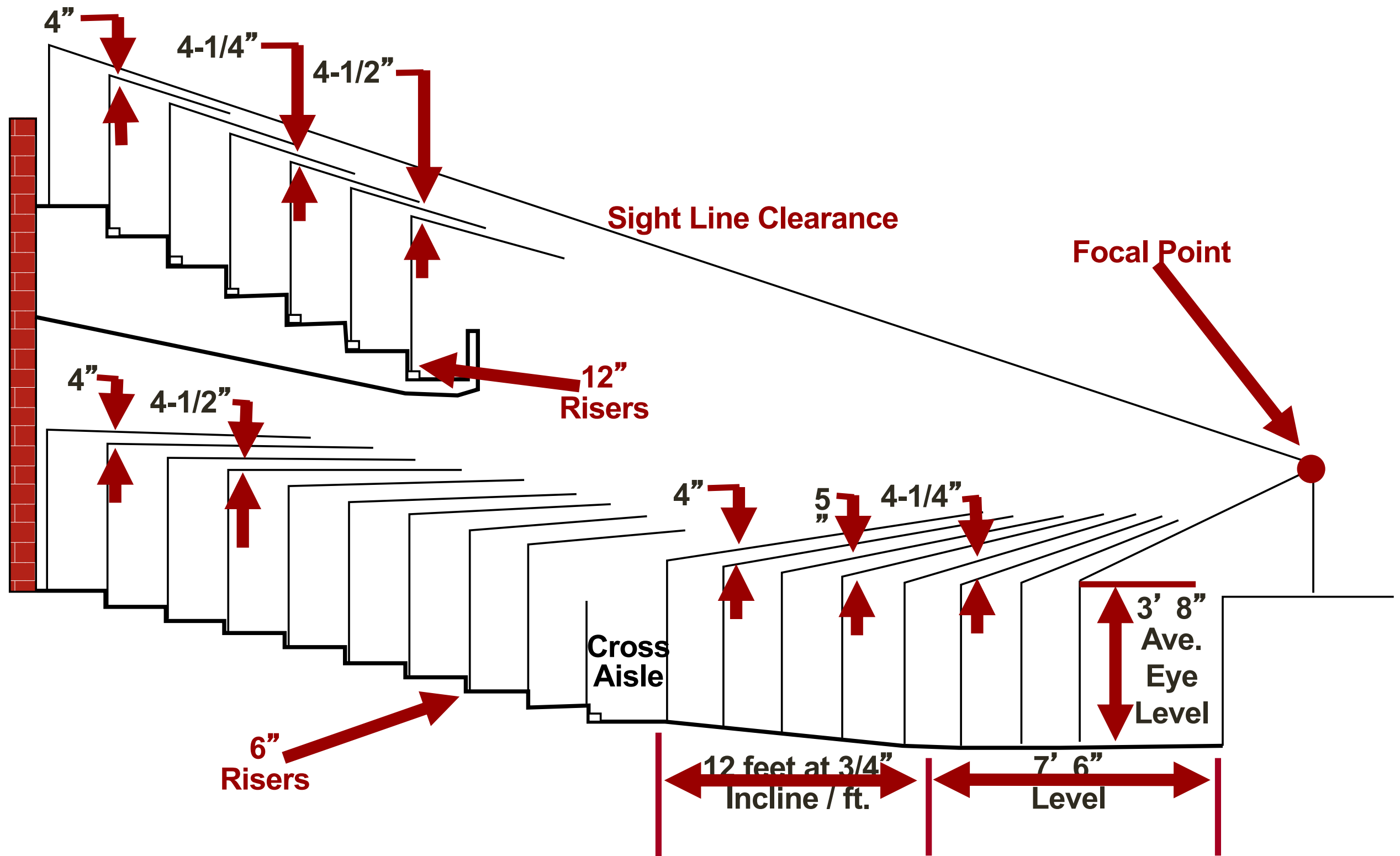


# Sightlines

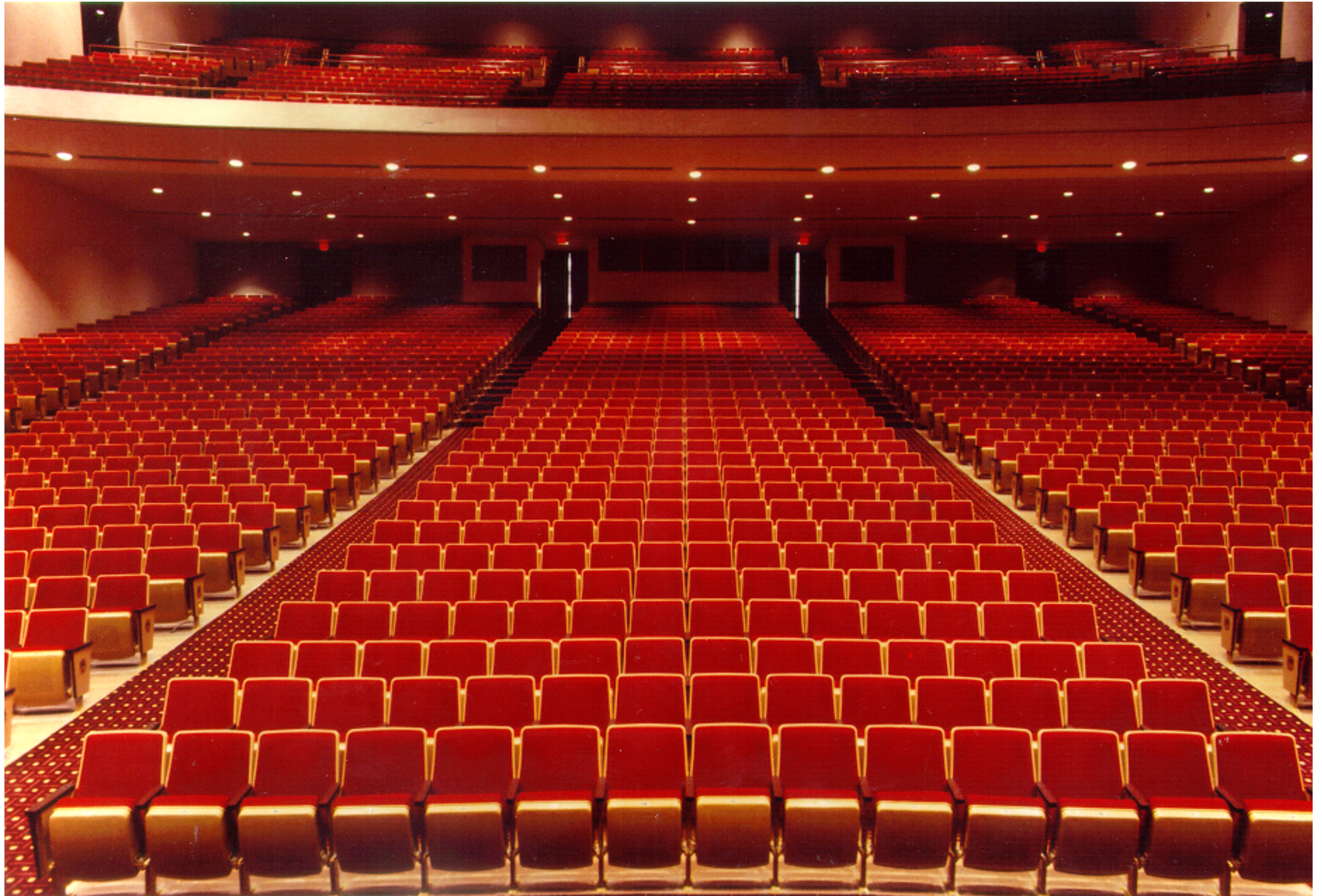


# Sightlines





# Sightlines





# Sightlines





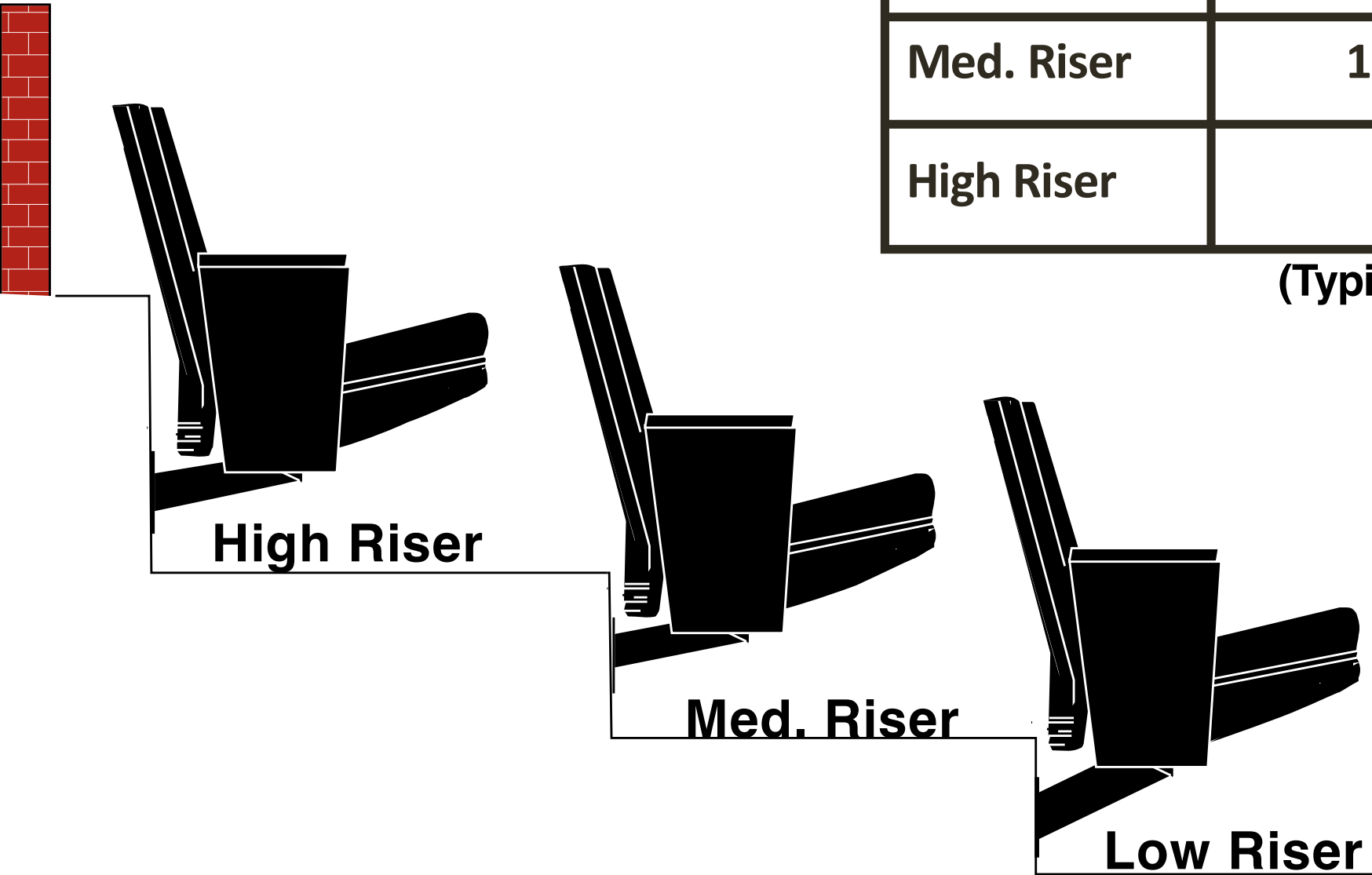
# Mounting on Treads & Risers



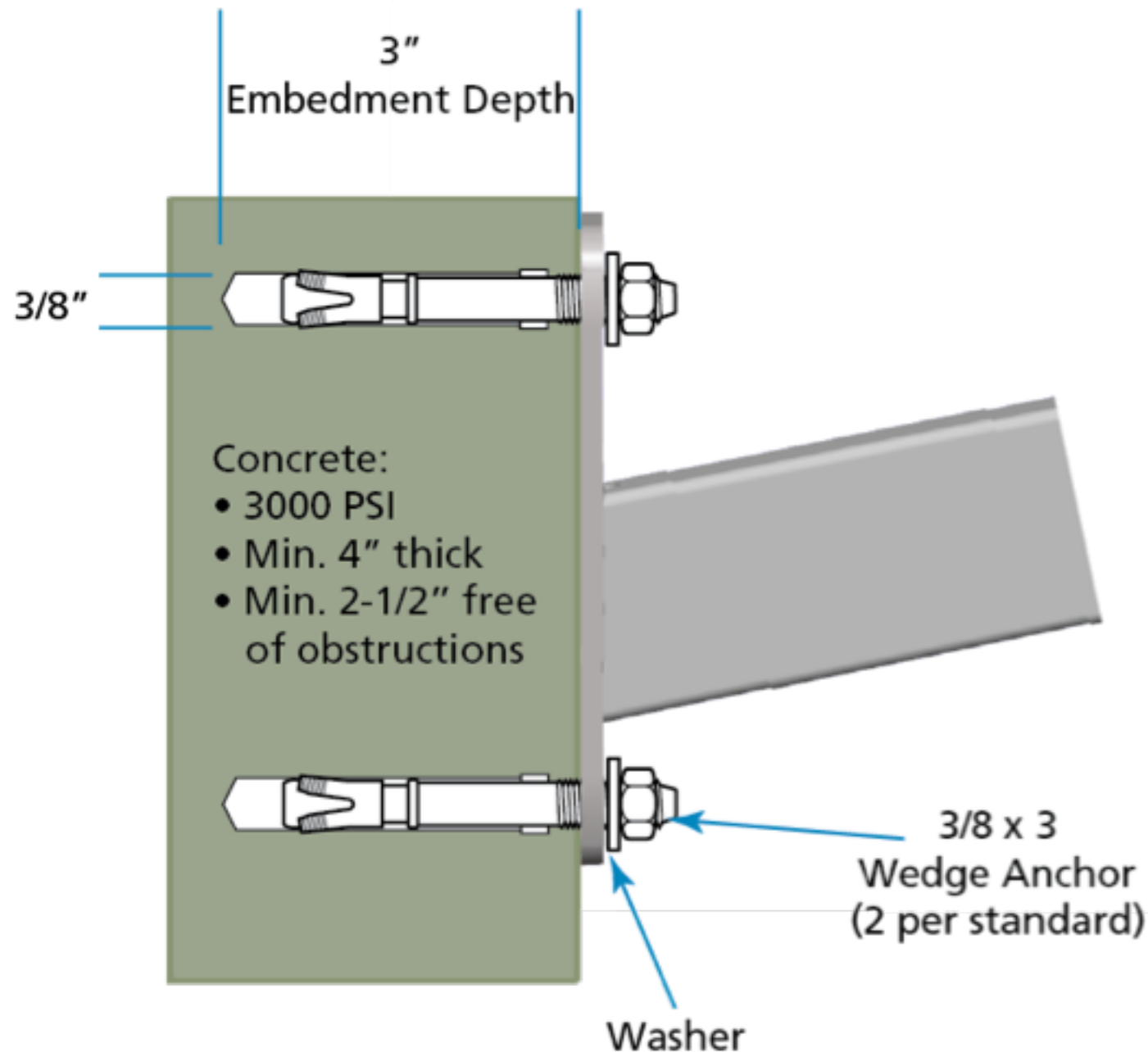
# Tread & Riser Mounting

Riser Type	Riser Height Range
Low Riser	4-1/2" to 12-1/2"
Med. Riser	12-1/2" to 16"
High Riser	16" to 21"

(Typical Steel Standards)



# Tread & Riser Mounting

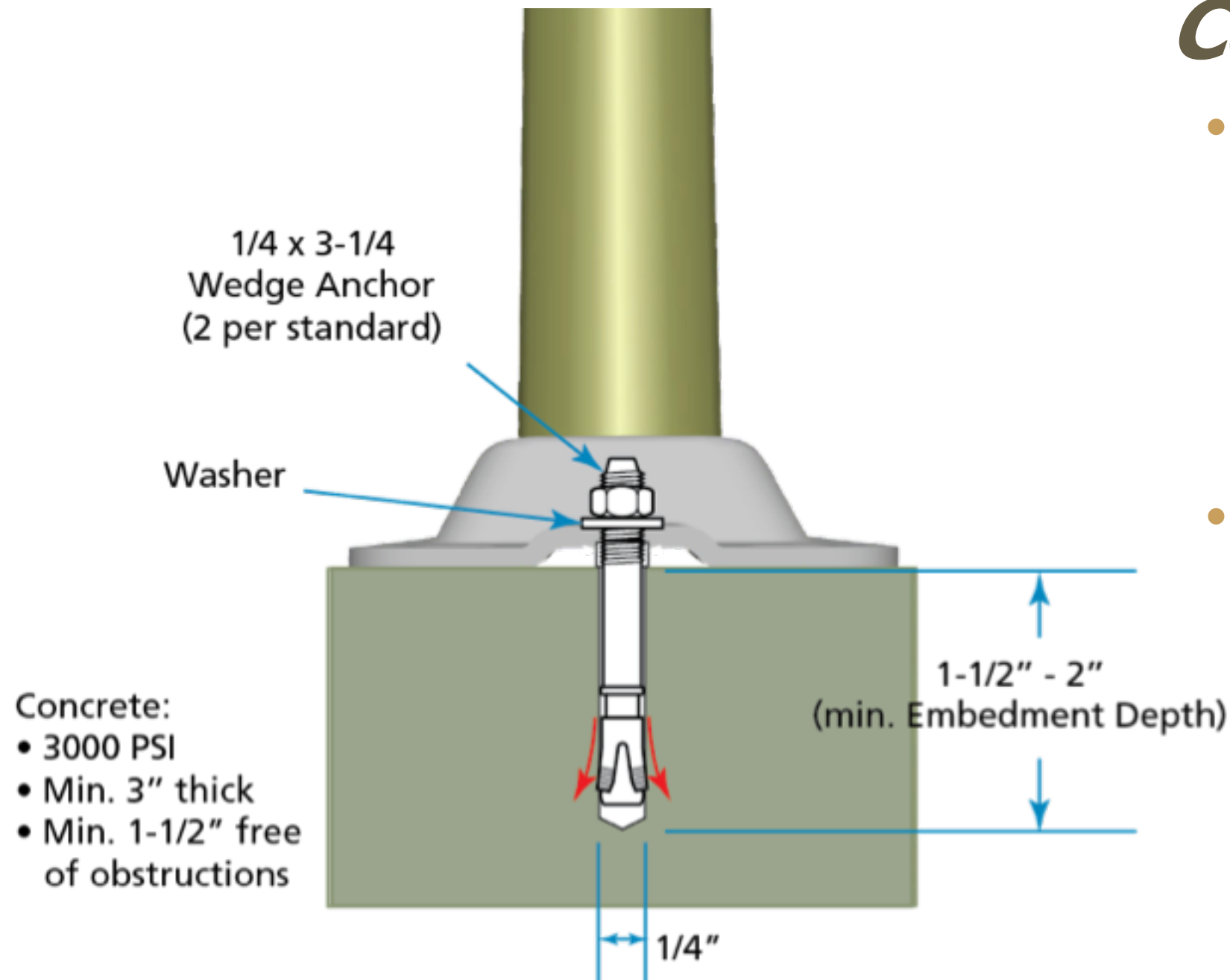


## *Concrete:*

- For riser mounted chairs 4" concrete with 2-1/2" from riser face free from obstructions.
- Riser plumb  $\pm 1/8"$ .
- Compressive strength of 3,000 PSI.



# Tread & Riser Mounting



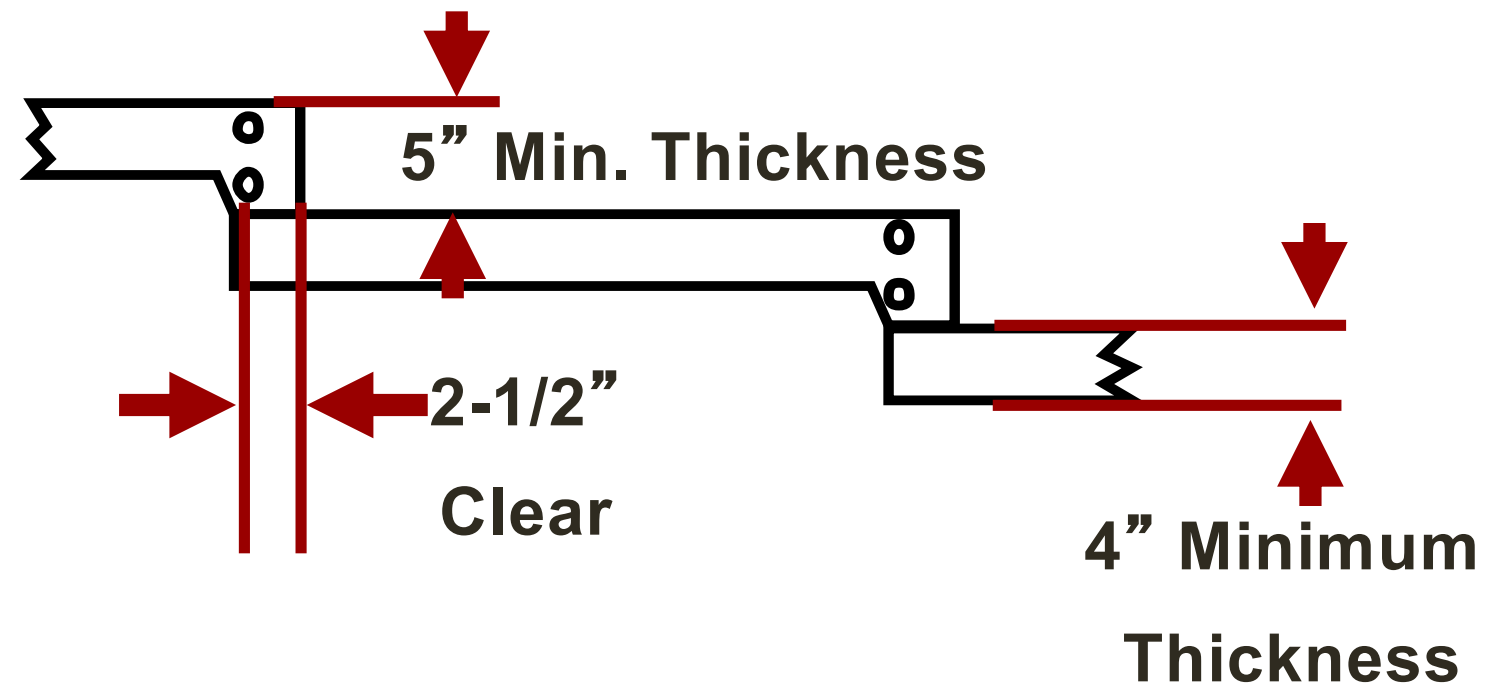
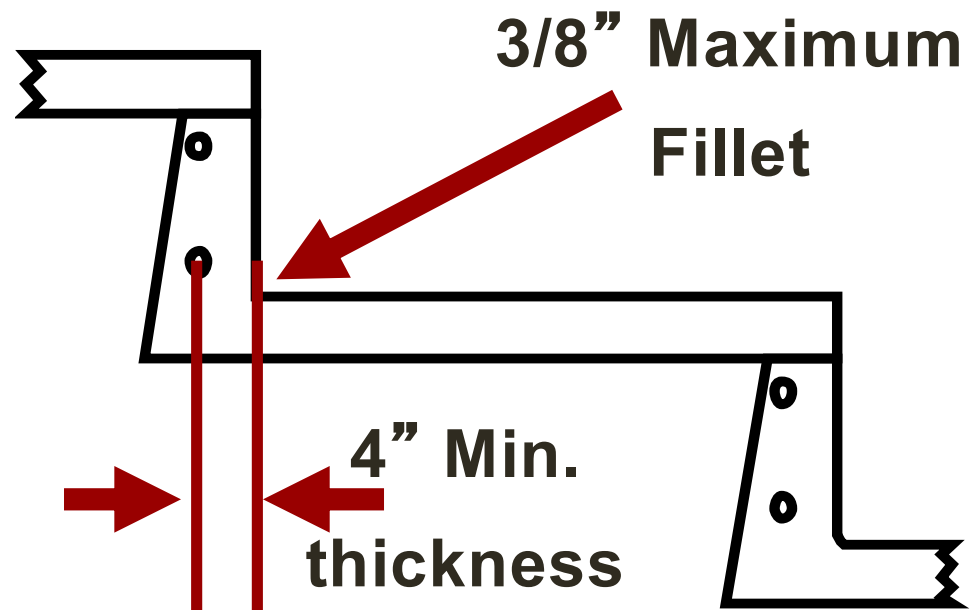
## *Concrete:*

- For floor mounted chairs 3" concrete with top 1-1/2" free from any obstructions.
- Compressive strength of 3,000 PSI.

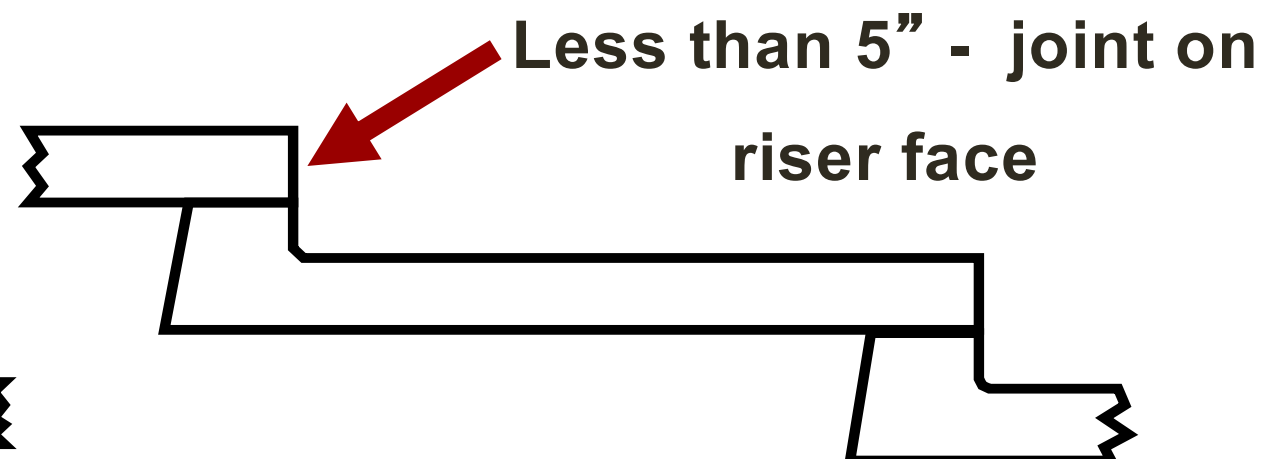
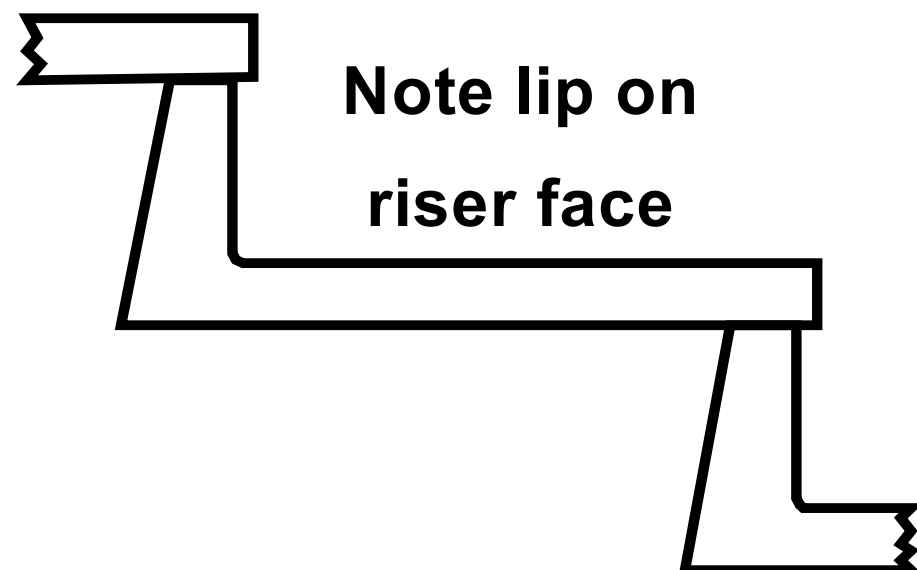


# Tread & Riser Mounting

## Correct



## Incorrect

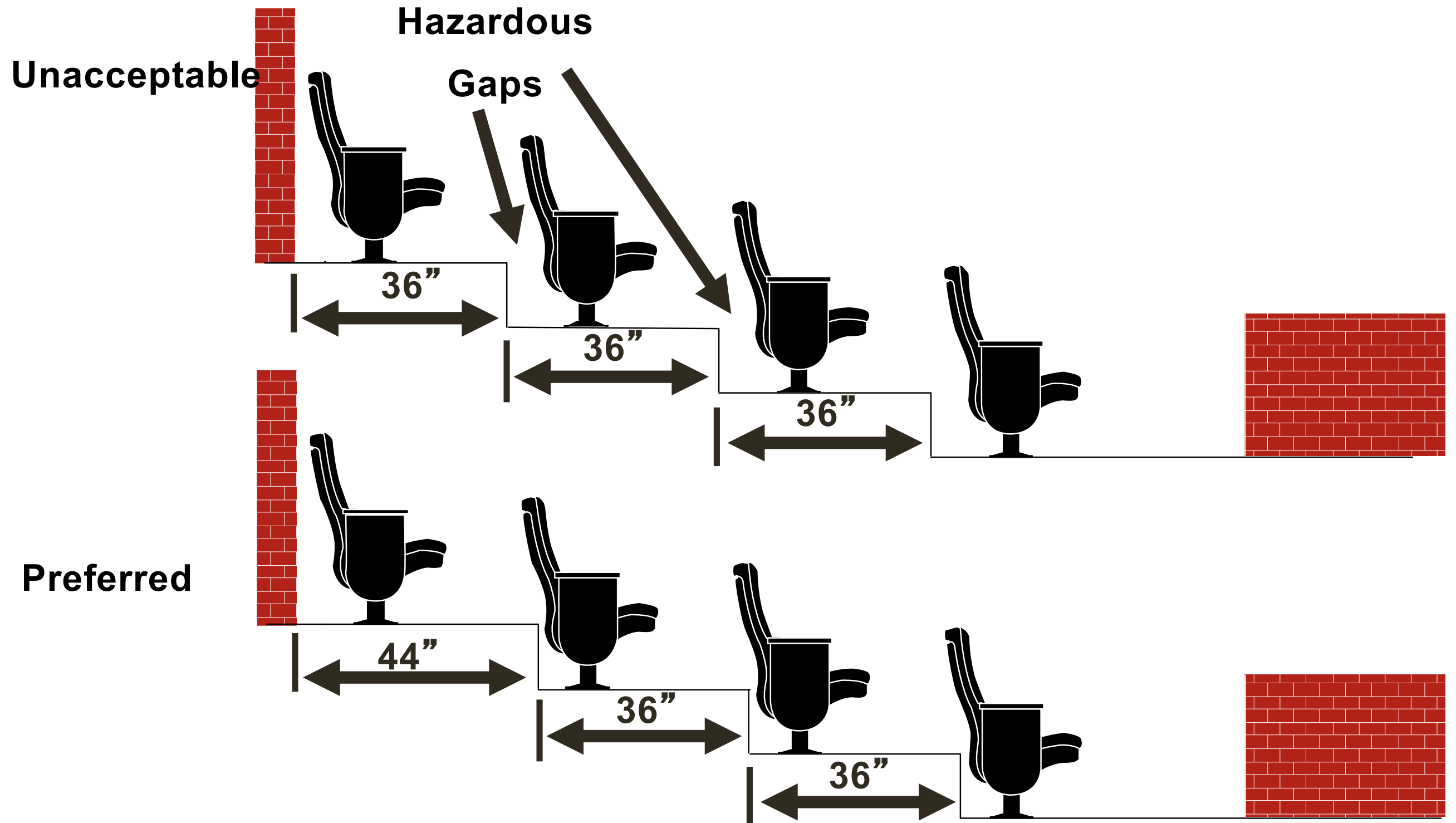


# Additional Issues

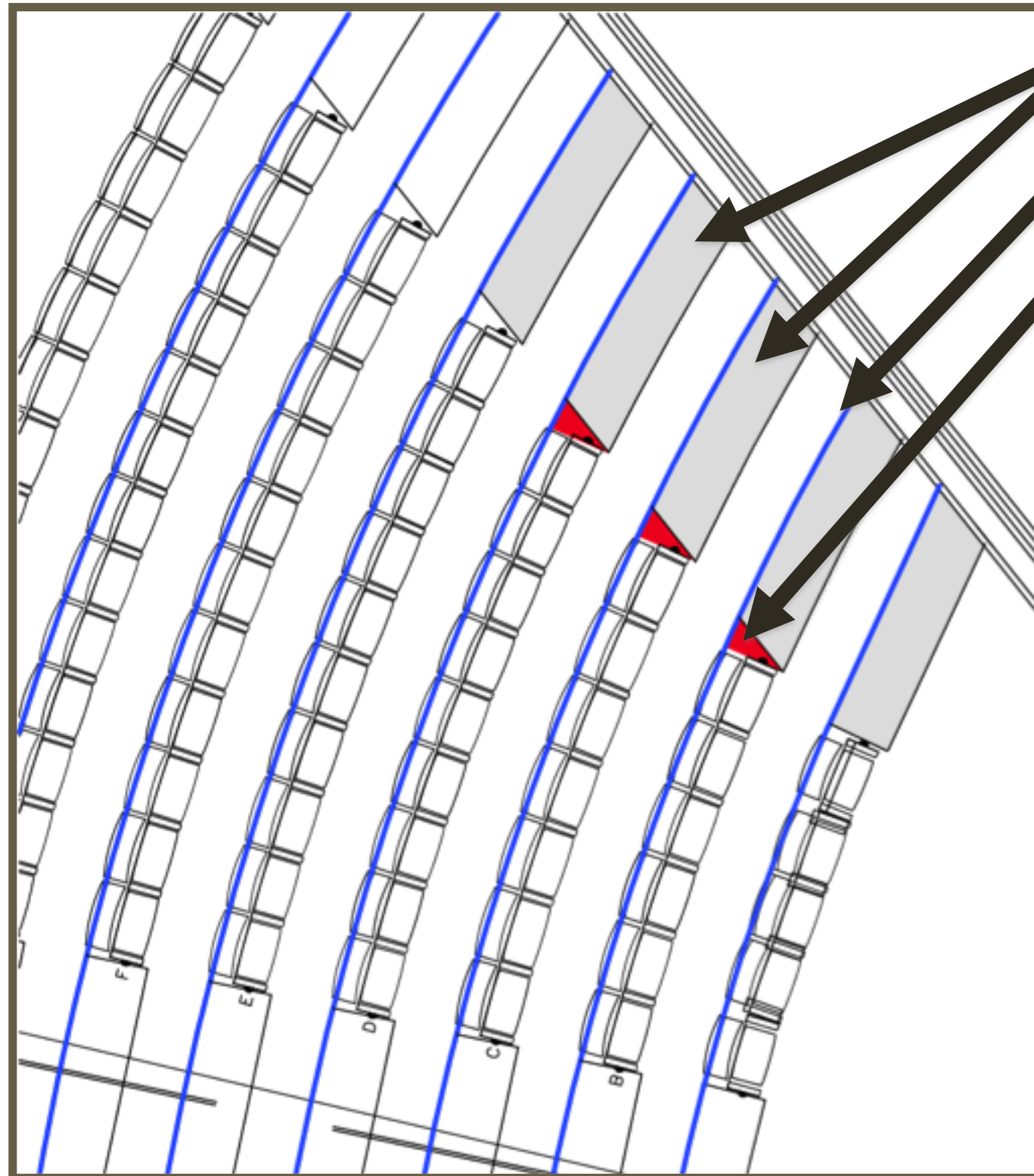




# Vertical Obstruction Problems



# Intermediate Step Problems



Intermediate Steps

Riser Face

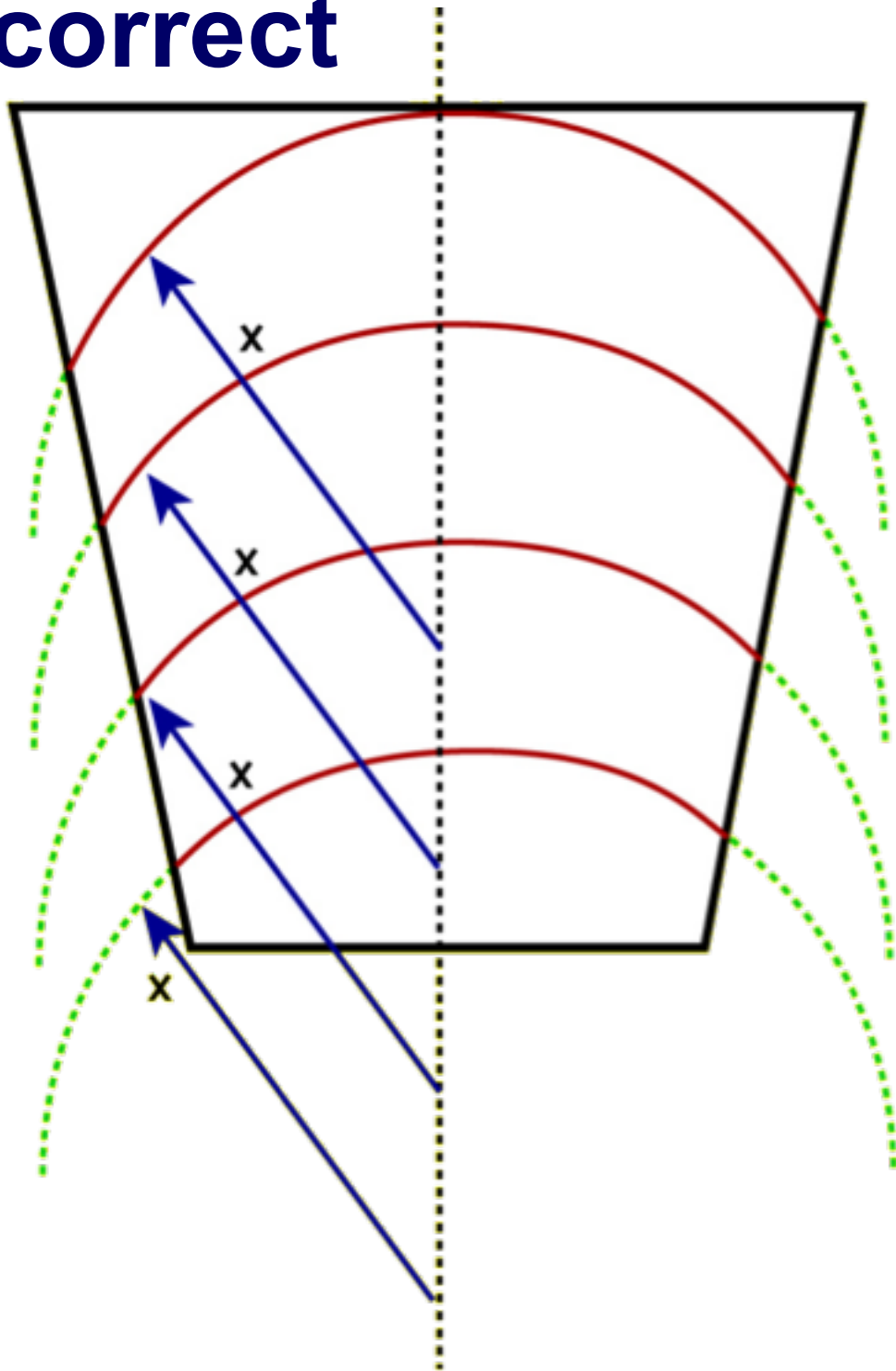
Hazardous Gaps

- A common mistake is to design intermediate steps parallel to a wall or some other architectural element.
- Chair stanchions must be installed perpendicular to the riser face.
- Hazardous gaps are created when the steps are not designed to match the angle of the chair standards.

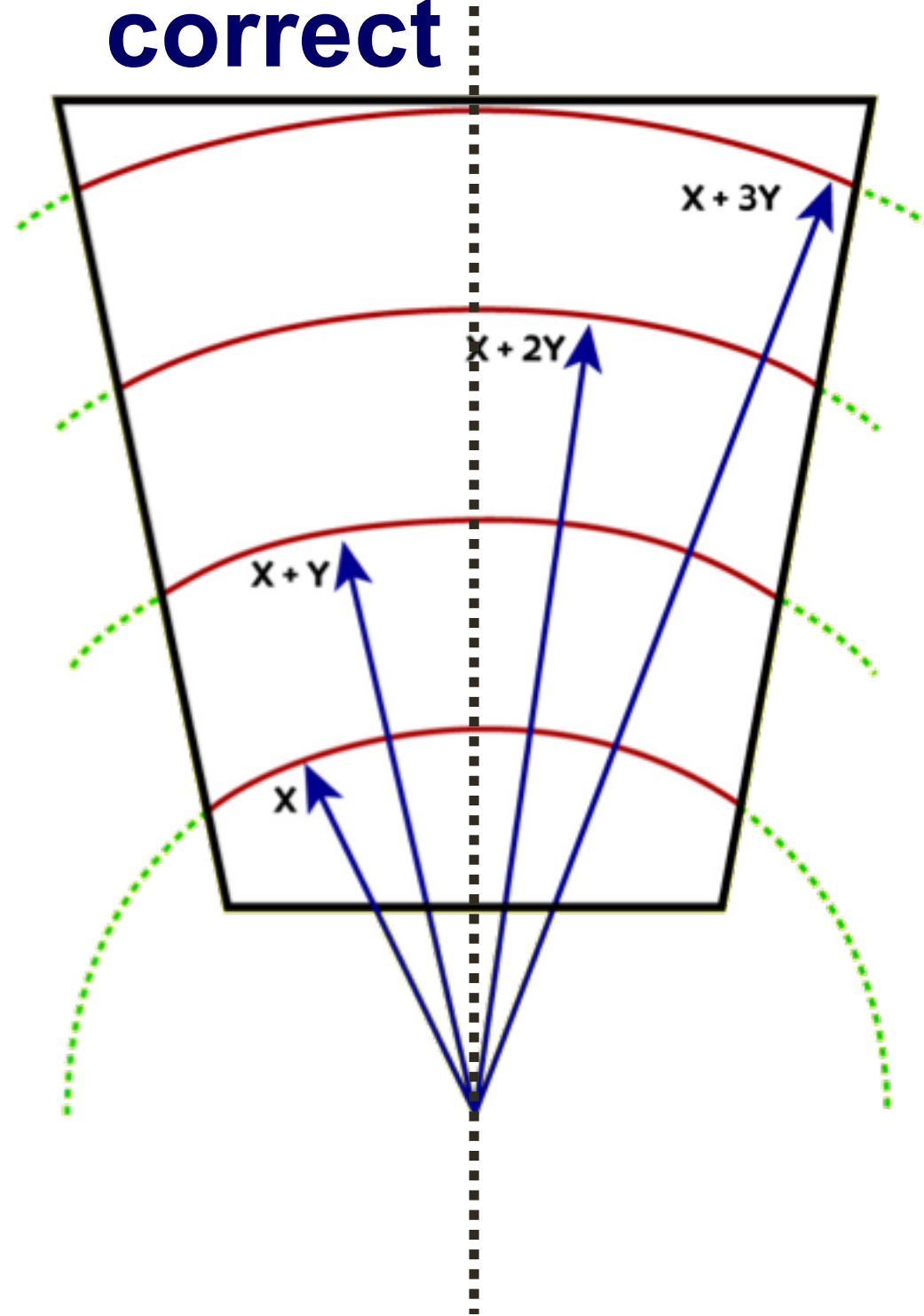


# Proper Design of a Radius

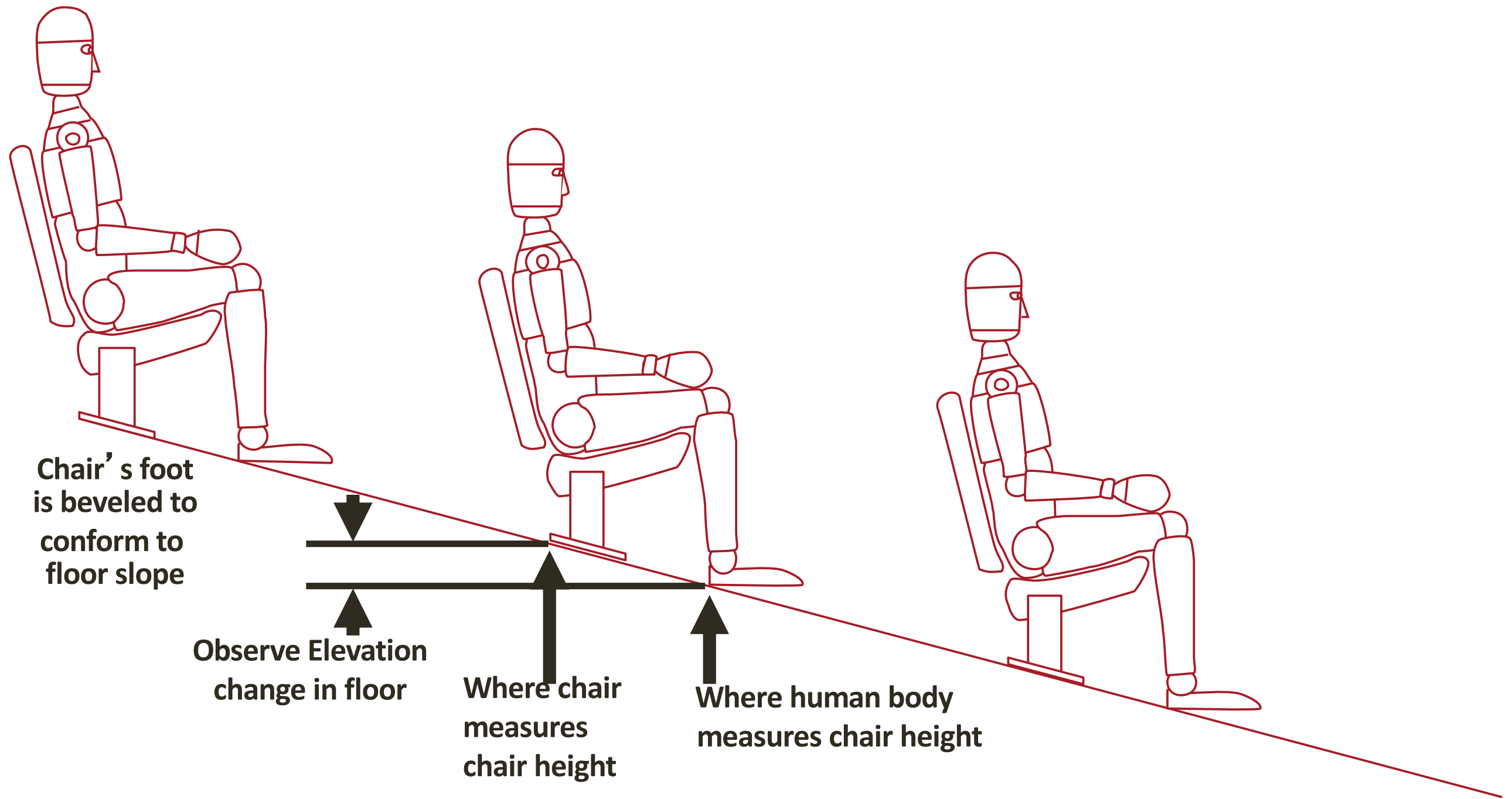
**Incorrect**



**correct**



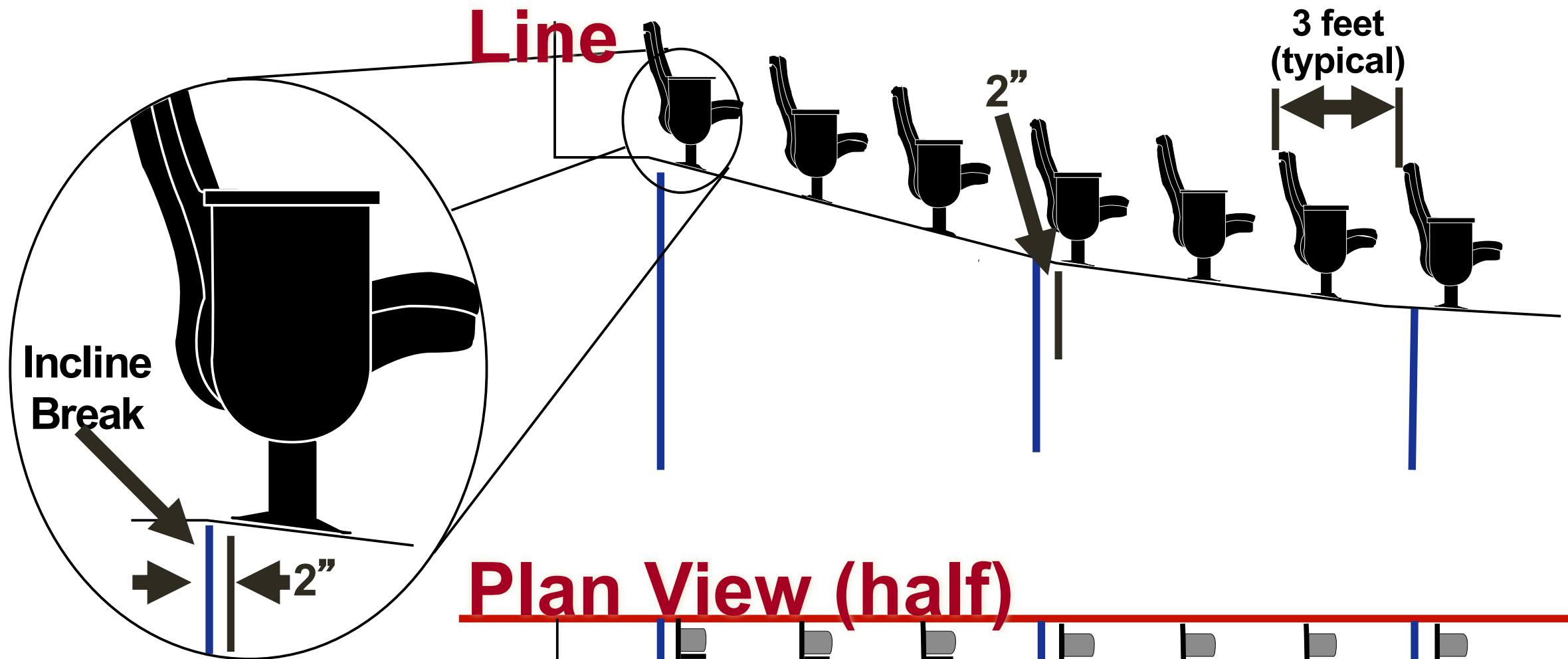
# Floor Slope & Patron Comfort



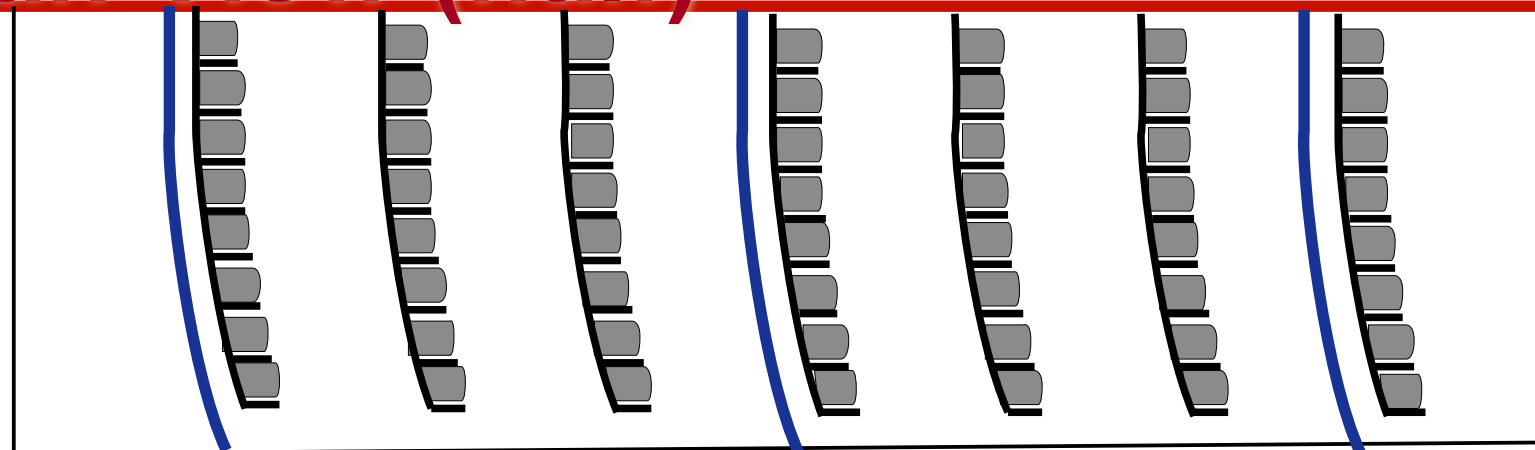


# Incline Break Locations

## Elevation View at Center Line



## Plan View (half)



Rows follow radius  
of floor and chair  
rows do not cross  
incline breaks.