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

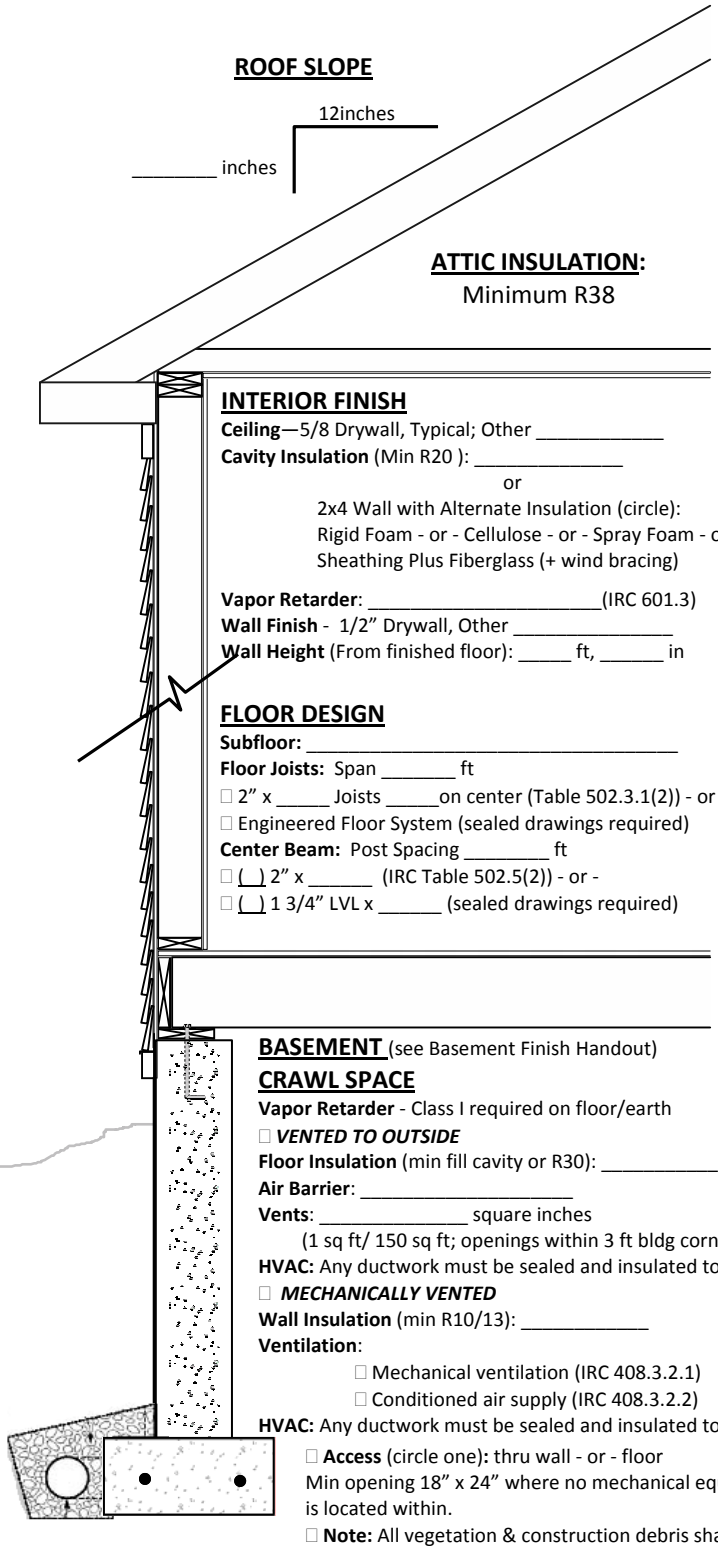
Type of roofing material: _____
☐ **Ice and Water Barrier** (24" inside wall line)
Underlayment: _____
Roof sheathing (ex. 1/2 OSB): _____
Ventilation IRC 806 (circle one): Box - or - Ridge
Roof Total Vent Area _____
Soffit Total Net Free Vent Area _____
☐ **Trusses** (sealed drawings required)
☐ **Roof 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 hangar
☐ 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 hangar
☐ 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)
Footing: (8" x 16" min) _____ X _____
☐ **Depth** - Min 42" below finished grade
☐ **UFER Ground** (see handout)
☐ **Foundation Drainage** (per IRC 405)
☐ **Waterproofing and Damnproofing** (per IRC 406)
☐ **Slope** - Finished grade shall drop 6 inches in 10 feet
☐ **Clearance** - maintain 6 inches from siding to grade min.



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.

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