Appendix

This appendix is formatted as a quick reference guide summarizing code-related issues through the use of tables and example diagram drawings and Illustrations. The handbook is intended to be a general guideline and should be used for reference purposes only.

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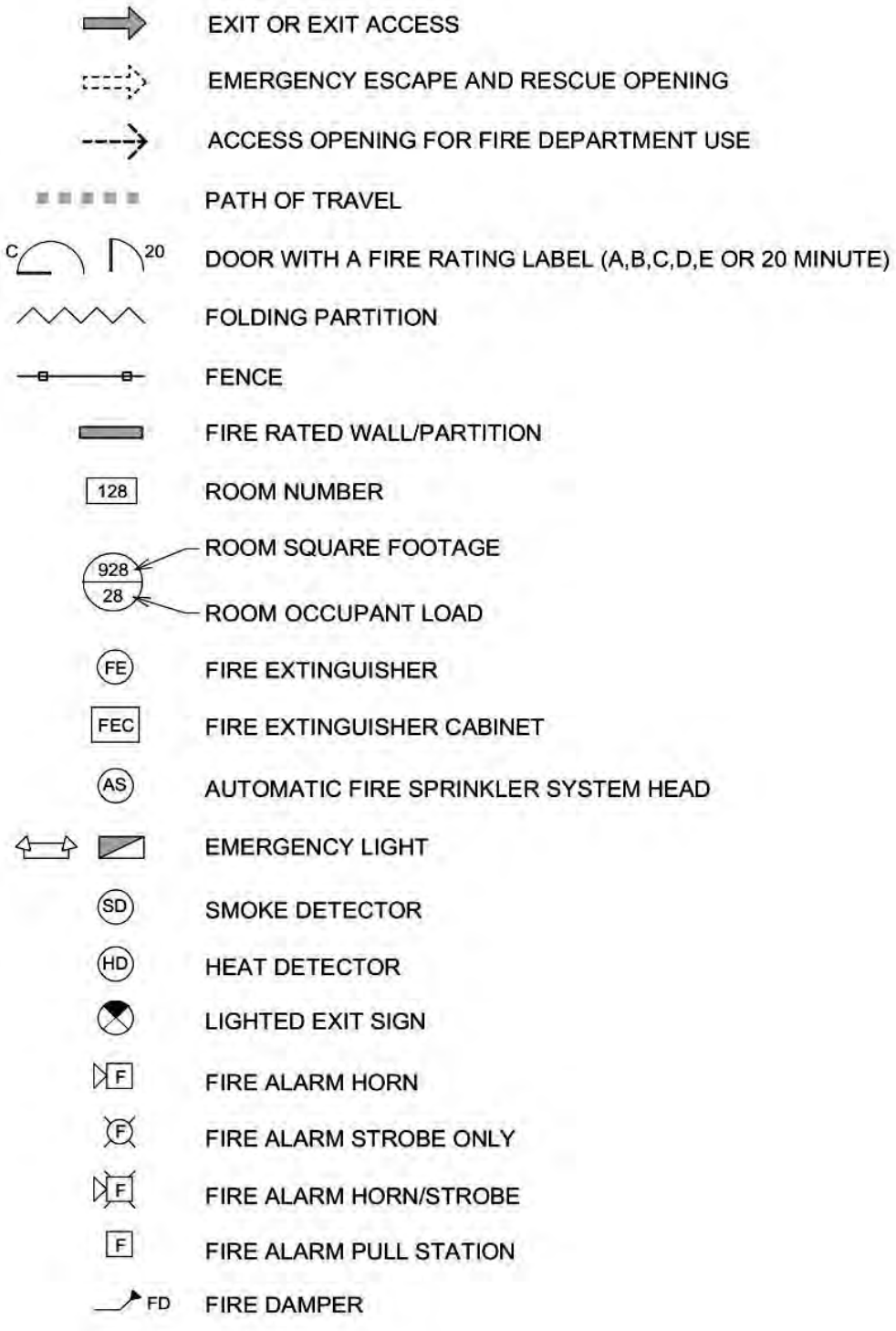
SYMBOL LEGEND



Minimum Occupant Load				
Use	**Example**		**Sq Ft per Occupant**	**Code Reference**
Assembly without fixed seats **Unconcentrated use**	**Dining Rooms/Cafétorium with Stage Multipurpose Rooms**			FBC Table 1004.1.1 FBC 423.18.1.1
		Main floor area	15 gross	
		Stage	15 net	
		Dressing rooms	20 net	
		Kitchen	100 gross	
	Media Centers			FBC Table 1004.1.1 FBC 423.18.1.4
		Reading room and stacks	50 net	
		Small group area or room	5 net	
Assembly with fixed seats *Number of fixed seats includes accessible seating.*	**Auditoriums**			FBC Table 1004.1.1 FBC 423.18.1.1
		In main seating area	number of fixed seats	
		Stage	15 net	
		Dressing rooms	20 net	
Fixed or telescopic bench-type bleacher seating at 18 linear inches per person, including accessible seating.	**Gymnasiums** **Gymnatorium with Stage**			FBC TABLE 1004.1.1 FBC 423.18.1.1 FBC 423.18.1.2
		In main seating area	number of fixed seats	
		Main court area	15 gross	
		Locker rooms	5 net	
		Stage	15 net	
		Dressing rooms	20 net	
Bench-type bleacher seating at 18 linear inches per person, including accessible seating.	**Stadiums**		number of fixed seats	FBC 1004.7
Educational	Classrooms		20 net	FBC Table 1004.1.1
	Shops, labs and other vocational areas		50 net	
	CCTV		15 net	FBC Table 423.18.1.5
Day-care	Day-car spaces		20 net	FBC Table 1004.1.1
Business Areas	Administrative offices		100 gross	
Dormitories	Dormitory spaces		50 gross	
Courtyards *Raised, dedicated landscape areas may be deducted.*	Interior courtyards		15 gross	FBC Table 1004.1.1

Exit and Means of Egress Width						
Occupancy Classification	**Egress Width per Person (in.)**		**Minimum Corridor/Aisle Width** FBC 1016.2	**Minimum Clear Opening of Exit Doors** FBC 1008.1.1	**Minimum Stair Width** FBC 1009.	**Code Reference**
	Ramps, Doors and Corridors	**Stairs**				
Group A Assembly	0.2	0.3	44"	32"	44" *	FBC 1005 FBC 1009 FBC 1018
Group B Assembly	0.2	0.3	44" **	32"	44" **	
Group D Day-care	0.2	0.3	44" **	32"	44" **	
Group E Educational	0.2	0.3	72"	32"	44"	

* See FBC Section 1028 for detailed required requirements in Assembly Occupancies.
** 36 inches acceptable if stair or corridor serves occupant load of less than 50.

The minimum width of egress shall be based on the number of occupants to be served. Minimum width may be no less than:

Passage Width: 32 inches minimum clear opening width (36 inches recommended). Florida Accessibility Code required 32 inches minimum at a point and 36 inches continuously. Refer to Figures 1 and 24(e) Florida Accessibility Code. FBC Section 11-4.2.1.

Door: 32 inches minimum clear opening (36 inch wide doors are recommended). The clear opening at swinging doors shall be measured between the face of the doors and the stop, with the door open 90 degrees. FBC Section 1008.1.1. Serves a total capacity of 160.

Stairs: 44 inches minimum width, except as noted above. Serve a total capacity of 147. Handrails may project 3½ inches into the required stair width. FBC Section 1009.1.

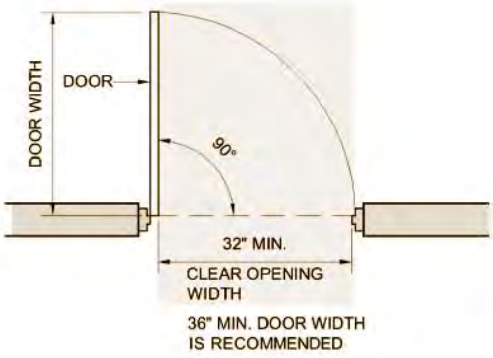
Ramps: 44 inches minimum width. Serves a total capacity of 220. Handrails may project 3½ inches into the required stair width. FBC Section 1010.5.

Exit Access Corridors: Group E occupancy, 72 inches minimum width, serving a capacity of 100 or more.

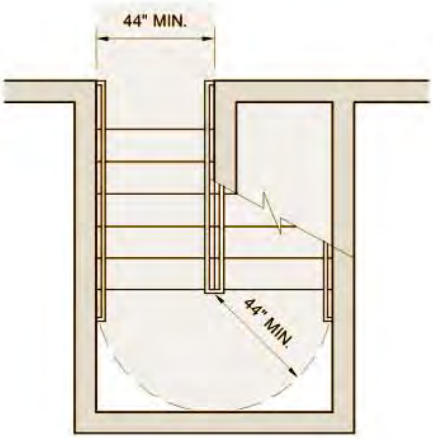
Groups A, B, and D Occupancies: 44 inches minimum width. Serves a total capacity of 220.

Exterior Corridors: The minimum width of exterior corridors or balconies in Group E occupancy shall be sufficient to accommodate the occupant load, but shall not be less than 72 inches. FBC Section 1018.2.

(a)
Opening in Wall

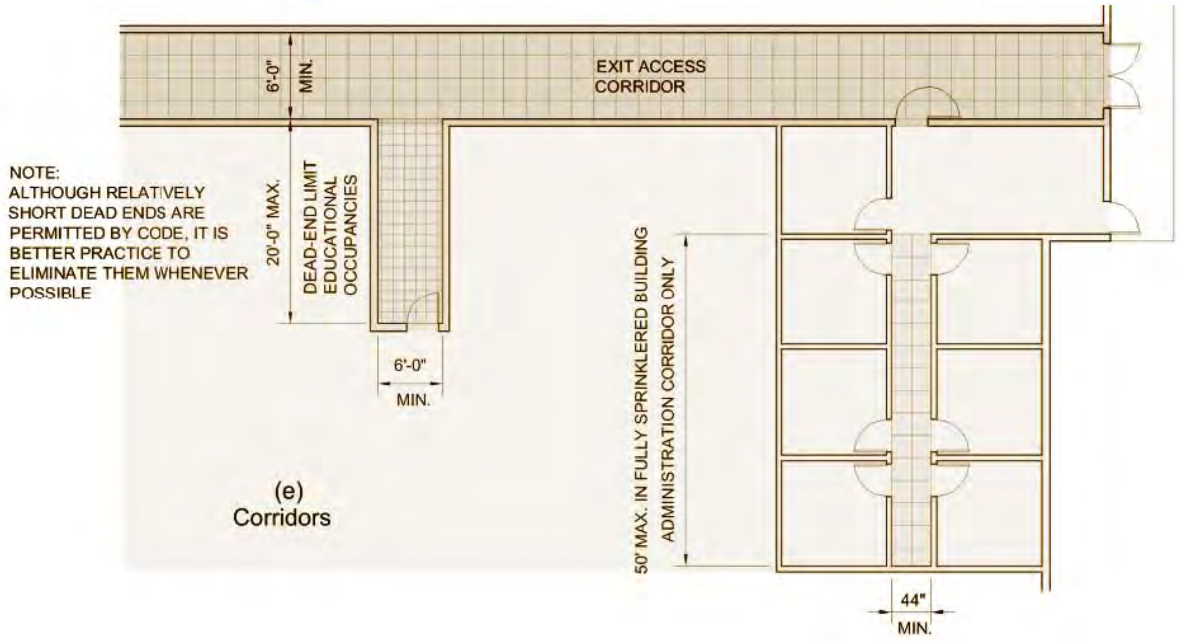


(b)
Door



(c)
Stair

(d)
Ramp



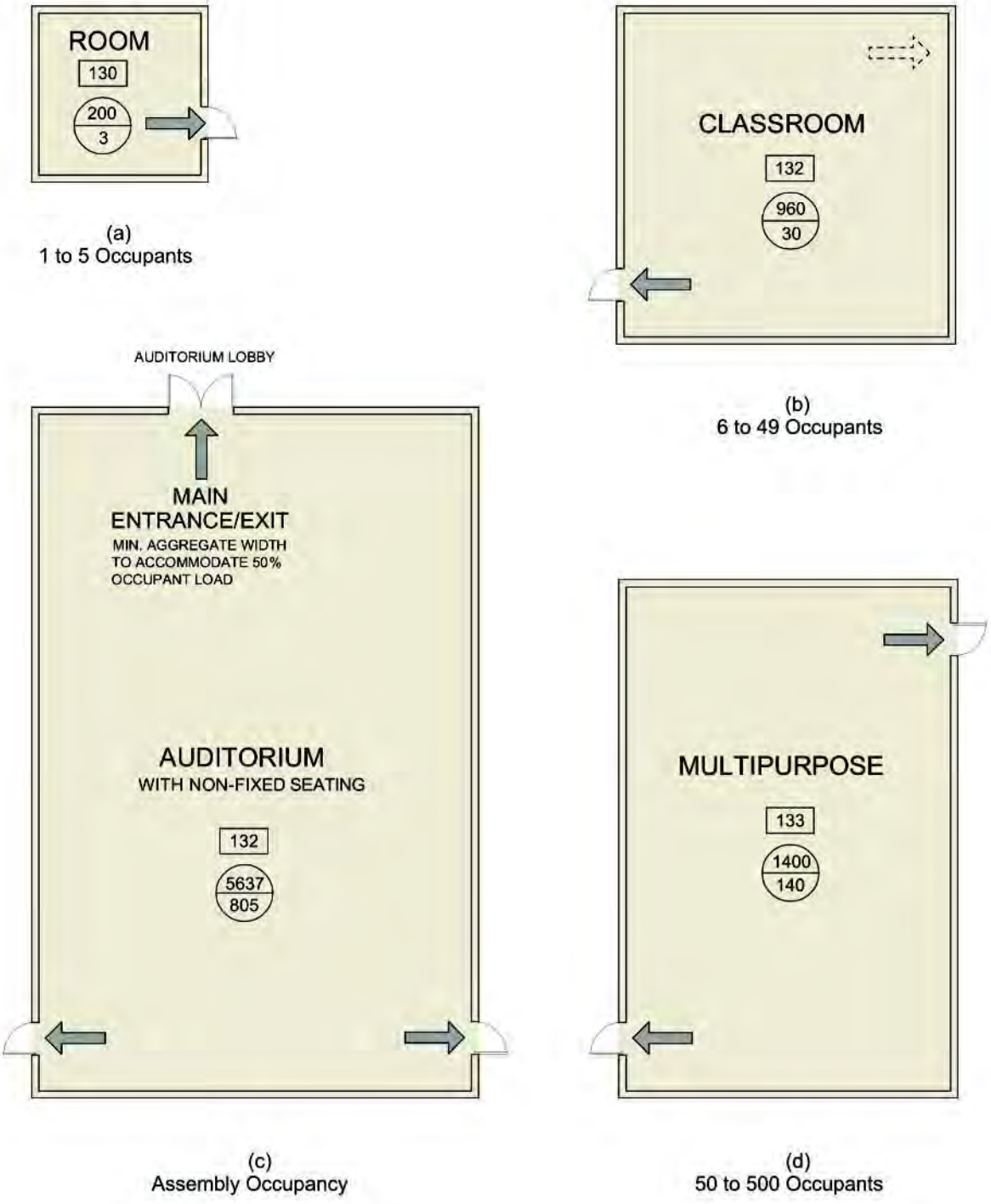
(e)
Corridors

MINIMUM MEANS OF EGRESS WIDTH

<table>
<tr><th colspan="4">Number of Required Means of Egress</th></tr>
<tr><td colspan="4">The number of means of egress shall be determined to meet the requirements for egress capacities and travel distances, but shall not be less than the minimum number of means of egress listed below.</td></tr>
<tr><th>Occupant Load</th><th colspan="2">Minimum Requirements</th><th>Code References</th></tr>
<tr><td>1 to 5</td><td colspan="2">One means of egress</td><td>FBC 423.13.1</td></tr>
<tr><td rowspan="2">6 to 49</td><td>Unsprinklered Building</td><td>Sprinklered Building</td><td rowspan="2">FBC 423.13.1</td></tr>
<tr><td>One means of egress leading directly to exterior,

<u>or</u>

One means of egress and one emergency rescue window that opens directly to the exterior (in buildings three stories or less).</td><td>One means of egress</td></tr>
<tr><td>50 to 500</td><td colspan="2">Two means of egress where one of the two opens directly to the exterior,
<u>or</u>
Two means of egress to two separate atmospheres.</td><td>FBC Table 1021.1
FBC 423.7.1</td></tr>
<tr><th colspan="4">Special Egress Requirements</th></tr>
<tr><td>Assembly Occupancy</td><td colspan="2">Main entrance/exit with a minimum aggregate width to accommodate 50% of the occupant load.
See FBC Section 1025 for additional requirements.</td><td>FBC 1028.2</td></tr>
<tr><td>Educational Occupancy</td><td colspan="2">Rooms used for first grade children and younger shall be located on the floor of exit discharge.
Rooms used for second grade children shall not be located more than one story above the floor of the exit discharge.</td><td>FFPC 14.2</td></tr>
<tr><th>Occupancy Load</th><th colspan="2">Minimum Number of Exits per Story</th><th></th></tr>
<tr><td>1 to 500</td><td colspan="2">2</td><td rowspan="3">FBC 1021</td></tr>
<tr><td>501 to 1000</td><td colspan="2">3</td></tr>
<tr><td>More than 1000</td><td colspan="2">4</td></tr>
</table>



NUMBER OF REQUIRED MEANS OF EGRESS

Separation of Means of Egress			
Occupancy Classification	**Minimum Separation**		**Code Reference**
	Unsprinklered Building	Sprinklered Building	
All Occupancies	½ Diagonal Rule	⅓ Diagonal rule	FBC 1015.2.1

½ Diagonal Rule:

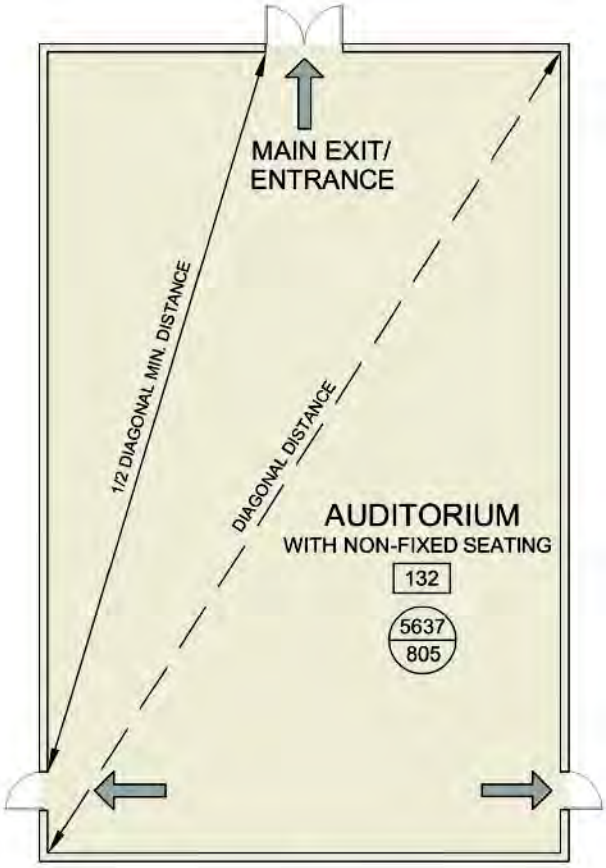
Where two or more exits or exit access doors are required in an unsprinklered building, at least two of the exits or exit access doors shall be placed a distance apart equal to at least ½ of the length of the maximum overall diagonal dimension of the building or area to be served, measured in a straight line between the nearest edge of the exit doors or exit access doors. FBC Section 1015.2.1.

⅓ Diagonal Rule:

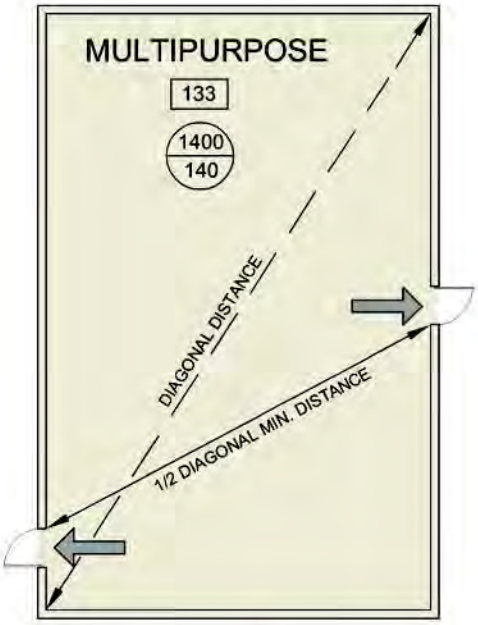
Where two or more exits or exit access doors are required in a sprinklered building, at least two of the exits or exit access doors shall be placed a distance apart equal to at least ⅓ of the length of the maximum overall diagonal dimension of the building or area to be served, measured in a straight line between the nearest edge of the exit doors or exit access doors. FBC Section 1015.2.1.

More than 2 Required Exits:

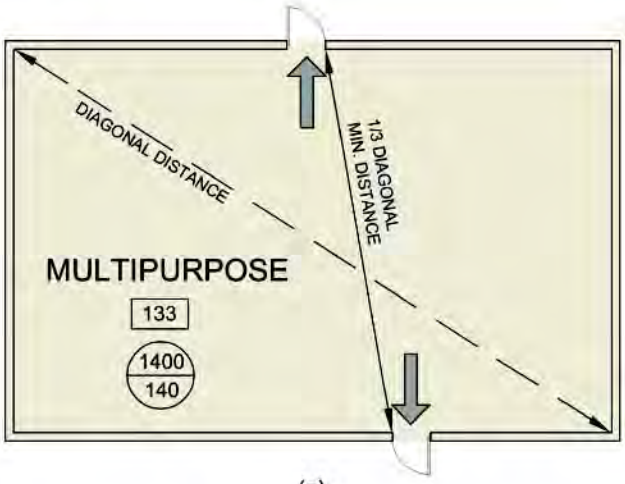
Where more than two exits or exit access doors are required, at least two of the required exits or exit access doors shall be arranged to comply with the above. The other exits or exit access doors shall be located so that if one becomes blocked, the others shall be available. FBC Section 1015.2.1.



(a)
More than 2 Exits
Unsprinklered Building



(b)
2 Exits
Unsprinklered Building



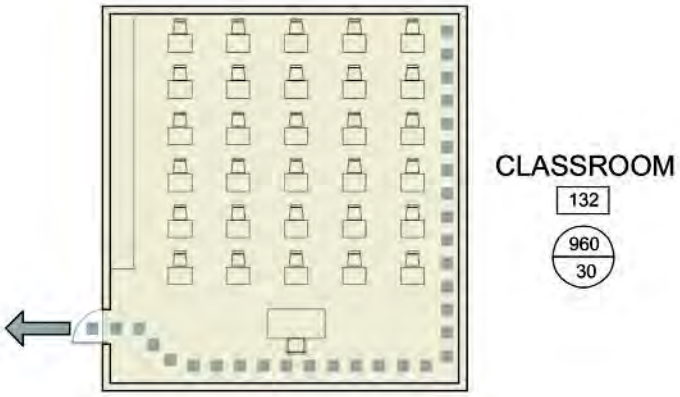
(c)
2 Exits
Sprinklered Building

SEPARATION OF MEANS OF EGRESS

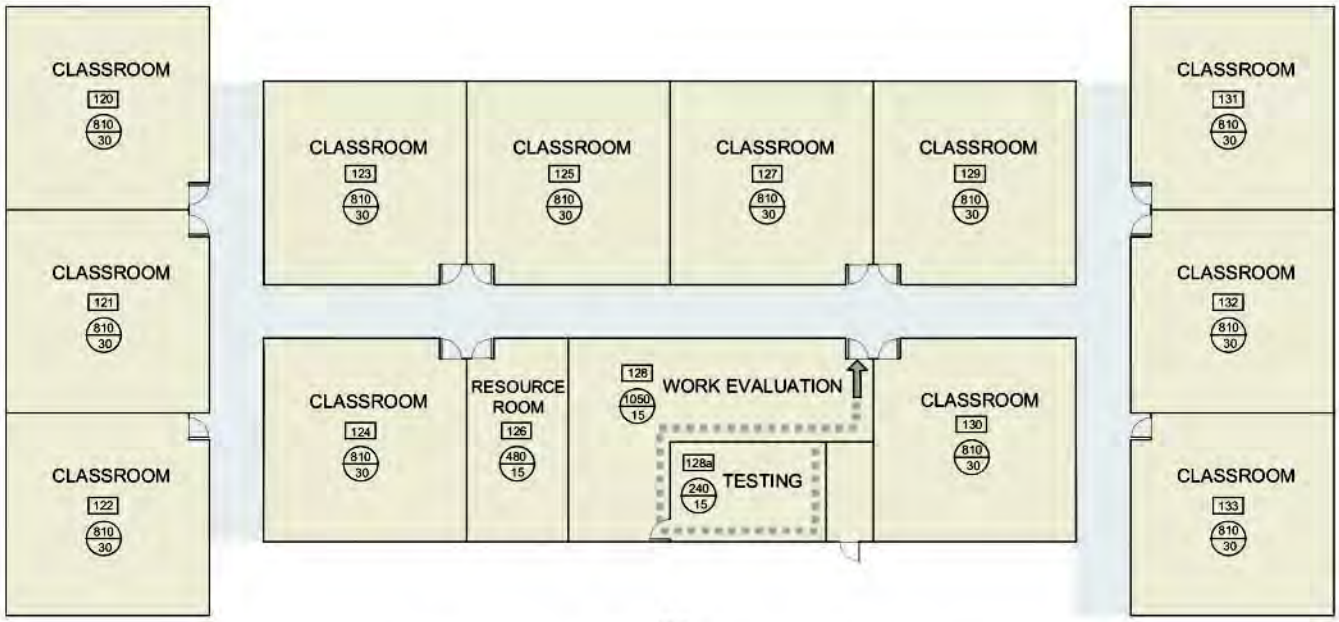
Travel Distance			
Occupancy Classification	**Maximum Travel Distance to Exit (Ft)**		**Code Reference**
	Unsprinklered Building	**Sprinklered Building**	
Group A Assembly	200	250	FBC Table 1016.1
Group B Business	200	300	
Group D Day-care	150	200	
Group E Educational	150	200	

Measurement of Travel Distance		
		Code Reference
Travel Distance in a Room	Travel distance is measured from the most remote point in the room along the natural path of travel, with a 1-foot clearance around any corners or obstructions, to the centerline of the doorway. Travel distance is not measured across the diagonal of the room to the door. This space may be blocked by furniture or equipment.	FFPC 7.6.1
Travel Distance in a Building	Travel distance to an exit is measured along the centerline of the natural path of travel, starting from the most remote point subject to occupancy, with 1-foot clearance around any corners or obstructions, to the centerline of the doorway or other point at which the exit begins.	FFPC 7.5.4.2

Common Path of Travel		
		Code Reference
General	The common path of travel is measured along the centerline of the natural path of travel, starting from the most remote point of the room or space, with a 1-foot clearance around any corners or obstructions, and terminates at that point where two separate and distinct routes become available. The common path of travel shall not exceed 75 feet.	FFPC 7.6.1
Assembly Occupancies	A common path of travel shall be permitted for the 20 feet from any point where serving any number of occupants and for the first 75 feet from any point where serving not more than 50 occupants.	FBC 1014.3



(a)
Measurement of Travel Distance in a Room
The Common Path of Travel Shall Not
Exceed 75 FT



(b)
Measurement of Travel Distance in a Building
The Common Path of Travel Shall Not
Exceed 75 FT

TRAVEL DISTANCE

Dead-End Corridors			
Occupancy Classification	Maximum Dead-End Length (Ft)		Code Reference
	Unsprinklered Building	Sprinklered Building	
Group A Assembly	20	20	FBC 1018.4 FFPC 14.2.5.2 FFPC 16.2.5.2
Group B Business	20	20	
Group D Day-care	20	20	
Group E Educational	20	20	

Measurement of Dead-End Corridors

General: Dead-end exists where an occupant enters a corridor, thinking there is an exit at the end, and finding none, is forced to retrace the path traveled to reach a choice of egress travel paths. Although relatively short dead ends are permitted by Code, it is better practice to eliminate them whenever possible, as they increase the danger of persons being trapped in case of fire. FFPC Section A.7.5.1.5 and FBC Section 1018.4.

Dead-End Limit: The distance of a dead end is measured from the most remote point of a dead end to where an occupant has a choice of direction of travel or to the centerline of an exit door.

Plan Schematic 1
Example: Dead-End Corridors

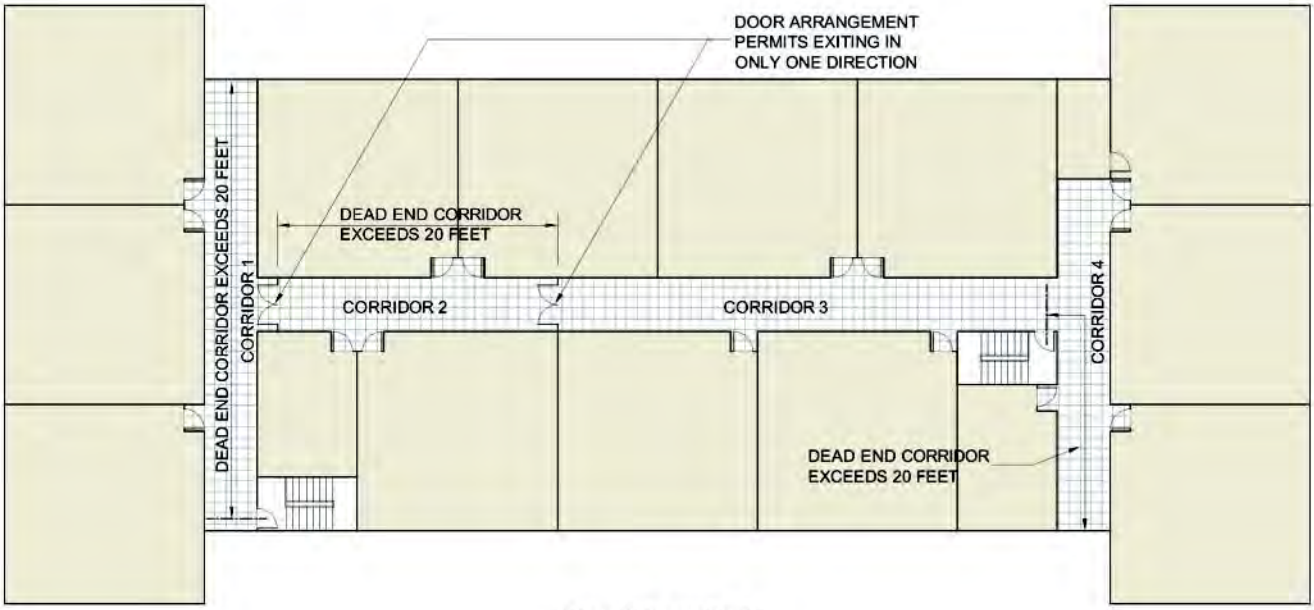
Corridor 1: The dead-end corridor from the uppermost portion of the corridor to the centerline of the stair door. The doors from Corridor 2 swing in to Corridor 1 eliminating Corridor 2 as a possible second mean of egress.

Corridor 2: Corridor 2 is classified as a dead-end corridor because the doors between Corridor 2 and Corridor 3 swing into Corridor 2. The occupants in Corridor 2 have a choice of only one direction to egress.

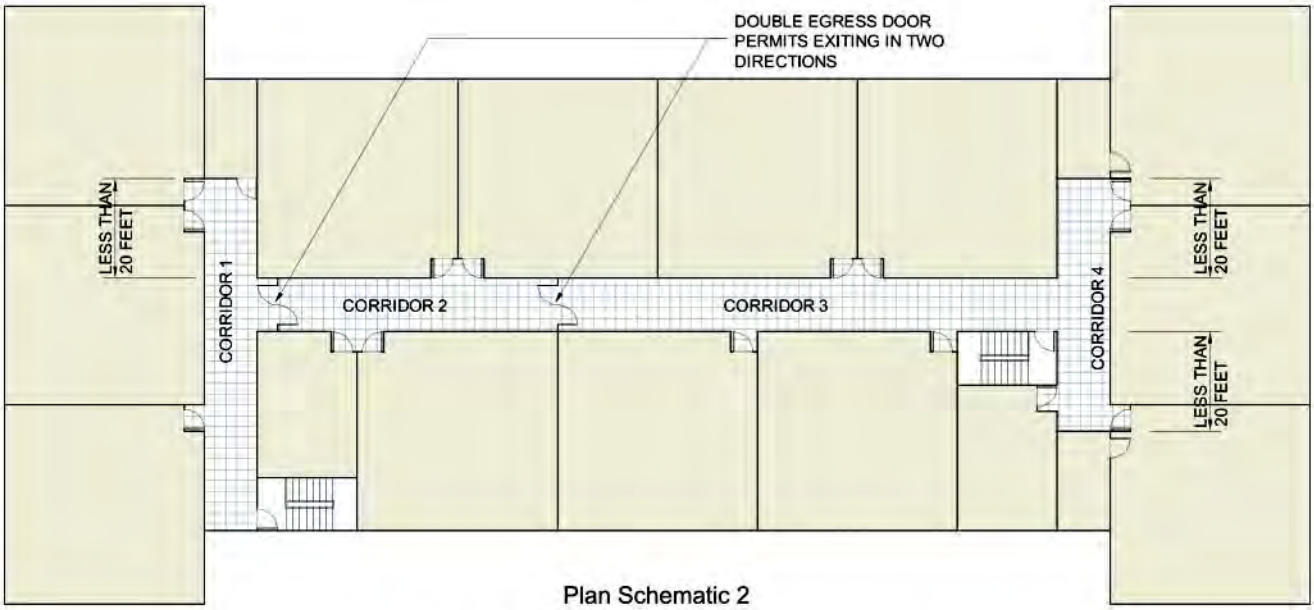
Corridor 4: The dead-end corridors exist from the lowermost portion of the corridor to the centerline of the exit stair.

Plan Schematic 2
Example: Corrected Dead-End Corridors

In this example, the dead-end corridors have been corrected to be less than 20 feet in length. The doors separating Corridors 2 from Corridors 1 and 3 have been made to swing in both directions, allowing the occupants of the corridors to have a choice of directions to reach an exit.



Plan Schematic 1
Upper Floor Level
Example Dead End Corridors
That Exceed Maximum 20 Foot Length
Requirements



Plan Schematic 2
Upper Floor Level
Example Corrected Dead End Corridors
That Comply with Maximum 20 Foot Length
Requirements

DEAD END CORRIDORS

Emergency-Rescue Openings					
Occupancy Classification and Location	**Unsprinklered building**			**Sprinklered Building**	**Code Reference**
	Minimum Net Clear Opening	**Minimum Net Clear Area of Opening**	**Maximum Sill Height**		
Group D Day-care					
Every room or space greater than 250 sq.ft. used for classroom or other Educational occupancies or normally subject to client occupancy, other than bathrooms, shall have not less than one outside window for emergency rescue when a door opening directly to the exterior is not provided.	20 inches wide 24 inches high	5.7 sq. ft.	44 inches	Not required	FBC 1029
Group E Educational					
In buildings of three stories or less: All spaces with an occupant load of six or more students where a door opening directly to the exterior is not provided.	20 inches wide 24 inches high	5.7 sq. ft.	44 inches	Not required	FBC 1029

Window and Panel Assemblies Serving as Emergency-rescue Openings

Latching Device: Operated from not more than 54 inches above the floor and operable by a single motion in the direction of exit, without the use of tools. If a security/storm screen or grille is installed on the outside of the assembly, a single release device for both the emergency rescue opening and security/storm screen grills shall be operable from the inside by a single motion without the use of tools. FBC Sections 423.13.8 and 1029.

Signage: Emergency-rescue windows shall be identified by signage and the release device shall be readily Identifiable.

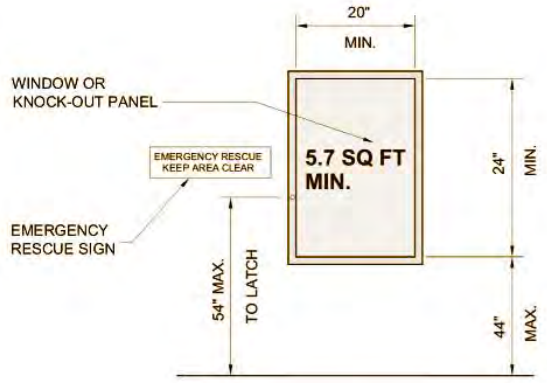
Permanent identification at each emergency rescue opening stating:

"EMERGENCY RESCUE - KEEP AREA CLEAR" FBC Section 423.14.2.3.

Door Serving as Emergency-Rescue Opening

On Ground Level: Door opens directly to an exterior corridor or public way.

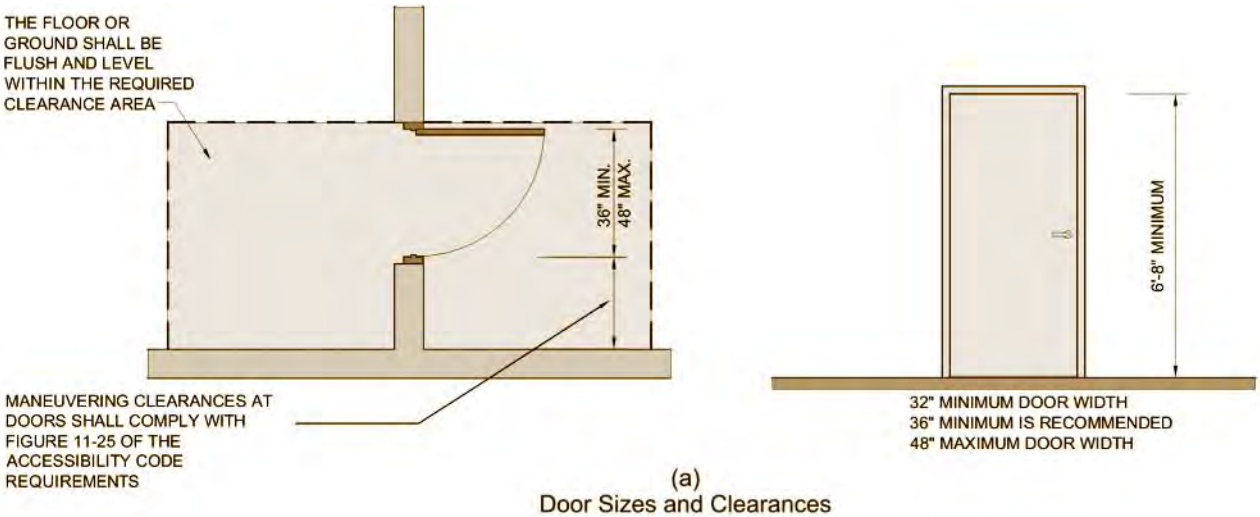
Above ground level: Door opens directly to an exterior corridor or balcony leading directly to a stairway. Exterior corridor or balcony shall have open rails and shall be open to the exterior air.



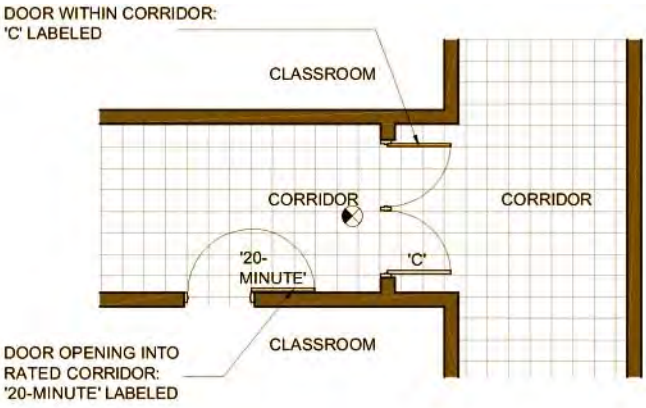
(a)
Window or Knock-out panel serving as an emergency rescue opening

EMERGENCY RESCUE OPENINGS

Doors		
		Code Reference
Size	Minimum width 32 inches (36 inch doors recommended). Maximum width 48 inches. Minimum height 6 feet 8 inches.	FBC 1008.1.1
Operation	Side hinged. Swing in the direction of egress if occupant load of area being served is 6 or greater. Operable from inside by a single operation without the use of tools. Doors for steam rooms, locker rooms, shower rooms, and group toilet rooms shall swing in the direction of exit travel, and shall always be operable for exit from the inside.	FBC 423.13.1
Clearances	Maneuvering clearances at doors shall comply with Figure 11-25, Accessibility Code requirements. The floor or ground area within the required maneuvering clearance area shall be flush and level. A minimum 5 feet by 5 feet level platform on each side of a single door is recommended.	FBC 11-4.13.6
Threshold	Maximum height ½ inches. Interior doors shall have a flat threshold. Flat threshold at class 'A' fire-rated doors with carpet.	FBC 1008.1.7
Required Fire Rating	Doors opening into corridors shall be '20-minute' labeled assemblies. Doors within corridors shall be 'C' labeled assemblies.	FBC 715.4
Fire-Rated Doors	Comply with NFPA 80 and NFPA 252 or NFPA 257. Self-closing. Positive latching.	FBC 715.4.1
	Class 'C' fire-rated assembly View panels: Clear fire-rated glazing in steel frames. Maximum area of 1296 square inches. Bottom of view panel 30 inches above finished floor. Top of view panel 72 inches above finished floor.	FBC 715.4
Smokestop Doors	Each leaf of pair of doors swings in opposite direction. ⅛ inch clearance at frame. Grilles or louvers prohibited. Center mullions prohibited. No locking devices. Smoke detector and illuminated exit signs on each side. Smokestop barrier: 1-hour fire-rated except in sprinklered buildings. Continuous from floor to deck above.	

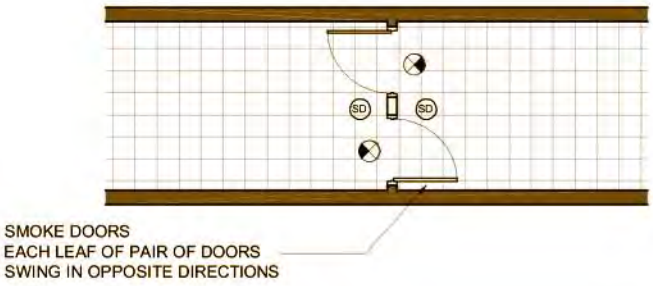


(a)
Door Sizes and Clearances

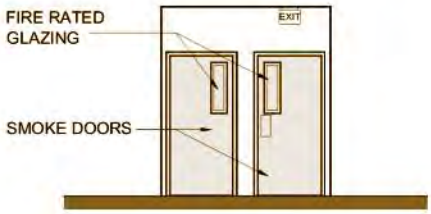


(b)
Door Ratings at Corridors

(c)
Threshold Height



(d.1)
Smoke Door Plan Schematic



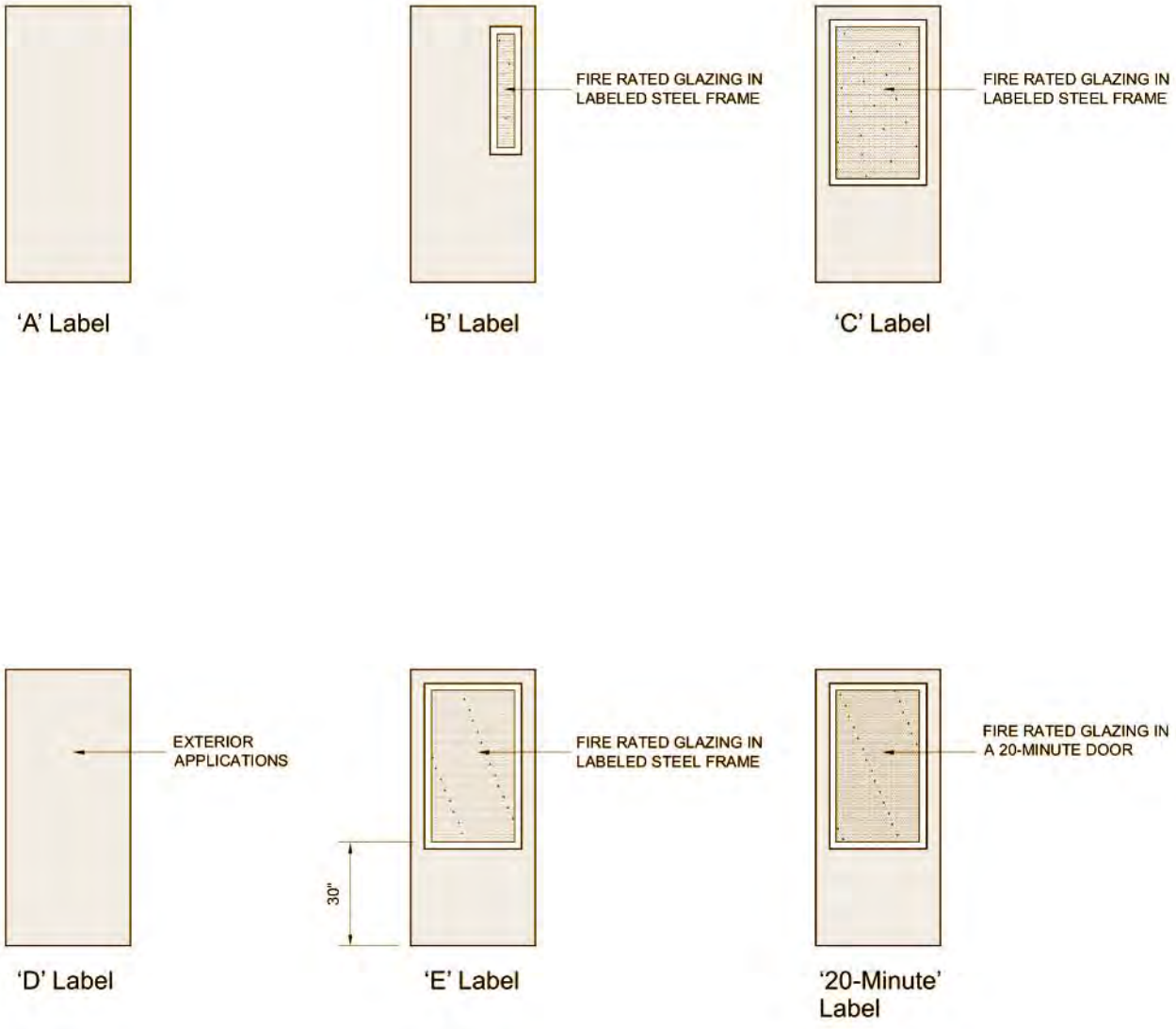
(d.2)
Smoke Door Elevation Schematic

DOORS

Door Fire-Rating Labels				
Label	**Fire Resistance**	**Limited Size of Fire-Rated Glazing**	**Example Use/Location**	**Code Reference**
'A' Label	3-Hour	No glazing allowed.	Doors or openings in walls separating buildings or dividing a single building into fire areas.	FBC Table 715.4 FFPC 8.3.3
'B' Label	1-Hour and 1½ - Hour	Limited size of fire-rated glazing shall be installed in accordance with and complying with NFPA 80.	Doors or openings in enclosures of vertical communication through buildings (stairs, elevators, etc.). Doors in fire-rated corridors.	
'C' Label	¾ - Hour		Doors that open into fire-rated corridors.	
'D' Label	1 ½ - Hour		Doors or openings in exterior walls that are subject to severe fire exposure from outside the building.	
"E' Label	¾ - Hour		Doors or openings in exterior walls that are subject to moderate or light fire exposure from outside the building.	
20-minute	20 minute	Limited to the amount of glass tested in a door.	Doors or openings in walls that require a fire-resistance rating for smoke barriers and exit access corridors.	

Fire protection ratings for products intended to comply with the above shall be as determined and reported by a nationally recognized testing agency in accordance with NFPA 252 or NFPA 257. Fire door assemblies shall be installed in accordance with NFPA 80.

All such products shall have an approved label. FBC Section 715.5.9.



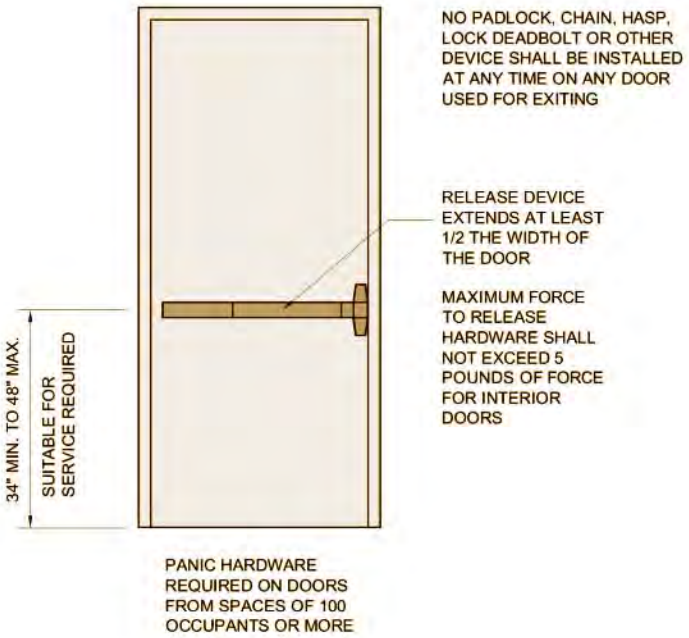
'A' Label | 'B' Label | 'C' Label

'D' Label | 'E' Label | '20-Minute' Label

Note:
Fire resistance glazing shall be installed in accordance with and complying with NFPA 80.

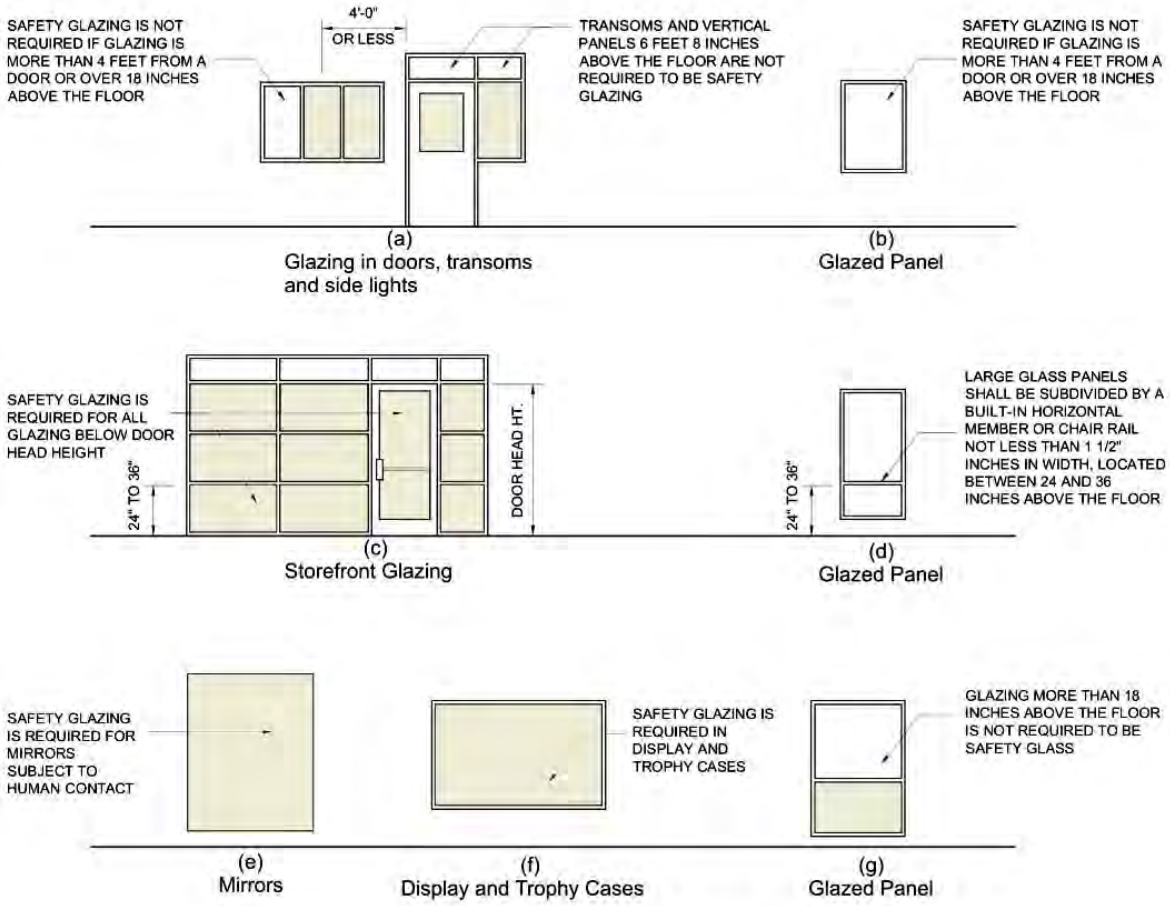
Door Fire Rating Labels

Door Panic Hardware			
Acceptable Lockset Functions			
Location	**Function**	**Operation**	**Code Reference**
Occupancy of 50 or More	Panic Release	For Accessibility Code requirements, 5 pounds of pressure maximum for interior and 8.5 pounds of pressure for exterior doors.	FBC 1008.1.10
Fire Doors		Positive latching device.	
Smoke Doors	No Latching Device	None.	
Classrooms	Classroom Security	Latch locked or unlocked by key from inside or outside room; inside always free for exiting.	
Offices	Classroom Security	Latch locked or unlocked by key from inside or outside; inside always free for exiting.	
Single-Use Toilet Rooms Pre-K Through Grade 3	Bath Privacy	Push-button locking from inside. Can be opened from the outside without the use of special tools or key. Turning inside knob or shutting door releases locking button, preventing lockout.	
Other Single-Use Toilet Rooms	Bath Privacy	Push-button locking from inside. Readily opened from the inside. Turning inside knob or shutting door releases locking button, preventing lockout.	
Group Toilet Rooms	Classroom Security or Classroom Deadbolt Lock	Latch locked or unlocked by key from inside or outside room; inside always free for exiting.	
Storerooms Mechanical Rooms Electrical Rooms	Storeroom	Outside knob fixed. Entrance by key only. Inside always free for exiting.	
Time-Out Rooms	Electromagnetic Locking Device May Be Used	Push-button engagement mounted outside time-out room door adjacent to the door frame.	FBC 423.26.2
Hardware			
General	Doors and gates shall be equipped with hardware that will allow egress at all times without assistance. Projecting hardware on doors swinging into a means of egress is not considered an obstruction if the door opens flat against the wall. No padlock, chain, hasp, lock, deadbolt or other device shall be installed at any time on any door used for exiting. Doors that by code require closers, and other doors subject to wind exposure, shall be equipped with closers to prevent slamming and uncontrolled opening.		FBC 423.13.6

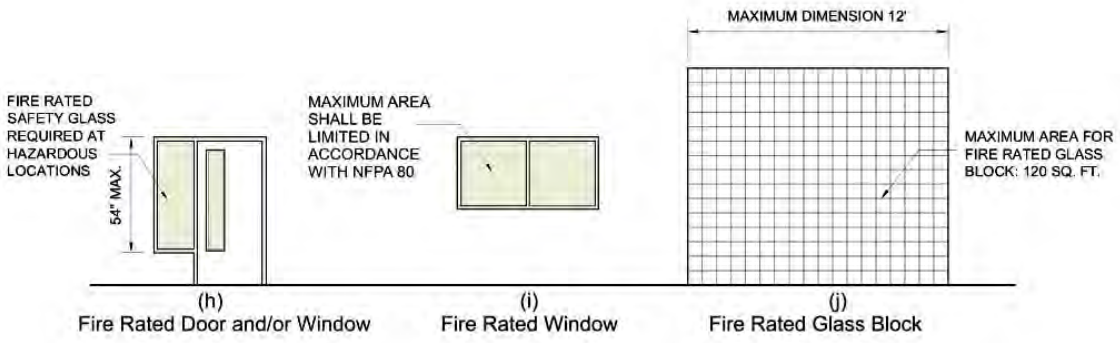


Door Panic Hardware

Safety and Fire-Rated Glazing		
		Code Reference
Hazardous Locations	Individual glazed areas, including glass mirrors, in hazardous locations shall pass the test requirements of CPSC 16-CRF, part 1201. Glazing in hazardous locations shall be tempered glass, safety glass, safety plastic, or in fire-rated assemblies, impact-resistant fire-rated glass. Specific hazardous locations include: Glazing in swinging doors. Enclosures of whirlpools, saunas, steam rooms, locker rooms and showers. Display and trophy cases, casework. Full-length mirrors subject to human contact. Glazed panels in fire extinguisher, fire hose, and fire blanket cabinets.	FBC 423.13.7 FBC 423.13.7.1 FBC 423.13.7.2
All Panels and Storefront	Glazed panels within 48 inches of a door shall be tempered glass, safety glass, or in fire-rated assemblies, impact-resistant fire-rated glass, excluding transoms or vertical panels above 6 feet 8 inches. Large glass panels shall be subdivided by a built-in horizontal member or a permanent chair rail, not less than 1 ½ inches in width, located between 24 and 36 inches above the floor. All glazed panels beginning 18 Inches or less from the floor, greater than 9 sq ft in area, with a walking surface within 36 inches of the panel, shall be tempered or safety glass. All storefronts shall use tempered or safety glass for all glazing below door head height.	FBC 423.13.7 FBC 423.13.7.1 FBC 423.13.7.2
Fire-Rated Glazing	Fire-rated assemblies shall display a permanent stamp, label, or mark identifying the product and fire rating. Fire-protection-rated glazing shall be installed in accordance with and complying with the size limitations set forth in NFPA 80. ¾-hour glass block assemblies shall be labeled to conform to NFPA 257 or UL 9. 1-hour and ½ hour walls/partitions, 120 sq ft maximum. Maximum dimension, 12 feet. The aggregate area of glazing in fire doors, fire windows, side lights, and transoms in 1-hour fire-resistant partitions shall not exceed 25 percent of the area of a wall separating a room or space from a corridor.	FBC Table 715.4 FBC 2110.1.1 FBC 715.5 FFPC 8.3.3.9

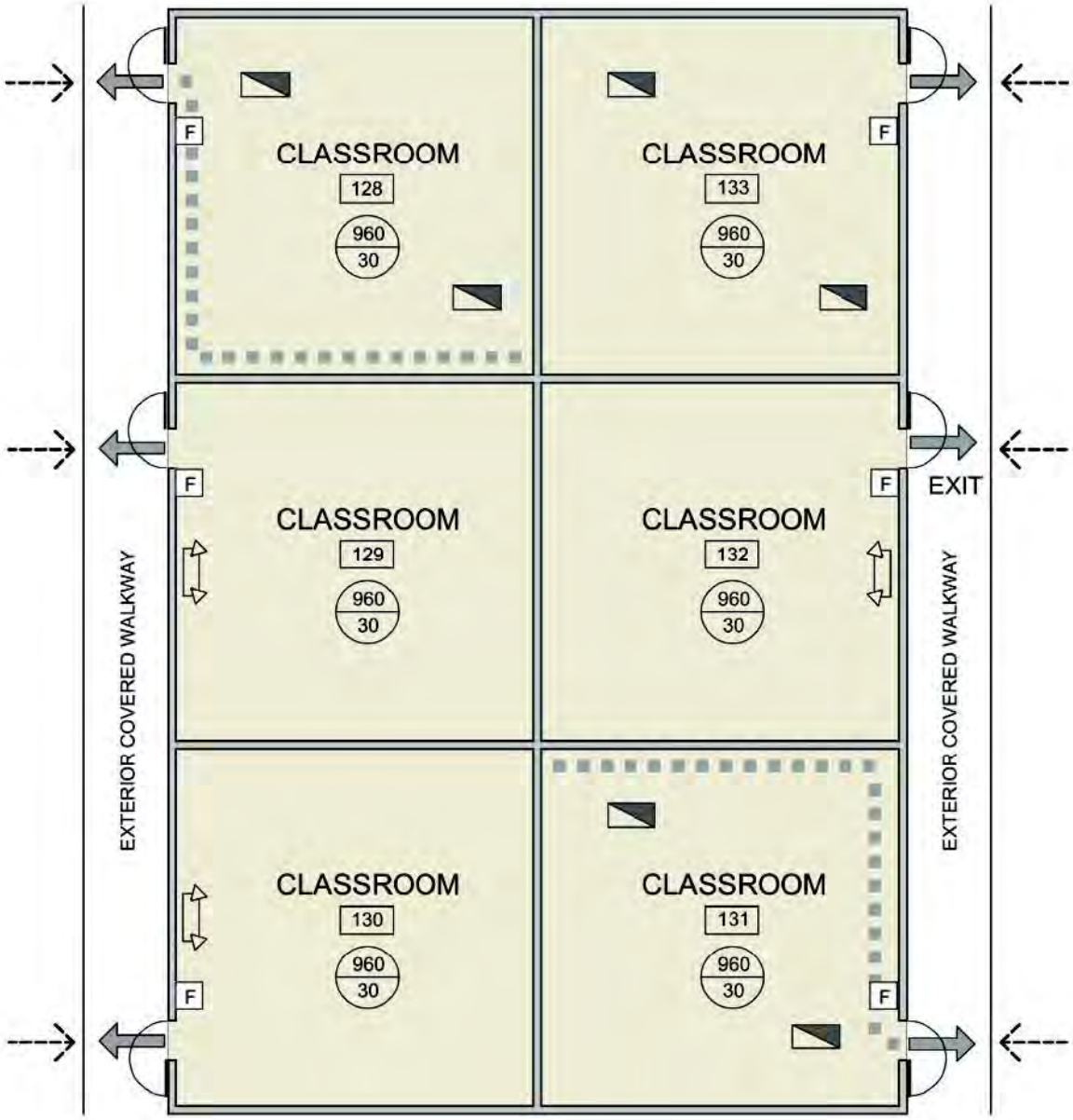


HAZARDOUS LOCATIONS



SAFETY AND FIRE RATED GLAZING

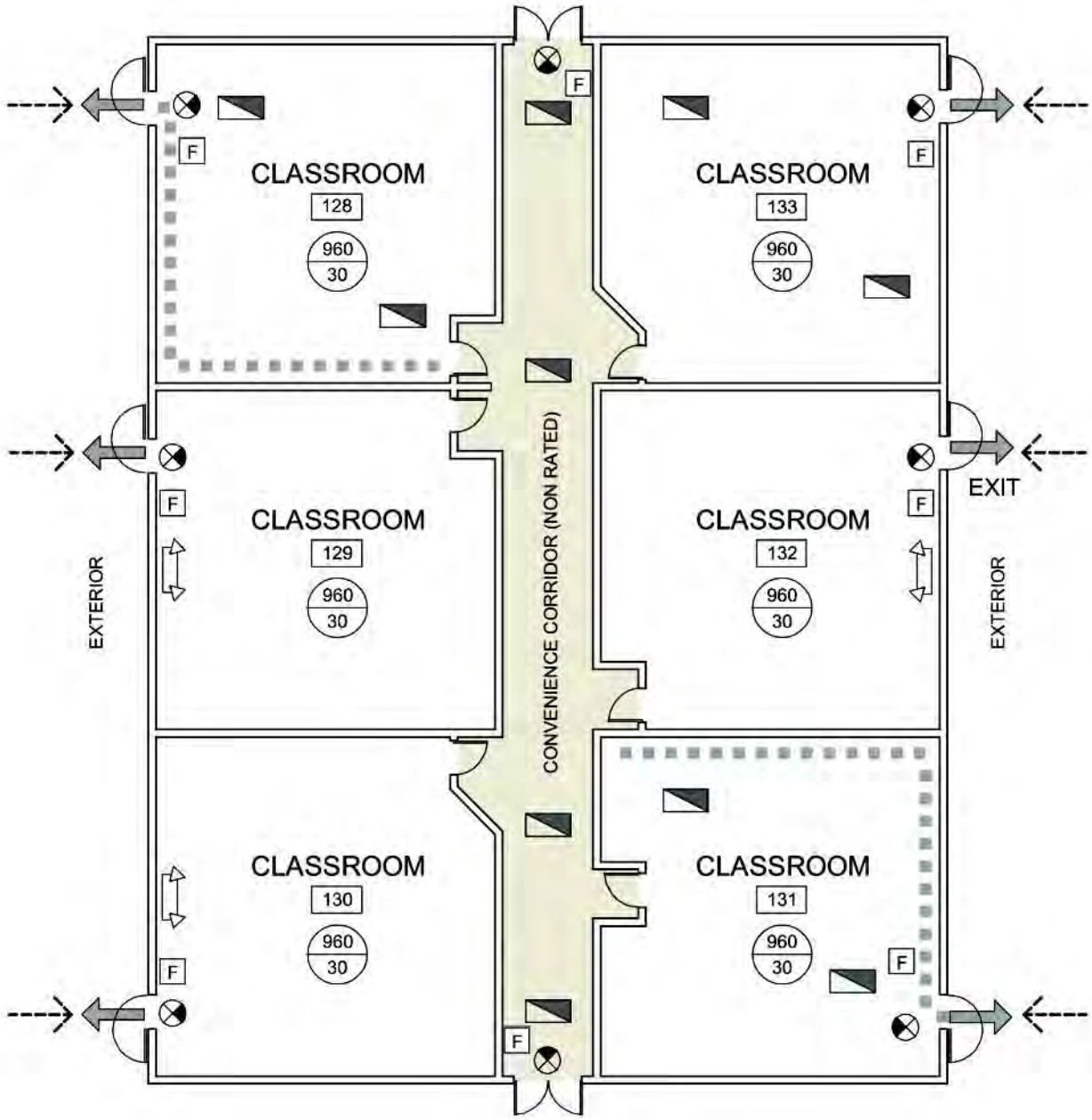
Classrooms with all Primary Egress to the Exterior Group E Educational Occupancy Unsprinklered Building		
		Code Reference
Occupant Load	49 or less per student-occupied space.	FBC Table 1004.1
Egress	One means of egress leading directly to the exterior.	FBC 423.13.1
Egress Doors	Exit doors are sized to meet requirements of egress width: 32 inches minimum clear opening width (36-inch wide door recommended). 6 feet 8 inches minimum height. Swing in the direction of exit travel. Side-hinged type. Always operable from the inside by a single operation and without a key.	FBC 1008.1.1 FBC 423.13.1
Travel Distance	150 feet unsprinklered building.	FBC Table 1016.1
Emergency Rescue and Access Opening	Not required; egress is directly to the exterior of the building for all student-occupied spaces.	FBC 1029
Access opening for Fire Department Use	Provided by exit doors.	
Fire-Rated Walls	None.	Not Applicable
Emergency Lighting	Required in each classroom. Illumination level.	FBC 423.17.1 FFPA 7.9.2
Illuminated Exit Signs	Not required, unless exiting is not clear.	FBC Table 1006.1 FFPC 7.10



(a)
Example Schematic Floor Plan
Unsprinklered Building

CLASSROOMS WITH ALL PRIMARY EGRESS DIRECTLY TO EXTERIOR

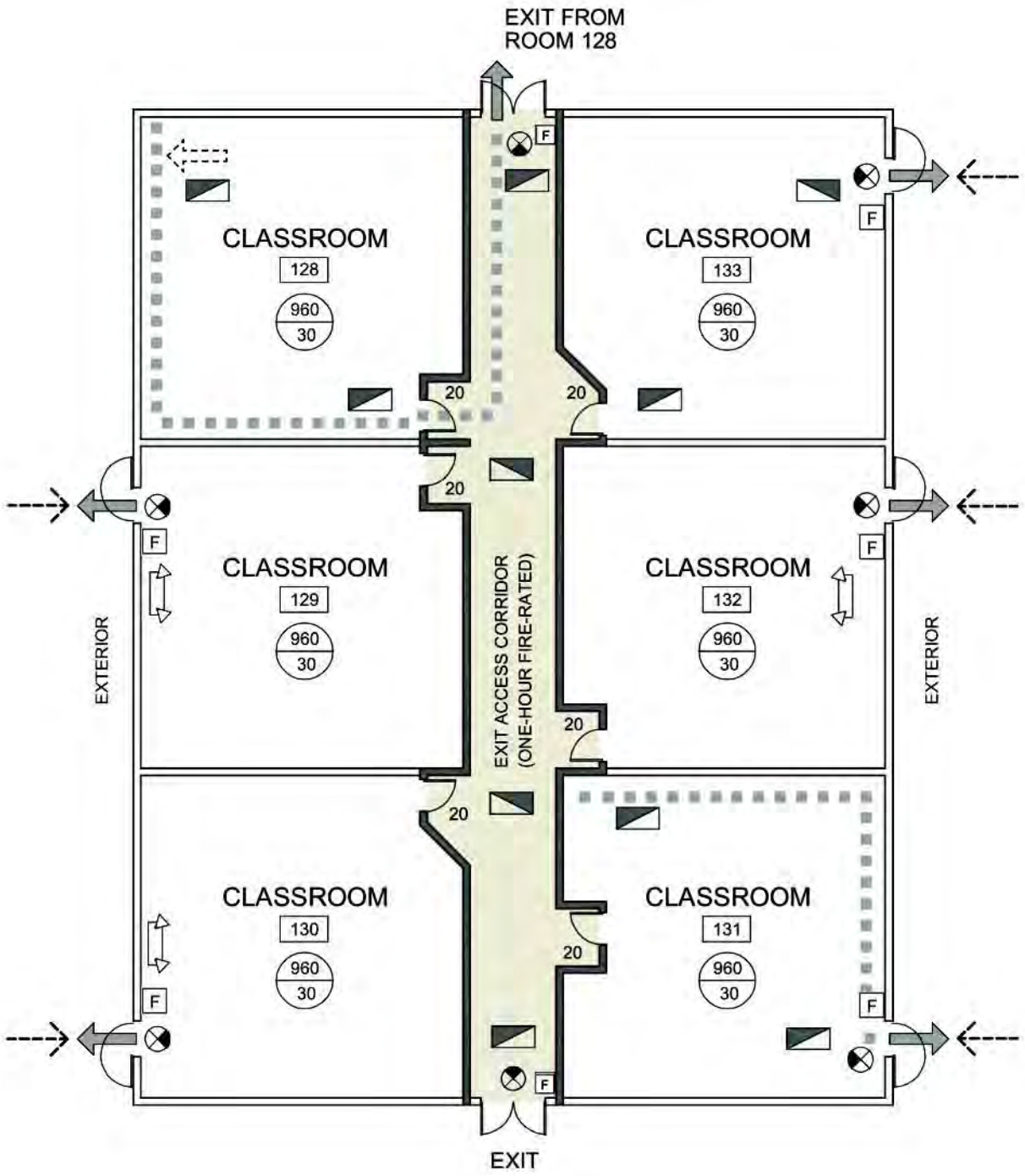
Classrooms with Convenience Interior Corridor And Exits Directly to the Exterior Group E Educational Occupancy Unsprinklered Building		
		Code Reference
Occupant Load	49 or less per student-occupied space.	FBC Table 1004.1
Egress	One means of egress leading directly to the exterior.	FBC 423.13.1
Egress Doors	Exit doors are sized to meet requirements of egress width: 32 inches minimum clear opening width (36-inch wide door recommended). 6 feet 8 inches minimum height. Swing in the direction of exit travel. Side-hinged type. Always operable from the inside by a single operation and without a key.	FBC 1008.1.1 FBC 423.13.1
Travel Distance	150 feet unsprinklered building.	FBC Table 1016.1
Emergency Rescue and Access Opening	Not required; egress is directly to the exterior of the building.	FBC 1029
Access opening for Fire Department Use	Provided by exit doors.	
Fire-Rated Walls	Not required; at least one exit door from each classroom opens directly to the exterior at the ground level.	FBC 1018.1 Exception 1
Emergency Lighting	Required in each classroom and in the convenience corridor.	FBC 423.17.1 FFPC 7.9.2
Illuminated Exit Signs	Over each door exiting directly to the exterior.	FBC 1006.3 FFPC 7.10
Signage	A graphic diagram of primary and emergency evacuation routes shall be posted adjacent to the primary exit door from each space.	FBC 423.14.2.4



(a)
Example Schematic Floor Plan
Unsprinklered Building

CLASSROOMS WITH CONVENIENCE INTERIOR CORRIDOR
ALL PRIMARY EXITS DIRECTLY TO EXTERIOR

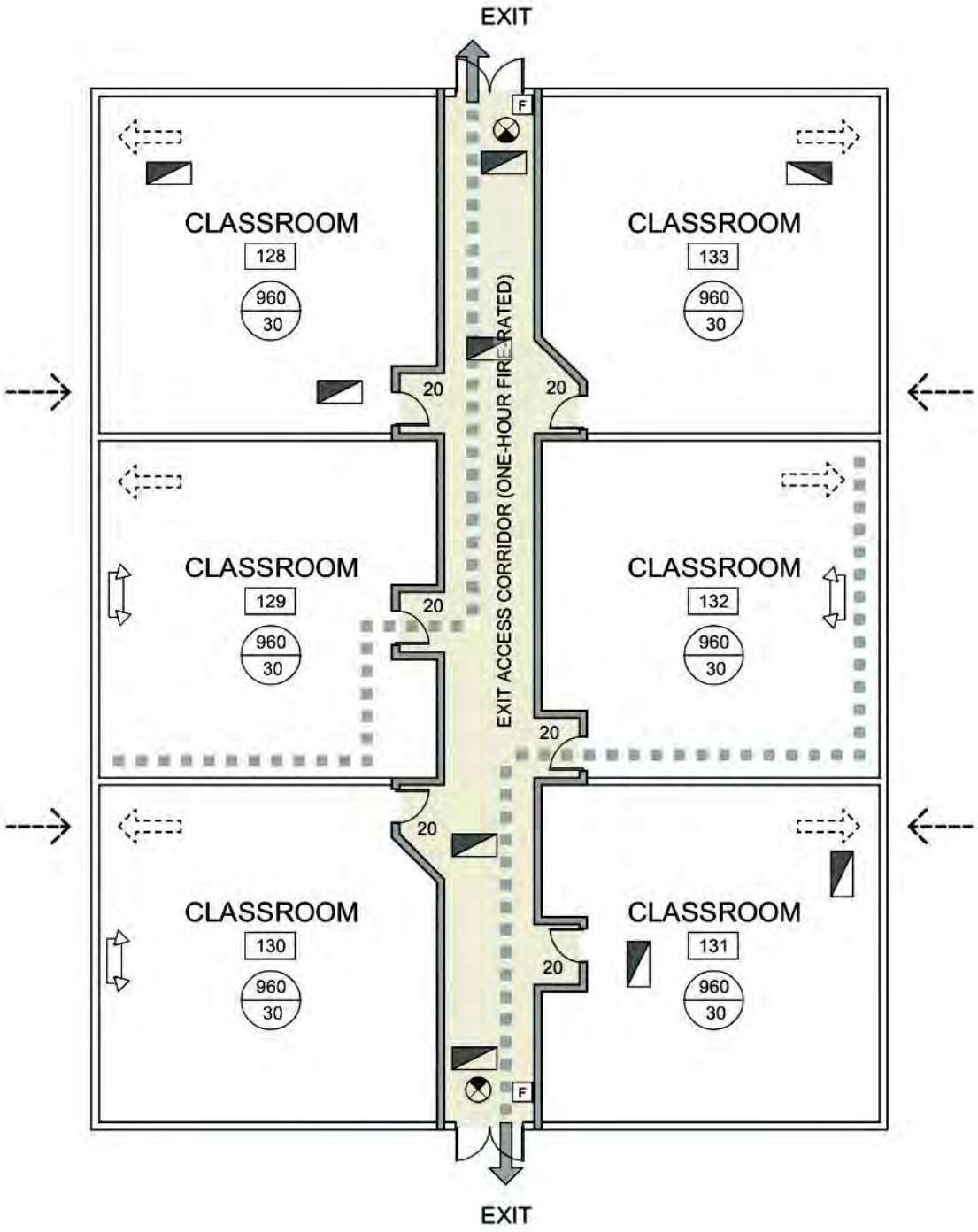
One or More Classrooms Exiting Through an Interior Corridor and Remaining Classrooms Exiting Directly to the Exterior Group E Educational Occupancy Unsprinklered Building		
		Code Reference
Occupant Load	49 or less per student-occupied space.	FBC Table 1004.1
Egress	Room 128 exits through the exit access corridor. All other classrooms exit directly to the exterior.	FBC 423.13.1
Egress Doors	Exit doors are sized to meet requirements of egress width: 32 inches minimum clear opening width (36-inch wide door recommended). 6 feet 8 inches minimum height. Swing in the direction of exit travel. Side-hinged type. Always operable from the inside by a single operation and without a key. Doors opening into the exit access corridor from non-rated spaces shall be 20-minute labeled.	FBC 1008.1.1 FBC 423.13.1
Travel Distance	150 feet unsprinklered building.	FBC Table 1016.1
Emergency Rescue and Access Opening	Required for student-occupied Classroom 128, which exits through the exit access corridor. Not required for student-occupied classrooms that exit directly to the exterior of the building.	FBC 423.13.1 FBC 1029
Access opening for Fire Department Use	Exit doors provide the required access opening in each 50 feet of exterior wall on an accessible side of the building. The distance around the perimeter of the building, measured from the exit door of Classroom 129 to the exit door of the upper portion of the exit access corridor, does not exceed 50 feet.	
Fire-Rated Walls	Fire-resistance rating of exit access corridors shall be 1-hour fire-rated assemblies. Walls shall extend from the floor slab to the underside of the structural deck above.	FBC 1018.1
Emergency Lighting	Required in each classroom and in the convenience corridor. Illumination level.	FBC 423.17.1 FFPC 7.9.2
Illuminated Exit Signs	Shall be provided in the exit access corridor and at each exit door exiting to the exterior from the corridor.	FBC 1006.3 FFPC 7.10
Signage	A graphic diagram of primary and emergency evacuation routes shall be posted adjacent to the primary exit door from each space.	FBC 423.14.2.4



(a)
Example Schematic Floor Plan
Unsprinklered Building

ONE OR MORE CLASSROOMS EXITING THROUGH AN INTERIOR CORRIDOR AND REMAINING CLASSROOMS EXIT DIRECTLY TO EXTERIOR

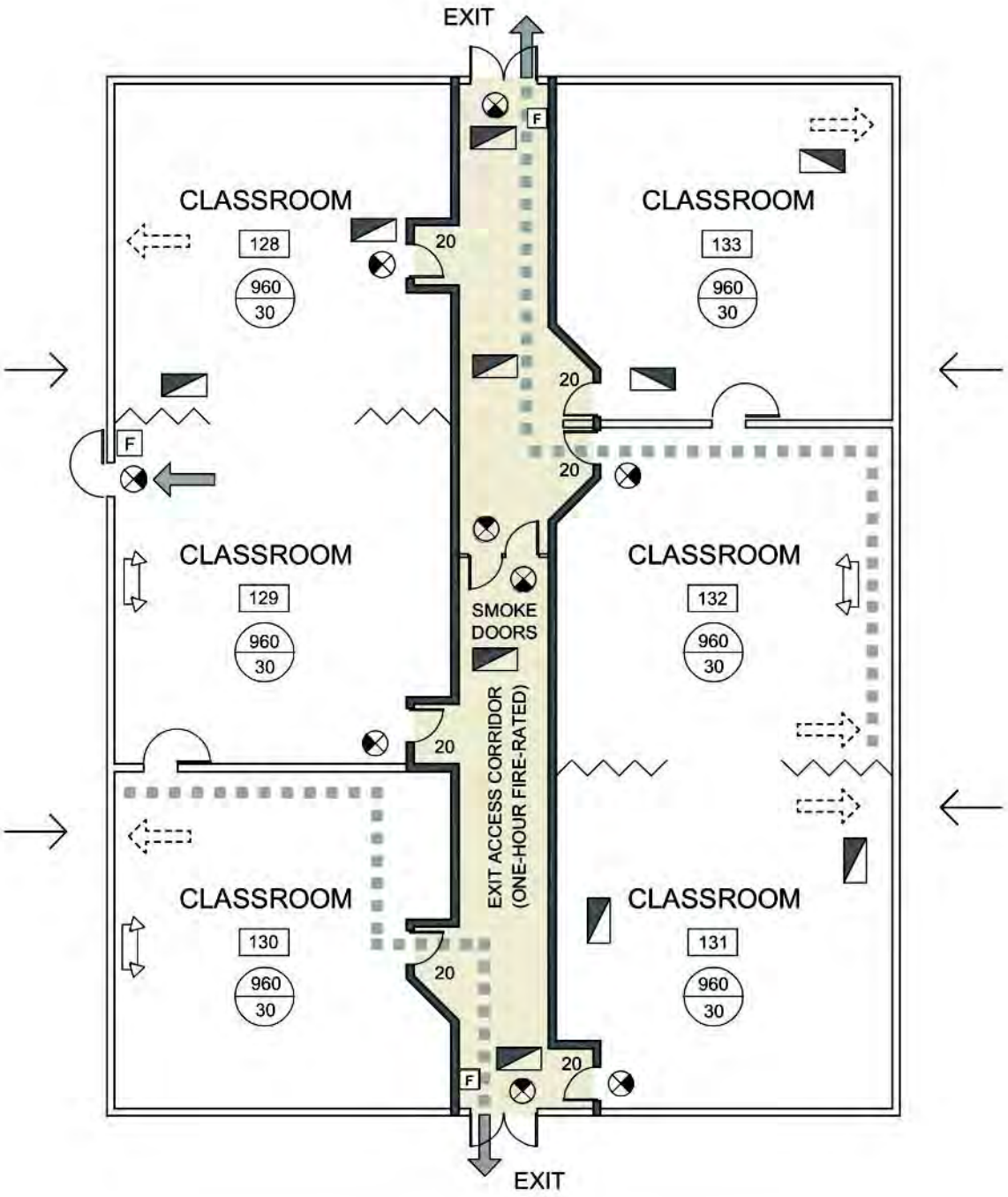
Classrooms with all Egress through an Exit Access Corridor Group E Educational Occupancy Unsprinklered Building		
		Code Reference
Occupant Load	49 or less per student-occupied space.	FBC Table 1004.1
Egress	All classrooms exit through the exit access corridor.	FBC 423.13.1 FBC 1018.1
Egress Doors	Exit doors are sized to meet requirements of egress width: 32 inches minimum clear opening width (36-inch wide door recommended). 6 feet 8 inches minimum height. Swing in the direction of exit travel. Side-hinged type. Always operable from the inside by a single operation and without a key. Doors opening into the exit access corridor from non-rated spaces shall be 20-minute labeled.	FBC 1008.1.1 FBC 423.13.1
Travel Distance	150 feet unsprinklered building.	FBC Table 1016.1
Emergency Rescue and Access Opening	Required for student-occupied classroom where a door opening directly to the exterior is not provided.	FBC 423.13.1
Access opening for Fire Department Use	Access openings for fire department use are required in each 50 feet of exterior wall on an accessible side of the building.	
Fire-Rated Walls	Fire-resistance rating of exit access corridors shall be 1-hour fire-rated assemblies. Walls shall extend from the floor slab to the underside of the structural deck above.	FBC 1018.1
Emergency Lighting	Required in each classroom and in the convenience corridor. Illumination level.	FBC 423.17.1 FFPC 7.9.2
Illuminated Exit Signs	Shall be provided in the exit access corridor and at each exit door exiting to the exterior from the corridor.	FBC 1006.3 FFPC 7.10
Signage	A graphic diagram of primary and emergency evacuation routes shall be posted adjacent to the primary exit door from each space.	FBC 423.14.2.4



(a)
Example Schematic Floor Plan
Unsprinklered Building

CLASSROOMS WITH EXITING THROUGH AN INTERIOR CORRIDOR

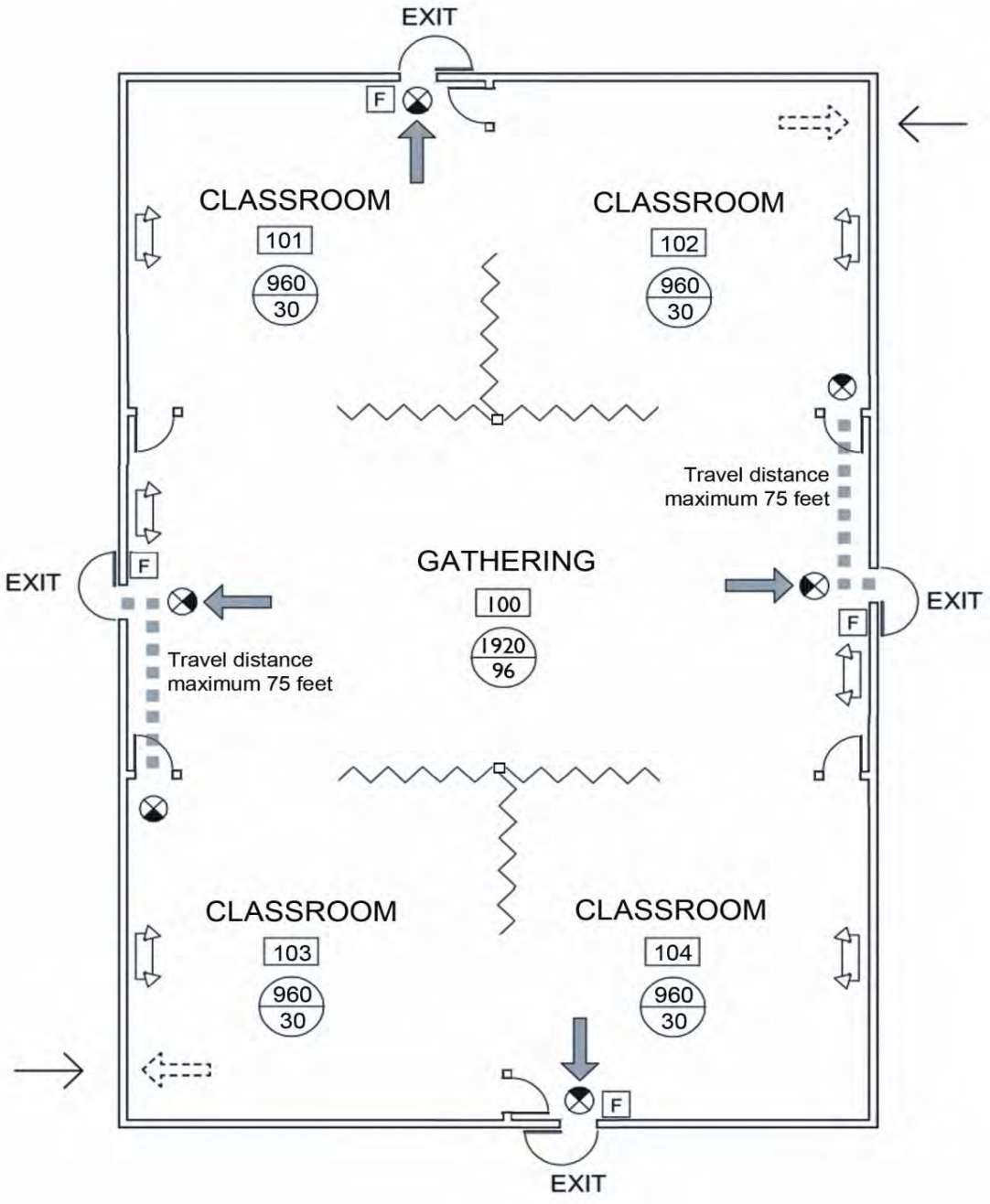
Egress from Rooms Divided with a Folding Partition Group E Educational Occupancy, Unsprinklered Building.		
Rooms 128/129 and 131/132 shall be evaluated with the folding partition in both the open position and the closed position.		
Folding Partition in Open Position		**Code Reference**
Occupant Load	Combining two classrooms generates an occupant load of 50 or more.	FBC Table 1004.1
Egress	Combined Classrooms 131/132 must have two means of egress. The first is a door leading in to the lower exit access corridors system. The second is a door leading in to the upper exit access corridor system. The lower and upper corridors are divided into two separate atmospheres by the smoke doors and partition. Emergency rescue and access opening are provided to the exterior. Combined Classrooms 128/129 have two means of egress where one opens directly to the exterior. Using either of the two doors that open into the exit access corridor, ½ diagonal rule is met.	FBC 423.13.1 FBC 1018.1
Folding Partition in Closed Position		
Occupant Load	Each classroom is 49 or less per student-occupied space.	FBC Table 1004.1.1
Emergency Rescue Opening	Each classroom has one means of egress and one emergency rescue opening directly to the exterior. Classroom 129 has one means of egress opening directly to the exterior.	FBC 423.13.1 FBC 1018.1 FBC 1029
Folding Partition in Open and Closed Position		
Egress Doors	Exit doors are sized to meet requirements of egress width: 32 inches minimum clear opening width (36-inch wide door recommended). 6 feet 8 inches minimum height. Swing in the direction of exit travel. Side-hinged type. Always operable from the inside by a single operation and without a key. Doors opening into the exit access corridor from non-rated spaces shall be 20-minute labeled.	FBC 1008.1.1 FBC 423.13.1
Travel Distance	150 feet unsprinklered building.	FBC Table 1016.1
Emergency Rescue Opening	Required for student-occupied classroom where a door opening directly to the exterior is not provided.	FBC 423.13.1
Access Openings for Fire Department Use	Access openings for fire department use are required in each 50 feet of exterior wall on an accessible side of the building.	
Fire-Rated Walls	Fire-resistance rating of exit access corridors shall be 1-hour fire-rated assemblies. Walls shall extend from the floor slab to the underside of the structural deck above.	FBC Table 1018.1
Emergency Lighting	Required in each classroom and in the exit access corridor. Illumination level.	FBC 423.17.1 FFPC 7.9.2
Illuminated Exit Signs	Shall be provided in the exit access corridor.	FBC 1006.3 FFPC 7.10



(a)
Example Schematic Floor Plan
Unsprinklered Building

EGRESS FROM ROOMS DIVIDED WITH A FOLDING PARTITION

Egress from Classrooms through an Intervening space.		
Rooms 100,101,102,103 and, 104 shall be evaluated with the folding partitions both in the open position and the closed position.		
Folding Partition in Open Position		**Code Reference**
Occupant Load	Combining Classrooms and gathering spaces generates an occupant load of 50 or more. Combined Classrooms 101/102 and 103/104 generate an occupant load of 50 or more.	FBC Table 1004.1
Egress	Exiting from gathering 100 is including Classrooms 101, 102, 103 and 104 two exits directly to the exterior.	FBC 1020
Folding Partition in Closed Position		
Occupant Load	Gathering 100 generates an occupant load of 50 or more.	FBC Table 1004.1.1
Egress	Exiting Gathering 100 has two means of egress directly to the exterior. Classrooms 101 and 104 have exit doors directly to the exterior. Classrooms 102 and 103 have exit doors to Gathering 100. The travel distance in Gathering 100 to exit doors from each classroom does not exceed 75 feet.	FBC 104.2 FBC 1020
Emergency Rescue Opening	Classrooms 102 and 103 have one means of egress and one emergency rescue opening directly to the exterior.	FBC 1029
Folding Partition in Open and Closed Position		
Occupant Load	Gathering 100 generates an occupant of 50 or more. Combined Classrooms 101/102 and 103/104 generate an occupant load of 50 or more.	FBC Table 1004.1.1
Egress Doors	Exiting from Gathering 100 is two exits directly to the exterior. Exiting combined Classrooms 101/102 and 103/104 is directly to the exterior and through Gathering 100. Exiting meets requirement for two separated atmospheres.	FBC 1014.2 FBC 1020
Egress Docks	Exit doors are sized to meet requirements of egress width. 32 inches minimum door opening width (36-inch wide door) recommended. 6 feet 8 inches minimum height.	FBC 1008.1.1 FBC 423.13.1
Travel Distance	150 feet unsprinklered building.	FBC Table 1016.1
Emergency Rescue Opening	Classrooms 102 and 103 have emergency rescue openings directly to the exterior.	FBC 1029
Access Openings for Fire Department Use	Access openings for fire department use are required in each 50 feet of exterior wall on an accessible side of the building.	
Fire-Rated Walls	Partitions between Classrooms 101, 102, 103 and 104 are not required to be fire-rated.	FBC 1014.2
Emergency Lighting	Required in each classroom and related student occupied space.	FBC 423.17.1 FFPC 7.9.2
Illuminated Exit Signs	Require in assembly occupied spaces.	FFBC 1006.3 FPC 7.10



(a)
Example Schematic Floor Plan
Unsprinklered Building

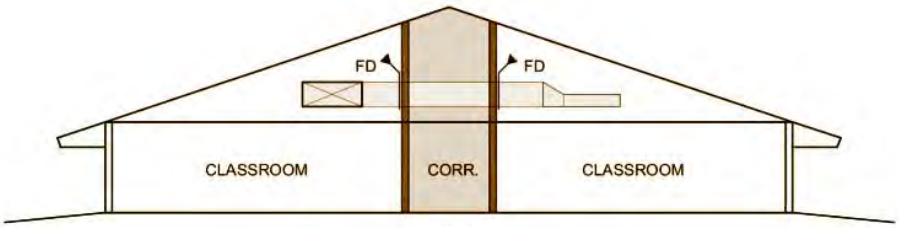
EGRESS THROUGH AN INTERVENING SPACE

Corridor Protection Group E Educational Occupancy Unsprinklered Building		
		Code Reference
Example 1	Fire-resistance rating 1-hour: Corridor walls in exit access corridors shall be 1-hour fire-rated assemblies. Partitions shall extend from the ground floor slab to the underside of the structural deck above.	FBC Table 1018.1 FBC 709.4
Example 2	Fire-resistance rating 1-hour: Corridor walls in exit access corridors shall be 1-hour fire-rated assemblies and may terminate at a corridor ceiling assembly where the assembly has a 1-hour fire-resistance rating when tested as a wall.	FBC Table 1018.1 FFPC 14.3.6(3)
Example 3	Fire-resistance rating 1-hour: Corridor walls in exit access corridors shall be 1-hour fire-rated assemblies and shall extend from the ground floor slab to the second floor slab and from the second floor slab to the underside of the structural deck above. The second floor slab shall be 1-hour fire-rated construction and shall be supported by a 1-hour fire-rated assembly.	FBC Table 1018.1 FBC 709.4
Example 4	Fire-resistance rating 1-hour: Corridor walls in exit access corridors shall be 1-hour fire-rated assemblies and shall extend from the ground floor slab to the second floor slab and from the second floor slab to the underside of the corridor ceiling assembly where the assembly has a 1-hour fire-resistance rating when tested as a wall.	FBC Table 1018.1 FBC 709.4 FFPC 14.3.6(3)

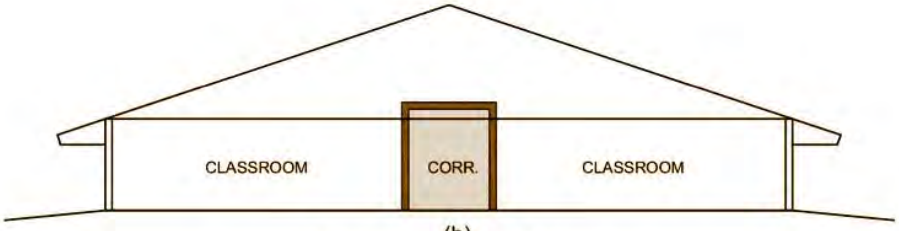
Administration corridors in Group B occupancies, with an occupant load of less than 30 are not required to be fire-rated. FBC Table 1018.1.

Administration corridors in Group B occupancies, with an occupant load of 30 or more in a sprinklered building are not required to be fire rated. FBC Table 1018.1.

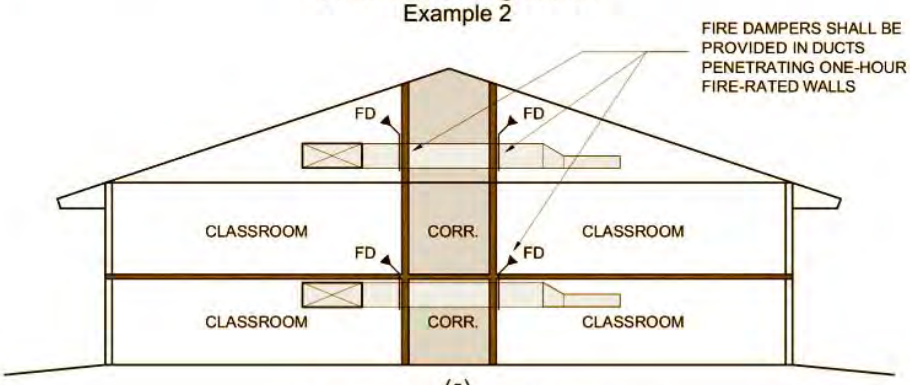
Corridors shall not be used as return air plenums. FBC Section 423.15.2.



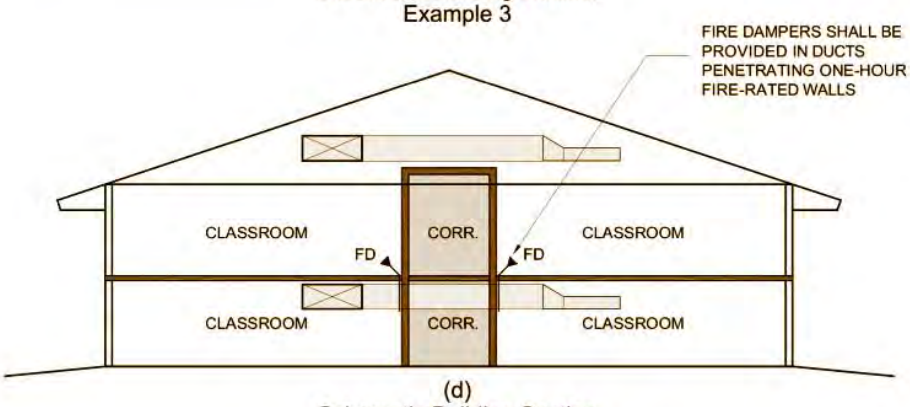
(a)
Schematic Building Section
Example 1



(b)
Schematic Building Section
Example 2



(c)
Schematic Building Section
Example 3

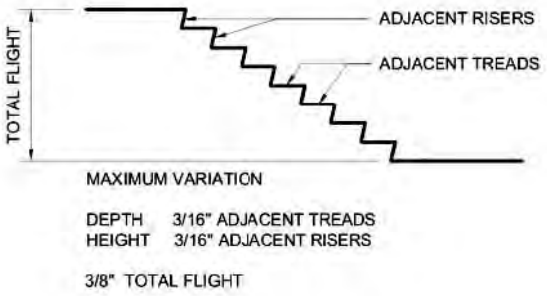


(d)
Schematic Building Section
Example 4

CORRIDOR PROTECTION

Stairs			
			Code Reference
Proportion	Minimum changes in elevation	Changes in elevation of 12 inches or less shall be made by ramps.	FBC 1003.5
	Risers	Risers shall be maximum height of 7 inches and a minimum height of 4 inches.	FBC 1009.4.2
	Treads	Treads shall be a minimum of 11 inches. Where a change in level in a means of egress not exceeding 21 inches is achieved by a stair, the minimum tread depth Is 13 inches.	FBC 1009.3 FBC 1003.4
	Variation	Stair treads and risers shall be of uniform size and shape. The tolerance between the largest and smallest riser height or between the largest and smallest tread depth shall not exceed ⅜ inch (9.5mm) in any flight of stairs. The greatest winder tread depth at the walk line within any flight of stairs shall not exceed the smallest by more than ⅜ inch (9.5mm).	FBC 1009.4.4
Widths	Stairs	Minimum stair width shall be based on the number of occupants served, but not less than 44 inches. Stairs shall not decrease in width along the direction of egress travel.	FBC 1009.1 FBC 1009.4
	Landings	The width of landings shall be no less than the width of stairways they serve. Every landing shall have a minimum dimension measured in the direction of travel equal to the width of the stairway. Exception: Landing shall be permitted to be no more than 4 feet in the direction of travel provided the stair has a straight run. During its swing, any door in a means of egress shall leave unobstructed at least one half of the required width of an aisle, corridor, passageway, or landing.	FBC 1009.4 FBC 1009.5
Landings	A flight of stairs shall not have a vertical rise of more than 12 feet between floors or landings.		FBC 1009.7
Storage	There shall be no enclosed, useable space within an exit enclosure, including under stairs.		FBC 423.20.1

(a)
Changes in elevation of 12 inches or less in exit access corridors, exits, and exit discharges shall be made by ramps

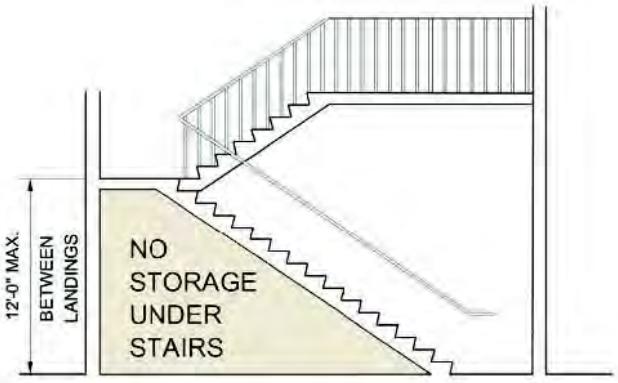


(b)
Dimensional Uniformity

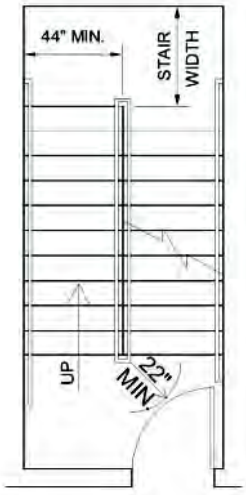
STAIR TREADS AND RISERS
MINIMUM RISER 4"
MAXIMUM RISER 7" MINIMUM TREAD 11"

RULE OF THUMB
2 R (RISERS) + 1 T (TREADS) = 24 TO 25

(c)
Stair Risers and Treads



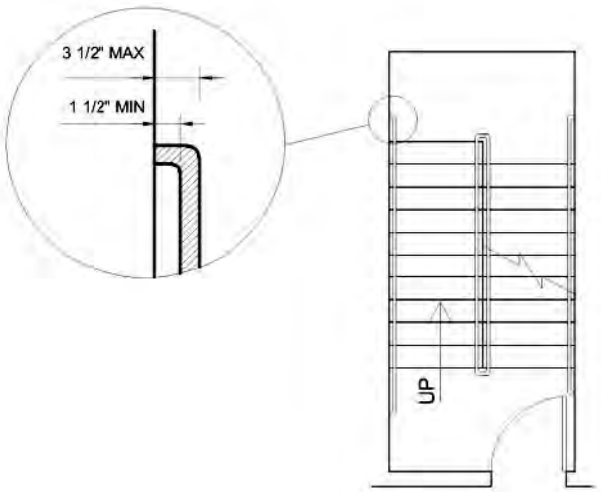
(d)
Stair Landings



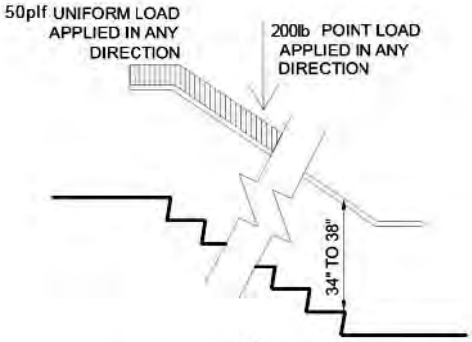
(e)
Stair Clearances

STAIRS

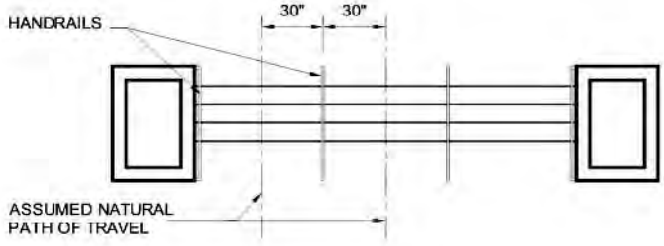
Handrails at Stairs		
		Code Reference
Location	Stairways shall have handrails on each side. Exception: Aisle stairs provided with a center handrail need not have additional handrails. Stairs shall be clear of all obstructions except projections not exceeding 4 ½ inches at or below handrail height on each side. Handrails shall extend at least 12 inches horizontally beyond the top riser of a flight. At the bottom, the handrails shall continue to slope for a distance of the depth of one tread from the bottom riser. Clear space between handrail and wall shall be a minimum of 1½ inches.	FBC 1009.12 FBC 1012.7 FBC 1012.8 FBC 11-4.9.4
Height	Stairways shall be equipped with handrails located no less than 34 inches or more than 38 inches above the leading edge of a tread. Facilities housing pre-K through grade six should also include a second handrail located 26 inches in height.	FBC 1012.2
Handrail Loading	Handrails shall be designed and constructed for a concentrated load of 200 lbs applied at any point and in any direction. Handrails shall be designed and constructed for a load of 50 plf applied in any direction.	FBC 1607.7
Handrail Spacing	Handrails shall be provided within 30 inches of all portions of the stair width required for egress capacity in accordance with FBC Section 1012. The required egress width shall be along the natural path of travel.	FBC 1012.9



(a)
Handrail Location



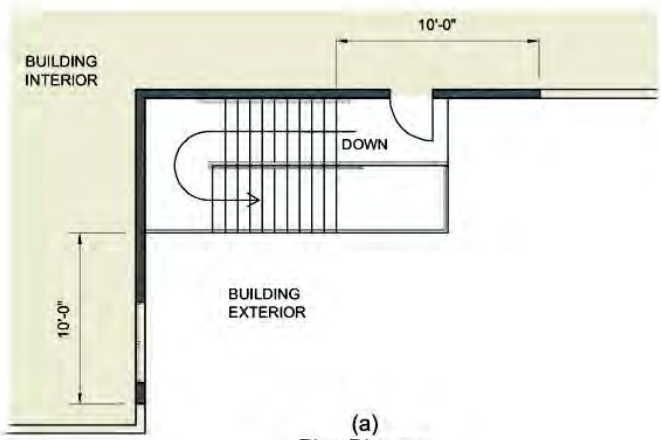
(b)
Handrail Height and Loading



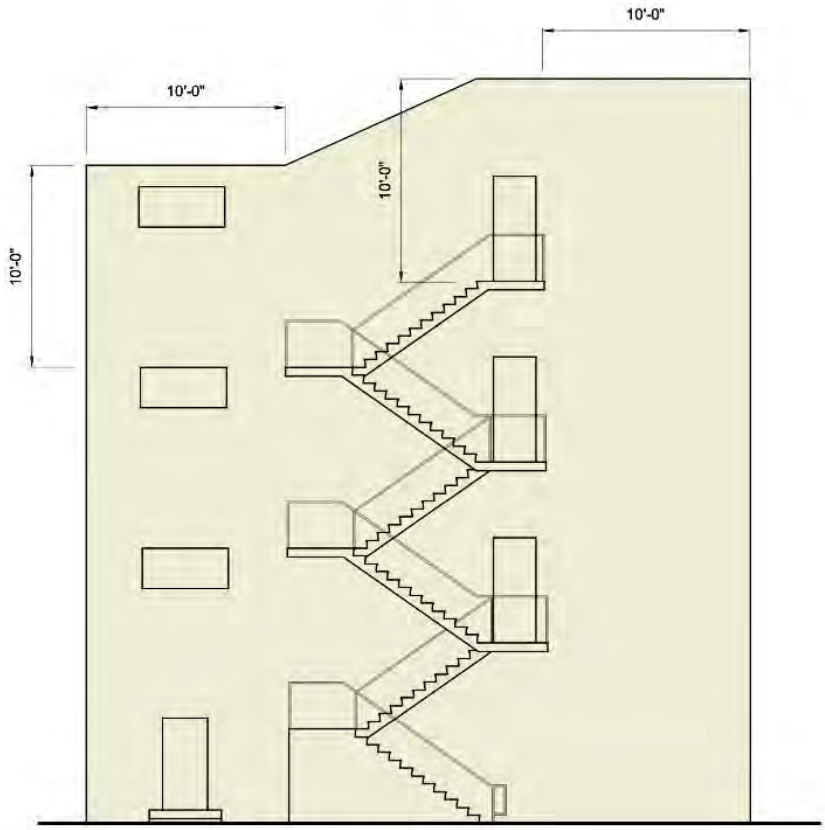
(c)
Handrail Spacing

HANDRAILS AT STAIRS

Separation and Protection of Exterior Stairs		
		Code Reference
Exterior Stairs	Separated from interior of building by walls with a fire resistance rating of not less than 1-hour.	
	Fixed or self-closing opening protective as required for enclosed stairs.	FBC 1026.6
	Protection shall extend vertically from the ground to a point 10 feet above the topmost landing or the roof line, whichever is lower, and horizontally 10 feet from each side of the stairway.	FFPC 7.2.2.5.2.1 FFPC 7.2.2.5.2.3
	Openings within the 10 feet horizontal extension of the protected walls beyond the stairway shall be equipped with fixed ¾-hour assemblies.	



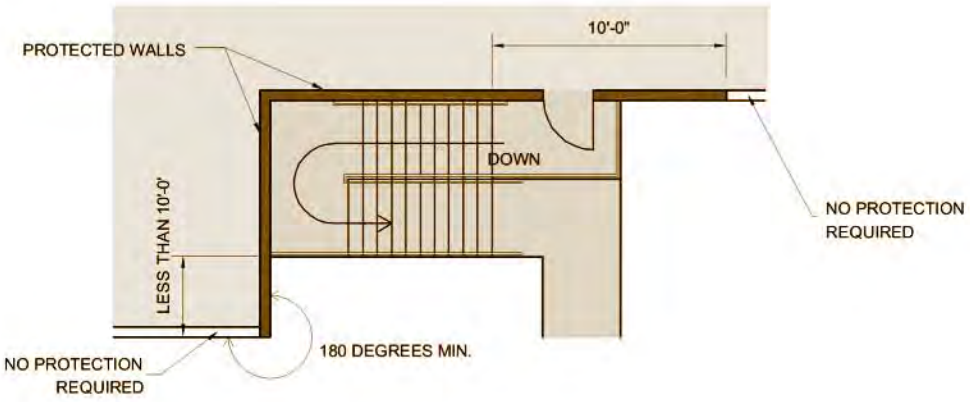
(a)
Plan Diagram



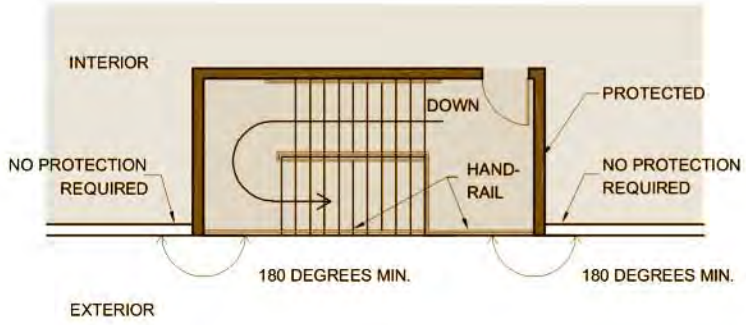
(b)
Schematic Elevation

SEPARATION AND PROTECTION OF EXTERIOR STAIRS

Exceptions to Separation and Protection of Exterior Stairs		
		Code Reference
Exterior Access Balcony	Exterior stairs may be unprotected when serving an exterior exit access balcony that has two exterior stairways, remotely located. Exterior exit access must be a roofed-over open balcony, porch, gallery, or similar space served by at least two stairways located to provide a choice of independent, unobstructed means of egress directly to the ground. Exterior access balcony shall be of sufficient width to accommodate the occupant load, but shall not be less than 6 feet.	FBC 1019.1 FBC 1019.2 FBC 1026.6
Walls At least 180 Degrees From Stair	Walls that are located 10 feet horizontally or less from any side of the stair, but are at an angle of at least 180 degrees from the stair do not require protection.	FFPC 7.2.2.5.2.1 FBC 1022.6
Wall Turns Corner At Least 180 Degrees	Walls that are located 10 feet horizontally or less from any side of the stair, but turn a corner at an angle of at least 180 degrees from the stair do not require protection.	FFPC 7.2.2.5.2.1 FBC 1022.6



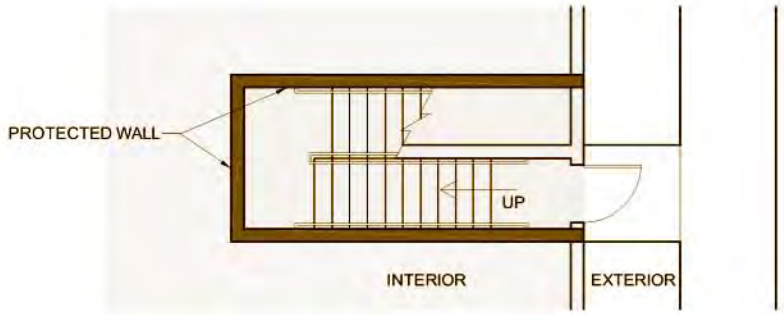
(a)
Wall Turns Corner At Least 180 Degrees



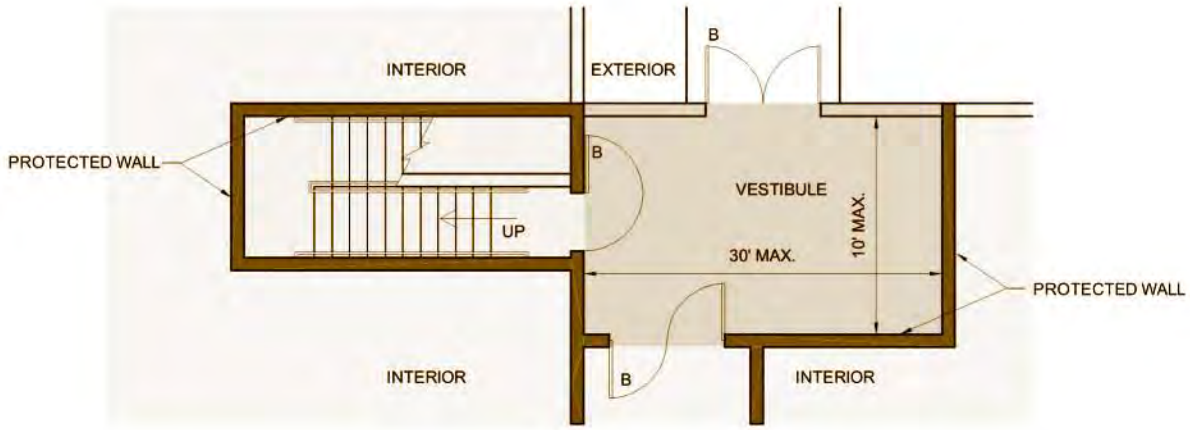
(b)
Walls At Least 180 Degrees From Stair

EXCEPTIONS TO SEPARATION AND PROTECTION TO OUTSIDE STAIRS

Interior Stairs		
		Code Reference
Protection	Exit stairways between floors shall be enclosed or separated by fire-resistant construction. All openings through a floor and penetrations through a floor shall be protected by a shaft enclosure. A shaft enclosure is not required for floor opening between a mezzanine and another floor below.	FBC 1022.1 FBC 707.2
Access and Discharge	A smoke-proof enclosure shall exit into a public way or into a yard, open court, or open space having direct access to a public way. Access to the stairway shall be by way of a vestibule or by way of an open exterior balcony of non-combustible materials. Note: Exit passageways are not permitted in educational facilities.	FBC 1022.9.1



(a)
Stair Exiting to the Exterior

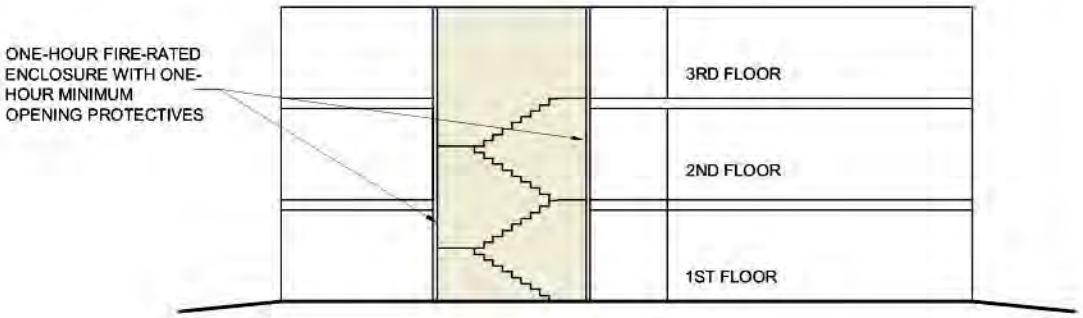


(b)
Stair Exiting to a Protected Vestibule
Vestibule dimension in accordance with FBC Section 1023.1
Exception 2.2

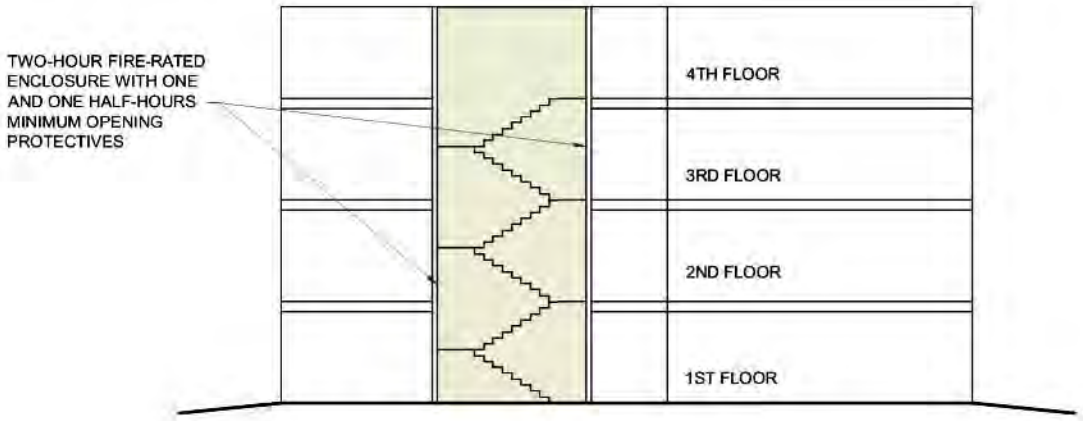
STAIR EXITING

Shaft Enclosure Protection *			
	Walls and Partitions	**Opening Protections**	**Code Reference**
4 or More Stories	2 hours minimum	1 ½ hours minimum	FBC 708.4 FBC 1022.1 FBC Table 715.4
Less than 4 Stories	1 hour minimum	1 hour minimum	

*Includes stairways, exits, and elevator (FBC Table 715.4).



(a)
Stair Enclosure Protection 3 Stories or Less

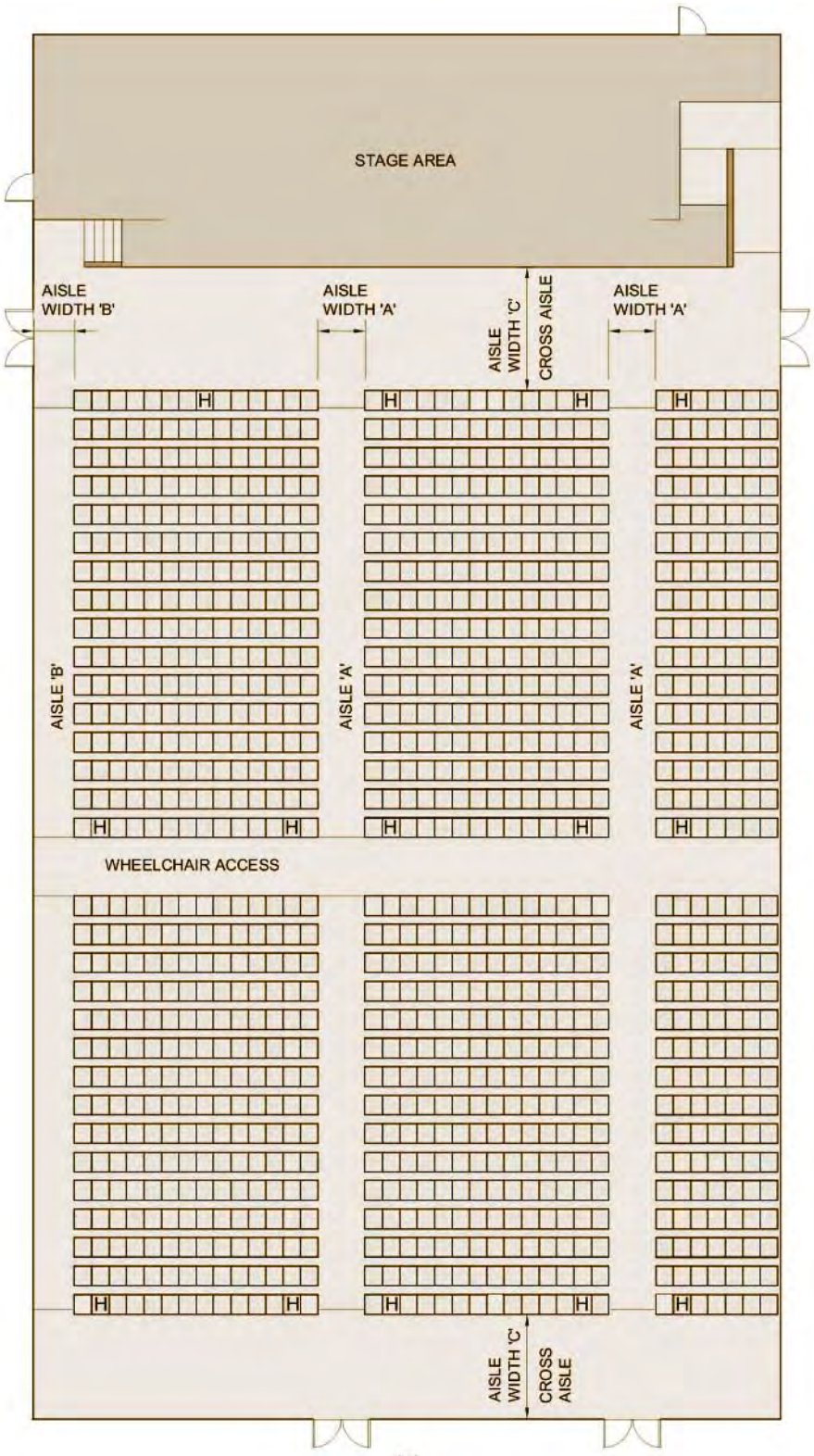


(b)
Stair Enclosure Protection 4 Stories or More

STAIR SHAFT ENCLOSURE

Auditorium Aisle Width		
		Code Reference
Aisles	Aisles shall lead to exit. Those portions of aisle access ways and aisles where egress is possible in either of two directions shall be uniform in required width. Dead-end aisles shall not be greater than 20 feet in length. Exception: Dead-end aisles longer than 20 feet (6096 mm) are permitted where seats beyond the 20-foot (6096 mm) dead-end aisle are no more than 24 seats from another aisle, measured along a row of seats having a minimum clear width of 12 inches (305 mm) plus 0.6 inch (15.2 mm) for each additional seat above seven in the row.	FBC 1028.9 FBC 1028.9.5
Aisle Widths	1. Forty-eight inches for aisle stairs having seating on each side, Exception: Thirty-six inches where the aisle serves less than 50 seats. 2. Thirty-six inches for aisle stairs having seating on only one side. 3. Twenty-three inches between an aisle stair handrails or guard and seating where the aisle Is subdivided by a handrail. 4. Forty-two inches for level or ramped aisles having seating on both sides. Exceptions: 1. Thirty-six inches where the aisle serves less than 50 seats. 2. Thirty-inches where the aisle does not serve more than 14 seats. 5. Thirty-six inches for level or ramped aisles having seating on one side. Exceptions: 1. Thirty inches where the aisle does not serve more than 14 seats. 2. Twenty-three inches between an aisle handrails and seating where an aisle does not serve more than five rows on one side.	FBC 1028.9.1

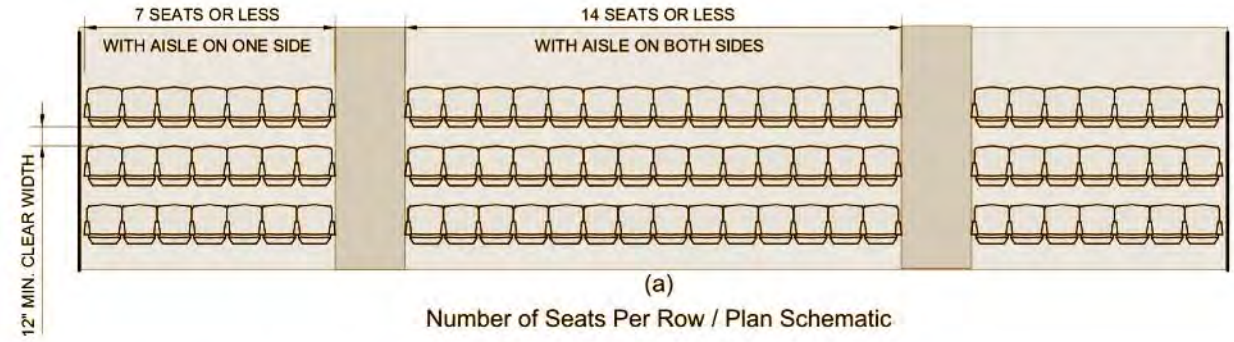
For width of means of egress of assembly without smoke-protection, see FBC 1028.6.1.
For width of means of egress of assembly with smoke-protection, see FBC 1028.6.2.



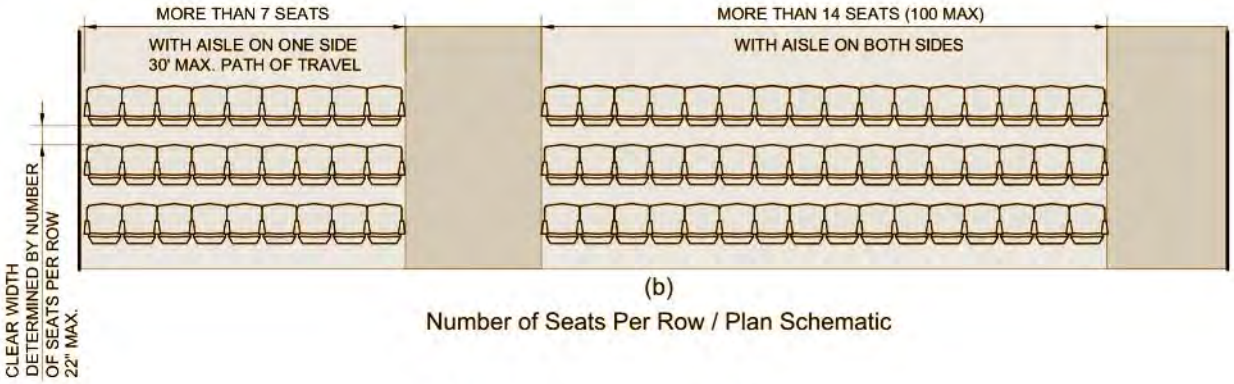
(a)
Seating plan diagram

AUDITORIUM SEATING PLAN

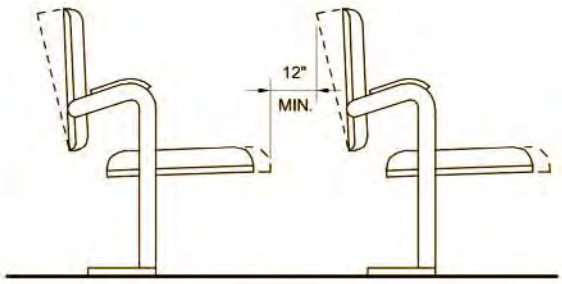
Auditorium Seating			
	Maximum Number of Seats per Row	**Clear Width of Aisle Access Way Required**	**Code Reference**
Rows of Seating Served by Aisles or Doorways at Both Ends	100 Seats.	14 seats per row or less: 12 inches minimum clear width.	FBC 1028.10.1
		More than 14 seats per row: Increase 12 inches minimum clear width by 0.3 inches for every additional seat beyond 14. Minimum clear width not required to exceed 22 inches.	
Rows of Seating by an Aisle or Doorway at One End Only	Determined by path of travel shall not exceed 30 feet from any seat to a point where a person has a choice of two paths of travel to two exits.	7 seats per row or less: 12 inches minimum clear width.	FBC 1028.10.1
		More than 7 seats per row: Increase 12 inch minimum clear width by 0.6 inches for every additional seat beyond seven. Minimum clear width not required to exceed 22 inches.	FBC 1028.10.2



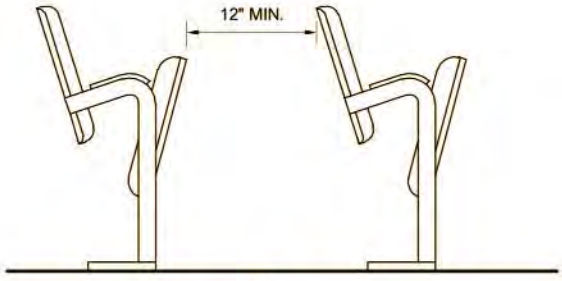
(a)
Number of Seats Per Row / Plan Schematic



(b)
Number of Seats Per Row / Plan Schematic



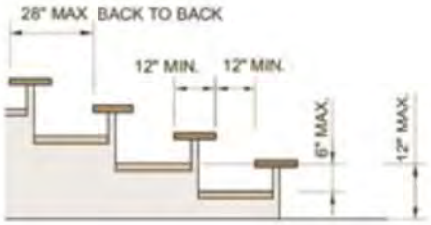
(c)
Non-self Rising Seat



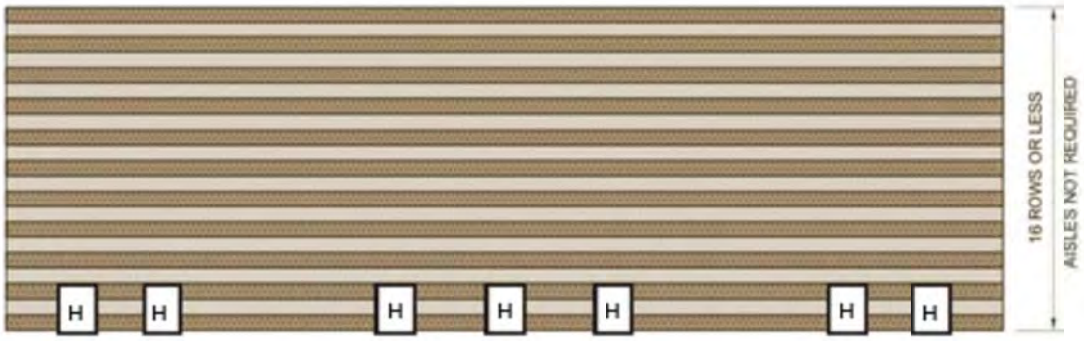
(d)
Self Rising Seat

AUDITORIUM SEATING

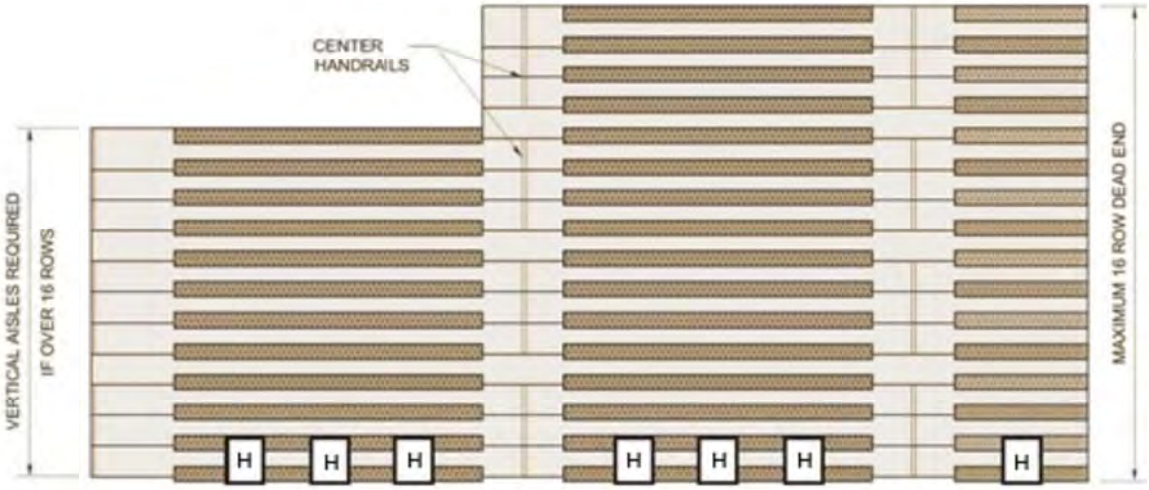
Grandstands and Bleachers		
Aisle Not Required		**Code Reference**
Number of Rows	16 rows or less in height.	FFPC 12.2.5.6.2
Row-to-Row	Not to exceed 6 inches.	FFPC 12.2.5.6.1
Row Spacing	Not to exceed 28 inches unless the seat boards and floor boards are at the same level.	FFPC 12.2.5.6.1
Seat Boards	The first seating board is not more than 12 inches above the ground or floor below or a cross aisle.	FFPC 12.2.5.6.1
	Seat boards provide a walking surface with a minimum width of 12 inches.	
Aisles Required		FFPC 12.2.5.6.2
Number of Rows	More than 16 rows in height.	
Maximum Dead End	16 rows maximum in height when seats do not have backrests.	FFPC 12.2.5.6.1



(a)
Schematic Section with 16 Rows or Less



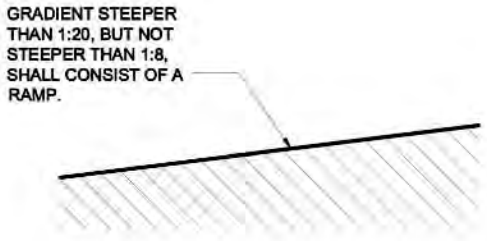
(b)
Schematic Plan with 16 Rows or Less



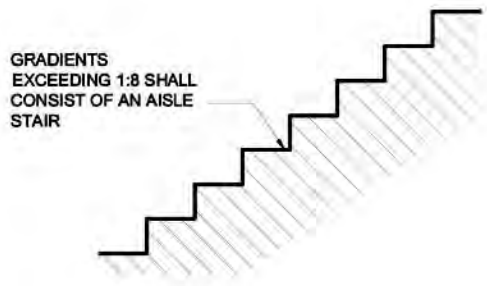
(c)
Schematic Plan with Over 16 Rows

GRANDSTANDS AND BLEACHERS

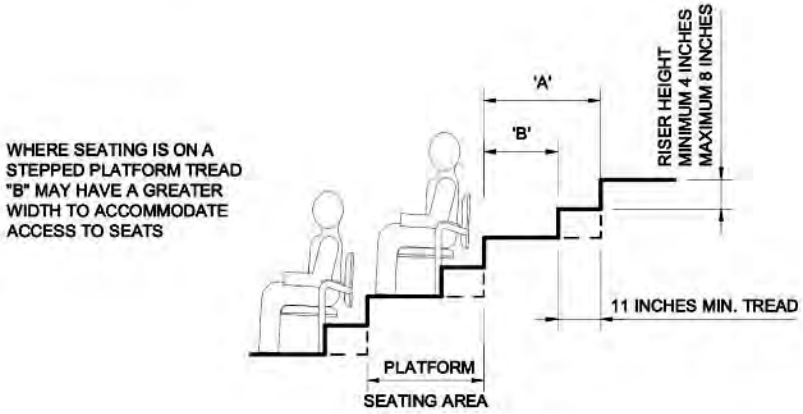
Aisle Ramps and Stairs		
		Code Reference
Ramps	Aisles having a gradient steeper than 1:20, but not steeper than 1:8, shall consist of a ramp.	FBC 1028.11
Stairs	Aisles with a slope exceeding 1:8 shall have an aisle stair.	FBC 1028.11
Treads	Tread depth 11 inches minimum; depths shall be uniform within each aisle. Exception: Non-uniformities shall not exceed 0.188 inches (3/16 inches) between adjacent treads. A contrasting marking stripe shall be provided on each tread at nosing or leading edge. Stripe shall be a minimum of 1 inch and a maximum of 2 inches wide.	FBC 1028.11.1 FBC 1028.11.3
Risers	Riser height shall be a minimum of 4 inches and a maximum of 8 inches high. Riser height shall be uniform with each flight. Exceptions: Where the gradient of an aisle is steeper than 8 inches of rise in 11 inches of run to maintain necessary sight lines in the adjoining seating area, the riser height shall be permitted to exceed 8 inches, but shall not exceed 9 inches. Riser height may be non-uniform, but only to the extent necessitated by changes in the slope of the adjoining seating area to maintain adequate sight lines. Where non-uniformities exceed 3/16 inch between adjacent risers, the exact location of such non-uniformities shall be indicted with a distinctive marking stripe on each tread.	FBC 1028.11.2
Handrails	Ramped aisles having slope exceeding 1:15 and aisle stairs shall be provided with handrails located either at the side or within the aisle width. Where there is seating on both sides of the aisle, the handrail shall be discontinuous with gaps or breaks at intervals not exceeding 5 rows. Handrail gaps or breaks shall have a clear width of at least 22 inches and not greater than 36 inches measured horizontally. Handrails shall have rounded terminations or bends.	FBC 1028.13 FBC 1028.13.1



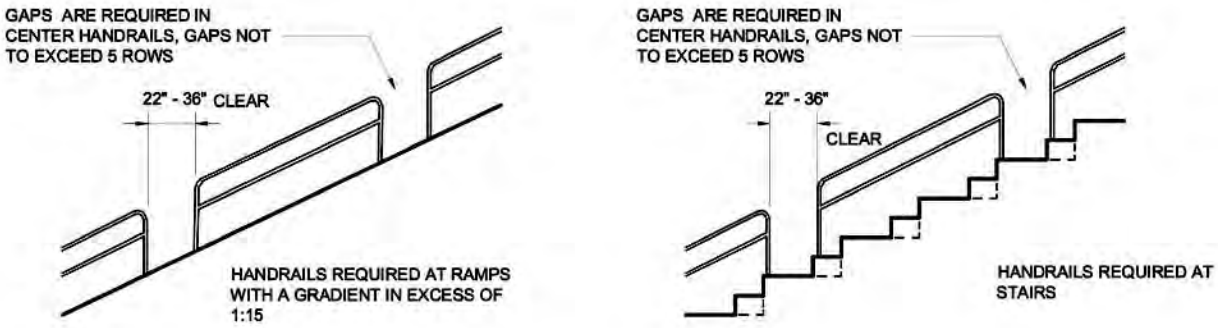
(a)
Ramp



(b)
Aisle Stair



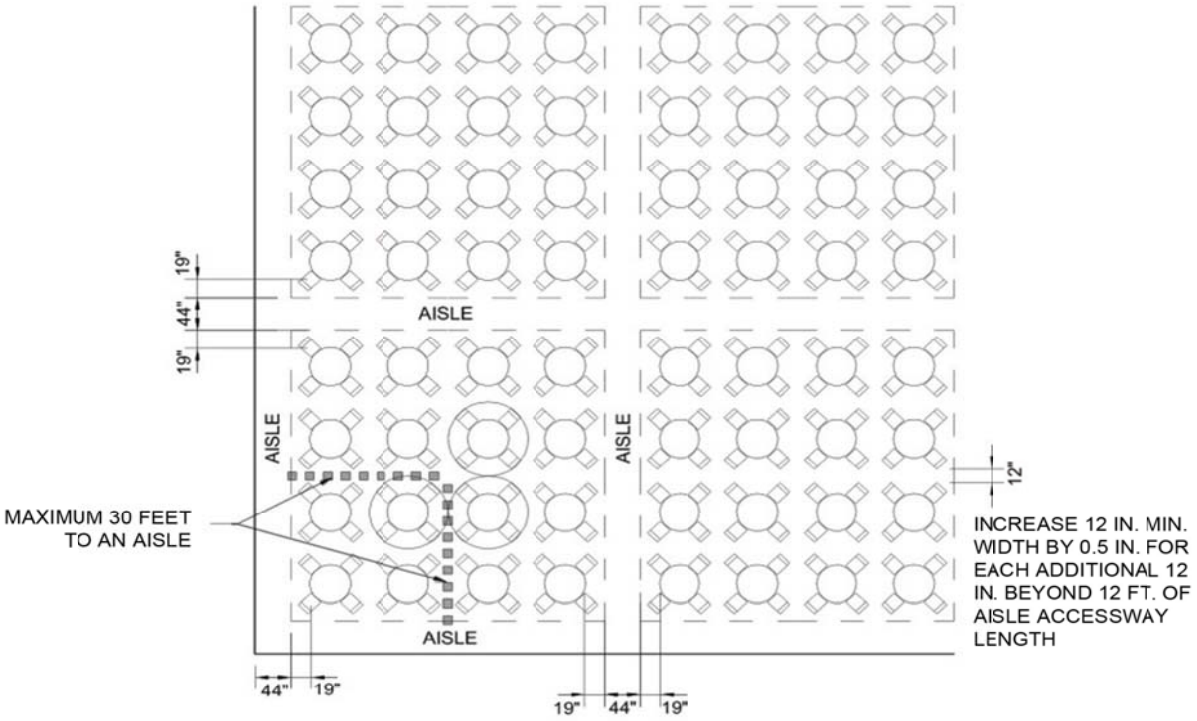
(c)
Risers and Treads

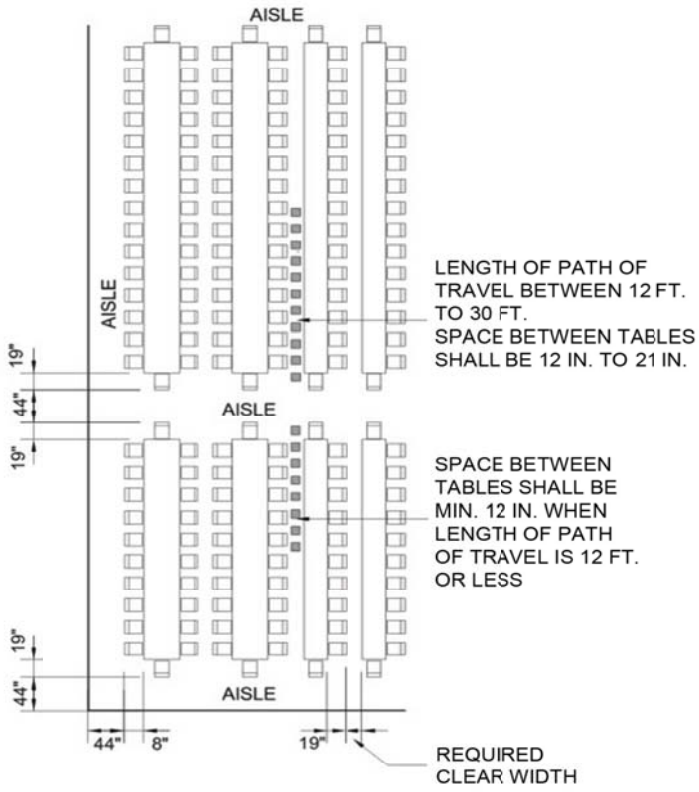


(d)
Handrails

AISLE RAMPS AND SEATS

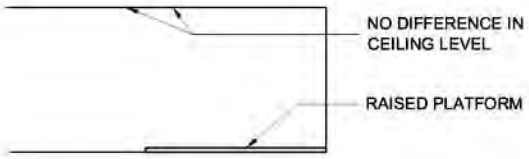
Aisles Serving Seating at Tables			
	Aisles	**Aisles Access Ways**	**Code Reference**
Minimum Clear Width	44 inches. 36 inches where serving an occupant load of not more than 50.	Access ways shall provide a minimum of 12 inches (305 mm) of width plus ½ inch (12.7 mm) of width for each additional 1 foot (305 mm), or fraction thereof, beyond 12 feet (3658 mm) of aisle accessway length measured from the center of the seat farthest from an aisle.	FBC 1017.4
Measurement of Clear Width	Where non-fixed seating is located between a table and an aisle, the measurement of required clear width of the aisle shall be made to a line 19 inches measured perpendicularly to the edge of the table, away from the edge of said table.	Where non-fixed seating is located between a table and an aisle access way, the measurement of required clear width of the aisle access way shall be made to a line 19 inches away from the edge of the table. The 19 inch distance shall be measured perpendicularly to the edge of the table.	FBC 1017.4 FFPC 12.2.5.8.3
Maximum Length Path of Travel	N/A	The length of travel along the aisle accessway shall not exceed 30 feet from any seat to the point where a person has a choice of two or more paths of egress travel to separate exits.	FBC 1017.4.3



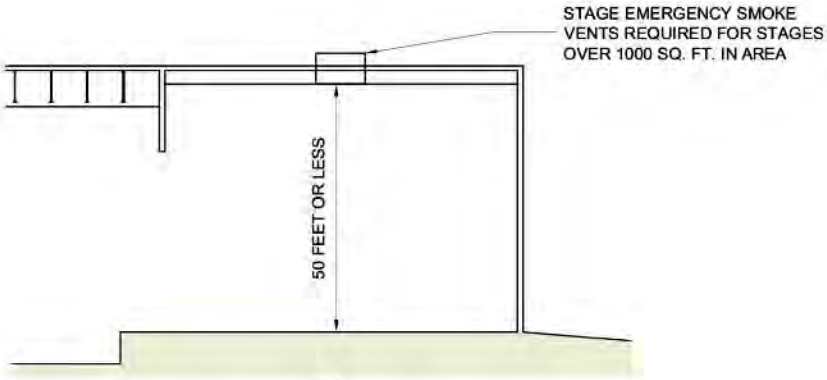


AISLES SERVING SEATING AT TABLES

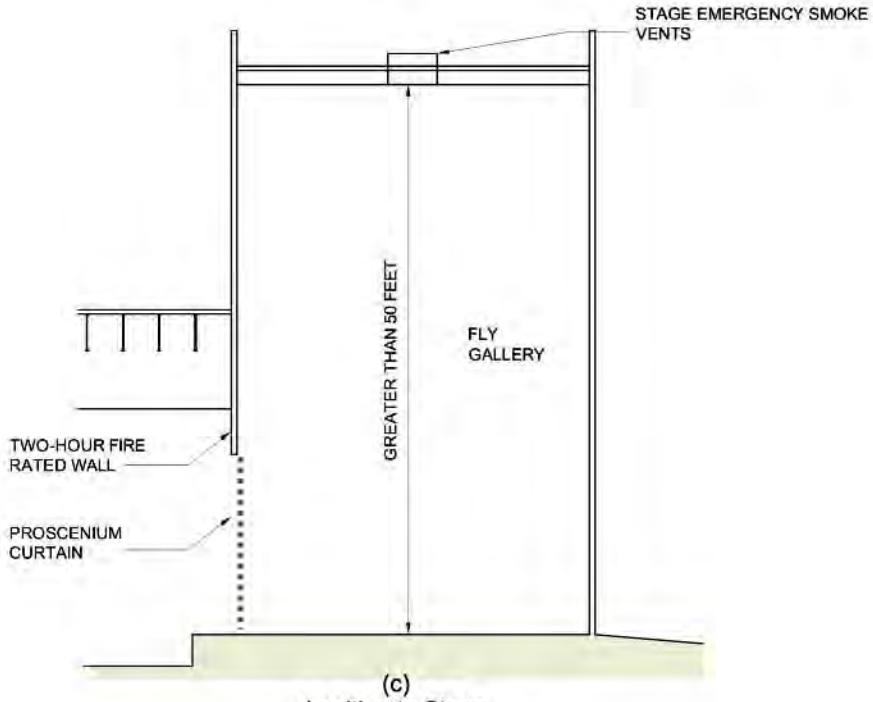
Platforms and Stages		
		Code Reference
Platform	A raised area within a building used for the presentation of music, plays, or other entertainment. No overhead hanging curtains, drops, scenery, or stage effects other than lighting and sound.	FBC 410 FFPC 3.3.166
Regular Stage	A space within a building used for entertainment and utilizing drops, scenery, or other stage effects. Stage height of 50 feet or less measured from the lowest point to the deck above.	FBC 410 FFPC 3.3.210
Legitimate Stage	A space within a building used for entertainment and utilizing drops, scenery, or other stage effects. Stage height is greater than 50 feet measured from the highest point of the roof to the floor deck below.	FFPC 3.3.210.1



(a)
Platform
Schematic Section Diagram



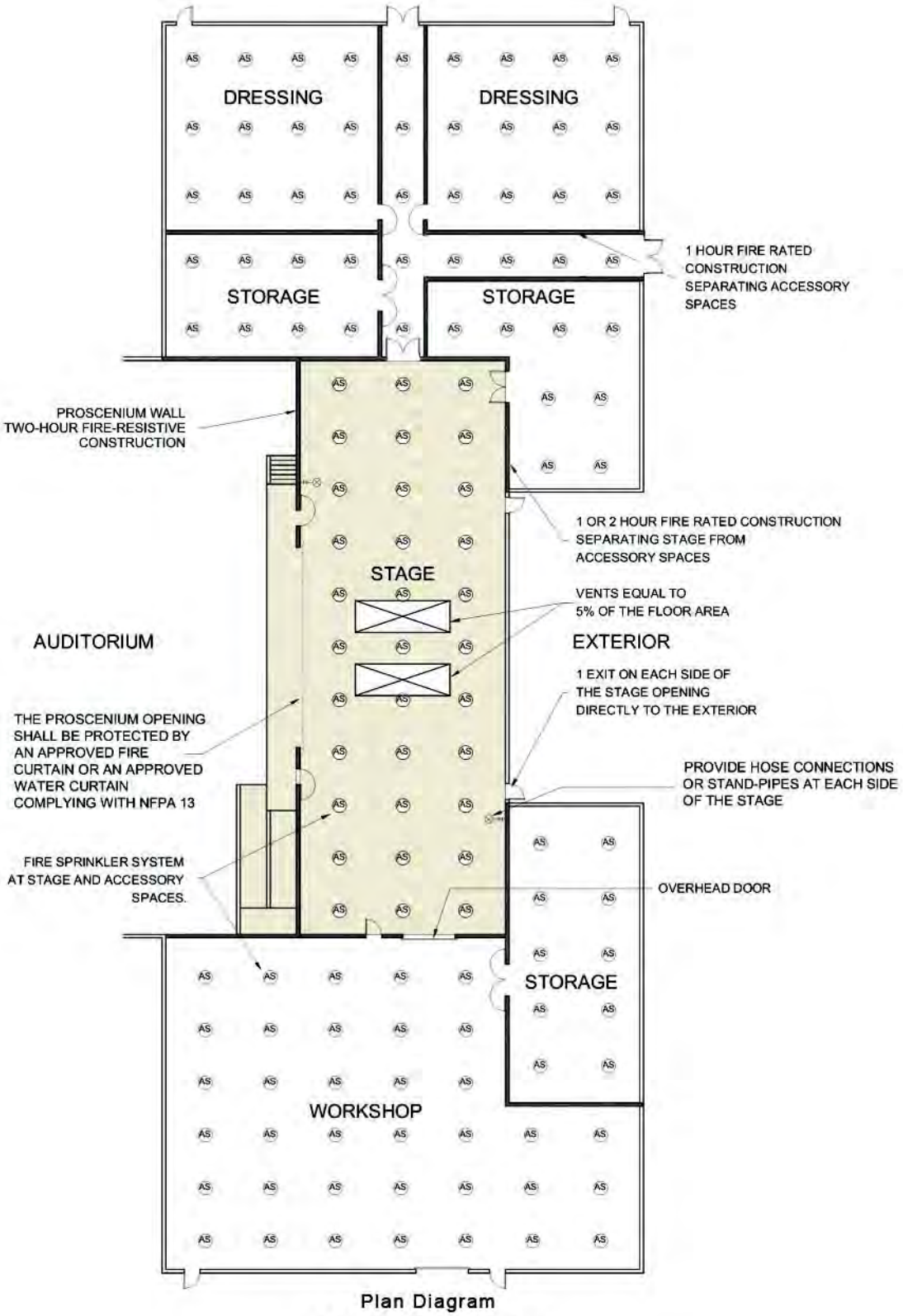
(b)
Regular Stage
Schematic Section Diagram



(c)
Legitimate Stage
Schematic Section Diagram

STAGE TYPES

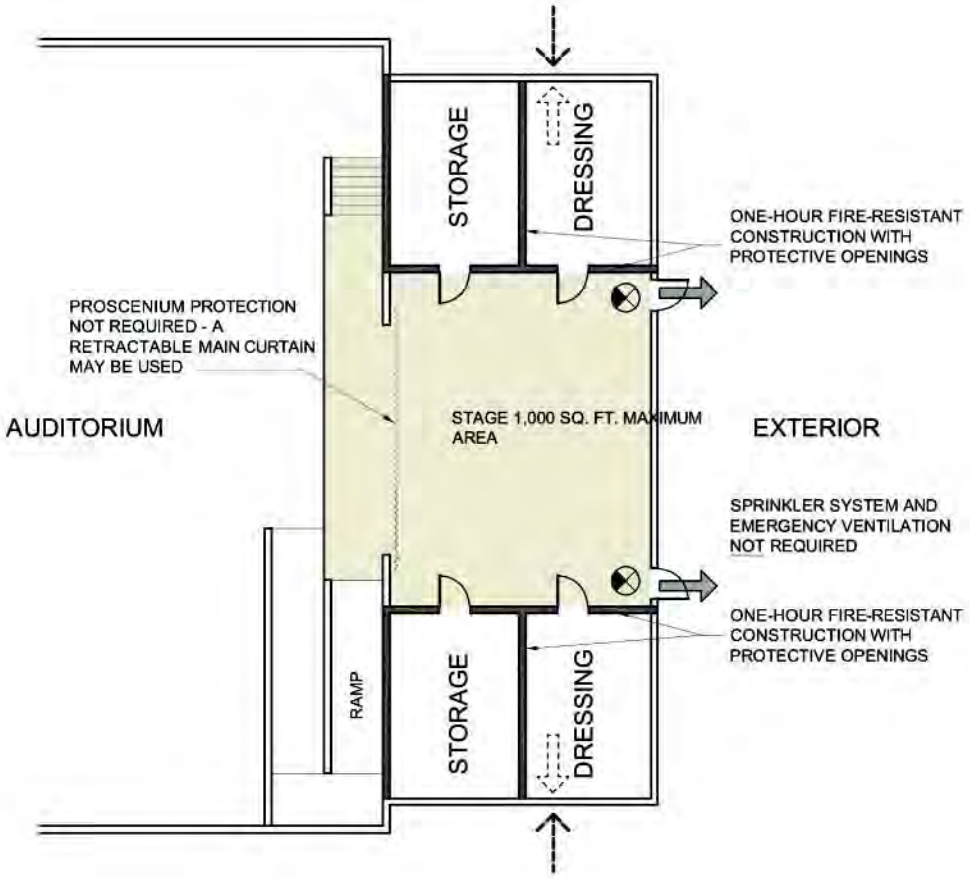
Legitimate Stage (Stages Over 1,000 Sq. Ft. in Area and with a Stage Height Greater Than 50 Ft.)		
Stage Areas		**Code Reference**
Protection	The minimum type of construction for a stage shall be as required for the building as determined by the occupancy, area, and height, except that the floor finish may be of wood in all types of construction. All portions of a stage area with a stage height greater than 50 feet (15.2 mm) shall be within an area separated from all other building areas by 2-hour fire-resistant construction with protected openings. The 2-hour fire-resistant construction shall extend to the roof or floor deck above the auditorium. Stage shall be protected by a supervised automatic sprinkler system. Hose connections or stand-pipes shall be provided at each side of stage.	FBC 410.3
Ventilators	Emergency ventilation shall be provided by one or a combination of the following methods: Smoke Control: Maintain smoke level not less than 6 feet above the highest level of assembly seating or above the top of the proscenium opening where a proscenium wall and opening protection is provided. Activation by sprinkler system and by a manually operated switch. Roof Vents: Two or more vents located near the center of and above the highest part of the stage. Net-free vent area equal to 5% of stage area. Vents raised above the roof. Open automatically by heat-activated devices and manually from stage floor.	FBC 410.3.7
Egress	Two means of egress required, with one means of egress located on each side of the stage. A second means of egress is not required from lighting and access catwalks, galleries, and gridirons where a means of escape to the floor or a roof is provided.	FBC 410.5.3 FFPC 12.2.4.8
Proscenium Wall	Stages shall be completely separated from the seating area by a proscenium wall of not less than 2-hour fire-resistive, noncombustible construction.	FBC 410.3.4 FFPC 12.4.5.6
Proscenium Curtain	The proscenium opening shall be protected and an approved fire curtain or an approved water curtain complying with NFPA 13. The fire curtain or water curtain shall be designed to close automatically upon automatic detection of a fire and upon manual activation. The fire curtain shall resist the passage of flame and smoke for 20 minutes between the stage area and the audience area.	FBC 410.3.5 FFPC 12.4.5.7
Accessory Areas	Accessory spaces contiguous to stages shall be separated from each other and other building areas by 2-hour fire-resistant construction protected openings and shall be protected by a supervised automatic sprinkler system.	FBC 410.5.1



Plan Diagram

LEGITIMATE STAGE
(STAGES OVER 1,000 SQ. FT OR WITH A STAGE HEIGHT GREATER THAN 50 FT.)

Regular Stage (Stage 1,000 Sq. Ft. Maximum Area and with a Stage Height of 50 Ft. maximum)		
		Code Reference
Stage Areas	Stage shall be of the material required for the types of building construction in which it is located. Floor finish may be made of wood. Proscenium opening protection is not required. Separated from accessory spaces by 1-hour fire-resistant construction with protected openings. Sprinkler system is not required. Emergency ventilation is not required.	FBC 410.3 FBC 410.4 FBC 410.6 FFPC 12.4.5.3.1 FFPC 12.4.5.10.2
Accessory Areas	Dressing rooms, workshops, storerooms, and other accessory spaces contiguous to stages shall be separated from each other and the stage by 1-hour fire-resistant construction and protected openings. Walls shall extend tight to the roof deck.	FBC 410.5.1 FBC 410.5.2



(a)
Plan Diagram

STAGES 1,000 SQ. FT. MAXIMUM AREA OR WITH A STAGE HEIGHT OF 50 FT. MAXIMUM (REGULAR STAGE)
Building is not sprinklered

Site Requirements		
		Code Reference
Fencing	**Required Locations** Pre-kindergarten through grade 12 facilities: Exposed mechanical, plumbing, gas, or electrical equipment located on ground level. All child care and kindergarten play areas. Pre-kindergarten through grade 5 facilities: Special hazard as identified by the authority having jurisdiction including: Retention ponds with permanent water depth or water depth over a 24-hour period exceeding 1 foot. Deep drainage ditches. Canals. Highway. Play fields adjacent to roadways. **Materials** Materials that are non-flammable, safe, durable, and low-maintenance, and that provide structural integrity, strength and aesthetics appropriate for the intended location. **Prohibited materials** Non-agricultural educational plants. Razor wire, barbed wire, and electrically charged systems. **Height** Shall be in compliance with local zoning regulations. Access shall be provided for maintenance machinery.	FBC 423.10.1 FBC 423.10.1.1 FBC 423.10.1.1.1 FBC 423.10.1.1.2 FBC 423.10.1.1.3
Paving	**Required Locations** Walks, roads, drives, and parking areas on educational and ancillary sites. **Materials** Roads, drives, and parking areas shall be in compliance with Department of Transportation (DOT) road specifications and striped in compliance with DOT paint specifications. All paved areas shall have positive drainage.	FBC 423.10.2
Drainage	Soil, grass, and planting beds shall provide positive drainage away from sidewalks. Maximum 3% gradient slope for a minimum distance of 5 feet from the edge of the sidewalk. The location of all drains, grates, drop inlets, catch basins, and other drainage elements and curb cuts shall be out of the main flow of pedestrian traffic.	FBC 423.10.2.3

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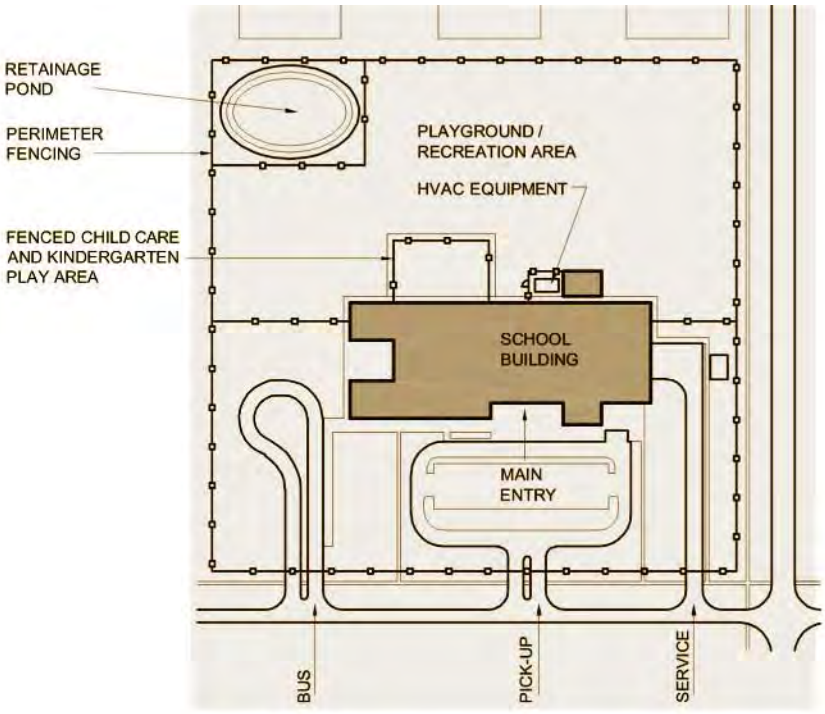
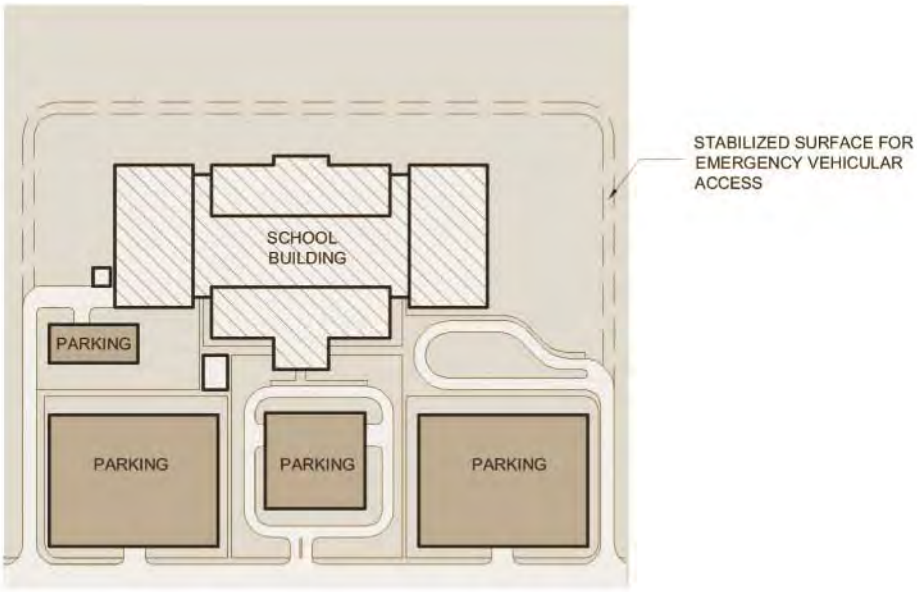


(a)
Example perimeter fencing with limited access points

(b)
Example fencing for exposed mechanical equipment located at ground level

SITE REQUIREMENTS

Site Requirements (continued)		
		Code Reference
Accessible Walk and Bridges	**Required Locations** Accessible walks shall connect building entrances(s) to all: Accessible parking. Public transportation stops. Public streets. Sidewalks. Loading and drop-off zones. Other facilities within the site as required by the accessibility standard. School board sites where educational plants are separated by highways shall be connected by overhead pedestrian bridges.	FBC 423.10.2.2
Covered Walks	**Required Locations** All buildings in pre-K through grade 12 educational facilities shall be connected by paved walks and accessible under continuous roof cover. Long-term relocatable classroom buildings shall be connected to permanent building by paved covered walks where applicable. Roofs for covered walks shall extend one foot beyond each side of the designated walkway width. Gutters or other water funneling devices, including diverters, shall prevent storm water from pouring onto or draining across walks.	FBC 423.10.2.1
Protection for Vertical Drops	**Required Locations** Any vertical drop between joining or abutting surface of more than 6 inches, but less than 18 inches in height: Protected by wall, railing, or other physical barriers that are at least a minimum 12 inches in height. Vertical drop of 18 inches or more: Protected by a wall or guardrail a minimum of 42 inches in height.	FBC 423.10.2.4
Roads and Streets	Primary and emergency access required. Paved driveways shall not encircle a school plant. Vehicular and pedestrian traffic shall not cross on site. Bus driveways and parent pickup areas shall be separated.	FBC 423.10.2.5
Bus Drives	**Dimensional Requirements** Minimum width shall be 24 feet for two-lane traffic. Turning radius: Educational and ancillary sites and for turning off public access streets: One-way traffic: 60 feet minimum measured to the outside curb or edge of the traffic lane. Two-way traffic: 60 feet minimum measured to the centerline of the road. Bus drives shall be designed so that buses do not have to back up.	FBC 423.10.2.6



(a)
Site Plan Schematic
Vehicular Circulation Diagram

(b)
Example covered walkway

SITE REQUIREMENTS

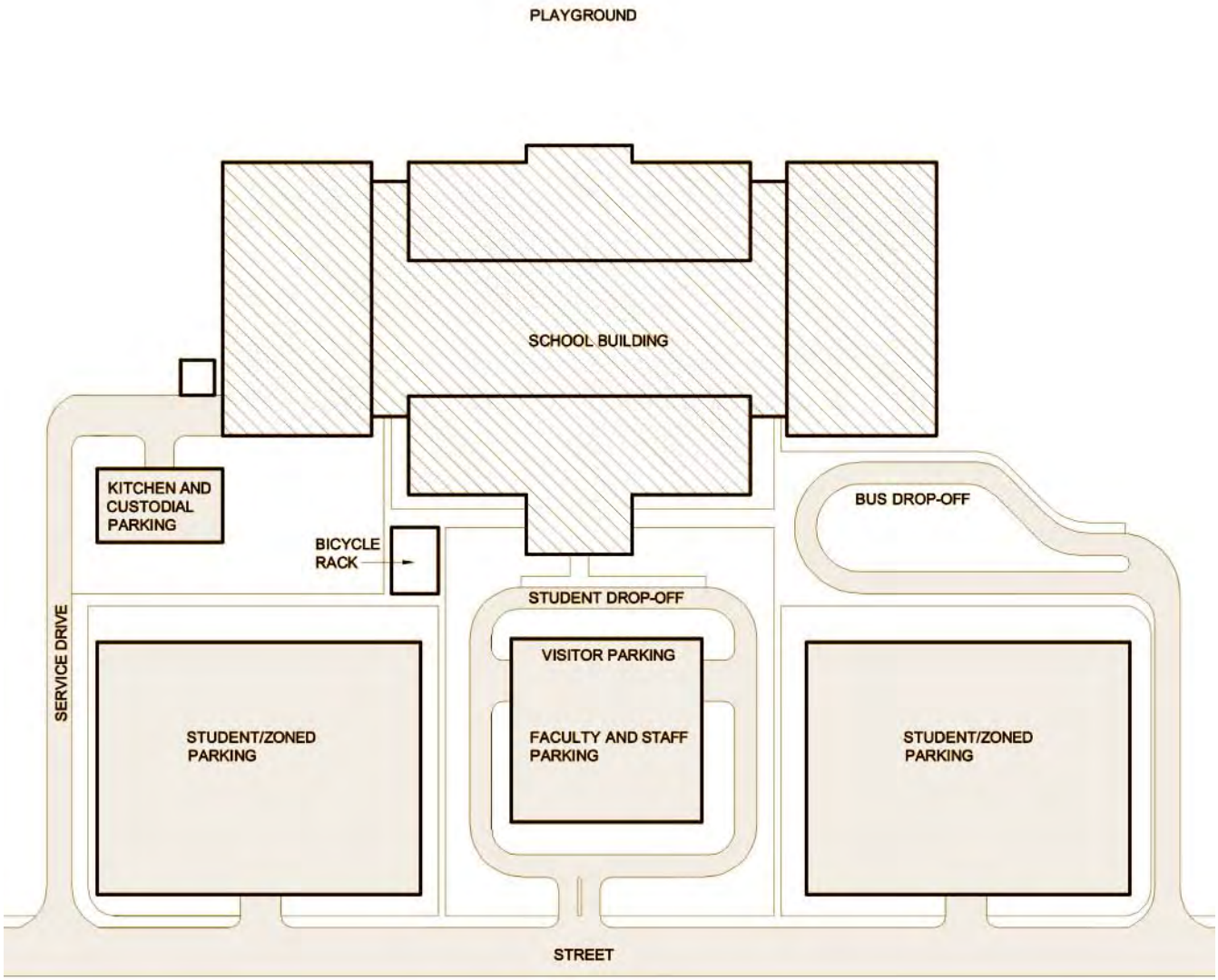
Minimum Parking Requirements		
Group	**Parking Required**	**Code Reference**
Faculty and Staff	1 Space for each member.	FBC 423.10.2.8.1
Visitors	1 Space for every 100 students.	FBC 423.10.2.8.2
Community Clinics	10 Spaces including 1 accessible space.	FBC 423.10.2.8.3
High Schools	1 Space for every 10 students in grades 11 and 12.	FBC 423.10.2.8.4
Vocational Schools	1 Space for every 2 students.	FBC 423.10.2.8.5
Florida Colleges	1 Space for every 2 students.	FBC 423.10.2.8.6
Accessible Parking	Parking spaces designed for persons with disabilities shall comply with ADA, Chapter 11, Florida Building Code, Building, and Section 316.1955, F.S.	FBC 423.10.2.8.7

Vehicle parking areas shall comply with minimum parking space requirements. FBC Section 423.10.2.7.

Except for parking space requirements to meet federal and state accessibility laws, where alternate transportation or parking arrangements are available, the parking area requirements may be reduced from these standards, if sufficient justification documentation is provided and if the review authority approved the reduction based on the justification. FBC Section 423.10.2.7.

Overflow parking areas may utilize alternative parking surfaces that facilitate water absorption rather than runoff, when approved for use by the review authority. This requirement usually applies to a percentage of the parking spaces, not all of them. FBC Section 423.10.2.7.

Exception: Accessible parking spaces shall be hard-surfaced.



(a)
Site Plan / Parking Schematic

SITE REQUIREMENTS

<table>
<tr><th colspan="4">Site Lighting Requirements</th></tr>
<tr><td>Security Lighting Educational and Ancillary Facilities</td><td colspan="2">Required Locations:
Auto, bus, service drives, and loading areas.
Parking areas.
Building perimeter.
Covered and connecter walks between buildings and between buildings and parking.</td><td>Code Reference
FBC 423.10.3
FBC 423.10.3.1
FBC 423.10.3.2
FBC 423.10.3.3
FBC 423.10.3.4</td></tr>
<tr><td colspan="4">Illumination Requirements</td></tr>
<tr><td rowspan="4">Parking Areas</td><td>Location</td><td>Average Maintained Footcandle *</td><td rowspan="7">FBC 423.10.3.5.1
FBC 423.10.3.5.2
FBC 423.10.3.5.3
FBC 423.10.3.6.1
FBC 423.10.3.6.2</td></tr>
<tr><td>Parking Areas.</td><td>1</td></tr>
<tr><td>Covered and Connector Walks.</td><td>1</td></tr>
<tr><td>Entrance/Exits.</td><td>2</td></tr>
<tr><td rowspan="3">Building Exteriors</td><td>Location</td><td>Minimum Footcandle *</td></tr>
<tr><td>Building Entrances.</td><td>5</td></tr>
<tr><td>Building Surrounds.</td><td>1</td></tr>
</table>

Parking area lighting standards shall be designed to withstand appropriate wind loads. FBC Section 423.10.3.5.

*Parking areas shall be illuminated to an average maintained horizontal footcandles measured at the surface. FBC Section 423.10.3.5.

**Building exteriors, perimeters, and entrance may be illuminated to the minimum number of footcandles, measured at the surface with a suggested uniformity ratio of 2:1. FBC Section 423.10.3.6.

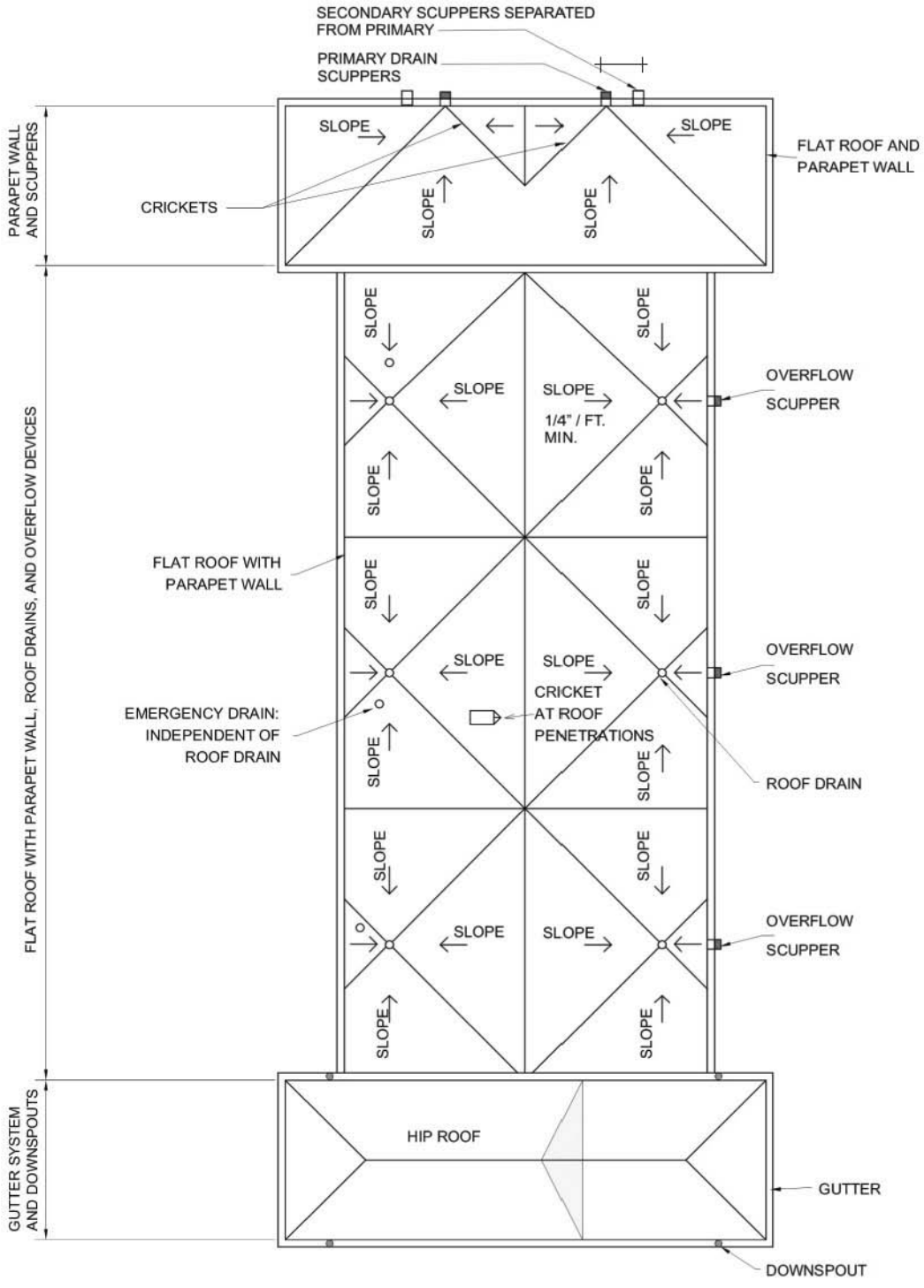
Exterior lighting shall be shielded from adjacent properties. FBC Section 423.10.3.7.

Exterior lights shall comply with the energy efficiency requirements of FBE 13-415 as appropriate.

(a)
Example Lighting Parking Area

SITE LIGHTING REQUIREMENTS

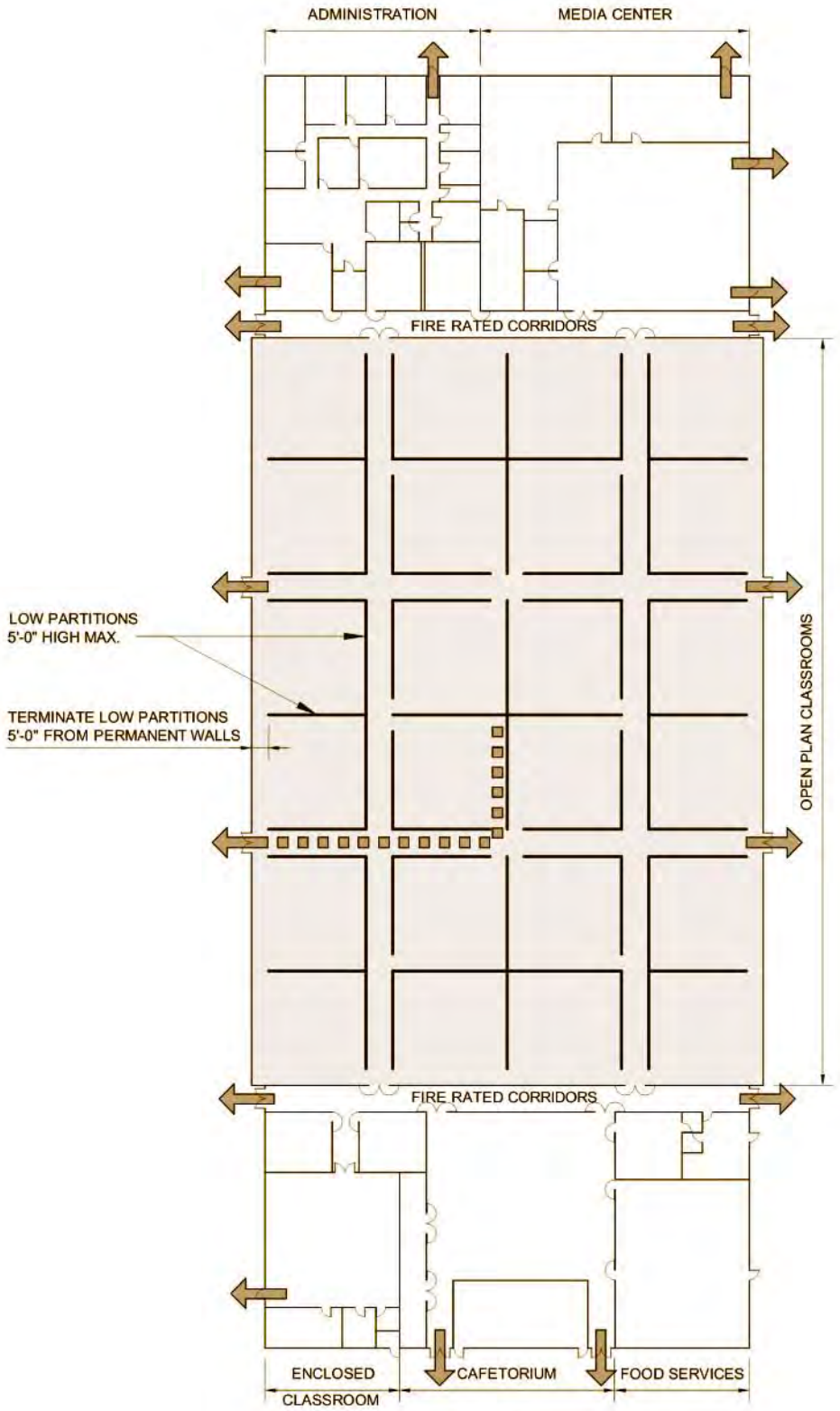
ROOFING MEMBRANE AND DRAINAGE Built-up and Single-Ply Membrane			
			Code Reference
Fire Rating	Class A by ASTM E-108, FBC Section 423.12.1. Certified by a nationally recognized testing laboratory. Excludes nailers and blocking.		ASTM E-108 FBC 423.12.1
ASTM	Roofing materials		FBC 1507.10.2 FBC 1507.11.2 FBC 1507.12.2 FBC 1507.13.2
Wind Uplift	Roofing membrane shall resist wind uplift forces as follows:		
		Non-hurricane shelters: ASCE 7-10, wind speed per FBC Figure 1609.	ASCE 7-10 FBC Figure 1609
		Hurricane Shelters:	
		Recommend: ASCE 7-10, wind speed per FBC Figure 1609 plus 40 mph.	ASCE 7-10 FBC Figure 1609
		Minimum: ASCE 7-10, wind speed per FBC Figure 1609.	ASCE 7-10 FBC Figure 1609
Cross Slope	New construction: All finished roof surfaces shall have a minimum cross slope of 1/4 inch per foot, except coal-tar built-up roofs shall have a minimum cross slope of 1/8 inch per foot.		FBC 1507.10.1
	Re-roofing: All finished roof surfaces shall have positive drainage or a minimum cross slope of 1/4 inch per foot.		FBC 1510.1
Warranty	Specification should provide a manufacturer's warranty against defects in materials and workmanship.		
Installation	Should follow manufacturer's printed instructions.		
Moisture Intrusion	All new installed materials shall be sealed from moisture intrusion at the end of the day.		FBC 423.12.3
Phased Construction	Not permitted		FBC 423.12.3
Primary Drainage	A primary drainage system shall be provided, sized per FBC-Plumbing, Section 1106, Tables 1106.2(1), 1106, 2(2), 1106.3, and Figure 1106.1.		FBC-P 1106
Secondary Drainage	A secondary drainage system shall be provided when roof perimeter construction (Parapets) extends above roof deck so that water is entrapped if primary drains clog.		FBC-P 1107
		Separate from the primary system.	FBC-P1107.2
		Sized per FBC-Plumbing, Section 1107.3. Values obtained from Tables 1106.2(1), 1106.2 (2), 1106.3, and Figure 1106.1	FBC-P 1107.3 FBC-P 1106.1
		Minimum cross-sectional area of an overflow scupper to have a minimum dimension of 4 inches.	FBC-P 1107.3
Overflow Scuppers	Scuppers shall be set at least 2 inches above adjacent deck and not more than 4 inches above the roof covering. (Prevent ponding water from exceeding design depth.)		FBC 1503.4.2.1
Overflow Pipes	Overflow pipes shall be set at least 2 inches and not more than 4 inches above the roof covering. (Prevent ponding water from exceeding design depth.)		FBC 1503.4.2.1
Energy Efficiency	Requires completed FLA/COM compliance form. This shall indicate compliance with Florida Energy Efficiency Code (FEEC) for Building Construction.		FBC 1301.1.1
Final Statement of Compliance	The Contractor shall provide a "Final Statement of Compliance" to the Architect, which states that the finished roof membrane complies with the approved contractual documents. FBC Section 423.12.3.		FBC 423.12.3
Inspection by Manufacturer	The roof membrane shall be inspected by the manufacturer's representative within one year of acceptance of the roof membrane by the Board. FBC Section 423.12.4.		FBC 423.12.4
Rooftop Equipment	Lateral and uplift forces on rooftop equipment.		FBC 1620.6



(a)
Schematic Roofing Plan

ROOF SLOPES AND DRAINAGE

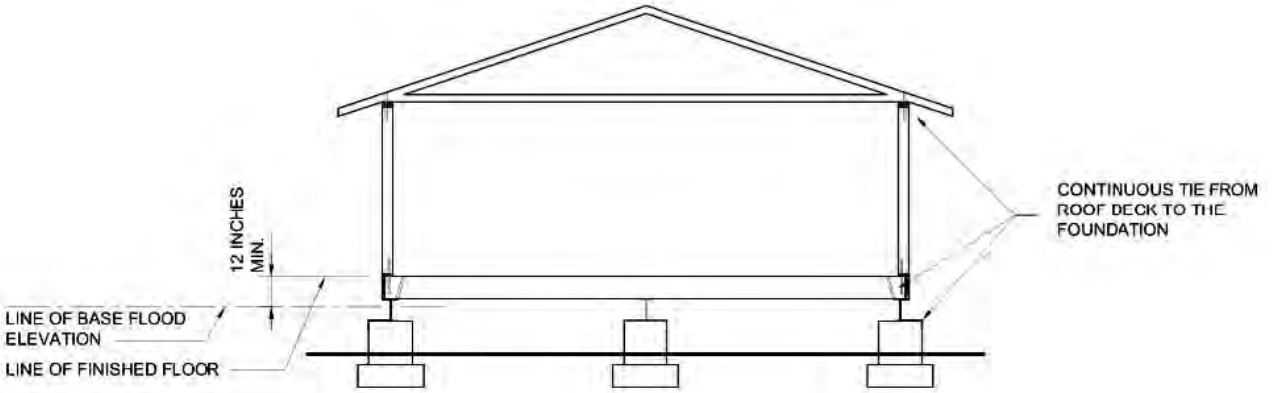
Open Plan Classrooms Group E Educational Occupancy Open Plan Area			
			Code Reference
Partitions	Low height, maximum 5 feet high. Terminate 5 feet from any permanent partition or wall. Circulation openings 5 feet wide minimum.		FBC 423.24
Egress	Each room occupied by more than 300 people shall have 2 or more means of egress entering into separate atmospheres. Where 3 or more means of egress are required, the number of means of egress permitted to enter into the same atmosphere shall not exceed 2.		FFPC 14.4.3.1 FFPC 14.4.3.1.2 FFPC 14.4.3.1.3
Interior Finishes	Unsprinklered Building	Sprinklered Building	FBC Table 803.9
	Class 'B' throughout	Class 'C'	
	Class 'C' for 5-foot high partitions		
Travel Distance	150 feet	200 feet	FBC Table 1016.1
Access Openings for Fire Department Use	Such windows shall be accessible by the fire department and shall open into an area having access to a public way.		FFPC 14.2.11.1(4)



(a)
Plan Diagram

OPEN PLAN CLASSROOMS

Relocatables for Classroom Use		
		Code Reference
Construction	**Type I, II or IV (non-combustible)** Shall comply with: Americans with Disabilities Act, Florida Building Code. Use at facilities housing pre-K through grades 5 or 6, shall also conform to the federal criteria "Accessibility Standards for Children's Environments." Finished floor shall be 12 Inches above base flood elevation. Anchored to resist buoyant forces.	FBC 423.27.3 FBC 423.27.4 FBC 423.27.5.1 FBC 423.27.2.1
Accessible Covered Walks	Required from exit door to core facilities.	FBC 423.27.5.2
Doors	**Exit Doors** Shall swing in the direction of exit travel. **Classroom Locksets** Locksets that are readily opened from the side from which egress is to be made at all times, a threshold, heavy-duty hinges, and closer to control door closing. Each door shall have a view panel. **View Panel** Minimum 8 Inches by 42 inches and maximum 1,296 square inches. 1/4 inch tempered or safety glass installed with the bottom edge of the panel at 30 inches AFF. Exterior doors shall open on to a minimum 5-foot by 5-foot roofed platform with handrails, which is level with the interior floor.	FBC 423.27.8 FBC 423.27.8.1 FBC 423.27.8.2
Windows	Operable windows equal to at least 5 percent of the floor area of the unit. Exterior doors may be included in computing the required 5 percent. Awning, casement, or projection windows shall not be placed in walls with adjacent walks, ramps, steps, or platforms. Emergency rescue window shall comply with NFPA 101, and shall be labeled "EMERGENCY RESCUE - KEEP AREA CLEAR."	FBC 423.27.9 FBC 423.27.9.1
Fire Extinguisher	At least one appropriate fire extinguisher shall be provided in each relocatable classroom unit and in each classroom of a multi-classroom building.	FBC 423.27.11
Illumination	Provide an average maintained 50 footcandles at desk top.	FBC 423.27.15
Emergency Lighting	Each classroom unit shall be equipped with emergency lighting.	FBC 423.27.15.1
Exterior Lighting	Exterior lighting shall be provided as required elsewhere in these public educational facilities code requirements.	FBC 423.27.15.2
Lighted Signs	Exit lights shall be provided as required by the Florida Fire Prevention Code adopted by the State Fire Marshal.	FBC 423.27.15.3
Fire Safety Requirements	New relocatables shall be provided with fire alarm devices meeting the code requirements for permanent educational facilities and shall be connected to the facility's main fire alarm system as required by code.	FBC 423.27.18



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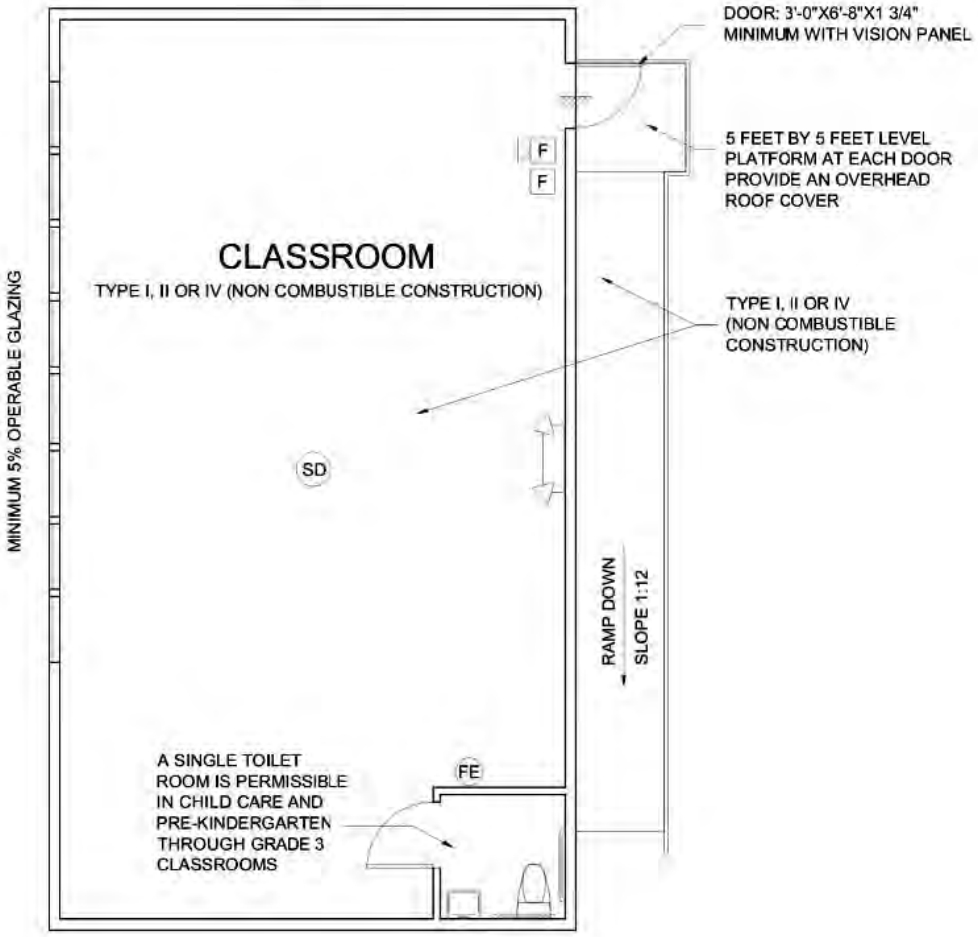
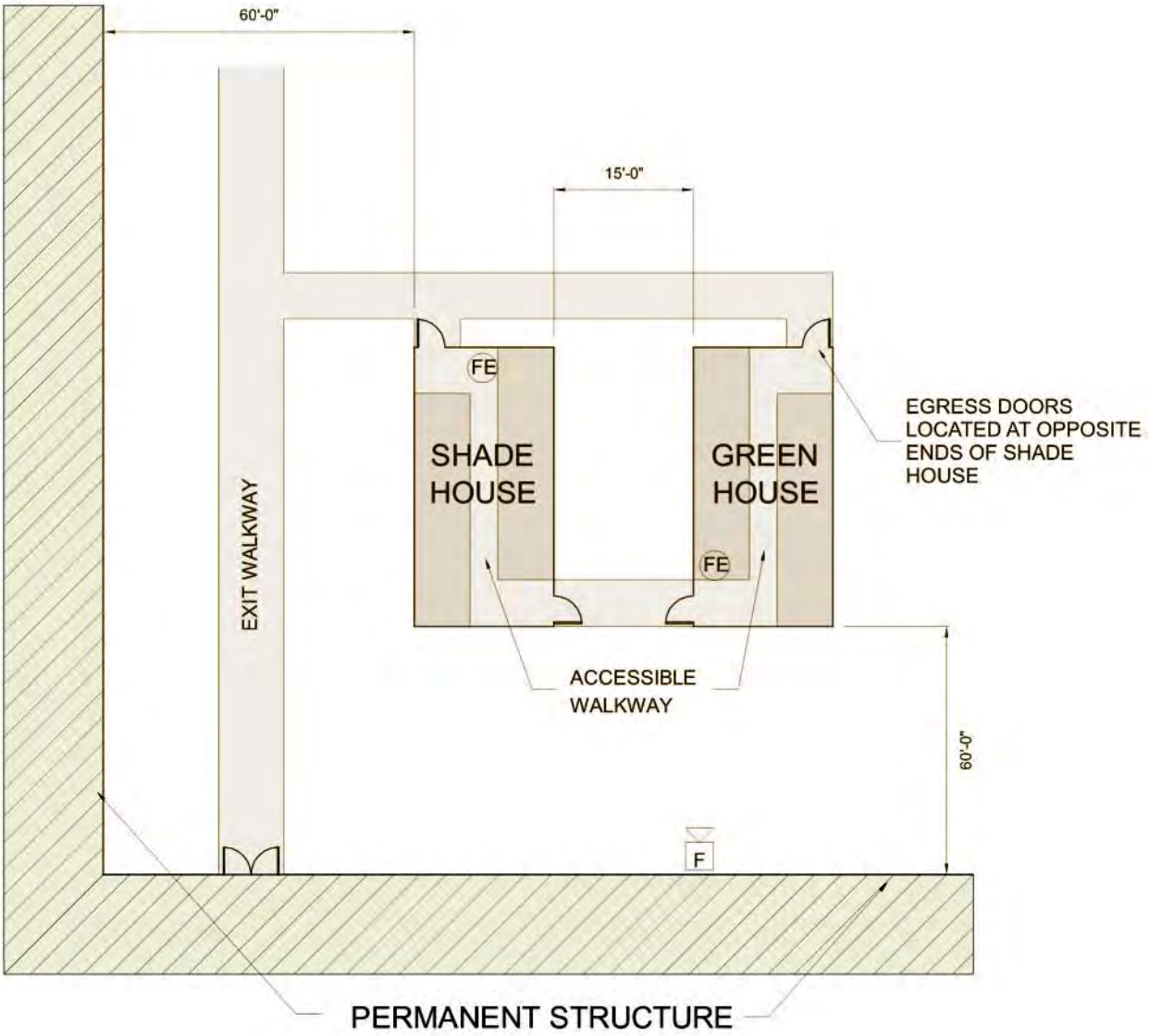
Section



(b)
Plan

RELOCATABLES

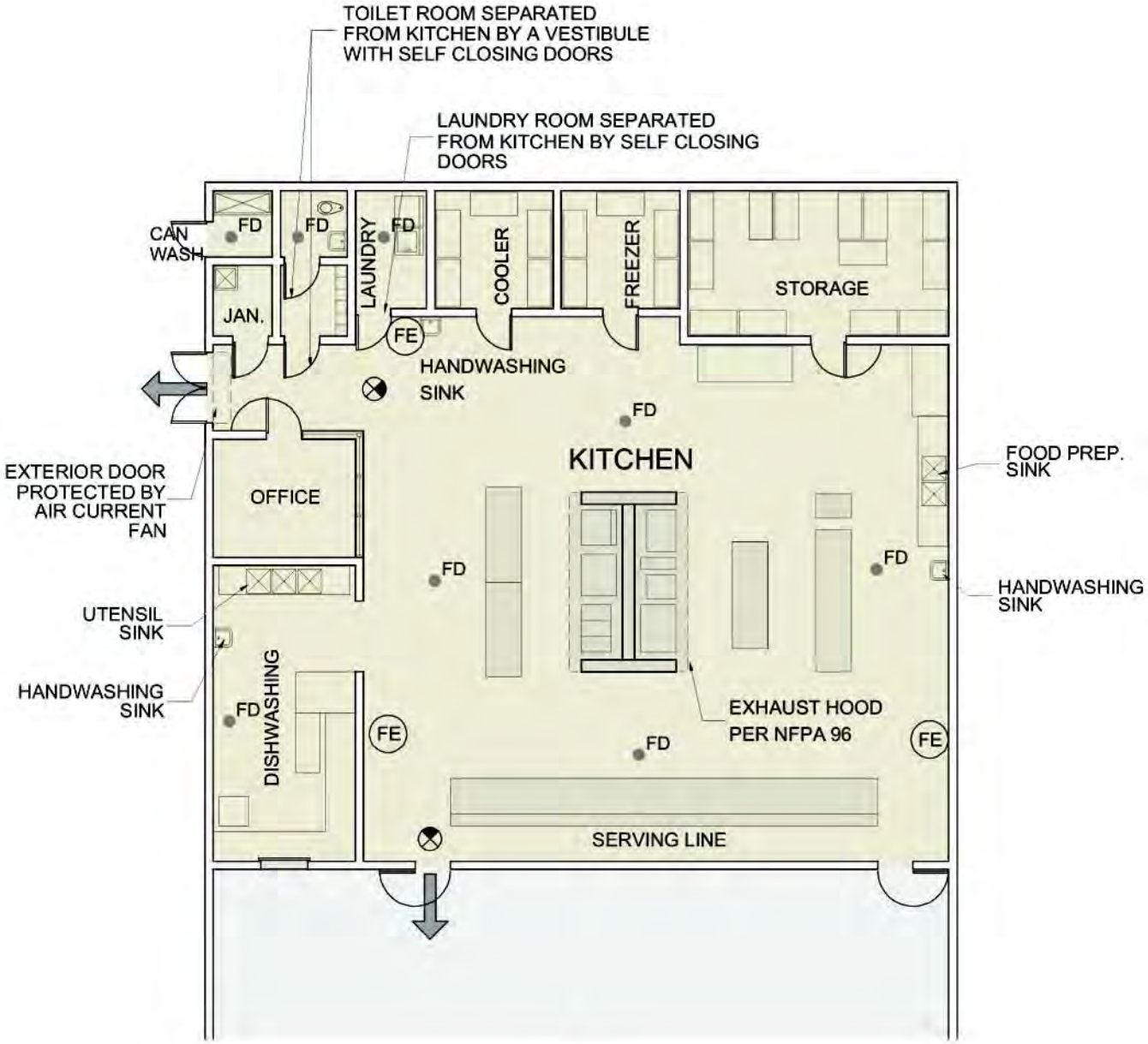
Shade and Green House		
		Code Reference
Construction	Type I, II or IV Construction (metal frame) capable of withstanding the appropriate wind load.	FBC 423.19.1
Location	The location of the shade/green house shall not hinder exiting from new and/or existing structures.	FBC 423.19.2
Egress	A minimum of two doors remotely located shall be provided. Doors shall be side-hinged and shall swing in the direction of egress.	FBC 423.19.3
Accessibility	Green houses shall meet accessibility requirements. The accessible walkway shall be connected to doors leading to an accessible route to the permanent structure.	FBC 423.19.4
Shade Cloth	Shade cloth shall be tear-away fabric securely fastened to the structural frame.	FBC 423.19.5
Fire Extinguisher	A minimum of one Type 2A-10B C fire extinguisher shall be provided per shade/green house.	FBC 423.19.6
Fire Safety Requirements	Fire alarm pull stations shall be located within 200 feet of any shade or green house. Fire alarm horns mounted on a permanent building must be audible inside the shade/green house.	FBC 423.19.7
Space Heaters	Space heaters, when provided, shall be mounted at least 6 feet 8 inches above finished floor (AFF).	FBC 423.19.8



(a)
Plan Diagram

SHADE/GREEN HOUSES

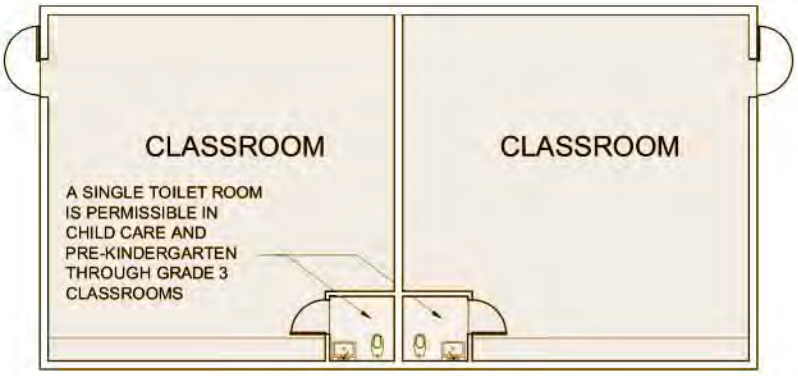
Kitchen and Food Services		
		Code Reference
General	Kitchen and food service areas shall comply with design and construction standards as described in the Food Code, Chapter 509, part I, or Chapter 500, Florida Statutes. Other administrative and programmatic provisions may apply.	FBC 426.1
Toilet and Hand-washing Facilities	Kitchens and food service areas shall be provided with toilet and hand-washing facilities for employees as required by the Florida Building Code, state rules, and state statutes. Toilet rooms shall be completely enclosed and have self-closing doors and shall open into vestibules with self-closing doors. Toilet rooms shall not open directly into food preparation areas, serving areas, or dining areas. A minimum of one water closet and one lavatory, with hot and cold water, shall be provided in each staff toilet.	FBC 423.16.10 FBC 423.16.10.1
Floor Drains	Floor drains shall be provided in the food serving area, kitchen area, scullery, garbage and rubbish rooms and can wash area.	FBC 423.16.10.2
Vermin Control	All areas shall be effectively rodentproofed. Windows used for ventilation must be screened, except when other effective means of vermin control are used. Screening materials shall not be less than 16 mesh to the inch or equivalent, tight fitting, and free of breaks.	FBC 426.3.3 FBC 443.3.1
NFPA 96 Requirements	NFPA 96 provides the minimum fire safety requirements related to the design, installation, operation, inspection and maintenance of all cooking operations. These requirements include, but are not limited to, all manner of cooking equipment, exhaust hood, grease removal devices, exhaust duct work, exhaust fans, dampers, fire extinguishing equipment, and all other auxiliary or ancillary components or systems that are involved in the capture, containment, and control of grease-laden cooking effluent.	NFPA 96 1-1.1



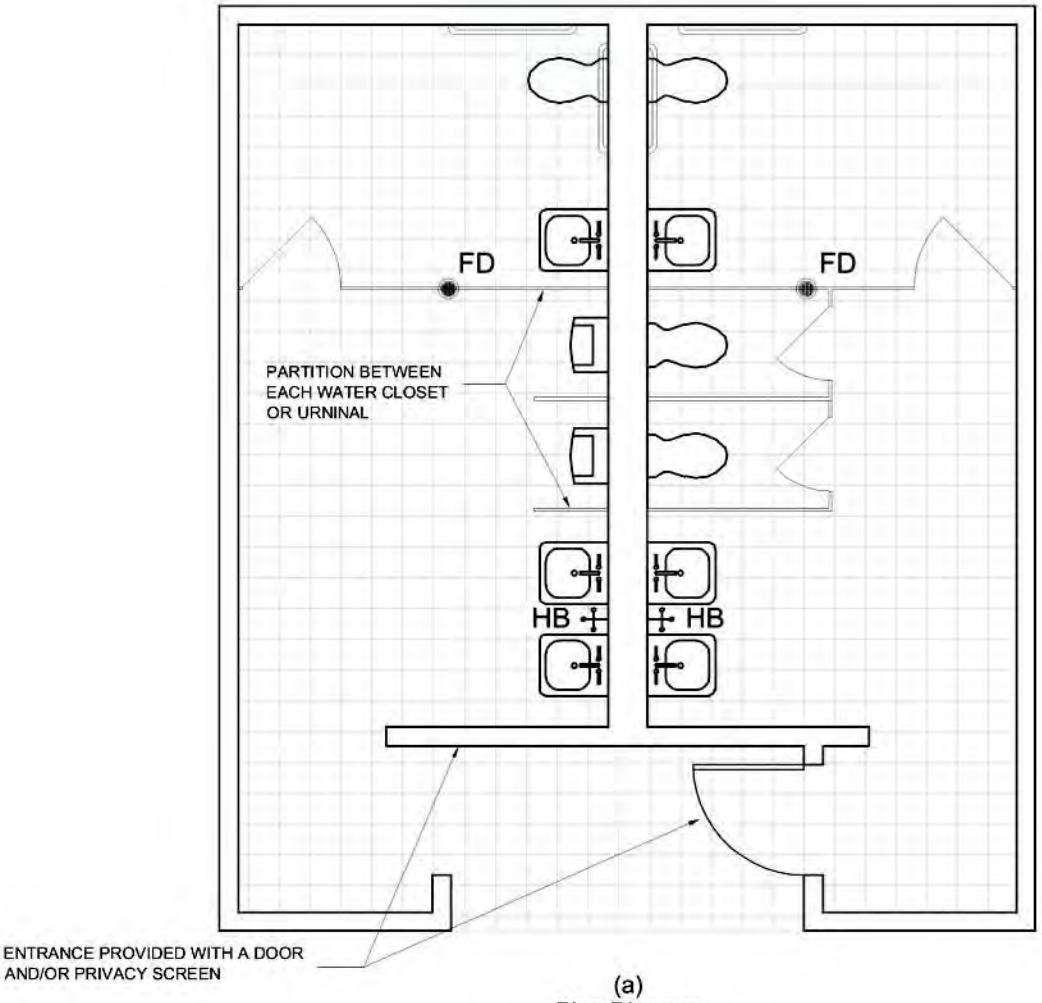
(a)
Plan Diagram

KITCHENS AND FOOD SERVICE

Toilet Rooms		
		Code Reference
Standards	Educational and ancillary facilities shall be provided with toilets, hand-washing facilities, and drinking fountains for all occupants, in rations and accessible as required by the Florida Building Code, Florida Law, and federal requirements. Exception: A single unisex toilet room is allowed where provided in child care and pre-kindergarten through grade 3 classrooms.	FBC 423.16.1 FBC 443.3.5
Teacher Toilets	Faculty and staff toilets shall be separate from student toilets.	FBC 423.16.2 FBC 443.3.5.2
Urinals	Trough urinals shall not be installed in any location.	FBC 423.16.4
Floor Drains and Hose Bibbs	All group toilet rooms shall be provided with at least one floor drain and one easily accessible hose bibb. The floor shall be sloped down to the drain. Stall urinals shall not serve as the required floor drains.	FBC 423.16.5 FBC 443.3.5.6
Shielding Device	The entry to each group toilet room shall be provided with a door, partition, or other shielding device to block from view the occupants in the toilet room. If a door is provided, it shall have a closer and shall swing out in the direction of exit. Exterior entries to toilet rooms shall have outward swinging doors.	FBC 423.16.6 FBC 443.3.5.4
Hot Water	When hot water is supplied to showers, handwash sinks, or lavatories in toilet rooms, a mixing valve shall be installed to control the temperature, which shall not exceed 110°F.	FBC 423.16.7 FBC 443.3.5.8.3
Delayed Closing Valves	Water supply at toilet room lavatories shall be controlled by delayed-closing valves.	FBC 423.16.8
Accessibility Requirements	All toilet rooms, including individual toilet rooms, shall be accessible to the disabled - ADA Title II requirement.	FBC 443.3.5.1
	Accessible requirements for children's environments for elementary grade students shall be utilized.	FBC 423.4.4 FBC 443.3.5.1
	Provide at least one of each type fixture accessible to the disabled in group toilets.	FBC 443.3.5.1 FBC 11-4.22.4 FBC 11-4.22.5 FBC 11-4.22.6
	One additional water closet in group toilets required to be accessible to the disabled when six or more fixtures provided.	FBC 443.3.5.1 FBC 11-4-22.4



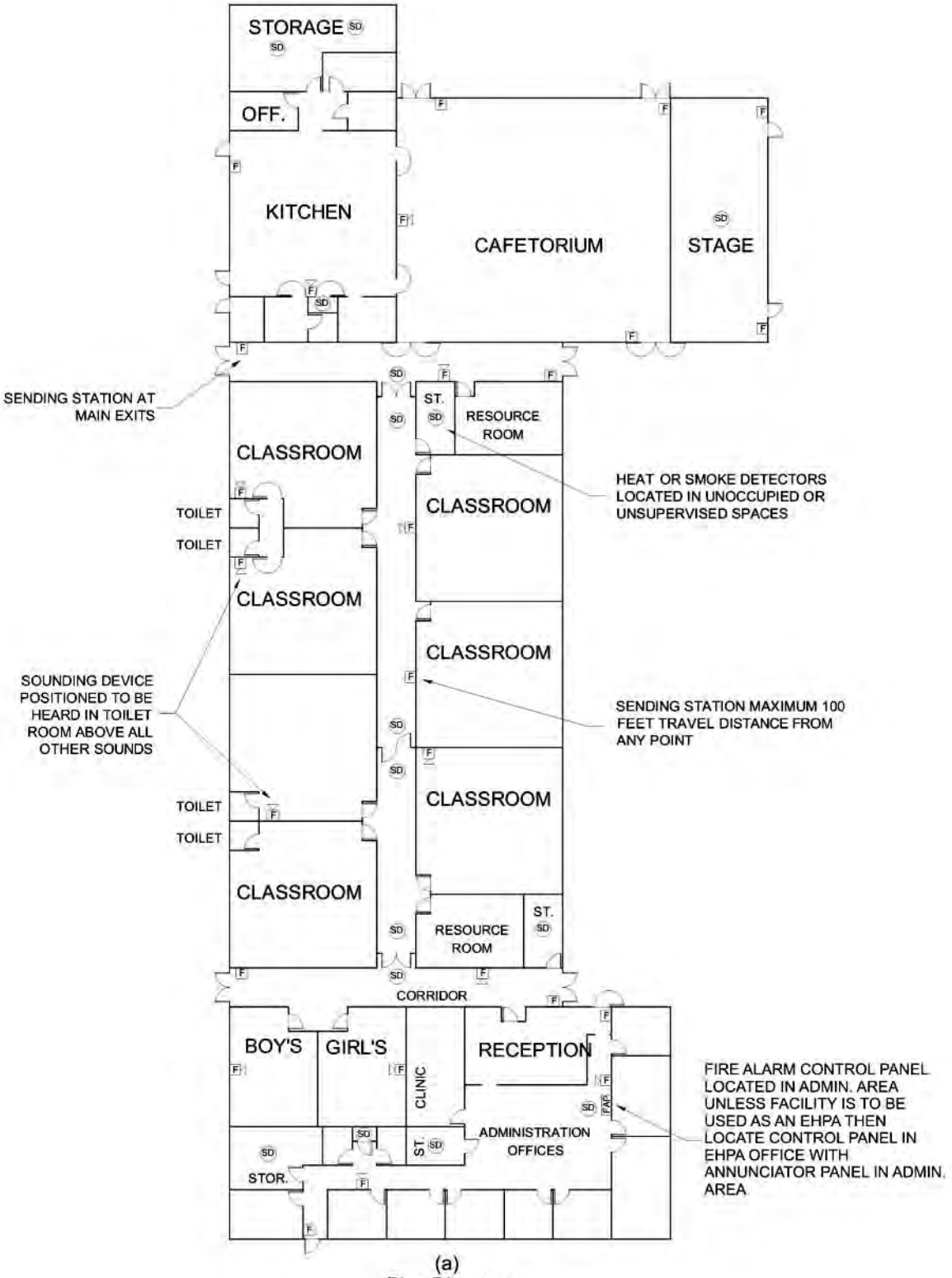
(a)
Toilet Rooms inside the Classroom



(a)
Plan Diagram

GROUP TOILETS

Fire Alarm		
		Code Reference
General Manual Fire Alarm Systems	All systems to be installed in educational facilities shall be in accordance with the 2010 Florida Fire Prevention Code and the National Fire Alarm Code NFPA 72 and shall meet the accessibility requirements of Chapter 11 of the Florida Building Code.	FBC 907.2
	Manual fire alarm pull stations shall be located no more than five (5) feet from the entrance to the exit. This includes each individual classroom that opens to the exterior. The exemption, under Section 907.2.1, Florida Building Code does not apply to educational facilities.	FBC 907.4.2.1
	Manual fire alarm pull stations may be omitted In a building provided it meets all of the exemptions listed in Section 903.3.1.1, Florida Building Code as clarified in the Florida Fire Prevention Code, Sections 14.3.4.2 and 15.3.4.2.	FBC 907.2.3 Exemption 3
Zoning	Each Floor shall be zoned separately. No one zone may exceed 15,000 sq. ft. A zone indicator panel shall be located at grade level, at the normal point of fire department access, or at a constantly attended building security control center.	FBC 907.6.3
Alarm Indicating Appliances	Visible alarm indicating appliances in public and common areas.	FBC 907.5.2.3.1
	Automatically activated by all the following where provided:	FBC 907.5
	Smoke detectors and heat detectors. Sprinkler water-flow devices. Manual fire alarm boxes. Other approved types of automatic fire-detection device suppression systems.	FBC 907.6 FBC 907.9.2 FBC Table 907.9.1.3
	Audible alarms:	
	Shall provide a distinctive sound that shall not be used for any other purpose. Sound pressure of 15 dbA above average ambient sound level in every occupied space within the building. Minimum 60 dbA, maximum 130 dbA.	FBC 907.5.2
	Visual: Minimum candela level of 75 regardless of location.	FBC 11-4.28.3(4)
Automatic Fire Detection	Approved single-station or multi-station smoke detectors shall be installed in accordance with NFPA 72.	FBC 907.3
Testing	Upon completion of the fire alarm system, all alarm indicating devices and circuits, alarm indicating appliances and circuits, supervisory signal initiating devices and circuits, signaling line circuits, and primary and secondary power supplies shall be tested in accordance with the Florida Fire Prevention Code.	FBC 907.8



(a)
Plan Diagram

FIRE ALARM SYSTEMS

Example EHPA Design Square Footage and Capacity Calculations
219 Student Station Elementary School

Space	Net Square Footage		Student Stations
	Net Included Spaces	Net Excluded Spaces	
2 Kindergarten Classrooms	899		18
6 Primary Classrooms	5,094		108
4 Intermediate Classrooms	3,080		80
1 Music Room	1,456		
Related Spaces		325	
1 Art Classroom	1,036		
Related Spaces		365	
1 Skills Development Lab	986		
1 Physical Ed Area Storage		1,395	
2 Regular Resource	1,140		
1 ESE	1,190		13
1 Media Center			
Reading/Stacks			
Related	1,110		
Functions/Storage		1,080	
Group Projects	180		
Administration			
Administrative Offices	675		
Related Spaces/Storage		1,125	
Reception/Secretary	413		
Conference Room	450		
Toilets	120		
Food Service			
Dining student/Staff	1,320		
Kitchen related		1,380	
Stage	990		
Related Spaces		400	
Multipurpose			
Storage	930	60	
Other Storage Spaces		105	
Toilets	286		
Custodial		985	
TOTALS	**21,355 Net Included Spaces**	**7,220 Net Excluded Spaces**	**219 Student Stations**
	21,355 + 7,220 = 28,545 Net Square Feet		

Example EHPA Design Square Footage and Capacity Calculations
219 Student Station Elementary School

Notes:

To determine the square footage and capacity for the EHPA in accordance with FBC Section 423.25.3 the following is required:

The excluded spaces shall be subtracted from the total net square footage.

28,575 Total Net Square Feet
− 7,220 Total Net Square Feet Excluded Spaces

21,355 Total Adjusted Net Square Feet

50% of the Total Adjusted Net Square Feet determines the designated square footage requirement for use as an EHPA.

21,355 Total Adjusted Net Square Feet
X .50

10,677.5 ~ 10,677 Square Feet Designated for use as an EHPA

The capacity of an EHPA shall be calculated at 20 square feet per occupant.

10,677 / 20 = 533.85 ~ 534 occupants.

Toilet and hand-washing facilities should be located within the EHPAs and provided at one toilet and one sink per 40 occupants.

534 people / 40 = 13.35 ~ 14

14 Toilets Required, 7 female and 7 male (3 toilets and 4 urinals)
14 Sinks Required

Toilet facilities located within the EHPA area are not in addition to toilet facilities provided for the normal school usage.

EHPA - Electrical and Emergency Power Systems Standby Circuits.			
	Code Reference		
EHPA Emergency Power Loads	**Primary**	**First Priority**	**Second Priority**
Lighting	FBC 4233.25.5		
EHPA Fire Alarm System	FBC 423.25.5		
EHPA Main Office Receptacles	FBC 423.25.5.3		
Ventilation Fans	FBC 423.25.5 (minimum)		FBC 423.25.5.2 - additional requirements
Campus Fire Alarm System		FBC 423.25.5.2	
Campus Exit Lights (Illuminated)		FBC 423.25.5.2	
Campus Emergency Lights		FBC 423.25.5.2	
Intercom System			FBC 423.25.5.2
Campus Security Lighting			FBC 423.25.5.2
Additional Power Receptacles			FBC 423.25.5.2

Recommended Acreage								
Schools						**Florida State Colleges**		
FTE Student Capacity	Acreage Recommenced			Vo-Tech School		**FTE Student Capacity**	Acreage required	
	Elem	Mid/Jr	Sr High	FTE Student Capacity	Acreage Required		Main Campus	Separate Center
200-299	4					500-599	Minimum	40
300-399	5	6	7			600-699	100	42
400-499	6	7	9			700-799		44
500-599	7	8	11	500-549	20	800-899		46
600-699	8	9	13	510-599	21	900-999		48
700-799	9	10	15	600-649	22	1000-1099		50
800-899	10	11	17	650-699	23	1100-1199		52
900-999	11	12	19	700-749	24	1200-1299		54
1000-1099	12	13	21	750-799	25	1300-1399		56
1100-1199	13	14	22	800-849	26	1400-1499		58
1200-1299	14	15	23	850-899	27	1500-1599		60
1300-1399	15	16	24	900-949	28	1600-1699		62
1400-1499		17	25	950-999	29	1700-1799		64
1500-1599		18	26			1800-1899		66
1600-1699			27			1900-1999		68
1700-1799			28			2000-2099		70
1800-1899			29			2100-2199		72
1900-1999			30			2200-2299		74
2000-2099			31			2300-2399		76
2100-2199			32			2400-2499		78
2200-2299			33			2500-2599		80
2300-2399			34			2600-2699		82
2400-2499			35			2700-2799		84
2500-2599			36			2800-2899		86
						2900-2999		88
1 Acre for each additional 100 students						3000-3099		90
						3100-3199		92

FBC CHAPTER 16 - STRUCTURAL LOADS			
			Code Reference
Dead Loads	Actual weights of materials.		FBC 1606.1 ASCE 7-10 Tables C3-1 & C3-2
Partition Loads	Permanent: part of dead load.		FBC 1607.5
	Partitions not shown or likely to be shifted: 15 psf in addition to permanent loads.		
	Exceptions: when live load exceeds 80 psf, partitioning not required.		
Live Loads	Floor:		FBC 1607.3
		Uniform: FBC Table 1607.1. See Section 1607.9 for allowable reductions. Distribution: FBC Sections 1607.4 and 1607.10.	
		Concentrated: FBC Section 1607.4.	FBC 1607.4
		Interior wall loads: 5 psf minimum, applied perpendicular.	FBC 1607.13
		Truck and bus garages: FBC 1607.6, Table 1607.6.	FBC 1607.6
	Roof: FBC Section 1607.11.2. Reductions: FBC Section 1607.11.2.1.		FBC 1607.11.2
Rain Loads	Not more than uniform live load if roof is drained and scupper set properly. FBC 1503.4.2.1.		FBC 1611.1
Impact:			FBC 1607.8
Wind	ASCE 7-10 and commentary thereon:		
	Velocity:		
		Non-hurricane shelters: ASCE 7-10, Figure 26.5-1B.	
		Hurricane shelters containing EHPA.	ASCE 7-10
		Recommend: wind speed plus 40 mph.	
	Risk and Importance factors:		ASCE 7-10 Table 1.5-2
		Non-hurricane shelters: Risk category IV, 1 = 1.0.	ASCE 7-10
		Hurricane shelters containing EHPA: Risk category IV, 1 = 1.0.	ASCE 7-10
	Exposure: See FBC and IBC Section 1609.4 for definitions.		FBC 1609.4
	Directionality: 0.85 only when wind load is combined with other loads ASCE 7-10, Table 26. 6-1 and footnote.		ASCE 7-10
	Topography: See ASCE 7-10 Section 26.8.1, Section 26.8.2, K_{ZT} = 1.		ASCE 7-10
	Enclosed or partially enclosed building: ASCE 7-10, pages 241 and 242 definitions		ASCE 7-10 FBC 1609.2
	Coefficients:		
		Main wind force resisting systems: ASCE 7-10. Chapters 27-29.	ASCE 7-10
		Components and cladding: ASCE 7-10, Chapter 30; FBC Table 1609.6.2(2).	ASCE 7-10
		Internal pressure Coefficients: ASCE 7-10. Table 26.11-1. Enclosed building: plus/minus 0.18. Partially enclosed buildings; plus/minus 0.55.	ASCE 7-10
		Minimum :16.	ASCE 7-10, Section 28.4.4

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FBC CHAPTER 16 - STRUCTURAL LOADS (Continued)			
			Code Reference
Wind (Continued)		Combined force: FBC Sections 1605.2.1 and 1605.3.1, Load combinations.	FBC 1605.2.1 FBC 1605.3.1
		Structures other than buildings:	
		Round structures: ASCE 7-10, Figure 29.5-1.	ASCE 7-10
		Free-standing walls and solid signs; ASCE 7-10, Figure 29.4-1.	ASCE 7-10
		Open signs: ASCE 7-10, Figure 29.5-2.	ASCE 7-10
		Trussed towers: ASCE 7-10, Figure 29.5-3.	ASCE 7-10
	Missile impact; SSTD 12 for hurricane shelters, see FBC Section 423.25.4.		FBC 423.25.4
Deflections	FBC Sections 1604.3.1 through 1604.3.6; Table 1604.3.		FBC 1604.3
Special	Foundations and retaining wall; see FBC Table 1610.1; also geotechnical engineering report weights and lateral pressures.		
	Basement walls; if below grade, consider upward pressure of water.		
	Handrails and guards:		
		Concentration: 200 pounds at any point and in any direction, along top.	FBC 1607.7.1.1
		Uniform: 50 plf in any direction, at top.	FBC 1607.7.1
		Application: Not simultaneous.	FBC 1607.7.1.1
		Grab bars, shower seats, dressing room benches - 250 lbs. concentration.	FBC 1607.7.3
	Awnings and Canopies (fabric construction supported by lightweight rigid skeleton structure) - 5 psf.		FBC Table 1607.1
Wind-borne Debris **See Figure 1609B**	FBC Section 1609.1.2 applies to glass only, One of the following shall apply: Areas within 1 mile of coastal mean high water line, where the ultimate design wind speed is 130 mph or greater. Areas where the ultimate design wind speed is 140 mph or greater. Exception: Building designed as "partially enclosed." Missile impact resistance need not be considered in window design.		FBC 1609.2
High Velocity Hurricane Zones	General Deflection Volume Changes Minimum Loads Roof Live loads Roof Drainage Special Load Considerations Live Load Reductions Wind Loads Overturning Moment and Uplift Screen Enclosures Live Load Posted, Occupancy Limits Foundation Design Load Tests Impact Tests for Wind-borne Debris		FBC 1615 FBC 1616 FBC 1617 FBC 1618 FBC 1619 FBC1620 FBC 1621 FBC 1622 FBC 1623 FBC 1624 FBC 1625 FBC 1626

FBC CHAPTER 18 - SOILS AND FOUNDATIONS		
		Code Reference
Soils Report	Soil brings representative of footprint Soil profile Ground water level Plasticity index Expansion index Standard penetration testing or cone penetration testing	FBC 1803 FBC 1803.6
Soil Containment	See geotechnical report. Usually 18 inches minimum, except for pre-engineered, prefabricated buildings.	
Allowable Bearing Pressure	FBC Table 1806.2 for maximum values. Exceptions: See geotechnical report.	FBC 1806.2
Lateral Sliding Resistance	FBC Table 1806.2 Exceptions: See soils report Increase: FBC Sections 1806.3.3, 1806.3.4.	FBC 1806.3
Differential Settlement	See geotechnical report; usually ½ inch maximum.	
Type of Soil	Acceptable for Foundation: Natural geotechnical compacted Compacted fill.	FBC 1804.5
Problem Soils	Expansive geotechnical, plastic clays: Shrink-swell potential, over-excavate. Also see geotechnical report.	FBC 1805.2.5 FBC 1805.8
Water Table	Allowable bearing pressure Affects placement of foundation concrete if high. See Geotechnical report. Located above finished floor; waterproofing required	FBC 1803.5.4 FBC 1805.1, 1805.3 FBC 1807.2.2
Continuous Wall or Strip Footing Only	Not affected by differential settlement.	
Spread Footings and Continuous Footings	See geotechnical report for recommended depth of soil compaction.	
Footing Design	Method of load calculation: See FBC Section 1808.3.	FBC 1808.3
	Width of Footing: 12 inches minimum.	FBC 1809.4
	Concrete design: See FBC Chapter 19 and ACI 318-10, Chapter 15.	FBC Chapter 19 ACI 318-10
Footing Concrete Strength	FBC Table 1808.1, 2500 psi minimum.	FBC Table 1808.1
Retaining Walls		FBC 1807
Pile Foundations	See geotechnical report.	FBC 1810.1.1
	Lateral Support	FBC 18110.2.1 and 1810.2.2
	Stability in all directions: 3 piles minimum, connected by rigid cap, located in radial directions from group centroid not less than 60 degrees apart.	FBC 1808.2.2

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FBC CHAPTER 18 - SOILS AND FOUNDATION (Continued)		
		Code Reference
Pile Foundations (Continued)	Allowable stresses, FBC Table 1810.3.2.6.	FBC Section 1810.3.2.8
	Splices develop minimum 50% least capacity in bending.	FBC 1810.3.6
	Splices located in upper 10 feet of embedded portion of pile, resist moment and shear from 3-inch load eccentricity.	FBC 1810.3.6
	Pile caps: Tops of piles embedded 3 inches minimum in cap. Caps extend 4 inches minimum past piles.	FBC 1810.3.11
Allowable Pile Load	Driven piles: Driving formula; 40 tons maximum capacity.	FBC 1810.3.3.1.1
Allowable Pile Load	Load test method: Not more than ½ the test load-capacity per FBC Section 1810.3.3.1.2. Determined by Florida registered P.E.	FBC 1810.3.3.1.2
	Allowable Frictional Resistance: 500 psf maximum.	FBC 1810.3.3.1.4
	Uplift capacity, single deep foundation grouped deep foundation, the lesser of : Proposed individual pile uplift working load times the number of piles in group. Two-thirds of the effective weight of the pile group and the soil contained within a block defined by the perimeter of the group and the length of the pile. Not to exceed ultimate load capacity divided by 2.	FBC Section 1810.3.3.1.5 FBC 1810.3.3.1.6
	Bearing Capacity: Ultimate load capacity of at least twice the design working loads in the designated bearing layers. No soil layer underlying the designated bearing layers shall cause the bearing capacity safety factor to be less than 2.	FBC 1810.3.3.1.7
Structural Steel Piles	Not outlined because not generally used on schools.	FBC 1810.3.5.3
Concrete filled Steel Pipe and Tube Pipes	Not outlined because not generally used on schools.	FBC 1810.3.5.3.2
Driven Pile Foundations	Precast Concrete Piles:	FBC 1810.3.8.1
	Precast, non-prestressed concrete piles:	FBC 1810.3.8.2
Precast Prestressed Concrete Piles	Effective prestress, FBC Section 1810.3.8.3.1 Piles up to 30 feet - 400 psi Piles 30 to 50 feet - 550 psi Piles greater than 50 feet - 700 psi	FBC 1810.3.8.3
High Velocity Hurricane Zones	Footings and Foundations Termite Protection Excavations Bearing Capacity of Soil Soil Bearing Foundations Concrete Slab on Fill Monolithic Footings Pile Foundations Wood Piles Precast Concrete Piles Prestressed Precast Concrete Piles Cast in Place Rolled Structural Shapes Special Piles or Special Conditions Load Test on Piles Foundation Walls and Grade Beams Grades Under Buildings Retaining Walls Sea Walls and Bulkheads Soil Improvement	FBC 1805 FBC 1816 FBC 1817 FBC 1818 FBC 1819 FBC 1820 FBC 1821 FBC 1822 FBC 1823 FBC 1824 FBC 1825 FBC 1826 FBC 1827 FBC 1828 FBC 1829 FBC 1830 FBC 1831 FBC 1832 FBC 1833 FBC 1834

FBC CHAPTER 19 --- CONCRETE		
		Code Reference
Reference Standards	ACI 318-08, Building Code Requirements for Structural Concrete. ACI 506.2, Specification for Concrete. ASTM Standards.	ACI 318-08 ACI 506.2
Strength	Strength of concrete: 2,500 psi minimum, stated on plans and specifications.	FBC 1905.1.1 Table 1904.3
Mix Design	Minimum strength 2500 PSI.	FBC 1905.1.1
	Selecting proportions.	FBC 1905.2
	Methods of design.	FBC 1905.3, 1905.4, 1905.5
Slump	Slump for regular concrete subject to vibratory compaction shall be 4 inches plus/minus 1 inch. See ACI 301, Section 4.2.2: also ACI A-117, Section 2.5.1.	ACI 301, 4.2.2.2 ACI 530.1-08, 2.6B2
	For filled cells in reinforced masonry, use 8 inch to 11-inch slump. See ACI 530.1-08, Section 2.6B2.	
Reinforced Steel	Reinforced steel shall be free of mud, oil, or other non-metallic coatings that would decrease the bond with concrete. No field bends except as approved by the architect.	FBC 1907.3 and 4 ACI 318-08, 7.3 & 7.4
Fly Ash	Fly ash in concrete shall not exceed 25 percent by weight.	ACI 318-08, 4.2.3
Mixing Time	When air temperature is between 85 and 90 degree F., reduce mixing and delivery time to 75 minutes. When air temperature is higher than 90 degrees, reduce mixing and delivery time to 60 minutes.	
Segregation of Materials	Concrete shall be deposited as nearly as practicable to its final position to avoid segregation of material due to re-handing or flowing.	FBC 1905.9 ACI 318-08, 5.10.1 FBC 1905.10
Flow	Concreting shall be carried on at such a rate that the concrete is at all times plastic and flows readily into spaces between reinforcement.	FBC 1905.10 ACI 318-08, 5-10.2
Prohibited	Suggest prohibiting the following concrete:	FBC 1905.10 ACI 318-08, 5.10.3, 5.10.4
	1. Partially hardened concrete.	
	2. Contaminated concrete.	
	3. Re-tempered concrete.	
	4. Concrete remixed after it had taken its initial set.	
Continuous Operation	After concreting has been started, It should be carried on as a continuous operation until placing of a panel or section, as determined by its boundaries or joints, is completed.	FBC 1905.10 ACI 318-08, 5.10.5
Construction Joints	Construction joints shall be constructed (cleaned, laitance removed, wetted, standing water removed).	ACI 318-08, 6.4.2
Consolidated	All concrete shall be thoroughly consolidated by suitable means during placement and should be worked around reinforcement and embedded fixtures and into corners of forms.	FBC 1905.10 ACI 318-08, 5.10.8
Cover of Steel	Minimum clearances for reinforcing steel.	FBC 1907.7.1 ACI 318-08, 7.7.1
Curing	Wet cure time of 7 days minimum at 50 degrees minimum temperature.	FBC 1905.11 ACI 318-08, 5.11.
Finishing Tolerance	Finishing tolerance for concrete floor slabs which receive resilient coverings shall be ⅛ inch in 10 feet.	ACI 301, 11.8.2, 11.7.3, 11.9.1

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FBC CHAPTER 19 --- CONCRETE (Continued)		
		Code Reference
Testing	Test cylinders. Two concrete test cylinders shall be broken at 28 days and the average value used as the test result.	ACI 301,11.8.2, 11.7.3, 11.9.1
	Criteria for acceptance of concrete cylinder tests.	FBC 1905.6 ACI 318-08, 5.6.2.4, 5.6.3.3
Slab at Grade	Not less than 3 ½ inches thick.	FBC 1910.1
Headed anchors	Strength in tension.	FBC Table 1911.2
	Strength in shear.	
Vapor retarder;	Vapor retarder should be 6 mil minimum polyethylenes with joints lapped 6 inches.	FBC 1910.1
Shotcrete	General Proportions and materials Aggregate Reinforcement Preconstruction tests Rebound Joints Damage Curing Strength tests	FBC 1913.1 FBC 1913.2 FBC 1913.3 FBC 1913.4 FBC 1913.5 FBC 1913.6 FBC 1913.7 FBC 1913.8 FBC 1913.9 FBC 1913.10
Light Weight Insulation Concrete Fill	Minimum thickness 2 inches	FBC 1917.4.2
	Maximum Compressive Strengths per ASTM C 495 and C796. Aggregate Concrete - 125 psi. FBC Section 1917.1.1 Cellular lightweight insulating concrete - 160 psi. FBC Section 1917.1.2. Cellular aggregate (hybrid) lightweight insulating concrete - 200 psi FBC Section 1917.1.3.	FBC 1917.1
High Velocity Hurricane Zones	General Standards Definitions Materials Concrete Quality Mixing and Placing Concrete Formwork, Embedded Pipes and Construction Joints Details Reinforcement Precast Concrete Units Prestressed Concrete Pneumatically Placed Concrete (Shotcrete)	FBC 1919 FBC 1920 FBC 1921 FBC 1922 FBC 1923 FBC 1924 FBC 1925 FBC 1926 FBC 1927 FBC 1928 FBC 1929

FBC CHAPTER 21 - REINFORCED MASONRY		
		Code Reference
Code	All design and construction of reinforced masonry shall conform to ACI 530-08.	ACI 530-08
ASTM	Portland cement: C150 Sand and aggregate: C33 Block: C90, Type N Mortar: C270 Grout: C476 Reinforcing bars: A615 Truss reinforcing: A82	
Elastic Module	Concrete masonry $900f'_m$, ACI 530-08, Section 1.8.2.2.1. Reinforcing steel: 29,000,000 psi, ACI 530-08, Section 1.8.2.1.	ACI 530-08
Proportions	Mortar-see ASTM C-270, FBC Table 2103.8.	FBC 2103.8
	Grout-see ASTM C-476, FBC Table 2103.12.	FBC 2103.12
Slump	Slump for grout in filled ceils should be 8 inches to 11 inches. See ACI 530.1-05, Section 2.6.B.2.	ACI 530.1-08
Compressive Strength	See FBC Table 2105.2.2.1.1. Minimum Strength of masonry units and grout stated. ACI 530.08, Section 2.1.3.1.	FBC 2105.2.2.1.1
Allowable Stress Design	General	FBC 2107.1
	Lap Splices. Modify ASCE 530-08.2.1.10.3, Section values of splices.	ACI 530-08, Section 2.1.10 and FBC 2107.3, 2107.4, 2107.5
	Empirical design limited to ultimate design, wind speed of 115 mph. ACI 530-08, Section 5.1.2 for general limitations.	FBC 2109.1.1, ACI 530-08, 5.1.2
Reinforcing Steel	Reinforcing steel should be free of mud, oil or non-metallic castings that would decrease the bond with concrete. No field bends except as approved by the architect.	FBC 1907.3, 1907.4, ACI 318-08, 7.4
Lintel Bearing	Specify the minimum lintel bearing, in inches.	
Masonry Veneer	Special wind load requirements per ACI 530, Section 6.2.2.1 and 6.2.2.2.	ACI 530, 6.2.2.1, 6.2.2.11
Clean-out Holes	Use inspection and clean-out holes at bottom of wall reinforced vertical cells for grouting lifts over 5 feet high. Clean-out holes should be 3 feet minimum, see ACI 530.1-08, Section 3.2F. See grout space requirements for various grout pour heights in ACI 530.1-08, Section 3.5C with Table 7.	ACI 530.1-08
High Velocity Hurricane Zones	Design Quality, Test and Approval Allowable Unit Stresses in Unit Masonry Construction Details Reinforced Unit Masonry	FBC 2118 FBC 2119 FBC 2120 FBC 2121 FBC 2122

FBC CHAPTER 22 - STEEL		
Codes		**Code Reference**
Structural Steel	A.I.S.C. Manual of Steel Construction, 2005, Thirteenth Edition, including Specification for Structural Steel Buildings 360-05.	FBC 2214.1-6 AISC 360-05
	Grades of steel: A36: 36 ksi yield stress: Wide- flange and other shapes used for beams. A572: 42 ksi and 50 ksi yield stress: Wide-flange and other shapes for beams. A588: 50 ksi yield stress: Wide-flange and other shapes used for beams. A992: 50 ksi yield stress: Wide-flange and other shapes used for beams. A500; Grade B: 42 ksi (round) and 46 ksi (shaped) yield; Cold-rolled square, round and rectangular tubes used for columns and pipe columns. A501; 36 ksi yield stress; hot-rolled square, round and rectangular steel tubes used for columns. A53, Grade B, Type E or S: 35 ksi yield stress: Pipes used for columns.	FBC 2205
Cold-Formed Lightgage Steel	Code: North American Specifications for the Design of Cold-Formed Steel Structural Members, AISI 5100-07. Code: Standard for Cold-Formed Steel Framing-General Provisions, Floor and Roof System Design, Wall Stud Design, Header Design, Lateral Design, Trusses. ASTM A-653. Metal roof decks and floor decks. Steel Deck Institute DDM-03 Diaphragm Design Manual. Steel Deck Institute MOC-2 Manual of Construction with Steel Deck. Standing seam metal decks. Lightgage steel trusses, Code: Standard for Cold Formed Steel Framing - Trusses.	AISI 5100-07 AISI 9200-07, 5211-07, 5212.07, 5213-07, 5214-07 FBC 2209.1 FBC 2210.1, 2210.2, 2210.3, 2210.4, 2210.5, 2210.6
Open-Web Steel Joints	Standard Specifications for Open-Web Steel Joists, K-series Standard Specification for Longspan Steel Joists, LH series and Deep Longspan Steel joists, DLH-series. Standard Specification for Joist Girders.	FBC 2206
Welding	Welding done by certified welders.	FBC 2218.3
High Velocity Hurricane Zones	General Material Design Loads Minimum Thickness of Materials Connections Tubular Columns Protection of Metal General-Open Web Steel Joists Cold-Formed Steel Construction Pre-engineered, Prefabricated Metal Building Systems and Components Chain Link Fences	FBC 2214 FBC 2215 FBC 2216 FBC 2217 FBC 2218 FBC 2219 FBC 2220 FBC 2221 FBC 2222 FBC 2223 FBC 2224
Joist Bridging Layout	The specialty engineer for the steel joist supplier shall certify, in a cover letter that the steel joist bottom chords will safely resist the wind uplift, considering the spacing of the joist bridging. Calculations shall be submitted.	FBC 1609.3 Figure 1609 FBC 2206.3
Submittals	Steel shop drawings shall be signed, sealed and dated by the Florida-registered professional engineer who is responsible for their preparation, unless design of connections is shown on contract plans.	Section 471.025(1) F.S.
Structural Steel Fabrication	A.I.S.C. Manual of Steel Construction, 2005, Thirteenth Edition	AISC 360-05
Structural Steel Erection	A.I.S.C. Manual of Steel Construction, 2005, Thirteenth Edition	

FBC CHAPTER 23 - WOOD			
Code	NDS-05 Load and Resistance Factor Design Standard for Engineered Wood Construction. National Design Specification for Wood Construction - 2005 Supplement		**Code Reference** NDS-05
Permitted Use	Educational facilities construction; Type I, II, or IV, no wood permitted for structural use. Types III and IV are permitted as follows:		FBC 423.8.3.4
		1. Covered walkways open on all sides.	FBC 423.8.3.4
		2. Dugouts, concession stands and related public toilets.	
		3. Press boxes located on the first floor or with nothing directly below.	
		4. Non-flammable storage buildings detached at least 60 ft from educational facility.	
		5. Wood may be used for non-structural uses, such as blocking, moldings, nailers, etc.	
Non-Permitted Use	Non-bearing interior partitions in permanent educational facilities.		

ROOF SHINGLES		
Fire Rating	Shingles Class A	**Code Reference** FBC 423.12.1
Cross Slope	Minimum roof cross slope for shingles 2:12.	FBC 1507.2.2
ASTM	Shingles comply with ASTM D225 or D3462.	FBC 1507.2.5
Underlayment	Comply with ASTM D226, Type I or Type II, or ASTM D4869 Type I or Type II, or ASTM D6757.	FBC 1507.2.3
	For roof slopes between 2:12 and 4:12: Two layers of felt, minimum. Starting at the eave, a 19 inch strip of underlayment shall be: Applied parallel to and starting at the eave, and Fastened sufficiently to hold it in place. Starting at the eave, 36-inch wide strips of underlayment felt shall be applied: Overlapping successive sheets 19 inches and Fastened sufficiently to hold them in place.	FBC 1507.2.8
	For slope greater than 4:12: Starting at the eave, one layer of underlayment felt shall be applied as follows: Applied shingle fashion parallel to and starting at the eave, and lapped 2 inches, and fastened sufficiently to hold it in place.	
Fasteners	Fasteners for asphalt shingles shall be:	
	Galvanized, stainless steel, aluminum, or copper roofing nails, minimum 12 gauge (0.105. inch) shank with a minimum ⅜-inch diameter head, and	
	Length sufficient to penetrate through the roof materials and a minimum of ¾ inch into the roof sheathing. Where the sheathing is less than ¾ inch thick, the nails shall penetrate through the sheathing.	FBC 1507.2.6
	Comply with ASTM F1667	
Anchoring	Asphalt shingles shall be secured to the roof with fasteners, per FBC Table 1507.2.7.	FBC 1507.2.9.25
Valleys	Valley linings shall be installed per manufacturer's printed instructions before applying asphalt shingles. Valley linings for the following types are approved:	FBC 1507.2.9.2
	For open valleys (valley lining exposed) lined with metal, the valley lining shall be: At least 16 inches wide and Made of any of the corrosion-resistant materials listed in FBC Table 1503.2.	
	For open valleys, valley lining of two piles of mineral surface roll roofing is permitted. Bottom layer shall be 18 inches wide, minimum. Top layer shall be 36 inches wide, minimum.	
	For closed valleys (valley covered with shingles), valley lining shall be one of the following: Type 1 or 2 above. One ply of smooth roll roofing at least 36 inches wide and complying with ASTM D6380 Class S.	FBC 1507.2.9.2
Coatings	No elastomeric and/or maintenance coatings unless approved by the manufacturer and installed per manufacturer's instructions.	FBC 1507.15.3, 1521.17.1
Photovoltaic System	Rooftop-installed photovoltaic systems shall be installed per FBC 1505.8 and 1507.17.	FBC 1505.8, 1507.17, 1518.11
Drip Edge	Drip edge shall be 3 inches minimum.	FBC 1507.2.9.3

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ROOF SHINGLES (Continued)		
		Code Reference
Drip Edge	Drip edge shall be: Provided at eaves and gables of shingle roofs. Overlapped a minimum of 2 inches. Eave drip edges shall extend: ½ inch below sheathing, and Back on the roof a minimum of 2 Inches. Drip edge shall be mechanically fastened a maximum of 12 inches on center. Drip edge may be installed over or under underlayment. If drip edge is installed over underlayment, there shall be a minimum width of 4 inches of roof cement over the drip edge flange.	FBC 1507.2.9.3
Final Statement of Compliance	The Contractor shall provide a "Final Statement of Compliance" to the architect, which states that the finished roof membrane complies with the approved contractual documents.	FBC 423.12.3
Inspection by Manufacturer	The roof membrane shall be inspected by the manufacturer's representative within one year of acceptance by the Board.	FBC 423.12.4
Primary Drainage	A primary drainage system shall be provided, size per FBC-Plumbing Section 1106, Tables 1106.2(1), 1106.2(2), 1106.3 and Figure 1106.1.	FBC-P 1106
Secondary Drainage	A secondary drainage system shall be provided when parapets surround the perimeter.	FBC-P 1107
	Separate from the primary system. FBC-P 1107.2. Values from Tables 1106.2(10), 1106.2(2), 1106.3 and Figure 1106.1.	FBC-P 1107.2
	Sized per FBC-P Section 1107.3.	FBC-P 1107.3
	Overflow scupper to have a minimum dimension of 4-inch opening.	FBC-P 1107.3
High Velocity Hurricane Zones	General Definitions Weather Protection Performance Requirements Fire Classification Materials Roof Coverings with Slopes 2:12 or Greater Roof Coverings with Slopes Less than 2:12 Roof Insulation Re-roofing Rooftop Structures and Components Testing Required Owners Notification for Roofing Considerations Uniform Permit Application	FBC 1512 FBC 1513 FBC 1514 FBC 1515 FBC 1516 FBC 1517 FBC 1518 FBC 1519 FBC 1520 FBC 1521 FBC 1522 FBC 1523 FBC 1524 FBC 1525
Energy Efficiency	Submit complete FLA/COM compliance form. This shall indicate compliance with Florida Energy Efficiency Code (FEEC) for Building Construction.	FBC 13-400.0

OFFICE OF EDUCATIONAL FACILITIES SECTION 423 APPLICATION MATRIX			
Section	**K-12**	**College**	**Ancillary**
423.1 Scope: Public educational facilities	X	X	X
423.2 Public schools and Florida colleges general requirements	X	X	X
423.2.1 Owner	X	X	X
423.2.2 Exemption from local requirements	X	X	X
423.2 Code enforcement	X	X	X
423.3.1 School boards and Florida college boards	X	X	X
423.3.2 Owner review and inspection	X	X	X
423.3.3 Local government review and inspection	X	X	X
423.3.4 Other regulatory agencies	X	X	X
423.3.5 Day labor projects	X	X	X
423.3.6 Routine maintenance	X	X	X
423.3.7 Certificate of occupancy	X	X	X
423.3.8 Reuse of prototype plans	X	X	X
423.4 Reference documents	X	X	X
423.4.1 Rule 6-2	X	X	X
423.4.2 Flood resistant construction	X	X	X
423.4.3 Florida statutes and state rules	X	X	X
423.4.4 Accessibility requirements for children's environments	X	Footnote(1)	Footnote(1)
423.4.5 Handbook for public playground safety	X	Footnote(1)	Footnote(1)
423.4.6 ANSI Z53.1	X	X	X
423.4.7 ASCE 7	X	X	X
423.4.8 Life Cycle Cost Guidelines for Materials and Buildings for Florida's Public Educational Facilities	X	X	X
423.5 Definitions	X	X	X
423.5.1 Assembly	X	X	X
423.5.2 Board	X	X	X
423.5.3 Boiler	X	X	X
423.5.4 Certificate of occupancy	X	X	X
423.5.5 Courtyard	X	X	N/A
423.5.5.1 Exterior courtyard	X	X	N/A
423.5.5.2 Enclosed courtyard	X	X	N/A
423.5.5.3 Roofed courtyard	X	X	N/A

OFFICE OF EDUCATIONAL FACILITIES SECTION 423 APPLICATION MATRIX			
Section	**K-12**	**College**	**Ancillary**
423.5.6 Facility	X	X	X
423.5.6.1 Ancillary facility	N/A	N/A	X
423.5.6.2 Auxiliary plant	N/A	N/A	X
423.5.6.3 Auxiliary facility	X	X	N/A
423.5.6.4 Educational facility	X	X	N/A
423.5.6.5 Educational plant	X	X	N/A
423.5.6.6 Existing facility	X	X	X
423.5.6.7 Leased facility	X	X	X
423.5.6.8 Permanent facility	X	X	X
423.5.6.9 Relocatable portable facility	X	X	X
423.5.6.10 Modular facility	X	X	X
423.5.7 Maintenance and repair	X	X	X
423.5.8 New construction	X	X	X
423.5.9 Open plan building	X	X	X
423.5.10 Open plan instructional space	X	X	N/A
423.5.11 Owner	X	X	X
423.5.12 Permit	X	X	X
423.5.13 Remodeling	X	X	X
423.5.14 Renovation	X	X	X
423.5.15 Separate atmosphere	X	X	X
423.5.16 Separate building	X	X	X
423.5.17 Florida college	N/A	X	N/A
423.5.18 Student-occupied space	X	X	N/A
423.6 Administration of public education projects	X	X	X
423.6.1 Occupancy during construction	X	X	X
423.6.2 Contractor toxic substance safety precautions	X	X	X
423.6.3 Flammable or explosive substances	X	X	X
423.7 Life safety	X	X	X
423.7.1 Separate exits	X	X	X
423.7.2 Exit access	X	X	X
423.7.3 Location of fire extinguishers and blankets	X	X	N/A

OFFICE OF EDUCATIONAL FACILITIES SECTION 423 APPLICATION MATRIX			
Section	**K-12**	**College**	**Ancillary**
423.7.4 Common fire alarm	X	X	Footnote[(2)]
423.7.5 Fire Alarm sending stations	X	X	X
423.7.6 Automatic shut off	X	X	N/A
423.7.6.1 Kitchen gas supplies	X	X	X
423.7.6.2 Emergency power	X	X	X
423.7.7 Unoccupied rooms and concealed spaces	X	X	X
423.7.7.1 Fully sprinklered buildings	X	X	X
423.7.8 Boiler rooms	X	X	X
423.8 General requirements for new construction, additions, renovations and remodeling	X	X	X
423.8.1 Codes and standards	X	X	X
423.8.1.1 Educational occupancy	X	X	N/A
423.8.1.2 Business occupancy	N/A	X	X
423.8.1.3 Ancillary facility	N/A	N/A	X
423.8.2 Space standards	X	X	X
423.8.3 Construction type	X	X	X
423.8.3.1 Noncombustible Type I, II or IV	X	X	X
423.8.3.1.1 Interior nonload-bearing wood studs	X	X	X
423.8.3.2 Type I	X	X	X
423.8.3.3 Type IV	X	X	X
423.8.3.4 Exceptions to types of construction	X	X	X
423.8.4 Standards for remodeling and/or renovation	X	X	X
423.8.4.1 Fire sprinkler in existing buildings	X	X	X
423.8.5 Leased facilities	X	X	X
423.8.6 Asbestos prohibited	X	X	X
423.8.7 Life cycle cost guidelines for materials and building systems	X	X	X
423.8.8 Safe school design	X	X	N/A
423.8.8.1 Natural access and control	X	X	N/A
423.8.8.2 Natural surveillance	X	X	N/A
423.8.8.3 Territorial integrity	X	X	N/A
423.8.8.4 Audio and motion detection systems	X	X	N/A
423.8.8.5 Design	X	X	N/A

OFFICE OF EDUCATIONAL FACILITIES SECTION 423 APPLICATION MATRIX			
Section	**K-12**	**College**	**Ancillary**
423.8.8.6 Exterior stairs, balconies, ramps, etc.	X	X	N/A
423.8.8.7 Open areas	X	X	N/A
423.9 Structural design	X	X	X
423.9.1 Load importance factor	X	X	X
423.10 Site requirements	X	X	X
423.10.1 Fencing	X	X	X
423.10.1.1 Required locations	X	N/A	N/A
423.10.1.1.1 Kindergarten through grade 12	X	N/A	N/A
423.10.1.1.2 Kindergarten through grade 5	X	N/A	N/A
423.10.1.1.3 Kindergarten through grade 12	X	N/A	N/A
423.10.2 Walks, roads, drives, and parking areas	X	X	X
423.10.2.1 Covered walks	X	N/A	N/A
423.10.2.2 Accessible walks and bridges	X	X	X
423.10.2.3 Drainage	X	X	X
423.10.2.4 Vertical drops	X	X	X
423.10.2.5 Roads and streets	X	X	X
423.10.2.6 Bus drives	X	X	X
423.10.2.7 Vehicle parking areas	X	X	X
423-10.2.8 Minimum parking requirements	X	X	X
423.10.2.8.1 Faculty and staff	X	X	X
423.10.2.8.2 Visitors	X	X	N/A
423.10.2.8.3 Community clinics	X	X	X
423.10.2.8.4 High schools	X	N/A	N/A
423.10.2.8.5 Vocational schools	X	Footnote(3)	N/A
423.10.2.8.6 Florida colleges	N/A	X	N/A
423.10.2.8.7 Accessible parking	X	X	X
423.10.3 Site lighting required	X	X	X
423.10.3.1 Auto, bus and service drives	X	X	X
423.10.3.2 Parking areas	X	X	X
423.10.3.3 Building perimeter	X	X	X
423.10.3.4 Covered and connector walks	X	X	X

OFFICE OF EDUCATIONAL FACILITIES SECTION 423 APPLICATION MATRIX			
Section	**K-12**	**College**	**Ancillary**
423.10.3.5 Lighting for parking areas	X	X	X
423.10.3.5.1 Parking areas	X	X	X
423.10.3.5.2 Covered and connector walks	X	X	X
423.10.3.5.3 Entrances/exits	X	X	X
423.10.3.6 Building exterior	X	X	X
423.10.3.6.1 Entrances	X	X	X
423.10.3.6.2 Building surrounds	X	X	X
423.10.3.7 Shielding	X	X	X
423.10.4 Building setbacks	X	X	X
423.10.5 School board playgrounds, equipment, and athletic fields	X	X	N/A
423.10.5.1 Kindergarten play areas	X	Footnote(1)	Footnote(1)
423.10.5.2 Playgrounds and equipment	X	Footnote(1)	Footnote(1)
423.10.5.3 Direct access from the school buildings	X	Footnote(1)	Footnote(1)
423.10.5.4 Related facilities	X	X	N/A
423.10.5.5 Playground drainage	X	Footnote(1)	Footnote(1)
423.10.6 Exterior signage	X	X	X
423.10.6.1 Site signage	X	X	X
423.10.6.2 Accessible route	X	X	X
423.10.7 Landscaping	X	X	X
423.10.8 Water irrigation	X	X	X
423.10.9 Transmission line right-of-way	X	X	X
423.10.10 School site master plan	X	X	N/A
423.11 Wood: fire-retardant treated wood (FRTW)	X	X	N/A
423.11.1 Fire-retardant treaded wood	X	X	N/A
423.11.2 Inspection access panels	X	X	N/A
423.11.3 Evidence of compliance	X	X	N/A
423.12 Roofing	X	X	X
423.12.1 Class A materials	X	X	X
423.12.2 Insulation and moisture protection	X	X	X
423.12.3 Phased installation prohibited	X	X	X
423.12.4 Manufacture's one-year inspection	X	X	X

OFFICE OF EDUCATIONAL FACILITIES SECTION 423 APPLICATION MATRIX			
Section	**K-12**	**College**	**Ancillary**
423.13 Doors and windows	X	X	X
423.13.1 Doors	X	X	N/A
423.13.1.1 Door swing	X	X	X
423.13.1.2 Obstruct or conceal an exit	X	X	X
423.13.2 Recessed	X	X	X
423.13.3 Special function doors	X	X	X
423.13.4 Overhead and siding security grilles	X	X	X
423.13.5 Gates	X	X	X
423.13.6 Hardware	X	X	X
423.13.7 Safety glazing: Panels and storefronts	X	X	X
423.13.7.1 Glazing in hazardous locations	X	X	X
423.13.7.2 Large glass panels	X	X	X
423.13.8 Windows	X	X	X
423.13.8.1 Natural light and ventilation	X	N/A	N/A
423.13.8.2 Projecting and awing windows	X	X	X
423.13.8.3 Security/storm screens and grills	X	X	N/A
423.14 Special safety requirements	X	X	X
423.14.1 Master control switch	X	X	N/A
423.14.2 Interior signage	X	X	X
423.14.2.1 Emergency rescue openings	X	N/A	N/A
423.14.2.2 Maximum capacity sign	X	X	X
423.14.2.3 Room name, number sign	X	X	X
423.14.2.4 Evacuation sign	X	X	X
423.14.2.5 Accessibility signage	X	X	X
423.14.2.6 Hazardous work & storage areas	X	X	X
423.14.3 Other potential hazards	X	X	X
423.14.4 Storage shelving	X	X	X
423.14.5 Vertical platform lifts and inclined wheelchairs lifts	X	X	X
423.14.5.1 Not reduce width of egress	X	X	X
423.14.5.2 Shielding devices	X	X	X
423.14.5.3 Key operated	X	X	X

OFFICE OF EDUCATIONAL FACILITIES SECTION 423 APPLICATION MATRIX			
Section	**K-12**	**College**	**Ancillary**
423.14.5.4 Inclined wheel chair lifts	X	X	X
423.14.5.4.1 Sensing	X	X	X
423.14.5.4.2 Guide rails	X	X	X
423.14.6 Color code machinery	X	X	X
423.14.7 Anchor equipment	X	X	X
423.14.8 Interior finishes	X	X	X
423.14.8.1 Floors	X	X	X
423.14.8.2 Walls	X	X	X
423.14.8.3 Ceilings	X	X	X
423.15 Mechanical	X	X	X
423.15.1 Gas and fluid piping	X	X	X
423.15.1.1 Flammable liquid/gases	X	X	X
423.15.1.2 Piping systems	X	X	X
423.15.1.3 Main supply valve	X	X	X
423.15.2 Air plenums	X	X	X
423.15.3 Residential equipment	X	X	X
423.15.4 Toilet room venting	X	X	X
423.15.5 Chemistry laboratories and science classrooms	N/A	N/A	N/A
423.15.6 Ventilation air make-up for HVAC Systems	X	X	N/A
423.16 Plumbing	X	X	X
423.16.1 Standards	X	X	X
423.16.1.1 Assembly occupancies	X	X	X
423.16.1.2 Location	X	X	N/A
423.16.2 Teacher toilets	X	N/A	N/A
423.16.3 Public shelter	X	X	X
423.16.4 Urinals	X	X	X
423.16.5 Floor drains and hose bibs	X	X	X
423.16.6 Exterior entries	X	X	X
423.16.7 Hot water	X	X	X
423.16.8 Delayed closing valves	X	X	X
423.16.9 Shower facilities	X	X	N/A

OFFICE OF EDUCATIONAL FACILITIES SECTION 423 APPLICATION MATRIX			
Section	**K-12**	**College**	**Ancillary**
423.16.9.1 Shower facilities	X	X	N/A
423.16.9.2 Floor finish	N/A	N/A	N/A
423.16.9.3 Water temperature	N/A	N/A	N/A
423.16.9.4 Master control valve	X	X	N/A
423.16.10 Kitchens	X	X	X
423.16.10.1 Toilet rooms	X	X	X
423.16.10.2 Floor drains	X	X	X
423.16.11 Dousing shower and eye wash	X	X	N/A
423.16.12 Floor drains and plumbing fixtures in equipment room	.X	X	X
423.17 Electrical	X	X	X
423.17.1 Emergency lighting	X	X	X
423.17.2 Electrical rooms and closets	X	X	N/A
423.17.3 Space capacity	X	X	X
423.17.4 Emergency shutoff switches	X	X	N/A
423.17.5 Emergency disconnect	X	X	N/A
423.17.6 Sauna and steam rooms	X	X	N/A
423.17.7 Lightning	X	X	X
423.17.8 Ground fault interrupter (GFI) receptacles	X	X	X
423.18 Assembly occupancies in public educational facilities	X	X	N/A
423.18.1 Occupant capacity	X	X	N/A
423.18.1.1 Dressing rooms	X	X	N/A
423.18.1.2 Gymnasium	X	X	N/A
423.18.1.3 Classrooms and labs	X	X	N/A
423.18.1.4 Small group areas in media centers	X	X	N/A
423.18.1.5 Closed circuit television production, distribution, and control	X	X	N/A
423.18.1.6 Interior courtyards	X	X	N/A
423.19 Shade and green houses	X	X	N/A
423.19.1 General	X	X	N/A
423.19.2 Unrestricted exiting	X	X	N/A
423.19.3 Required doors	X	X	N/A
423.19.4 Accessibility	X	X	N/A

OFFICE OF EDUCATIONAL FACILITIES SECTION 423 APPLICATION MATRIX			
Section	**K-12**	**College**	**Ancillary**
423.19.5 Shade cloth	X	X	N/A
423.19.6 Fire extinguisher	X	X	N/A
423.19.7 Fire alarm	X	X	N/A
423.19.8 Space heaters	X	X	N/A
423.20 Storage	X	X	X
423.20.1 General storage	X	X	X
423.20.2 Custodial work areas and storage	X	X	X
423.20.3 Custodial closets and storage	X	X	X
423.20.4 Chemical and hazardous materials storage	X	X	X
423.20.4.1 Chemical storage	X	X	X
423.20.4.2 Hazardous materials storage	X	X	X
423.21 Child care/day care/pre-kindergarten facilities	X	X	Footnote(1)
423.21.1 Located on school board property	X	X	Footnote(1)
423.21.2 Toilet facilities	X	X	Footnote(1)
423.21.3 Bathing area	X	X	Footnote(1)
423.21.4 Toilet facilities finishes	X	X	Footnote(1)
423.21.5 Drinking fountains	X	X	Footnote(1)
423.21.6 Hand washing facilities	X	X	Footnote(1)
423.21.7 Residential-type kitchen	X	X	Footnote(1)
423.21.8 Sleeping areas	X	X	Footnote(1)
423.21.9 Prohibited storage	X	X	Footnote(1)
423.21.10 Outdoor play areas	X	X	Footnote(1)
423.21.11 Play area shade	X	X	Footnote(1)
423.21.12 Play equipment	X	X	Footnote(1)
423.21.13 Grounds	X	X	Footnote(1)
423.22 Clinics	X	Footnote(3)	N/A
423.22.1 Clinic general	X	Footnote(3)	N/A
423.22.2 Include locked storage, toilet room, etc.	X	Footnote(3)	N/A
423.22.3 Sanitary facilities	X	Footnote(3)	N/A
423.22.3.1 Elementary school clinics	X	Footnote(3)	N/A
423.22.3.2 Secondary & VTC school clinics	X	Footnote(3)	N/A

OFFICE OF EDUCATIONAL FACILITIES SECTION 423 APPLICATION MATRIX			
Section	**K-12**	**College**	**Ancillary**
423.22.3.3 Include hot & cold water	X	Footnote(3)	N/A
423.22.3.4 Toilet exhaust fans	X	Footnote(3)	N/A
423.22.3.5 Working counter top	X	Footnote(3)	N/A
423.22.4 Bed areas	X	Footnote(3)	N/A
423.22.4.1 Up to 500 students	X	Footnote(3)	N/A
423.22.4.2 501-1,000 students	X	Footnote(3)	N/A
423.22.4.3 1,001-2,000 students	X	Footnote(3)	N/A
423.22.4.4 Over 2,000 students	X	Footnote(3)	N/A
423.22.5 Full-service school health clinics	X	X	N/A
423.22.5.1 Location	X	X	N/A
423.22.5.2 Parking	X	X	N/A
423.22.5.3 Sanitary facilities	X	X	N/A
423.22.5.3.1 Toilet rooms	X	X	N/A
423.22.5.3.2 Hot & cold water	X	X	N/A
423.22.5.3.3 Exhaust fans	X	X	N/A
423.22.5.3.4 Nurses' station	X	X	N/A
423.22.5.4 Storage rooms	X	X	N/A
423.22.5.5 Data outlets	X	X	N/A
423.23 Kilns	X	X	N/A
423.24 Open plan schools	X	X	N/A
423.25 Public shelter design criteria	X	X	X
423.25.1 New facilities	X	X	X
423.25.1.1 Enhanced hurricane protection areas	X	X	X
423.25.1.1.1 Application	X	X	X
423.25.1.2 Serve primary function of building	X	X	X
423.25.2 Site	X	X	X
423.25.2.1 Emergency access	X	X	X
423.25.2.2 Landscaping	X	X	X
423.25.2.3 Parking	X	X	X
423.25.2.4 Signage	X	X	X
423.25.3 Design	X	X	X

OFFICE OF EDUCATIONAL FACILITIES SECTION 423 APPLICATION MATRIX			
Section	**K-12**	**College**	**Ancillary**
423.25.3.1 Excluded spaces	X	X	X
423.25.3.2 Capacity	X	X	X
423.25.3.3 Toilets	X	X	X
423.25.3.3.1 Support systems	X	X	X
423.25.3.3.2 Plumbing and valve systems	X	X	X
423.25.3.4 Food service	X	X	X
423.25.3.5 Manager's office	X	X	X
423.25.4 Structural standard for wind loads	X	X	X
423.25.4.1 Missile impact criteria	X	X	X
423.25.4.1.1 Missile impact criteria	X	X	X
423.25.4.1.2 Cyclic loading	X	X	X
423.25.4.2 Roofs	X	X	X
423.25.4.2.1 Light weight concrete	X	X	X
423.25.4.2.2 Roof openings	X	X	X
423.25.4.2.3 Roof coverings	X	X	X
423.25.4.2.4 Roof slope and drainage	X	X	X
423.25.4.2.5 Roof Parapets	X	X	X
423.25.4.3 Windows	X	X	X
423.25.4.3.1 Permanent protective systems	X	X	X
423.25.4.3.2 Mechanical ventilation	X	X	X
423.25.4.4 Doors	X	X	X
423.25.4.5 Exterior envelope	X	X	X
423.25.4.5.1 HVAC equipment	X	X	X
423.25.4.5.2 HVAC roof curb	X	X	X
423.25.4.6 Foundation and floor slabs	X	X	X
423.25.5 Electrical and standby emergency power system	X	X	X
423.25.5.1 EHPA lighting	X	X	X
423.25.5.2 Optional standby circuits	X	X	X
423.25.5.3 Receptacle outlets	X	X	X
423.25.6 Inspections	X	X	X
423.25.6.1 Inspection during construction process	X	X	X

OFFICE OF EDUCATIONAL FACILITIES SECTION 423 APPLICATION MATRIX			
Section	**K-12**	**College**	**Ancillary**
423.25.6.2 Inspection of emergency electrical system	X	X	X
423.25.6.3 5-year inspection & recertification	X	X	X
423.25.6.4 Annual inspections and maintenance	X	X	X
423.26 Time-out rooms	X	Footnote(4)	N/A
423.26.1 Locking of time-out rooms	X	Footnote(4)	N/A
423.26.2 Electromagnetic locking device	X	Footnote(4)	N/A
423.26.2.1 Engagement of lock	X	Footnote(4)	N/A
423.26.2.2 Activation device	X	Footnote(4)	N/A
423.26.2.3 Interface relay	X	Footnote(4)	N/A
423.26.2.4 Automatic disengagement	X	Footnote(4)	N/A
423.26.2.5 Timers prohibited	X	Footnote(4)	N/A
423.26.3 Door requirements	X	Footnote(4)	N/A
423.26.3.1 Swing out	X	Footnote(4)	N/A
423.26.3.2 Vision panel	X	Footnote(4)	N/A
423.26.3.3 Door frame and jamb	X	Footnote(4)	N/A
423.26.4 Finishes	X	Footnote(4)	N/A
423.26.5 Minimum size	X	Footnote(4)	N/A
423.26.6 Lighting	X	Footnote(4)	N/A
423.26.7 HVAC required	X	Footnote(4)	N/A
423.27 New relocatables	X	X	X
423.27.1 Relocatables	X	X	X
423.27.1.1 Shelter	X	X	X
423.27.2 Design, plan, approval, construction	X	X	X
423.27.2.1 District-wide foundation plans	X	X	X
423.27.2.2 DOT requirements	X	X	X
423.27.2.3 Inventory/construction date signage	X	X	X
423.27.3 Construction type	X	X	X
423.27.4 Accessibility	X	X	X
423.27.5 Site standards/site plan	X	X	X
423.27.5.1 Floodplain	X	X	X
423.27.5.2 Covered walks and technology	X	N/A	N/A

OFFICE OF EDUCATIONAL FACILITIES SECTION 423 APPLICATION MATRIX			
Section	**K-12**	**College**	**Ancillary**
423.27.5.3 Separation of units	X	X	X
423.27.6 Structure	X	X	X
423.27.7 Fire-retardant treated wood (FRTW)	X	X	X
423.27.8 Doors	X	X	X
423.27.8.1 Classroom locksets	X	X	N/A
423.27.8.2 Roofed platform	X	X	X
423.27.9 Operable windows	X	N/A	N/A
423.27.9.1 Rescue	X	N/A	N/A
423.27.10 Finishes	X	X	X
423.27.10.1 Interior walls and ceilings	X	X	N/A
423.27.10.2 Floors	X	X	N/A
423.27.10.3 Toilet rooms, showers, and bathing facilities	X	X	X
423.27.10.3.1 Floors and walls	X	X	X
423.27.10.3.2 Ceilings	X	N/A	N/A
423.27.11 Fire extinguishers	X	X	N/A
423.27.12 Document storage	X	X	X
423.27.13 Time-out rooms	X	Footnote[4]	N/A
423.27.14 Child care/day units	X	Footnote[1]	Footnote[1]
423.27.14.1 Residential kitchens	X	X	N/A
423.27.15 Illumination required	X	X	N/A
423.27.15.1 Emergency lighting	X	X	N/A
423.27.15.2 Exterior lights	X	X	X
423.27.15.3 Exit lighting	X	X	X
423.27.16 Air conditioning, heating and ventilation	X	X	X
423.27.17 Technology	X	X	N/A
423.27.18 Fire safety requirements	X	X	N/A
423.27.19 Inspection of units during construction	X	X	X
423.27.20 Inspection of units prior to occupancy	X	X	X

[1] If Daycare Program exists
[2] Where required by NFPA
[3] If Vocational Program is present
[4] If included in program