Instructor Guide









213: Elevator: Principles of Operation

Module 6: Introduction to Code Specifications



Elevator – Code Specifications Instructor's Guide



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Instructor's Guide

Icons Used In This Guide



REVIEW slides



INDIVIDUAL ACTIVITY



ASK



WRITE



CLASSROOM ACTIVITY



Multimedia



SMALL GROUP ACTIVITY



REFER participants to

Agenda

		
Topic #	Topic Title	Duration
1	Overview	15 minutes
2	Code Compliance & Organizations	35 minutes
3	Using and Applying Code	60 minutes
4	Access and ADA Requirements	10 Minutes
5	Summary	10 Minutes
	Total Time:	130 Minutes

Instructor's Guide



Purpose The purpose of this module is to:

 Provide an overview on what code organizations exist which mandate regulations for transit elevators and to introduce the participant to these organizations' publications.

Objectives

At the end of this lesson, the transit elevator/escalator trainee will be able to:

- Discuss applicable and related codes in ASME A17.1-2010
- Apply standards used in the ASME A17.1-2010 code compliance manual
- Access and review ADA compliance list for elevator doors



Materials Mandatory

Make sure you have the following

- PowerPoint Presentation
- Coursebook
- Quizzes
- Pencils

Optional

You may also want the following for optional activities:

- Chalk board with chalk, large paper with marker, etc.
- Internet connection
- Lab, simulator or out of service elevator
- Code Data Plate
- Safety Handbook
- National Electrical Codes
- ASME A17.1 through ASME 17.3
- NFPA 130
- International Building Code
- Any other Applicable Code Books

DO

Instructor's Guide
Module Length: 180 minutes

Time remaining: 180 minutes

This section: 15 minutes

Section start time:

Section End Time: ____

Materials Needed

REVIEW introduction slides Instructor's Notes

IIII Transit Elevator/Escalator Consortium

In your own words:

Welcome to the module on code specifications.

Advance.

Most of you have probably heard about this kind of code. This is called Morse Code. Can anyone describe what Morse Code is? Discuss participant responses.

Morse code is a system of symbols used to represent a certain meaning.

SAY

Advance.

Another type of code, according to merriamwebster's dictionary is a system of principles or rules. And this is the kind of code we will talk about today.

Advance.

✓ PPT slides 1, 2





Instructor's Guide

Module Length: 180 minutes

Time remaining: 180 minutes

This section: 15 minutes

Section start time:



Materials Needed DO SAY In your own words: ✓ PPT slide 3 An elevator code is a system of regulations **REVIEW** module objectives pertaining to the design, manufacture, installation and maintenance of elevators. Apply standards used in the ASME 17.1A co. compliance manual The general purpose of codes is to provide · Access and review ADA compliance list for el for public safety. Today we will...))))) Transit Elevator/Escalator Consortium Advance for each objective. Instructor's Notes Discuss applicable and related codes in **ASME 17.1A** Apply standards used in the ASME 17.1A code compliance manual Access and review ADA compliance list for elevator doors Advance.

Instructor's Guide

Module Length: 180 minutes Time remaining: 180 minutes

This section: 15 minutes

Section start time:

Section End Time:

Materials Needed DO SAY In your own words: Lets take a look at some of the key words we **REVIEW** key terms will be defining as move through this module. Authority having Jurisdiction · ASME · ANSI Authority having Jurisdiction · Code data plate **ASME ANSI** Code data plate **Instructor's Notes** and QEI Advance.

✓ PPT slide 4



Instructor's Guide

Module Length: 180 minutes Time remaining: 180 minutes

This section: 15 minutes

Section start time:



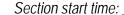
Materials Needed DO SAY In your own words: ✓ PPT slide 5 **ASK** participants what they Thinking back to course 200, what are remember about electric some things you remember or already ✓ Chalk board/chalk or know about codes and code traction elevators paper/marker specifications? **CLASSROOM ACTIVITY** [Discuss participant responses, if Thinking back to course 200 or any previous elevator experiences so far, what are some things you may remember or may already know list them on a chalk board or similar.] Instructor's Notes Advance.)))) Transit Elevator/Escalator Consortiu

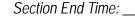
DO

Instructor's Guide

Module Length: 180 minutes Time remaining: 165 minutes

This section: 45 minutes





Materials Needed

REVIEW slide

Instructor's Notes

In your own words:

The most widely recognized and used code is ASME A -17.1 sponsored by the National Bureau of Standards, The American Institute of Architects, The American Society of Mechanical Engineers (ASME), and published by ASME. It has been adopted by many states and municipalities. Some states and municipalities have written their own codes, most of which are based on the ANSI A-17.1. Advance.

SAY

✓ PPT slide 6



Instructor's Guide

Module Length: 180 minutes Time remaining: 165 minutes

This section: 45 minutes

Section start time:



DO SAY **Materials Needed** In your own words: ✓ PPT slide 7 **REVIEW** slide Municipal and state building codes invoke most, or all, of the following standards developed by the following: **Advance.** International Building Code (IBC) **Advance.** National Fire Protection Association which publishes the National Electric Code (NFPA 70) Instructor's Notes Advance. National Fire Protection Association which publishes Life Safety Code (NFPA 101) **Advance.** American Society of Mechanical Engineers which publishes Safety Code for Elevators and Escalators (ASME A17.1) **Advance.** American Society of Mechanical Engineers which publishes Safety Code for Existing Elevators and Escalators (ASME A17.3)

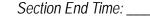
Advance.

Instructor's Guide



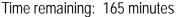
This section: 45 minutes





DO SAY **Materials Needed** In your own words: ✓ PPT slide 8 **REVIEW** slide In addition to these building codes, transit systems are also required to comply with the Overview Standard for Fixed Guideway Transit and FPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems Passenger Rail Systems (NFPA 130). tional Fire Protection Associatio Each jurisdiction may even amend certain portions of these codes as deemed Transit Elevator/Escalator Consortiur necessary. Those amendments can then be Instructor's Notes adopted into law and generally are found in the jurisdiction's building codes. It must be noted that codes do not "approve", "certify", "rate," or "endorse" any item, construction, proprietary device, or activity. The codes state the standard. Advance.

Instructor's Guide Module Length: 180 minutes



This section: 45 minutes



DO SAY **Materials Needed** In your own words: ✓ PPT slide 10 **REVIEW** slide How does the elevator technician know which code to use and when? The answer is found Code Compliance and Organizations on the elevator's code data plate. Code Data Plate · For those performing inspections and tests The code data plate is a **Advance** permanent · Contains code and edition in effect at time of · Contains date of installation plate and intended **Advance** for those · As owner, the transit agency must Update with any major repairs or alterations · Locations include controller, or main disconnect switch performing inspections and tests. *Advance* It and top of elevator cab crosshead. Transit Elevator/Escalator Consortium contains code and edition in effect at time of Instructor's Notes installation and also **Advance** contains date of installation. **Advance** As owner, the transit agency must Update with any major repairs or alterations. **Advance** Locations or places you may find the data plate include the controller or main disconnect switch and top of elevator cab crosshead. Advance.

Instructor's Guide

Module Length: 180 minutes Time remaining: 165 minutes

This section: 45 minutes

Section start time:

Section End Time:

Materials Needed

DO **REVIEW** slides Instructor's Notes

In your own words:

The following table lists the locations for purchasing codes and standards as well as how often the organization revises and publishes their codes:

SAY

[Read and discuss slide.] Advance.

[Read and discuss slide.] Advance.

[Read and discuss slide.] Advance.

✓ PPT slides 11, 12, 13





	ce and Organization organizations
Organization	Revision frequency
nternational Code Council 203 Leesturg Pike juite 600 alls Church, VA 22041 elephone: (703) 931-4533 www.icosafe.org	Revised and published everythree years.

Instructor's Guide



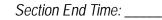
Materials Needed DO SAY In your own words: ✓ PPT slide 14 **ASK** Lest see what we know so far: Code Compliance and Organizations ASME is the acronym for which organization? 1. ASME is the acronym for which organization? a. American Society of Machinists and Engineers American Society of Machinists and a. American School for Mechanical Engineers c. American Society of Mechanical Engineers d. American Society of Manufacturing Engineers **Engineers** American School for Mechanical h. Transit Elevator/Escalator Consortium **Engineers** Instructor's Notes American Society of Mechanical C. **Engineers** d. American Society of Manufacturing **Engineers** Call on participants for answers. Advance for answer. Answer: c. Advance.

Instructor's Guide

Module Length: 180 minutes Time remaining: 165 minutes

This section: 45 minutes

Section start time:

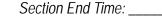


DO	SAY	Materials Needed
ASK Instructor's Notes	In your own words: The code data plate can be found on a. the controller b. the main disconnect switch c. top of elevator cab crosshead d. all of the above Call on participants for answers. Advance for answer. Answer: d. Advance.	Materials Needed ✓ PPT slide 15 Introduction to Code Specifications Code Compliance and Organizations Knowledge Check 2. The code data plate can be found on a. the controller b. the man discorned switch c. top of elevator cab crosshead d. all of the above Answer: d

Instructor's Guide

Module Length: 180 minutes Time remaining: 165 minutes This section: 45 minutes

Section start time:

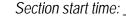


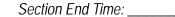
DO SAY **Materials Needed** In your own words: ✓ PPT slides 16, 17 **REVIEW** slides The next objective looks at how to apply standards used in ASME 17.1a code Using and Applying Codes compliance manual. Objective: Apply standards used in the ASME 17.1A Advance. According to the Guide for Inspection for Transit Elevator/Escalator Consortiu Elevator (ASME A17.2), periodic inspection of Instructor's Notes elevators is recommended and includes the Using and Applying Codes inside of Guide for Inspection for Elevator (ASME A17.2): Recommends periodic inspection of elevators including Advance for each area. · inside of cab · machine room · top of car cab, the machine room, the top of the car, · outside of hoistway · fire service outside of the hoistway, in the pit, and fire)))) Transit Elevator/Escalator Consortiur service. Advance.

Instructor's Guide

Module Length: 180 minutes Time remaining: 165 minutes

This section: 45 minutes





Materials Needed

DO SAY In your own words: **REVIEW** slide During inspection, *Advance* the inspector's role is to witness the tests required to verify code compliance and report the results to the jurisdictional authority. On the other hand **Advance** The owner or operator of the equipment is required to provide technicians capable of performing the code-mandated Instructor's Notes tests safely. The tools and equipment necessary to conduct the tests must also be furnished by the owner or operator. Safety is paramount while conducting tests. Advance.

✓ PPT slide 18

	Using and Applying Codes	
	Inspection	
In	spector's Role:	
	witness tests	
	verify code compliance	
•	report results to jurisdictional authority	
Q	wner or Operator's Role:	
	provide technicians capable of performing tests	
	provide tools and equipment for tests	
	ensure a safe test	

Instructor's Guide

Time remaining: 165 minutes

This section: 45 minutes

Section start time:

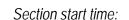
Section End Time:

Module Length: 180 minutes **Materials Needed** DO SAY In your own words: ✓ PPT slide 19 **REVIEW** slide In addition to standard mechanic's tools, the following tools and materials are Using and Applying Codes recommended for periodic tests: Barricades, Lock Out Equipment, Keys, Wiring Diagrams, · Lock Out Equipment Tachometer Test Procedures, Come-Along, Advance · Wiring Diagrams Multimeter Test Procedures · Canned Smoke Come-Along Dynamometer, Torque Wrench, Tachometer, Transit Elevator/Escalator Consortium Multimeter, and Canned Smoke. Instructor's Notes Advance.

Instructor's Guide



This section: 45 minutes



Section End Time:

DO SAY **Materials Needed** In your own words: ✓ PPT slide 20 **REVIEW** slide **Advance** Some jurisdictions require that inspectors be certified by an accredited Using and Applying Codes organization as a Qualified Elevator Inspector · some jurisdictions require inspectors be certified by (QEI). An elevator mechanic obtains QEI accredited organization like Qualified Elevator · obtained through work experience and a written tescertification is **Advance** obtained after · must be renewed yearly · must take continuing education meeting work experience requirements and Transit Elevator/Escalator Consortium passing a written test. Advance The Instructor's Notes certification must be renewed on a yearly basis and **Advance** inspectors must take continuing education to stay current with changes in the elevator industry. It is a nationally recognized certification. Advance.

Instructor's Guide



This section: 45 minutes

Section start time:

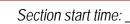


DO SAY **Materials Needed** In your own words: ✓ PPT slide 21 **REVIEW** slide For code books, The technician needs to be able to identify the location of the transit Using and Applying Codes agency's code manuals and should be able to Safety Handbook use them when necessary. The maintenance · National Electrical Codes ASME A17.1 through ASME 17.3 technician should know how to use and get · focal codes Technicians must communicate to supervisors for more information specific to their transit agency information from the Safety Handbook, the Transit Elevator/Escalator Consortium National Electrical Codes, ASME A17.1 Instructor's Notes through ASME A17.3, and local codes. The technician should communicate with his or her supervisor for more information that is specific to the transit agency. [Discuss the location of your transit authority's location of these books.] Advance.

Instructor's Guide Module Length: 180 minutes

Time remaining: 165 minutes

This section: 45 minutes



Section End Time:

DO	SAY	Materials Needed
Instructor's Notes	In your own words: [Quickly review the following:] There are several code books and handbooks that provide resources for safety information which elevator technicians need to use while inspecting, testing, and working on elevators. ASME A17.1/CSA B44 is the Safety Code for Elevators and Escalators. Canadian Standards Association ASME A17.2 is the Guide for Inspection of Elevators, Escalators, and Moving Walks ASME A17.3 is the Safety Code for Existing Elevators and Escalators ASME A17.4 is the Guide for Emergency Personnel (including Evacuation Procedures and Firefighters' Service Operating Procedures) Advance.	✓ PPT slide 22 Using and Applying Codes Common Code Books - ASME AT7.1/CSA B44 is the Safety Code for Elevators and Escalators. Canadian Standards. Association - ASME AT7.2 is the Guide for Inspection of Elevators, Escalators, and Moving Walks - ASME AT7.3 is the Safety Code for Existing Elevators and Escalators - ASME AT7.4 is the Guide for Emergency Personnel (including Execution Procedures and Firefighters' Service Operating Procedures))))))) Transit Elevator/Escalator Consortium 27

Instructor's Guide

Module Length: 180 minutes Time remaining: 165 minutes This section: 45 minutes

Section start time:

Section End Time:

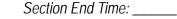
DO	SAY	Materials Needed
Instructor's Notes	In your own words: ASME A17.5/CSA B44.1 ASME A17.6 ASME A17.7 ASME A18.1 ICC/ANSI – 117.1 NEC IBC International Electrical Code Advance. And Life Safety Code (NFPA 101) Standard for Fixed Guideway Transit and Passenger Rail Systems (NFPA 130) Elevator Industry Field Employees' Safety Handbook. More information about each of these organizations can be found in your coursebook. Advance.	Introduction to Code Specifications Using and Applying Codes Common Code Books - ASME A17.5CSA B44.1 - ASME A17.7 - ASME A17.7 - NEC - IBC - International Electrical Code)))) Transit Elevator / Escalator Consortium Introduction to Code Specifications Using and Applying Codes Common Code Books - Life Safety Code (NFPA 101) - Standard for Fixed Guideway Transit and Passenger Rail Systems (NFPA 130) - Elevator Industry Field Employees' Safety Handbook 1)) Transit Elevator / Escalator Consortium 22

Instructor's Guide
Module Length: 180 minutes

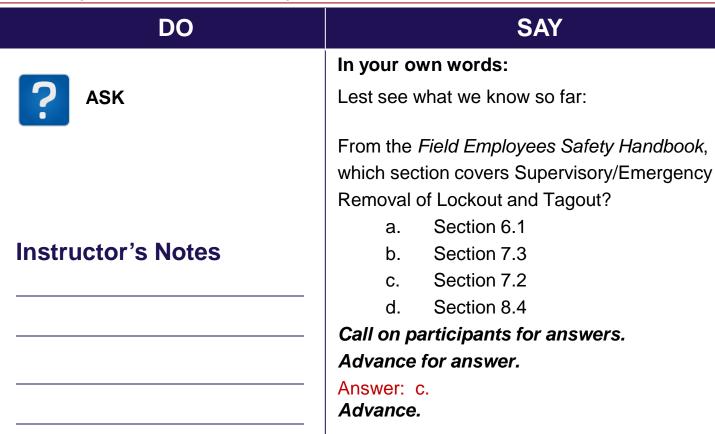
Time remaining: 165 minutes

This section: 45 minutes

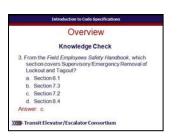
Section start time:



Materials Needed



✓ PPT slide 25

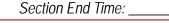


Instructor's Guide



This section: 45 minutes

Section start time:



DO SAY **Materials Needed** In your own words: ✓ PPT slide 26 **REVIEW** slide To use the code book, f find out which is the latest code year your transit property is Using and Applying Codes Using the Code Book currently following and check the scope to see . Determine scope of the code book what the code book applies to. Check to see Check for effective date code was put in effect Check table of contents or index - Table of Contents: part, section, major topic effective date including the year and date, the and page number Index: part, section, requirement, table, figure code was put in effect. Check the table of Transit Elevator/Escalator Consortius contents or the index to see what part, Instructor's Notes section, or subsection the equipment was covered in. The table of contents will give the part, section, major topic and page number. The index will refer to the part, section, requirement, table, figure, and appendix. The index covers parts that are more individual. It does not state the page. The code books use a numerical system which is in logical sequence with standards, or guideline procedures, inspection techniques, and cautionary notes. Advance.

Instructor's Guide

Module Length: 180 minutes Time remaining: 165 minutes

DO

This section: 45 minutes

Section start time:

Section End Time:

Materials Needed

CLASSROOM ACTIVTY



REVIEW slides

Instructor's Notes

In your own words:

[Instructional Strategy: Participants should open a code book and look for the various sections of the code book as per slide 24.1 Advance.

SAY

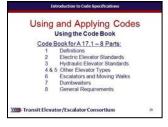
The Code Book for A 17.1 has 8 parts:

- **Definitions**
- Electric Elevator Standards
- Hydraulic Elevator Standards
- 4 & 5 Other Elevator Types
- **Escalators and Moving Walks**
- **Dumbwaiters**
- **General Requirements**

Advance.

✓ PPT slides 27, 28





Instructor's Guide

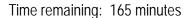
Module Length: 180 minutes Time remaining: 165 minutes This section: 45 minutes

Section start time:

Section End Time:

SAY	Materials Needed
n your own words: The Code Book for A 17.2 has 10 parts: 1	VPPT slide 29 Istroductive to Code Specificatives Using and Applying Codes Using the Code Book Code Book for A 17 ≥ − 10 Parts: 1 Inside the Elevator Car 2 Machine Room 3 Top of the Elevator Car 4 Outside the Hoistway 5 PR Service 7 Escalator - Internal 8 Escalator - Internal 9 Moving Walk - External 10 Moving Walk - Internal 11 Moving Walk - Internal 11 Moving Walk - Internal 12 Moving Walk - Internal 13 Moving Walk - Internal 14 Moving Walk - Internal 15 Moving Walk - Internal 16 Moving Walk - Internal 17 Moving Walk - Internal 18 Moving Walk - Internal 19 Moving Walk - Internal 19 Moving Walk - Internal 10 Moving Walk - Internal 10 Moving Walk - Internal 11 Moving Walk - Internal 11 Moving Walk - Internal 12 Moving Walk - Internal 13 Moving Walk - Internal 14 Moving Walk - Internal 15 Moving Walk - Internal 16 Moving Walk - Internal 17 Moving Walk - Internal 18 Moving Walk - Internal 19 Moving Walk - Internal 19 Moving Walk - Internal 10 Moving Walk - Internal 10 Moving Walk - Internal 10 Moving Walk - Internal 11 Moving Walk - Internal 12 Moving Walk - Internal 13 Moving Walk - Internal 14 Moving Walk - Internal 15 Moving Walk - Internal 16 Moving Walk - Internal 17 Moving Walk - Internal 18 Moving Walk - Internal 19 Moving Walk - Internal 19 Moving Walk - Internal 10 Moving Walk - Internal 11 Moving Walk - Internal 12 Moving Walk - Internal 13 Moving Walk - Internal 14 Moving Walk - Internal 15 Moving Walk - Internal 16 Moving Walk - Internal 17 Moving Walk - Internal 18 Moving Walk - Internal 19 Moving Walk - Internal 19 Moving Walk - Internal 10 Moving Walk - Internal 11 Moving Walk - Internal 12 Moving Walk - Internal 13 Moving Walk - Internal 14 Moving Walk - Internal 15 Moving Walk - Internal 16 Moving Walk - Internal 17 Moving Walk - Internal 18 Moving Walk - Internal 18 Moving Walk - Internal 19 Moving Walk - Interna
Γ	he Code Book for A 17.2 has 10 parts: 1

Instructor's Guide Module Length: 180 minutes



This section: 45 minutes



Section End Time:

Materials Needed

DO **REVIEW** slide Instructor's Notes

In your own words:

When referring to the code, you must state the ASME A 17.1 YYYY where YYYY is the year the code was published; Part; Section; Subsection: and the Sub-subsection so that **ASME A 17.1 2010 2.11.2.1.(a)** which covers the standard for horizontally siding doors is divided this way: It is important to use exact numbering and symbols when referring to the code in writing (i.e., 2.11.2.1.(b) gives the horizontally siding single section doors). If the wrong number is used or the symbol is not used properly, you will mislead the person looking for the information in the code. Hence. you must use every period and parenthesis exactly as written in the code. Also, always state which code (i.e., ASME A17.3) and year (i.e., 2004), exactly as the codes do change. Advance.

SAY

✓ PPT slide 30



Instructor's Guide

Module Length: 180 minutes Time remaining: 165 minutes This section: 45 minutes

Section start time:

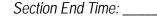
Section End Time:

DO	SAY	Materials Needed
REVIEW slides Instructor's Notes	In your own words: The Code Book for A 17.3 has 10 parts. The first 5 parts include: 1 Introduction 2 Hoistway and Related Construction Equipment for Electric Elevators 3 Machinery & Equipment for Electric Elevators 4 Hydraulic Elevators 5 Escalators Advance. Parts 6 – 10 include: 6 Dumbwaiters 7 Hand Elevators 8 Sidewalk Elevators 9 Moving Walks 10 Private Residence Elevators Advance.	PPT slides 31, 32 Introduction to Code Specifications Using and Applying Codes Using the Code Book Code Book for A17.3 – 10 Parts, Parts 1 – 5. 1 Introduction 2 Hostway and Related Construction Equipment for Electric Elevators 3 Machinery & Equipment for Electric Elevators 4 Hydraulic Elevators 5 Escalators Using and Applying Codes Using and Applying Codes Using the Code Book Code Book for A17.3 – 10 Parts, Parts 6 – 10. 6 Dumbwalters 7 Hand Elevators 8 Sidewalt Elevators 9 Moving Walts 10 Private Residence Elevators)))) Transit Elevator/Escalator Consortium 21

Instructor's Guide

Module Length: 180 minutes Time remaining: 165 minutes This section: 45 minutes

Section start time:



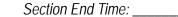
DO SAY **Materials Needed** In your own words: ✓ PPT slide 33 **REVIEW** slide The term **Safety Integrity Level** (SIL) is for specifying the safety integrity requirements of Using and Applying Codes the safety functions allocated to safety Using the Code Book Safety Integrity Level (SIL): Specific safety integrity requirements of safet devices and systems, where safety integrity functions allocated to safety devices and system Safety integrity level has 4 as highest and 1 as lowest Attempt to ensure proper aftermarket devices and level 4 has the highest level of safety integrity systems meet original specification Especially intended for electrical and electronic and safety integrity level 1 has the lowest. Transit Elevator/Escalator Consortium The Safety Integrity Level is an attempt to Instructor's Notes ensure proper aftermarket devices and system(s) meet the original specifications as designed by the manufacturer. This level is given to safety items especially electrical and electronics devices. Advance.

Instructor's Guide Module Length: 180 minutes

Time remaining: 120 minutes

This section: 45 minutes

Section start time:



DO SAY **Materials Needed** In your own words: Okav, now it's time to see how this works in ✓ PPT slides 34, 35 **CLASSROOM** the real world. **ACTIVITY** Advance. Using and Applying Codes Using the Code Book How does one measure the door closing force for either the hoistway or car door from Transit Elevator/Escalator Consortiun rest? Instructor's Notes Using and Applying Codes Using the Code Book Also what is the maximum allowed closing How does one measure the door closing force for either the hoistway or car door from rest? force in pounds per feet? Also what is the maximum allowed closing force in pounds per feet? Transit Elevator/Escalator Consortiur [Instructional Strategy: Participants should open a code book A17.1 to answer this question. Participants can work independently, in small groups/pairs, or as a class to complete the task.] Advance.

Instructor's Guide

Module Length: 180 minutes Time remaining: 120 minutes

This section: 45 minutes

Section start time:

Section End Time:

Materials Needed DO SAY In your own words: Answer is 2.13.4.2.3 ✓ PPT slide 36 **CLASSROOM** Start by looking in ASME A17.1 code **ACTIVITY** book. Using and Applying Codes Using the Code Book Look in the index for Door Time for Practice! Answer is 2.13.4.2.3 Start by looking in ASME A17.1 code book Look in the index for Door Look for door closing force (under Door · Look for door closing force (under Door closing force and kinetic energy) Look in subsections 2.13.4.1 & 2.13.4.2 closing force and kinetic energy) · Find it in 2.13.4.3 which states the force at 30 lbf and procedure for measuring the force Look in subsections 2.13.4.1 & W Transit Elevator/Escalator Consortium 2.13.4.2 Instructor's Notes Find it in 2.13.4.3 which states the force at 30 lbf and procedure for measuring the force Advance.

Instructor's Guide

Module Length: 180 minutes Time remaining: 165 minutes This section: 45 minutes

Section start time:

Section End Time:

DO	SAY	Materials Needed
? ASK Instructor's Notes	In your own words: Lest see what we know so far: The Safety Integrity Level (SIL) in ASME A17.3 has: a. 10 as the highest level and 1 as the lowest. b. 5 as the highest level and 1 as the lowest. c. 5 as the highest level and 0 as the lowest. d. 4 as the highest level and 1 as the lowest.	Materials Needed ✓ PPT slide 37 Introduction to Code Spotifications Using and Applying Codes Knowledge Check 4. The Safety Integrity Level (slL) in ASME A17.3 has: a. 10 as the highest level and 1 as the lowest. b. 5 as the highest level and 0 as the lowest. c. 5 as the highest level and 1 as the lowest. Artswer. d.)))) Transit Elevator/Escalator Consortium
	Call on participants for answers. Advance for answer. Answer: d. Advance.	

Instructor's Guide



Materials Needed DO SAY In your own words: ✓ PPT slide 38 **ASK** Lest see what we know so far: Using and Applying Codes What is the relationship between ANSI and Knowledge Check 4. The Safety Integrity Level (SIL) in ASME A17.3 has a. 10 as the highest level and 1 as the lowest. ASME? h. 5 as the highest level and 1 as the lowest c. 5 as the highest level and 0 as the lowest d. 4 as the highest level and 1 as the lowest. ANSI and ASME are the same organization. Transit Elevator/Escalator Consortium ANSI oversees development of codes b. Instructor's Notes and standards and ASME publishes them. ANSI oversees development of codes C. and standards and ASME enforces them. Call on participants for answers. Advance for answer. Answer: b. Advance.

Instructor's Guide

Module Length: 180 minutes Time remaining: 165 minutes This section: 45 minutes

Section start time:

Section End Time:

DO	SAY	Materials Needed
Instructor's Notes	In your own words: Lest see what we know so far: Codes are typically revised every: a. Year. b. 5 years. c. 10 years. d. 3-5 years Call on participants for answers. Advance for answer. Answer: d. Advance.	Introduction to Code Specifications Code Compliance and Organizations Knowledge Check 6. Codes are typically revised every: a. Year b. 5 years. c. 10 years. d. 3-5 years Answer: d.))))) Transit Elevator/Escalator Consortium

Instructor's Guide

Module Length: 180 minutes Time remaining: 15 minutes This section: 15 minutes

Section start time:

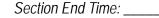
Section End Time:

DO SAY **Materials Needed** In your own words: ✓ PPT slide 40 **REVIEW** slide Where would a Technician find the requirements for existing hall call buttons' Access and ADA Requirements height? How long must the elevator doors ANSI 117.1 Accessible and Usable Buildings and Facilities Code Manual stay open when answering a call? These Elevator requirements – Chapter 4 "Accessibility issues are about accessibility therefore they . Door Signal and Timing - 407.3.4 -T=D/(1.5fts) are covered in ICC-ANSI 117.1 Accessible Transit Elevator/Escalator Consortium and Usable Buildings & Facilities code Instructor's Notes manual. This manual is divided into chapters. Elevators requirements are covered in Chapter 4 "Accessibility Routes", The answer to the height of the existing hall call buttons the requirement is 54inches which is covered in 407.2.1.1. Continued – DO NOT Advance.

Instructor's Guide

Module Length: 180 minutes Time remaining: 15 minutes This section: 15 minutes

Section start time:



DO SAY **Materials Needed** In your own words: ✓ PPT slide 40 **REVIEW** slide The answer to the timing of the doors is a formula found in 407.3.4 Door & Signal Access and ADA Requirements Timing. The formula states T=D/(1.5fts) which ANSI 117.1 Accessible and Usable Buildings and Facilities Code Manual means the doors must stay open (T) for the Elevator requirements – Chapter 4 "Accessibility time it takes a person to travelling 1.5 feet per . Door Signal and Timing - 407.3.4 -T=D/(1.5fts) second from the center line of the hoistway Transit Elevator/Escalator Consortium call buttons station to the centerline of the Instructor's Notes doors. Hence if a person must travel 10 feet (at 1.5 feet per second) from the centerline of the hoistway call buttons station to the centerline of the doors. The doors would have to stay open for 6.6 seconds (round up 7 seconds). The absolute minimum time an elevator door must stay open is 5 seconds. Advance.

Instructor's Guide

Module Length: 180 minutes Time remaining: 15 minutes This section: 15 minutes

Section start time:

Section End Time:

DO SAY **Materials Needed** In your own words: ✓ PPT slides 41, 42 **REVIEW** slides Read slide. [For each objective, briefly review what · Discuss applicable and related codes in ASME 17.1A · Apply standards used in the ASME 17.1A code was learned in this module or ask **ASK** compliance manual · Access and review ADA compliance list for elevate participants to share what they have learned for each learning objective and briefly discuss as a class.] Transit Elevator/Escalator Consortium Advance. Instructor's Notes Conclusion · Authority having Jurisdiction Lets take a look at some of the key words we ASME · ANSI · Code data plate have defined as moved through this module. [Read slide. Discuss definitions as a Transit Elevator/Escalator Consortiur group.] Advance. [Read slide. Discuss definitions as a group.] Advance. Administer quiz.