LOCATING CODES, STANDARDS AND AECO CERTIFICATIONS

By: Kevin L. Brinkman, PE - NEII® Code and Safety Director

Locating codes and standards can be frustrating and time consuming. However, in recent years it has become increasing easier to locate and purchase documents using the internet. Web addresses are given for all the sources of information in this article. Most codes and standards are now available electronically (CD ROM or on the Web) and in a printed format. Purchasers should inquire as to the formats available when ordering. Mandatory codes and standards can usually be obtained from the authority having jurisdiction (AHJ) or they can provide you with procurement information. Many AHJ’s also post their codes on the web.

A comprehensive one-of-a-kind code database, CodeFinder, is now available to NEII® Regular Members and NEII® Individual Members. The CodeFinder database provides detailed information on the codes adopted in the 50 states and Canadian provinces and territories, including contact information for the enforcing authorities. CodeFinder includes details on new, performance and existing elevator, electrical, accessibility, building, and life safety codes, standards and regulations. One of the best features of CodeFinder is the fact that users are able to see any modifications that are made to the model codes by the local jurisdiction.

NEII® CodeFinder
www.neii.org/

UNITED STATES CODES AND STANDARDS

Building Transportation Codes and Standards

Consensus codes are generally written as mandatory, while standards are written as recommendations. They are referred to as model codes and standards. Model codes and standards are not enforceable unless adopted by an AHJ. In the United States building transportation industry, the most widely used model codes and standards documents are the Safety Codes for Elevators and Escalators, ASME A17.1/CSA B44; Performance-Based Safety Code for Elevators and Escalators, ASME A17.7/CSA B44.7; Guide for the Inspection of Elevators, Escalators and Moving Walks, ASME A17.2; Safety Code for Existing Elevators and Escalators, ASME A17.3; Standard for Elevator and Escalator Electrical Equipment, CSA-B44.1/ASME A17.5; Standard for Elevator Suspension, Compensation, and Governor Systems, ASME A17.6; Guide for Emergency Personnel, ASME A17.4; Standard for the Qualifications of Elevator Personnel, ASME QEI - 1; and Safety Standard for Platform Lifts and Stairway Chairlifts, ASME A18.1. Additionally, ASME publishes the ASME A17.1/CSA B44 Handbook by Edward A. Donoghue, CPCA, which clarifies and explains the code requirements. The ASME A17.1 and CSA B44 Codes were harmonized in 2000 and published as one
document the Safety Codes for Elevators and Escalators, ASME A17.1/CSA B44, starting with the 2007 edition. The latest edition of ASME A17.1/CSA B44 in print as of the time this article was written is the 2013 edition; however, the 2016 edition is expected to be published during the fourth quarter of 2016. The harmonized United States and Canadian Performance-Based Safety Codes for Elevators and Escalators, ASME A17.7/CSA B44.7 was published in 2007. All of these documents can be obtained from:

American Society of Mechanical Engineers (ASME)
Order Department
150 Clove Rd
Little Falls, NJ 07434-2100
800-THE-ASME
201-882-1167
www.asme.org/

ASME documents are also available from Elevator World, whose address is listed later in this article.

The ASME A17.1/CSA B44 and ASME A17.7/CSA B44.7 codes contain many references to other codes and standards. To help the users of the ASME A17.1/CSA B44 Codes, procurement information for referenced codes and standards, is contained in Part 9 of that document. Procurement information for referenced codes and standards in ASME A17.7/CSA B44.7 can be found in Part 5 of that document. Those documents identify 90% of the codes and standards, which will normally be encountered by the North American building transportation industry. Additional codes and standards reference material and ordering information can also be found in Part 9 of the ASME A17.1/CSA B44 Handbook.

Additional Codes and Standards

How to locate the remaining 10%? Among the best-known organization is the American National Standards Institute (ANSI). ANSI approved documents are usually identified as an American National Standard or with the ANSI initials or logo.

**Request for electronic delivery of standards** – either individual sale via ANSI’s Electronic Standards Store or site license access via networking agreements should be directed to:

American National Standards Institute (ANSI)
Customer Service Department
25 West 43rd Street
Fourth Floor
New York, NY 10036
212- 642-4980
http://webstore.ansi.org/
email: info@ansi.org
Request for printed copies of standards – should be directed to:

IHS Standards Store
15 Inverness Way East
Englewood, CO 80112-2776
800-854-7179
http://global.ihs.com/

Other major standard writing organizations, in addition to those already mentioned, are:

American Society for Testing and Material (ASTM)
100 Barr Harbor Drive, PO Box C700
West Conshohocken, PA 19428-2959
877-909-ASTM
www.astm.org/

National Fire Protection Association (NFPA)
1 Batterymarch Park
Quincy, MA 02269
800-344-3555 or 617-770-3000
www.nfpa.org/

Underwriters Laboratories Inc. (UL)
333 Pfingsten Road
Northbrook, IL 60062
877-UL-HELPS
www.ul.com/

UL documents are available for purchase from:

Comm 2000
151 Eastern Avenue
Bensenville, IL 60106
888-853-3503
www.comm-2000.com/

Accessibility Standards

The Americans with Disabilities Act (ADA) standards apply to facilities in the private sector (places of public accommodation and commercial facilities) and to state and local government facilities. Standards issued by the US Department of Justice (DOJ) apply to all ADA facilities except transportation facilities, which are subject to standards maintained by the US Department
of Transportation (DOT). On September 15, 2010, DOJ published in the Federal Register updated ADA regulations and adopted its 2010 ADA Standards for Accessible Design that were effective in March 2012. It concurrently published a separate Guidance on the 2010 ADA Standards for Accessible Design that explains the rationale for many of the regulations. DOT updated its ADA standards in 2006 which apply to bus stops, rail stations, airports, and other transportation facilities.

### ADA Standards

<table>
<thead>
<tr>
<th>Facility</th>
<th>Standards to Follow</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Place of Public Accommodation and Commercial Facilities (private sector)</strong></td>
<td><strong>Compliance Dates for New Construction and Alterations</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Applicable Standards</strong></td>
</tr>
<tr>
<td>On or after January 26, 1993 and before September 15, 2010</td>
<td>1991 Standards</td>
</tr>
<tr>
<td>On or after September 15, 2010 and before March 15, 2012</td>
<td>1991 Standards or 2010 Standards</td>
</tr>
<tr>
<td>On or after March 15, 2012</td>
<td>2010 Standards</td>
</tr>
</tbody>
</table>

**State and Local Government Facilities (except transportation facilities)**

Until 2012, DOJ's title II regulation (28 CFR Part 35) allowed use of the original (1991) ADA standards (with some exceptions) or the Uniform Federal Accessibility Standards (UFAS). DOJ's updated title II regulation implements the 2010 standards which became mandatory March 15, 2012 and replaced the option to use the 1991 ADA standards or UFAS. Before that date, the 2010 standards were permitted to be used in lieu of the original ADA standards or UFAS.

<table>
<thead>
<tr>
<th><strong>Compliance Dates for New Construction and Alterations</strong></th>
<th><strong>Applicable Standards</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Before September 15, 2010</td>
<td>1991 Standards or UFAS</td>
</tr>
<tr>
<td>On or after September 15, 2010 and before March 15, 2012</td>
<td>1991 Standards, UFAS, or 2010 Standards</td>
</tr>
<tr>
<td>On or after March 15, 2012</td>
<td>2010 Standards</td>
</tr>
</tbody>
</table>

**Transportation Facilities**

DOT’s ADA Standards for Transportation Facilities (2006) These standards took effect November 29, 2006, as indicated in a notice published by DOT

### ABA Standards

The Architectural Barriers Act (ABA) applies to federally funded facilities. The US General Services Administration (GSA) updated its ABA standards which apply to most facilities...
covered by the ABA. Similar standards have been adopted by the United States Postal Service (USPS) for postal facilities and by the US Department of Defense (DOD) for military facilities. All these agencies have adopt the 2004 ABA Accessibility Guidelines. The US Department of Housing and Urban Development (HUD) also is responsible for updating its ABA standards, and is the only federal agency that still references the 1984 Uniform Federal Accessibility Standard (UFAS) for non-military housing subject to the ABA.

<table>
<thead>
<tr>
<th>Facility</th>
<th>Standards to Follow</th>
</tr>
</thead>
</table>
| Federal Facilities (other than postal, housing, and military facilities) | GSA’s ABA Accessibility Standard (updated)  
Effective May 8, 2006 (February 6, 2007 for leased facilities), as indicated in GSA’s Facility Management Regulation (subpart c) |
| Postal Facilities | USPS’s ABA Accessibility Standard (updated, also known as the RE-4 Standards)  
Effective October 1, 2005, as indicated in a notice issued by USPS |
| Military Facilities | DOD’s ABA Accessibility Standard (updated)  
Effective October 31, 2008, as indicated in a DOD policy memorandum |
| Housing            | UFAS  
HUD to replace UFAS with updated ABA standards |

The ADA and ABA standards are available online from:

United States Access Board  
1331 F Street, N. W. Suite 1000  
Washington, DC 20004-1111  
800-872-2253  
202-272-0080  
[www.access-board.gov](http://www.access-board.gov)  
[www.access-board.gov/guidelines-and-standards/buildings-and-sites (ADA and ABA Standards)]

The following links provide effective dates and other important information regarding other ADA and ABA Standards setting agency’s regulations and memoranda adopting the new Standards:
ABA

ADA
DOJ Standards  https://www.ada.gov/2010_regs.htm

ADA/ABA Technical Assistance
Technical assistance on the ADA and ABA standards is available from the Access Board:

  phone:  800-872-2253 (voice) or 800-993-2822 (TTY)
  e-mail:  ta@access-board.gov
  fax:  202-272-0081

The Federal ADA and ABA standards are not enforced at the local level. Local building codes usually require building transportation to comply with the American National Standard for Accessible and Usable Buildings and Facilities, ICC/ANSI A117.1 or a local code that mimics the Federal ADA standard. The latest edition of ICC/ANSI A117.1 is 2009. It is available from the International Code Council (ICC). Procurement information for ICC can be found later in this article.

A comprehensive analysis of the accessibility regulations and where they apply is contained in "ADA and Building Transportation, A Handbook on Accessibility Regulations for Elevators, Platform Lifts and Escalators" by Edward A. Donoghue, CPCA and Brian D. Black. The fourth edition of this handbook is available from:

  Elevator World, Inc.
  P. O. Box 6507
  Mobile, AL 36660
  800-730-5093
  251-479-4514
  http://www.elevatorbooks.com/

Building Codes

Elevator installations must also comply with the building code. Building codes in the United
States up until 2000 had generally been based on one of the following legacy model building codes:

- National Building Code (NBC)
- Standard Building Code (SBC)
- Uniform Building Code (UBC)

In 2000 the three model building codes published the first International Building Code (IBC), as the successor document to the NBC, SBC, and UBC. The current edition of the IBC is the 2015. The IBC, NBC, SBC, and UBC are available from:

International Code Council (ICC)
4051 Flossmoor Rd.
Country Club Hill, IL 60478
800-786-4452
888-ICC-SAFE – For Electronic Products
www.iccsafe.org/

In late 2002 NFPA published the first Building Construction and Safety Code™, NFPA 5000. The current edition of NFPA 5000 is the 2015 edition. This code is available from:

National Fire Protection Association (NFPA)
1 Batterymarch Park
Quincy, MA 02269
800-344-3555
617-770-3000
www.nfpa.org/

ANSI IBR Portal

This website provides free online access to read-only versions of voluntary consensus standards that have been incorporated by reference (IBR) into U.S. federal laws and regulations.

In response to input from Administrative Conference of the United States (ACUS) and the National Institute of Standards and Technology (NIST), as well as hundreds of standard development organizations (SDOs) and other partners’ input from both the public and private sectors, ANSI developed the IBR Portal with the goal of providing a single solution to ensure reasonable access to incorporated standards without endangering the viability of the standards development process as a whole.

All of the standards on the IBR Portal are available for viewing exclusively as read-only files. In order to safeguard the intellectual property of the participating standards developers, the portal contains a number of built-in security features that prevent viewers from printing, downloading, or transferring any of the posted standards; screenshots are also disabled and all documents will
contain an identifying watermark.

Browse the standards, visit the FAQ page, and see for yourself the value the portal can provide in addressing the IBR issue.

ANSI IBR Portal
http://ibr.ansi.org/

National Standards Systems Network (NSSN)

NSSN, A national resource for global standards is a search engine that provides users with standards-related information from a wide range of developers, including organizations accredited by the American National Standards Institute (ANSI), other US private sector standards bodies, government agencies and international organizations.

Building on the strength of these partnerships, NSSN:

- has become the world’s most comprehensive search engine for standards with more than 300,000 records;
- is a delivery mechanism for subscribers to download licensed content for multiple users;
- provides easy links to obtain standards and related technical documents;
- offers multiple search options and automated e-mail functions;
- provides technical contact information for standards-setting organizations; and
- is a tool for standards users, project managers, researchers, engineers and procurement staff.

National Standards System Network
www.nssn.org/

Other Resources

The NEII® Building Transportation Standards and Guidelines, NEII® - 1 is an invaluable reference for dimensional, performance, electrical, application, design, and evaluation of building transportation systems. NEII® - 1 contains the North American industry standards and guidelines used by architects, consultants, manufacturers, contractors, developers, building owners/operators and code officials. NEII® - 1 is available at no cost at:

National Elevator Industry Inc.

The National Institute of Standards and Technology (NIST) formally the National Bureau of Standards (NBS) has an extensive collection of codes and standards consisting of voluntary standards, state purchasing standards, United States government and foreign standards. The
NIST Standards and Information Group can be contacted at:

National Institute of Standards and Technology
Research Support Services Building
100 Bureau Drive, MS 2100
Gaithersburg, MD 20899-2150
301-975-4000
http://gsi.nist.gov/global/index.cfm

A NIST search will result in a list of all applicable standards, the name and address of the issuing organization, the standard number, title, price if known, and the year of publication of the latest revision. There is no charge for an NIST search. They will not supply you with a copy of the code or standard.

This website provides business, other organizations and interested citizens with a direct portal to sources of information on the thousands of specifications that government agencies reference in regulations or use to guide their purchasing decisions. From basic tutorials to a searchable database of standards referenced in federal regulations, the web site offers a broad perspective on the government’s complex standards landscape. Using “Standards.Gov” visitors can quickly hone in on their particular interests, be it standards incorporated into building requirements, specifications for equipment, safety guidelines for worker protection, or other topics. Links to standards-related websites maintained by multiple federal departments and independent agencies are featured on the site.

Standards.Gov
http://standards.gov

CANADIAN CODES AND STANDARDS

The CSA B44 and ASME A17.1 Codes were harmonized in 2000 and since 2007 published as the Safety Codes for Elevators and Escalators, ASME A17.1/CSA B44. The Canadian and United States Performance-Based Safety Codes for Elevators and Escalators, ASME A17.7/CSA B44.7 is also a harmonized code. Other documents of interest to the Canadian elevator industry include Lifts for Persons with Physical Disabilities; CSA-B355 and Canadian Electrical Code, CSA C22.1. The Standard for Private Residences Lifts for Persons with Physical Disabilities; CSA-B613 was incorporated into CSA-B355 beginning with the 2015 edition. These documents as well as CSA-B44.1/ASME A17.5 can be purchased from:

Canadian Standards Association (CSA)
178 Rexdale Blvd.
Toronto, Ontario
Canada M9W 1R3
800-463-6727
Another important Canadian document is the National Building Code of Canada (NBCC) that can be purchased from:

National Research Council Canada (NRCC)
1200 Montreal Road, M-58
Ottawa, ON, Canada K1A 0R6
877-NRC-CNRC
613-993-9101

ACCREDITED ELEVATOR/ESCALATOR CERTIFICATION ORGANIZATION (AECO)

The ASME A17.7/CSA B44.7 Code requires all new technologies and materials to be approved by Accredited Elevator/Escalator Certification Organization (AECO). An AECO is an independent organization concerned with product safety evaluation which evaluates and awards certificates of conformance with the ASME A17.7/CSA B44.7 Code based on the manufacturers' documented design, risk assessments, and Code Compliance Document. AECOs must be accredited by the American National Standards Institute (ANSI) or the Standards Council of Canada (SCC) and certified as compliant with the ISO Guide 65 program. AECOs are required to maintain a website where information on certification will be maintained and available to the public. The following organizations have been accredited as AECOs:

Liftinstituut
www.liftinstituut.com

Underwriters Laboratories (UL)
www.ul.com

INTERNATIONAL CODES AND STANDARDS

As the world becomes smaller and smaller international standards will play an important role. ISO 9000, as an example, is a standard series on quality system registration and related issues that has become very popular. The American National Standards Institute (ANSI) is the United States agent for all standards issued by the International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC). The United States source for ISO, IEC standards and standards published by foreign governments and private entities is:

- ANSI for electronic delivery; and
- IHS Standards Store for printed documents.

Procurement information for these sources can be found earlier in this article. The ANSI
Standards Portal website provides answers to the critical standards, conformance, market access, and trade-related questions that companies require to succeed in the U.S. and internationally.

ANSI Standards Portal
http://www.standardsportal.org/

In Canada, ISO and IEC documents can be purchased from:

Standards Council of Canada
55 Metcalfe St. Suite 600
Ottawa ON K1P 6L5
Canada
613-238-3222
http://www.scc.ca/en

In other countries you should be able to purchase ISO and IEC Standards from the countries National Standards Organizations. If not, contact ISO and IEC in Geneva, Switzerland.

International Organization for Standardization (ISO)
ISO Central Secretariat
BIBC 11
CP 401
1241 Vernier Geneva
Switzerland
www.iso.org/iso/

The ISO and IEC can also be found on the web at a joint information center. The website also features the IEC and ISO standards catalogues, standards under development, as well as a dedicated enquiry service. This website allows you to monitor the development and make the greater use of IEC and ISO standards. Other pages include “Reference Publications” which list publications used in the elaboration and/or adoption of International Standards.

ISO/IEC Information Center
www.standardsinfo.net

The Western European Common Market Standards for elevators and escalators (CEN) can be purchased in the United States from ANSI or IHS Standards Store or:

European Committee for Standardization
http://www.cenorm.be.

The ISO, IEC, CEN and CAN standards are available in French and English. Be sure to specify at time of ordering.
Want to know about pending changes in technical regulations in Brazil, the United Kingdom, Korea or any of the 148 nations that are members of the World Trade Organization (WTO)? Then sign up for the “Notify U.S.” service maintained by the National Institute of Standards and Technology. Notify U.S. is the successor to “Export Alert!” the e-mail notification system previously offered by NIST and the International Trade Administrations. This new web based service offers a fast, comprehensive, global perspective on proposed technical regulations and conformity assessment procedures that might influence US access to export markets. Notify U.S. provides users with access to notifications and full texts of regulations issued by the WTO members. In addition, users can monitor proposed changes across chosen countries and 41 fields of industrial or technical activities, or they can select a subset of fields. The new, free service is operated by NIST’s National Center for Standards and Certification Information. To learn more and to sign up, go to:

Notify U.S.
www.nist.gov/notifyus

OUT OF PRINT CODES AND STANDARDS

Have the need for a prior edition of the Safety Code for Elevators and Escalators or other out of print documents? Typically the original publisher does not stock out of print documents, though you may want to confirm that with the original publisher. An extensive collection of both current and out of print codes and standards is maintained and available for purchase from:

IHS Standards Store
15 Inverness Way East
Englewood, CO 80112-2776
800-624-3974
www.global.ihs.com/

and:

Document Center Inc.
121 Industrial Road, Suite 8
Belmont, CA 94002
650-591-7600
www.document-center.com/

These firms also act as the sales agent for many of the organizations mentioned in this article.