



City of Urbandale

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Basement Finish

Plan Review and Inspection Schedule

Design

- Habitable rooms should have a minimum height to ceilings and bulkheads of 7'-0" and a minimum 6'-4" to the bottom of beams. The minimum ceiling height in a bathroom is 6'-8". R305.1
- Hallways should have a minimum width of 36". R311.6
- If the remodel affects structural elements such as removing a column, beam or support wall, the design would need to be evaluated by an engineer for specific support of imposed loads such as the number of stories supported, and the length of floor joists. R106.1
- For stair guard and handrail requirements a separate **Single Family Stairways - Landings, Guards and Handrails** handout is available. R311.7.8 & R312.1
- All foam insulation should be covered with a minimum of ½" gypsum board or an approved finish material equivalent to a thermal barrier. R316.4

Emergency Escape Window

- IRC 2015 R310.6 Alterations or repairs of existing basements. An emergency escape and rescue opening is not required where existing basements undergo alterations or repairs. Exception: New sleeping rooms created in an existing basement shall be provided with emergency escape and rescue openings in accordance with Section 310.1. A separate **Emergency Escape Window Handout** is available with additional details. R310.1
- If a bedroom is planned, or what appears to be a bedroom because of a closet with the typical rod & shelf arrangement, the code requires an escape window or exterior door from the room directly to the exterior. If the escape window is separated from the stairs by a minimum code prescribed distance, and additional dual sensing smoke detectors are installed, then it would not be required to be directly in the bedroom. IRC 2015 R310.1 & Ordinance 150.03 (23) (b).

Framing

- Wood in contact with concrete such as bottom plates or firing strips on walls should be treated material. R317.1
- Fire-blocking is required in a number of areas such as when walls are framed away from the foundation or at bulk heads. Draft stopping is required if a suspended ceiling is installed. R302.11 & R302.12
- Enclosed accessible space under stairs shall have walls, under-stair surface and any soffits protected on the enclosed side with 1/2" gypsum board. R302.7
- Nails should be used to fasten framing components in accordance with Table 602.3(1).

Smoke Detectors & Carbon monoxide Detectors

- The code requires smoke detectors in all sleeping rooms, outside each sleeping room in the immediate vicinity of the sleeping room door, and on every level of the house. Detectors must be interconnected if the area of work provides access to these locations. New or replacement detectors must be dual sensing R314.1, IAC 661.210.3
- A carbon monoxide detector should be installed in the immediate vicinity of the bedrooms. R315.3

Separate permits must be obtained for Electrical, Plumbing & Heating / Air-Conditioning

Mechanical

- Bathrooms must be provided with a mechanical ventilation system exhausted directly to the outside. R303.3
- Bonding is required for existing installations of Corrugated Stainless Steel Tubing (CSST). A **CSST Bonding** handout is available. IFGC 310.1.1, Ordinance 150.03 (18)
- Equipment that requires access for servicing, such as sump pumps, furnaces, water heaters, etc. must remain accessible. IRC M1305.1
- All habitable rooms shall have a heating source capable of maintaining a room temperature of 68 degrees Fahrenheit. Portable heaters should not be used to meet this requirement. R303.9
- Furnaces and water heaters should not be located in bedrooms or bathrooms. IRC G2406.2
- Return air spaces that utilize stud cavities or joist bays should be isolated from adjacent concealed spaces including tub surrounds. IRC M1601.1.1

Plumbing

- Toilets should be located in a clear space not less than 30" wide, and a minimum 21" clear in front. Figure R307.1
- Where air admittance valves are used, maintenance access to the device must be provided. IPC 918.5
- Showers should have a minimum 30" X 30" floor space and minimum headroom of 6' – 8". Figure R307.1 & 305.1

Electrical

- Electrical receptacles must be arc-fault circuit interrupter protected and be tamper-resistant per NEC 210.12 & 406.12.
- Label electrical panel and gas manifold with permanent identification method. IRC E3706.2, IRC G2420.5.3
- Bathroom receptacles shall be GFCI protected. NEC 210.8
- Receptacles installed with-in 6' of a sink should be GFCI protected. NEC 210.8
- Unfinished basement areas with receptacles should be GFCI protected NEC 210.8
- Non-metallic cable (Romex) must be protected from physical damage therefore it should be securely attached to the sides of studs or be inaccessible. NEC 334.15
- Electrical panels should remain accessible and should not be located in bathrooms or clothes closets. A 30" wide by 36" deep working space should be provided in front of the panel. NEC 240.24 & 110.26(A)
- Receptacles should be spaced so that they are no more than 6' from a door or wall opening, and no more than 12' along the wall line. At least one receptacle is required on every section of wall that is 2' or wider. NEC 210.52
- A switch to control the stairway lights should be installed at the top and bottom of each stairway. R303.7.1
- Stairway shall be provided with a minimum of 1foot candle of light. R303.7
- Bathroom receptacles require a separate 20amp circuit. NEC 210.11(C)(3)
- All junction boxes should remain accessible and should not be buried in walls or ceilings. NEC 314.29

Required Inspections

1. **Plumbing under slab rough-in** (if any)
2. **Plumbing rough-in** (if any), can be combined with Framing Inspection
3. **Electrical rough-in** (if any), can be combined with Framing Inspection
4. **Mechanical rough-in** (if any), can be combined with Framing inspection
5. **Framing**
6. **Final Inspection**