



# Building Guide

## ILLOWA Chapter of ICC



# Single Family Residential Typical Wall Section

Check, Circle or Fill in each detail to create your building design.

### ROOF DESIGN

Type of roofing material: \_\_\_\_\_

Ice and Water Barrier (24" inside wall line)

Underlayment: \_\_\_\_\_

Roof sheathing (ex. 1/2 OSB): \_\_\_\_\_

Ventilation IRC 806 (circle one): Box - or - Ridge

Roof Total Vent Area \_\_\_\_\_

Soffit Total Net Free Vent Area \_\_\_\_\_

Trusses (sealed drawings required)

Roof Framing IRC 802

2 x \_\_\_\_\_ Rafters \_\_\_\_\_ on center

2 x \_\_\_\_\_ Ceiling Joists \_\_\_\_\_ on center

2 x \_\_\_\_\_ Hip/Valley Rafters

### WALL DESIGN

Double Top Plate IRC 602.3.2(circle one): 2 x 4 - or - 2 x 6  
(Consult Building Department for Single Top Plate Option)

Window Header:

( ) 2" x \_\_\_\_\_ (IRC Table 502.5(1)) - or -

( ) 1 3/4" LVL x \_\_\_\_\_ (sealed drawings required)

( ) 2" x \_\_\_\_\_ (IRC Table 502.5(1)d) supported by hanger

single 2" x 4" on non-load bearing wall (IRC 602.7.2)

Door Header:

( ) 2" x \_\_\_\_\_ (IRC Table 502.5(1)) - or -

( ) 1 3/4" LVL x \_\_\_\_\_ (sealed drawings required)

( ) 2" x \_\_\_\_\_ (IRC Table 502.5(1)d) supported by hanger

single 2" x 4" on non-load bearing wall (IRC 602.7.2)

Studs (circle one): 2 x 4 - or - 2 x 6

Bottom Plate (single) - Same as Top Plate

Wall Sheathing: \_\_\_\_\_

Water-resistive Barrier IRC 703.2( circle one): House Wrap - or - Felt

Continuous Insulation (for 2x4 min wall R5): \_\_\_\_\_

Siding: \_\_\_\_\_

Sill Plate (circle one): 2 x 6 - or - 2x8

Note: Must be treated or naturally decay resistant. 1/2" X 10" Anchor Bolt, Washer and Nut (or other approved anchors), 6' on center and 12" max from plate splices, Anchor bolt MUST have 7" embedment in concrete. (IRC 403.1.6)

### FOUNDATION DESIGN

Number of Stories: \_\_\_\_\_

WALL:

Height: \_\_\_\_\_ Width: \_\_\_\_\_

Block Size: \_\_\_\_\_ X \_\_\_\_\_

Poured:

IRC 404.1.3.1 (a) or (b) (see handout)

ACI 318 (see handout)

ACI 332 (see handout)

Footings: (8" x 16" min) \_\_\_\_\_ X \_\_\_\_\_

Depth - Min 42" below finished grade

UFER Ground (see handout)

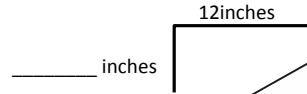
Foundation Drainage (per IRC 405)

Waterproofing and Dampproofing (per IRC 406)

Slope - Finished grade shall drop 6 inches in 10 feet

Clearance - maintain 6 inches from siding to grade min.

### ROOF SLOPE



### ATTIC INSULATION:

Minimum R38

### INTERIOR FINISH

Ceiling—5/8 Drywall, Typical; Other \_\_\_\_\_

Cavity Insulation (Min R20 ): \_\_\_\_\_

or

2x4 Wall with Alternate Insulation (circle):

Rigid Foam - or - Cellulose - or - Spray Foam - or -

Sheathing Plus Fiberglass (+ wind bracing)

Vapor Retarder: \_\_\_\_\_ (IRC 601.3)

Wall Finish - 1/2" Drywall, Other \_\_\_\_\_

Wall Height (From finished floor): \_\_\_\_\_ ft, \_\_\_\_\_ in

### FLOOR DESIGN

Subfloor: \_\_\_\_\_

Floor Joists: Span \_\_\_\_\_ ft

2" x \_\_\_\_\_ Joists \_\_\_\_\_ on center (Table 502.3.1(2)) - or -

Engineered Floor System (sealed drawings required)

Center Beam: Post Spacing \_\_\_\_\_ ft

( ) 2" x \_\_\_\_\_ (IRC Table 502.5(2)) - or -

( ) 1 3/4" LVL x \_\_\_\_\_ (sealed drawings required)

### BASEMENT (see Basement Finish Handout)

#### CRAWL SPACE

Vapor Retarder - Class I required on floor/earth

VENTED TO OUTSIDE

Floor Insulation (min fill cavity or R30): \_\_\_\_\_

Air Barrier: \_\_\_\_\_

Vents: \_\_\_\_\_ square inches

(1 sq ft/ 150 sq ft; openings within 3 ft bldg corner)

HVAC: Any ductwork must be sealed and insulated to min R8

MECHANICALLY VENTED

Wall Insulation (min R10/13): \_\_\_\_\_

Ventilation:

Mechanical ventilation (IRC 408.3.2.1)

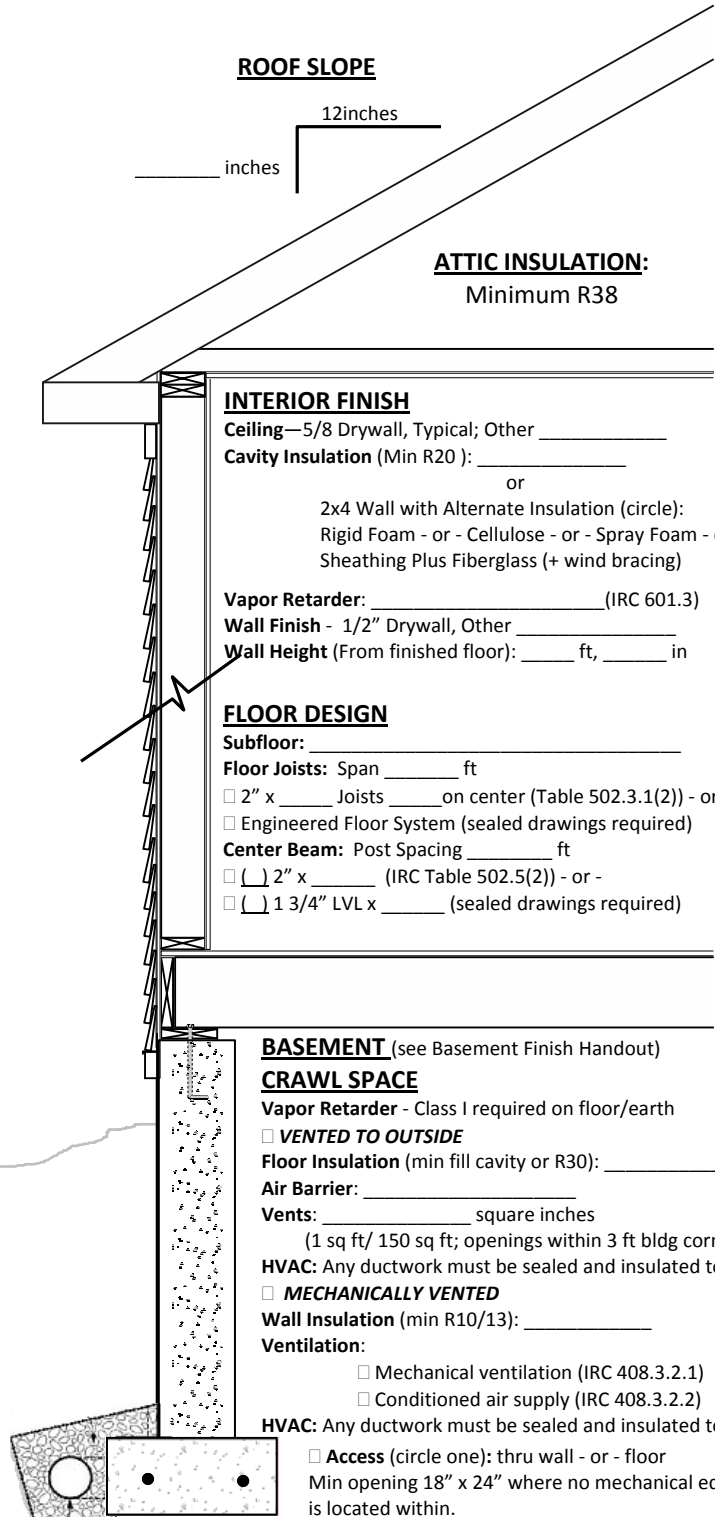
Conditioned air supply (IRC 408.3.2.2)

HVAC: Any ductwork must be sealed and insulated to min R6

Access (circle one): thru wall - or - floor

Min opening 18" x 24" where no mechanical equipment is located within.

Note: All vegetation & construction debris shall be removed.



DISCLAIMER: ILLOWA Chapter of the ICC has created this handout to assist with plans submittal under the 2009 International Residential Code, and it is not intended to cover all circumstances. Please check with the Department of Building Safety for additional requirements.