New Home Construction Checklist

Tap a phase to see the checklist items:

Phase 1: Building Foundations

Assessing and Preparing the Soil

- [ ] Check for problem soils like clay or silt.
- [ ] Ensure the soil is capable of supporting the house.
- [ ] Consult with a building inspector for advice on local soil conditions.
- [ ] If necessary, consult a soils engineer for recommendations.
- [ ] Remove organic matter from the proposed excavation area.
- [ ] Ensure footings rest on undisturbed soil.
- [ ] Use a jumping jack compactor to re-consolidate soil where stumps or rocks were removed.
- [ ] Clean loose material from footing trenches with hand tools.

Excavation and Layout

- [ ] Determine the correct elevation for the bottom of the excavation in advance.
- [ ] Check the bottom of the opening for elevation and levelness as you excavate.
- [ ] For a basement, excavate an opening a few feet wider and longer than the house.
- [ ] For a crawlspace, scrape organic matter but leave the grade.
- [ ] For a monolithic slab, scrape organic matter off the surface.
- [ ] Set up a leveling instrument to establish a level plane.
- [ ] Use offset stakes to preserve the preliminary layout.
- [ ] Record the desired top-of-foundation elevation relative to a benchmark.
- [ ] Mark the excavation area with a line 4 ft. outside the corner stakes.
- [ ] Calculate the exact depth of the excavation based on the top-of-foundation elevation.

Footings and Walls

- [ ] Dig footing trenches to the required depth, below the frost line for your area.
- [ ] Form the footings according to the plan, ensuring the walls will be centered over them.
- [ ] Install rebar as required by local code.
- [ ] Have the footing examined by the building inspector before pouring concrete.
- [ ] Pour the concrete for the footings and form a keyway if specified.
- [ ] After the concrete hardens, lay out the foundation walls on the footings.
- [ ] Check the layout for squareness by measuring the diagonals.
- [ ] Build the foundation walls using poured concrete, concrete blocks, or a permanent wood foundation.
- [ ] For concrete block walls, install rebar and cleanouts in the footings.
- [ ] Grout block cavities as needed.

Phase 2: Framing Floors, Walls, and Ceilings

Floors

- [ ] Measure the foundation to check for squareness and levelness.
- [ ] Snap a chalkline to mark the location of the mudsill.
- [ ] Correct for any low spots on the foundation using shims or patching material.
- [ ] Correct high spots with a grinder or by making adjustments later when installing joists.
- [ ] Attach the mudsills, drilling accurately to fit over anchor bolts.
- [ ] Install a sill seal or caulk to prevent air infiltration.
- [ ] Install girders or basement bearing walls.
- [ ] Sort and crown the joist material before installation.
- [ ] Lay out joist locations on the mudsill, accounting for critical details like stairwells and plumbing.
- [ ] Install rim joists.
- [ ] Install the floor joists, toenailing to the mudsill and nailing to the rim joist.

- [ ] Install the floor sheathing, leaving a small gap for expansion.
- [ ] Follow the specified nailing schedule for the sheathing.
- [ ] Provide for wiring and plumbing by installing blocking.

Walls

- [ ] Lay out the locations of exterior and intersecting walls on the floor.
- [ ] Lay out the details for all exterior wall plates, including rough openings for doors and windows.
- [ ] Fabricate wall components like corners, T-intersections, and headers.
- [ ] Assemble the exterior walls.
- [ ] Sheathe the walls before or after raising them.
- [ ] Raise and brace the exterior walls, ensuring they are plumb and straight.
- [ ] Build and install interior walls.
- [ ] Install the second top plate, overlapping intersecting walls for rigidity.
- [ ] Install blocking and backing for fire protection and to support future installations like cabinets and handrails.

Ceilings

- [ ] Lay out ceiling joist locations on the top plates of the walls.
- [ ] Lay out large openings for stairwells and chimneys.
- [ ] Install joists with the crown up, toenailing to the top plates.
- [ ] Frame a gable-end wall if applicable.

Phase 3: Framing Roofs 1: Raftered Roofs

Gable Roof

- [ ] Find the hypotenuse of the pitch triangle.
- [ ] Determine the dimensions of the measuring triangle to find the height of the ridge and rafter length.
- [ ] Rip the ridge to the correct height and use posts to hold it in place.
- [ ] Install planking across the joists and screw it in place for a work platform.

- [ ] Lay out rafter locations on the ridge.
- [ ] Lay out, cut, and assemble the rafters.
- [ ] Install the rafters, nailing them to the ridge and toenailing to the top plate.

Hip Roof

- [ ] Lay out rafter locations on the walls for king common, hip, and jack rafters.
- [ ] Take key measurements off the top plates.
- [ ] Install ceiling joists and provide backing for drywall where necessary.
- [ ] Cut and install the ridge.
- [ ] Lay out and install the common rafters.
- [ ] Lay out and cut the hip rafters, ripping the material to the correct width and angle.
- [ ] Lay out, cut, and install the jack rafters.

Roof with a True Valley

- [ ] Lay out and install the ridges and common rafters.
- [ ] Prep and install the valley material.
- [ ] Lay out, cut, and install the jack rafters.

Doghouse Dormer

- [ ] Build the opening to the correct size.
- [ ] Frame the walls, cutting plates and studs to match the roof pitch.
- [ ] Cut and install the ridge.
- [ ] Cut and install the common rafters.
- [ ] Lay out and install the valley plate.
- [ ] Lay out and install the valley jack rafters.

Phase 4: Framing Roofs 2: Trusses, Eaves, Rakes, and Sheathing

Trusses

- [ ] Order trusses with a clear understanding of the design loads and roof shape.
- [ ] Store and handle trusses correctly to avoid damage.
- [ ] Set trusses using a crane, telehandler, or by hand.
- [ ] Align trusses using a stringline, laser level, or marks on the bottom chord.
- [ ] Install temporary and permanent bracing as specified in the truss design drawings.

Eaves and Rakes

- [ ] Install subfascia, ripping the top edge to match the roof slope for a full nailing surface.
- [ ] For rake overhangs, build a ladder-type rake or a cantilevered rake.
- [ ] Install the rake boards and rake frieze.
- [ ] For cantilevered rakes, install lookouts and a barge rafter.

Sheathing

- [ ] Install roof sheathing with the long side perpendicular to the rafters/trusses.
- [ ] Leave a 1/8-in. gap between panels for expansion.
- [ ] Follow the specified nailing schedule.
- [ ] Stagger the courses of sheathing.
- [ ] Use H-clips on trussed roofs between panels.

Phase 5: Closing the House to the Weather

Roofing the House

- [ ] Check for the minimum roof pitch required for asphalt shingles.
- [ ] Install an underlayment and drip edge.

- [ ] Lay out the shingle pattern, marking horizontal courses and bond lines.
- [ ] Install the starter course and main courses.
- [ ] Cut shingles to fit around pipes, vents, and other obstacles.
- [ ] Install flashing for all penetrations and junctures.
- [ ] Install ridge and hip caps and vents.
- [ ] Perform a final inspection to clean up dropped nails and seal exposed fasteners.

Installing Windows, Exterior Doors, Siding, and Trim

- [ ] Install a weather-resistive barrier (WRB) on exterior walls, detailing around openings.
- [ ] Flash the bottom, sides, and top of window and door openings.
- [ ] Install windows and exterior doors, ensuring they are plumb and square.
- [ ] Install exterior trim, including corner boards, fascia, and frieze.
- [ ] Seal the end grain of all cut wood or fiber cement siding/trim.
- [ ] Install exterior siding, ensuring all joints allow for movement.

Phase 6: Finishing the House – Interior

Wall and Floor Coverings

- [ ] Order the correct size and quantity of drywall to minimize butt joints.
- [ ] Hang ceilings first, then walls, cutting drywall for all openings and fixtures.
- [ ] Fasten drywall securely and finish all joints and corners with tape and compound.
- [ ] Install solid-sawn tongue-and-groove or plywood paneling if desired.
- [ ] Install wood floors over a layer of tar paper, or install ceramic tile with a proper substrate.

Doors

- [ ] Measure and install prehung doors, ensuring they are plumb, level, and the gaps are consistent.
- [ ] For new doors in existing openings, check the opening and custom-fit the door.
- [ ] Install hardware for all doors.

- [ ] For French, pocket, or bifold doors, follow specific installation and framing instructions.

Trim and Cabinets

- [ ] Install door and window casing, ensuring the jambs are flush with the drywall.
- [ ] Install baseboard, chair rail, and crown molding, using proper joints and cuts.
- [ ] Install backing blocks for crown molding if needed.
- [ ] Check for drawer and appliance clearances before installing cabinets.
- [ ] Install wall cabinets first, followed by base cabinets.

Stairs

- [ ] Build stairs, adhering to code requirements for dimensions and safety.
- [ ] For exterior stairs, use durable materials and protect against frost heave.
- [ ] For interior stairs, account for finished floor thicknesses and a precise fit.
- [ ] Install newel posts, skirtboards, risers, and treads in the correct sequence.
- [ ] Install the balustrade, ensuring balusters are evenly spaced to meet code.