



Technical Standards Program

ESTA Standards Watch

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Aw, You Missed It

There are no draft standards or standards up for reaffirmation posted for public review on the ESTA TSP website right now. However, a great number of documents were posted there last year, and fifteen of them moved on to being approved American National Standards. Some of them might be important to your life or work—or both. Listed below is a summary of what was approved and published last year—just in case you missed them.

These documents can be downloaded at no cost from <http://tsp.esta.org/freestandards>. The free download is made possible by the sponsorship of ProSight Specialty Insurance. However, none of these documents would exist without the support of the Investors in Innovation, the companies, organizations, and individuals who help fund the Technical Standards Program. Please see the listing of Investors in Innovation at the end of this edition of *Standards Watch*. Visit http://tsp.esta.org/tsp/inv_in_innovation/sponsor.html to make a donation and join the Investors in Innovation.

ANSI E1.1-2018, Entertainment Technology--Construction and Use of Wire Rope Ladders. ANSI E1.1-2018 describes the construction and use of wire rope ladders in the entertainment industry. It is a revision of the 2012 standard, which was a revision of the 2006 standard with changed load ratings to accommodate heavier workers. Wire rope ladders are distinguished from other ladders by having flexible rails. They are used in

applications where ladders with rigid rails are impractical to use, or where a rigid ladder would pose a greater danger to the user or other workers in the area.

ANSI E1.5–2009 (R2018), Entertainment Technology–Theatrical Fog Made With Aqueous Solutions of Di- And Trihydric Alcohols. This standard describes the composition of theatrical fogs or artificial mists that are not likely to be harmful to otherwise healthy performers, technicians, or audience members of normal working age. This standard is intended to be applied in theatres, arenas, and other places of entertainment or public assembly where theatrical fogs and mists are often used. It lists what is permissible in the fog or haze and how much can be there on a short-term and long-term basis.

ANSI E1.6-2–2018, Design, Inspection, and Maintenance of Electric Chain Hoists for the Entertainment Industry. ANSI E1.6-2–2018 is part of the E1.6 powered entertainment rigging suite of standards. It covers the design, inspection, and maintenance of serially manufactured electric link chain hoists having capacity of 2 tons or less and used in the entertainment industry. This standard does not cover attachment to the load or to the overhead structure. Controls used for multiple hoist operation are excluded from the scope of this part of the standard.

ANSI E1.8-2018, Entertainment Technology–Loudspeaker Enclosures Intended for Overhead Suspension–Classification, Manufacture and Structural Testing. This standard covers the requirements for loudspeaker enclosures specifically intended for overhead suspension, but addresses only the structural characteristics of the enclosure pertaining to its suspension, such as enclosure construction, component part security, enclosure suspension hardware, manufacturing control systems, structural testing, and product representation.

ANSI E1.11–2008 (R2018), Entertainment Technology–USITT DMX512-A, Asynchronous Serial Digital Data Transmission Standard for Controlling Lighting Equipment and Accessories. ANSI E1.11–2008 (R2018) is a reaffirmation of the 2008 edition. ANSI E1.11 describes a method of digital data transmission for control of lighting equipment and accessories, including dimmers, color-changers, and related equipment. It is intended to provide for interoperability at communication and mechanical levels with controllers and controlled equipment made by different manufacturers. It is an update and expansion of the protocol developed by the United States Institute for Theatre Technology, Inc. and published as "DMX512/1990, Digital Data Transmission Standards for Dimmers and Controllers."

ANSI E1.14–2018, Entertainment Technology–Recommendations for Fog Equipment Manuals. ANSI E1.14 applies to the user-instruction materials for fog-making equipment manufactured for use in the entertainment industry. In order to use fog safely and effectively, the user must have some general knowledge of the technology, have a clear understanding of how to operate the fog making system, and be aware of the potential hazards related to the use of fog, and particularly the system that he is using. This standard is designed to establish guidelines for manufacturers to provide to the user the necessary information required for the safe and responsible use of fog equipment.

ANSI E1.29-2009 (R2018), Product Safety Standard for Theatrical Fog Generators That Create Aerosols of Water, Aqueous Solutions of Glycol or Glycerin, or Highly Refined Alkane Mineral Oil. ANSI E1.29 is a guide for product safety testing laboratories in evaluating fog-making equipment for design or construction defects that might create unacceptable hazards. It is based on ANSI/UL 998–2006, Humidifiers, but has modifications to deal with safety issues peculiar to fog generators. Fog generators often are evaluated as heating appliances to assure they are not a fire or shock hazard. ANSI E1.29 considers those issues, but also has safety tests for the fog generated. Fog & Smoke, November 06, 2018

ANSI E1.31-2018, Entertainment Technology–Lightweight streaming protocol for transport of DMX512 using ACN. ANSI E1.31–2018, Entertainment Technology–Lightweight streaming protocol for transport of DMX512 using ACN, is a revision of the 2016 standard. It describes a mechanism to transfer DMX512A packets over a TCP/IP network using a subset of the ACN protocol suite. It covers data format, data protocol, data addressing, and network management. It also outlines a synchronization method to help ensure that multiple sinks can process this data concurrently when supervised by the same controller. This revision includes support for IPv6 as well as IPv4.

ANSI E1.35–2013 (R2018), Standard for Lens Quality Measurements for Pattern Projecting Luminaires Intended for Entertainment Use. ANSI E1.35 describes a method for measuring stage and studio luminaire lens quality with particular emphasis on contrast and perceived projected image quality (sharpness). It also offers a way for presenting these results on a datasheet in a format that is readily understood by a typical end-user and that allows the end-user to directly compare lenses in a meaningful way. Without this standard, there is no way to describe how clearly a stage lighting instrument projects an image, other than by showing a person with the actual instrument and gobo. The download is a ZIP file that includes an EPS graphic file of the test pattern in three common gobo sizes.

ANSI E1.42-2018, Entertainment Technology–Design, Installation, and Use of Orchestra Pit Lifts. This standard covers the design, construction, operation, inspection, testing, maintenance, alteration and repair of permanently installed orchestra pit lifts and their associated parts, rooms, spaces, enclosures and hoistways, where located in a theatre or a similar place of public entertainment.

ANSI E1.46–2018, Standard for the Prevention of Falls from Theatrical Stages and Raised Performance Platforms. The users of theatrical stages and raised platforms can suffer debilitating injuries from falls into orchestra pits, open stage lifts, and similar openings in stage floors. Health and safety regulations require action to prevent these falls, but offer little guidance that is suitable for theatrical environments. This document provides that guidance. This revised edition addresses recent changes to 29 CFR 1910 subpart D.

ANSI E1.51–2018, The Selection, Installation, and Use of Single-Conductor Portable Power Feeder Cable Systems for Use At 600 Volts Nominal or Less for the Distribution of Electrical Energy in the Television, Film, Live Performance and Event Industries in Canada. ANSI E1.51–2018, The Selection, Installation, and Use of Single-Conductor Portable Power Feeder Cable Systems for Use At 600 Volts Nominal or Less for the Distribution of Electrical Energy in the Television, Film, Live Performance and Event Industries in Canada, is about what the title says it is about. It gives guidance on how to safely use single-conductor portable power feeder cable, a power distribution technique about which the Canadian Electrical Code is largely silent.

ANSI E1.56-2018, Entertainment Technology–Rigging Support Points. This standard applies to stationary rigging points, attached to permanent facility structure, that are intended to be permanent, and provides minimum requirements for the design, fabrication, installation, inspection and documentation of these rigging points for their use to support rigging loads.

ANSI E1.60–2018, Guidelines for the Use of Raked Stages in Live Performance Environments. This standard provides guidance for the use of raked stages in live performance environments to mitigate the risks for the protection of actors and technicians.

ANSI ES1.19-2018, Safety Requirements for Special Event Structures. The scope of this standard covers any temporary structure used for special events ("temporary special event structures"), where such structures are used for presentation, performance, structural support of entertainment technology equipment, audience seating or viewing in conjunction with the event, and regardless if the event is indoor or outdoor. The scope covers any such structure not otherwise addressed by existing standards, codes or legislation, and to the extent that such other standards, codes or legislation do not already address conditional use of those temporary structures within existing structures.

Two ESA Crowd Safety Symposiums in February

The Event Safety Alliance has announced a Crowd Safety Symposium to be held in two locations to help attendees know how to plan to mitigate risks and keep crowds safe. The course aims to provide an understanding of the four aspects of basic crowd safety and to provide techniques to plan and manage safe pedestrian flows in crowded places during all phases of an event including emergencies. The registration fee is \$235 for ESA members and \$260 for everyone else.

Las Vegas
14–15 February 2019
PRG Las Vegas
6050 S Valley View Blvd
Las Vegas, 89118

<https://eventsafetyalliance.z2systems.com/np/clients/eventsafetyalliance/eventRegistration.jsp?event=201&>

San Francisco
18-19 February 2019
Moscone Convention Center
747 Howard St.
San Francisco, CA 94103

<https://eventsafetyalliance.z2systems.com/np/clients/eventsafetyalliance/eventRegistration.jsp?event=196&>

UL Seeks Technical Panel Members for UL 1640

Derrick L. C. Martin, UL's project manager for UL 1640, UL Standard for Safety for Portable Power-Distribution Equipment, has issued a request for assistance in finding additional members for the Standard's Technical Panel. UL seeks to have STPs in which an interest category does not make up more than one-third of the overall voting membership. Currently, Producers make up 36 percent of STP 1640. UL is currently seeking representatives from the following interest categories to serve on STP 1640 to help balance the Panel:

AHJ/Regulator: Those involved in the regulation or enforcement of the requirements of codes and standards at a regional (e.g. state or province) and/or local level. The authority having jurisdiction/regulator may be a regional or local department or individual such as a fire chief; fire marshal; chief of a fire prevention bureau, state department of insurance official, labor department, or health department; building official; electrical inspector; or others having statutory authority.

Consumer: Consumer organizations, consumer departments at universities, home economic departments at universities, professional consumers, and individuals who use the product or service as part of their livelihood and are not eligible for STP membership under another interest category.

General Interest: Consultants, members of academia, scientists, special experts, representatives of professional societies, representatives of trade associations, representatives of non-governmental organizations, representatives of companies that only private-brand label products (made by another manufacturer) covered by STP 1640, and other individuals, etc. that are not covered by the other interest categories.

Supply Chain: Component producers for an STP responsible for standards covering end-products or end-product producers for an STP responsible for standards covering components; installers, distributors, and retailers. Manufacturers who have no manufacturing facilities for the products covered by UL 1640, but solely use contract manufacturers to make the products are considered part of the Supply Chain interest category. Wholesale or retail purchase-resellers for products made by other companies are also considered as part of the Supply Chain interest category.

Testing and Standards Organization: Organizations that test and/or certify products, services, or systems covered by UL 1640, or that develop standards/codes related to the products, services, or systems covered by UL 1640.

Anyone interested in applying for membership on STP 1640 should go to the [STP Application Page](#) to complete an application for STP 1640. UL staff will inform applicants of the status of their application soon after the receipt of their completed applications.

No FCC News

The Federal Communications Commission news in this issue is that there is no FCC news. The Federal Communications Commission is effectively shut down due to the lapse in funding. There has been little news to report in *Standards Watch* recently because the FCC has removed from its scope regulating ISPs to bar preferential treatment for certain web sites or customers, and removed regulating how wireless phone services handle SMS texts, which cuts the number of announcements that might be of interest to readers. However, the FCC has been active in tracking down unlicensed radio operation and unintentional radiation that interferes with licensed radios—enforcement actions that might have an effect on shows and communications. That has now stopped; the last enforcement action was on 10 December. The FCC news is now confined to publishing terse public notices of broadcast applications, such as <https://docs.fcc.gov/public/attachments/DOC-355873A1.pdf>, which is the only notice for 10 January 2019. Normally there are dozens, if not scores of notices, each business day.

Standards Watch is a listing of news items that might affect their business and thus that might warrant some action. There is no action for you to take here, but you might want to know that until funding is restored you will not have the support of the FCC. That is, for example, if your show's wireless data network is overwhelmed by broadcasts or RF signals in violation of FCC regulations, you will have to find some remedy other than complaining to your local FCC office. There is no staff to help you. Plan accordingly.

A version of the FCC's "Plan for Orderly Shutdown Due to Lapse of Congressional Appropriations" was published in mid-December. A revised version was published on January 10. It is available at http://tsp.esta.org/tsp/StandardsWatch/FCC_shutdown_plan_DOC-355868A1.pdf. The plan lays off 82% of the FCC's staff, reducing it from 1,442 employees to 262.

No Report on WTO Technical Barrier to Trade Notifications

The partial US government shutdown has taken Notify US, the U.S. Department of Commerce's service to announce Technical Barrier to Trade filings, off-line. Normally the NIST site lists all the Technical Barrier to Trade Notifications that have been filed in roughly chronological filing order, and ESTA's Technical Standards Managers scan the list to look for anything that might be of interest to *Standards Watch* readers. That can't be done for this issue of *Standards Watch*. The U.S. Department of Commerce is closed; the tsapps.nist.gov/ website cannot be reached.

One Department of Commerce page that is alive says that the following services and activities will not be available except to extent they are funded by other than current year annual appropriations:

- Most research activities at NIST and NOAA (excluding real-time regular models on research computers used for hurricane and FAA flight planning)
- Assistance and support to recipients of grant funding
- Technical oversight of non-mission essential contracts
- Services and activities provided by:
 - ✓ Bureau of Economic Analysis (BEA)
 - ✓ Economic Development Administration (EDA)
 - ✓ Economics and Statistics Administration (ESA)
 - ✓ Minority Business Development Agency (MBDA)
 - ✓ U.S. Census Bureau with the exception of the support of the Decennial Census, which remains funded and activities funded by other agencies and non-Federal entities through reimbursable agreements.
- Most services and activities provided by the International Trade Administration (ITA)

But all is not lost for Standards Watch readers—it's simply a LOT less convenient. It is possible to look up WTO Technical Barrier to Trade notifications on the Europa website at <http://ec.europa.eu/growth/tools-databases/tbt/en/search/>. However, this is a search tool that asks you to enter search terms in specific fields. You can search for any filings done between, for example, 12 December 2018 and 10 January 2019 in technical field 17.180.20 "Colours and measurement of light," but if you are also

interested in filings during the same period for 29.140.40, "Luminaires," that is another search. The entertainment industry is very broad; it covers *many* technical fields.

The Europa site is not handy, but it is better than nothing. If you are interested in possible barriers to trade for a particular product for a particular class of products, it can help you. Until funding is restored, the U.S. Department of Commerce has little help to offer.

ANSI Public Review Announcements

The following documents have been announced for public review by ANSI. Please send your comments before the deadline to the person indicated and to ANSI's Board of Standards Review at psa@ansi.org.

Due 4 February 2019

BSR/ACI 318-201x, Building Code Requirements for Structural Concrete and Commentary (new standard)

The Building Code Requirements for Structural Concrete provides minimum requirements for the materials, design, and detailing of structural concrete buildings and, where applicable, non-building structures. This code addresses structural systems, members, and connections, including cast-in-place, precast, plain, nonprestressed, prestressed, and composite construction.

Single copy price: Free

Obtain an electronic copy from: <https://www.concrete.org/publications/standards/upcomingstandards.aspx>

Send comments to: discussion@concrete.org

BSR/ASSP Z459.1-201x, Safety Requirements for Rope Access Systems (new standard)

This standard sets forth accepted practices for rope access work. It is applicable for use in any environment where ropes are suspended from or connected to a structure or natural feature and used as the primary means of access, egress, or support and as the primary means of secondary protection against a fall. This standard is not intended to apply to recreational use of ropes or to methods used by professional emergency response personnel, although persons engaged in such activities may benefit from the advice, principles, and practices in this standard. This is the same project as the originally proposed Z359.8 standard but the committee decided to change the numbering.

Single copy price: \$99.00

Obtain an electronic copy from: OMunteanu@ASSP.org

Send comments to: Ovidiu Munteanu, OMunteanu@ASSP.org

BSR/ASSP Z359.1-201x, The Fall Protection Code (revision and redesignation of ANSI/ASSE Z359.1-2016)

The Fall Protection Code is a set of standards that covers program management; system design; training; qualification and testing; and equipment, component, and system specifications for the processes used to protect workers at height in a managed fall protection program. This standard identifies those requirements and establishes their role in the Code and their interdependence.

Single copy price: Free!

Obtain an electronic copy from: <https://store.assp.org/PersonifyEbusiness/Store/Product-Details/productId/26534446>

Send comments to: Ovidiu Munteanu, OMunteanu@ASSP.org

BSR C18.3M, Part 1-201x, Portable Rechargeable Cells and Batteries - General and Specifications (revision of ANSI C18.3M, Part 1 -2013)

The standard applies to portable lithium primary cells and batteries.

Single copy price: \$99.00

Obtain an electronic copy from: khaled.masri@nema.org

Send comments to: Khaled Masri, Khaled.Masri@nema.org

Due 11 February 2019

BSR/ASSP Z16.1-201x, Safety and Health Metrics and Performance Measures (new standard)

- (1) Historical lagging indicators of measuring work-related injuries and illnesses. It will address clarification of guidelines used by BLS for recordability and formulas used to traditionally track employee injury/illness statistics.
- (2) Methodologies to utilize leading indicators to measure management effectiveness in reducing risk in the

workplace. The use of leading indicators has been promoted in all systems management approaches. This portion of the standard will identify what leading indicators should be used and how to measure their effectiveness and turn such indicators into a statistical database. (3) Expanding metrics beyond the traditional tracking of employee injuries/illnesses. In this section, metrics will be developed that apply to areas such as property loss, general liability, fleet, business interruption, and other nontraditional metrics. It will also address, using financial terms, to speak the language of business in addressing such losses.

Single copy price: \$110.00

Order from and send comments to: Lauren Bauerschmidt, LBauerschmidt@assp.org

BSR/CTA 2006-B-2009 (R201x), Testing and Measurement Methods for Mobile Audio Amplifiers

(reaffirmation of ANSI/CTA 2006-B -2009)

CTA 2006-B defines characteristics that, considered collectively, describe the performance of power amplifiers designed for use in mobile applications. Power amplifiers designed for use in mobile applications include, but are not limited to, separate single and multichannel amplifiers, integrated amplifiers, and bandwidth-limited amplifiers that are connected to and rely solely on the vehicle's primary electrical system for power input and have output power ratings of greater than 5 watts when measured in accordance with CTA 2006-B. [FYI, the TSP's secondary teleconferencing system for its meetings uses "mobile audio amplifiers" to drive the speakers.]

Single copy price: Free

Order from and send comments to: Veronica Lancaster, vlancaster@cta.tech

BSR/CTA 2014-B-2011 (R201x), Web-Based Protocol and Framework for Remote User Interface on UPnP Networks and the Internet (Web4CE) (reaffirmation of ANSI/CTA 2014-B-2011)

This standard defines the necessary mechanisms to allow a user interface to be remotely displayed on and controlled by devices or control points other than the one hosting the logic.

Single copy price: Free

Order from and send comments to: Veronica Lancaster, vlancaster@cta.tech

BSR/ESD SP5.0-201x, ESD Association Standard Practice for Electrostatic Discharge Sensitivity Testing - Reporting ESD Withstand Levels on Datasheets (new standard)

This document applies to ESD withstand level information in datasheets or other information publications such as reliability or qualification reports. All packaged semiconductor devices, thin film circuits, surface acoustic wave (SAW) devices, opto-electronic devices, hybrid integrated circuits (HICs), and multi-chip modules (MCMs) should have this information provided.

Single copy price: \$105.00 (List)/\$75.00 (EOS/ESD Members) [hardcover]; \$130.00 (List)/\$100.00 (EOS/ESD Members) [softcover]

Order from and send comments to: Christina Earl, cearl@esda.org

BSR/TIA 1005-A-2-201x, Telecommunications - Infrastructure standard for industrial premises - Addendum 2: Performance requirements for four-pair industrial cables and cabling supporting 1000BASE-T for MICE2 and MICE3 environments (addenda to ANSI/TIA 1005-A-1-2015)

Creates an addendum to ANSI/TIA 1005-A defining enhanced performance requirements for four-pair industrial cables and cabling supporting 1000BASE-T in MICE2 and MICE3 environments. This addendum will use Connectivity already specified in ANSI/TIA-1005-A.

Single copy price: \$61.00

Order from and send comments to: TIA; standards@tiaonline.org

Due 19 February 2019

BSR/UL 2900-2-3-201x, Standard for Safety for Software Cybersecurity for Network-Connectable Products, Part 2-3: Particular Requirements for Security and Life Safety Signaling Systems (new standard)

This proposed first edition of the Standard for Software Cybersecurity for Network-Connectable Products, Part 2-3: Particular Requirements for Security and Life Safety Signaling Systems, UL 2900-2-3, applies to the evaluation of security and life safety signaling system components including, but not limited to, alarm control units; intrusion detection equipment; general-purpose signaling units; digital video equipment and systems; mass notification and emergency communication/evacuation equipment and systems; control servers; alarm automation system software; alarm receiving equipment; anti-theft equipment; automated teller machines; fire

alarm control systems; network-connected locking devices; PSIM systems; smoke control systems; smoke/gas/CO detection devices; audible and visual signaling devices (fire and general signaling); access control equipment and systems; and smart locks.

Single copy price: Free

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

Send comments to: Barbara Davis, Barbara.J.Davis@ul.com

BSI Public Review Announcements

BSI Standards has announced draft documents for public review that might be of interest to *Standards Watch* readers. BSI documents may be commented on at <https://standardsdevelopment.bsigroup.com/>.

Due 07 February 2019

BS PD 6702-1, Structural use of aluminium

This part of PD 6702 gives guidance on the use of the following parts of BS EN 1999, Design of aluminium structures: Part 1 1, General structural rules; Part 1 3, Structures susceptible to fatigue. It is applicable to the same scope of application as BS EN 1999 unless otherwise stated. The design information included in this document is applicable only when the recommendations in PD 6705 3 are followed for the execution of the structure. This document covers those items identified in the UK National Annexes to BS EN 1999-1-1 and BS EN 1999-1-3 as requiring additional guidance. Further material, not necessarily identified in the relevant National Annex, is also given for information.

Due 15 February 2019

BS EN IEC 63129 Determination of inrush current characteristics of lighting products

This document describes a method, based on measurements combined with calculations, to determine specific characteristics of the inrush current of single and/or multiple lighting products of the same type. Lighting products include the following:

- Light sources with integrated controlgear
- Controlgear
- Luminaires.

The inrush current characteristics that are determined are

- the peak inrush current;
- the inrush-current pulse duration.

This document applies to lighting products connected to low-voltage 230 V AC 50/60 Hz electrical supply networks.

Due 20 February 2019

CEN/TC 250 N 2133 , The revision of EN 1993-1-4. 'Eurocode 3: Design of steel structures - Part 1-4: General rules - Supplementary rules for stainless steels'

(1) This Part 1.4 of EN 1993 gives supplementary provisions for the design of buildings and civil engineering works that extend and modify the application of EN 1993-1-1, EN 1993-1-3, EN 1993-1-5 and EN 1993-1-8 to austenitic, austenitic-ferritic and ferritic stainless steels.

CEN/TC 250 N 2134 Eurocode 3: Design of steel structures - Part 1-5: Plated structural elements

(1) EN 1993-1-5 gives design requirements of stiffened and unstiffened plates which are subject to in-plane forces.

(2) Effects due to shear lag, in-plane load introduction and plate buckling for I-section girders and box girders are covered. Also covered are plated structural components subject to in-plane loads as in tanks and silos. The effects of out-of-plane loading are outside the scope of this document.

CEN/TC 250 N 2136 Eurocode 3: Design of steel structures - Part 1-10: Material toughness and through-thickness properties

(1) EN 1993-1-10 contains design guidance for the selection of steel for fracture toughness and for through thickness properties of welded elements where there is a significant risk of lamellar tearing during fabrication.

(2) Section 2 applies to steel grades S 235 to S 690. However section 3 applies to steel grades S 235 to S 460 only.

(3) The rules and guidance given in section 2 and 3 assume that the construction will be executed in accordance with EN 1090.

CEN/TC 250 N 2131 , The revision of EN 1993-1-2 Eurocode 3: Design of steel structures - Part 1-2: General rules - Structural fire design

(1) EN 1993-1-2 deals with the design of steel structures for the accidental situation of fire exposure and is intended to be used in conjunction with EN 1993-1-1 and EN 1991-1-2. EN 1993-1-2 only identifies differences from, or supplements to, normal temperature design.

(2) EN 1993-1-2 deals only with passive methods of fire protection.

(3) EN 1993-1-2 applies to steel structures that are required to fulfil this load bearing function if exposed to fire, in terms of avoiding premature collapse of the structure. NOTE: This part does not include rules for separating elements.

(4) EN 1993-1-2 gives principles and application rules for designing structures for specified requirements in respect of the load bearing function and the levels of performance.

(5) EN 1993-1-2 applies to structures, or parts of structures, that are within the scope of EN 1993-1 and are designed accordingly.

(6) The methods given are applicable to structural steel grades S235, S275, S355, S420 and S460 of EN 10025 and all grades of EN 10210 and EN 10219.

(7) The methods given are also applicable to cold-formed steel members and sheeting within the scope of EN 1993-1-3.

(8) The methods given are applicable to any steel grade for which material properties at elevated temperatures are available, based on harmonized European standards.

(9) The methods given are also applicable stainless steel members and sheeting within the scope of EN 1993-1-4

CSA Public Review Announcements

The CSA Group has announced a draft for public review that might be of interest to *Standards Watch* readers. To participate in CSA public reviews, please visit: <http://publicreview.csa.ca/>.

Due 5 March 2019

C22.1, Amendment - Canadian Electrical Code, Part I, Subject No. 4408, Revisions to definition of “Grounding conductor” (amendment)

Amend the definition of “Grounding conductor” as shown.

Grounding conductor — ~~the conductor used to connect the service equipment~~ the conductor of a system to be grounded, the conductive parts of electrical equipment or the conductive parts of non-electrical equipment to the a grounding electrode. (see Appendix B).

New ANS Projects

ANSI has announced the following new projects that might materially affect *Standards Watch* readers—or at least be interesting to them. Contact the developer if you (a) want to be involved in the project, (b) object to the project and wish it to be abandoned, or (c) if you would like to point out that its scope is covered by an existing standard, thereby possibly making the project redundant or conflicting.

BSR/ASABE S642.1 MONYEAR-201x, Recommended Methods for Measurement and Testing of LED Products for Plant Growth and Development (revision and redesignation of ANSI/ASABE S642-SEPT2018)

This document describes methods for measurement and testing of LED packages and arrays or modules, LED lamps, and any other LED optical radiation devices, with a spectral range between 280 nm and 800 nm, used for plant growth and development. These methods are necessary to obtain information about device characteristics and long-term change behaviors.

Contact: Walter Brace, brace@asabe.org

BSR/ASSP Z590.4-201x, Occupational Safety and Health (OSH) Audit Standard for Use and Implementation When Evaluating Organizations for Potential Merger and/or Acquisition (new standard)

This standard sets forth a procedure for conducting occupational safety and health due diligence. This practice is

intended primarily as a reasonable and prudent approach to conducting an assessment designed to identify risks in connection with a transaction, including safety and health concerns, regulatory gaps, human capital issues, and underfunded liabilities.

Contact: Lauren Bauerschmidt, LBauerschmidt@assp.org

BSR/AVIXA D402.02-201X, Audiovisual Systems Performance Verification (revision and redesignation of ANSI/INFOCOMM 10-2013)

This standard provides a framework and supporting processes for determining elements of an audiovisual system that need to be verified; the timing of that verification within the project delivery cycle; a process for determining verification metrics; and reporting procedures. Consultants, integrators, manufacturers, technology support staff, owners, third-party commissioning agents, and architects who have verification processes in place can integrate those existing processes into the framework this standard provides, adding customized items to those already defined in the standard.

Contact: Michelle Truong, mtruong@avixa.org

BSR/IES LP-2-201x, Designing Quality Lighting for People in Outdoor Environments (new standard)

The RP will be a comprehensive approach for light levels, glare, adaptation, spectrum, and contrast while addressing safety, timing, and perceived security for pedestrian-based tasks. Application of these recommendations will ultimately enhance the pedestrian's visual experience while also respecting the environment.

Contact: Patricia McGillicuddy, pmcgillicuddy@ies.org

BSR/IES RP-39-201x, Off-Roadway Sign Luminance (new standard)

This recommended practice contains guidelines for restricting the brightness of signs by limiting their luminance as seen by drivers on nearby streets and roads.

Contact: Patricia McGillicuddy, pmcgillicuddy@ies.org

BSR/IES TM-XX TLA-201x, IES Approved Method: Measuring and Quantifying Temporal Light Artifacts (TLA) (new standard)

Defines and describes 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.

Contact: Patricia McGillicuddy, pmcgillicuddy@ies.org

BSR NEMA MG 1-201x Amendment 1, Motors and Generators (addenda to ANSI/NEMA MG 1-2016)

Assists users in the proper selection and application of motors and generators. Practical information concerning performance, safety, test, construction, and manufacture of ac and dc motors and generators.

Contact: Mike Leibowitz, mike.leibowitz@nema.org

BSR/ISEA Z308.1-201x, Minimum Requirements for Workplace First Aid Kits and Supplies (revision of ANSI/ISEA Z308.1-2015)

This standard establishes minimum performance requirements for first-aid kits and their supplies that are intended for use in various work environments. Classification of first-aid kits, designating the assortment of items and quantity of each item, is based on the anticipated number of users intended to be served by each first-aid kit, as well as the complexity of the work environment and level of hazards. First-aid kit containers are classified by portability, ability to be mounted, resistance to water and corrosion and impact resistance.

Contact: Cristine Fargo, cfargo@safetysupplyequipment.org

BSR/UL 9540-201x, Standard for Safety for Energy Storage Systems and Equipment (revision of ANSI/UL 9540-2016)

These requirements cover energy storage systems that are intended to receive energy and then to store the energy received in some form so that the energy storage system can provide electrical energy to loads or to the local/area electric power system (EPS) when needed. The types of energy storage covered under this standard include electrochemical, chemical, mechanical, and thermal. The systems covered by this standard include those intended to be used in a standalone mode (e.g., islanded) including "self-supply" systems to provide electrical energy and those used in parallel with an electric power system or electric utility grid such as "grid-

supply" systems, or applications that perform ancillary operational modes associated with power generation such as, voltage support and regulation, frequency support and regulation, volt-var, capacity reserve, energy shifting or other utility grid support services. Energy storage systems are intended for installation and use in accordance with the National Electrical Code, NFPA 70, the Canadian Electrical Code, Part I: Safety Standard for Electrical Installations, C22.1; the National Electrical Safety Code, IEEE C2; the International Fire Code, IFC; the International Residential Code, IRC; the National Fire Code of Canada, NRC NFC; and the Fire Code, NFPA 1. Requirements for installation, with the exception of installation manuals and documents for installation provided with the system, are outside the scope of this standard.

Contact: Megan Van Heirseele, Megan.M.VanHeirseele@ul.com

Final Actions on American National Standards

The documents listed below have been approved by the ANSI Board of Standards Review or by an ANSI-Audited Designator on the date noted.

ANSI/ASTM E119-2018, Test Methods for Fire Tests of Building Construction and Materials (revision of ANSI/ASTM E119-2018): 20 November 2018

ANSI/ASTM E1321-2018, Test Method for Determining Material Ignition and Flame Spread Properties (revision of ANSI/ASTM E1321-2013): 20 November 2018

ANSI/AWS D20.1/D20.1M-2019, Specification for Fabrication of Metal Components using Additive Manufacturing (new standard): 17 December 2018

ANSI/CTA/CEDIA 863-B-2011 (R2018), Connection Color Codes for Home Theater Systems (reaffirmation of ANSI/CTA/CEDIA 863-B -2011): 17 December 2018

ANSI/CTA/CEDIA 897-2010 (R2018), F-Connector Color Coding for Home Television Systems (reaffirmation of ANSI/CTA/CEDIA 897-2010): 17 December 2018

ANSI/NACF 001-2018, Criteria of Crossbow Designs Under Conditions of Reasonable Foreseeable Use and Abuse by Users (new standard): 17 December 2018

ANSI/NAPSA PSS2018-2018, NAPSA Power Sweeping Standard 2018 (new standard): 17 December 2018

ANSI/RESNET/ICC 301-2018, Standard for the Calculation and Labeling of the Energy Performance of Dwelling and Sleeping Units using an Energy Rating Index (revision of ANSI/RESNET/ICC 301-2014): 14 December 2018

Draft IEC & ISO Documents

This section lists proposed documents that the International Electromechanical Commission (IEC) or the International Organization for Standardization (ISO) are considering for approval. *Standards Watch* readers interested in reviewing and commenting on a document should order a copy from their national representative and submit their comments through them. Comments from US citizens on IEC and ISO documents should be sent to Charles T. Zegers at czegers@ansi.org and Karen Hughes at isot@ansi.org respectively. Any prices, if shown, are for purchases through ANSI. The sort order is by due date then alphanumeric.

65/735/FDIS, IEC 62443-4-2 ED1: Security for industrial automation and control systems - Part 4-2: Technical security requirements for IACS components, 1 February 2019

ISO/DIS 20887, Sustainability in buildings and civil engineering works - Design for disassembly and adaptability - Principles, requirements and guidance, 24 February 2019, \$112.00

ISO/IEC/IEEE DIS 21840, Systems and software engineering - Guidelines for the utilization of ISO/IEC/IEEE 15288 in the context of System of Systems (SoS), 25 February 2019, \$125.00

ISO/DIS 24334, Laminate floor coverings - Determination of locking strength for mechanically assembled panels, 28 February 2019, \$40.00

ISO/DIS 22111, Bases for design of structures - General requirements, 11 March 2019, \$107.00

ISO/IEC 9594-1/DAmD1, Information technology - Open Systems Interconnection - The Directory - Part 1: Overview of concepts, models and services - Amendment 1, 11 March 2019, \$29.00

ISO/IEC 9594-2/DAmD1, Information technology - Open Systems Interconnection - The Directory - Part 2: Models - Amendment 1: Password policy support, 11 March 2019, \$46.00

ISO/IEC 9594-3/DAmD1, Information technology - Open Systems Interconnection - The Directory - Part 3: Abstract service definition - Amendment 1: Password policy support, 11 March 2019, \$33.00

ISO/IEC 9594-4/DAmD1, Information technology - Open Systems Interconnection - The Directory - Part 4: Procedures for distributed operation - Amendment 1: Password policy support, 11 March 2019, \$29.00

ISO/IEC 9594-5/DAmD1, Information technology - Open Systems Interconnection - The Directory - Part 5: Protocol specifications - Amendment 1: Password policy support, 11 March 2019, \$40.00

ISO/IEC 9594-6/DAmD1, Information technology - Open Systems Interconnection - The Directory - Part 6: Selected attribute types - Amendment 1: Password policy support, 11 March 2019, \$33.00

ISO/IEC 9594-7/DAmD1, Information technology - Open Systems Interconnection - The Directory - Part 7: Selected object classes - Amendment 1: Password policy support, 11 March 2019, \$29.00

ISO/IEC 9594-8/DAmD1, Information technology - Open Systems Interconnection - The Directory - Part 8: Public-key and attribute certificate frameworks - Amendment 1: Password policy support, 11 March 2019, \$53.00

ISO/IEC 9594-9/DAmD1, Information technology - Open Systems Interconnection - The Directory - Part 9: Replication - Amendment 1: Password policy support, 11 March 2019, \$29.00

22G/383/CD, IEC 61800-5-3 ED1: Adjustable speed electrical powerdrive systems - Part 5-3: Safety requirements for encoders -Functional, Electrical and Environmental, 15 March 2019

23/830/CDV, IEC 63172 ED1: Methodology for determining the energyefficiency class of electrical accessories, 15 March 2019

34/588/CD, IEC 63129 ED1: Determination of inrush current characteristics of lighting products, 15 March 2019

56/1825/CDV, IEC 61163-2 ED2: Reliability stress screening - Part 2: Components, 15 March 2019

121A/259/CDV, IEC 60947-4-2 ED4: Low-voltage switchgear and controlgear - Part 4-2: Contactors and motor-starters - Semiconductor motor controllers, starters and soft-starters, 15 March 2019

CIS/A/1282/CD, CISPR TR 16-4-5/AMD2 ED1: Specification for radio disturbance and immunity measuring apparatus and methods – Part 4-5: Uncertainties, statistics and limit modelling - Conditions for the use of alternative test methods, 15 March 2019

JTC1-SC25/2842/CDV, ISO/IEC 14543-3-10 ED2: Information technology - Home electronic system (HES) architecture - Part 3-10: Wireless short-packet (WSP) protocol optimised for energy harvesting - Architecture and lower layer protocols, 15 March 2019

21A/683/CDV, IEC 63115-1 ED1: Secondary cells and batteries containing alkaline or other non-acid electrolytes - Sealed nickel metal hydride rechargeable cells and modules for use in industrial applications - Part 1: Performance, 22 March 2019

22G/384/CD, IEC 61800-2 ED3: Adjustable speed electrical power drive systems - Part 2: General requirements - Rating specifications for adjustable speed a.c. power drive systems, 22 March 2019

34A/2125/CDV, IEC 62868-1 ED1: Organic light emitting diode (OLED) Light sources for general lighting - Safety - Part 1: General requirements and tests, 22 March 2019

77A/1016/CDV, IEC 61000-4-11 ED3: Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests for equipment with input current up to 16 A per phase, 22 March 2019

91/1554/CD, IEC 61188-6-1 ED1: Circuit boards and circuit board assemblies - Design and use - Part 6-1: Land pattern design - Generic requirements for land pattern on circuit boards, 22 March 2019

Recently Published IEC & ISO Documents

Listed here are documents recently approved by the IEC or ISO. Prices are if bought from ANSI.

ISO/IEC 20924:2018, Information technology - Internet of Things (IoT) - Vocabulary, \$68.00

ISO/IEC 23270:2018, Information technology – Programming languages - C#, \$232.00

ISO/IEC 19086-2:2018, Cloud computing - Service level agreement (SLA) framework - Part 2: Metric model, \$185.00

ISO/IEC 23003-2:2018, Information technology - MPEG audio technologies - Part 2: Spatial Audio Object Coding (SAOC), \$232.00

ISO/IEC/IEEE 26511:2018, Systems and software engineering - Requirements for managers of information for users of systems, software, and services, \$209.00

ISO/IEC/IEEE 26515:2018, Systems and software engineering - Developing information for users in an agile environment, \$138.00

ISO/IEC/IEEE 24748-2:2018, Systems and software engineering – Life cycle management - Part 2: Guidelines for the application of ISO/IEC/IEEE 15288 (System life cycle processes), \$209.00

ISO 30414:2018, Human resource management - Guidelines for internal and external human capital reporting, \$162.00

ISO 21401:2018, Tourism and related services – Sustainability management system for accommodation establishments - Requirements, \$162.00

ISO/TS 10303-1129:2018, Industrial automation systems and integration - Product data representation and exchange - Part 1129: Application module: External properties, \$68.00

TSP Meeting Schedule

The following meetings will be held in conjunction with the NAMM show in Anaheim, CA. The schedule sorted by day and with meeting locations is available at <http://www.esta.org/>.

Control Protocols Compliance Study Group	19:00 – 23:00	Saturday, 26 January 2019
	13:00 – 17:00	Sunday, 27 January 2019
Control Protocols E1.20 / E1.37-5 TG	14:00 – 18:00	Wednesday, 23 January 2019
Control Protocols E1.20 Task Group	19:00 – 23:00	Wednesday, 23 January 2019
Control Protocols E1.37-5 TG	14:00 – 18:00	Thursday, 24 January 2019
Control Protocols E1.37-4 Firmware Uploads TG	09:00 – 13:00	Thursday, 24 January 2019
Control Protocols NAEP TG	19:00 – 23:00	Friday, 25 January 2019
Control Protocols Next Gen TG	14:00 – 18:00	Friday, 25 January 2019
Control Protocols Working Group	08:00 – 11:00	Friday, 25 January 2019
CP/Rig E1.59 Automation Feedback TG	20:00 – 23:00	Thursday, 24 January 2019
Electrical Power Electrical Inspection TG	19:00 – 23:00	Saturday, 26 January 2019
Event Safety Fire Safety TG	09:00 – 13:00	Saturday, 26 January 2019
Event Safety Rigging Task Group	14:00 – 18:00	Wednesday, 23 January 2019
Event Safety Venue & Site Design Task Group	14:00 – 18:00	Friday, 25 January 2019
Event Safety Working Group	14:00 – 18:00	Saturday, 26 January 2019
Floors Working Group	09:00 – 13:00	Saturday, 26 January 2019
Fog & Smoke Working Group	11:30 – 14:30	Friday, 25 January 2019
Followspot Position Working Group	09:00 – 13:00	Thursday, 24 January 2019
Rigging E1.6-2 Chain Hoist DIM TG	14:00 – 18:00	Saturday, 26 January 2019
Rigging Working Group	19:00 – 23:00	Friday, 25 January 2019
Stage Machinery E1.64 TG	09:00 – 13:00	Saturday, 26 January 2019
Stage Machinery Working Group	15:00 – 18:00	Friday, 25 January 2019
Technical Standards Council	09:00 – noon	Sunday, 27 January 2019

The following meetings will be at the Hyatt Regency Louisville, in conjunction with the USITT Conference:

Floors Working Group	14:00 – 17:00	Wednesday 20 March 2019
Control Protocols Working Group	09:00 – noon	Thursday 21 March 2019
Stage Machinery Working Group	14:00 – 17:00	Thursday 21 March 2019
Stage Machinery E1.64 TG	09:00 – 13:00	Wednesday 20 March 2019
Rigging Working Group	19:00 – 22:00	Thursday 21 March 2019
Electrical Power Working Group	11:00 – 14:00	Friday 22 March 2019
Technical Standards Council	15:00 – 18:00	Friday 22 March 2019
Followspot Position Working Group	19:00 – 22:00	Friday 22 March 2019
Fog & Smoke Working Group	09:00 – 11:00	Saturday 23 March 2019
Event Safety Working Group	14:00 – 18:00	Saturday 23 March 2019

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Editors:

Karl G. Ruling, Technical Standards Manager
Entertainment Services and Technology Association
630 Ninth Avenue, Suite 609
New York, NY 10036
USA
karl.ruling@esta.org
1 212 244 1505 ext. 703
Fax 1 212 244 1502

Richard Nix, Asst. Technical Standards Manager
Entertainment Services and Technology Association
630 Ninth Avenue, Suite 609
New York, NY 10036
USA
richard.nix@esta.org
1 212 244 1505 ext. 649
Fax 1 212 244 1502