

## Rolling Sphere Design.

The rolling ball or more correctly the rolling sphere method uses an imaginary spherical shaped ball with a 150-foot radius that rolls over the building structure touching only the tips of the air terminals mounted on the roof. This dimension is based on the fact that the lightning strike distance near the surface of the earth is about 150 ft. or less. The sphere is tangent to earth and will contact three or more correctly spaced air terminals when rolled over any portion of the roof structure. When using this imaginary sphere and rolling up over and down the other side of the building, it will only touch the roof mounted air terminals, never the building structural roof surfaces. When using the spherical shape to determine the zone of protection for the building structure all possible placements of the sphere on the structure shall be considered for terminal placement. A protected building that exceeds the height of the lower building structure will protect the lower structure when it lies within the zone of protection of the rolling sphere. Remember that the protective sphere has a 150 ft. radius or is really a 300 foot diameter round ball. A protected building that is more than a 150 feet high will provide protection for lower elevation roof areas of adjacent, or connected structures, when the lower structure roof is protected by the arc of the sphere that is tangent to the side of the protected building, and to the earth.



