

### Architectural Theater Considerations:

The addition of the plenum on the balcony increases the height of the Proscenium Theater seating area in the balcony. The increased height of the balcony affects the angle at which the occupants of the balcony view the stage. The architectural standards for theaters limit the viewing angle from the balcony to the arrival point of sight (APS) 2" above the stage to 30°. The plenum increases the viewing angle from 19° to 22° which is still within the acceptable limits.

The riser height is dependent on the tread length, eye level elevation of the front row and the horizontal distance from the stage. The riser height of the balcony is 20". The required riser height with the underfloor plenum is 16.5". The riser design height is greater the minimum required riser height and therefore provides enough elevation from row to row for the occupants to adequately view the stage. Calculations for the sightline angle and riser height are located in Appendix G.