NOTE:
This is a condensed explanation of "sloped glazing" codes.
(see current IBC code book)

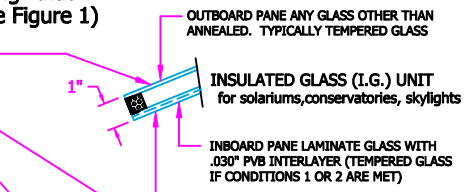
SLOPED GLAZING 2003 IBC (also 2006 North Carolina Residential Code)

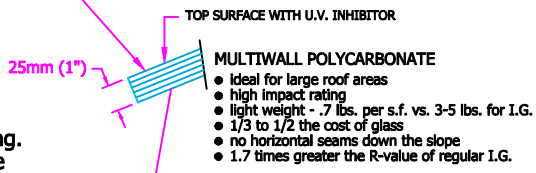
The intent of the code for overhead glass installations is to protect the occupants below from falling glass in the event of breakage. Because of this potential only certain types of glass or glazing materials may be used per a specific set of conditions. Certain exceptions to the general rule may apply.

Glazing is considered sloped glazing as any installation where the glazing material is installed more than 15 degrees off vertical. (See Figure 1)

Any of the following glazing material is considered "safety glazing" that may be used for glazing more than 15 degrees off vertical. (See Figure 1)

- Fully Tempered Glass
- Laminated Glass
- Heat-Strengthened Glass
- Wired Glass
- Approved Plastics (such as Multiwall Polycarbonate)




Laminated Glass - Has a minimum .015-inch polyvinyl butyral (PVB) interlayer for glass panes 16 s.f. or less in area located such that the highest point of the glass is not more than 12 ft. above a walking surface. For higher or larger sizes the minimum PVB interlayer thickness shall be .030 inch. The nominal glass thickness 3/16" or less for monolithic (single pane) and for multiple glazing (insulated / multiple glazing / I.G. units only) the other pane or panes fully tempered, laminated or wired glass. (See Figure 1)

Tempered Glass - Like laminated glass, tempered glass is considered safety glazing. Tempered glass is used in many applications today where there may be human impact issues (hazardous locations). When fully tempered glass is used overhead certain restrictions apply. Tempered glass may be used residentially if the following conditions are met:

Condition 1
- The glass unit area is not greater than 16 s.f.
- Any point of the glass is not more than 12 ft. above a walking surface.
- The nominal glass thickness is not more than 3/16" (see laminated glass). (See figure 1)

Condition 2
- The glass unit area is greater than 16 s.f.
- The glass is sloped 30 degrees or less from vertical
- Any point of the glass is not more than 10 ft. above a walking surface. (See Figure 1)

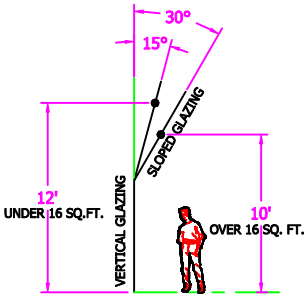
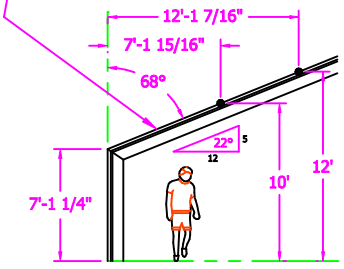


FIGURE 1



EXAMPLE POOL ENCLOSURE

Screens - For fully tempered glass, heat-strengtheded or wired glass, a retaining screen (see code for screen specifics) shall be installed below the glass, unless condition 1 or 2 are met. It is easier to begin with glass, as a glazing material, that meets the entire glazing criterion. Generally screens are avoided for reasons of cost, cleaning of the glazing surfaces and they do not have architectural appeal. There are no requirements for screens when approved plastics are used.

Non-Residential - In all cases, when installed more than 15 degrees off vertical in commercial applications, glazing should have laminated glass with an inner layer of .030" or greater for single glazing and as the inboard layer in an insulated glass (I.G.) unit. Polycarbonate is an ideal solution also. Refer to the 2006 IBC definitions located in Section 310.1

Greenhouses - The glazing codes are no different for greenhouses if they are attached to the house or if it is being used as habitable space. If the greenhouse is detached and used specifically for the growing of plants, any glazing material may be used provided the height at the ridge is 20 ft. or less above the walking surface.