

CONSTRUCTION  
MINIMUM REQUIREMENTS SPECIFICATIONS FOR  
SINGLE FAMILY DETACHED GARAGE

This is not intended as a design specification or an instruction manual for untrained persons.

A. ZONING

1. Setback requirement for accessory buildings:
  - a. Prohibited in front yard
  - b. Five feet from rear lot line
  - c. Eight feet from side lot line when accessory building is located ten (10) or more feet from principal buildings in residential zones.
  - d. In all other districts setback shall be the same as for principal buildings(s).

B. FOOTING REQUIREMENT:

1. Pursuant to Section 1806.1 all footings shall extend below frost line (42 inches).
2. Footing width shall not be less than twelve (12) inches).
3. Footing thickness shall not be less than six inches.

These alternative methods were accepted by Building and Housing Code Appeals Board July 1, 1981 pursuant to Section 105, Uniform Building Code 1979 Edition Appeal #1030.

1. An un-reinforced concrete footing at the edge shall not be less than eight inches wide.
2. A reinforced concrete footing at the edge shall not be less than six inches wide.
3. Minimum slab thickness shall not be less than three and one-half inches in thickness.

C. FOUNDATION PLATES OR SILLS:

1. Foundation plates or sills shall be bolted to the foundation or foundation wall with not less than one-half inch diameter steel bolts embedded at least 7 inches into the concrete or reinforced masonry or fifteen (15) inches into un-reinforced grouted masonry and spaced not more than six feet apart. There shall be a minimum of two bolts per piece. Foundation plates and sills shall be the kind of wood specified.

D. WALL FRAMING:

1. Studs in exterior walls, interior walls and interior bearing walls of buildings not more than two stories in height shall be not less than 2x4 inches in size. For three story buildings such studs shall be not less than 3x4 inches or 2x6 inches to the bottom of the second floor joists, and 2x4 inches for the two upper stores. Interior non-bearing partitions may be framed with 2x3 inch studs.
2. Height: Unless supported laterally by adequate framing, the maximum allowable height for studs shall be ten (10) feet for 2x3 inch studs, fourteen (14) feet for 2x4 inch or 3x4 inch studs and twenty (20) feet for 2x6 inch studs.

When approved for use by the building official, the maximum allowable height for utility studs shall be eight feet for load-bearing and exterior wall studs and ten (10) feet for interior non-load bearing studs. When used in bearing walls, utility studs shall support not more than a roof and ceiling load.

3. Spacing: Studs supporting floors shall be spaced not more than sixteen (16) inches on center. Except for utility studs, 2x4 inch studs not more than ten (10) feet in length may be spaced not more than 24 inches on center when supporting only a ceiling and roof. The spacing of 2x3 inch studs shall not exceed sixteen (1) inches on center.

When bearing studs are spaced at 24 inch intervals, care shall be exercised to insure centering of roof trusses over studs or, in lieu thereof, solid blocking equal in size to the studs shall be installed to reinforce the double plate above.

4. Framing Details: Studs shall be placed with their wide dimension perpendicular to the wall. Not less than three studs shall be installed at each corner of an exterior wall.

Exception: At corners a third stud may be omitted through the use of wood spacers or backup cleats of 3/8" inch thick plywood, one inch thick lumber or other approved devices which will serve as an adequate backing for the attachment of facing materials.

Bearing and exterior wall studs shall be capped with double top plates installed to provide overlapping at corners and at intersections with other partitions. End joints in double top plates shall be offset at least forty-eight (48) inches.

Studs shall have full bearing on a plate or sill not less than two inches in thickness having a width not less than that of the wall studs.

5. Bracing: All exterior walls and main cross stud partitions shall be effectively and thoroughly braced at each end, or as near thereto as possible and at least twenty-five (25) feet of length.
6. Headers: Headers and lintels shall conform to the requirements set forth in this paragraph and together with their supporting systems shall be designed to support the loads specified in this code. All openings four feet wide or less in bearing walls shall be provided with headers consisting of either two pieces of two inch framing lumber placed on edge and securely fastened together or four inch lumber of equivalent cross section. All openings more than four feet wide shall be provided with headers or lintels. Such headers or lintels shall have not less than two inch solid bearings at each end to the floor or bottom plate, unless other approved framing methods or joint devices are used.

#### E. ROOF FRAMING:

1. Framing: Rafters shall be framed directly opposite each other at the ridge. There shall be a ridge board at least one inch nominal thickness at all ridges and not less in depth than the cut end of the rafter. At all valleys and hips there shall be a single valley or hip rafter not less than two inch nominal thickness and not less in depth than the cut end of the rafter.

Rafter ties: Rafters shall be nailed to adjacent ceiling joists to form a continuous tie between exterior walls when such joists are parallel to the rafters. Where not parallel, rafters shall be tied to 1x4 inch (nominal) minimum sized cross ties. Rafter ties shall be spaced not more than four feet on center.

2. Roof sheathing: Joints in lumber sheathing shall occur over supports unless approved end matched lumber is used, in which case, each piece shall bear on at least two supports.

Plywood used for roof sheathing shall be bonded by intermediate or exterior glue. Sheathing placed on rafters spaced twenty-four (24) inches perpendicular to support shall have a minimum

thickness of 5/8" inches. Sheathing placed diagonally to support shall have a minimum thickness of 3/4" inches.

#### F. ROOF COVERING:

1. Asphalt shingles: Asphalt shingles shall comply with UBC standards. Asphalt shingles shall be fastened according to manufacturer's instructions to solidly sheathed roofs, but not less than four nails per each strip shingle nor more than nominal thirty-six (36) inches wide and two nails per each individual shingle not more than eighteen (18) inches wide shall be used.

Underlayment may be omitted over existing roofs except where the roof slope is less than four inches in 12 inches.

2. The roof valley flashing shall be of laced asphalt shingles applied in an approved manner with an underlayment of not less than Type 15 felt extending eighteen (18) inches from the center line each way, or shall be of two layers of ninety (90) pound mineral surfaced cap sheet cemented together with the bottom layer not less than twelve (12) inches wide laid face down and the top layer not less than twenty-four (24) inches wide laid face up.
3. In areas subject to roof ice build up, underlayment consisting of two layers of Type 15 felt applied shingle fashion shall be installed and solid mopped together with approved cementing material between the piles extending from the eave up the roof to point twenty-four (24) inches inside the exterior wall line of the building.

#### G. SIDING:

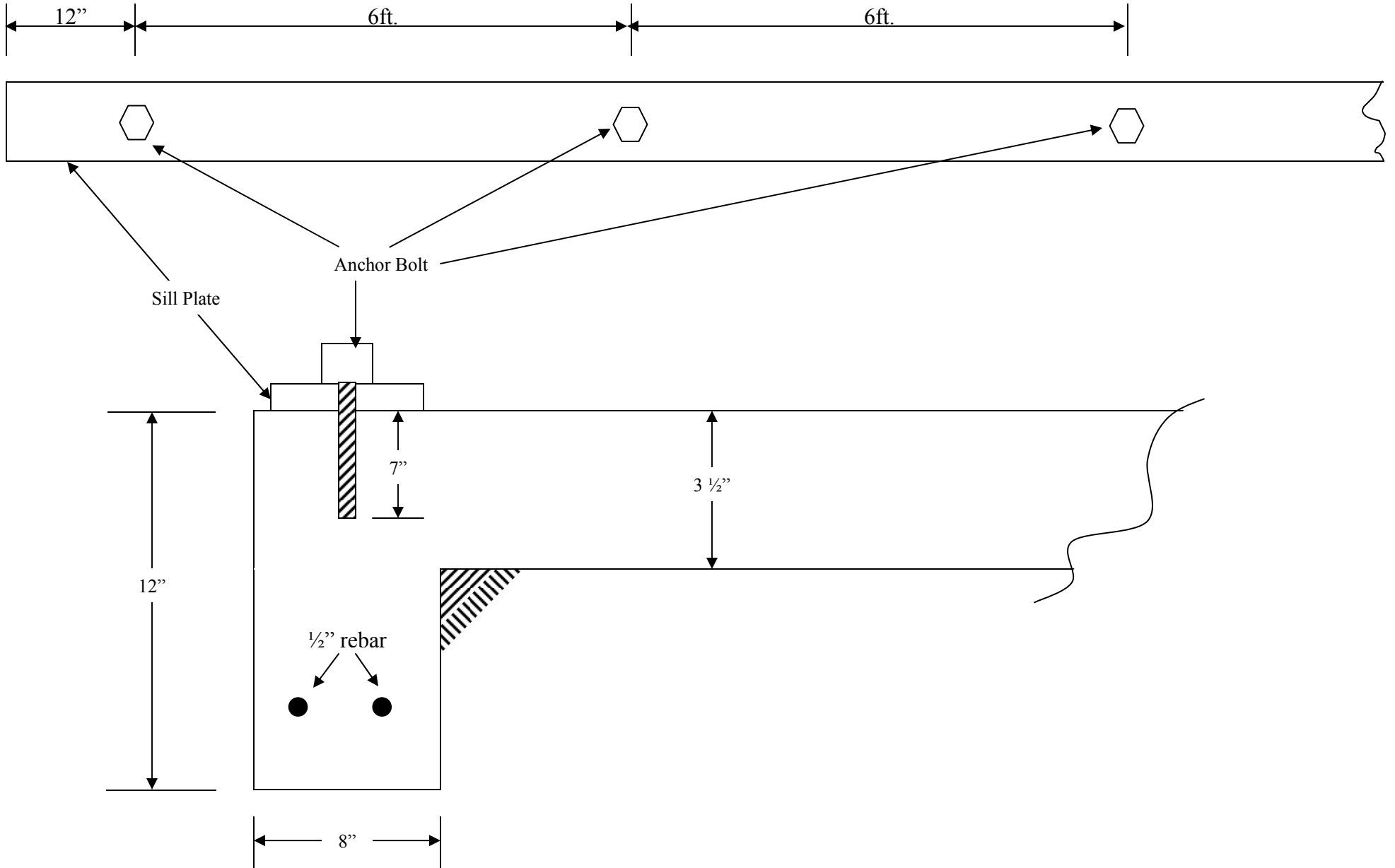
1. Siding shall have a minimum thickness of 3/8" inch unless placed over sheathing permitted by this code.

Siding patterns known as rustic, drop siding or shiplap shall have an average thickness in place of not less than 19/32 inch and shall have a minimum thickness of not less than 3/8 inch. Bevel siding shall have a minimum thickness measured at the butt section of not less than 7/16 inch and a tip thickness of not less than 3/16 inch. Siding of lesser dimensions may be used, provided such wall covering is placed over sheathing which conforms to the provisions specified elsewhere in this code.

All weatherboarding or siding shall be securely nailed to each stud with not less than one nail, or to one inch nominal wood sheathing or 1/2" inch plywood sheathing with not less than one line of nails spaced nor more than twenty-four (24) inches on center in each piece of the weatherboarding or siding. (6d commons)

NOTE: This is a general summary of the minimum requirements regarding the construction of a one or two stall residential garage, persons engaged in the construction of one and two stall garages should refer to the building code for more complete specifications.

# Garage Footing Specifications



1. Show distance to property lines.
2. Show dimension of structures proposed and existing.
3. Show north direction.
4. Distance between structures.

