

COMMON ACCESS ERRORS IN EDUCATIONAL FACILITIES

Common Errors

BSA Educational Facilities Committee

3 June 2008

Agenda

- Common Errors
 - New Construction
 - Alterations
 - K-12 & Higher Ed
 - 521 CMR & ADAAG

Which Standards Apply?

- All Campus Facilities
 - “*The Standards for Accessible Design*” = ADAAG (1994)
 - *Uniform Federal Accessibility Standards* (UFAS)
 - ABAAG/ADAAG (2004)...coming soon
 - State Building Code
 - 521 CMR (Massachusetts)
- Dormitories
 - FHA
 - Design Guidelines
 - Safe Harbors
 - Like “Group 1”
 - 521 CMR 8 – Transient Lodging
 - ADAAG 9 – Transient Lodging

Alterations

- 521 CMR
 - Like new construction
 - A few exemptions
 - 30% Trigger
- ADAAG
 - Like new construction
 - A few exemptions
 - 20% Accessible Path of Travel

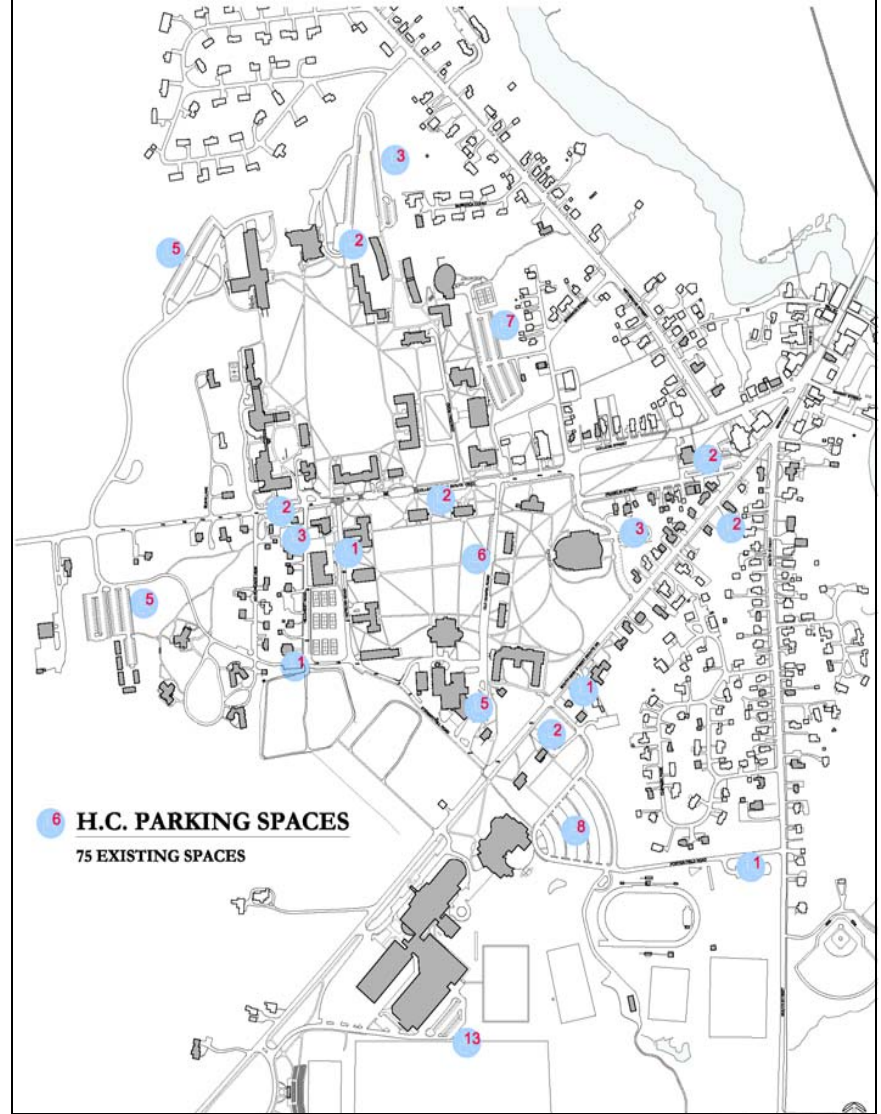
Exterior Accessible Routes

- 521 CMR
 - **ALL** pedestrian pathways = accessible
 - Affirmative requirement
- ADAAG
 - An accessible route connecting all accessible elements
 - No affirmative requirement (yet....)



Accessible Parking

- Disperse & locate closest to **all** accessible entrances
 - School
 - Assembly
 - Sports fields
 - Voting locations
 - After-school uses



Ramps

- *“The least possible slope shall be used for any ramp.”*
 - <8.33%
 - <5%
- **No construction tolerance on slopes**
 - 24" SmartLevel



Curb Cuts & Detectable Warning

- 1994 ADAAG
 - At all curb cuts
 - Wherever pedestrian way crosses a vehicular way
- 2004 ABA-ADAAG
 - No requirements
- ADAAG Public ROW
 - At curb cuts on public ROW



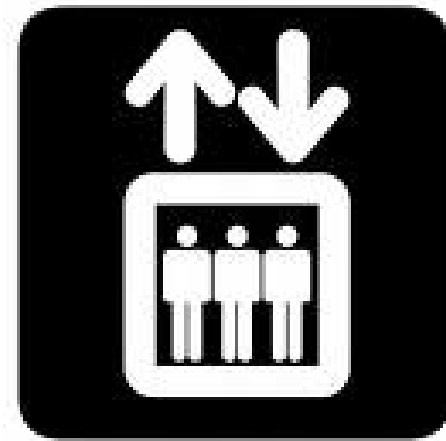
Entrances

- 521 CMR
 - **All** public entrances
- ADAAG
 - 1994 – 50% public
 - 2004+ - 60% public & employee
- <15 lbf *or* automatic door opener



1 or More Elevators

- *Coincide, to the maximum extent feasible, with the route for the general public*
- Time between classes
- Signage



Vertical Wheelchair Lift/LULA

ADAAG: ... *only under the following conditions:*

- a) Stage access
- b) Wheelchair viewing position & dispersion
- c) Incidental occupiable spaces
- d) Ramp or an elevator infeasible.
- e) Certain courthouse elements.
- f) Player seating areas

521 CMR: ...*any one of the following circumstances:*

- a) Stage access
- b) Wheelchair viewing position & dispersion
- c) Distance < 1 story **and** ramp not feasible
- d) **Existing** buildings with no other work
- e) **Existing** buildings < 3 stories, or <3,000 sq. ft./story unless...

Platform Lifts

ADAAG

- Same as vertical lifts

521 CMR

- a) Stage access
- b) Wheelchair viewing position & dispersion
- c) Incidental occupiable spaces
- d) Ramp or an elevator infeasible.

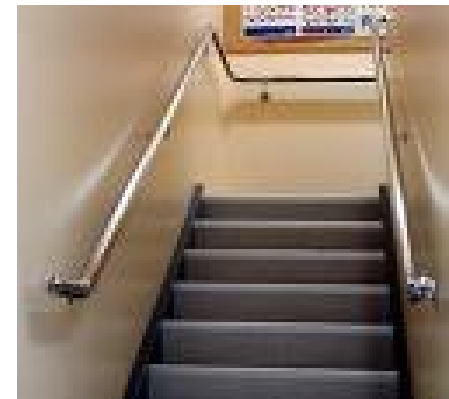
Stairs

- Handrails

- 1.5" (+/- 1/8th") from wall
- Round or oval
- Continuous
- Extensions top & bottom
- Extensions **not** a protruding object

- Stairs

- All stairs (521 CMR)
- Stairs where ramp/elevator does not serve
- Equal tread width
- No winding stairs
- No nosings



Accessible Egress

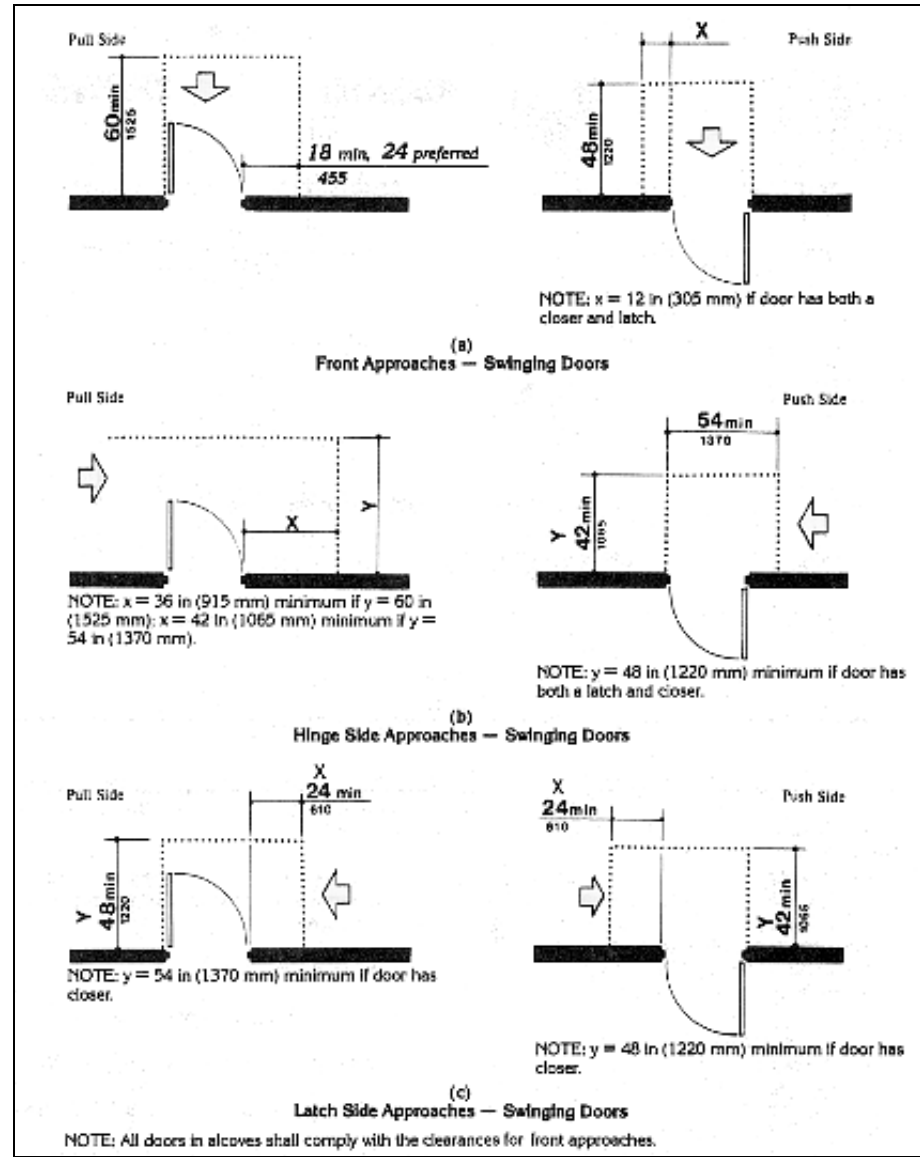
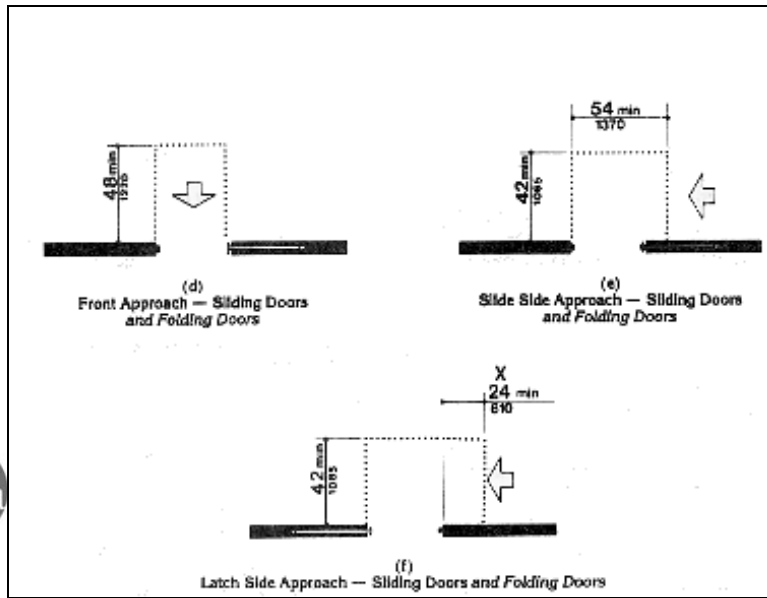
- = # accessible *means of egress*.
- fire escapes are exempt.
- The exit discharge shall provide a continuous path of travel from an *exit* to a public way by means of a *walkway* or a *ramp*.
- Where public ways are > 100 feet from an exit, provide exterior *areas of rescue assistance* no closer than 100 feet from the building.
- Grade at the level of exit discharge prohibits a *walkway* or a *ramp*, an *area of rescue assistance located* exterior exit balcony.

Exterior Area of Rescue Assistance

- Number/*story* = $>1/200$ persons of calculated occupant load served by the *area of rescue assistance*.
- 2 (min.)
- Each = 30 inches by 48 inches
- Clear of required exit width.

Doors

- Clear maneuvering space
- < 5 lbf



Classrooms

- Visual alarms visible
- Accessible sinks w/ knee space
- Accessible tables/desks (1/5%)

Protruding Objects

Recess or Relocate:

- Drinking fountains
- Fire extinguishers
- Overhead signs
- Counters
- AEDs



Assembly Areas

- **Dispersed** accessible & companion seating
 - 521 CMR @ 150
 - ADAAG @ 300

- 1% Armless seats
- No exit overlap
- ADAAG @ 48" X 60" (front)
@ 60" X 66" (side)
- 521 CMR @ 36" X 60"

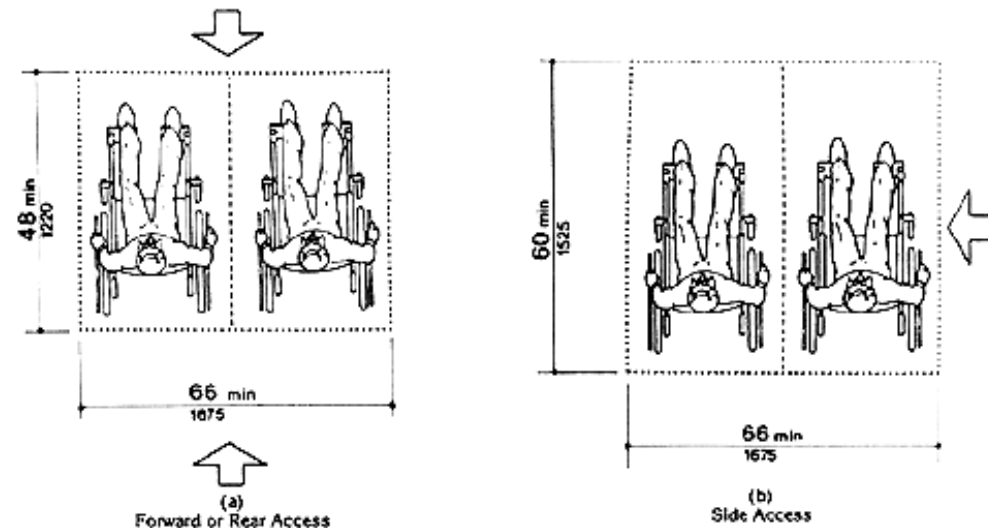
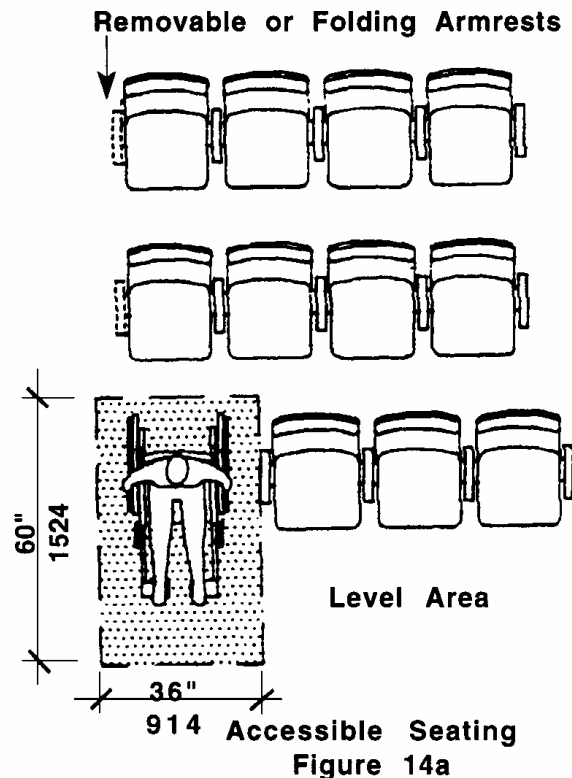


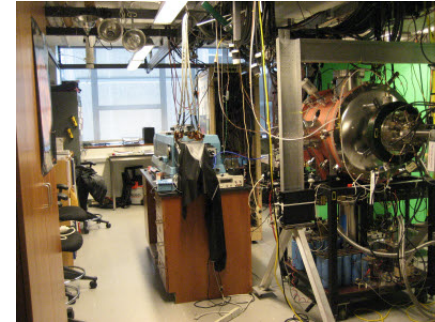
Fig. 46
Space Requirements for Wheelchair
Seating Spaces in Series

Assembly Areas

- Handrails on aisles >5%
- = # accessible emergency egress for accessible seats
- Assistive listening devices
- Access to stage from within assembly area

Labs

- Accessible sinks
- Accessible lab bench (1/5%)
- Accessible route through the lab
- Visual alarm
- Accessible reach ranges
 - Eye wash
 - Emergency showers

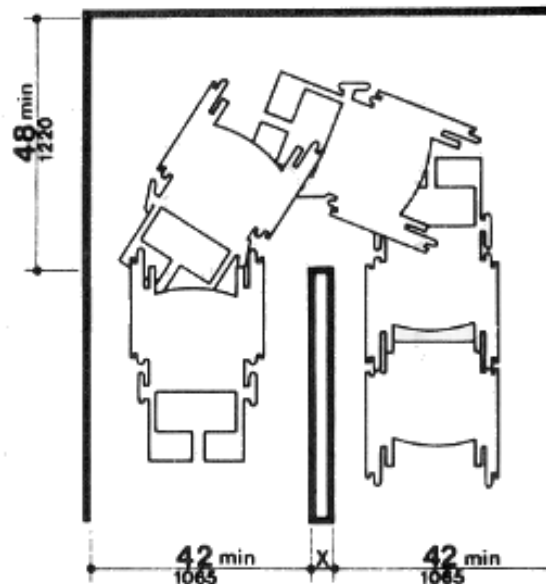
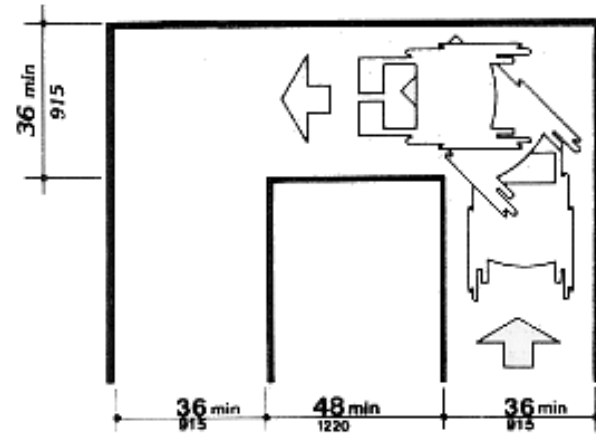


Kitchens/Woodworking

- Commercial kitchens/shops
 - Approach/enter/exit
- Teaching kitchens/shops
 - Accessible sink, counters, etc.
 - Accessible appliances, where available

Locker Rooms

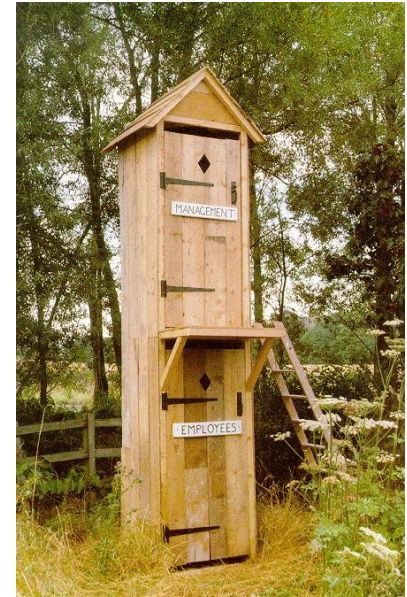
- 5% accessible lockers
- Male/female/single-user
- Accessible route throughout



NOTE: Dimensions shown apply when $x < 48$ in (1220 mm).

Toilet Rooms

- **All** accessible
- CMS and CFS at sinks and doors
- 18" (+/- 1/2")



Controls

- **All** controls w/in reach ranges
- 48" max.
 - Preferred now
 - 2004 ADAAG req'd



Visual Alarms

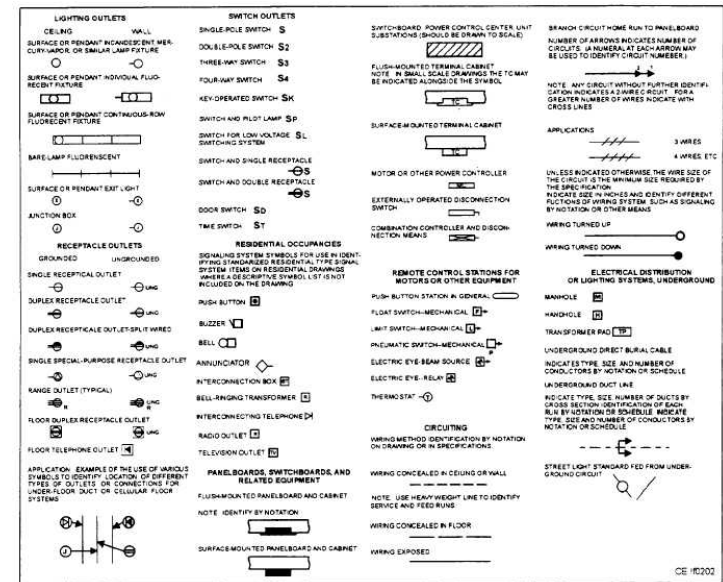
- Mounting height
- All areas a person could be alone, incl:
 - Toilet rooms
 - Locker rooms
 - Labs
 - Offices
- Visible from hall?

Contract Language

www.bsa-access.org

Accessible Design & Construction Notes

- Notes Page
- ADAAG, 521 CMR, FHA
- Typical conditions
- Specifications



Accessible Design Review

- QC
- Different items @
 - 10%
 - 30%
 - 60%
 - 100%



Construction Administration

- Avoid post-construction complaint
- Give contractor a SmartLevel
- ID allowable construction tolerances (521 CMR 2.4.4)

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