del>	Ratio <1.0%
OPC zero count check	<10 counts per sample.
OPC sizing accuracy check Based on sampling aerosolized monodisperse polystyrene latex (PSL spheres of known size).	Relative maximum must appear in the appropriate sizing channel.
Aerosol neutralizer activity (if radioactive source is used).	Radioactivity must be detected.

a.CV = coefficient of variance.

b.OPC = optical particle counter.



**BSR/ASHRAE Addendum g to  
ANSI/ASHRAE Standard 34-2019**

**Public Review Draft**

# **Proposed Addendum g to Standard 34-2019, Designation and Safety Classification of Refrigerants**

**First Public Review (October 2019)  
(Draft shows Proposed Changes to Current Standard)**

This draft has been recommended for public review by the responsible project committee. To submit a comment on this proposed standard, go to the ASHRAE website at <https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts> and access the online comment database. The draft is subject to modification until it is approved for publication by the Board of Directors and ANSI. Until this time, the current edition of the standard (as modified by any published addenda on the ASHRAE website) remains in effect. The current edition of any standard may be purchased from the ASHRAE Online Store at [www.ashrae.org/bookstore](http://www.ashrae.org/bookstore) or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

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BSR/ASHRAE Addendum g to ANSI/ASHRAE Standard 34-2019, *Designation and Safety Classification of Refrigerants*

First Public Review Draft

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## FOREWORD

*This addendum adds the zeotropic refrigerant blend R-470B in Table 4-2.*

*[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~striketrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]*

## Addendum g to 34-2019

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Add the following underlined data to Table 4-2 in the columns indicated.

### **TABLE 4-2 Data and Safety Classifications for Refrigerant Blends**

Refrigerant Number = 470B

Composition (Mass %) = R-744 / 32 / 125 / 134a / 1234ze(E) / 227ea (10.0 / 11.5 / 11.5 / 3.0 / 57.0 / 7.0)

Composition tolerances = ±1.0 / ±1.0 / ±1.0 / ±0.5 / ±2.0 / ±0.5

OEL = 1100 ppm v/v

Safety Group = A1

RCL = 72,000 ppm v/v; 16 lb/Mcf; 260 g/m<sup>3</sup>

Highly Toxic or Toxic Under Code Classification = Neither

---

NOTE: The following data will be added to Informative Appendix D in Table D-2 (Data for Refrigerant Blends) and is not open for public comment.

### **TABLE D-2 Data for Refrigerant Blends**

Refrigerant Number = 470B

Composition (Mass %) = R-744 / 32 / 125 / 134a / 1234ze(E) / 227ea (10.0 / 11.5 / 11.5 / 3.0 / 57.0 / 7.0)

Average Relative Molar Mass = 89.7 g/mol

Bubble Point (°F) = -79.1

Dew Point (°F) = -24.5

Bubble Point (°C) = -61.7

Dew Point (°C) = -31.4

# Public Review Draft

Proposed Addendum ao to Standard 189.1-2017

# Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings

First Public Review Draft (October 2019)  
(Draft Shows Proposed Changes to Current Standard)

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## Foreword

This addendum clarifies several issues related to Chapter 7. It moves the climate zone requirements from Appendix A to a new section in Chapter 7 (Section 7.3.1.1) and removes the term “climate zone” from Section 3 where it had merely contained a reference to the former appendix location.

Section 7.3.1 clarifies the mandatory requirements for energy efficiency per the latest updates to Standard 90.1. Section 7.4 has been modified in accordance with a June 2018 request for official interpretation to clarify the requirements for prescriptive compliance with Standard 189.1.

Finally, the phrase “occupant sensor” has been changed to “occupancy sensor” to be consistent with Standard 90.1.

*[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]*

## Addendum ao to 189.1-2017

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*Revise Section 3 as follows:*

~~climate zone:~~ see Normative Appendix A.

*Revise Section 7 as follows:*

### 7. ENERGY EFFICIENCY

**7.1 Scope.** This section specifies requirements for energy efficiency for buildings and appliances, for *on-site renewable energy systems*, and for energy measuring.

**7.2 Compliance.** The energy systems shall comply with Section 7.3, “Mandatory Provisions,” and either

BSR/ASHRAE/ICC/USGBC/IES Addendum ao to ANSI/ASHRAE/ICC/USGBC/IES Standard 189.1-2017, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings* First Public Review Draft.

- a. Section 7.4, “Prescriptive Option,” or
- b. Section 7.5, “Performance Option.”

### 7.3 Mandatory Provisions

**7.3.1 General.** *Building projects* shall be designed to comply with Sections 5.2.1, 6.2.1, 7.2.1, 8.2.1, 9.2.1, and 10.2.1 ~~5.4, 6.4, 7.4, 8.4, 9.4, and 10.4~~ of *ANSI/ASHRAE/IES Standard 90.1*.

**7.3.1.1 Climate Zones.** For *climate zones*, see ANSI/ASHRAE/IES Standard 90.1, Section 5.1.4, and ANSI/ASHRAE Standard 169.

- a. For locations in the United States and its territories, use ANSI/ASHRAE Standard 169, Table B-1, “U.S. States by State and County,” to determine the assigned climate zone and, where required, the assigned climate zone letter.

**Informative Note:** Reference Standard Reproduction Annex ASHRAE Standard 169 (included at the end of this document) contains an extraction of ANSI/ASHRAE Standard 169, Figure B-1, “Climate Zone for United States Counties,” (which is informative for Standards 90.1 and 189.1). ANSI/ASHRAE/IES Standard 90.1 Reference Standard Reproduction Annex ASHRAE Standard 169 (included at the end of ANSI/ASHRAE/IES Standard 90.1) contains an extraction of ANSI/ASHRAE Standard 169, Table B-1, “U.S. States by State and County.”

- b. For locations in Canada that are listed in ASHRAE Standard 169, Table A-5, “Canada Stations and Climate Zones,” use this table to determine the assigned climate zone number and, where required, the assigned climate zone letter. For locations in other international countries that are listed in ASHRAE Standard 169, Table A-6, “International Stations and Climate Zones,” use this table to determine the required climate zone number and, where required, the assigned *climate zone* letter. For all international locations that are not listed either in ASHRAE Standard 169, Table A-5 or Table A-6, use ASHRAE Standard 169, Section A3, “Climate Zone Definitions,” and Table A-3, “Thermal Climate Zone Definitions,” to determine both the *climate zone* number and letter.

**Informative Note:** Reference Standard Reproduction Annex ASHRAE Standard 169 (included at the end of this document) contains an extraction of ASHRAE Standard 169, Section A3, “Climate Zone Definitions,” and Table A-3, “Thermal Climate Zone Definitions.” ANSI/ASHRAE/IES Standard 90.1 Reference Standard Reproduction Annex ASHRAE Standard 169 (included at the end of ANSI/ASHRAE/IES Standard 90.1) contains an extraction of ASHRAE Standard 169, Table A-5, “Canada Stations and Climate Zones,” and Table A-6, “International Stations and Climate Zones.”

#### **7.3.1.1 7.3.1.2 Continuous Air Barrier.**

...

#### **7.3.2 On-Site Renewable Energy Systems.**

...

#### **7.3.3 Energy Consumption Management.**

...

BSR/ASHRAE/ICC/USGBC/IES Addendum ao to ANSI/ASHRAE/ICC/USGBC/IES Standard 189.1-2017, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings* First Public Review Draft.

### 7.3.4 Automated Demand Response.

...

## 7.4 Prescriptive Option

**7.4.1 General Comprehensive Prescriptive Requirements.** ~~When~~ Where a requirement is provided in this section below, it supersedes the requirement in ANSI/ASHRAE/IES Standard 90.1. For all other criteria, the *building project* shall comply with the requirements of ANSI/ASHRAE/IES Standard 90.1, Chapters 5 through 10.

### 7.4.1.1 7.4.1 On-Site Renewable Energy Systems.

(Renumber subsections of 7.4.1.1, now 7.4.1)

...

**7.4.6.2 Occupancy Sensor Controls with Multilevel Switching or Dimming.** The lighting in commercial and industrial storage stack areas shall be controlled by an ~~occupant~~ occupancy sensor with multilevel switching or dimming system that reduces lighting power a minimum of 50% within 20 minutes of all occupants leaving the stack area.

(Remainder of section and sections not shown have not changed.)

Revise Appendix A as follows:

## NORMATIVE APPENDIX A

### ~~CLIMATE ZONES AND PRESCRIPTIVE BUILDING~~

### ~~ENVELOPE AND DUCT INSULATION TABLES~~

Tables A-1 through A-3 appear twice in this appendix. The three tables are shown first with I-P units, followed by three tables with SI units.

~~For climate zones, see ANSI/ASHRAE/IES Standard 90.1, Section 5.1.4, and ANSI/ASHRAE Standard 169.~~

- a. ~~For locations in the United States and its territories, use ANSI/ASHRAE Standard 169, Table B-1, "U.S. States by State and County," to determine the assigned climate zone and, where required, the assigned climate zone letter. **Informative Note:** Reference Standard Reproduction Annex ASHRAE Standard 169 (included at the end of this document) contains an extraction of ANSI/ASHRAE Standard 169, Figure B-1, "Climate Zone for United States Counties," (which is informative for Standards 90.1 and 189.1). ANSI/ASHRAE/IES Standard 90.1 Reference Standard Reproduction Annex ASHRAE Standard 169 (included at the end of ANSI/ASHRAE/IES Standard 90.1) contains an extraction of ANSI/ASHRAE Standard 169, Table B-1, "U.S. States by State and County."~~
- b. ~~For locations in Canada that are listed in ASHRAE Standard 169, Table A-5, "Canada Stations and Climate Zones," use this table to determine the assigned climate zone number and, where required, the assigned climate zone letter. For locations in other international countries that are listed in ASHRAE~~

BSR/ASHRAE/ICC/USGBC/IES Addendum ao to ANSI/ASHRAE/ICC/USGBC/IES Standard 189.1-2017, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings* First Public Review Draft.

~~Standard 169, Table A-6, “International Stations and Climate Zones,” use this table to determine the required *climate zone* number and, where required, the assigned *climate zone* letter. For all international locations that are not listed either in ASHRAE Standard 169, Table A-5 or Table A-6, use ASHRAE Standard 169, Section A3, “Climate Zone Definitions,” and Table A-3, “Thermal Climate Zone Definitions,” to determine both the *climate zone* number and letter. **Informative Note:** Reference Standard Reproduction Annex ASHRAE Standard 169 (included at the end of this document) contains an extraction of ASHRAE Standard 169, Section A3, “Climate Zone Definitions,” and Table A-3, “Thermal Climate Zone Definitions.” ANSI/ASHRAE/IES Standard 90.1 Reference Standard Reproduction Annex ASHRAE Standard 169 (included at the end of ANSI/ASHRAE/IES Standard 90.1) contains an extraction of ASHRAE Standard 169, Table A-5, “Canada Stations and Climate Zones,” and Table A-6, “International Stations and Climate Zones.”~~

*(Remainder of section does not change)*

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*Note to reviewers:*

*Addendum ad deleted Tables A-2 and A-3.*

# Structural Glued Laminated Timber for Utility Structures

## Revise Section 1 as follows:

### 1 Scope

This standard covers requirements for manufacturing and quality control of structural glued laminated timber of Southern Pine (longleaf, slash, shortleaf, loblolly), Coast Douglas-fir, Hem-Fir and other species of similar treatability for electric power and communication structures. The requirements are based on those in *American National Standard for Structural Glued Laminated Timber*, ANSI/~~AITC~~ A190.1. This standard is supplemental to ANSI/~~AITC~~ A190.1 and provides descriptions of the special manufacturing and design requirements for glued laminated utility structures.

The term, *structural glued laminated timber*, as used in this standard, refers to an engineered, stress-rated product of a timber laminating plant comprising assemblies of specially selected and prepared wood laminations securely bonded together with adhesives. The grain of all laminations is approximately parallel longitudinally. They may comprise pieces end joined to form any length, or pieces placed or glued edge-to-edge to make wider ones or of pieces bent to curved form during gluing.

Timbers manufactured in accordance with this standard can be stressed in axial tension or axial compression, loaded in bending parallel to or perpendicular to the wide face of the laminations, or any combination of the above. Members that are normally loaded in bending about one axis of a laminated timber may, under other loading conditions, be stressed about the other axis, or about both axes and shall be designed accordingly. See *Standard Specifications for Structural Glued Laminated Timber of Softwood Species*, ~~AITC-ANSI~~ 117, for descriptions of various arrangements of laminations within a laminated member. Other combinations of grades of lumber are available that may be more desirable and economical, depending upon the design and loading requirements of the timber and availability of various grades.

All timbers produced in accordance with the requirements of this standard are intended for use in exterior construction and, therefore, will be exposed to both wet and dry conditions of use.

## Revise Section 2 as follows (footnote numbering will be editorially updated for publication):

### 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this American National Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. The latest edition (unless a specific edition is referenced) may be used as references.

ANSI/~~AITC~~ A190.1-~~2007~~2017, *Wood products – Structural glued laminated timber*<sup>1,2</sup>

~~AITC 110-2001, Standard appearance grades for structural glued laminated timber~~<sup>1</sup>

AITC 111-2005, *Recommended practice for protection of structural glued laminated timber during transit, storage and erection*<sup>1</sup>

~~AITC-ANSI~~ 117-~~2010~~2015, *Standard specifications for structural glued laminated timber of soft wood species*<sup>1,2</sup>

AITC 200-2009, *Manufacturing Quality Control Systems Manual*<sup>1</sup>

AITC 2004, Technical Note 18, *Evaluation of Checking in Glued Laminated Timber*<sup>1</sup>

~~APA EWS S400-2006, Proper storage and handling of glulam beams~~<sup>2</sup> APA R540-2013, Builder tips, proper storage and handling of glulam beams<sup>2</sup>

<sup>1</sup> Available from the American Institute of Timber Construction, [www.aite-glulam.org](http://www.aite-glulam.org)

<sup>2</sup> Available from the APA, The Engineered Wood Association, [www.apawood.org](http://www.apawood.org)

APA Technical Note R475-2007, Evaluation of Check in Glued Laminated Timber Beams <sup>2</sup>

ASTM D1036, *Standard test methods of static tests of wood poles* <sup>3</sup>

ASTM D2915, *Standard practice for evaluating allowable properties for grades of structural lumber* <sup>3</sup>

ASTM D3737, *Standard practice for establishing allowable properties for structural glued laminated timber (Glulam)* <sup>3</sup>

AWPA Standard M6, *Brands used on forest products* <sup>4</sup>

AWPA Standard U1 Use Category System: User Specification for Treated Wood, Commodity Specification D: Poles, Sections 6: Glue Laminated Poles <sup>4</sup>

FPL-GTR-190, Wood Handbook, Wood as an Engineering Material <sup>5</sup>

FPL-RP-532-1995, Fiber Stress Values for Design of Glulam Timber Utility Structures <sup>5</sup>

SPIB, *Standard grading rules for southern pine lumber* <sup>6</sup>

WCLIB, *Standard grading rules for west coast lumber* <sup>7</sup>

WWPA, *Western lumber grading rules* <sup>8</sup>

#### **Revise Section 4.2 as follows:**

#### **4.2 Grade of lumber**

All laminating lumber shall be graded in accordance with applicable grading rules of the West Coast Lumber Inspection Bureau (WCLIB) or the Western Wood Products Association (WWPA) for Western Species, and the grading rules of the Southern Pine Inspection Bureau (SPIB) for Southern pine, as supplemented by the requirements of ANSI/~~AITC~~ A190.1, ~~AITC~~ [ANSI 117](#), and this standard for all species.

#### **Revise Section 4.3.3.2 as follows:**

**4.3.3.2** If resistance meter is used for measuring maximum moisture content, the meter shall have insulated-type needles and be used in the same manner as prescribed for measuring moisture gradient in ANSI/~~AITC~~ A190.1; except that the needles shall be inserted to only a maximum of 1/4 the thickness of the piece of lumber.

#### **Revise Section 4.4.1 as follows:**

#### **4.4.1 Fiber strength values based on ~~AITC~~ [ANSI 117](#) designated combinations or their equivalents developed in accordance with ASTM D3737**

Fiber strengths for various laminating combinations listed in ~~AITC~~ [ANSI 117](#), or their equivalents developed in accordance with ASTM D3737, may be determined by multiplying the design strength, adjusted for all end use conditions of ANSI 117, but using ~~by~~ the actual beam volume factors as shown below, ~~the loading condition coefficients as given in AITC 117~~ and multiplied by the stress adjustment factor values shown in table 23. The actual volume factors shall be permitted to exceed 1.0. The volume effect factor in the X-X bending (loads applied perpendicular to the wide face of laminations) is calculated using the following equation:

<sup>3</sup> Available from ASTM International, [www.astm.org](http://www.astm.org)

<sup>4</sup> Available from the American Wood Protection Association, [www.awpa.com](http://www.awpa.com)

<sup>5</sup> Available from the USDA Forest Products Laboratory, [www.fpl.fs.fed.us](http://www.fpl.fs.fed.us)

<sup>6</sup> Available from the Southern Pine Inspection Bureau, [www.spib.org](http://www.spib.org)

<sup>7</sup> Available from the West Coast Lumber Inspection Bureau, [www.wclib.org](http://www.wclib.org)

<sup>8</sup> Available from the Western Wood Products Association, [www.wwpa.org](http://www.wwpa.org)

$$C_v = K_L \left( \frac{5.125}{b} \right)^{\frac{1}{m}} \left( \frac{12}{d} \right)^{\frac{1}{m}} \left( \frac{21}{L} \right)^{\frac{1}{m}}$$

where  $C_v$  = volume effect factor, which shall be permitted to exceed 1.0

$K_L$  = loading condition coefficient shown in Table 2

$m$  = 10 for all species other than Southern Pine or 20 for Southern pine

$b$  = glulam beam net width, inches; For multiple piece width layups,  $b$  = net width of widest piece in the layup

$d$  = glulam beam depth, inches

$L$  = glulam beam length between points of zero moment (for poles, conservatively selected as the total length of the pole), feet

**Table 2 – Loading condition coefficient ( $K_L$ )**

Loading Conditions	$K_L$
<u>Simple-span glulam beams</u>	
<u>Concentrated load at mid-span</u>	<u>1.09</u>
<u>Uniformly distributed load</u>	<u>1.00</u>
<u>Two-equal concentrated loads at 1/3 points of span</u>	<u>0.96</u>
<u>Continuous or cantilever glulam beams</u>	
<u>All loading conditions</u>	<u>1.00</u>

**Table 2-3 – Stress adjustment factor ‘K’**

<b>For laminated timber 2-5/8" (67 mm) to 6-3/4" (171 mm) in width 3" (76 mm) to 15" (381 mm) in depth</b>	<b>For laminated timber greater than 6-3/4" (171 mm) in width or greater than 15" (381 mm) in depth</b>
K = 2.9 or use the procedure outlined in 4.4.2	K = 2.7 or use the procedure outlined in 4.4.2

**Revise Sections 5.2 through 5.5.1 as follows:**

**5.2 Adhesives**

Adhesives for structural laminating shall conform to all applicable requirements of ANSI/AITC A190.1 to comply with wet conditions of use and be compatible with the selected preservative solution to be used. Adhesives containing urea shall not be used.

**5.3 Manufacture**

The selection, preparation, assembly, and bonding of the laminations shall be in accordance with ANSI/AITC A190.1 and as specified herein.

**5.3.1 Edge joints**

Unglued edge joints shall be permitted for multiple width lamination lay-up as permitted by ANSI/AITC A190.1. Unbonded edge joints shall not be permitted on the top lamination of horizontally or diagonally mounted members.

**5.3.2 End joints**

End joints of laminations shall be pre-glued and cured before assembly of the face joint into structural members. Spacing of the end joints shall be as specified in ANSI/AITC A190.1

**5.3.3 Repairs**

Structural repairs as defined in ANSI/AITC A190.1 are allowed. End blocks as defined in ANSI/AITC A190.1 are prohibited.

### 5.3.4 Second stage gluing

When two or more laminated members that are over 2 inches (51 mm) in net thickness are glued together, a gap-filling adhesive shall be used in accordance with ANSI/~~AITC~~ A190.1.

### 5.4 Proof-loading

If performed, proof-loading shall be in accordance with ANSI/~~AITC~~ A190.1.

#### 5.4.1 End joint spacing

When proof loading is performed in accordance with ANSI/~~AITC~~ A190.1, end joint spacing is not required.

### 5.5 Dimensions and tolerances

5.5.1 Sizes and tolerances for crossarms, crossarm braces and x-braces shall be in accordance with ANSI/~~AITC~~ A190.1. Sizes and tolerances for poles shall be in accordance with the following:

- a) Depth  $\pm 1/2$ " (13 mm)
- b) Width  $\pm 1/4$ " (6 mm)
- c) Squareness  $\pm 3/8$ " per foot (31 mm per meter) of depth
- d) Length of poles under fifty feet (15.24 meters), +6" (+152 mm), -3" (-76 mm), poles fifty feet or more in length (15.24 meters), +12" (+305 mm), -6" (-152 mm).

### **Revise Section 5.6 as follows:**

#### 5.6 Appearance

Glued laminated structural members shall be manufactured in accordance with the industrial appearance grade as defined in ~~AITC 110~~[ANSI A190.1](#) and as required in 5.6.1 through 5.6.6.

### **Revise Section 7.1 as follows:**

#### 7.1 Requirements

Testing and inspection shall be in accordance with ANSI/~~AITC~~ A190.1 and AITC 200.

### **Revise Section 8 as follows:**

#### 8 Quality control system

The quality control system shall be as specified in ANSI/~~AITC~~ A190.1. Daily records of the material produced under this standard shall be sent to the purchaser within five working days, if requested by the purchaser. Daily records shall include, at least, the requirements established in the Manufacturers Procedures Manual and Quality Control Manual and any others required in this standard.

### **Revise Section 9 as follows:**

#### 9 Storage and shipping

Storage, shipping, and handling shall be in accordance with AITC 111 or APA ~~R540-EWS-S400~~.

### **Revise Annex C, "Materials" Section as follows:**

Species: Coast Douglas-fir, Southern ~~Yellow~~-Pine, Hem-Fir, or any other species as allowed by this standard. Other species may be proposed for consideration for inclusion into the standard, but to be considered must be accompanied by data to support intended service longevity and suitability for the intended use.

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 Issue 92, Draft 8 (October 2019)

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[Note – the recommended changes to the standard which include the current text of the relevant section(s) indicate deletions by use of ~~strikeout~~ and additions by grey highlighting. Rationale Statements are in *red italics* and only used to add clarity; these statements will NOT be in the finished publication.]

## NSF/ANSI 49

### Biosafety Cabinetry: Design, Construction, Performance, and Field Certification

#### 3 Definitions

**3.XX modified canopy installation:** Installation of any canopy other than a designated acceptable option for a NSF Listed Biosafety Cabinet.

#### Annex F (normative)

#### Field tests

##### F.7.3.2.2 Exhaust alarm system – Type A1 or A2 canopy connection

**F.7.3.2.2.1** Maintain inflow velocity using canopy connection on Type A1 or Type A2 cabinets:

a) When a canopy connection is not included as an acceptable option in listing for the BSC being certified, complete the test in step b). When a canopy connection is included as an acceptable option in listing for the BSC being certified, the test in step b) is not required.

*Rationale: This encourages manufacturers to have their canopy connections type tested and BSC users to purchase the proper canopy connection for their BSC. Performing the test in b) is important for canopy connections not already type tested but less valuable for canopy connections already tested and approved by the certification agency. The type testing according to the requirements in Annex A assures the canopy will allow for proper inflow air when facility exhaust fails.*

b) De-energize or block the facility exhaust system from the cabinet. Measure inflow velocity of the cabinet. The measured velocity shall be no more than 8 ft/min (0.041 m/s) below the lowest value of the inflow velocity range stated on the cabinet data plate.

*Rationale: This new language guides certifiers to test non-NSF listed canopies in the field for compliance to the requirements referenced in Section 5.4.*

**F.7.3.2.2.12** Containment loss of ~~the~~ canopy connection on Type A1 or A2 cabinets:

a) Shall be tested at time of alarm verification.

b) Introduce a visible medium source into the canopy air intake(s) while slowly reducing the exhaust volume until there is a loss of capture of the visible medium into the canopy air intake(s). The audible and visual canopy alarms shall respond within 15 s, and the cabinet fan(s) will continue to operate.

c) Direct connected Type A1 or A2 cabinets shall not be considered in compliance with the standard.

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~~NOTE — Direct connected Type A1 or A2 cabinets shall not be considered in compliance with the standard.~~

***Rationale:** a “NOTE” by definition is informative, not normative. The note written in this section is normative language and should be updated to a new subsection*

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## NSF/ANSI International Standard for Biosafety Cabinetry —

### Biosafety Cabinetry: Design, Construction, Performance, and Field Certification

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### 3 Definitions

~~**3.35 work area:** The horizontal plane inside the cabinet extending from sidewall to sidewall and from back wall to the inside of the sash at a point approximately 2 inches (50 mm) above the lower level of the sash.~~

**3.35.1 total work area:** The area inside the cabinet between the sidewalls, rear wall, inside of the sash, bottom of the downflow diffuser, and top of the work tray.

**3.35.2 usable work area:** The space within the total work area where the user can perform work.

- 

*Rationale: The term “work area” is used 102 times in Standard 49. The language presented above includes suggested changes to the definition in Standard 49 to represent the two types of ‘work area’ generally described in the Standard. Below are a few examples where the current definition is ambiguous and potentially problematic. The language following this statement is not suggested to be changed, only the 2 previously presented statements. Once these terms are sorted out, the issue proponent will go through the Standard and update the terms appropriately.*

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**3.26 sash:** A fixed or sliding window located at the front of the biosafety cabinet, that forms a barrier between the operator and the **work area**.

*Why this is problematic: The work area only extends 2" above the bottom of the sash, there is no need for a sash above this.*

## **5.19 Doors and covers**

Doors and covers shall fit properly and close completely. Horizontal sliding doors shall not be used for the **work area**.

*Why this is problematic: The work area stops approximately 2" above the bottom of the sash, horizontal sliding doors may be used, provided they are at least 2" above the bottom of the sash.*

### **5.26.2 Electrical wiring, switches, etc.**

Replaceable electrical components shall not be located in contaminated air plenums, except for fan motors, sealed nonporous or jacketed wiring, and necessary airflow sensors. All wiring penetrations of contaminated spaces shall be sealed in accordance with 6.2. Circuit overload protection shall be provided for all receptacles. Switches shall be mounted outside the **work area**. A wiring diagram showing connection of all electrical components shall be permanently attached to the unit in an accessible location outside of air plenum systems. A statement providing starting current, running power, and circuit requirements shall be provided with the installation instructions.

*Why this is problematic: As long as the manufacturer keeps the switches at least 2" above the bottom of the sash, anything is acceptable.*

#### **A.10.3.4 Sash seal test**

Smoke shall be passed up the inside of the sash 2 inches (50 mm) from the sides and along the top of the **work area**.

*Why this is problematic: The intent of the sash seal test is to cover the entire perimeter of the sash. If the proposal to change the work area definition is accepted, the language suggested in A.10.3.4 regarding the Sash Seal Test should also be updated as presented on page 1.*

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[Note – the changes are illustrated below using ~~strikeout~~ for proposed removal of existing text and grey highlights to indicate the proposed new text. ONLY the highlighted text and ~~strikeout~~ text is within the scope of this ballot.]

NSF/ANSI Standard  
for Sustainability –

# Environmental Leadership and Corporate Social Responsibility Assessment of Servers

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## 2 Normative references

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ENERGY STAR Program Requirements for Computer Servers ~~Version 2.1~~<sup>3</sup>

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**3.1.8 computer server<sup>3</sup>:** Hardware system providing services and manage networked resources for client devices (e.g., desktop computers, notebook computers, thin clients, wireless devices, PDAs, IP telephones, other computer servers, or other network devices).

NOTE 1 — For the purposes of this Standard, the definition of computer server aligns with the most current version of the ENERGY STAR Program Requirements for Computer Servers 2.4. A computer server:

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**3.1.49 product:** A computer server:

— within the scope of the most current version of the ENERGY STAR Program Requirements for Computer Servers ~~Version 2.1~~, including managed servers and blade servers, and

— a marketing model with one or more specific configurations identified, inclusive of the product’s full range of configurations and as tested for compliance with ENERGY STAR.

NOTE 1 — Refer to the most current version of the ENERGY STAR Program Requirements for Computer Servers ~~Version 2.1~~ defines for the definition of a computer server, as all hardware and materials contained within the chassis, including the power supply unit.

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**5.5.2 Optional – Reduce energy lost from power conversion**

The product shall operate at high voltage AC power, 400/230v or 480/277v to reduce energy loss from power conversion during distribution and provide an overall higher system efficiency. The product shall be tested using the methodology specified in the most current version of the *ENERGY STAR Program Requirements for Computer Servers Version 2.1*.

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**5.5.3 Optional - Logged server activity metrics**

Product shall have the capability to log the metrics specified in the Standard Performance Data Measurements and Output Requirements section ~~Section 5~~ of the most current version of the *ENERGY STAR Program Requirements for Computer Servers Version 2.0*.

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**BSR/UL 493, Standard for Safety for Thermoplastic-Insulated Underground Feeder and Branch-Circuit Cables****PROPOSALS**

6.1.7 The designation "sunlight resistant, for CT use" or "sunlight resistant, for use in cable trays" may be marked on the outer surface of finished 14 - 6 AWG cables that contain two or three circuit conductors with or without an equipment grounding conductor if finished cable containing two 14 or 12 AWG circuit conductors with or without an equipment grounding conductor complies with ~~one of the flame tests referenced in 5.4 or 5.5~~ and with the 720 h sunlight-resistance requirements in 5.12.1. Where the cable is tested to the FT4/IEEE 1202 Vertical tray flame test, the cable may additionally be marked "FT4/IEEE 1202" or "FT4".

6.1.8 The designation "for CT use" or "for use in cable trays" may be marked on the outer surface of finished 14 - 6 AWG cables that contain two or three circuit conductors with or without an equipment grounding conductor if finished cable containing two 14 or 12 AWG circuit conductors with or without an equipment grounding conductor complies with ~~one of the flame tests referenced in 5.4 5.5~~, but have not been tested for sunlight resistance or do not comply with the 720 h sunlight-resistance requirements in 5.12.1. Where the cable is tested to the FT4/IEEE 1202 Vertical tray flame test, the cable may additionally be marked "FT/IEEE 1202" or "FT4".

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**BSR/UL 1203, Standard for Safety for Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations**

**1. Clarification of thread requirements in Table 10.2**

**PROPOSAL**

Replace existing Table 10.2 with the Proposed table shown below:

Current:

**Table 10.2**

*Number of threads versus class of fit*

Minimum number of fully engaged threads	Class of fit	
	ANSI <sup>a</sup>	ISO <sup>b</sup>
6	3	(6g/6H)
7	2	(6g/6H)
8	1	(6g/6H)

<sup>a</sup> See the Standard for Unified Inch Screw Threads (UN and UNR Thread Form), ANSI/ASME B1.1.

<sup>b</sup> See the Standard for General Purpose Metric Screw Threads - Tolerances - Part 1, ISO 965-1 and the Standard for General Purpose Metric Screw Threads - Tolerances - Part 3, ISO 965-3.

Proposed:

**Table 10.2**

**Minimum threaded engagement**

Class of fit / minimum tolerance class		Minimum number of fully engaged threads
ANSI <sup>a</sup>	ISO <sup>b</sup>	
3	-	6
2	-	7
1	-	8
-	(6g/6H)	5

<sup>a</sup> See the Standard for Unified Inch Screw Threads (UN and UNR Thread Form), ANSI/ASME B1.1.

<sup>b</sup> See the Standard for General Purpose Metric Screw Threads - Tolerances - Part 1, ISO 965-1 and the Standard for General Purpose Metric Screw Threads - Tolerances - Part 3, ISO 965-3.

## BSR/UL 1773, Standard for Safety for Termination Boxes

### 1. Increase Voltage Threshold to 1000 Volts and Expand Requirements for Insulation Materials

1.1 These requirements cover termination boxes rated ~~600~~ 1000 V or less that consist of lengths of bus bars, terminal strips, or terminal blocks with provision for wire connectors to accommodate incoming or outgoing conductors or both and are intended to be used in accordance with the National Electrical Code, NFPA 70. Termination boxes are investigated for use on the line or load side of service equipment.

1.4 This category covers mounting posts and pedestals rated ~~600~~ 1000 V ac or less intended to serve as a raceway for underground wiring that is being brought above grade to feed an outdoor electrical distribution device, such as a power outlet, panelboard, meter socket, circuit breaker enclosure or the like. They are intended to support the distribution device, which is installed either in the factory or in the field. They may contain electrical termination points for underground wiring and for wiring to the distribution device.

### 13 Bases and Supports - Insulation Material

13.1 For the mounting of an uninsulated live part, cold-molded or phenolic compositions are acceptable but nonvulcanized fiber, rubber, and hot-molded shellac and tar compositions are not acceptable. All other insulation materials in contact with live parts shall comply with one of the following:

- a) Insulation material requirements in the Standard for Polymeric Materials - Use in Electrical Equipment Evaluations, UL 746C;
- b) Insulation material requirements in the Outline of Investigation for Power Distribution Blocks, UL 1953;
- c) Insulation material requirements in the Standard for Terminal Blocks, UL 1059; or
- d) Insulation material requirements in the Standard for Switchboards UL 891.

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**Table 15.1**

**Minimum spacings if marked for use on line side of service equipment or rated greater than 100 amperes**

Voltage involved		Between uninsulated live parts of opposite polarity				Between uninsulated live parts and any grounded dead metal			
		Through air,		Over surface,		Through air,		Over surface,	
Greater than	Maximum	inch	(mm)	inches	(mm)	inch	(mm)	inch	(mm)
0	125	1/2	(12.7)	3/4	(19.1)	1/2	(12.7)	1/2	(12.7)
125	250	3/4	(19.1)	1-1/4	(31.8)	1/2	(12.7)	1/2	(12.7)
250	600	1	(25.4)	1-1/2	(38.1)	1/2	(12.7)	1	(25.4)
<u>601</u>	<u>1000</u>	<u>1</u>	<u>(25.4)</u>	<u>2</u>	<u>50.8</u>	<u>1</u>	<u>(25.4)</u>	<u>1</u>	<u>(25.4)</u>

NOTE - See 14.1 and 28.6.1.

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**Table 15.2**

**Minimum spacings if not marked for use on line side of service equipment and rated maximum 100 amperes**

Voltage involved		Between uninsulated live parts of opposite polarity and between an uninsulated live part and an exposed or uninsulated dead metal part other than the enclosure				Between uninsulated live parts and the walls of a metal enclosure, including fittings for conduit or armored cable	
Greater than	Maximum	Through air, <sup>a</sup>		Over surface,		Shortest distance,	
		inch	(mm)	inch	(mm)	inch	(mm)
0	150	1/8	(3.2)	1/4	(6.4)	1/2	(12.7)
150	300	1/4	(6.4)	3/8	(9.5)	1/2	(12.7)
300	600	3/8	(9.5)	1/2	(12.7)	1/2	(12.7)
<u>601</u>	<u>1000</u>	<u>1</u>	<u>(25.4)</u>	<u>2</u>	<u>(50.8)</u>	<u>1</u>	<u>(25.4)</u>

<sup>a</sup> The spacing between wiring terminals of opposite polarity shall not be less than 1/4 inch (6.4 mm) in any case if the terminals are in the same plane. A metal piece attached to the enclosure shall be considered to be a part of the enclosure for the purpose of this note if deformation of the enclosure is likely to reduce the spacing between the metal piece and a live part.

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**BSR/UL 4248-19, Standard for Safety for Fuseholders - Part 19: Photovoltaic Fuseholders****1. Change of Ambient Temperature to 50C**

4.4 PV fuseholders shall not be marked for 60°C (167°F) wire.

5.2 The field wiring terminal of a PV fuseholder shall have a capacity acceptable for the number, wire size and type of stranding associated with the maximum ampere rating of the fuseholder, and shall be acceptable for at least one size indicated in Table 1.

**Table 1**  
**50°C ambient corrected conductor size**

Terminal current <sup>a</sup> , A	Copper conductors <sup>b,c</sup>		Aluminum conductors <sup>b,c</sup>	
	Number of conductors	AWG or kcmil	Number of conductors	AWG or kcmil
15 or less	1	14	1	12
20	1	10	1	10
25	1	12	1	8
30	1	8	1	8
40	1	6	1	4
50	1	4	1	3
60	1	4	1	2
70	1	3	1	1
80	1	2	1	1/0
90	1	1	1	1/0
100	1	1/0	1	2/0
110	1	1/0	1	3/0
125	1	2/0	1	4/0
150	1	3/0	1	250
175	1	250	1	350
200	1	300	1	400
200	2	1/0	2	2/0
225	1	350	1	500
225	2	1/0	2	3/0
250	1	400	1	600
250	2	2/0	2	4/0
275	1	500	1	700
300	2	3/0	2	250
325	2	4/0	2	300
350	2	250	2	350

<u>350</u>	<u>3</u>	<u>2/0</u>	<u>3</u>	<u>4/0</u>
<u>400</u>	<u>2</u>	<u>300</u>	<u>2</u>	<u>400</u>
<u>450</u>	<u>2</u>	<u>350</u>	<u>2</u>	<u>500</u>
<u>450</u>	<u>3</u>	<u>3/0</u>	<u>3</u>	<u>250</u>
<u>500</u>	<u>2</u>	<u>400</u>	<u>2</u>	<u>600</u>
<u>500</u>	<u>3</u>	<u>250</u>	<u>3</u>	<u>300</u>
<u>550</u>	<u>2</u>	<u>500</u>	<u>3</u>	<u>350</u>
<u>600</u>	<u>3</u>	<u>300</u>	<u>3</u>	<u>400</u>
<u>700</u>	<u>3</u>	<u>400</u>	<u>3</u>	<u>500</u>
<u>800</u>	<u>3</u>	<u>500</u>	<u>4</u>	<u>400</u>
<u>800</u>	<u>4</u>	<u>300</u>	<u>5</u>	<u>300</u>
<u>1000</u>	<u>4</u>	<u>400</u>	<u>4</u>	<u>600</u>
<u>1200</u>	<u>5</u>	<u>400</u>	<u>6</u>	<u>400</u>
<u>1200</u>	<u>6</u>	<u>300</u>	<u>8</u>	<u>250</u>
<u>1200</u>	<u>4</u>	<u>600</u>	<u>5</u>	<u>600</u>
<u>1400</u>	<u>5</u>	<u>500</u>	<u>6</u>	<u>500</u>
<u>1400</u>	<u>6</u>	<u>400</u>	<u>9</u>	<u>250</u>
<u>1600</u>	<u>6</u>	<u>500</u>	<u>6</u>	<u>700</u>
<u>1600</u>	<u>7</u>	<u>400</u>	<u>8</u>	<u>400</u>
<u>2000</u>	<u>6</u>	<u>500</u>	<u>10</u>	<u>400</u>
<u>2000</u>	<u>8</u>	<u>400</u>	<u>8</u>	<u>600</u>
<u>2500</u>	<u>9</u>	<u>500</u>	<u>10</u>	<u>600</u>

<sup>a</sup> For terminal current other than indicated, the next higher rating shall be used - for example, if rated 35 A, enter at 40 A.

<sup>b</sup> Table is based on 75°C wire ampacities.

<sup>c</sup> Based on 50°C correction factor of Table 310.15(B)(2)(a) of the ampacities of Table 310.15(B)(16) of the National Electrical Code, ANSI/NFPA-70.

## 6.1 Verification of temperature rise

### 6.1.1 Test method

6.1.1.1 If the fuse and fuseholder form an integral device intended to be replaced as a unit, then the actual PV fuse, not a dummy fuse, may be used in testing. If the actual PV fuse is used, the applicable temperature limits shall be the limits specified in Table 4 2 plus 20°C.

6.1.1.2 The temperatures specified in Table 4 2 are based on an assumed ambient temperature of 25°C (77°F). A test may be conducted at an ambient temperature within the range of 20 - 40 50°C (68 - 104 122°F).

6.1.1.3 If a test is conducted at an ambient temperature other than 25°C (77°F), an observed temperature shall be corrected as described in 6.1.1.4. No corrected temperature shall exceed the required value specified in Table 4 2.

6.1.1.4 An observed temperature shall be corrected by addition [if the test ambient temperature is lower than 25°C (77°F)] or subtraction (if the test ambient temperature is higher than 25°C) of the difference between 25°C and the test ambient temperature.

6.1.1.5 If a corrected temperature exceeds the required value specified in Table 4 2, at the request of the manufacturer, the test may be repeated at an ambient temperature closer to 25°C (77°F).

## 6.1.2 Acceptability of test results

6.1.2.1 The temperature limits shown in Table 4 2 shall not be exceeded.

6.1.2.2 If tested with PV fuses, no fuse shall open.

**Table 4 2**  
**Maximum temperature (based on an test ambient of 25°C)**

Materials and components	°C	(°F)
Bus, strap, or fuse clip	55	(131)
Pressure terminal connectors for field installed conductors	55 <sup>a</sup>	(131 <sup>a</sup> )
Wire insulation or insulating tubing	40 <u>30</u> <sup>b</sup>	(104 <u>86</u> <sup>b</sup> )
Electrical tape	60 <u>50</u> <sup>b</sup>	(140 <u>122</u> <sup>b</sup> )
Varnished cloth insulation	65 <u>55</u> <sup>b</sup>	(149 <u>131</u> <sup>b</sup> )
Fiber employed as electrical insulation	70 <u>60</u> <sup>b</sup>	(158 <u>140</u> <sup>b</sup> )
Sealing compound	55 <u>45</u> <sup>b</sup>	(131 <u>113</u> <sup>b</sup> )
Polymeric materials used for electrical insulation or other part where the deterioration would result in a hazard	RTI-20 <u>30</u> <sup>c</sup>	(RTI-68 <u>86</u> <sup>c</sup> )

<sup>a</sup> Applicable to a connector for copper wire. This shall also be applicable to a connector for aluminum wire or aluminum-bodied connector if the connector has a temperature rating of 90°C (194°F).

<sup>b</sup> Consideration shall be given for the heating effect resulting from the use of actual fuses. Materials that have been previously proven acceptable for use at higher temperatures shall be suitable for use at 20°C less than the previously established temperature ratings.

<sup>c</sup> RTI shall be the lower of the mechanical and electrical Relative Thermal Indices for the polymeric material used or the established RTI when tested in accordance with CAN/CSA-C22.2 No. 0.17 or the Standard for Polymeric Materials - Use in Electrical Equipment Evaluations, UL 746C.