OBJECTIVE: To develop an understanding of the health and safety criteria of the code, including light and ventilation; minimum room areas and ceiling height; sanitation; toilet, bath, and shower spaces; glazing, including safety glazing; carports and garages; and emergency escape and rescue openings.

REFERENCE: Sections R303 through R310, 2012 International Residential Code

- Where natural light is used to satisfy the minimum illumination requirements, how is the minimum required amount of glazing determined? Where artificial light is used, what illumination level is mandated?
- Under what conditions is a whole-house mechanical ventilation system required?
- How must mechanical and gravity outside air intake openings be located in relationship to vents, chimneys, parking lots and other potential areas of a hazardous or noxious contaminant?
- Where must illumination be located in relationship to interior stairways? Exterior stairways?
- In what climatic areas must a heating system be provided? What performance level is mandated for the system?
- What is the minimum required size of the largest habitable room in a dwelling unit?
- What is the minimum dimension permitted for a habitable room other than a kitchen?
- What is the minimum ceiling height permitted for a living room or bedroom? A hallway? Bathroom? Basement? Where can a reduction in such heights be acceptable?
- How much clear floor space is required in front of a water closet? In front of a shower opening? What is the minimum distance needed between the centerline of a water closet and the nearest adjoining obstruction such as a wall or shower compartment?
- In what manner must safety glazing be identified? Multipane assemblies?
- What test standards are applicable to safety glazing materials? Which test standard is acceptable for glazing installed in any hazardous location?
KEY POINTS:  
(Cont’d)  
• What specific locations in and adjacent to doors are subject to human impact and require safety glazing? In tub and shower areas? In guards and railings? At stairways and stairway landings?  
• When is sloped glazing considered a skylight? What glazing materials are permitted in skylights? When must a screen be installed below a skylight?  
• How does a carport differ from a garage? What limitations are placed on carports?  
• Where are escape and rescue openings required? What is the minimum size of such openings? Maximum sill height? What limitations are placed on the operation of the opening?  
• When a window well serves an escape and rescue opening, what is its minimum size?  
• How may a bulkhead enclosure be utilized as an escape and rescue opening?  
• Under what conditions may an emergency escape window be located under a deck or porch?
Where the mechanical ventilation option is used for bathrooms and water-closet compartments, the minimum ventilation rates are set forth for either continuous ventilation or intermittent ventilation. In both cases, the air must be exhausted directly to the exterior of the dwelling.
Outdoor air exhaust and intake openings are regulated in the same manner as other openings in exterior walls. As such, they are not permitted in walls having a fire separation distance of less than 3 feet, except in exterior walls that are perpendicular to the lot line.
**Code Text:** Interior stairways shall be provided with an artificial light source located in the immediate vicinity of each landing of the stairway. See exception where light source is located over each stairway section. Exterior stairways shall be provided with an artificial light source located in the immediate vicinity of the top landing of the stairway. Where lighting outlets are installed in interior stairways, there shall be a wall switch at each floor level to control the lighting outlet where the stairway has six or more risers. See exception for lights that are continuously illuminated or automatically controlled.

**Discussion and Commentary:** A stairway is one of the most hazardous areas of a dwelling unit. As such, the code highly regulates the design and construction of all stairways. In addition, adequate lighting must be provided to enable the stairway user to see the treads, their nosings and any obstructions that may be present. Stairway landings must also be adequately lighted.

Unless the light sources are on continuously or automatically activated, interior stairway lights must be controlled from both the top and bottom of each stairway consisting of six or more risers. For exterior stairway lighting, the control switch is to be located within the dwelling unit.