

Pedestrian Entrances

ADA / Safety Inspections & Design Planning

Presented by



Giovanna Hewitt
VP of Sales



Supporting Distributor

Authorized Distributor:

Automated Door Ways
Mickey Connell



Product Portfolio

From our inception in 1960, with the introduction of the world's

First Automatic Sliding Door for Commercial Use

We have a
COMPREHENSIVE PRODUCT RANGE

- Automatic commercial sliding doors
 - Multiple Header Sizes
- ICU sliding doors
- Isolation Room doors
- Patient Room doors
- Multiple Swing doors and operators
- Hurricane Impact Doors
- Barn Doors
- Bifolding doors
- Clean room sliding doors
- Automatic windows
- Transit doors
- Revolving doors
- Fire / Security Accordion sliding door



Topics Outline

- ✓
- ✓
- ✓
- ✓
- ✓



Determine the Needs of the Application

Convenience

- For people with shopping carts, luggage, deliveries, baby carriages
- Hands-free operation



Accessibility for

- Elderly & Inconvenienced
- Differently Abled
- Special Needs



Determine the Needs of the Application

Security



Are slide or swing doors enough?

Is every employee part of the security team?

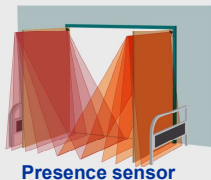
APPLICATIONS:

- Healthcare Employee Entrances
- Insurance
- Utility / Energy
- Airports
- Financial Data
- Courthouses
- Pharmaceutical

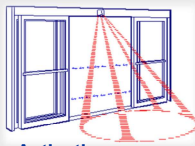


Determine the Needs of the Application

Determine User and Select Appropriate Activation Device



Presence sensor



Activation sensor

- Presence sensors & Safety Beams
- Touchless switches (for Clean Rooms)
- Keyless entry
- Proximity/Card readers
- UPS battery back-up (power fail open/close)



Wall mounted push plate (wired & wireless)



Touchless Wall Switch



36" Push Plate



Determine the Needs of the Application

Space, Aesthetics, Functionality





INSPECTIONS



Egress & Safety Requirements – The Role of AAADM

✓ AAADM Inspector Certification Program American Association of Automatic Door Manufacturers

- AAADM trains and certifies door technicians to promote compliance with outstanding ANSI guidelines
- Intended to enhance the safety of automatic doors



Egress & Safety Requirements – The Role of AAADM

✓ Inspections & Planned Maintenance

- Recommend planned maintenance program
- Proper function, longevity, and SAFETY

For use by AAADM Certified Inspectors		INSPECTION FORM FOR POWER OPERATED DOORS SLIDING DOORS		WORK TICKET NUMBER: (IF APPLICABLE)	
<input checked="" type="checkbox"/> IN COMPLIANCE <input type="checkbox"/> NOT IN COMPLIANCE <input type="checkbox"/> CORRECTED/NOT		<input checked="" type="checkbox"/> IN COMPLIANCE <input type="checkbox"/> NOT IN COMPLIANCE <input type="checkbox"/> CORRECTED/NOT		<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 Comments	
DOOR ID Model # _____ Serial # _____ Year _____ Location _____ Installer _____ Inspector _____		DOOR TYPE Sliding _____ Swing _____ Revolving _____ Other _____		DOOR ID Model # _____ Serial # _____ Year _____ Location _____ Installer _____ Inspector _____	
ANSI/BSMA AAADM Index Checklist Ceiling Speed _____ Control System _____ Photo Eye _____ Force Limit _____ Floor Mat (if existing) _____ Max. Torque _____ Max. Speed _____ Max. Force _____ Max. Torque _____ Max. Force _____ Max. Torque _____		INSPECTION CHECKLIST Spring Balance _____ Safety Sensor _____ Emergency Release _____ Door _____ Obstruction _____ Floor _____ Power _____ Control System _____ Photo Eye _____ Force Limit _____ Floor Mat (if existing) _____ Max. Torque _____ Max. Speed _____ Max. Force _____ Max. Torque _____ Max. Force _____ Max. Torque _____		DOOR ID Model # _____ Serial # _____ Year _____ Location _____ Installer _____ Inspector _____	
<small>As an AAADM certified inspector, I have completed an inspection only on the above door in your facility. This inspection is intended to assess the door's compliance with pertinent ANSI codes designed to approximate the requirements of the current ANSI/BSMA A89.12 standard, the American National Standard for Power-Operated Doors. Technical requirements may have additional requirements or recommendations for their doors. It is strongly recommended to bring doors into compliance for safe operation. Do you have an Owner Manual? Yes/No (circle one) No/Yes (circle one) Do you have additional doors you need inspected? Yes/No (circle one) No/Yes (circle one)</small>					
Inspector Name & Registration No. (PST) _____ Signature, Title & Date _____ Company Name _____ Address _____		Customer Name and Title (Owner) _____ Signature & Date _____ Customer / Facility _____ Address _____			



SLIDING DOORS



Codes & Standards Code Compliance – Sliding Doors

ANSI A156.10: Power Operated Pedestrian Doors

Full Powered (speed) Slide, Swing, Folding Doors

Egress, Speeds, Activation, Presence

ANSI A156.38: Low Energy Power Operated Sliding & Folding Doors

Slow Operation *Knowing Act for activation

Safety Beams not required

Applications: Trained traffic in corridor, isolation, OR, pharmacy, office

NFPA 101: Life Safety Code

Be aware of panel weight (panel size, glass type, breakout).

Some manufacturers have limits due to weight causing panel drop.

11/14/2012



Egress & Safety Requirements Sliding Door – Breakout Feature



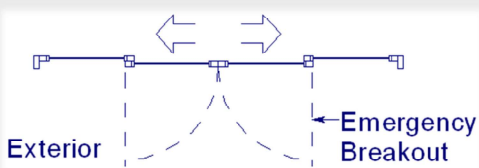
11/14/2012



Egress & Safety Requirements Sliding Door – Breakout Feature

NFPA 101, Powered Doors section & ANSI 156.10

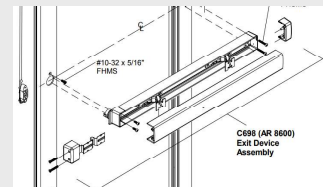
- Slide doors in egress areas must be able to swing out (breakout)
- In the direction of egress from any point in slide travel to 90°
- In the direction of egress with a maximum force of 50 lb.



11/14/2012



Egress & Safety Requirements Sliding Door – ADA Compliance



- 300VA ultra-compact 120V standby UPS
- Maintains AC output during power failures
- 3 UPS battery supported outlets, 3 surge-only outlets
- TEL/DSL/ethernet protection
- NEMA 5-15P input plug and 6 NEMA 5-15R outlets

11/14/2012



Codes & Standards Sliding Doors – Hurricane Zones

-
-
-
-

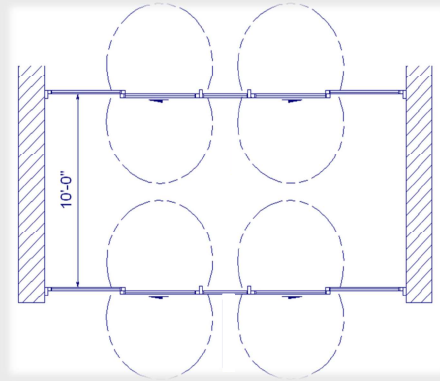
11/14/2012



Codes & Standards Sliding Door – Vestibules

The Greater the Distance Between Doors, the Lower the Possibility of Both Doors Opening Simultaneously

- Minimum distance recommended is 10 ft.
- Choice of activating devices will affect vestibule length



11/14/2012



Types of Automatic Doors Sliding Doors

Single Slide



Bipart Slide



Telescoping



Configurations:

- 2 panel (1)
- 3 panel (2)
- 4 panel (2)
- 6 panel (4)



Operating Room
"P" Configuration

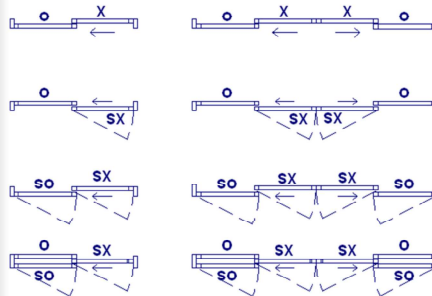


11/14/2012

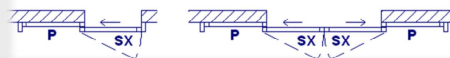


Types of Automatic Doors Sliding Doors – Configurations

PERIMETER MOUNT



SURFACE MOUNT



- O Sidelite
- X Sliding
- S Swings / Breakout
- P Dummy or no panel (wall / surface)

O-X
Sliding panel(s) slide along interior of fixed sidelite.

O-SX
Slide-swing panel(s) slide along exterior of fixed sidelite.

SO-SX
Slide-swing panel(s) slide along interior of swing-out sidelite(s).

O/SO-SX
Slide-swing panel(s) slide between fixed sidelite/wall and swing-out sidelite(s)

P-SX
Slide-swing panel(s) slide along exterior of wall.


11/14/2012



HEALTHCARE DOORS



-
-
-
-
-



Types of Non-Automatic Doors
Manual ICU/CCU Sliding & Swinging Doors

- Many Products Available:**
- Slide – Single, Bipart, Telescoping
 - Swing - Pair, Single, Unequal Pair
 - Bi-Fold/Bi-Swing
 - Isolation (AIR) Slider
 - STC 35 Acoustic Swing Door



- Options:**
- ✓ "Barn" Doors
 - ✓ Breakout / Egress
 - ✓ Self Closing - Manual
 - ✓ Clean Rooms
 - ✓ Smoke-rated (UL1784)
 - ✓ Positive Latching
 - ✓ Automatic or Constant Latching
 - ✓ Adjacent Sidelites
 - ✓ Glazing



Types of Non-Automatic Doors
Manual ICU/CCU Sliding & Swinging Doors

ICU Glazing & Privacy Options

Privacy options

- Integral mini-blinds (Unicel UL1784)
- E Glass / Switchable glass



Glazing considerations

- Thickness 1/4" to 1 1/16"
- Must be safety glazing (laminated or tempered)
- Solid panels (reduced cost)





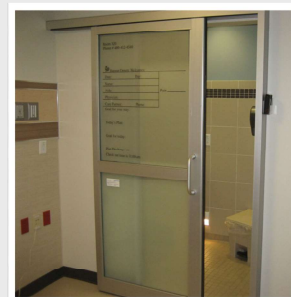
Types of Non-Automatic Doors Manual ICU/CCU Sliding Doors

Offices/Meeting Rooms



Types of Non-Automatic Doors Manual ICU/CCU Sliding Doors

Barn Doors
(Surface Applied)



Types of Non-Automatic Doors Manual ICU/CCU Sliding Doors

Operating Rooms



Custom Corner Interface



Lead Lined



Types of Non-Automatic Doors Manual ICU/CCU Sliding Doors

Standard Slide ICU's

- Swing out capability for both slide panel and sidelite for maximum clearance
- Panels to swing out to 90°
- 2-panel, 3-panel, 4-panel designs
- Full view of patient within ICU
- Trackless configurations for cleanliness, no floor obstruction
- 8'6" width yields 45.5" walk-thru





Types of Non-Automatic Doors Manual ICU/CCU Sliding Doors

✓ Standard Slide ICU's



ICU Breakout Demonstration



Slide open, release flush bolt & swing out.
Flush bolt automatically relatches upon closing. (Horton exclusive)

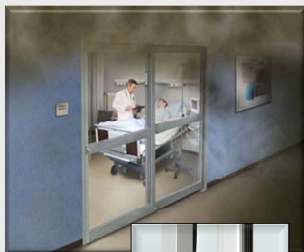


Types of Non-Automatic Doors Manual ICU/CCU Smoke Rated

✓ Underwriters Laboratories Inc.,

UL 1784 Air Leakage Test of Door Assemblies:

- Developed for smoke rated areas of health care facilities
- Track or Trackless
- Includes UL Label
- Requires:
 - High temperature gasketing
 - Positive latching



Types of Non-Automatic Doors Manual ICU/CCU Swing

✓ Manual Swing Doors

- Single or pairs
- Equal or Unequal
- Good for small openings
- Positive latching handle
- Mini Blinds
 - Allows staff to adjust viewing of patients without use of drape
 - Magnet actuated
- Tested to UL1784, Smoke Rated





Types of Non-Automatic Doors Manual ICU/CCU Specialty Units

✓ Manual Slide - ICU & Patient Room Oversized Corridor Door

- Large walk-thru opening (up to 58.75")
- No breakout (P-X design)
- Trackless threshold
- Positive latching
- Smoke rated (UL1784) for corridor & non-suite applications
- 1 panel configuration
- Eliminates designated swing space
- Medium or Wide Stile
- Surface or flush pocketed installation



11/14/2011



Types of Non-Automatic Doors Manual ICU/CCU Specialty Units

✓ Manual Slide – ICU Oversized Corridor Door



11/14/2011



Types of Non-Automatic Doors Manual ICU/CCU Specialty Units

✓ Manual Slide – Telescopic ICU

- Large walk-thru opening (~2/3's)
- Full breakout (SX-SX-SO design)
- Trackless threshold
- Positive latching
- Smoke rated (UL1784)



11/14/2011



Types of Non-Automatic Doors Manual ICU/CCU Specialty Units

Manual ICU Telescopic Slide



11/14/2011



Types of Non-Automatic Doors Manual ICU/CCU Sliding Doors

✓ Self-Closing Feature

- 2 panel or Telescopic
- Fully concealed
- Friction hold open
-
-
- Track or Trackless
- Meets NFPA 101
- Tested to NFPA 105
- UL 1784 Smoke Rated



11/16/2012



Codes & Standards Code Compliance *Isolation Rooms*

✓ 2014/2018 FGI... about Isolation Doors

- Slide doors recommended
- Must satisfy ASTM E283-04 (a pressurization or air leakage target)
- Must self close or employ an audible pressure alarm



11/16/2012



Codes & Standards Code Compliance *Isolation Rooms*

✓ 3 Options to address Isolation

- Automatic open & self close
- Manual open & self close
- Manual open & manual close WITH audible pressure alarm



11/16/2012



Types of Non-Automatic Doors Manual ICU/CCU

✓ Manual Isolation Door

- Negative, Positive and combination pressure rooms
- Trackless Design
- No Power with Self-closing operation
- Perimeter Seals
- 2 panel or Telescopic



11/16/2012



Types of Automatic Doors Automatic ICU/CCU

Automatic Isolation Door

- 2 panel or Telescopic
- Negative, Positive, combination pressure rooms
- Trackless Design
- Self-closing
- Knowing Act Operation
- Safety Presence Sensors
- Requires UPS power
- Perimeter Seals



Pharmacy or Clean Rooms

Sterile or Clean Rooms Sliding Doors ISO 3 or 5

- Control air pollutant levels
- Pressurization
- Temperature
- Humidity
- Personnel access



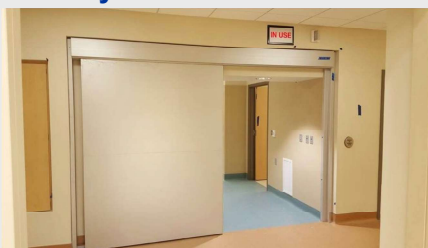
Changes in Pharmacy Hazardous Drug Guidelines

- New Guidelines USP 797 to USP 800
- Adopted February 1, 2016
- Deadline for compliance July 1, 2018 pushed to December 1, 2019
- Compounding Chemotherapy Agents made safer
- Requires Negative pressure
- Change air in room 12 times per hour



Automatic X-ray Door Systems

X-ray Photo Barrier Door



- Lead lined 1/16" shielding
- Single slide & biparting
- Walk-thru 3' 0" to 7' 0" wide
- Units are surface mounted
- Door panel weight up 500 lbs.
- Options:
 - Smoke seals
 - Automatic locks
 - X-ray equipment interlock
 - Touch less activation devices.

Applications

- Hospitals
- Radiology Facilities
- Doctor's Office
- Pharmaceutical
- V. A. Clinics

SWING DOORS



Codes & Standards Code Compliance

ANSI - American National Standards Institute

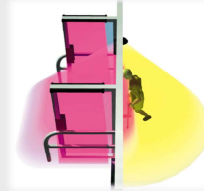
- ANSI A156.10: Power Operated Pedestrian Doors
Full Powered (speed) Slide, Swing, Folding Doors
Egress, safety, sensors
- ANSI A156.19: Power Assist & Low Energy Power Operated Doors
Swing Operators & Doors *Knowing Act for activation
*CAUTION: Minor changes can change entrance to A156.10
*Operators from hardware companies must comply



Types of Automatic Doors Swinging Doors Full Powered

Fully Automatic - Governed By ANSI 156.10:

- Automatic actuation - Motion sensors
- Require external safety devices
- Guide rails required on swing side (unless protected by adjacent wall within 5")



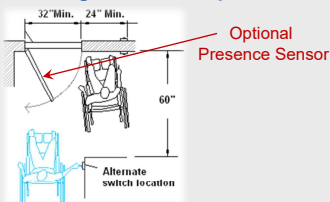
NOTE: Two-way traffic requires guide rails 55" beyond lead edge of open door (36" x 55" = 91")



Types of Automatic Doors Swinging Doors Low Energy

Low Energy - Governed By ANSI 156.19 & ADA:

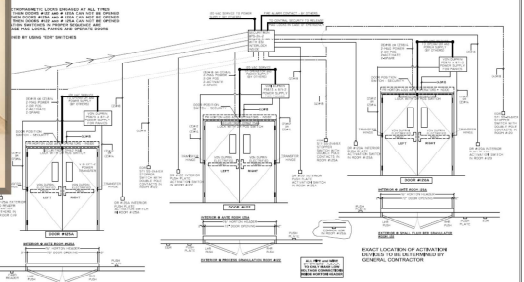
- "Knowing Act" activation (pushbutton or push plate)
- Slow opening and closing speeds
- Low operating force
- Floor space requirements
- No guide rails required



Types of Automatic Doors Swinging Doors Low Energy

Low Energy (& Full Power) – A lot you don't see...

- Panic Hardware
- Open / Close Sync
- Access Control
- Door Position Switch
- Activation Location / Type
- ANSI Compliance





Types of Automatic Doors Swinging Doors Swing

Low Energy

- ❖ Slow opening required
- ❖ Safety Sensors not required
 - ❖ Can be added but needs further discussion with your automatic door expert
- ❖ Time delay includes full open/close cycle
- ❖ Potential more "open" time daily
- ❖ Only option available in Hardware Specification, and does not include sensors

or

Full Power

- ❖ More adjustability
- ❖ Safety Sensors required
- ❖ Full open/close cycle is determined by actual traffic activity
- ❖ More efficient open time



Types of Automatic Doors Swinging Doors Low Energy

Low Energy – Specify Operators Properly

Use Specification:

08 42 29.33 Swinging Automatic Entrances
08 71 13 Automatic Door Operators

FOR
Code Compliance
Professional AAADM Installation
Years of Quality Performance
Additional Guidance/Expertise

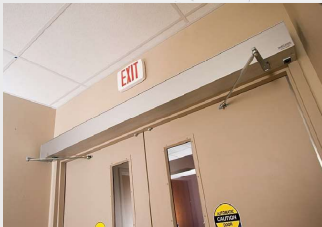
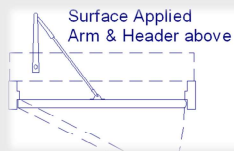
DO NOT use Specification:

MasterFormat 2004 Section 08 06 71
087100 Door Hardware



Types of Automatic Doors Swing Doors – Header Types

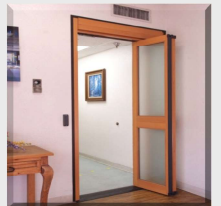
- ✓ Surface applied operators generally used for butt hung doors
- ✓ Overhead concealed operators used for center pivoted doors



Types of Automatic Doors Folding Doors

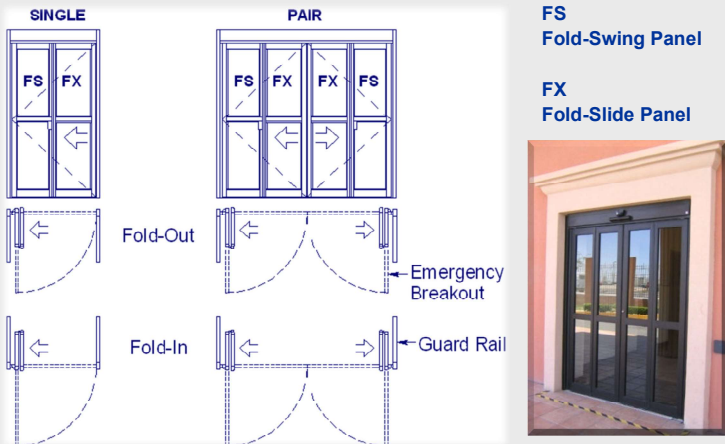
Governed By ANSI 156.10:

- Maximum opening speed is 1 ½ seconds
- Require external safety devices (door mounted)
- Maximum force of 50 lb. to achieve emergency egress
- Guide rails required on fold side (unless protected by adjacent wall)
- Provides maximum opening in narrow space





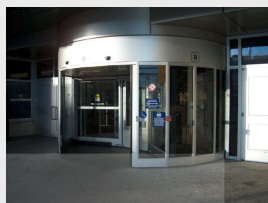
Types of Automatic Doors Folding Doors - Industry Designations



REVOLVING DOORS



Types of Automatic Doors Revolving Doors



- ✓ Always open, always closed
- ✓ Energy efficient



- ✓ Handicap accessible
- ✓ Security mantrap



Codes & Standards Code Compliance

Governed by ANSI A156.27

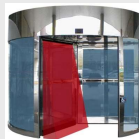
- Where egress is required, a revolving door shall be capable of breakout with an egress path providing 36" aggregate minimum width.
- If breakout is required, each revolving door wing shall be capable of breakout with maximum applied force of 130 lbs.
- Handicap Accessibility – Revolving doors can be made large enough to accommodate persons with disabilities and equipped with accessories for slow operation.
- Local building codes will most likely require **adjacent entrances for means of egress and ADA accessibility.**



Egress & Safety Requirements Revolving Doors



Egress & Safety Requirements Revolving Doors



Wing Sensors: A156.27 - 16.1

When required, sensors shall detect a 28" high person in the rotating path within of 10" of the face of the wing.



Entry Point Sensors: A156.27 - 22

Shall detect the presence of a person or object when door wing approaches end wall and stop door rotation.



End Wall Sensors: A156.27 - 17.1

Shall detect an obstruction with less than 10lb. of pressure and stop the door rotation.



Bottom Rail Sensors: A156.27 - 17.2

Shall detect an obstruction no more than 4" from floor and with less than 10lb. of pressure and stop the door rotation.



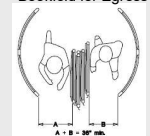
Slow Speed Button: A156.27 - 15.1

Shall be located on both sides of door and reduce rotation speed to 1/2 of normal rotation speed.

Emergency Button: A156.27 - 20.1

Shall be located on both sides of door and stop door rotation until reset.

Bookfold for Egress



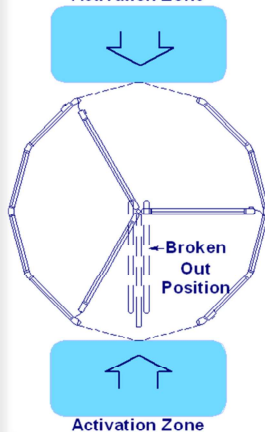
Types of Automatic Doors Revolving Doors *Small Diameter*

Automatic with Center Shaft

- Small diameter (10-12 ft)
- Assisted wheelchair - must be 12 ft
- 3 or 4 wing with emergency breakaway
- Motion sensors & safety systems
- Motor/Gearbox/Control
- 2 to 4 RPM



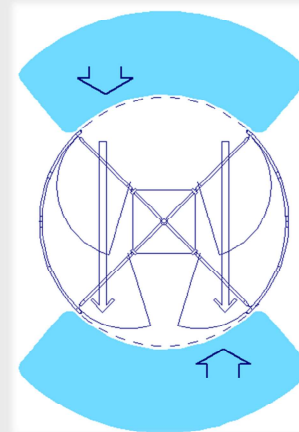
Activation Zone



Types of Automatic Doors Revolving Doors *Large Diameter*

Automatic with Core

- Large diameter (12-16 ft)
- 3 or 4 wing with emergency breakaway
- Motion sensors & safety systems
- Motor/Gearbox/Control
- 2.9 to 4.1 RPM





How can we help?

-
-
-
-
-
-
-
-
-

11/14/2022



Questions & Answers

Thank You For Your Participation!

Copyright

This presentation is protected by US and international copyright laws.
Reproduction, distribution, display and use of the presentation without written
permission of the speaker is prohibited.

© 2022 Horton Pedestrian Access Solutions, A Division of Overhead Door Company

11/14/2022