



Building Guide

City of Underwood, Iowa
Building and Safety Department

Single Family Residential Basement Finish

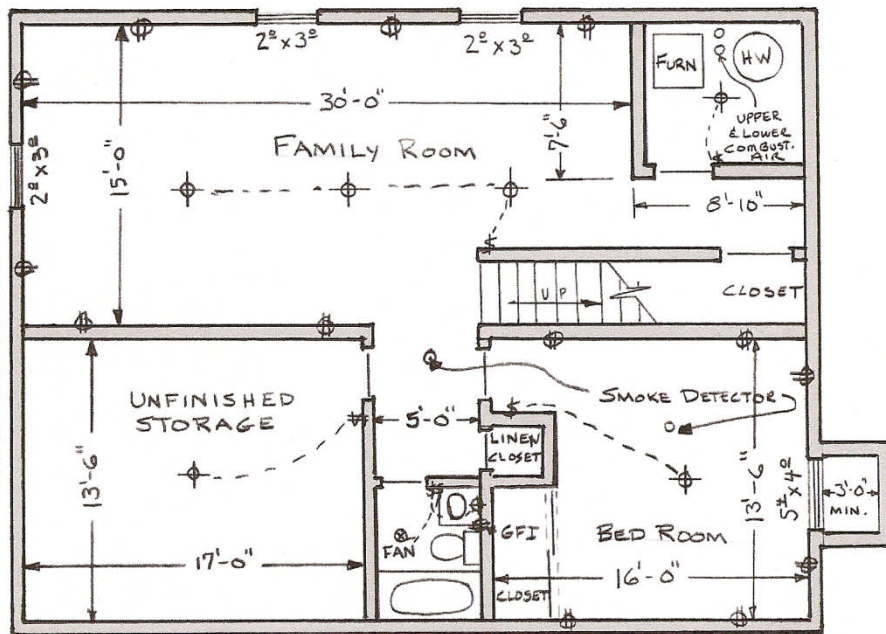
How to Use This Guide

Provide two (2) sets of plans and complete the following:

1. Review the Building Guide
2. Provide 2 Floor Plans – **Minimum 11" X 17" Paper Size**
3. Fill out a Building Permit Application

The majority of permit applications are processed with little delay. The submitted documents will help determine if the project is in compliance with building safety codes, zoning ordinances and other applicable laws.

EXAMPLE FLOOR PLAN LAYOUT & INFORMATION



This handout was developed for the City of Underwood, Iowa by the Building and Safety Department, as a basic Plan Submittal under the 2009 IRC. To help in questions that may arise in the application process. It is not intended to cover all circumstances or Code related issues as they pertain to individual projects.

Single Family Residential Basement Finish

Directions

1. Submit 2 (two) complete sets of required information.
2. Draw a floor-plan with dimensions drawn to scale, showing the layout of the entire basement. Label the use for ALL of the rooms.
3. Show electrical outlets, smoke detectors, lighting, fans, plumbing modifications, cleanouts, furnace and water heaters.
4. List window sizes and types and identify emergency escape and rescue windows, and egress window wells with ladder and clear dimensions of window well.
5. Identify modifications to the existing structure such as posts, beams and floor joists.
6. Indicate height of dropped ceiling areas less than 7 feet.
7. A shower or tub equipped with a showerhead shall have a minimum ceiling height of 6' 8" above a minimum area 30" by 30" at the showerhead.
8. Show clearance around the tub and fixtures.

Applicants Notes:

IMPORTANT CODE NOTE:

Emergency Escape Windows:

All basements and sleeping rooms must have an emergency escape window or exterior door. Emergency escape windows with a sill height below grade must be provided with an emergency escape window well and ladder. (For emergency escape window and window well requirements, see page 4)



Single Family Residential Basement Finish

1. Ceiling Heights:

If finished ceiling will be less than 7', Please inquire with the Building & Safety Department.

2. Emergency Escapes:

All basements and sleeping rooms must have an emergency escape window or exterior door. Emergency escape windows with a sill height below grade must be provided with an emergency escape window well and ladder. (For emergency escape window and window well requirements, see page 4)

3. Smoke Alarms:

Smoke alarms are required in all basements. If the finished basement contains a sleeping room, a smoke alarm must be installed on the ceiling or wall in the sleeping room and in the hallway or area immediately outside of the sleeping room. Smoke alarms added to satisfy the above requirements must be hard wired with the battery backup, and interconnected with existing smoke alarms. Smoke alarms are required to be hardwired and interconnected in new and existing bedrooms, halls and on each level unless removal of interior wall or ceiling finished would be required. In this case, battery operated devices are acceptable.

4. Fuel burning Appliances:

Furnaces and water heaters cannot be located in a bedroom or bathroom unless appliances are installed in a dedicated enclosure in which all combustion air is taken directly from outdoors, and a weather stripped solid door equipped with an approved self closing device is installed. If the furnace and water heater are being enclosed, adequate combustion air must be provided for these appliances to operate properly. For maintenance purposes, a minimum of 30 inches clear working space must be provided in front of furnaces and water heaters. Maintenance or removal of each appliance must be possible without removing the other or disturbing walls, piping, valves, wiring and junction boxes.

5. Floated Walls:

In areas subject to floor heaving, non-bearing walls on basement floor slabs should be built to accommodate not less than 1-1/2 inches of floor movement. A detail of a typical floated wall is included on page 4 of this hand-out. Drywall should be held to a minimum of 1 inch above the slab to allow for movement.

6. Fire-blocking:

Fire-blocking must be installed in concealed spaces of wood-furred walls at the ceiling level, at 10 foot intervals along the length of the wall and at all interconnections of concealed vertical and horizontal spaces such as intersection of stud walls and soffits or dropped ceilings. A detail of typical fire-blocking is included on the following page of this handout. Fire-blocks may be constructed of 1-1/2 inch lumber, 3/4 inch plywood or particle board, 1/2 inch gypsum board or fiberglass insulation 16 inches minimum in height, securely fastened.

7. Insulation:

Minimum R-13 Insulation is required to be in all frame walls adjacent to basement exterior walls.

8. Space Under Stairs:

If access to the area or space under the basement stairs is provided for storage or other uses, the walls and ceiling of this enclosed space must be protected on the inside. With a minimum 1/2 inch Gypsum/Sheetrock

9. Bathrooms:

Toilets must be provided with a minimum of 21 inches in front of the toilet and 15 inches from the center of the toilet and any sidewall or other obstruction. Showers shall have a minimum inside dimension of 900 square inches, capable of encompassing a 30 inch circle and be finished 72 inches above the floor with non-absorbent materials. See Exception 2, P2708.1

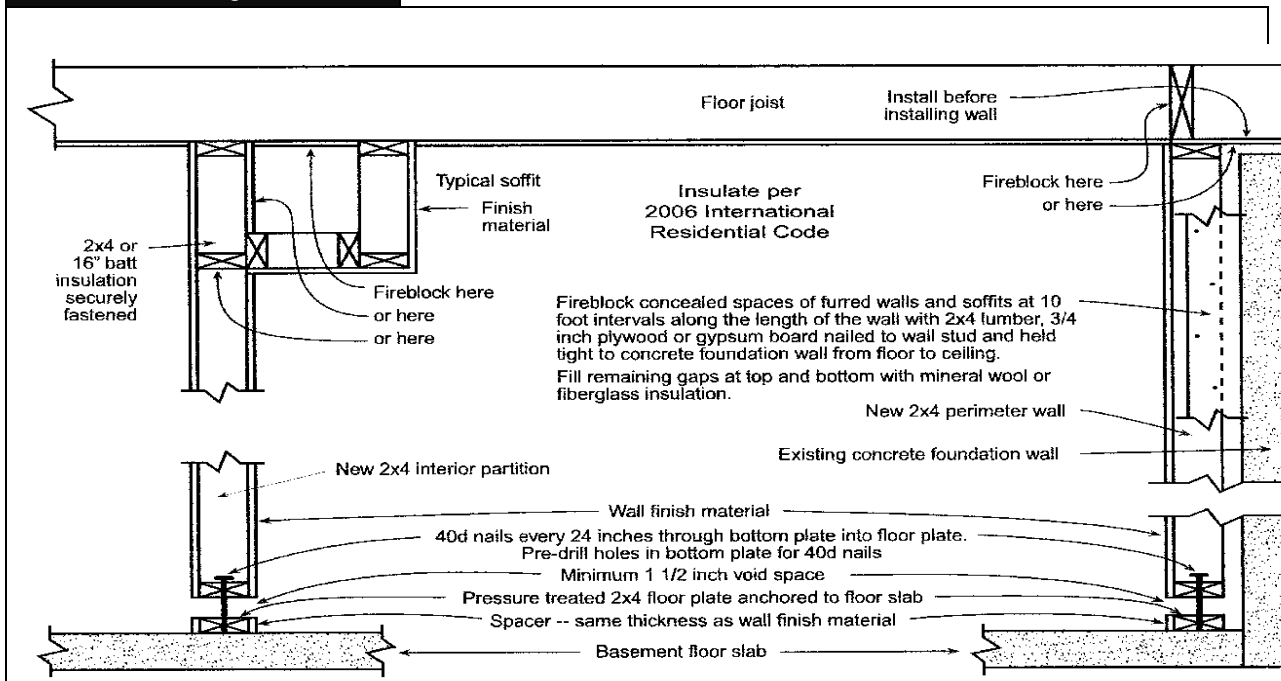
10. Lighting & Ventilation:

Lighting and ventilation are required for any finished portion of the basement.

*****The Building & Safety Department staff can help you determine what is necessary to meet minimum safety requirements*****

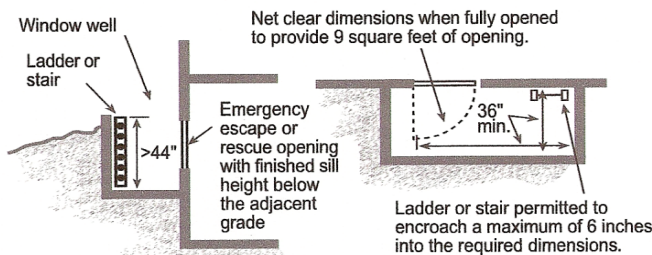
Single Family Residential Basement Finish

Basement Floating Wall Detail



Emergency Escape & Rescue Window Well

Emergency Escape And Rescue window wells must provide a minimum area of 9 square feet with a minimum dimension of 36 inches and shall enable the window to open fully. If the depth of the window well exceeds 44 inches, a permanently affixed ladder must be provided. The ladder must not interfere with the operation of the window.

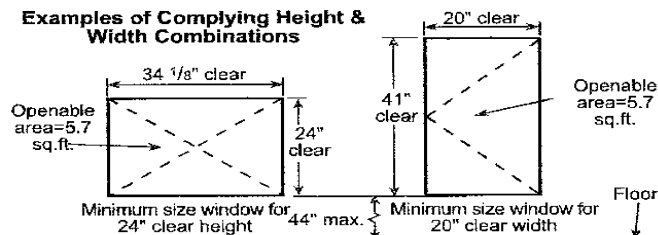


Emergency Escape & Rescue Window

Emergency Escape And Rescue Windows must meet the following criteria:

- A minimum total openable area of not less than 5.7 square feet
- A minimum clear openable height of not less than 24 inches
- A minimum clear openable width of not less than 20 inches.
- A finished sill height of not more than 44 inches above the floor and should be openable from the inside with normal operation and without the use of tools, keys or effort.

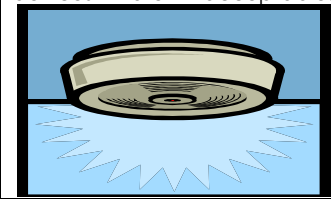
Examples of Complying Height & Width Combinations



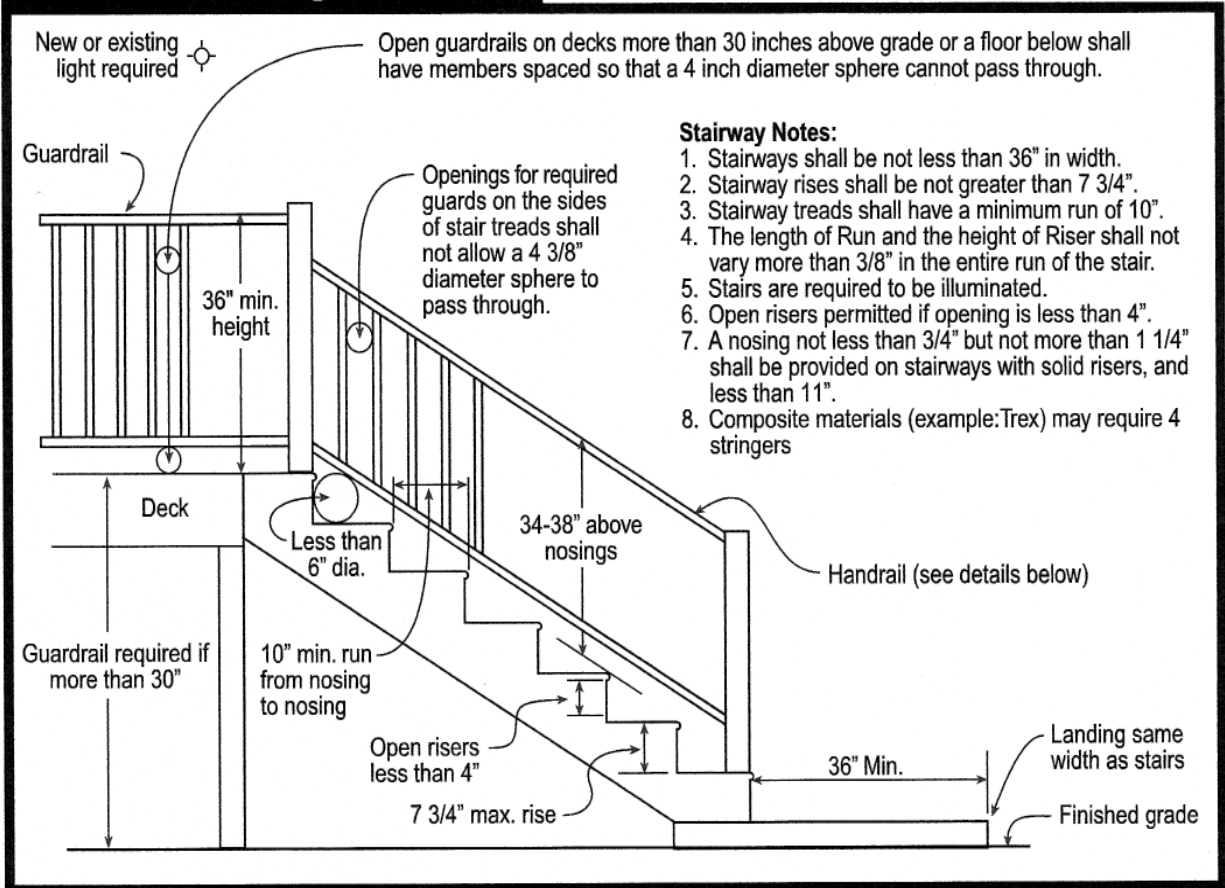
IMPORTANT CODE NOTE:

Smoke Alarms:

Smoke alarms are required in all basements. If the finished basement contains a sleeping room, a smoke alarm must be installed on the ceiling or wall in the sleeping room and in the hallway or area immediately outside of the sleeping room. Smoke alarms added to satisfy the above requirements must be hard wired with the battery backup, and interconnected with existing smoke alarms. Smoke alarms are required to be hardwired and interconnected in new and existing bedrooms, halls and on each level unless removal of interior wall or ceiling finished would be required. In this case, battery operated devices are acceptable.



Stair & Handrail Specifications



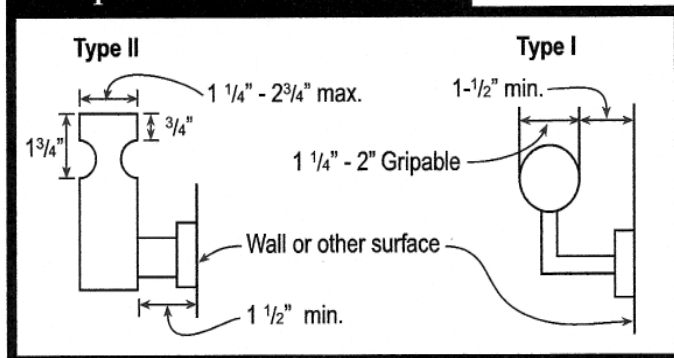
Stairway Notes:

1. Stairways shall be not less than 36" in width.
2. Stairway rises shall be not greater than 7 3/4".
3. Stairway treads shall have a minimum run of 10".
4. The length of Run and the height of Riser shall not vary more than 3/8" in the entire run of the stair.
5. Stairs are required to be illuminated.
6. Open risers permitted if opening is less than 4".
7. A nosing not less than 3/4" but not more than 1 1/4" shall be provided on stairways with solid risers, and less than 11".
8. Composite materials (example: Trex) may require 4 stringers

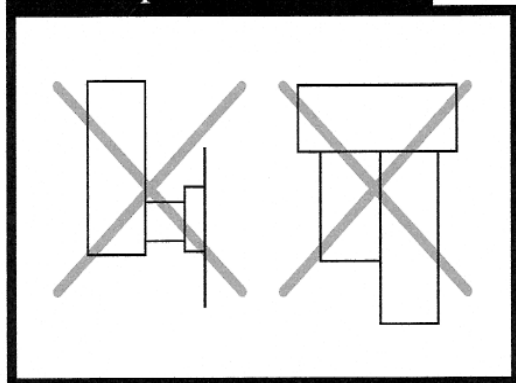
Handrail Notes:

1. Handrails shall be continuous on at least one side of stairs with 4 or more risers.
2. Top of the handrails shall be placed not less than 34 inches nor more than 38 inches above stair nosings.
3. The handgrip portion of handrails shall be not less than 1-1/4 inches nor more than 2 1/4 inches in cross section for non circular handrails.
4. Handrails shall be placed not less than 1-1/2 inches from any wall or other surface.
5. Handrails to be returned to wall, post or safety terminal (per 311.5.6.2 IRC)

Acceptable Handrail Details



Unacceptable Handrails





INTERIOR RENOVATION PERMIT APPLICATION
SFD Residential Basement Finish

City of Underwood
218 2nd Street
PO Box 40
Underwood, IA 51576
INSPECTION LINE (712) 256-6493
Ph. (712) 566-2373
Fax (712) 566-2083

	Receipt Number	Total Permit Amount	Permit Number
Job Address	Parcel Number		
Property Owner	Phone		
Property Owners Mailing Address			
Contractor	Phone		
Contractors Mailing Address			

Building Type/Use: Residential Commercial Multi-Family Other _____

Class of Work: Finished Uncompleted Existing Area Remodel Repair Other _____

CONSTRUCTION INFORMATION			
Proposed Construction Description			
Estimated Construction Valuation \$		Proposed Construction Area (Square Footage)	
FLOOD PLAIN DATA	Rate Map # 19155C0-	Flood Zone <input type="checkbox"/> .2% <input type="checkbox"/> AH <input type="checkbox"/> A <input type="checkbox"/> AO <input type="checkbox"/> AE <input type="checkbox"/> X	Floodplain? <input type="checkbox"/> Yes <input type="checkbox"/> No Floodway? <input type="checkbox"/> Yes <input type="checkbox"/> No

RESIDENTIAL INTERIOR
Construction Permit Valuation Schedule
(Standard Single Family Residential Construction Valuation Multipliers)

BUILDING VALUATION OF:	PER SQUARE FEET
Basement Finish Existing Unfinished Area into Habitable Area	\$28.50 per Sq. Ft.

<u>Type of Building Area Valuation</u>	<u>Square Footage</u>	<u>Multiplier</u>		
_____	_____	X _____	\$ _____	
		Permit Valuation	\$ _____	

PERMIT FEES		AMOUNT	
For One & Two Family dwellings (Residential): After calculating the square footage with the valuation multiplier above and determining your total permitted valuation. Use the Building Permit Fee Schedule and determine your Building Permit. This permit fee will be verified during plan review and collected at the time of permit issuance.	Building Permit Fee	\$	
Figuring the Plan Review at 25% of the calculated Building Permit cost. The Plan Review will be a required deposit at the time of your permit application submittal.	Plan Review Fee (Submittal Deposit)	\$	
Issued By: _____	Date: _____	TOTAL AMOUNT	\$

I will save, indemnify, and keep harmless the City of Underwood, Iowa its officers, employees, and agents against all liabilities, judgments cost, and expenses which may accrue against them in consequence of the granting of this permit, inspections, or use of any on -site or off -site improvements placed by virtue hereof, and will in all things strictly comply with all applicable rules, ordinance, and laws. Signature constitutes an attestation by the applicant that application complies with all covenants, conditions, and restrictions.

Applicant Signature: _____ Date: _____

