

Residential Home Construction Frequently Asked Questions Guide

City of Post Falls, Idaho Building Division



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For Your Information Only

The information presented in this guide, both graphical and text, is based on general construction techniques and may be considered *ADVISORY ONLY* for one and two family dwellings. If you need information about specific codes, or have questions about specific projects, *please call our office and talk to one of our staff*. The information provided in this guide is based on the 2009 International Residential Code and the 2009 International Energy Conservation Code. A copy of these can be found at the Public Library.

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Frequently Asked Questions

1. Do I need a building permit?

In most cases, yes. The City of Post Falls requires building permits for all construction, including, but not limited to, repair, remodel, new construction, decks that don't exceed 200 square feet in area and that are not over 30" above grade (must also be self-supported and not serve the required exit door), detached one-story tool or storage sheds or playhouses over 200 square feet, demolition, re-roofing, and retaining walls that are over 4' in height measured from the bottom of the footing to the top of the wall. Some things that may not require a building permit are concrete driveways, sidewalks, paint, cabinets, etc; however, it is best to call the Building Department to inquire about your specific project.

2. How do I get a building permit?

Building permit applications can be acquired from the Building Division located at 408 N Spokane St. or online at www.postfallsidaho.org. The Building Division personnel will have you fill out a building permit application on which you describe the construction you propose. Most projects require you to provide drawings that detail what the project is, how it will be situated on the property, and how it will be constructed. See our [Residential Submittal Requirements](#) which can be located online or at the Building Division. A plan review fee, determined by the type of project, will be required at the time of submittal. These drawings then go through a plan review process where they are either approved or you are asked to supply more information. Once the drawings are approved, all the information is added to the building permit application and/or plans, the permit is issued. The approval process usually takes a week, but can take two weeks or more during heavy construction season. Please call and ask for the [Residential Submittal Requirements](#) to ensure your drawings are complete as this will speed up the approval process. Building permit fees are based on the estimated cost of construction, including labor, or by a per square foot average cost as established by the Building Safety Magazine as published by the International Code Council. Some building permits, for example re-roofing, manufactured home sets, signs, window replacements, re-siding and demolition are a flat fee, and may or may not require drawings.

3. What work is covered by a building permit?

The building permit will cover all work except plumbing, electrical, and gas/mechanical. These permits will need to be obtained separately. Applications for plumbing and electrical can be obtained from the Idaho Division of Building Safety located at 1250 Ironwood Dr Ste 220, Coeur d'Alene, Id, 208-769-1579 or from their website www.dbs.idaho.gov. Gas/mechanical permits can be obtained from the City of Post Falls by filling out a mechanical permit application which is also available online at www.postfallsidaho.org.

4. What kind of plans and other information do I need to submit?

You may need to include two copies of the following depending on the scope of your project:

- a) Site plan
- b) Foundation Plan
- c) Floor Plan
- d) Structural Cross Section
- e) Elevation Views
- f) Prescriptive Energy Compliance Form or Rescheck (prescriptive available at the Building Division)

You will also need to show connections between the foundation and exterior walls, the exterior walls and the roof, masonry fireplaces, stairs and any post-to-beam connections. Please discuss this with building personnel if you have any questions. *Also see the [Residential Submittal Requirements](#).*

5. Can I draw the plans myself?

Yes, residential plans may be drawn by the homeowner, or any person the homeowner chooses. Drawings should be legible, drawn to ¼” scale preferably (1/8” minimum) and in blue or black ink. Apartments containing more than three dwelling units, or commercial drawings, must be drafted by a registered design professional, licensed by the State of Idaho. Sample drawings are at the end of this handout.

6. Can I do all the work myself?

A homeowner may do the work on their own home and work that is done on rental property or property that is not the primary residence, may be done by the property owner as long as the property owner does, in fact, do the work.

7. How long is a permit valid?

A building permit is valid as long as work continues; however, if no construction takes place for a period of six months, the building permit becomes invalid.

8. What inspections do I need and how do I get an inspection?

The Building Department requires the following inspections, which should be called in when completely ready and requested 24 hours before the inspection. A message can be left on the inspection line at 208-292-1201 or it can be requested online at www.postfallsidaho.org. **The address must be posted on site and visible from the road so the inspector knows which address is to be inspected.**

Footing and Foundation: These inspections are done after the forms are braced, the reinforcing steel is tied and installed, and before the concrete is placed. Please note that an inspection is required for both the footings *and* foundation. We like to look at the soil conditions before placement of the footings.

Slab Insulation: This inspection is done prior to placing concrete for any slab in conditioned space.

Framing and Mechanical: This inspection is called for when the roof, framing, fire blocking, and bracing are all complete, but before the insulation has been installed. If requested by the contractor (in lieu of a blower door test) an air barrier inspection will also be done. Also, the roughed-in plumbing, electrical services, gas piping, and mechanical must be inspected and approved for cover by the appropriate agency and a duct blaster test must be performed on any ducts that are not installed within conditioned spaces.

Insulation Inspection: This inspection is done when all exterior wall cavities, floor joists, basement walls, windows, doors, exposed hot water pipes in unheated areas, ducts and headers have been insulated, caulked, and sealed. All top and bottom plate penetrations in walls must also be sealed. Attic insulation can be inspected at the final inspection if it is blown in.

Sheetrock Nailing Inspection: This inspection is done before mudding and taping on garage walls, interior brace walls, and under any stairways. Nailing patterns may differ so be sure to refer to your approved set of plans for the right spacing. Also, electrical boxes, plumbing pipes vent or fans should be caulked to the drywall.

Final Inspection: A final inspection is done after all work is completed, including site grading, driveways, electrical, plumbing, mechanical, life safety and before occupancy.

When an inspection is required, please notify the Building Department as far in advance as possible, 24 hours minimum is required. The inspection line phone number is 208-292-1201 or one can be requested online at www.postfallsidaho.org. **A rule of thumb is that an inspection is required before placing any concrete and before covering anything with insulation or sheetrock.**

You or your contractor can be present during the inspection, *but note that no inspection will be performed in an occupied private residence unless an adult is present.*

9. What if the inspector finds something wrong?

Any deficiencies found during an inspection will be listed and will be posted on the job site, or given directly to you or your builder. ***Once all code requirements are completed for a particular inspection, the inspector will sign the inspection card on the appropriate line. This will provide you and the contractor with an up to date list of approved inspections.*** If the deficiencies are not corrected, and work continues, a "Stop Work Order" may be issued. This means that no work may continue until the deficiency is remedied.

10. What if I disagree with the inspector or the building official on a code interpretation, or if I choose to use materials or construction methods not addressed in the building codes?

Misunderstanding code requirements is usually the root cause of disagreements between builders and building inspectors. If you are not sure what a code requirement is, or don't understand why the inspector wants a certain construction feature, ask the inspector to show and explain the requirement. If you still disagree, you may want to talk to the building official. If for some reason you are still not satisfied with the response, or believe the code is being interpreted incorrectly, you may submit your appeal to the Building Code Board of Appeals with \$150.00 application fee. The Building Code Board of Appeals reviews challenges to interpretations of the Building Official. The staff of the Building Division will assist you through the appeals process.

We hope these questions and answers have proven beneficial, and would encourage any further questions to be directed to the Building Division. It is our goal to provide quality service and to help facilitate education with regards to safe building construction procedures.

Residential Construction

General Information

1. *Minimum Frost Depth* is 24" below finished grade. Footings on the daylight side of basements shall be 24" below finished grade of yard.

2. *Footings (R403)* for houses carrying one floor shall be a minimum of 6" x 12". Footings carrying two floors shall be a minimum of 8" x 16". Spread footings require (2) #4 bars of rebar horizontally suspended a minimum of 3" above the bottom of the footing.

3. *Foundation Walls (R403)* may be 6" wide when carrying one floor and roof and the foundation wall is 48" in height or less. Foundation walls must be 8" wide when supporting two floors and a roof or the foundation wall height is over 48". Reinforcing steel in residential foundation walls 48" or less shall be: #4 rebar @ 48" on center (o.c.) for vertical bars and 24" o.c. for horizontal bars. Foundation walls above four feet and up to eight feet: #4 rebar shall be

spaced @ 18" o.c. both horizontally and vertically. Retaining walls over 4' in height or specialty walls will require engineering design and specific approval.

4. *Emergency Egress/Rescue Windows (R310)*. All bedrooms or sleeping rooms, basements and habitable attics must have emergency egress windows or openings. The minimum net openable area for egress windows are 5 square feet for grade floor openings (those windows with a sill height of not more than 44 inches above or below the finished ground level) and 5.7 square feet for all others. The minimum width allowable for the egress portion of a window shall be 20", while the minimum height shall be 24". The finished sill height shall be 44" maximum above the finished floor. The egress window requirements will also be enforced when windows in bedrooms are being replaced in existing structures.

For example: A window with a clear opening height of 40" and a clear opening width of 21" will meet both the minimum height and width requirements AND the minimum 5.7 square feet openable area requirement.

5. *Below Grade Windows (R310)*. Windows that extend below the finished grade must have window wells installed. The vertical surface area of the well must be at least the same area as the window it serves. When the window is used as an egress window the outer edge of the well must be at least 36" from the home and at least 36" wide and provide at least 9 sq. feet of clear area. If the window well is deeper than 44" measured from the adjacent ground a permanent ladder or steps must be installed. It is important that construction details of window wells be review by the Building Department, as this brief description cannot cover every situation.

6. *Window Area in All Habitable Rooms (R303)* will be 8 percent of the floor area; 4 percent of the floor area must be exterior openings openable for ventilation. The windows are not required to be openable (unless they are egress windows) if:

- a) An approved mechanical ventilation system capable of producing 0.35 air changes per hour is installed
- b) A whole-house mechanical ventilation system is installed capable of supplying outdoor ventilation air of 15 cfm per occupant (based on two occupants for the first bedroom and one occupant for each additional bedroom).

Windows are not required in rooms where (a) and (b) above are met AND artificial light is provided capable of producing an average illumination of 6 foot candles over the area of the room at a height of 30 inches above the floor level. Reminder: egress windows ARE required in sleeping rooms.

7. *Floor Joists* will be sized in accordance to Table R502.3.1(1)(2) of the 2009 International Residential Code and will have solid blocking over bearing walls. Engineered floor joists ie; TJI's, shall be installed according to the manufacturers installation guide.

8. *Hallways and Stairways (R311)* shall be no less than 36" wide after sheetrock. *Stairway Headroom* shall be a minimum of 6'8" as measured from the nose of the tread.

9. *Private Residential Stairways (R311/312)* shall have a rise of no more than 7 3/4" and a tread depth of at least 10". The rise in a flight of stairs may not differ between all treads more than 3/8". Handrails are required on one side of all stairways with 4 or more risers and must be mounted between 34" and 38" as measured from the nose of the tread. Guardrails are required on the open side of stairways and must be at least 34" high unless stairs are 30" or less in height (measured vertically to the floor or grade below at any point within 36 inches horizontally to the

edge of the open side), then they do not need guardrails. Guardrail spacing for raised floor areas, balconies and porches must not allow passage of a sphere 4 inches or more in diameter. Guard spacing on the sides of stair treads must not allow a sphere 4 3/8" to pass through.

10. *Doorway height* is 6'8" minimum. *Required exit doors* shall be 3'0" in width.

11. *Ceiling Height (R305)* in all habitable rooms shall be 7'0" minimum.

12. *Safety Glass (R308)* is required when ALL 4 of the following criteria are met:

- a. An individual pane is larger than 9 square feet
- b. The bottom edge is less than 18" above the floor
- c. The top edge is more than 36" above the floor
- d. One or more walking surfaces are within 36" horizontally of the glazing.

Safety glazing is also required in doors, within a 24" arc of a door, within 60" of stairs or landings and in other areas prescribed in the IRC. Safety glass shall be tempered, laminated, or wire glass. Shower doors may be plastic.

13. *Exterior Walls and interior load-bearing walls (R602)* can have double top plates that shall be overlapped at corners and intersections with bearing partitions. A single top plate may be used providing that the plate is adequately tied at joints, corners and intersecting walls by a minimum 3"x 6" by .036" thick galvanized steel plate that is nailed to each wall or segment of wall by six 18d nails on each side and the rafters or joists are centered over the studs with a tolerance of no more than 1 inch.

14. *Stud Spacing* for 2x6's are a maximum of 24" when supporting one floor, roof and ceiling and 16" when supporting two floors, roof and ceiling. Stud spacing for 2x4's are a maximum of 16" when supporting one floor, roof, and ceiling. Other options are allowed as per Table R602.3 (5) in the code book. *For wall heights exceeding 10 feet see R301.3 or ask the plans examiner or the building inspector.*

Table R602.3(5)(Excerpts) Bearing Walls

Stud Size (inches)	Supporting a roof- ceiling assembly or a habitable attic assembly (inches)	Supporting one floor, plus a roof- ceiling assembly or a habitable attic assembly (inches)	Supporting two floors, plus a roof- ceiling assembly or a habitable attic assembly (inches)	Supporting one floor height (inches)
2X4	24 ^c	16 ^c	-	24
3X4	24	24	16	24
2X5	24	24	-	24
2X6	24	24	16	24

c. A habitable attic assembly supported by 2 x 4 studs is limited to a roof span of 32 feet. Where the roof span exceeds 32 feet, the wall studs shall be increased to 2 x 6 or the studs shall be designed in accordance with accepted engineering practice.

Exception (R602.3.1) Utility grade studs shall not be spaced more than 16 inches on center, shall not support more than a roof and ceiling and shall not exceed 8 feet in height for exterior walls and load-bearing walls or 10 feet for interior non load-bearing walls.

15. *Headers* in bearing walls are required for openings. The size and location must be indicated on the plans. Table R502.5(1) may be used for exterior bearing walls and Table R502.5(2) for interior bearing walls.

16. *Crawl Spaces (R408)* shall be vented with evenly spaced screened openings within 3' of corners, at a ratio of one square foot of opening for every 150 square feet of crawl space area. A minimum 18" x 24" crawlspace access opening is required and must not be obstructed by piping, ducting, or debris. Unvented crawl spaces may be allowed if the design drawings meet standards outlined in R408.3.

17. *Attic Spaces (R806)* and enclosed rafter spaces where ceilings are applied directly to the underside of roof rafters must have cross ventilation. Venting must be 1/150 of the space. It is permitted to use a calculation of 1/300, provided that at least 50% and not more than 80% of the required ventilating area is provided by ventilators located in the upper portion of the space (at least 3ft above the eave or cornice vents) with the balance of the required ventilation provided by the eave or cornice vents. Also, the cross ventilation area may be 1/300 when a Class I or II vapor barrier (not exceeding 1 perm) is installed on the warm-in-winter side of the ceiling.

18. *Attic Access (R807)* is required, with a minimum 22"x 30" opening or large enough to accommodate equipment. Openings should be placed such that 30" of headroom is available. Attic access is not required when there is less than 30" of attic space measured from the bottom chord of the ceiling joist to the peak of the roof.

19. *Wall-sheathing (R602)* must be of an approved type, and must connect the top and bottom plates of the wall. Brace wall panel methods and types are required to be shown on the plans. Brace wall panels resist the lateral load on a building and prevent walls from racking or pulling off the foundation. There are many different prescriptive methods allowed by code, so talk with the Plans Examiner or Building Inspector for options.

20. *Minimum Wood Type Siding Thickness* is 3/8". Building paper, Tyvek, or other approved weather resistant material shall be used under all siding, including vinyl, unless the structure is not being insulated, i.e. a detached accessory building.

21. *Smoke Detectors (R313)* are required in all new residences and when remodeling an existing residence. In new residences, detectors shall be powered by 110 volt house wiring with battery backup and be interconnected, while in residential remodels and additions battery powered detectors may be used, only when hard wiring is not possible. For instance, no attic, crawl space or unfinished basement that would allow the wiring to be run on that side of the existing finish materials.

22. *Bath Fans (M1507)* Exhaust air from bathrooms and toilet rooms must not be recirculated within the home or discharged into an attic, crawl space or other space inside the building and must be exhausted directly to the outdoors. Bath fans must have a mechanical exhaust capacity of 50 cfm intermittent or 20 cfm continuous.

23. *Trusses (R802.10)* may be used when supplied by an approved manufacturer and a set of truss drawings are provided which include an Idaho licensed engineers stamp. Trusses must be designed for a minimum 40 pound snow load per square foot on top chord.

24. *Rafters* - Wood roof framing is allowed per R802. A roof framing plan must be provided showing ridge beam size and dimensions, rafter and ceiling joist size, dimensions and spacing, rafter tie or collar tie size and spacing, and all nailing and connection details.

25. *Public frontage improvements* of concrete driveway approaches, sidewalks, curb & gutter, grass planter strips, swales and street trees are required with all new construction. If these improvements do not exist at the time when the building permit is applied for, they will need to be constructed prior to issuance of Certificate of Occupancy. Waivers from the requirement will be considered by staff and recommendation made, in favor or against, to the City Council for their consent upon receipt of a valid "Off-Site Improvement Waiver" application with appropriate fee. Street trees are required to be installed in conformance with the approved street tree plan for the subdivision, and will be inspected prior to Certificate of Occupancy, with the final inspection by the Urban Forester, who can be reached at 208-292-2315. All public frontage improvements; except street trees, will require inspections by the City Engineering Division prior to construction, and at the final inspection prior to Certificate of Occupancy. All deficiencies shall be addressed prior to Certificate of Occupancy; except, a Provisional Certificate of Occupancy may be granted for items that cannot be completed, due to weather limitations (winter) with the posting of appropriate bonding for the outstanding work. Pre-existing damages to sidewalks and curbs should be brought to the City Engineering Division's attention prior to the start of home construction, or the builder may be held responsible for repairs to the public frontage improvements.

Prior to Certificate of Occupancy, all swales and grass strips shall be graded in accordance with City Standards and hydroseeded. Engineering inspections should be arranged through the Building Division at 208-773-8708. Questions regarding the Engineering Standards and inspection requirements can be directed to the Engineering Division at 208-773-4235.

Energy Conservation

*There are three methods for showing energy efficiency compliance in the code. You may use the prescriptive compliance path, the total building "UA" Alternatives Compliance Approach, or a performance based energy analysis compliance path. The ResCheck software may be downloaded for free at www.energycodes.gov and will be accepted as a "UA" Alternatives Compliance method. In using either the prescriptive method, the "UA" alternatives method, or the performance based compliance path; the **mandatory** provisions of IECC Sections 401, 402.4, 402.5, and 403.1, 403.2.2, 403.2.3, and 403.3 through 403.9 must be adhered to.*

Table 402.1.1

INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^a

Climate Zone	Fenestration U-Factor	Skylight U-Factor	Glazed Fenestration SHGC	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value	Floor R-Value	Basement Wall R-Value	Slab R-Value & Depth	Crawl Space Wall R-Value
5	0.35	0.60	NR	38	20 or 13+5 ^h	13/17	30 ^g	10/13	10, 2 ft	10/13

*View the footnotes for Table 402.1.1 in your code book

1. Heated garages are considered part of the "conditioned space" in a home and must meet IECC requirements; unheated garages do not.

2. Below grade walls used for living space shall be insulated to not less than R-10. Any wall 50% or more above grade must be insulated as if it is an above grade wall.

3. Sill seal will be installed under sill plate.
4. All penetrations (including wiring penetrations at top and bottom plates; and exterior joints at floors, exterior walls, roof, or ceiling wall) will be sealed, caulked, gasketed, or weather stripped to limit air leakage. Penetrations in fire separation assemblies shall be sealed with an approved caulking or fire rated product for their specific fire rated assembly.
5. Fresh air must be supplied to all habitable rooms in residences. It can be openable windows or a forced air system.
6. A vapor resistant material, with a perm rating of 1 perm or less, is required on the warm-in-winter side of the wall insulation.
7. Gas, oil, or solid burning fuel appliances must be supplied with adequate combustion air as laid forth in Chapters 17 and 24 of the International Residential Code.
8. All windows must be low-E type and have a U-value of .35 or as prescribed in the IECC.
9. All windows must be rated by the National Fenestration Rating Service and must have its approval sticker on the window or readily available for the inspector to review.

Zoning and Building Go Together

Zoning is a matter of creating standards for the use and development of land within different sections of the city. The purpose of zoning is to allow the city to grow and function in ways that benefit the community as a whole. All standards of a zone are applied in the same way to all properties in that zone. Sometimes exceptions to zoning standards can be made depending on the circumstances with zoning permits such as Variances, Special Use Permits, or Planned Unit Development Permits that involve special review and opportunity for public input. All zoning standards are established by public hearing before the City Council and are compiled in a document known as the Zoning Ordinance. Most building permit applications must have zoning approval to be issued. This means that the building plans, especially the site plan (aka a “plot plan”), must clearly and accurately show the nature of proposed project in detail. Structures that are exempt from building permits are *not necessarily* exempt from zoning standards.

The plans will be checked for different zoning requirements, some of which are:

1. Use of the building(s) and/ or property.
Is the use allowed in the zone?
2. Legal lot status.
Is the development to take place on a legally created lot?
3. Minimum lot size and density.
Is the lot large enough for the structure?
4. Setbacks.
Will the building be too close to the street or property lines?
5. Parking and access.
Will there be legal access to the lot, are there enough parking spaces, and are parking dimensions sufficient?
6. Building height.
Do the structures comply with building height limitations?

7. Flood impact.

Will the building or site development be in a flood zone, and if so, how can flood damage be prevented?

8. Landscaping.

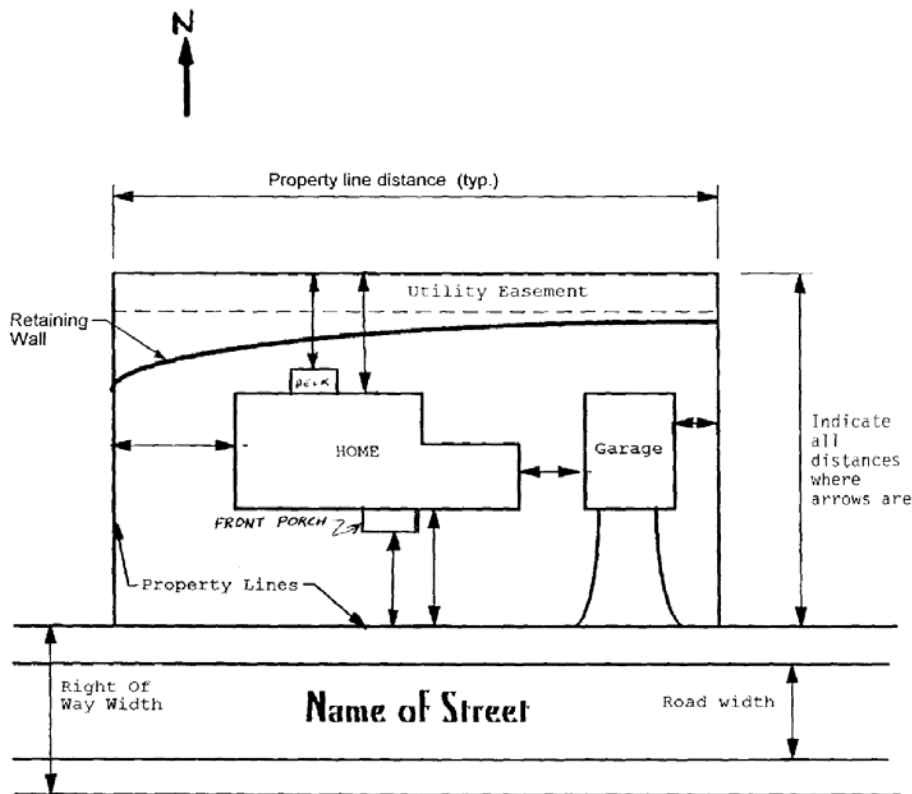
Are there remaining landscape improvements to be made, such as street trees or planter strip/swale improvements?

9. Fencing.

Will the fence location and height create any traffic hazard?

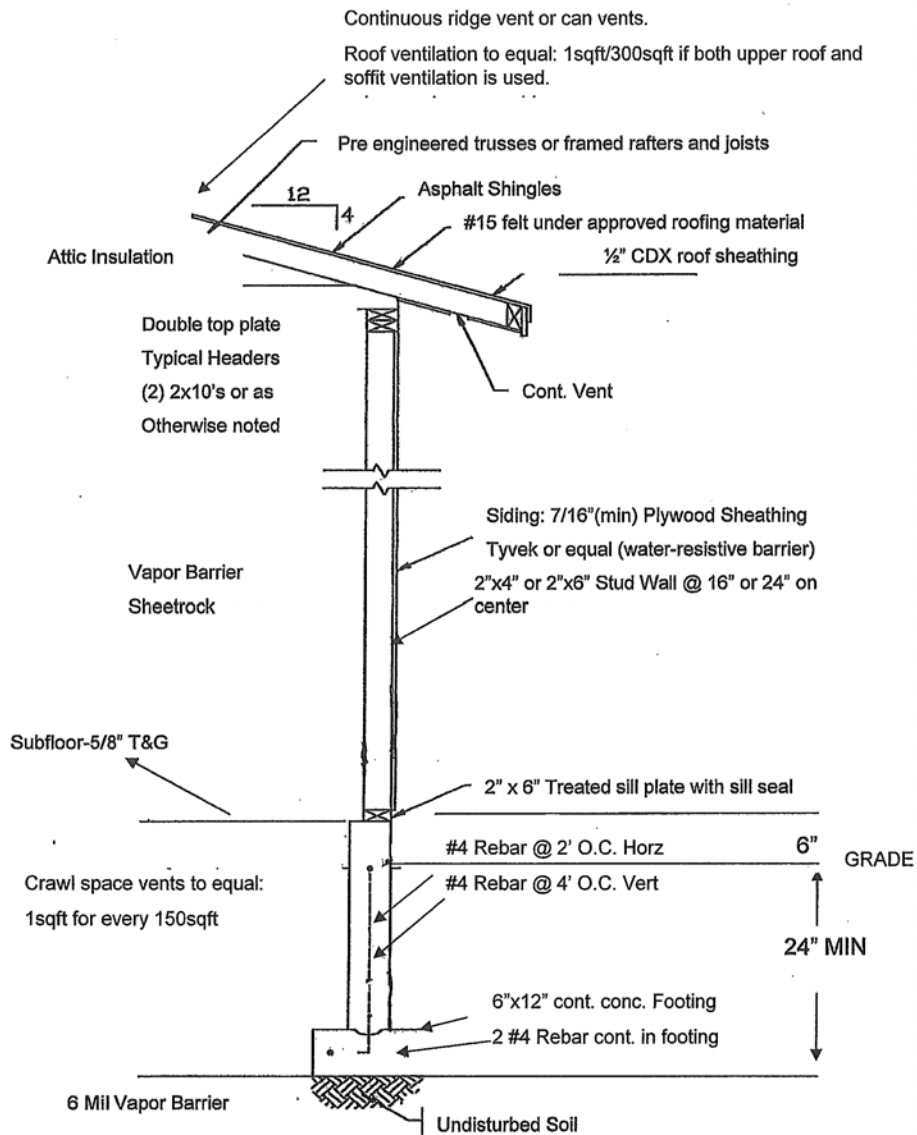
The zoning standards for the above listed categories are very specific. A person preparing a building permit application and plans should always contact the Public Service Department at 208-773-8708 to verify zoning standards before paying the application fee and submitting the plans. After verifying the zoning standards, as much detail as practical should be included in the building plans. Following these suggestions will lessen the applicant's plan review time and decrease the chance of improper permit issuance due to misunderstanding of the project.

TYPICAL SITE PLAN **EXAMPLE ONLY**



The site plan should show the location of the building on the lot, with dimensions to all property lines. The building must be situated within the “setbacks” (which can be acquired from the Planning Division) for the particular zone that the building is constructed in. Other structures, utility and other infrastructure easements should be shown as well as slopes and retaining walls.

TYPICAL SECTION DRAWING



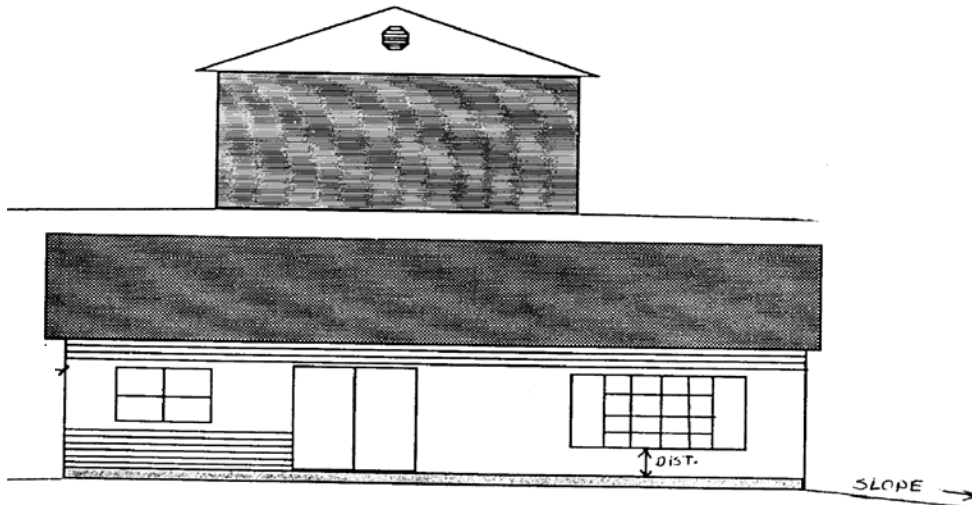
Section Drawings

Drawings are not required to be drawn by an architect or engineer (unless specifically asked for) and do not need to be complex. The drawings shall include the following:

- a. Wall framing, including connections to the roof, ceiling, drainage and foundation.
- b. Roof slope and roofing materials.
- c. Size of studs, beams rafters and all framing members, including spacing and span dimensions.
- d. Type of siding, insulation, and vapor barriers.
- e. Heights, widths and location of reinforcing bar in concrete footings and foundation walls. Include depth of bottom of footing to ground.

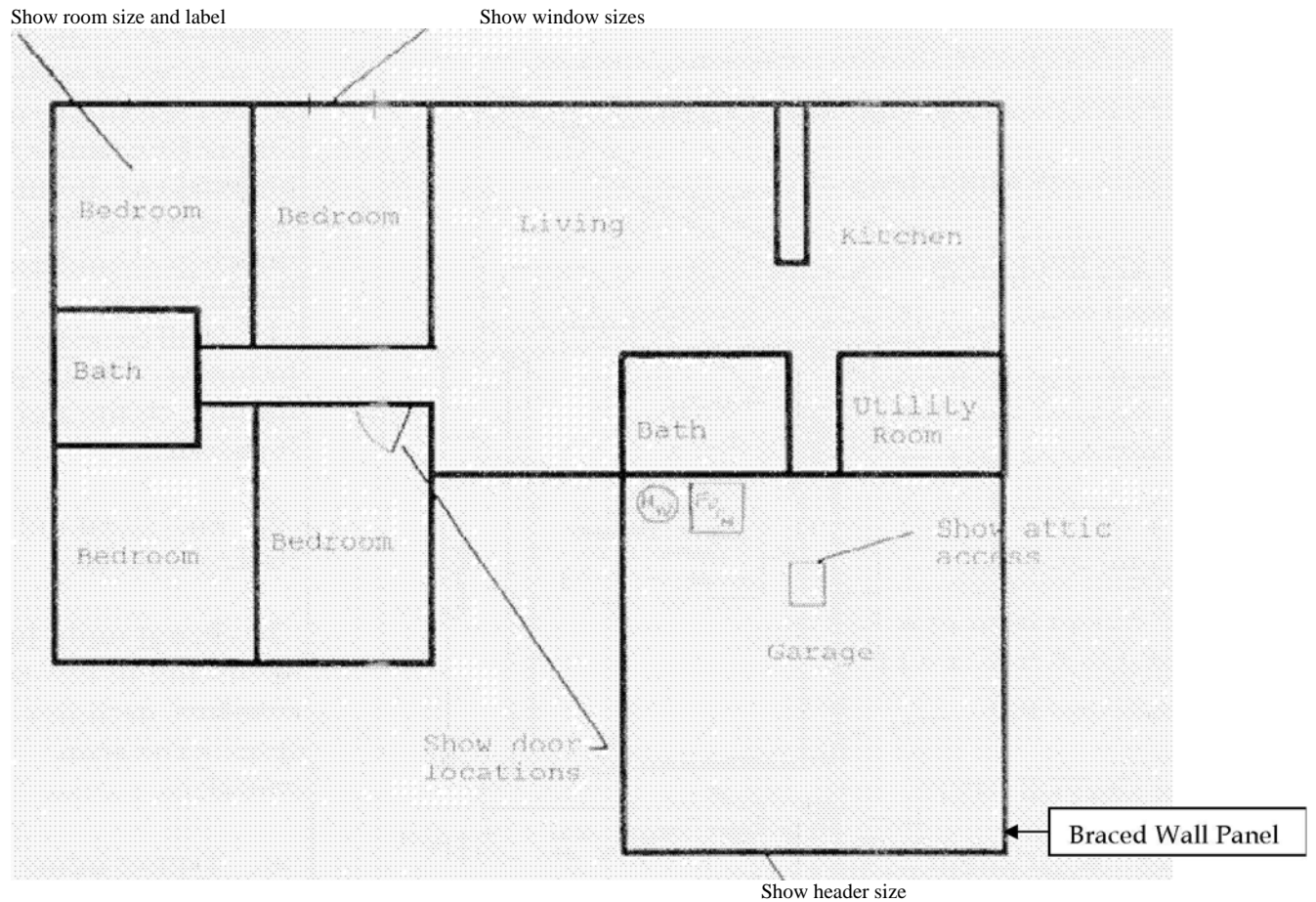
TYPICAL ELEVATION DRAWING

EXAMPLE ONLY



Exterior elevations are drawn to show what a particular side of a building looks like. Simple sketches will suffice as long as windows, doors, porches, guardrails, and finished grade are shown. Other details that are important are height of chimneys above the roof, location of skylights, eaves overhang, and location of any retaining walls that abut the structure. The plans examiner who reviews your plans may also ask for specific details.

TYPICAL FLOOR PLAN



Floor plans should show rooms and their usage, location of smoke detectors, window and door sizes, and location of fireplaces, stairs and permanent architectural features. Dimensions and type of headers over doors, windows and other long spans should be shown as well as attic access and crawl space access locations. The placement of the furnace, hot water tank and any other major heating or cooling appliances should be shown. Show decks, porches and stair location and size. Additionally braced wall panel locations and methods should be shown, and any required interior brace wall panels.