



**Arch 1240 Methods of Construction in Architecture**

**Professor Jason Montgomery**

# **Glass and Glazing (CHAPTER 17)**

## **Glass**

**History / Manufacture**

**Glass Characteristics**

**Treated Glass**

**Heat Treated, Tempered, Laminated, Fire-Rated**

**Speciality Glass**

**Fritted, Spandrel, Tinted, Reflective Coated**

**Thermal Configurations**

**Insulating Glass, Low-E**



# **Glass and Glazing (CHAPTER 17)**

## **Glazing**

**Small Lights**

**Large Lights**

**Advanced Glazing**

**Glass and Energy**

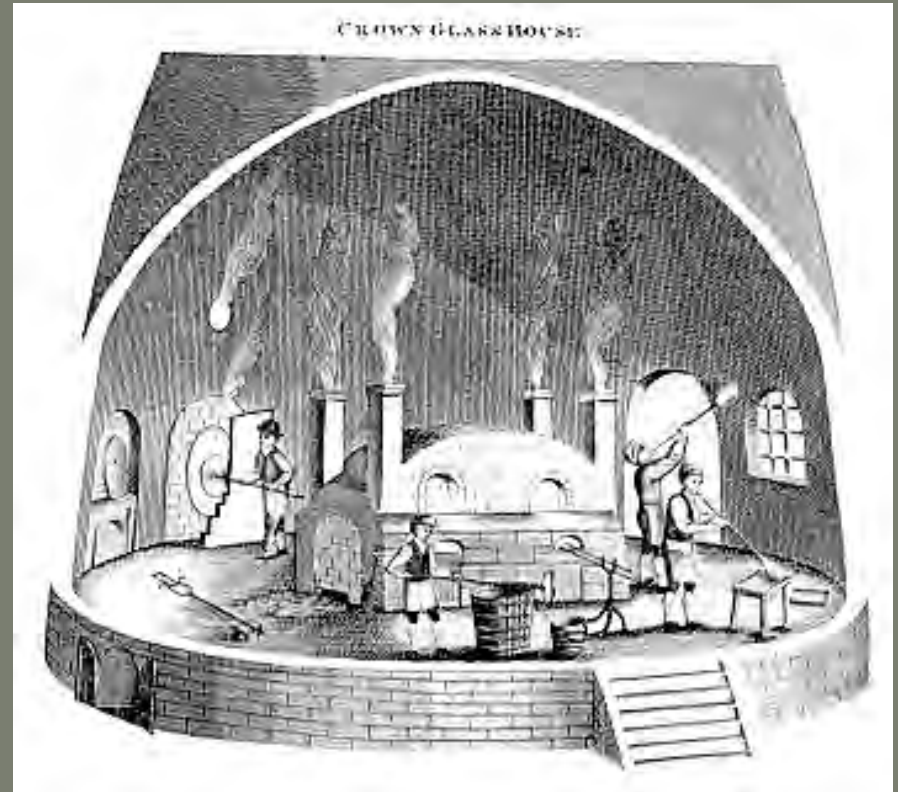
**Glass and the Building Codes**



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BLOWN GLASS



CROWN GLASS

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CROWN GLASS



LEADED GLASS

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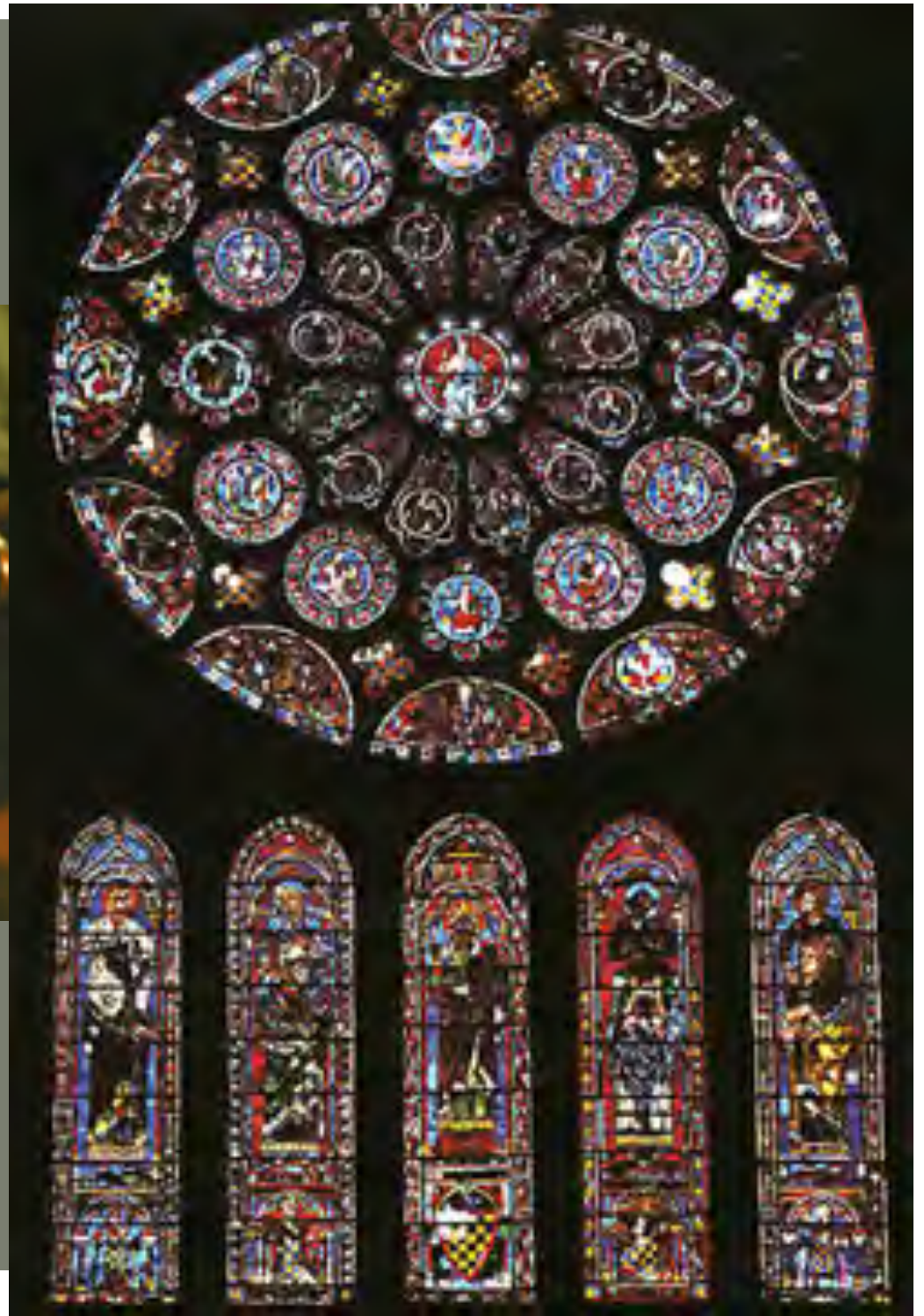


CYLINDER GLASS



CYLINDER GLASS

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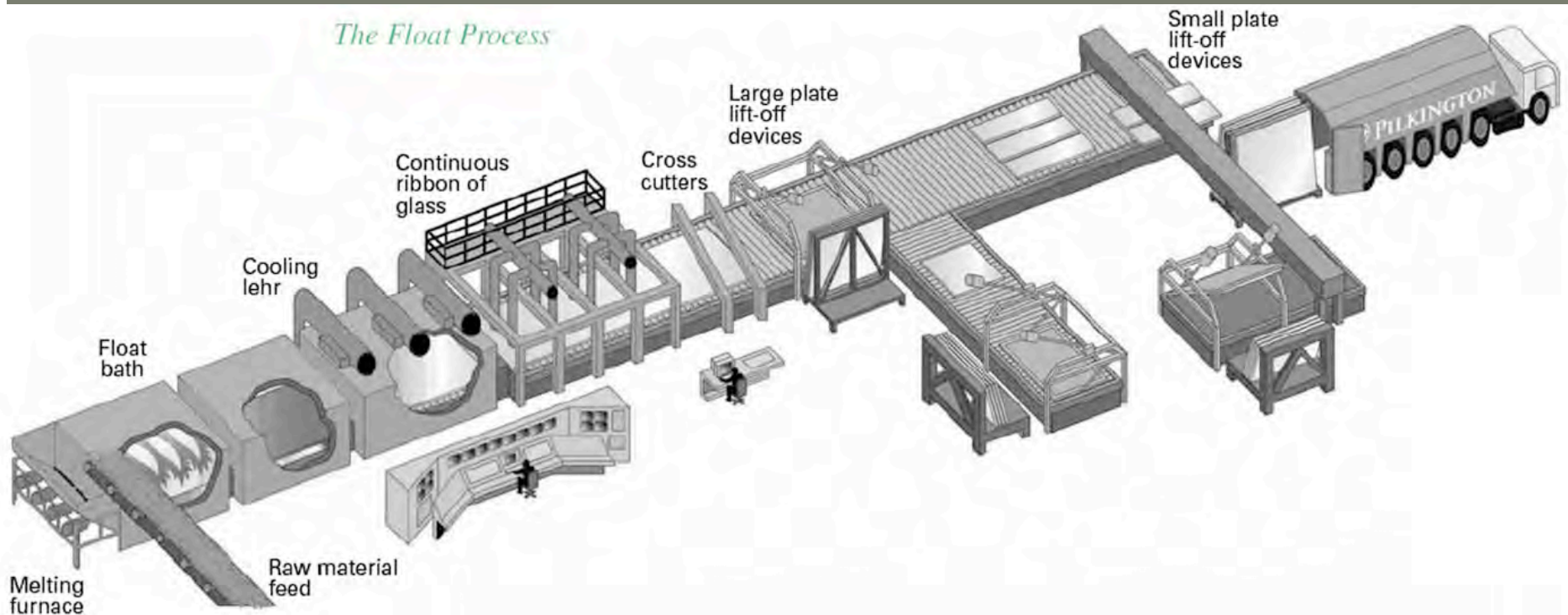


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# GLASS MAKING TECHNIQUES

CROWN GLASS → CYLINDER GLASS → PLATE GLASS →  
→ DRAWN GLASS → FLOAT GLASS

*The Float Process*



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# FLOAT GLASS



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# GLASS CHARACTERISTICS

THICKNESS:  $\frac{3}{32}$ " ,  $\frac{1}{8}$ " ,  $\frac{1}{4}$ "

TREATED GLASS:

HEAT-TREATED GLASS

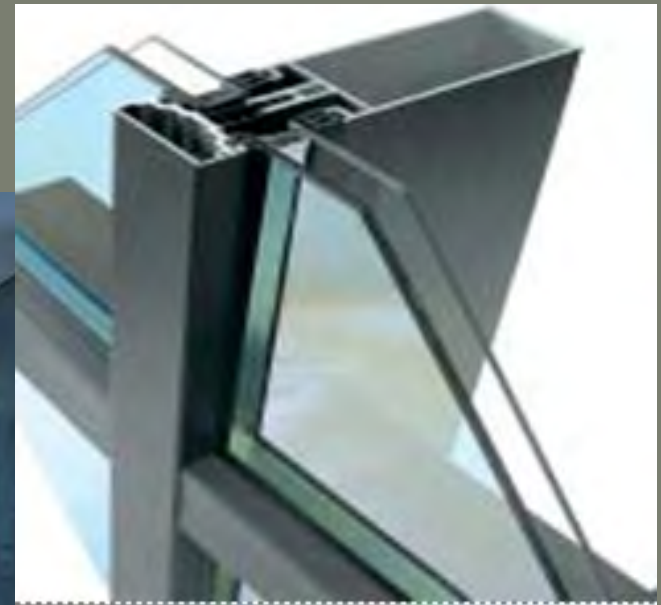
TEMPERED GLASS

LAMINATED GLASS

FIRE-RATED GLASS

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# INSULATED GLASS



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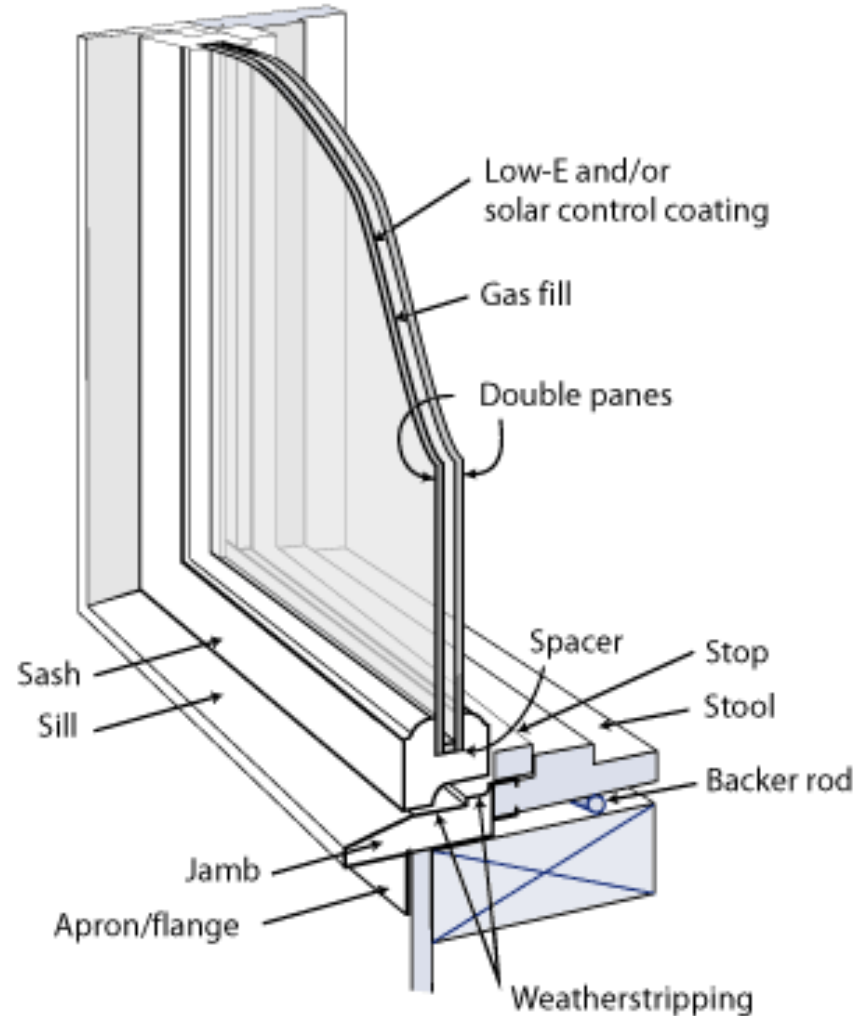
# INSULATED GLASS



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## Window Technologies

Energy-efficient window technologies are available to produce windows with the U-factor, SHGC, and VT properties needed for any application.

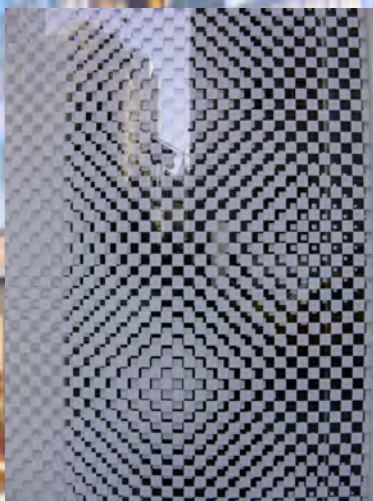


# GLASS TREATMENTS

FRITTED GLASS

SPANDREL GLASS

TINTED / REFLECTIVE COATING



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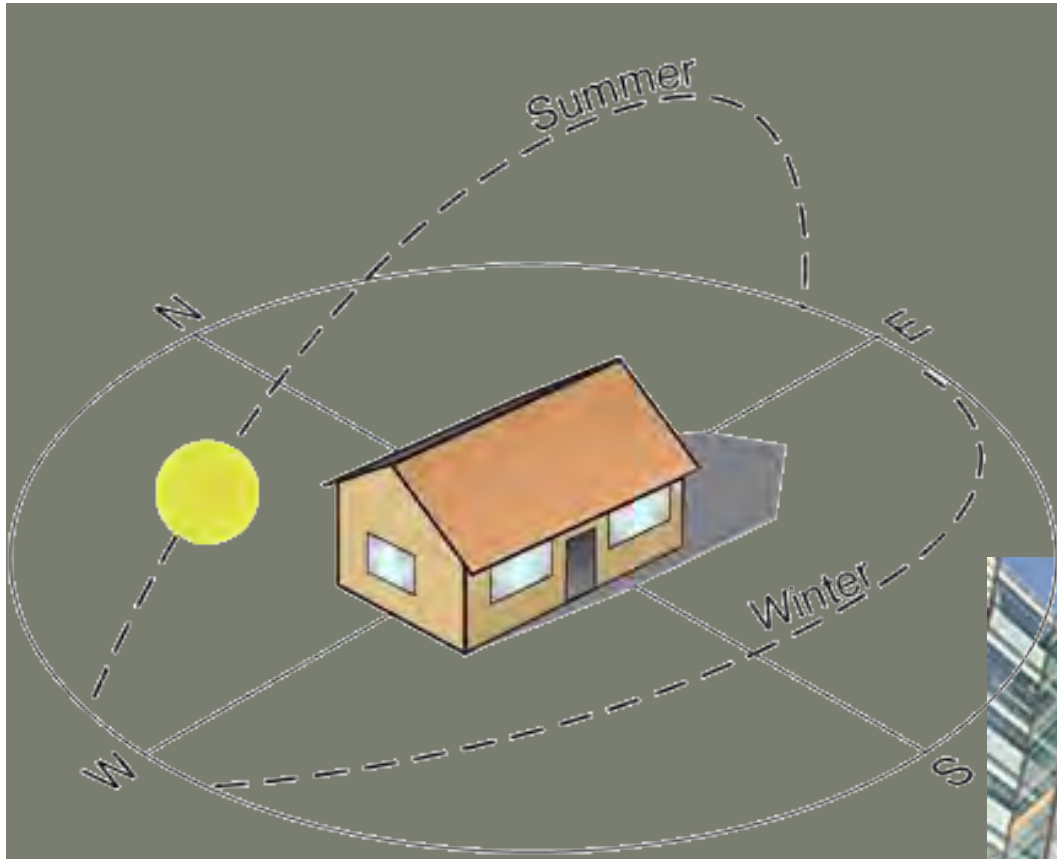
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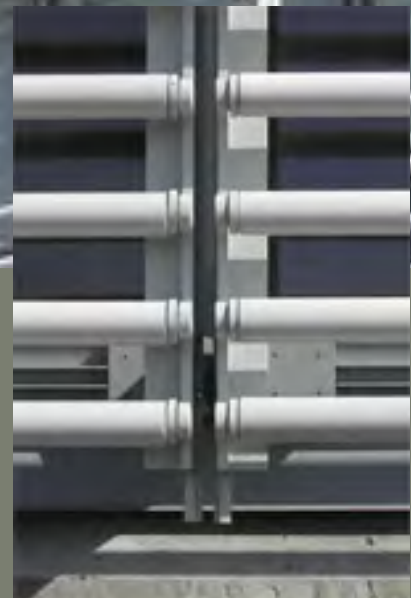
SPANDREL GLASS + PANELS

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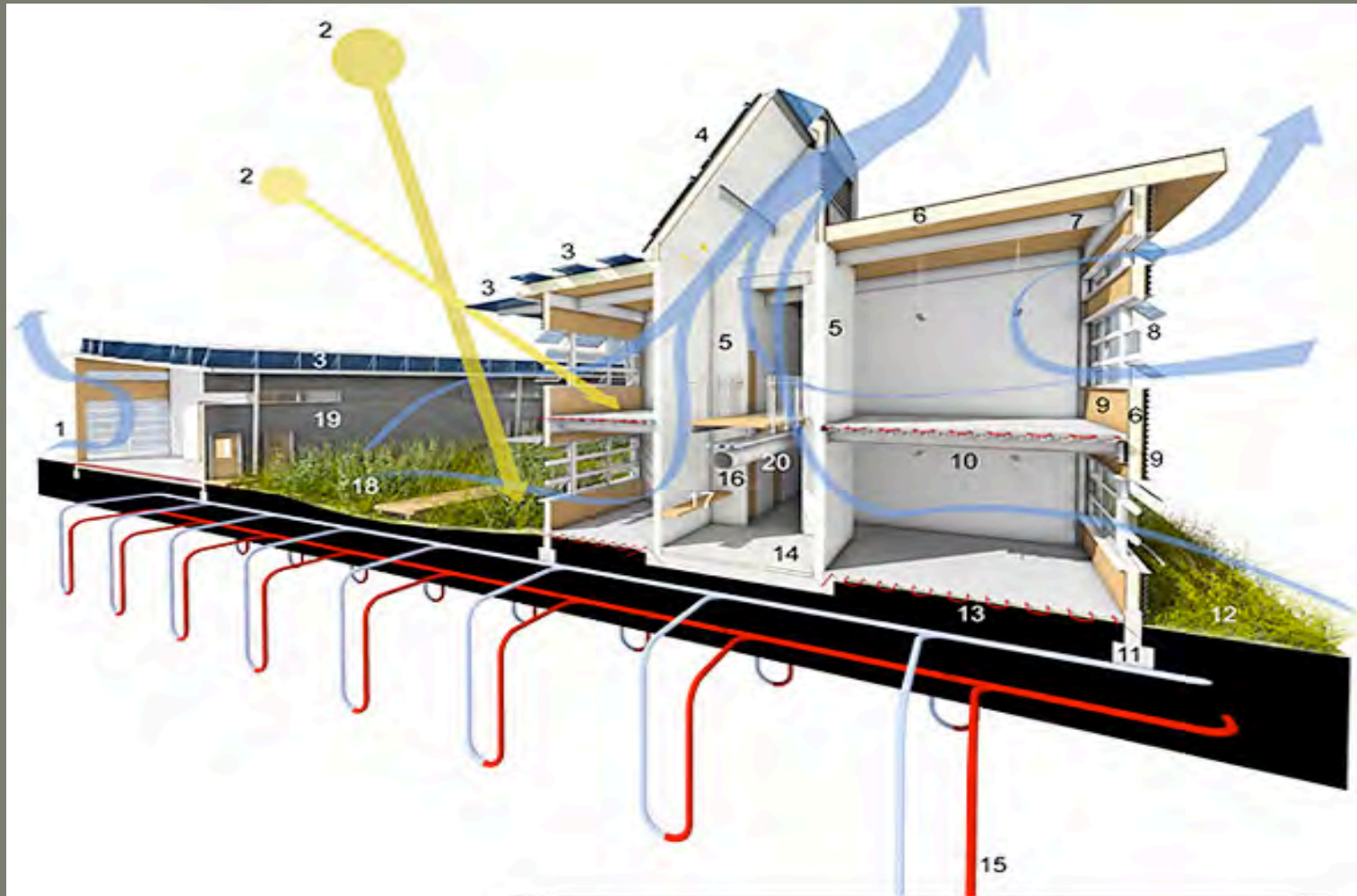


SOLAR ORIENTATION  
MUST ALWAYS BE  
ADDRESSED

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SOLAR HEAT GAIN + DAYLIGHTING IS FUNDAMENTAL COMPONENT OF OVERALL INTERIOR ENVIRONMENTAL DESIGN

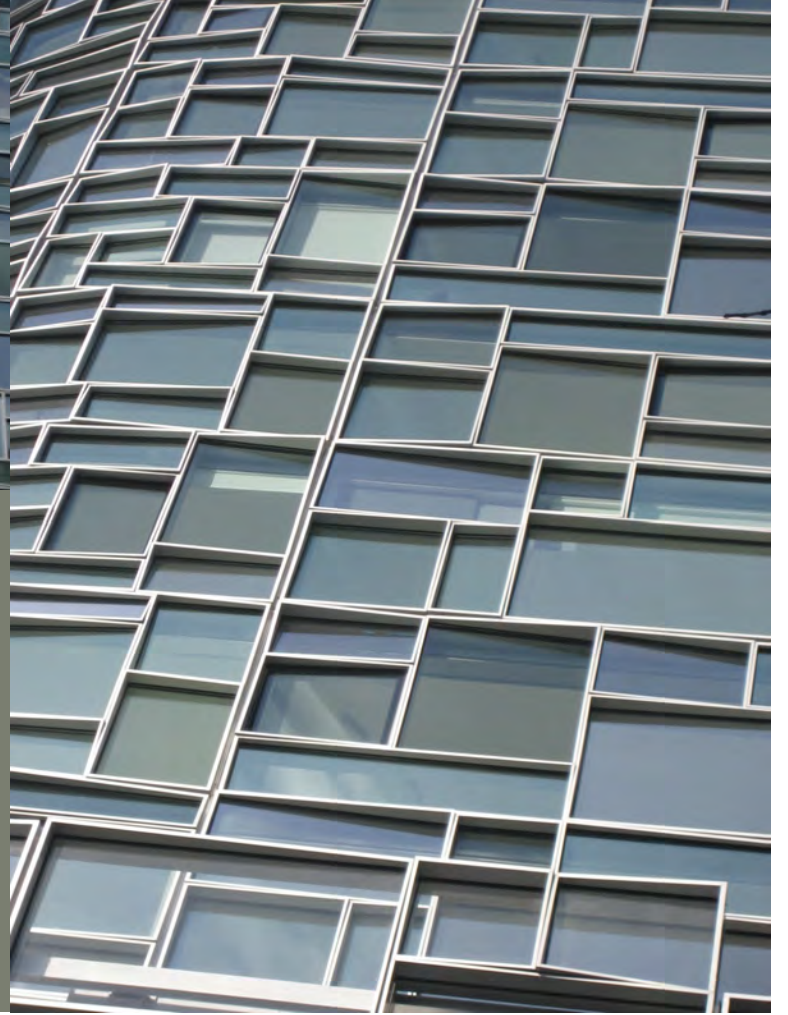
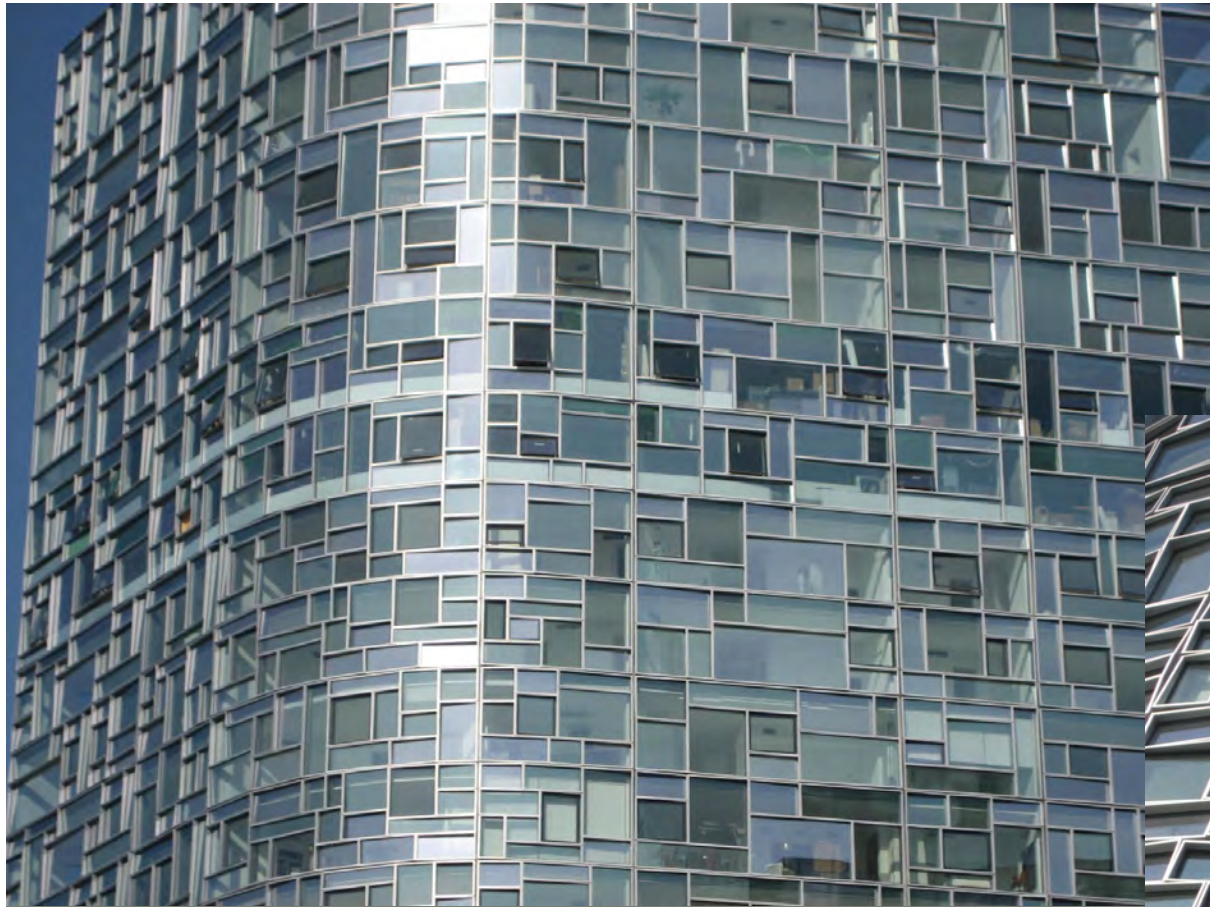
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# ADVANCED GLAZING SYSTEMS



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# **Glass and Glazing** (CHAPTER 17)

## **Summary:**

### **Glass as Opportunity**

**Indoor/Outdoor, Light / View**

### **Glass as Challenge**

**Thermal Weak Link, Glare**

### **Glazing as Critical Design Component**

**Orientation, Climate, Control**