

Michael "Erik" Pelham
BMI Training Officer
Residential Building
Zoning/Green/Energy

Final Inspection Process
ICC Southern California
2015 IRC/2016 CRC
2017 LARC

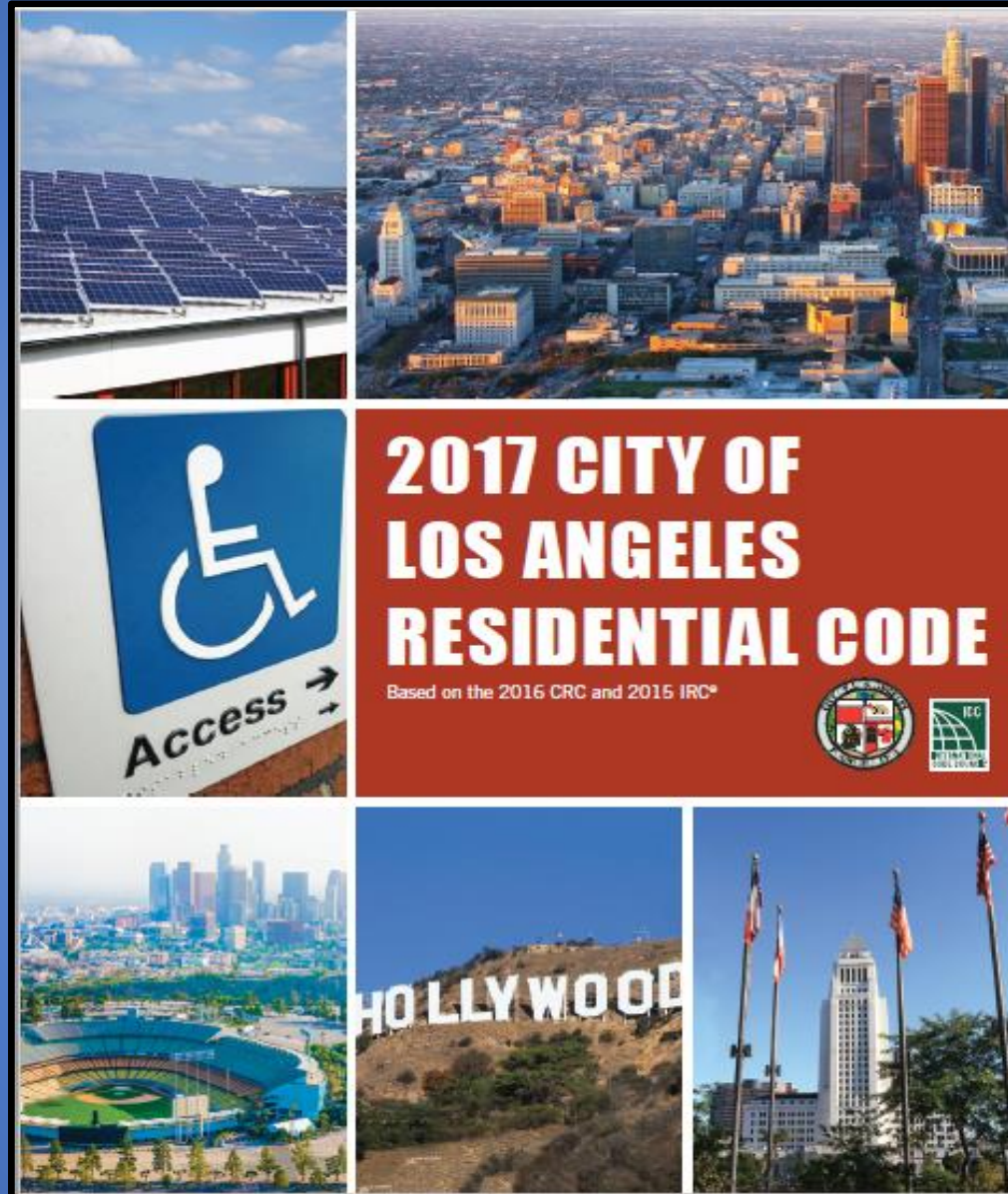


FINAL INSPECTION

BLDG FINAL FOR SFD'S

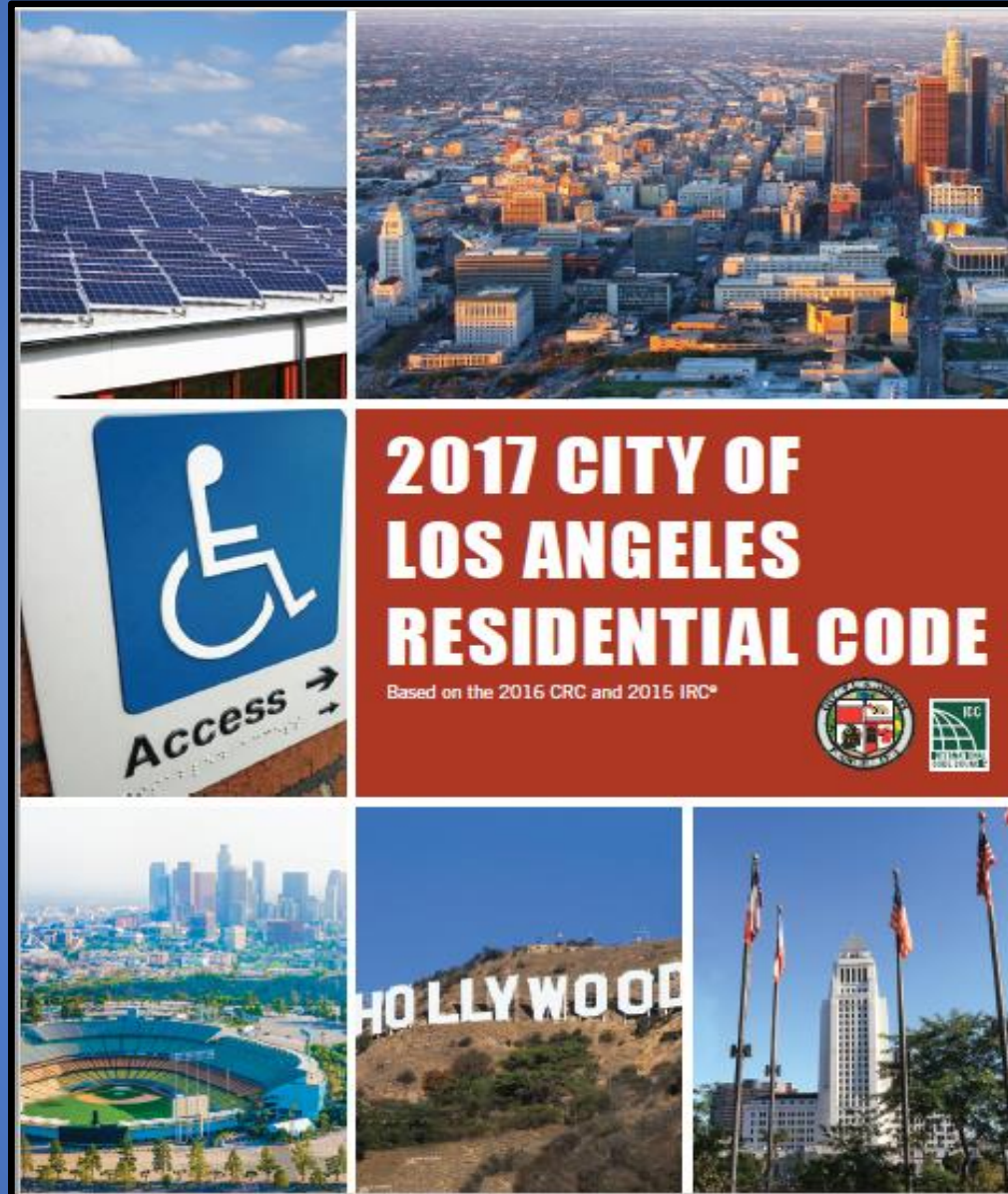
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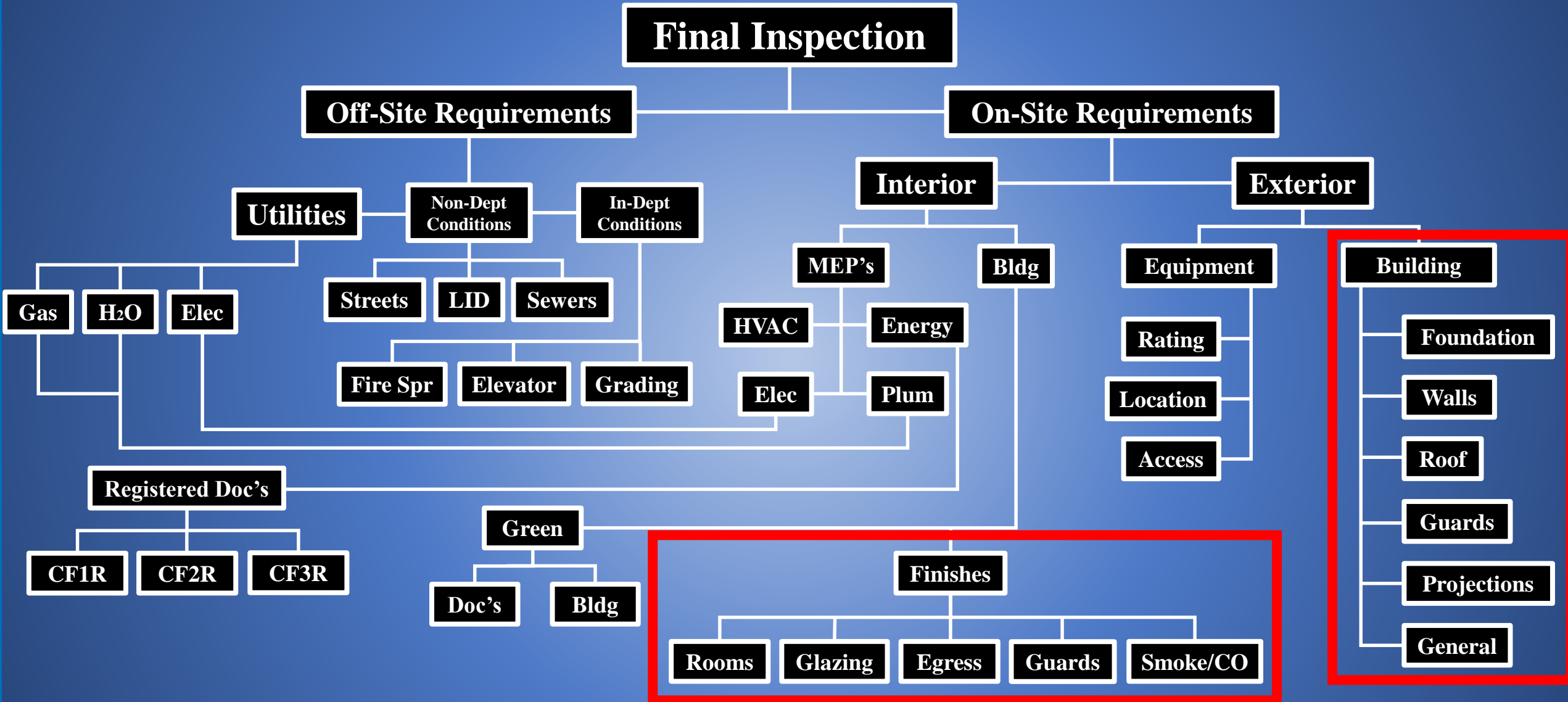
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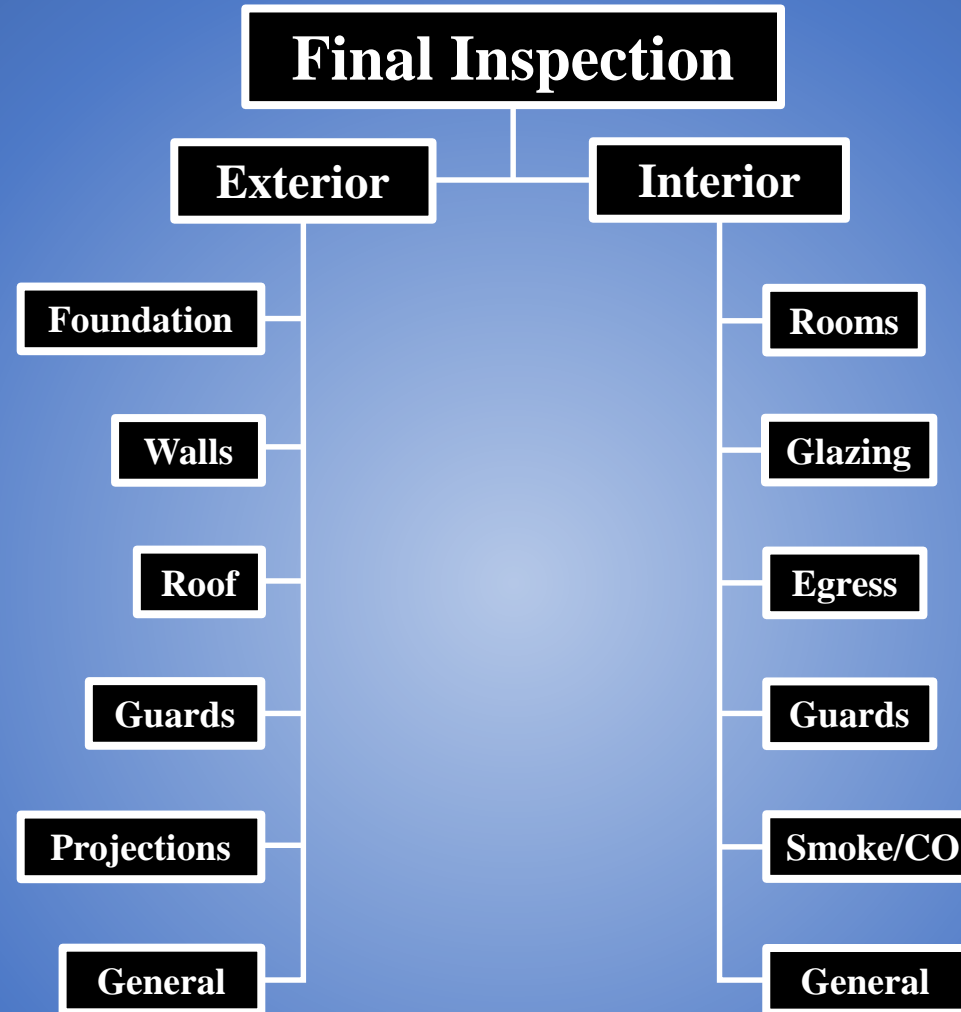


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- Proactive Inspection Process
- The Approved Plans are the Map
 - Begins with Early Inspections
 - Ends with a Smooth Final Inspection Process

- Begins with Early Inspections
 - The Map Is Not The Terrain
- Comprehensive Project Oversight
 - Look Forward to Identify the Significant Potential Setbacks

- Significant Potential Setbacks
 - Always Moving Forward; Never Backwards
 - Is Demolition Involved in Providing for a Correction?
 - Was the Customer Forewarned Regarding the Requirement?

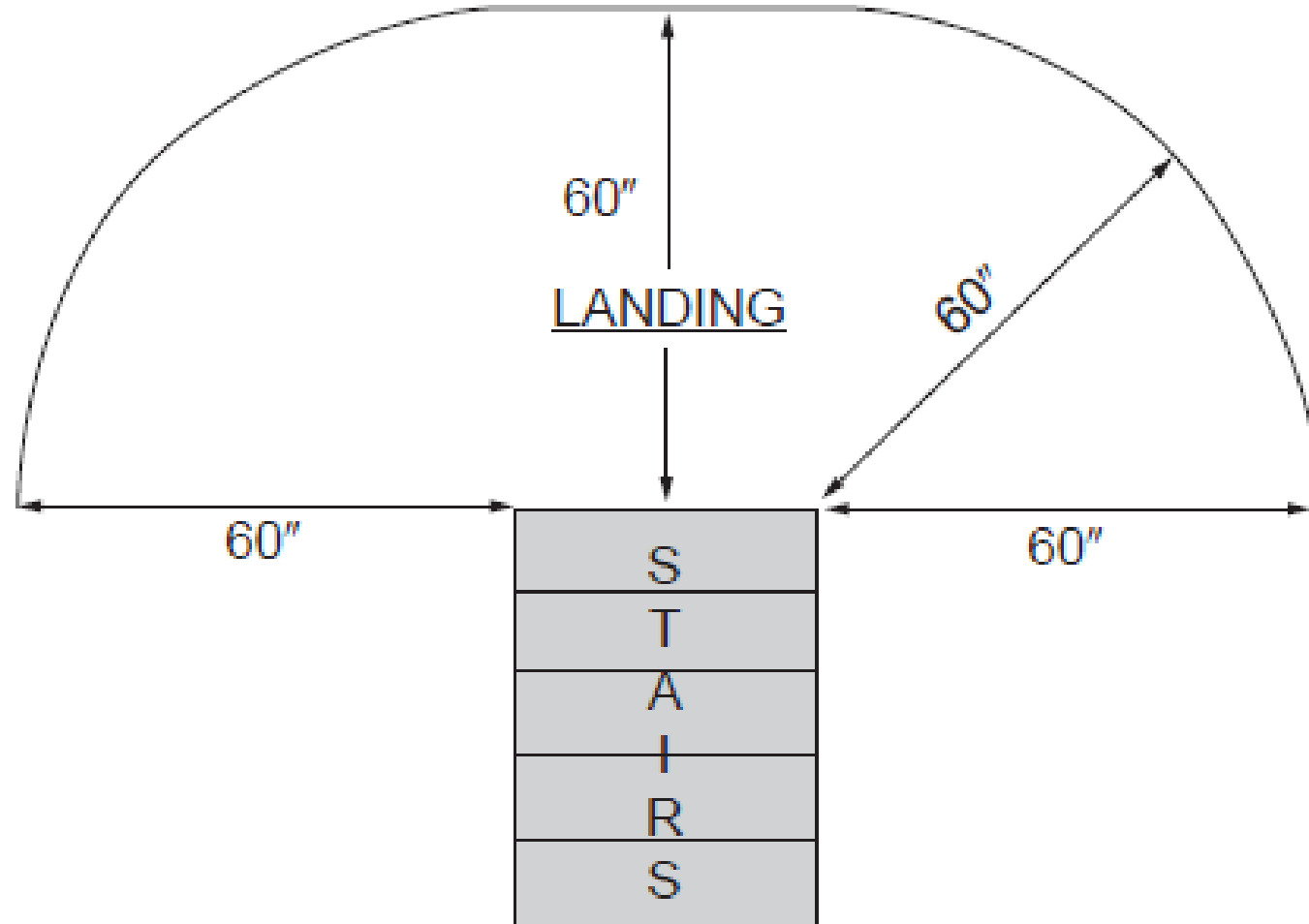
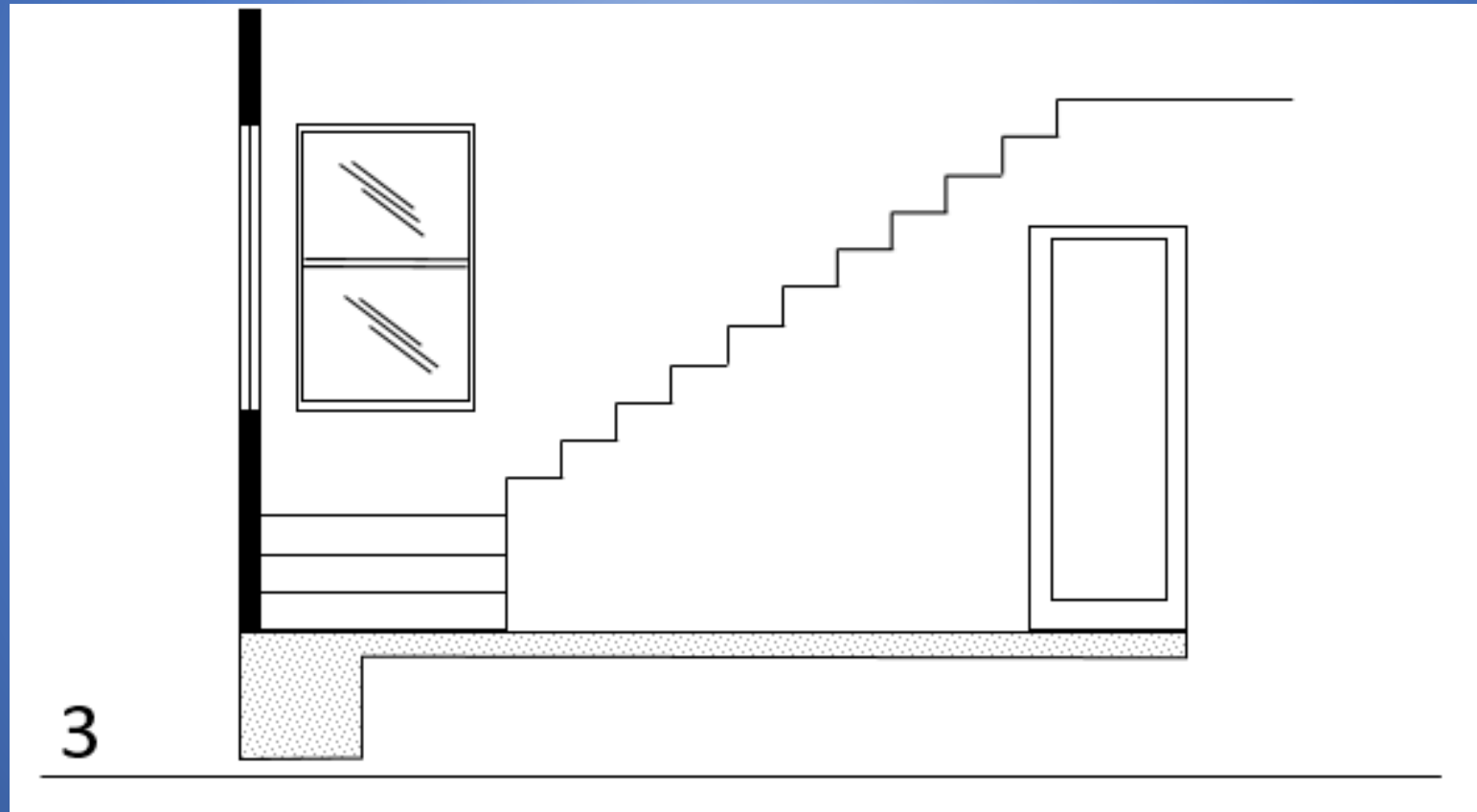
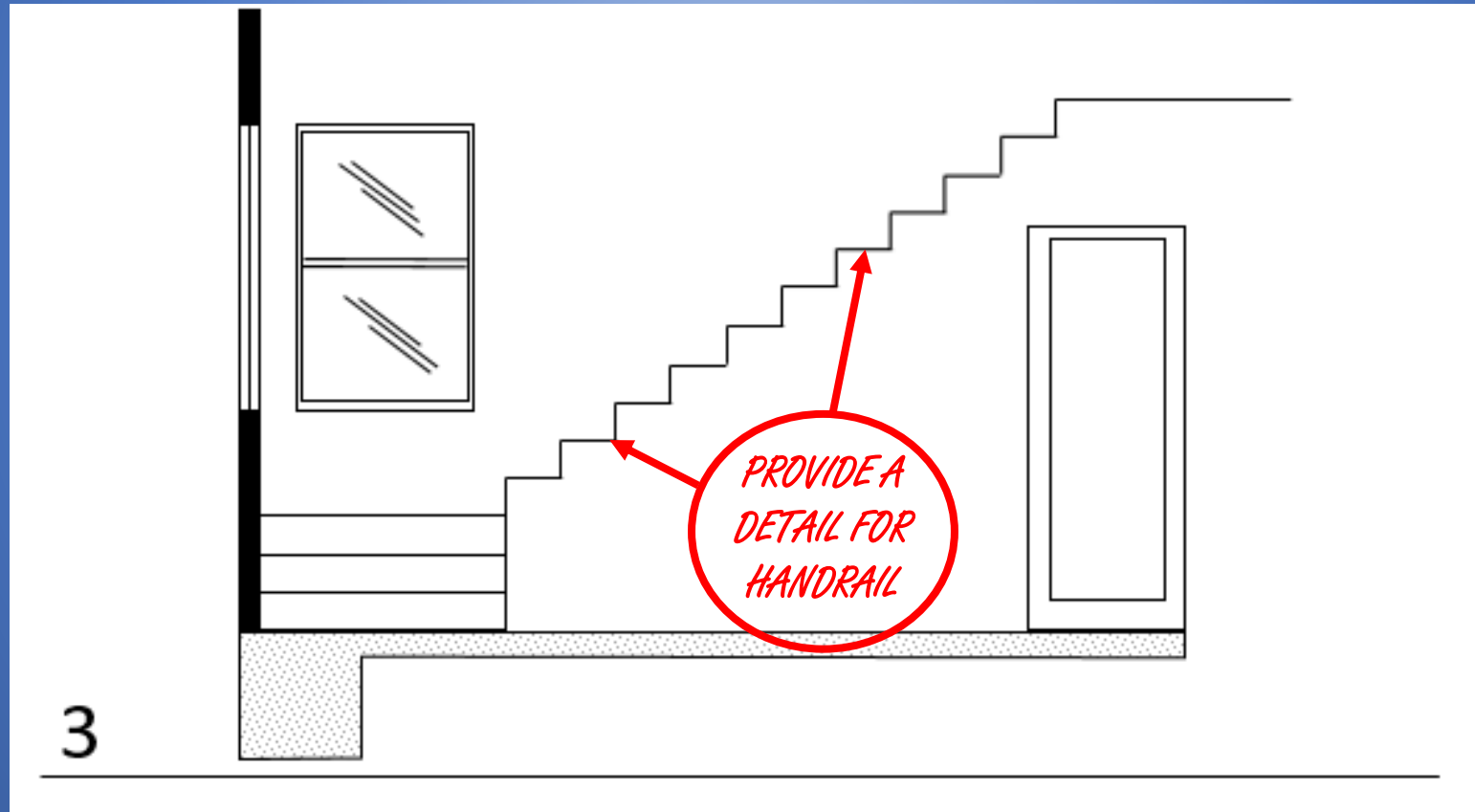


FIGURE R308.4.7
PROHIBITED GLAZING LOCATIONS AT BOTTOM STAIR LANDINGS

At Subfloor Frame Inspection, A Review of the Approved Plans Revealed:



Indicate on the Approved Plans that Safety Glazing is Required at the Landing:



- Significant Potential Setbacks
- Always Moving Forward; Never Backwards
 - Is Demolition Involved in Providing for a Correction?
 - Was the Customer Forewarned Regarding the Requirement?

The Final Inspection

- Are They Ready for Final Inspection?

Are They Ready for Final Inspection?

SECTION R110

CERTIFICATE OF OCCUPANCY

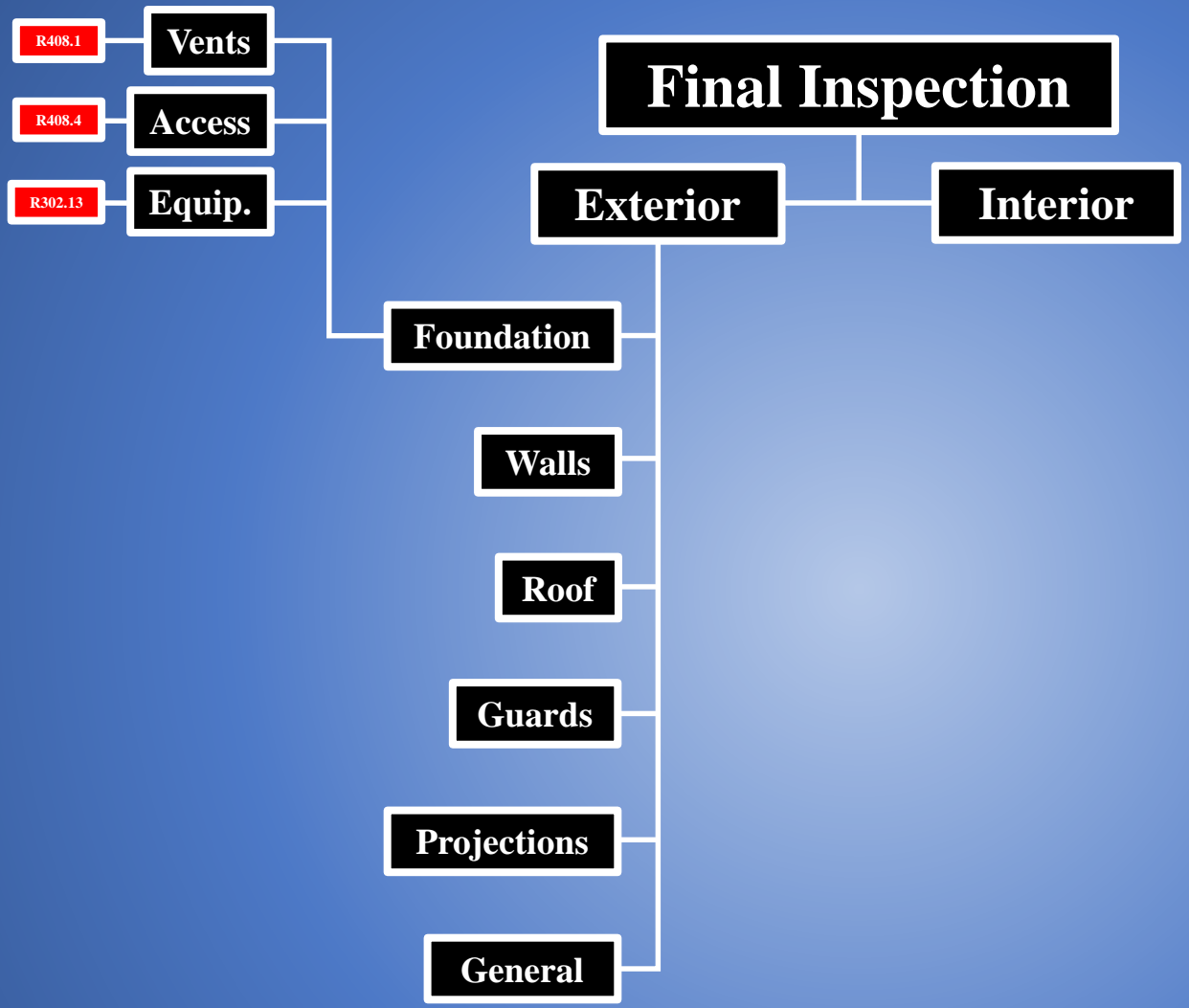
R110.1 Use and occupancy. A building or structure shall not be used or occupied, and a change in the existing use or occupancy classification of a building or structure or portion thereof shall not be made, until the *building official* has issued a certificate of occupancy therefor as provided herein. Issuance of a certificate of occupancy shall not be construed as an approval of a violation of the provisions of this code or of other ordinances of the *jurisdiction*. Certificates presuming to give authority to violate or cancel the provisions of this code or other ordinances of the *jurisdiction* shall not be valid.

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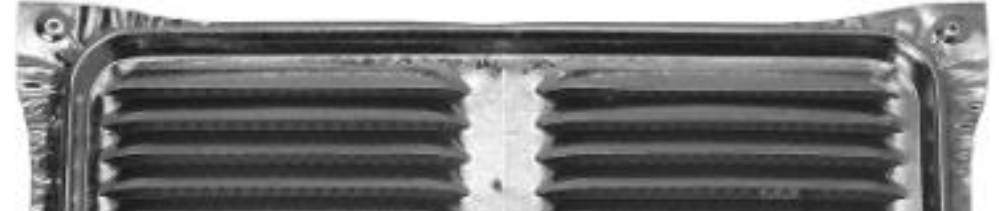


**So, They are Ready for the
Final Inspection...**



R408.1 Vents

R408.1 Ventilation. The under-floor space between the bottom of the floor joists and the earth surface (except space occupied by a basement) shall have openings through foundation walls or exterior walls with a minimum net area of ventilation opening of not less than 1 square foot (0.0929 m²) for each 100 square feet (9.29 m²) of under-floor space area, unless the space is covered by a Class 1 vapor retarder material. If a Class 1 vapor retarder material is used, the minimum net area of ventilation opening shall be not less than 1 square foot (0.0929 m²) for each 100 square feet (9.29 m²) of under-floor space area.



R408.4 Access

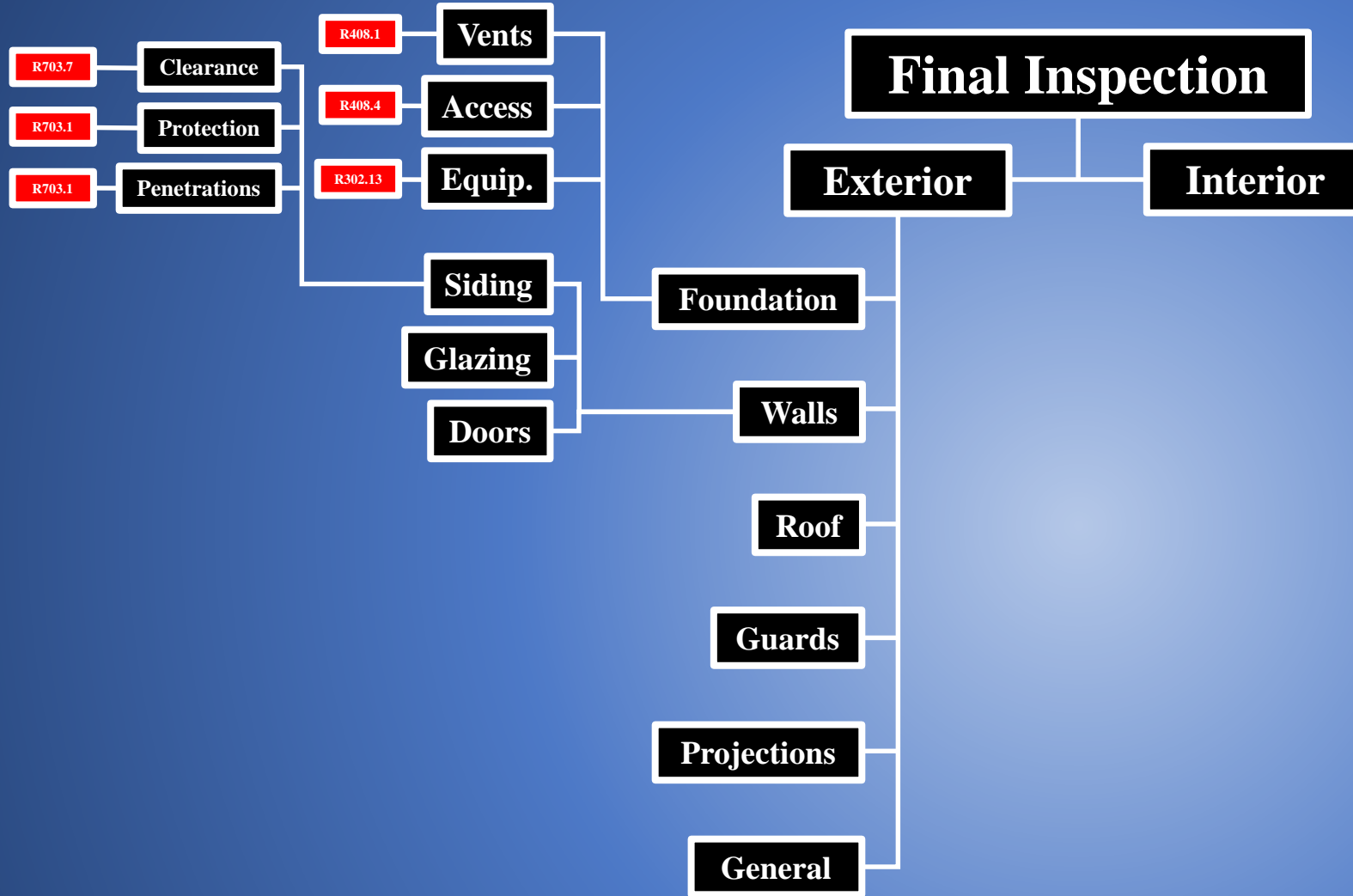
R408.4 Access. Access shall be provided to the under-floor space. Access openings through the floor shall have a minimum of 18 inches by 24 inches (457 mm by 610 mm). Access openings through a perimeter wall shall be not less than 16 inches by 24 inches (407 mm by 610 mm). Where through-wall access is below grade, an areaway shall be provided. The bottom of the areaway shall be not less than 16 inches (407 mm) below the bottom of the access opening. Through wall access shall not be located under a door to the residence.



R302.13 Equip.

R302.13 Fire protection of floors. Floor joists not required elsewhere in this code to be fire-retardant treated shall be provided with a 1/2-inch (12.7 mm) gypsum board membrane, 5/8-inch (16 mm) wood gyp board membrane, or equivalent on the underside of the joist member. Penetrations or openings for electrical outlets, lighting, devices, luminaire, drainage, piping and similar openings or penetrations shall be permitted.





R703.7

Clearance

R703.7.2.1 Weep screeds. A minimum 0.019-inch (0.5 mm) (No. 26 galvanized sheet gage), corrosion-resistant weep screed or plastic weep screed, with a minimum vertical attachment flange of 3 1/2 inches (89 mm) shall be provided at or below the foundation plate level on exterior stud walls in accordance with ASTM C975. The weep screed shall be placed not less than 4 inches (102 mm) above the earth or 2 inches (51 mm) above paved areas and shall be of a type that will allow trapped water to drain to the exterior of the building. The weather-resistant barrier shall lap the attachment flange. The exterior lath shall cover and terminate at the attachment flange of the weep screed.



R703.1

Protection

R703.1 General. Exterior walls shall provide the building with a weather-resistant exterior wall envelope. The exterior wall envelope shall include flashing as described in Section R703.4.

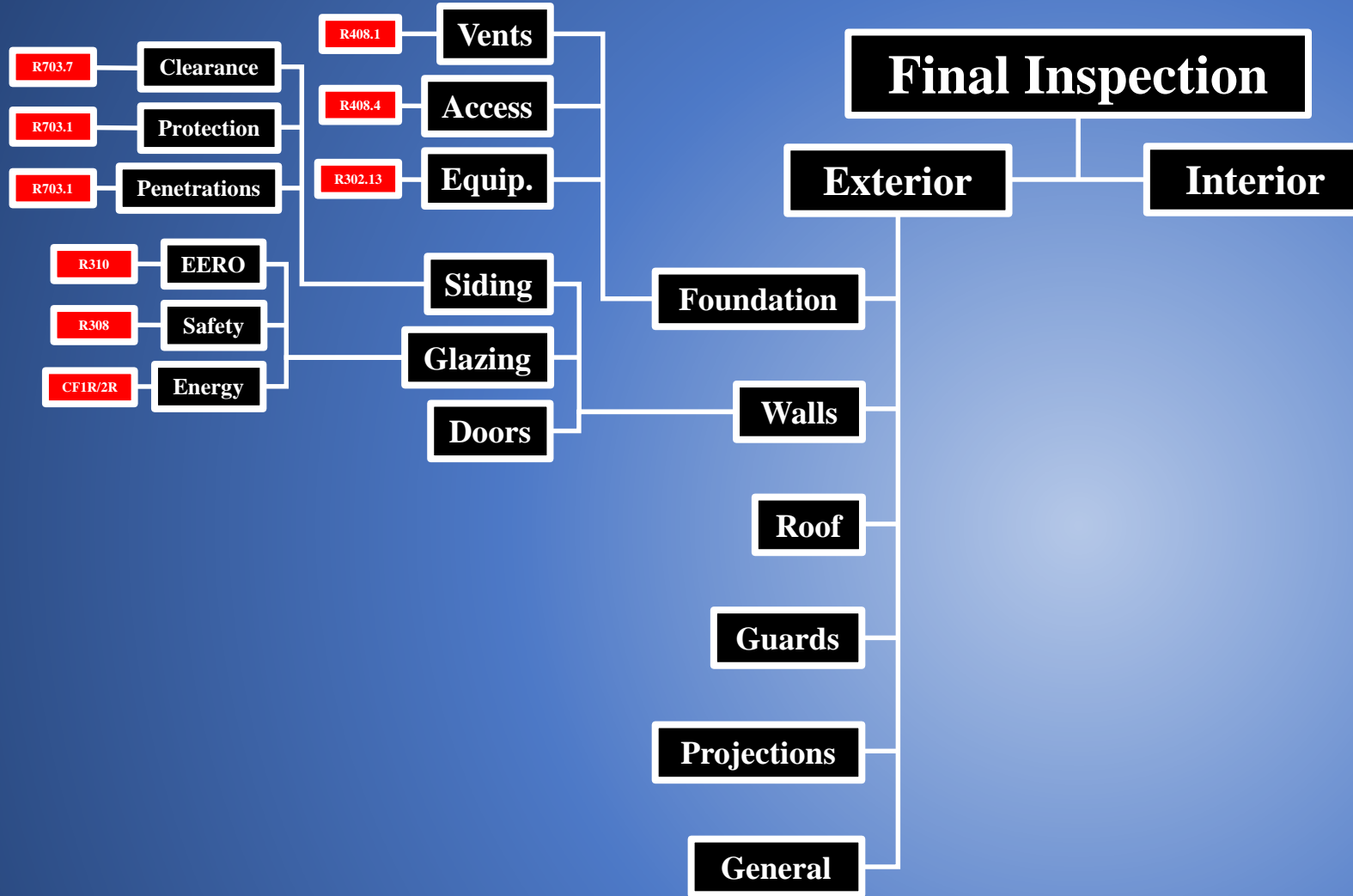


R703.1

Penetrations

R703.1.1 Water resistance. The exterior wall envelope shall be designed and constructed in a manner that prevents the accumulation of water within the wall assembly by providing a water-resistant barrier behind the exterior veneer as required by Section R703.2 and a means of draining the exterior water that enters the assembly. Protection against condensation in the exterior wall assembly shall be provided in accordance with the California Energy Code.





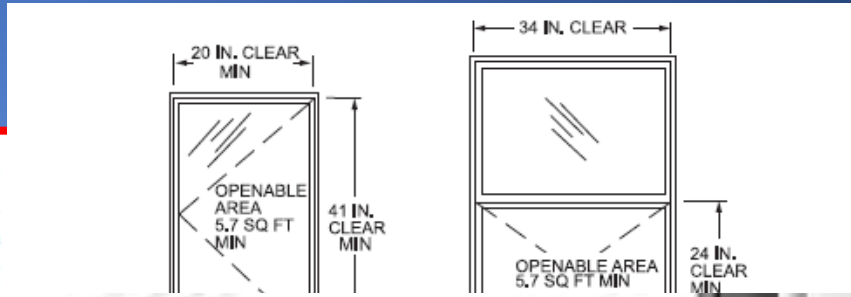
R310 **EERO**

R308 **Safety**

CFIR/2R **Energy**

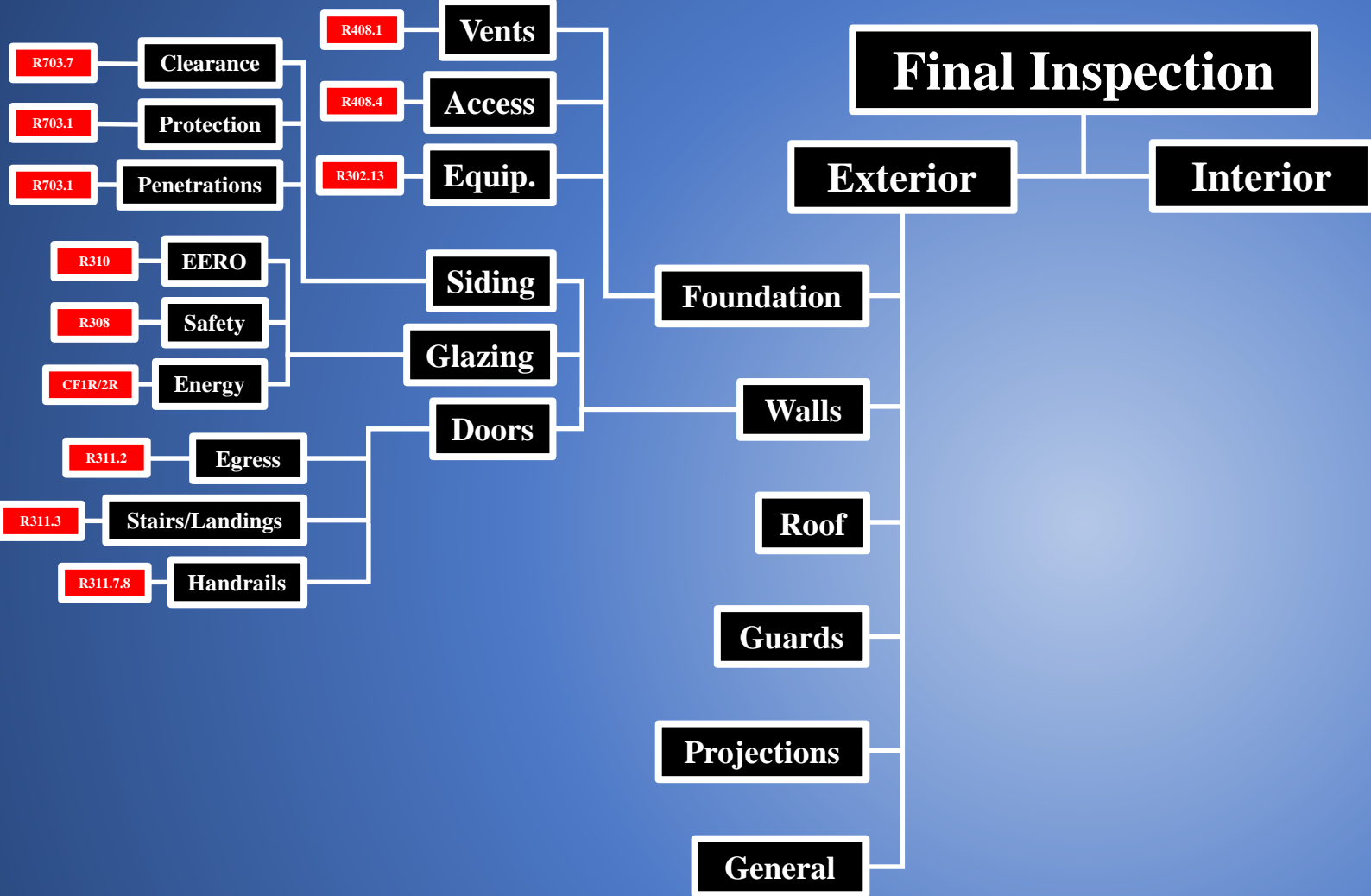
R310.1 Emergency escape and rescue opening required. Basements, habitable attics and every sleeping room shall have not less than one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, an emergency escape and rescue opening shall be required in each sleeping room. Emergency escape and rescue openings shall open directly into a public way, or to a yard or court that opens to a public way.

R308.1 Identification. Except as indicated in Section R308.1.1 each pane of glazing installed in hazardous locations as defined in Section R308.4 shall be provided with a manufacturer's designation specifying who applied the designation, designating the type of glass and the safety glazing standard with which it complies, which is visible in the final installation. The designation shall be acid etched, sandblasted, ceramic-



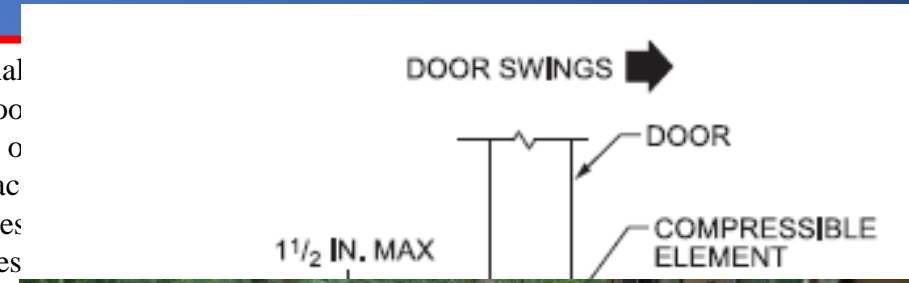
ENERGY PERFORMANCE RATINGS ÉVALUATION DES PROPRIÉTÉS ÉNERGÉTIQUES	
U-Factor Facteur-U 0.49 (U.S./F.P.)	Solar Heat Gain Coefficient Coefficient de gain de chaleur solaire 0.33
ADDITIONAL PERFORMANCE RATINGS ÉVALUATION SUPPLÉMENTAIRE DES PROPRIÉTÉS	
Visible Transmittance Transmission Visible 0.59	-

Manufacturer stipulates that these ratings conform to applicable NFRF procedures for determining whole product performance. NFRF ratings are determined for a fixed set of environmental conditions and specific product size. NFRF does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information. www.nfrf.org



R311.2 Egress

R311.2 Egress door. Not less than one egress door shall be provided for each dwelling unit. The egress door shall be side-hinged, and shall provide a clear width of not less than 32 inches when measured between the face of the door and the stop, with the door open 90 degrees. The clear height of the door opening shall be not less than 78 inches in height measured from the top of the threshold to the bottom of the stop. Other doors shall not be required to comply with these minimum dimensions. Egress doors shall be readily openable from inside the dwelling without the use of a key or special



R311.3 Stairs/Landings

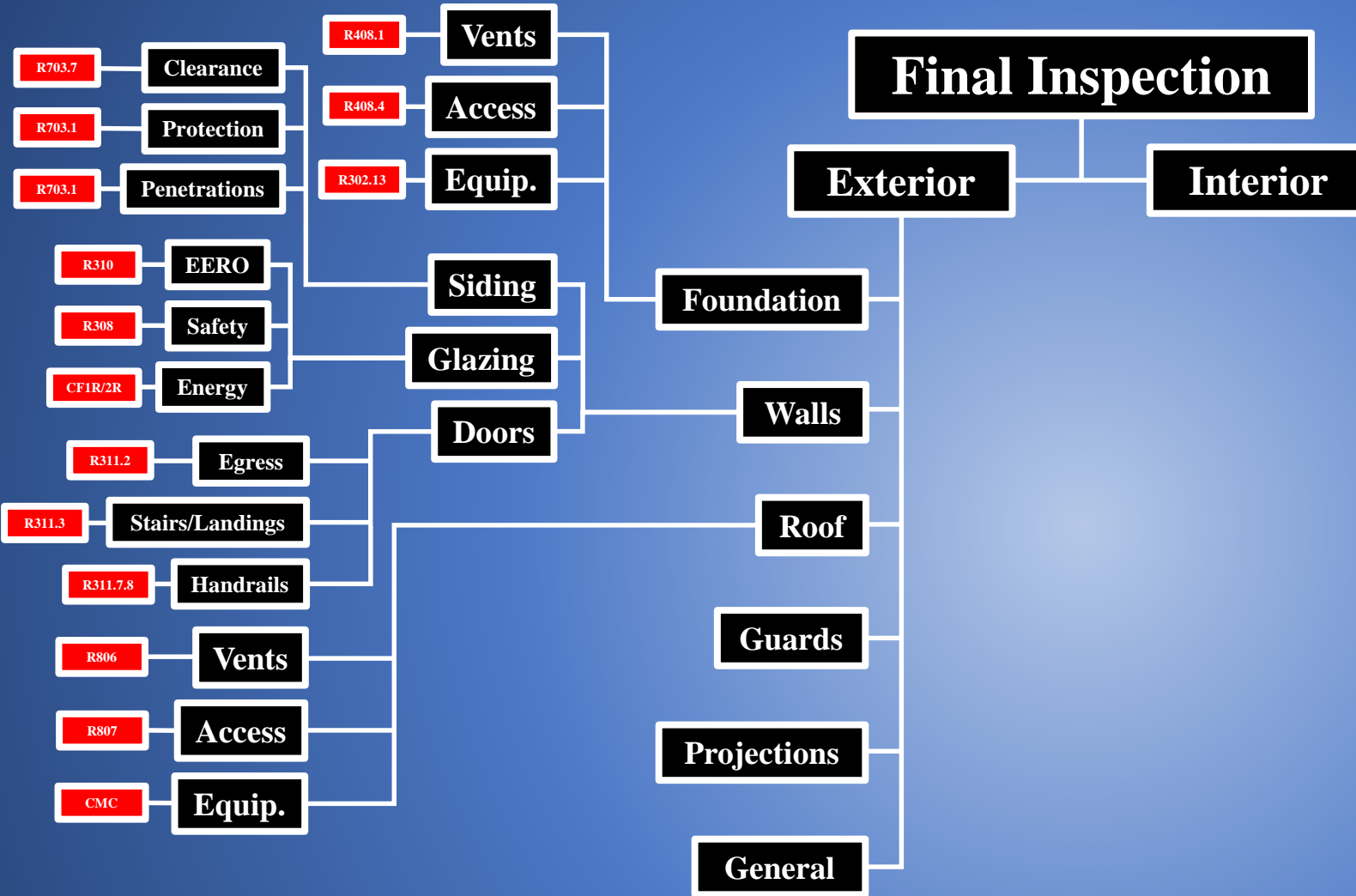
R311.3 Floors and landings at exterior doors. There shall be a landing or floor on each side of each exterior door. The width of each landing shall be not less than the door serve. Every landing shall have a dimension of not less than 36 inches (914 mm) measured in the direction of travel. The slope at exterior landings shall not exceed 1/4 unit vertical in 12 units horizontal (2 percent).



R311.7.8 Handrails

R311.7.8 Handrails. Handrails shall be provided on not less than one side of each continuous run of treads or flights with four or more risers.

R311.7.8.1 Height. Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or the finish surface of ramp slope, shall be not less than 36 inches (864 mm) and not more than 38 inches (965 mm).



R806

Vents

R806.1 Ventilation required. Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain or snow. Ventilation openings shall have a least dimension of $\frac{1}{16}$ inch (1.6 mm) minimum and $\frac{1}{4}$ inch (6.4 mm) maximum. Ventilation openings having a le

R807

Access

R807.1 Attic access. Buildings with combustible ceiling or roof construction shall have an attic access opening to attic areas that have a vertical height of 30 inches (762 mm) or greater over an area of not less than 30 square feet (2.8 m²). The vertical height shall be measured from the top of the ceiling framing members to the underside of the roof framing members.

The rough-framed opening shall be not less than 22 inches by 30 inches (559 mm by 762 mm) and shall be located in a hallway or other readily accessible location. Where located on a wall, the opening shall be not less than 22 inches wide by 30 inches high (559 mm wide by 762 mm high). Where the access is located in a ceiling, minimum unobstructed headroom in the attic space shall be 30 inches (762 mm) at some point above the access measured vertically from the bottom of ceiling framing members. See *the California Mechanical Code*.

CMC

Equip.

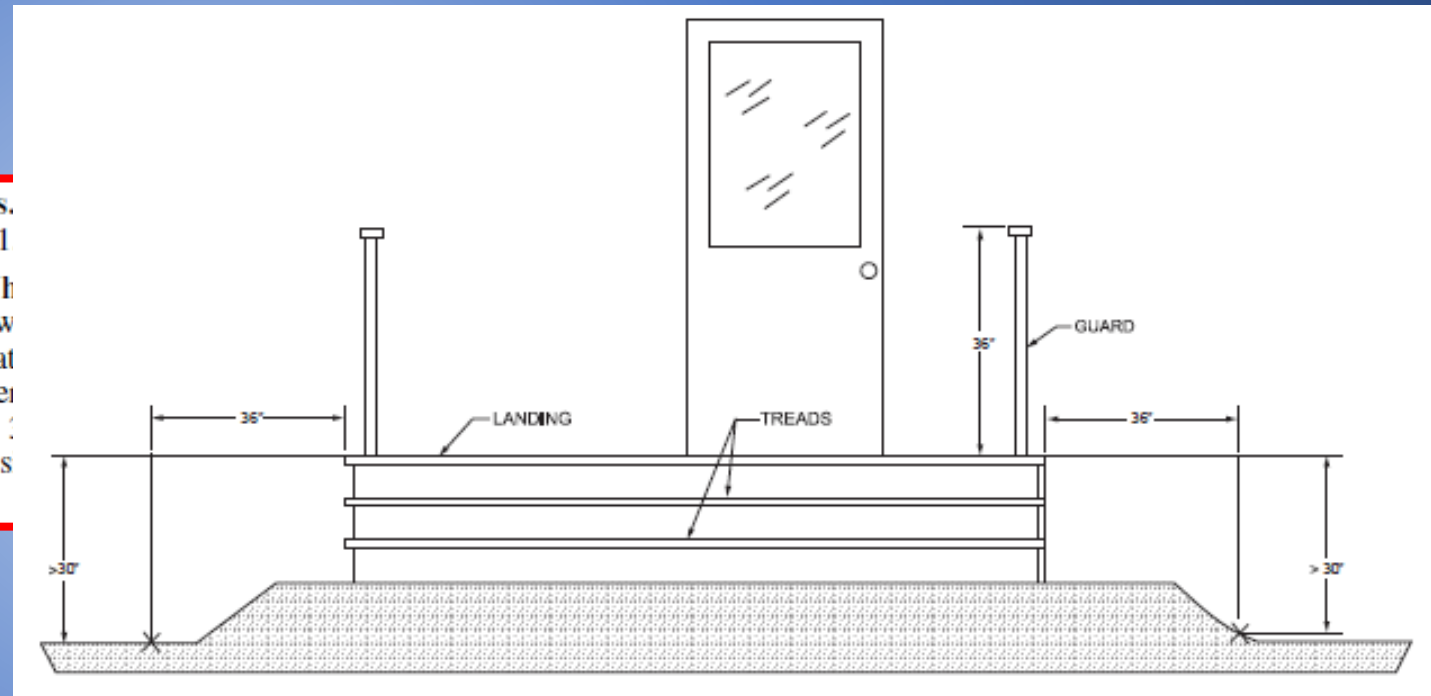
304.4 Appliances in Attics and Under-Floor Spaces. An attic or under-floor space in which an appliance is installed shall be accessible through an opening and passageway not less than the largest component of the appliance, and not less than 22 inches by 30 inches (559 mm by 762 mm).

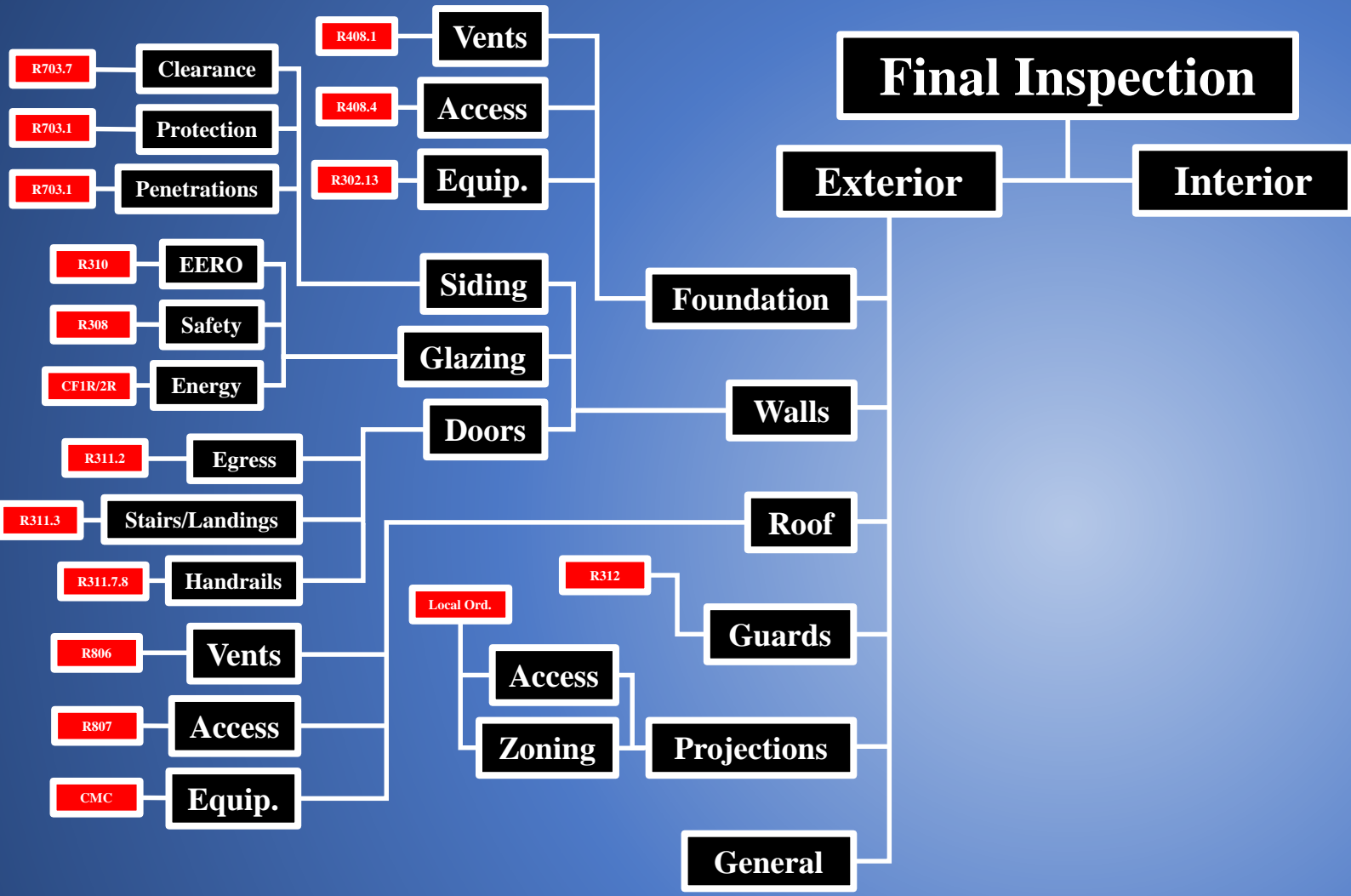


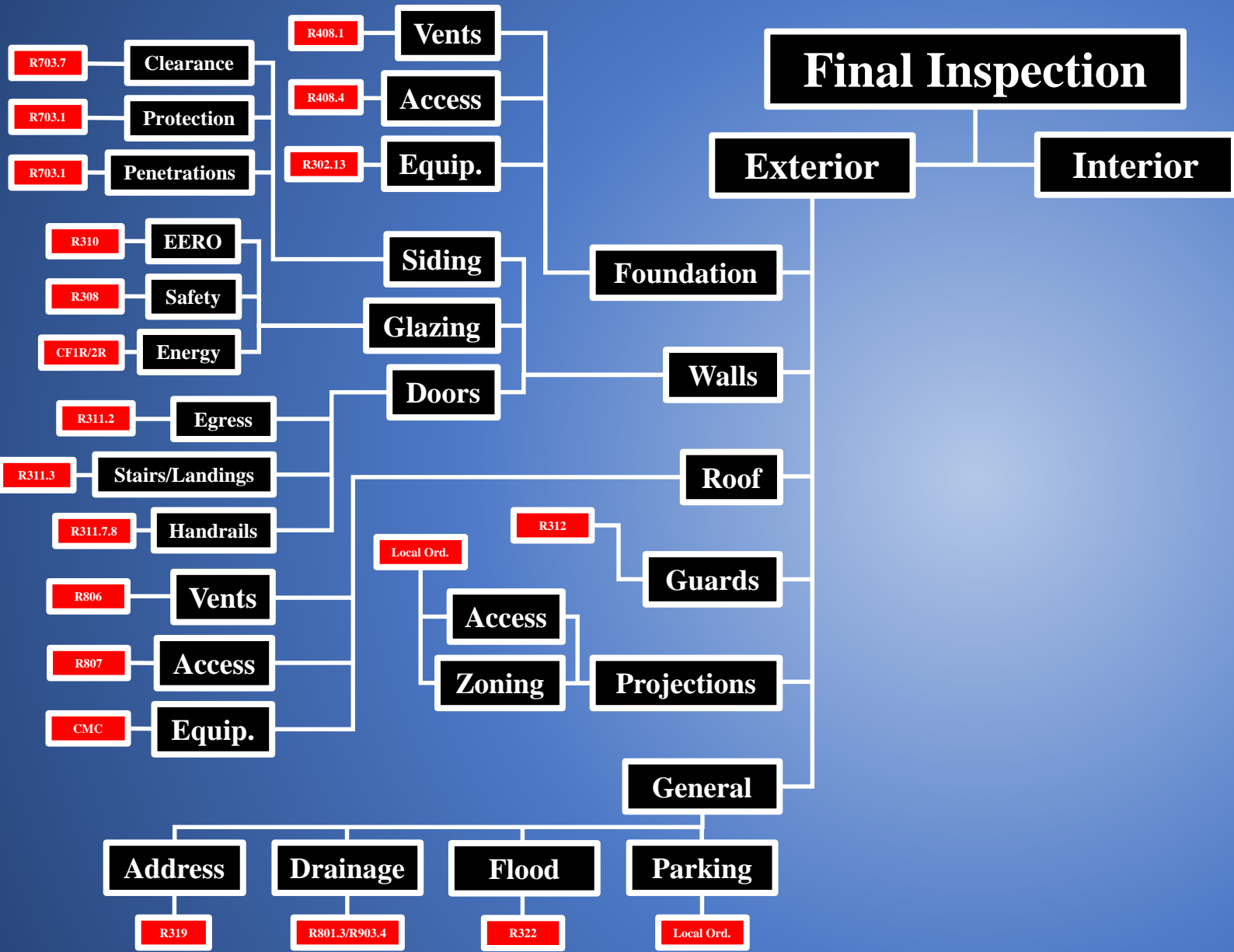
R312

Guards

R312.1 Guards.
Sections R312.1
R312.1.1 Wh
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R319

Address



R319.1 Address identification. Buildings shall be provided with approved address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than 4 inches (102 mm) in height with a stroke width of not less than 0.5 inch (12.7 mm). Where required by the fire code official, address identification shall be provided in additional approved locations to facilitate emergency



R801.3/R903.4

Drainage



R801.3 Roof drainage. In areas where expansive or collapsible soils are known to exist, all dwellings shall have a controlled method of water disposal from roofs that will collect and discharge roof drainage to the ground surface not less than 5 feet (1524 mm) from foundation walls or to an



R322

Flood



R322.1 General. Buildings and structures constructed in whole or in part in flood hazard areas, including A or V Zones and Coastal A Zones, as established in Table R301.2(1), and substantial improvement and restoration of substantial damage of buildings and structures in flood haz-

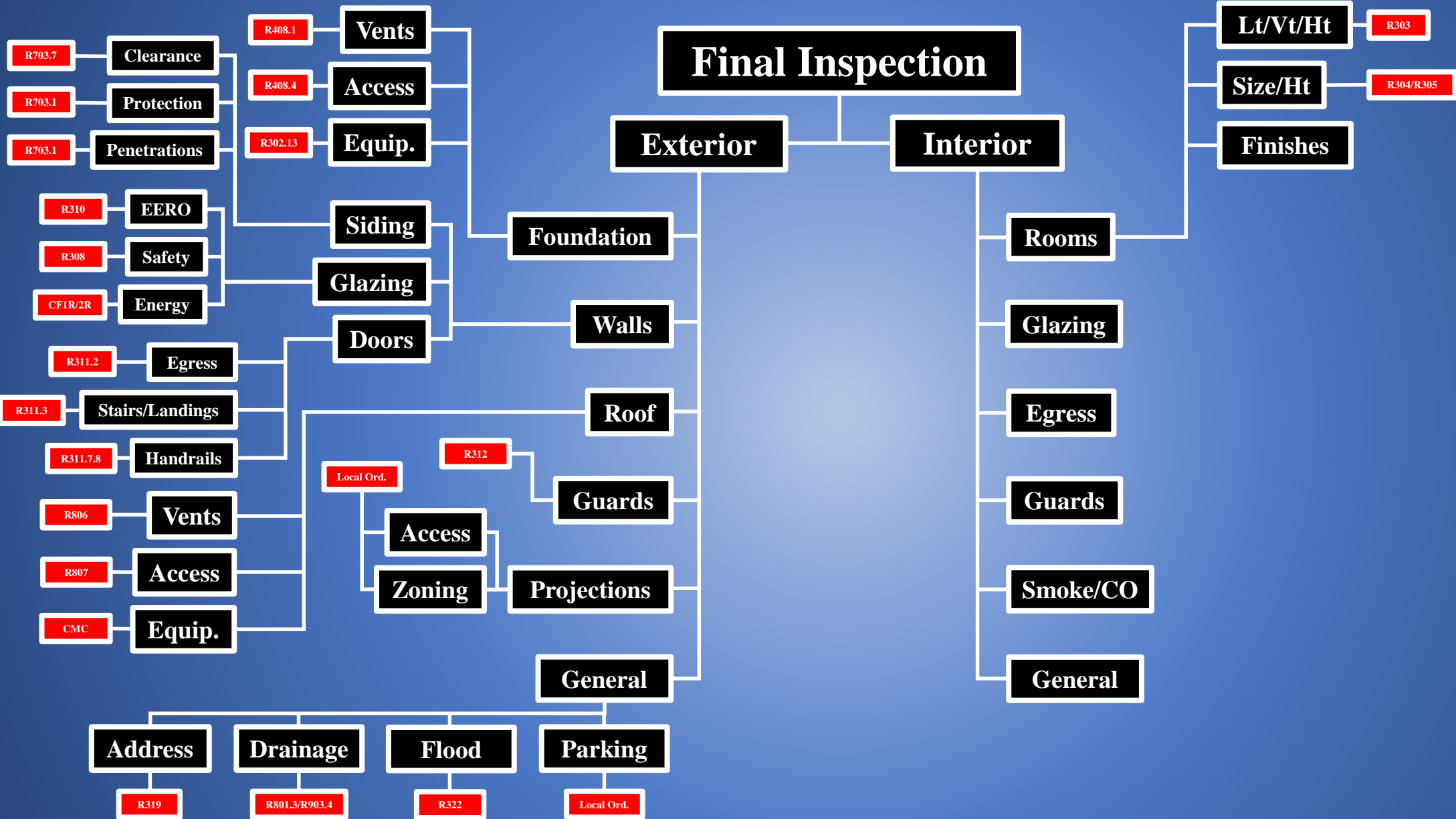


Local Ord.

Parking



(b) **Flexible Units.** Whenever a layout within any dwelling unit or guest room is designed with multiple hallway entrances, multiple toilet and bath facilities or bar sink installations, so that it can be easily divided into or used for separate apartments or guest rooms, the lot area requirements and the automobile parking requirements shall be based upon the highest possible number of dwelling units or guest rooms obtainable from any such arrangement.



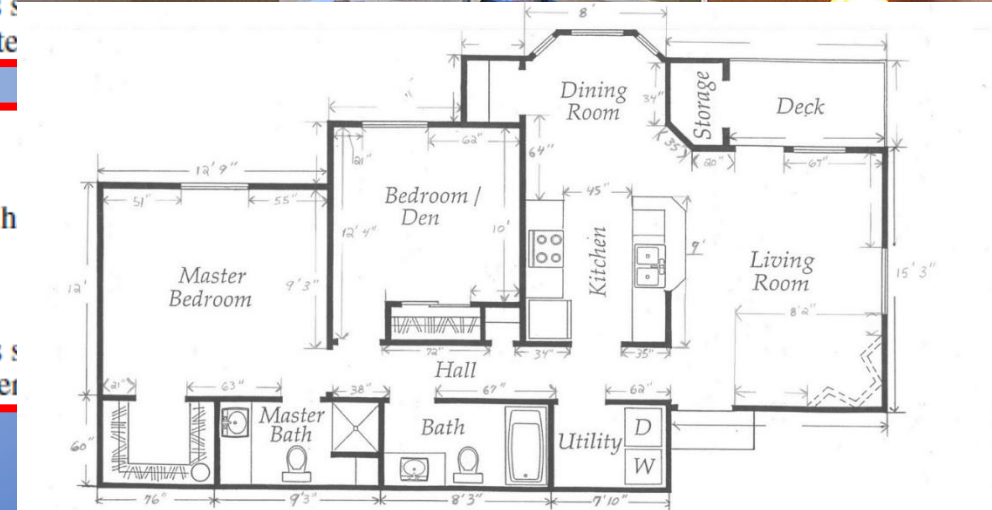
R303 Lt/Vt/Ht

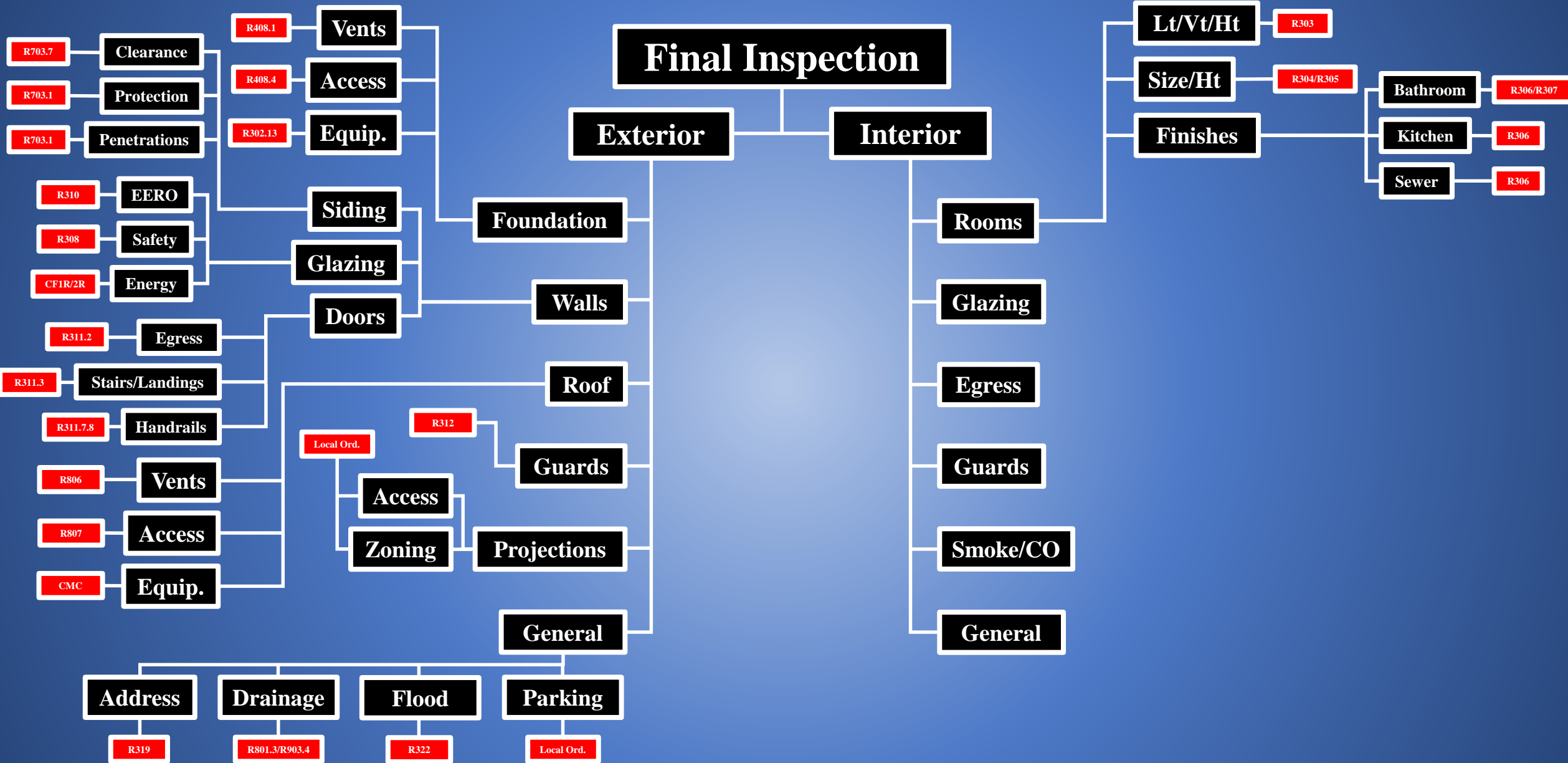
SECTION R303
LIGHT, VENTILATION AND HEATING
R303.1 Habitable rooms. Habitable rooms shall have an aggregate glazing area of not less than 8 percent of the floor area of such rooms. Natural ventilation shall be provided by windows, skylights, doors, louvers or other approved openings to the outdoor air. Such openings shall be readily accessible and shall otherwise be readily controllable by the occupants. The openable area to the outdoors shall be not less than 4 percent of the floor area being ventilated.



R304/R305 Size/Ht

SECTION R304
MINIMUM ROOM AREAS
R304.1 Minimum area. Habitable rooms shall have a minimum floor area of not less than 70 square feet (6.5 m²).
Exceptions: Kitchens.
R304.2 Minimum dimensions. Habitable rooms shall have a minimum clear height of not less than 7 feet (2134 mm) in any horizontal dimension.







**SECTION R307
TOILET, BATH AND SHOWER SPACES**

R307.1 Space required. Fixtures shall be spaced in accordance with the *California Plumbing Code*.

R307.2 Bathtub and shower spaces. Bathtub and shower floors and walls above bathtubs with installed shower heads and in shower compartments shall be finished with a nonabsorbent surface. Such wall surfaces shall extend to a height of not less than 6 feet (1829 mm) above the floor.

**SECTION R306
SANITATION**

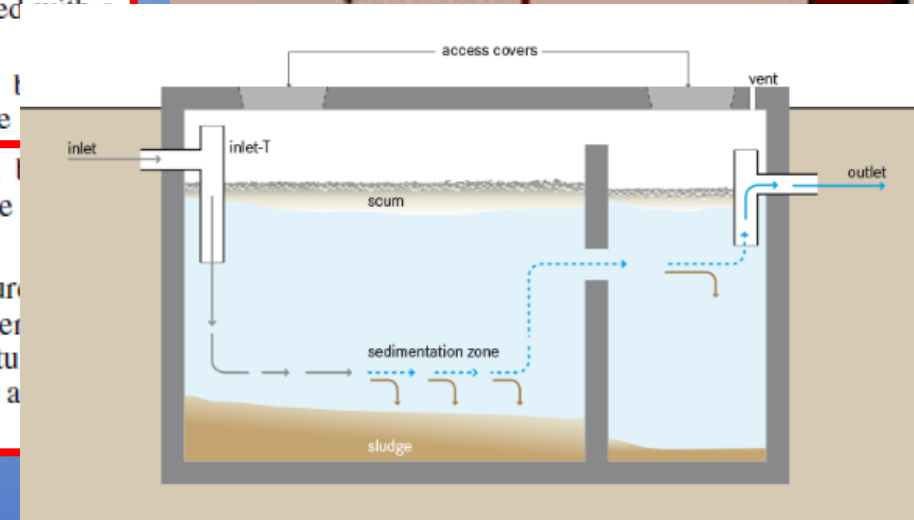
R306.1 Toilet facilities. Every dwelling unit shall be provided with a water closet, lavatory, and a bathtub or shower.

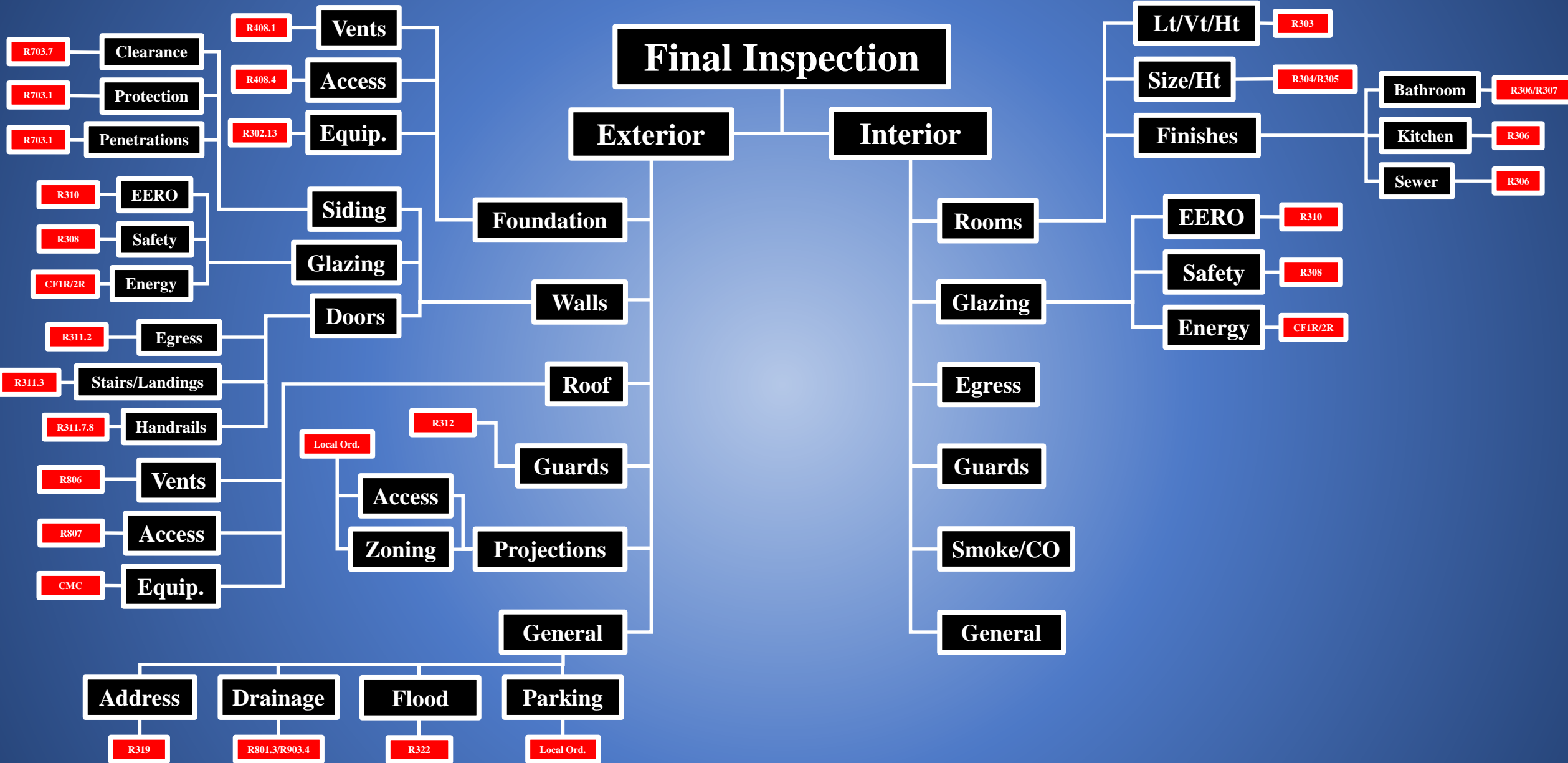
R306.2 Kitchen. Each dwelling unit shall be provided with a kitchen area and every kitchen area shall be provided with a sink.

R306.3 Sewage disposal. Plumbing fixtures shall be connected to a sanitary sewer or to an approved private disposal system.

R306.3 Sewage disposal. Plumbing fixtures shall be connected to a sanitary sewer or to an approved private disposal system.

R306.4 Water supply to fixtures. Plumbing fixtures shall be connected to an approved water supply. Kitchen lavatories, bathtubs, showers, bidets, laundry tubs, and washing machine outlets shall be provided with hot water.





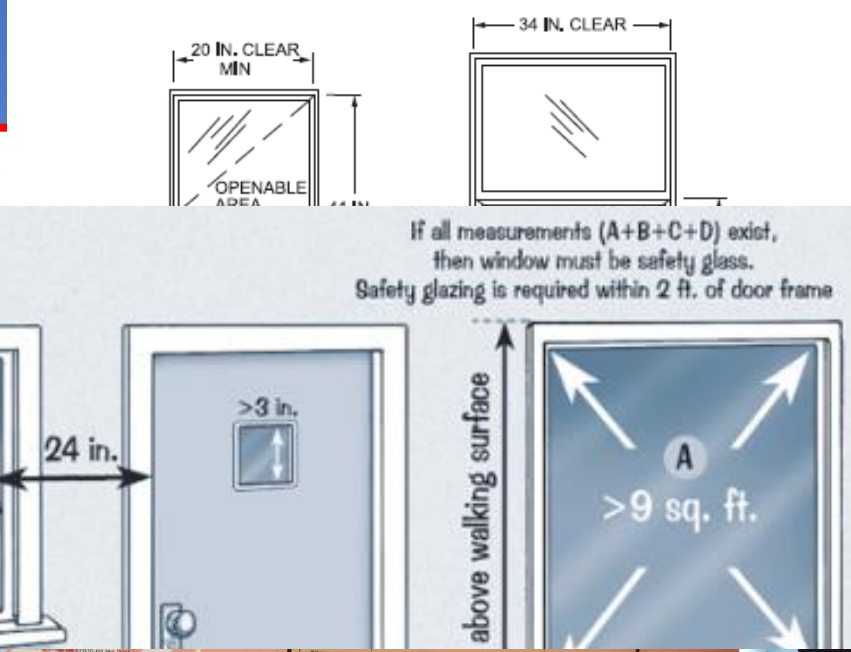
R310 — **EERO**

R308 — **Safety**

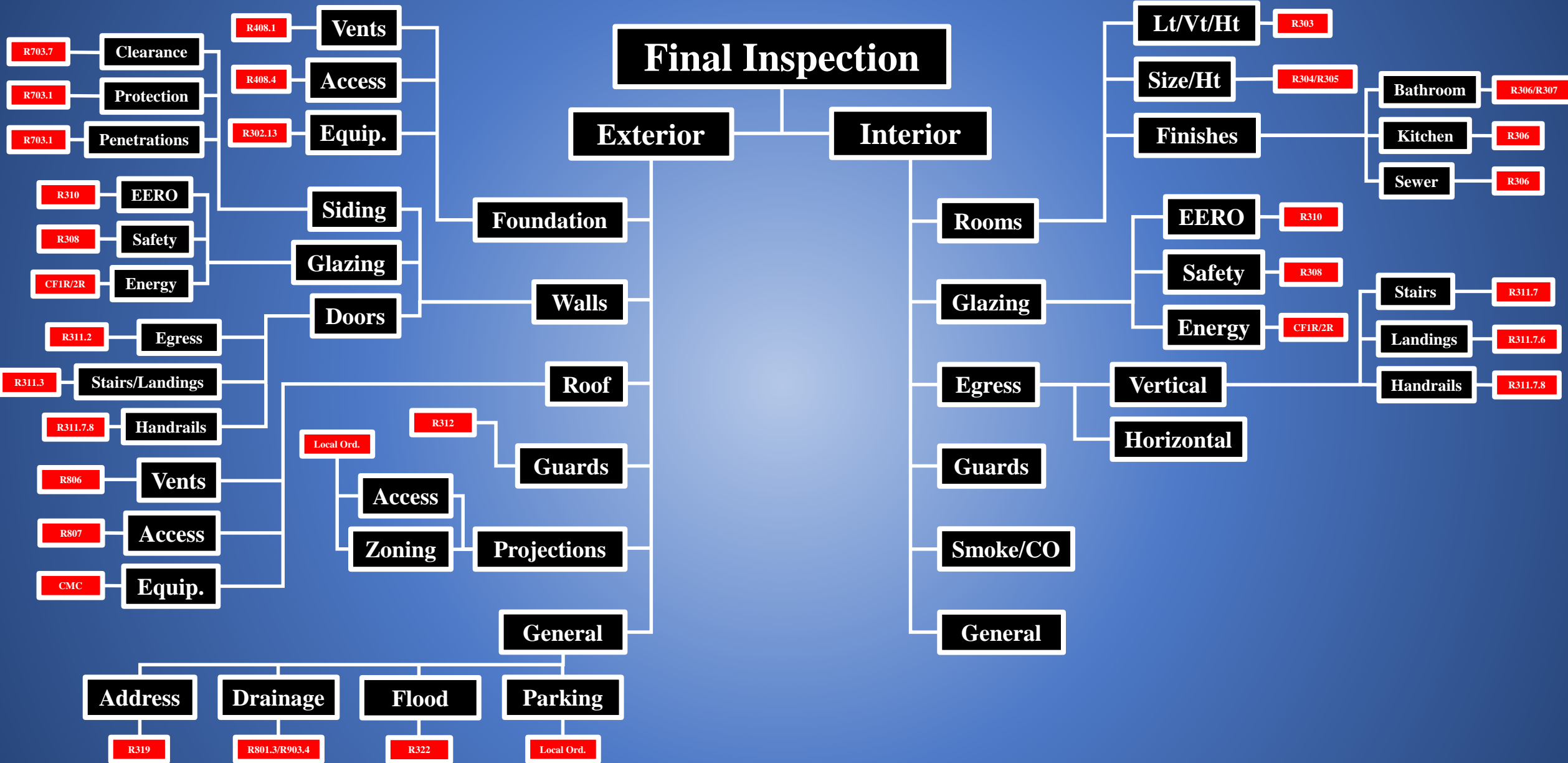
CFIR/2R — **Energy**

R310.1 Emergency escape and rescue opening required. Basements, habitable attics and every sleeping room shall have not less than one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, an emergency escape and rescue opening shall be provided in each sleeping room. Emergency escape and rescue openings shall open directly into a public way, street, yard or court that opens to a public way.

R308.1 Identification. Except as indicated in R308.1.1 each pane of glazing installed in hazardous locations as defined in Section R308.4 shall be provided with a manufacturer's designation specifying who applied the designation designating the type of glass and the safety glazing with which it complies, which is visible in the final installation. The designation shall be acid etched, sandblasted,



		CPDW MIL-A-173-02926-00001 SCH 1584752 027 1110H HORIZ SLIDER ALUM	MIL STC = 29
U-Factor Facteur-U 0.49 (U.S./F.P)	Solar Heat Gain Coefficient Coefficient de gain de chaleur solaire 2.78 (Metric/SI)	1/2 AIR 0.037(2) CU-D	0.33
ENERGY PERFORMANCE RATINGS ÉVALUATION DES PROPRIÉTÉS ÉNERGÉTIQUES		ADDITIONAL PERFORMANCE RATINGS ÉVALUATION SUPPLÉMENTAIRE DES PROPRIÉTÉS	
Visible Transmittance Transmission Visible 0.59		—	
Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information. www.nfrc.org			



R311.7 **Stairs**

R311.7.6 **Landings**

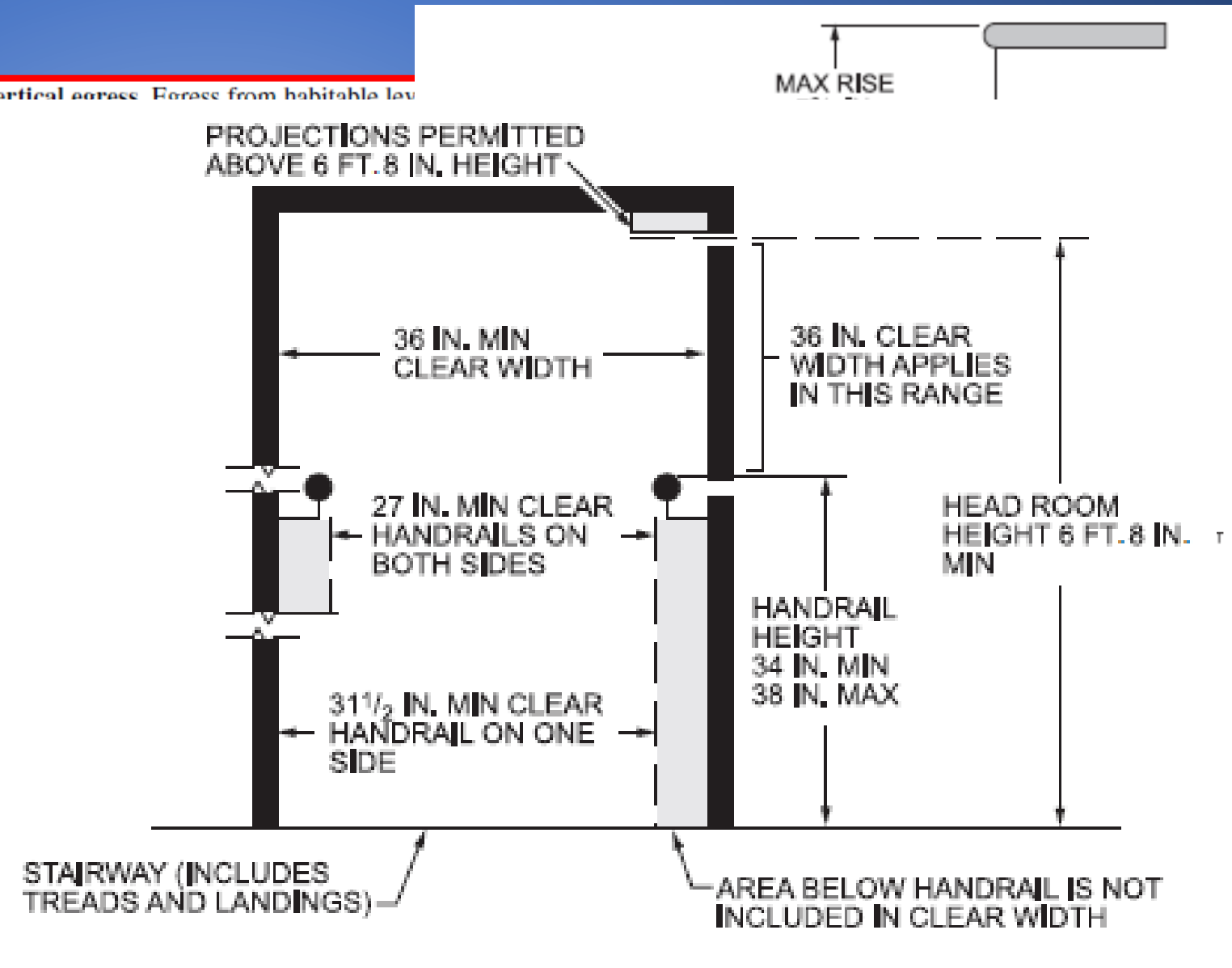
R311.7.8 **Handrails**

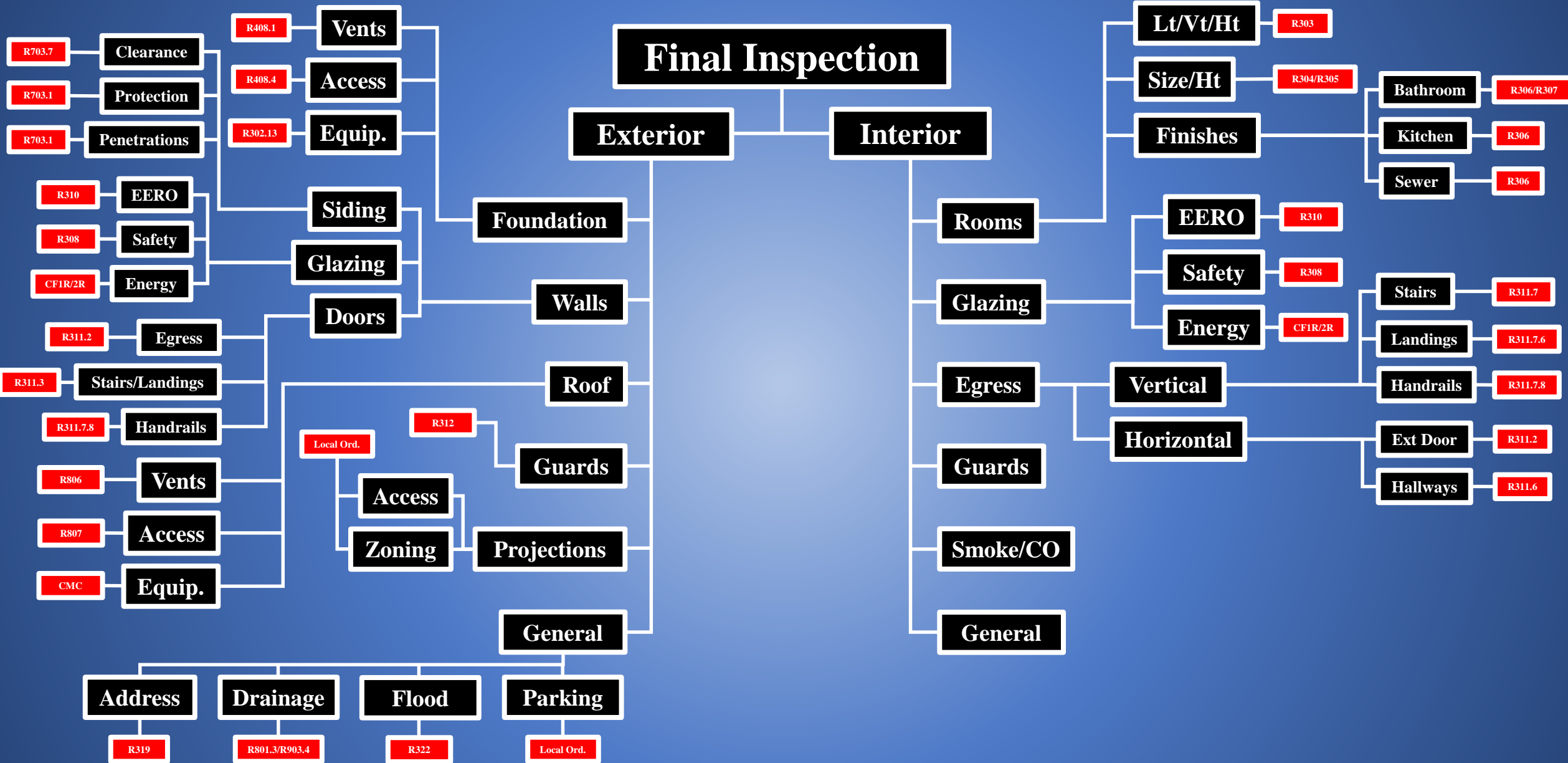
R311.4 Vertical egress Egress from habitable level to another habitable level, including egress doors, shall be provided for one or more exits from each habitable level. For one-story buildings, the maximum stairway clear width shall be not less than 36 inches.

R311.7.6 Landings shall have a clear width perpendicular to the direction of travel not less than the clear width of the stairway, but not less than 36 inches. The required clear width shall be measured straight run, not including projections, and shall be not less than 36 inches.

R311.7.8 Handrails shall be installed on both sides of the stairway, and shall be installed on one side of the landing. Handrails shall be installed on the side of the stairway with the greatest slope. Handrails shall be installed on the side of the landing with the greatest slope. Handrails shall be installed on the side of the landing with the greatest slope. Handrails shall be installed on the side of the landing with the greatest slope.

R311.7.9 Handrails shall be installed on both sides of the stairway, and shall be installed on one side of the landing. Handrails shall be installed on the side of the stairway with the greatest slope. Handrails shall be installed on the side of the landing with the greatest slope. Handrails shall be installed on the side of the landing with the greatest slope. Handrails shall be installed on the side of the landing with the greatest slope.





R311.2

Ext Door

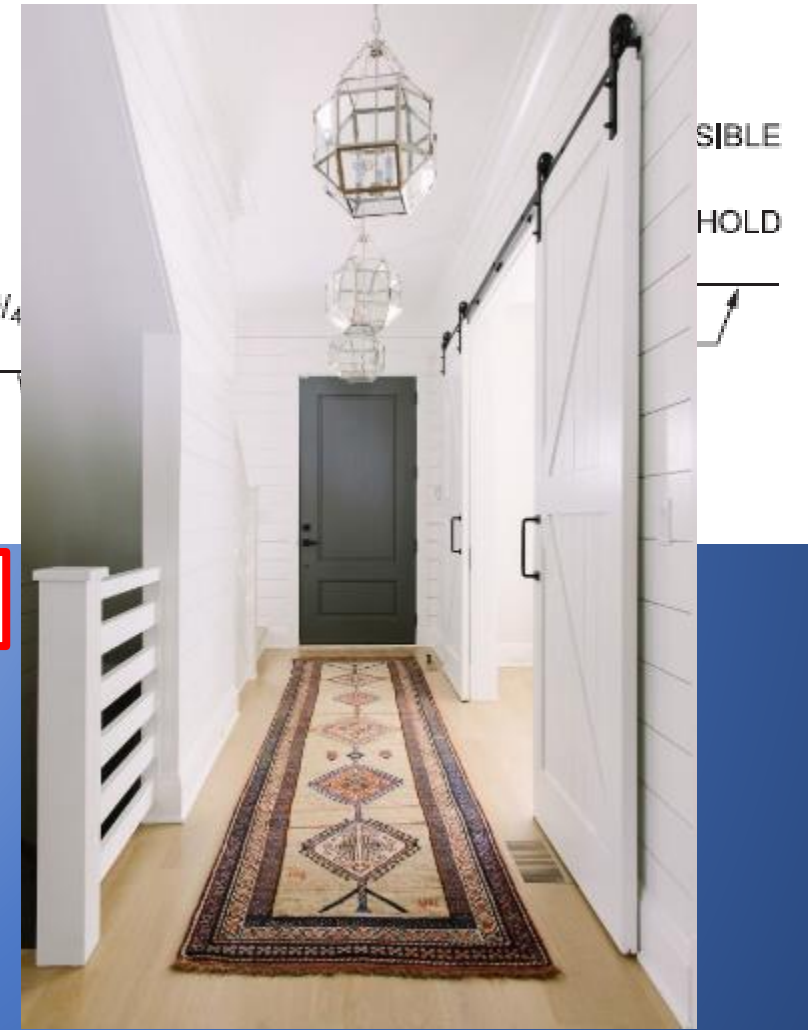
R311.2 Egress door. Not less than one egress door shall be provided for each dwelling unit. The egress door shall be side-hinged, and shall provide a clear width not less than 32 inches when measured between the face of the door and the stop, with the door open 90 degrees. The clear height of the door opening shall be not less than 78 inches in height measured from the top threshold to the bottom of the stop. Other doors are not required to comply with these minimum dimensions. Egress doors shall be readily openable from the inside of the dwelling without the use of a key or knowledge or effort.

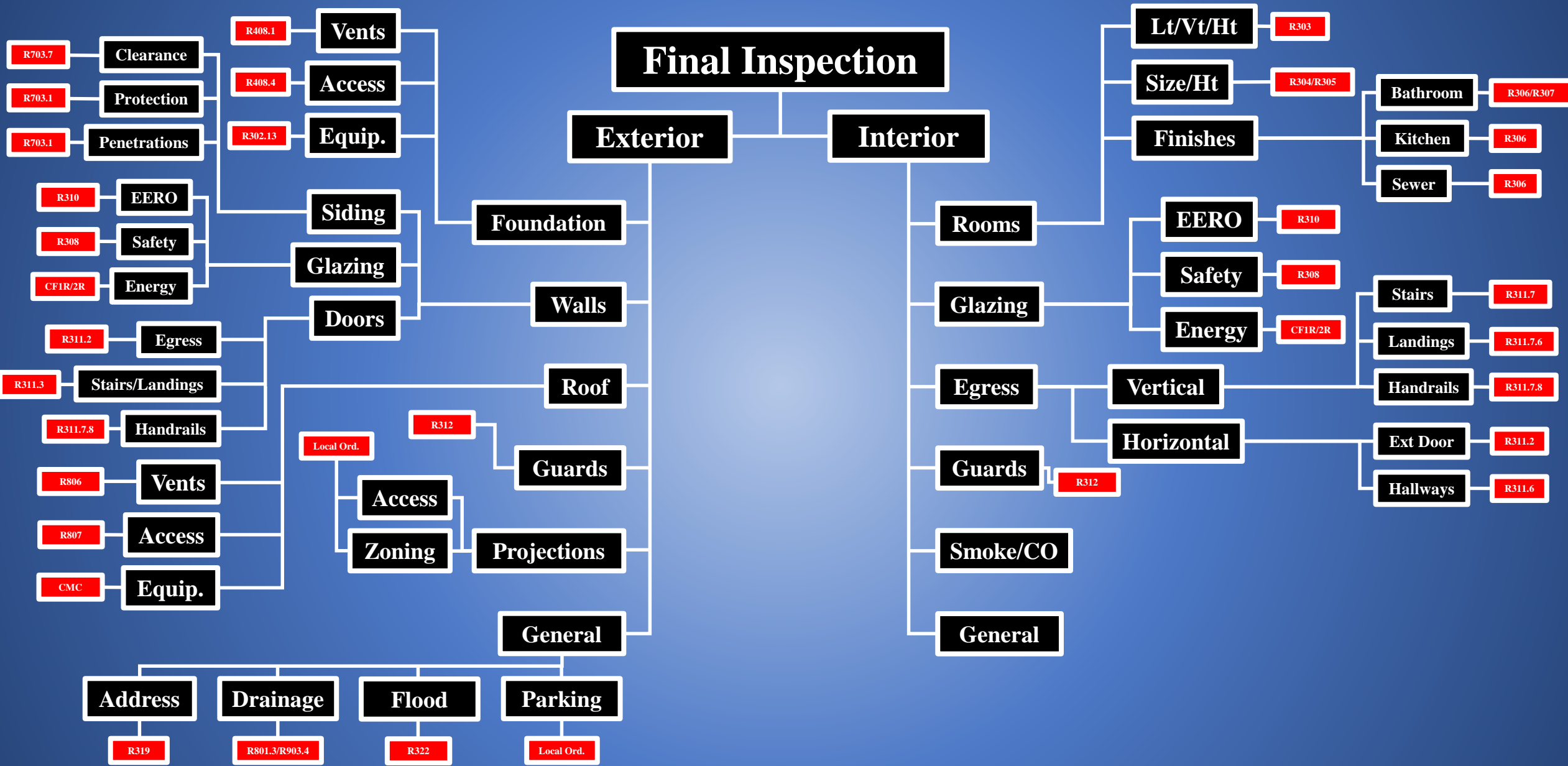
R311.6

Hallways

R311.6 Hallways. The width of a hallway shall be not less than 3 feet (914 mm).

DOOR SWINGS →



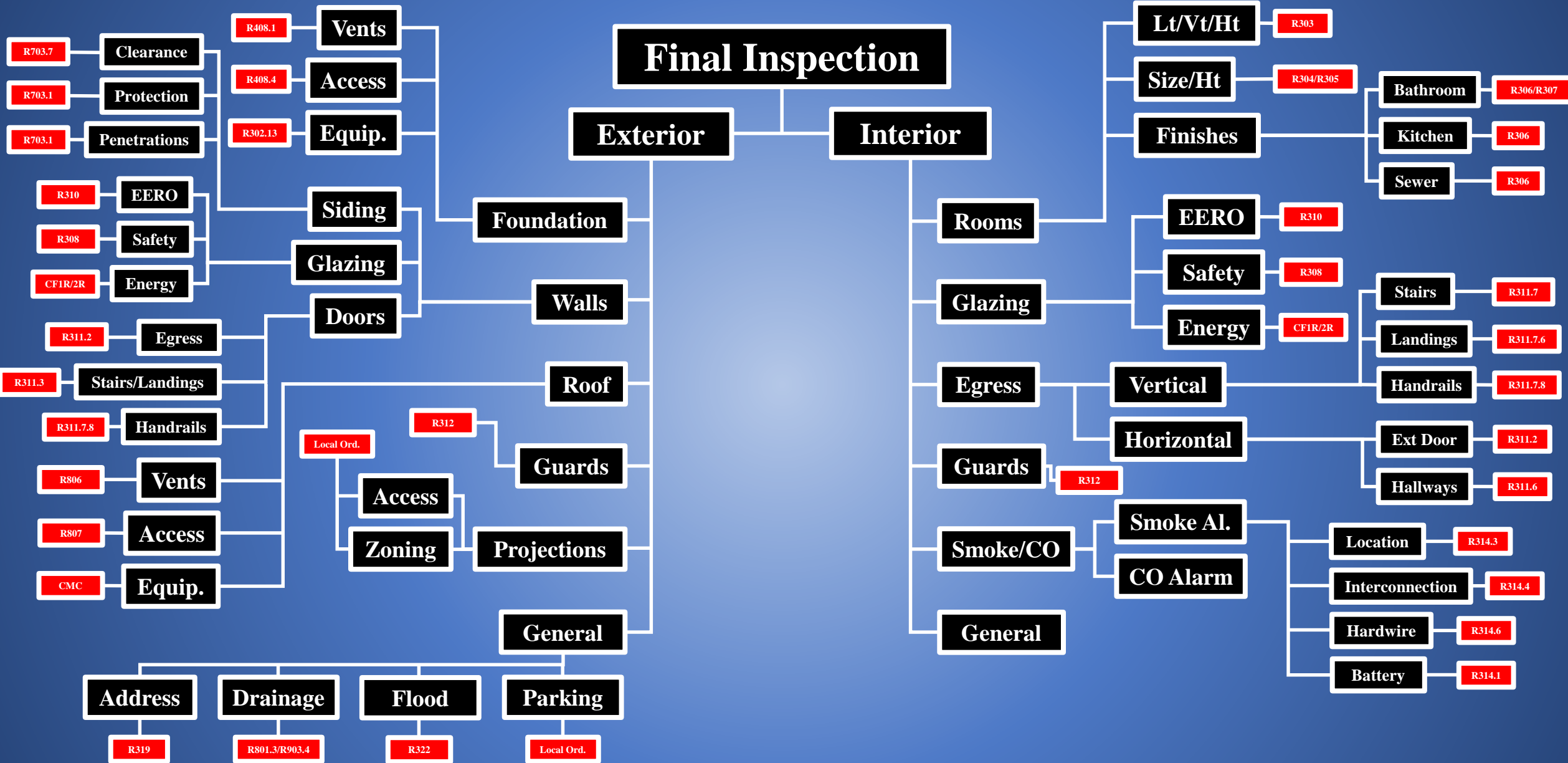


R312

Guards

R312.1 Guards. Guards
Sections R312.1.1 through
R312.1.1 Where req
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R314.3 Location

SECTION R314
SMOKE ALARMS MASTER PLACEMENT GUIDELINES

R314.3 Location. Smoke alarms in a 2-STORY HOME

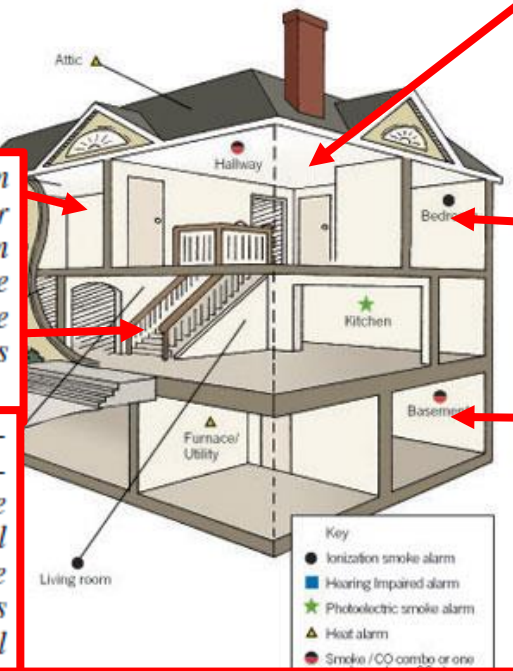
- Following locations:
1. In each sleeping room.
 2. Outside each separate sleeping unit in the vicinity of the bedrooms.

R314.4 Interconnection

R314.4 Interconnection. Where more than one smoke alarm is required to be installed within an individual dwelling or sleeping unit, the smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.

R314.6 Hardwire

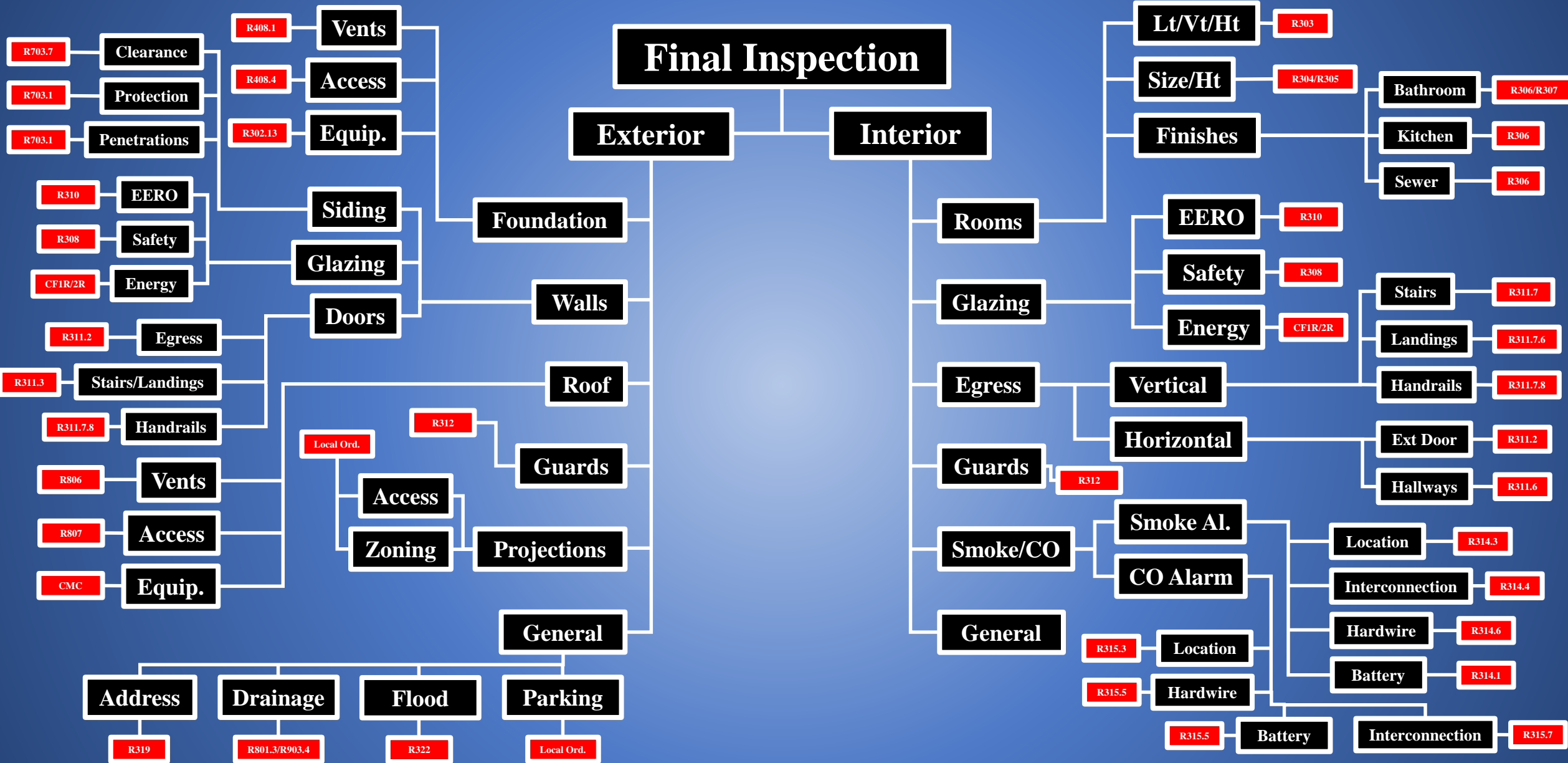
R314.6 Power source. Smoke alarms shall receive their primary power from the building wiring provided that such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms with integral strobes that are not equipped with battery backup shall be connected to an emergency electrical system. Smoke alarms shall emit a signal when the batteries are low. Wiring shall



R314.1 Battery

SECTION R314
SMOKE ALARMS

R314.1 General. Smoke alarms shall comply with NFPA 72 and Section R314.



R315.3 **Location**

R315.3 Location. Carbon monoxide alarms in dwelling units shall be installed *and maintained in accordance with manufacturer's published instructions in the following locations:*

1. Outside of each separate sleeping area in the immediate vicinity of the bedrooms.
2. On every occupiable level of a dwelling unit, including basements.
3. Where a fuel-burning appliance is located within a dwelling unit.

R315.5 **Hardwire**

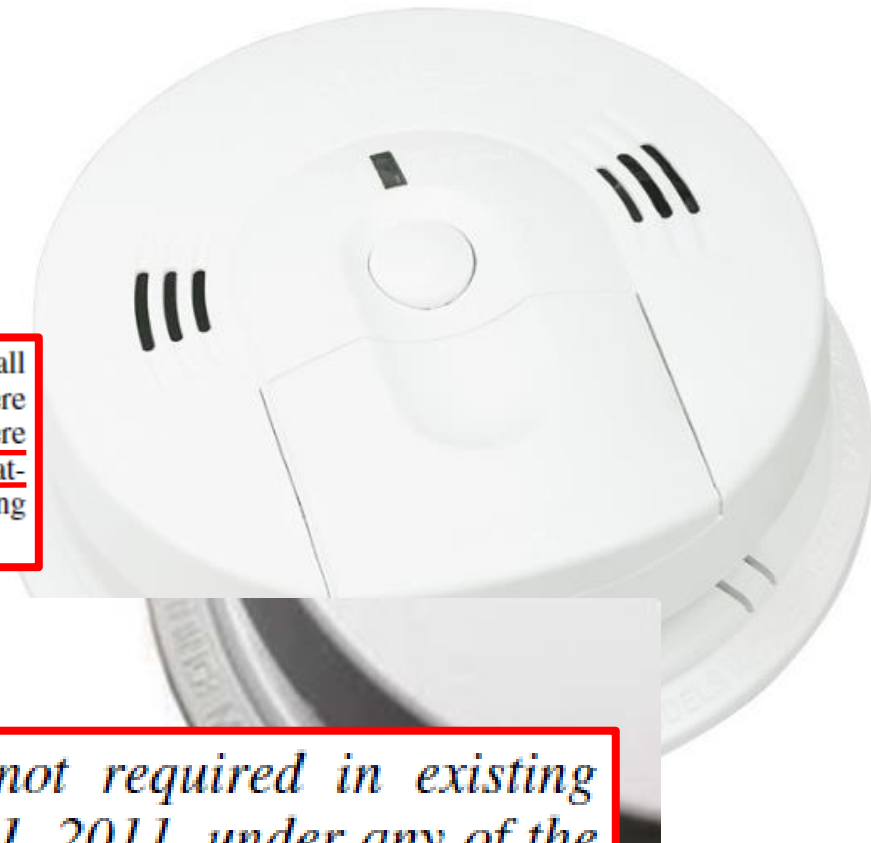
R315.5 Power source. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and, where primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection.

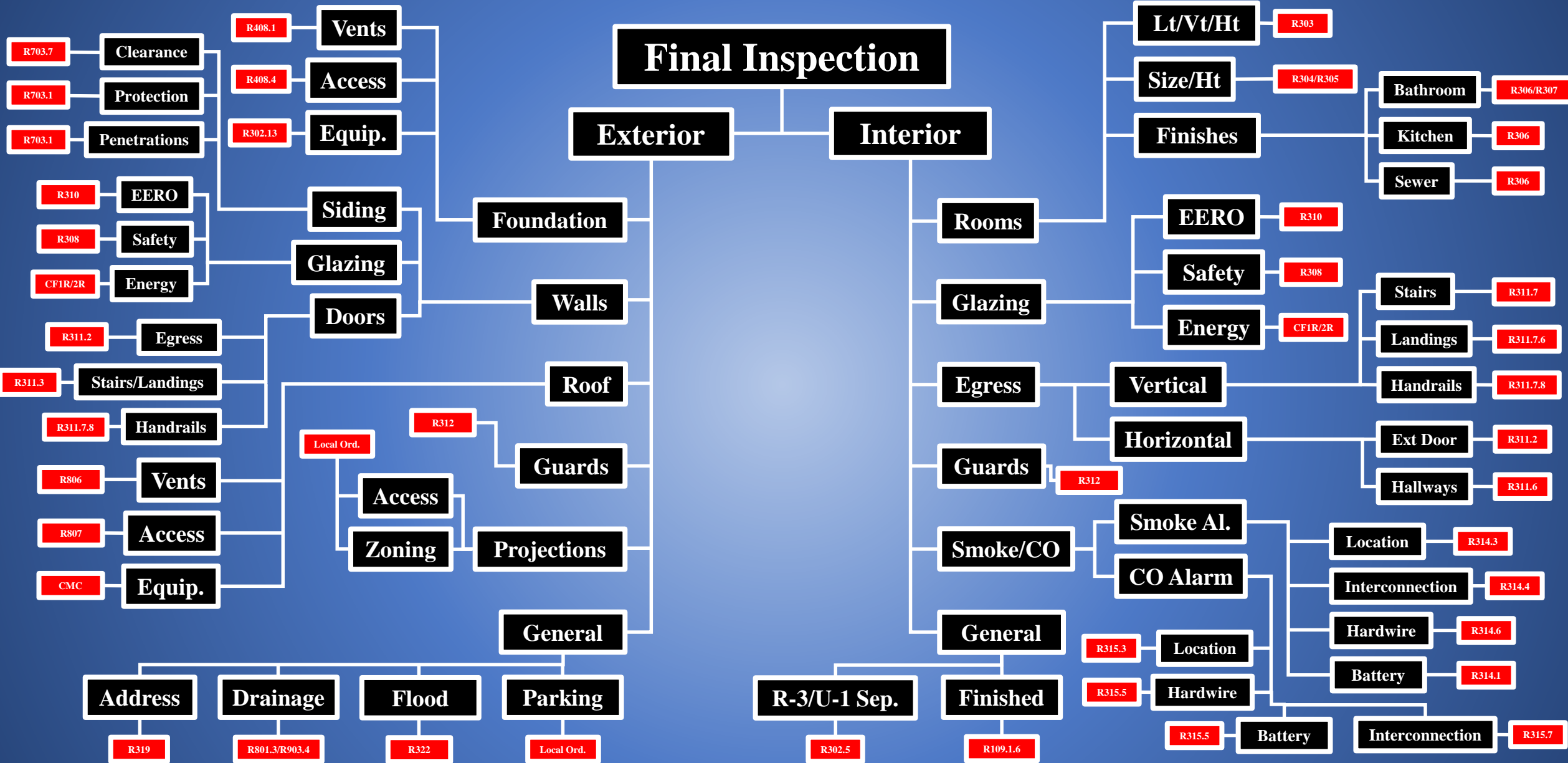
R315.5 **Battery**

R315.7 **Interconnection**

Exception: Interconnection is not required in existing buildings built prior to January 1, 2011, under any of the following conditions:

1. Physical interconnection is not required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.





R302.5

R-3/U-1 Sep.

R302.5 Dwelling-garage opening and penetration. Openings and penetrations through the separating the dwelling from the garage shall comply with Sections R302.5.1 through R302.5.2.

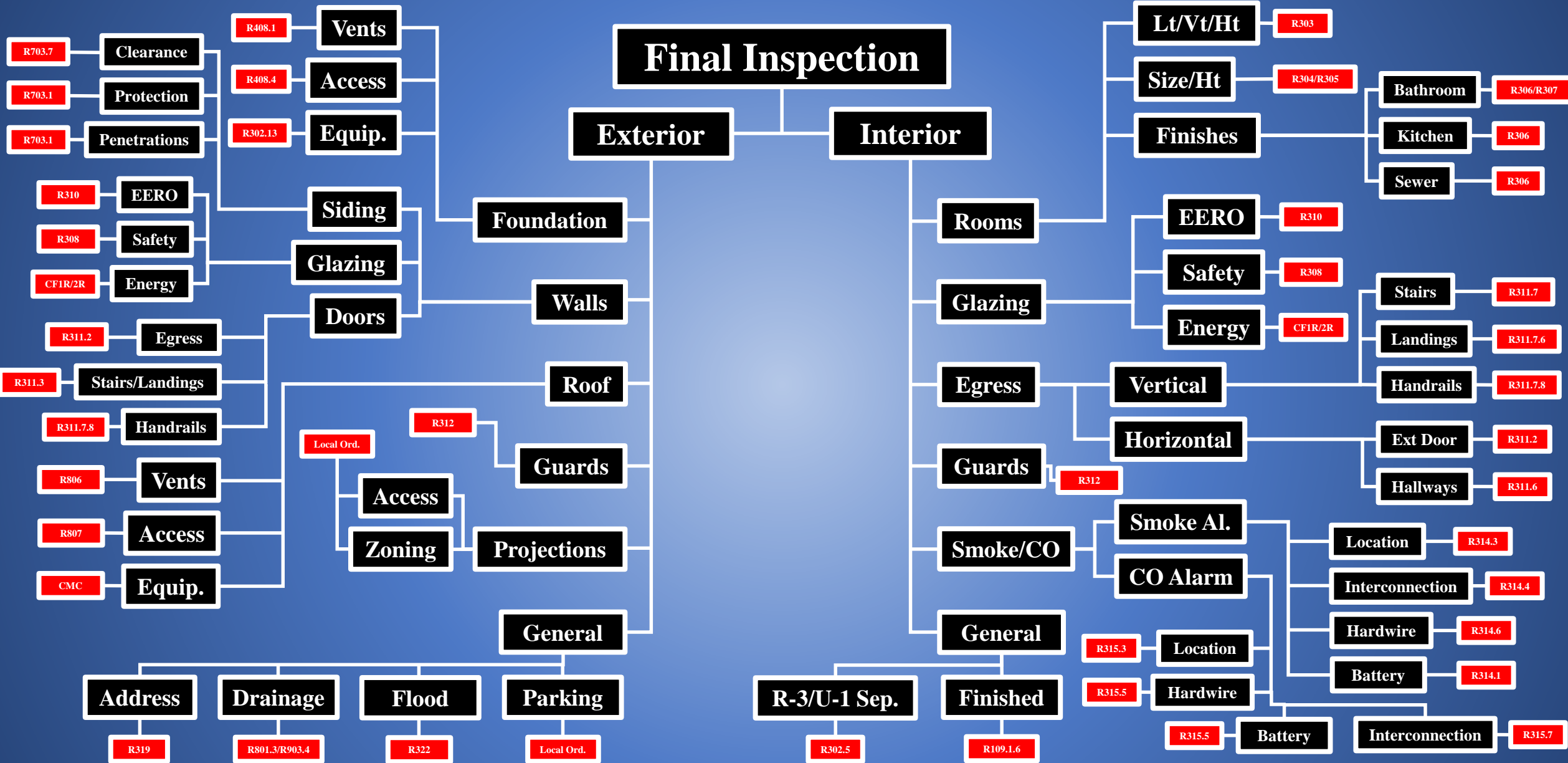
R302.5.1 Opening protection. Opening into a garage directly into a room used for sleeping quarters shall not be permitted. Other openings between a dwelling unit and a garage shall be equipped with solid wood doors not less than 1³/₈ inches (35 mm) in thickness, solid core steel doors not less than 1³/₈ inches in thickness, or 20-minute fire-rated doors, equipped with a self-closing and self-latching device.

R109.1.6

Finished

R109.1.6 Final inspection. Final inspection shall be made after the permitted work is complete and prior to occupancy.





Michael "Erik" Pelham
BMI Training Officer
Residential Building
Zoning/Green/Energy

Final Inspection Process
ICC Southern California
2015 IRC/2016 CRC
2017 LARC

