

ACCESSORY STRUCTURE

Building permit information
For 1 & 2-family dwellings

A building permit is required for any accessory structure over 100 square feet.

To obtain a building permit for an accessory structure you **must** supply the following:

- ❖ Signed and completed building permit application form.
- ❖ Two (2) copies of a site plan, two (2) copies of a floor plan, and two (2) copies of a section.
See page 8 for examples of plans required

Once the application and complete, correct plans are received by the Building Safety Department it can take up to 5-business days for plan review before the permit is issued. Please plan accordingly.

Required Inspections:

1. **Footing Inspection**-after all concrete form boards and steel reinforcement is in place (rebar must be hung or set in-place, you cannot "lift" the rebar into place when pouring the concrete) and property stakes have been located and visibly identified but before any concrete is poured.
2. **Foundation Inspection**-(*only needed if using poured concrete walls*) after all concrete form boards and steel reinforcement is in place but before any concrete is poured.
3. **Rough-In-Electrical** (before wires are covered), **-Plumbing** (before piping is concealed), **-Mechanical** (after ductwork and vents are in place). Separate permits are required for any electrical, plumbing and mechanical work being preformed.
 - a. All rough-in inspections are done as applicable for the project and must be done before the framing inspection.
4. **Framing Inspection**-after all wall and roof framing is complete, all wall and roof sheathing is properly nailed, but before any siding, felt paper/weather wrap is applied to exterior walls; and before the overhead garage door is installed. The roof can be shingled prior to a framing inspection, but siding cannot be installed. If siding is to be installed prior to a framing inspection a sheathing inspection is required.
5. **Final-Electrical, Plumbing and/or Mechanical** as needed.
6. **Final Building**-after garage is complete & electrical, plumbing and/or mechanical final inspections have been completed and approved.
7. In addition to the inspections above the inspector may required other inspections to ascertain compliance with the provisions of the code.

Call 255-7239, 8 a.m. to 4:30 p.m., to arrange an inspection **at least one business day** in advance. Inspection appointments are scheduled on a first-come first-serve basis, and there is no guarantee that you can get an inspection within 24 hours of calling. Inspections are available 9:00 a.m. to 11:30 a.m. and 1:30 p.m. to 3:30 p.m. Monday through Friday.

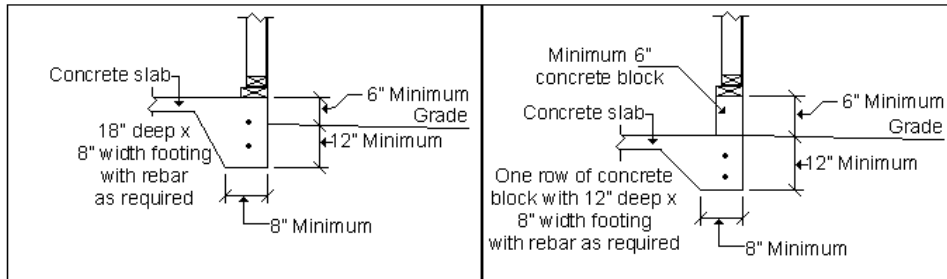
A building inspection is required at least every 6 months otherwise the permit will be closed and a new permit will be required to finish project. When needed, one extension may be requested in writing. Extensions without an inspection are granted one-time only; any future extensions will require a progress inspection to allow for the Building Safety Department to record that progress has been made, and the project is being actively worked on.

Setbacks/placement on property

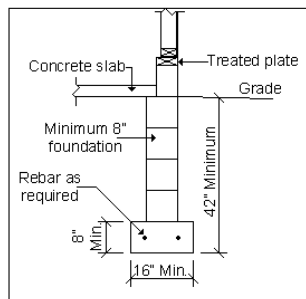
- ❖ Setbacks from property lines varies depending on the lot, please contact the Building Safety Department at (320)255-7239 or the Planning Department at (320)255-7218 for specific requirements.
- ❖ All setbacks are measured to property lines.
 - Property lines are found by locating the property irons (buried in each corner of the lot) typically by using a metal detector. If the property irons cannot be found a surveyor can be hired to locate them. **The City of St. Cloud DOES NOT survey properties.** Sidewalks and fences are not necessarily on the property lines. The only way to find a property line is by finding the property irons.
- ❖ Accessory structures with walls within 5' of a property line are required to have a minimum 1-hour fire-resistance rating with exposure from both (interior and exterior) sides of the wall.
- ❖ Find out where the underground utility lines might be buried before you dig. Anyone digging in Minnesota must call before digging. This is a FREE service. Call Gopher State One 1-800-252-1166, at least 2-business days before you dig, office hours are 7 a.m. – 5 p.m., Monday through Friday.

Footings

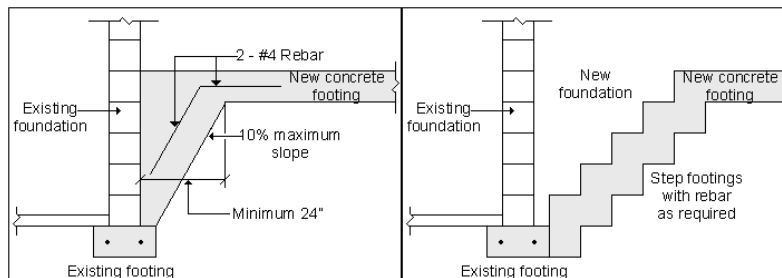
- ❖ Accessory structures with wood floors are not required to have footings but are required to be secured to the ground.
- ❖ All accessory structures over 200 square feet (sq. ft.) in area are required to have a foundation structure (such as a floating slab or footings).
- ❖ **Detached garages** 1000 sq. ft. in area or less can be build on a floating slab.
 - **Floating slabs** shall have a perimeter of 12-inches (") depth, 8" width at the perimeter with rebar as required. Slabs cannot be placed on grass, muck or frozen ground. Slabs with turned-down footings shall have a minimum of one No. 4 bar at the top and bottom of footing. Rebar must be hung or set in-place, you cannot "lift" the rebar into place when pouring the concrete. The footing is required to be at least 12" below grade with a minimum 6" separation between the framing and grade.



- ❖ **Detached garages** over 1000 sq. ft. or any size garage with a second level/usable attic space shall either be on a foundation with frost footings or a floating slab that is structurally engineered. Engineered plans must be signed and stamped by a licensed structural engineer (licensed in the State of Minnesota) and state slab thickness and rebar required. Footings must be placed on undisturbed soils.
- ❖ **Attached garages** shall be on a foundation with frost footings.
 - **Frost footings** shall have a minimum 42" depth (measured to the bottom of the footing) or shall extend to undisturbed soil, whichever is greater. Minimum footing sizes for a typical garage is 16" width x 8" depth. Footings cannot be placed on grass, muck or frozen ground.



- Frost footings on attached garages and garage additions must tie-in with the existing footings and be on undisturbed soils.



- ❖ Concrete cannot be placed on frozen ground and must be protected from freezing until concrete has cured

Floors

- ❖ **Shed floor** framing must be treated lumber if within 6" of grade.
- ❖ **Garage floor** surface may be concrete, asphalt, sand, gravel, crushed rock or natural earth. Wire mesh in the concrete floor is not required but strongly recommended. All concrete must be protected from freezing until concrete is cured.

Anchor Bolts

- ❖ Foundation plates or sills must be bolted to the foundation with not less than ½" diameter steel bolts embedded at least 7" into the concrete and spaced not more than 6' apart. There is a minimum of two bolts per plate section with one bolt located not more than 12" or less than 7-bolt diameters (3 ½" for a ½" bolt) from each end of the plate section.
 - Foundation anchor straps spaced as required per manufacturer's instructions to provide equivalent anchorage to the anchor bolts shall be allowed.
- ❖ Anchor bolts and/or foundation anchor straps must be aligned with any vertical reinforcement that is required.

Plates

- ❖ All foundation plates that are in direct contact with concrete or masonry or within 6" of grade must be of approved treated wood, heartwood or redwood, black locust or cedars having a width not less than that of the wall studs.
- ❖ Double top plates are required to overlap at corners and intersections with bearing walls. End joints must be offset at least 24" and do not need to occur over a stud.
 - A single top plate is allowed provided the plate is adequately tied at joints, corners and intersecting walls per code.

Wall Framing

- ❖ Studs must be placed with the wide dimension perpendicular to the wall. The walls shall have at least 3 studs in corner. Minimum stud size is 2x4 and a maximum spacing of 24" on-center (o.c.); the type of sheathing used shall determine exact stud spacing.
- ❖ Post-framed construction buildings must have structural engineering. Engineered plans must be signed and stamped by a licensed structural engineer (licensed in the State of Minnesota).

Roof Framing

- ❖ **Trusses:** When manufactured trusses are used one copy of the truss plans signed by a registered engineer must be made available to the inspector at the framing inspection. Engineered drawings should be provided by the truss manufacturer. Trusses need to be connected to the wall plates by the use of fasteners or connectors having a resistance to uplift not less than the value listed on the truss designs.

- ❖ **Hand-framed roofs (rafters):** Size and spacing of conventional lumber used for rafters depends upon the span and species of lumber used. See the table to the side for maximum rafter spans. Rafters need to be framed directly opposite from each other at the ridge. A ridge board at least 1" (nominal) thickness and not less in depth than the cut end of the rafter is required. At all valleys and hips a single valley or hip rafter not less than 2" (nominal) thickness and not less in depth than the cut end of the rafter is required. Gusset plates are not allowed for rafter connections.

Maximum Rafter Spans					
		Rafter Spacing			
		12" o.c.	16" o.c.	19.2" o.c.	24" o.c.
Rafter Size	2x4	6'-11"	6'-2"	5'-7"	5'-0"
	2x6	10'-5"	9'-0"	8'-3"	7'-4"
	2x8	13'-2"	11'-5"	10'-5"	9'-4"
	2x10	16'-1"	13'-11"	12'-9"	11'-5"
	2x12	18'-8"	16'-2"	14'-9"	13'-2"

*Rafter spans from Table R802.5.1 (6) or 2006 IRC
for SPF #2 with ceiling attached to rafters*

- Rafters with ceiling joists must be nailed to the adjacent ceiling joists to form a continuous tie between exterior walls when the joists are parallel to the rafters. Where not parallel, rafters must be tied by a minimum 1x4 cross tie spaced a minimum 4' o.c.

Wall Bracing

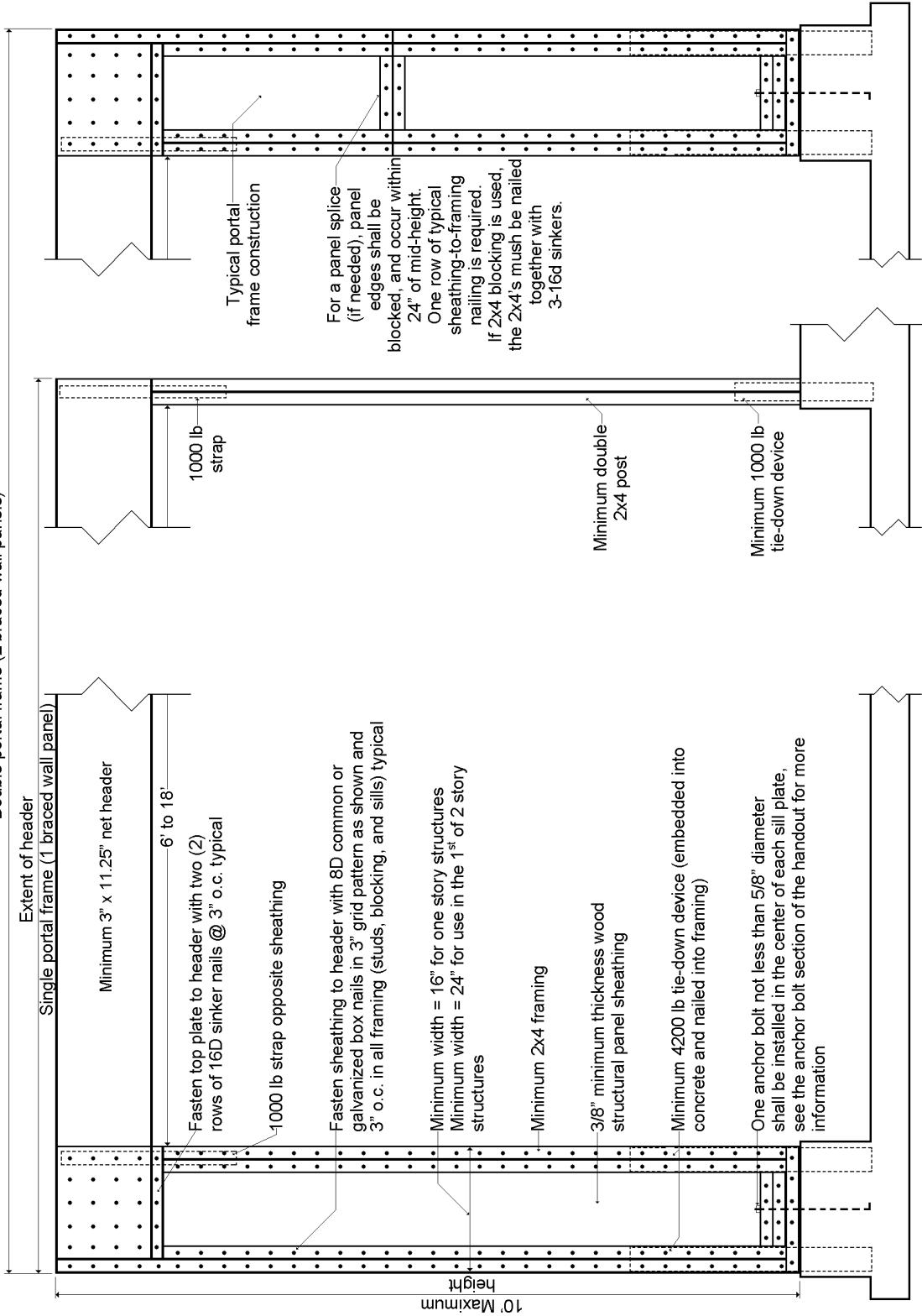
- ❖ Wall bracing is required to prevent the racking, sliding and overturning of structures.
- ❖ All exterior walls shall be braced in accordance to the requirement of Section R602.10.
 - Wall bracing consists of braced wall lines which shall consist of braced wall panel construction.
 - There are 8 different methods for braced wall panel construction, see Section R602.10 for the requirements of each method.
 - There are 2 different alternate methods for braced wall panel construction, see Section R602.10.6.1 for the first alternate, the second alternate is as follows:
- ❖ Alternate braced wall panel adjacent to a door or window opening.
 - Alternate braced wall panels constructed in accordance with one of the following provisions are also permitted to replace each 4' of braced wall panel as required by Section R602.10.4 for use adjacent to a window or door opening with a full-length header:
 1. In one-story buildings, each panel shall have a length of not less than 16" and a height of not more than 10'. Each panel shall be sheathed on one face with a single layer of 3/8" minimum thickness wood structural panel sheathing nailed with 8d common or galvanized box nails in accordance with the figure on the next page. The wood structural panel sheathing shall extend up over the solid sawn or glued-laminated header and shall be nailed in accordance with the figure on the next page. Use of a built-up header consisting of at least two 2x12's and fastened in accordance to the code shall be permitted. A spacer, if used, shall be placed on the side of the built-up beam opposite the wood structural sheathing. The header shall extend between the inside faces of the first full-length outer studs of each panel. The clear span of the header between the inner studs of each panel shall be not less than 6' and not more than 18' in length. A strap with an uplift capacity of not less than 1000 pounds (lbs) shall fasten the header to the side of the inner studs opposite the sheathing. One anchor bolt not less than 5/8" diameter and installed per code shall be installed in the center of each sill plate. The studs at each end of the panel shall have a tie-down device fastened to the foundation with an uplift capacity of not less than 4,200 lbs.

Where a panel is located on one side of the opening, the header shall extend between the inside face of the first full-length stud at the other end of the opening. A strap with an uplift capacity of not less than 1000 lbs shall fasten the header to the bearing studs. The bearing studs shall also have a tie-down device fastened to the foundation with an uplift capacity of not less than 1000 lbs.

The tie-down devices shall be an embedded-strap type, installed in accordance with the manufacturer's recommendations. The panels shall be supported directly on a foundation which is continuous across the entire length of the braced wall line. The foundation shall be reinforced with not less than one No. 4 bar top and bottom.

Where the continuous foundation is required to have a depth greater than 12", a minimum 12"x12" continuous footing or turned down slab edge is permitted at door openings in the braced wall line. This continuous footing or turned down slab edge shall be reinforced with not less than one No. 4 bar top and bottom. This reinforcement shall be lapped not less than 15" with the reinforcement required in the continuous foundation located directly under the braced wall line.
 2. In the first story of two-story buildings, each wall panel shall be braced in accordance to Item 1 above, except that each panel shall have a length of not less than 24".
- ❖ Alternative options for braced wall panels may be submitted to the Building Official for approval. Structural engineering may be required for any alternative. Engineered plans must be signed and stamped by a licensed structural engineer (licensed in the State of Minnesota).

Extent of header
Double portal frame (2 braced wall panels)



Sheathing

- ❖ All wall and roof sheathing shall be fastened according to manufacturer's specifications and the International Residential Code (IRC), table 602.3(1) or 602.3(2).

Roofing

- ❖ Roofing and #15 felt shall be installed according to manufacturer's specifications and IRC section R905.
- ❖ Ice and water barrier shall be provided from the eave to a point at least 24" inside the exterior wall line of the building.
 - ◆ Ice and water barrier is not required on detached accessory structures with no conditioned floor area.
- ❖ Flashing for asphalt shingles shall comply with section R905.2.8 of the IRC.

Header over Garage Doors

- ❖ For a 16-foot double overhead door in a gable (non-bearing) end of the garage use at least a 2-ply 2x10 header with continuous ½" plywood between the members. If the garage door is located in the bearing wall the header will need to be designed by a qualified building material specialist or structural engineer.

Overhead Garage Doors

- ❖ Exterior building components, including but not limited to overhead garage doors, shall be designed and installed to meet wind load requirements of the Minnesota State Building Code (90 miles-per-hour).

Required Separation Walls

- ❖ **Attached garages** shall be protected with at least ½" gypsum board or equivalent applied to the garage side. Garages beneath habitable space shall be separated from all habitable rooms above with not less than 5/8" Type X gypsum board or equivalent and all walls supporting the floor above (including gable end walls) shall be protected with at least ½" gypsum board or equivalent.
- ❖ **Detached garages** located less than 3' from a dwelling on the same lot shall be protected with at least ½" gypsum board applied to the interior side of exterior walls of the garage that are parallel with the dwelling that are within this 3' area.

Separation Wall Openings

- ❖ Any door in a separation wall shall be either: a solid wood door at least 1-3/8" thick; a solid or honeycomb core steel door at least 1-3/8" thick; or a door having a fire protection rating of at least 20 minutes. Under no circumstances shall a garage have an opening into a room used for sleeping purposes. There shall be no windows in a required separation wall.

Separation Wall Penetrations

- ❖ **Ducts** in the garage and ducts penetrating the garage-house separation walls or ceiling shall be constructed of minimum No. 26 gauge sheet steel or other approved material and shall have no openings into the garage.
- ❖ **Other penetrations** through the separation wall shall be protected by filling the opening around the penetrating item with approved material to resist the free passage of flame and products of combustion.

Required Separation from Property Lines

- ❖ Exterior walls within 5' of a property line are required to have a minimum 1-hour fire-resistance rating with exposure from both (interior and exterior) sides of the wall.
- ❖ All projections from the building that are within 5' of a property line are required to have a fire-resistance rating of 1-hour on the underside. No projection can be closer than 2' to a property line.
 - 1-hour on the underside equates to 1-layer of 5/8" Type X gypsum sheathing. Openings are not allowed.
- ❖ Openings are not allowed in walls that are closer than 3' to a property line; walls 3' to 5' from a property line are allowed a maximum of 25-percent (%) of the wall area to be openings.

Wood and Earth Separation

- ❖ All wood that is in direct contact with concrete or masonry or within 6" of grade must be of approved treated wood, heartwood or redwood, black locust or cedars. Wood siding must be located at least 6" above grade.
 - Recent changes have been made in the chemicals used in the manufacture of pressure-treated wood. The fastener industry has indicated that some of the hardware (anchor bolts, screws, etc.) currently on the market **may not perform with some of the new treatments**. Make sure you use the proper hardware for the type of treatment of the lumber.

Electrical, Plumbing and/or HVAC Work

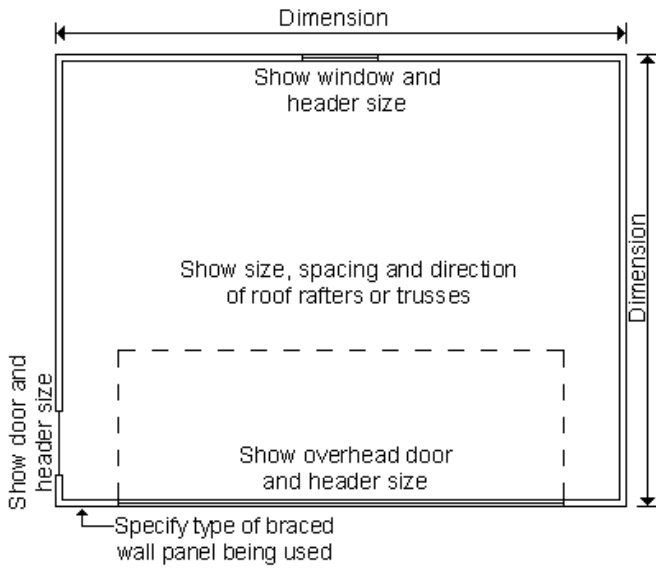
- ❖ All electrical, plumbing and/or HVAC work requires a separate permit. Permits can be obtained at the Building Safety Department.
 - When running electricity to a garage 20' of ½" rebar with access is required for grounding electrode per electrical code.

Automatic Garage Door Opening Systems

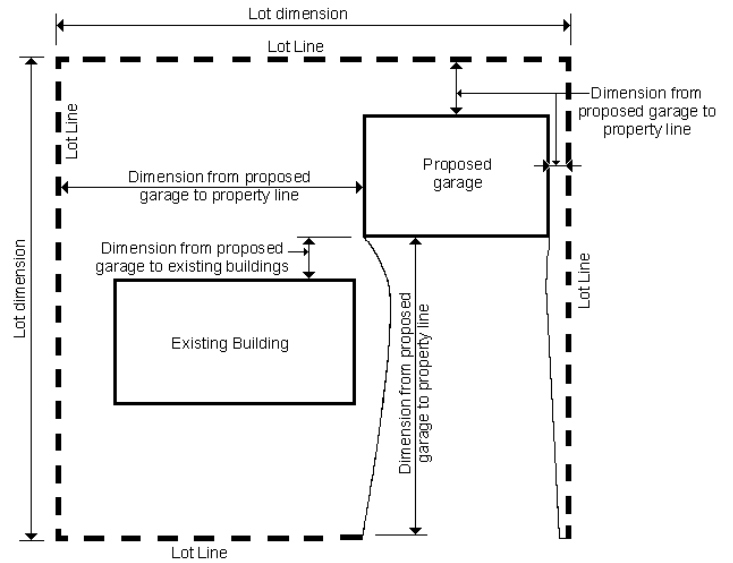
- ❖ All automatic garage door opening systems that are installed, serviced, or repaired must comply with the provisions of Minnesota Statutes, sections 325F.82 and 325F.83.

The information in this handout is just an overview.
See the 2007 Minnesota State Building Code for complete information.
All details and pictures in this handout are examples, other methods
of construction may be approved by the Building Safety Department.

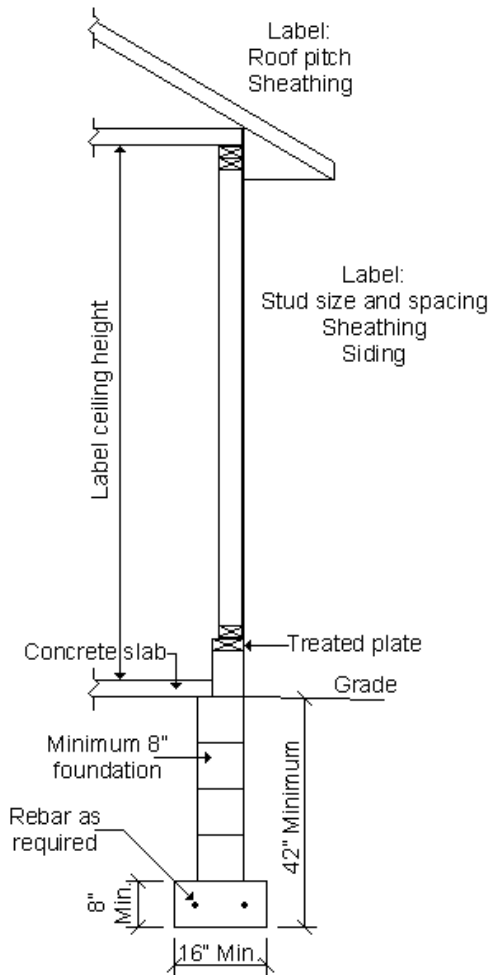
Sample Floor Plan



Sample Site Plan



Sample Section Plan



ALTERNATE FLOATING SLAB FOOTING DETAILS

