

Deck Span and Dimension Table

Maximum allowable spans are based on #2 Southern Pine 40 Pressure Treated Lumber. Other species of lumber will have shorter spans than indicated in the table below.

Spans based on 40 psf live load and 10 psf dead load. L/360 live load deflection and exposed to weather (wet conditions).

Post & footing sizes are based on 2000 psf soil bearing and other assumptions for building a standard deck.

Note: No roof loads are assumed. Converting a deck to a porch or room will require larger posts & footings and/or more posts & footings.

Beam sizes are based on a maximum 2' cantilever (ends of joists overhanging the edge of the beam by 2')

Tall posts may require sway bracing.

Joist Size	Joist Spacing	Joist Max Span	Beam Size	Beam Max Span (Post Spacing)	Posts: Size & Max Height Above Grade			Footing Diameter	Corner Footing Diameter	Deck Boards Min Size
					4 x 4	4 x 6	6 x 6			
2x6	12" o.c.	10'-4"	2-2x6	6'-0"	12'	16'		14"	12"	5/4x6
2x6	16" o.c.	9'-5"	2-2x6	6'-3"	12'	16'		12"	12"	5/4x6
2x6	24" o.c.	7'-10"	2-2x6	6'-10"	12'	16'		12"	12"	2x4/2x6
2x8	12" o.c.	13'-8"	2-2x8	6'-9"	10'	12'	20'	16"	14"	5/4x6
2x8	16" o.c.	12'-5"	2-2x8	7'-2"	10'	12'	20'	16"	12"	5/4x6
2x8	16" o.c.	12'-5"	2-2x10	8'-10"	9'	12'	20'	18"	14"	5/4x6
2x8	24" o.c.	10'-2"	2-2x8	7'-8"	10'	12'	20'	16"	12"	2x4/2x6
2x8	24" o.c.	10'-2"	2-2x10	9'-6"	10'	12'	20'	18"	14"	2x4/2x6
2x10	12" o.c.	17'-5"	2-2x10	7'-9"	8'	10'	16'	20"	16"	5/4x6
2x10	16" o.c.	15'-10"	2-2x10	8'-0"	8'	10'	16'	18"	16"	5/4x6
2x10	16" o.c.	15'-10"	2-2x12	9'-2"	6'	10'	16'	20"	16"	5/4x6
2x10	24" o.c.	13'-1"	2-2x10	8'-7"	9'	10'	20'	18"	14"	2x4/2x6
2x10	24" o.c.	13'-1"	2-2x12	10'-0"	8'	10'	16'	20"	16"	2x4/2x6
2x12	12" o.c.	21'-2"	2-2x12	8'-3"	6'	8'	16'	22"	16"	5/4x6
2x12	16" o.c.	18'-10"	2-2x10	7'-5"	8'	8'	16'	20"	16"	5/4x6
2x12	16" o.c.	18'-10"	2-2x12	8'-7"	6'	8'	16'	20"	16"	5/4x6
2x12	24" o.c.	15'-5"	2-2x10	8'-2"	8'	8'	16'	18"	14"	2x4/2x6
2x12	24" o.c.	15'-5"	2-2x12	9'-5"	6'	8'	16'	20"	16"	2x4/2x6

Residential: For one and two family dwellings and individual units of multi family.

Guards: Porches, balconies or raised floor surfaces located more than 30 inches above the floor or grade below shall have guards not less than 36 inches in height. Open sides of stairs with a total rise of more than 30 inches above the floor or grade below shall have guards not less than 34 inches in height measured vertically from the nosing of the treads.

Guard opening limitations: Required guards on open sides of stairways, raised floor areas, balconies and porches shall have intermediate rails or ornamental closures which do not allow passage of a sphere 4 inches or more in diameter.

Exception. 1) The triangular openings formed by the riser, tread and bottom rail of a guard at the open side of a stairway are permitted to be of such a size that a sphere 6 inches cannot pass through.
2) Openings for required guards on the sides of stair treads shall not allow a sphere 4 3/8" to pass through.

Stairs: The maximum riser height shall be 7 3/4 inches. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8". The minimum tread depth shall be 10 inches. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8".

Handrails: Shall be provided on at least one side of each stair flight of four risers or more. Handrails shall be continuous from above the top riser to the lowest riser of the flight and shall be not less than 34" and not more than 38" above the sloped plane adjoining the tread nosing. Handrails shall not encroach into the stair width more than 4 1/2".

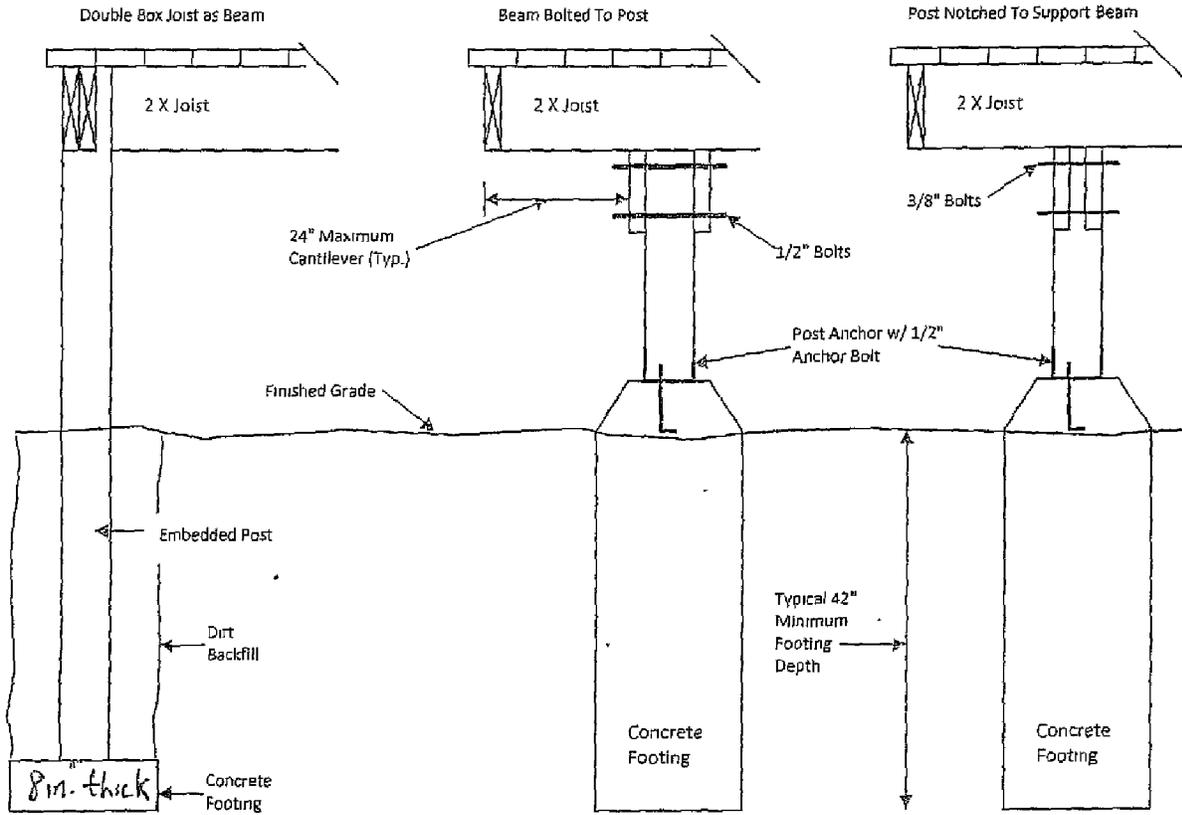
Handrail Termination: Handrails shall be returned or shall terminate in newel posts or safety terminals.

Handrail Shapes:

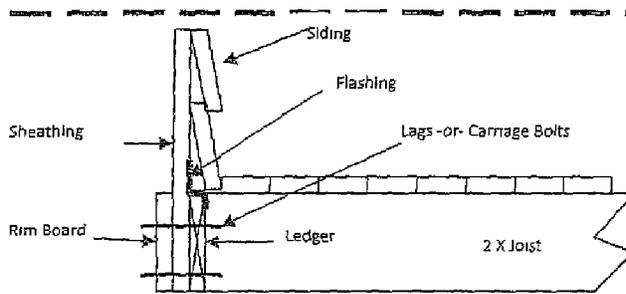
Type I -The handrail must be an approved shape for grasping while walking up or down the stairs. Handrails with a circular cross section shall have an outside diameter of at least 1 1/4" and not greater than 2". If not circular, the handrail shall have a perimeter dimension of at least 4" and not greater than 6 1/4" with a maximum cross section of 2 1/4".

Type II -Handrails with a perimeter greater than 6 1/4" shall provide a graspable finger recess (groove) on both sides of the profile. The finger recess shall begin within a distance of 3/4" measured vertically from the tallest portion of the profile and achieve a depth of at least 5/16" within 7/8" below the widest portion of the profile. This required depth shall continue for at least 3/8" to a level that is not less than 1 3/4" below the tallest portion of the profile. The minimum width of the handrail above the recess shall be 1 1/4" to a maximum of 2 3/4". Edges shall have a minimum radius of 0.01".

Residential. For one and two family dwellings and individual units of multi family

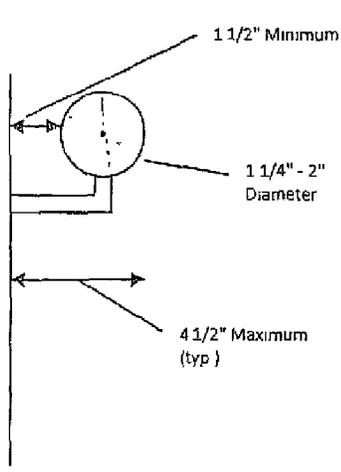
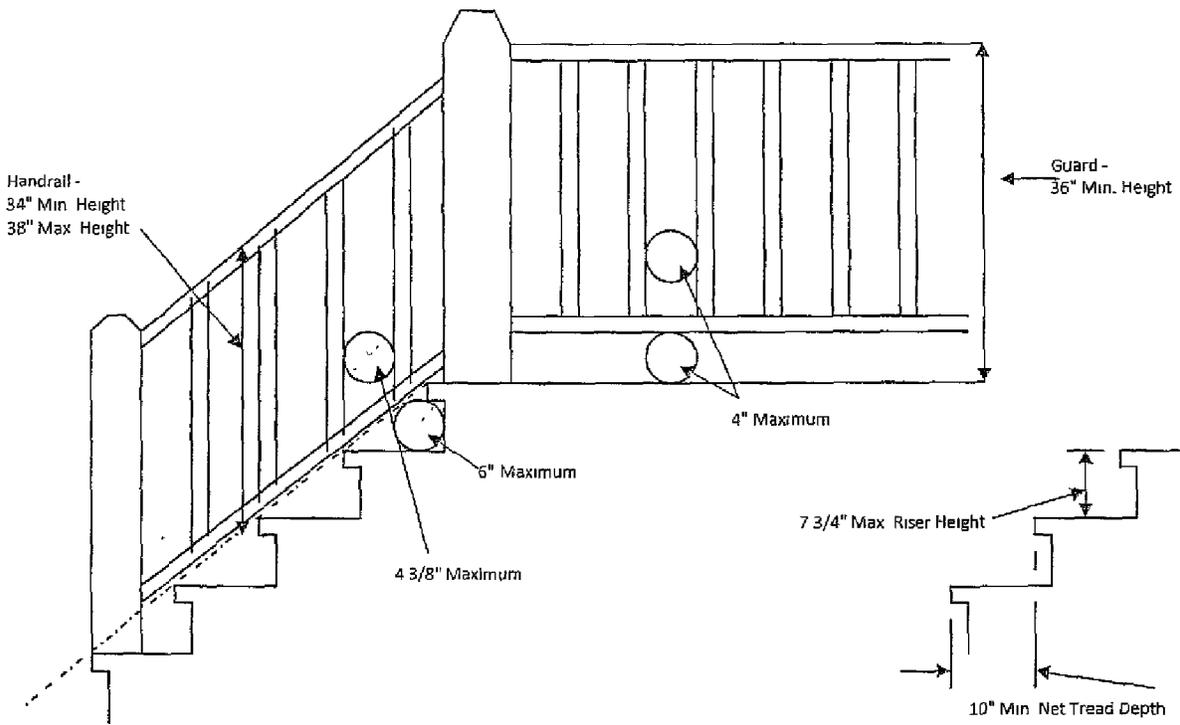


NOTE: All fasteners shall be of hot-dipped galvanized steel, stainless steel, silicon bronze or copper.
 Exception - 1/2" diameter or greater steel bolts

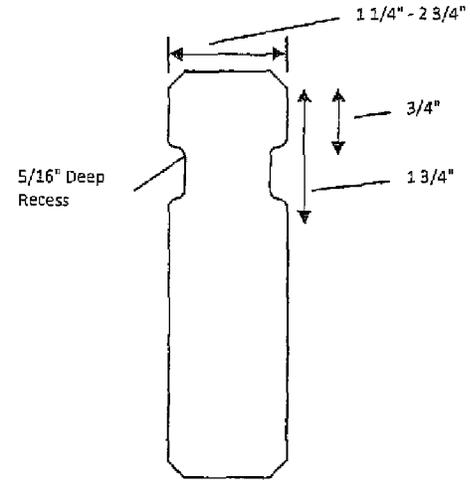


Fasten the ledger board to the house framing or the foundation

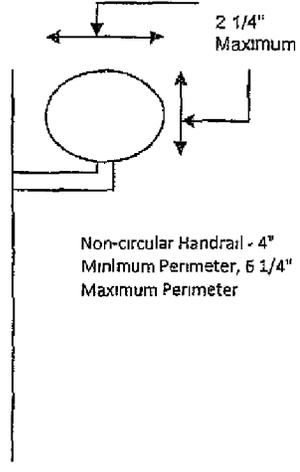
Flash the ledger board to keep water from seeping behind the ledger and infiltrating the wall.



Circular Handrail



Other Shapes

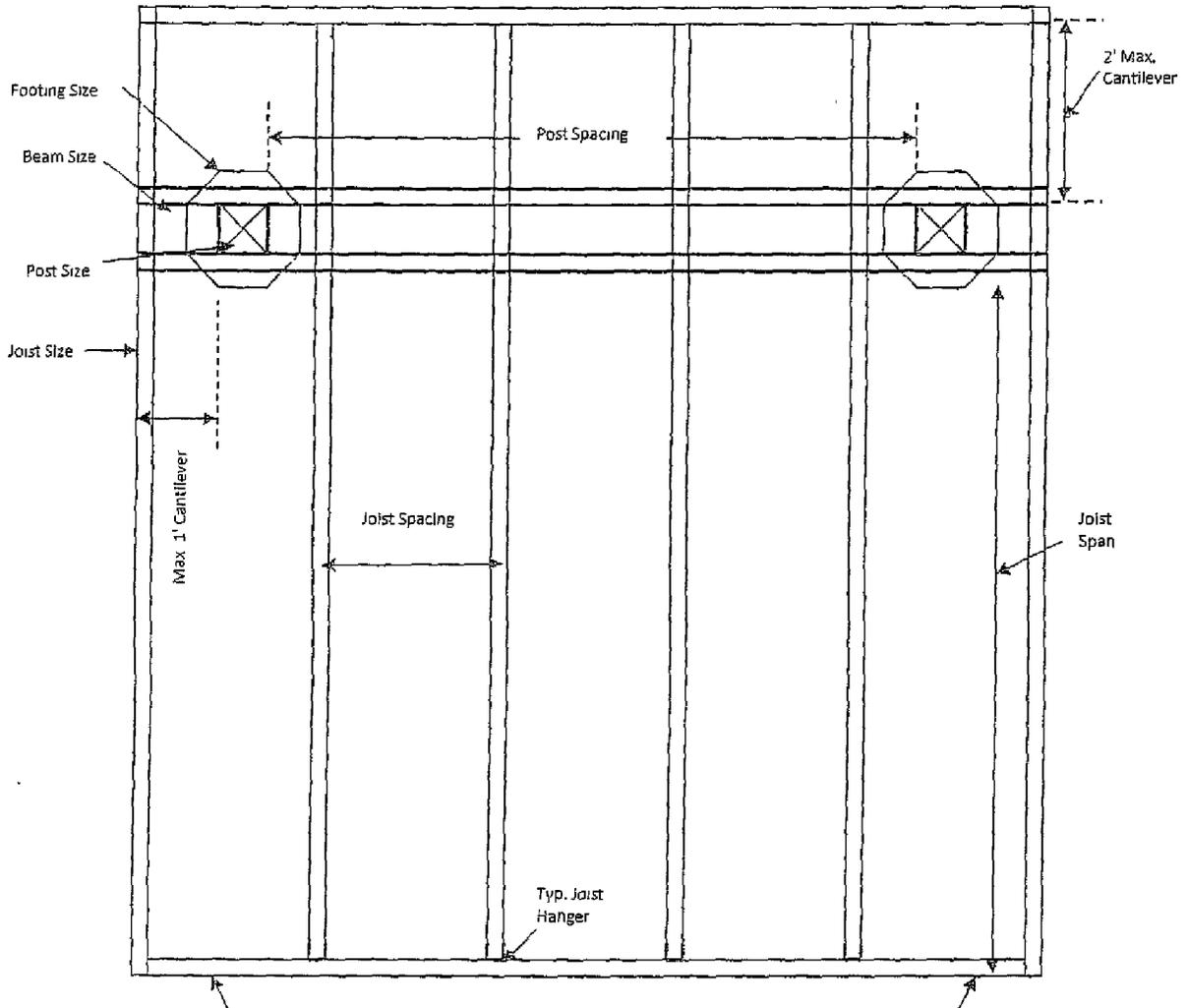


Non-circular Handrail

Decks

Simple Deck Plan View * All lumber shall be approved pressure treated -or- naturally decay resistant.

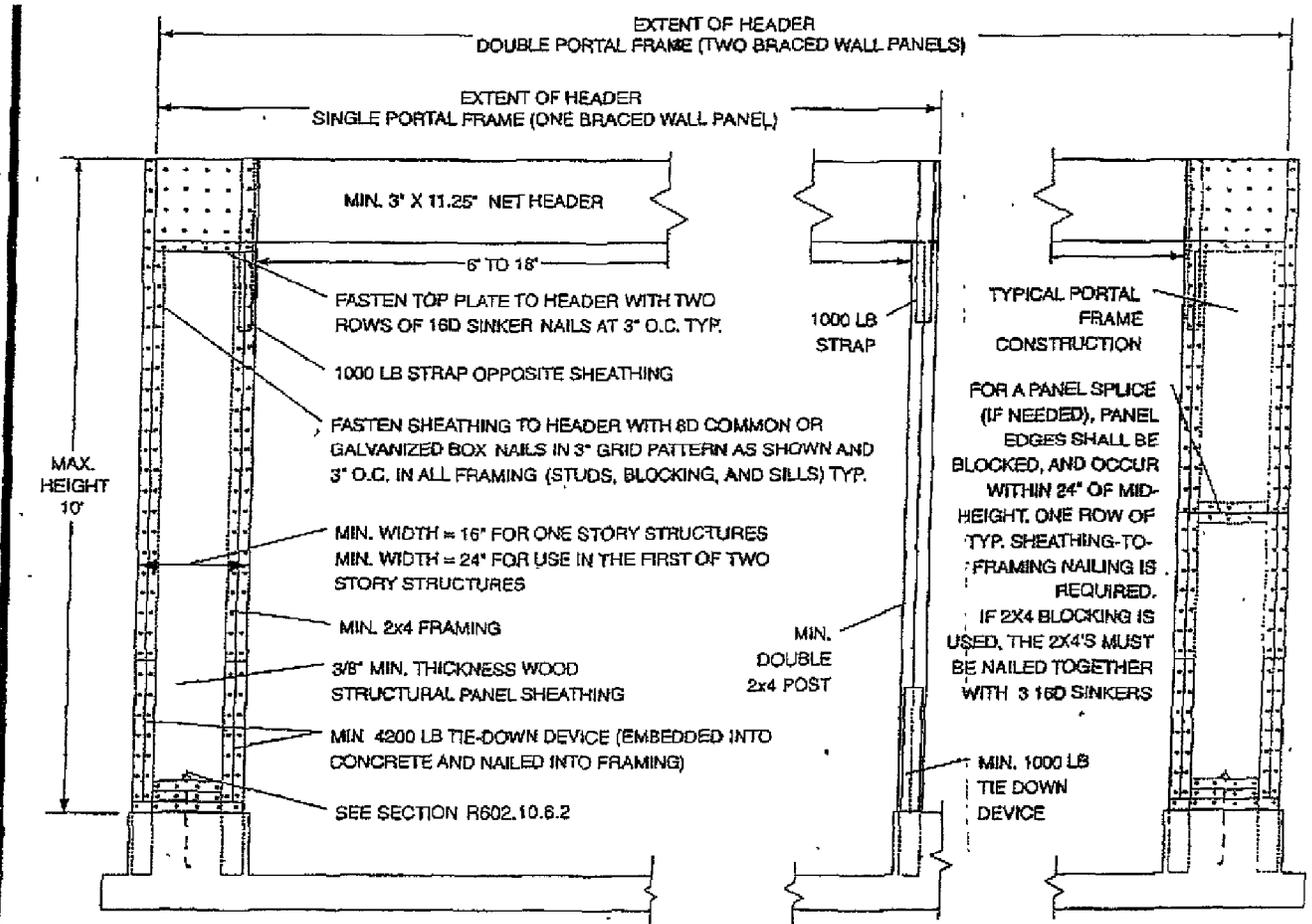
Residential: For one and two family dwellings and individual units of multi family.



2X Ledger attached to house framing structure and/or foundation, provide flashing

NOTE: All fasteners shall be of hot-dipped galvanized steel, stainless steel, silicon bronze or copper.

- + 4' or greater in width on either side of overhead garage door(s) do not require continuous head
- + For applications less than 4' in width on either side of overhead garage door(s) are required to follow diagram below.

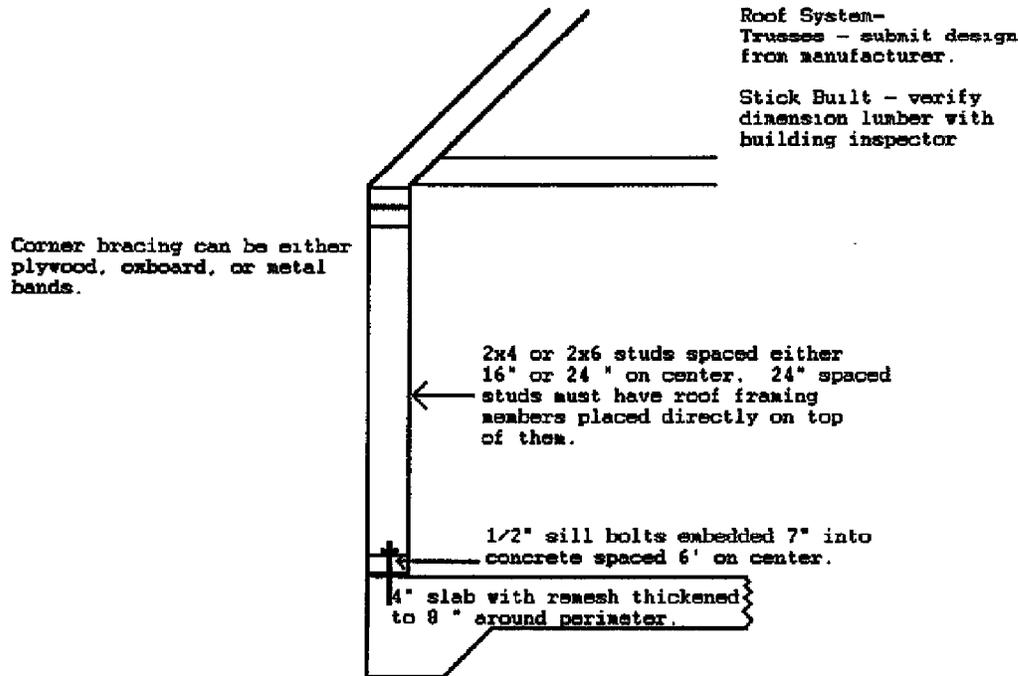


For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound = 0.454 kg.

FIGURE R602.10.6.2
ALTERNATE BRACED WALL PANEL ADJACENT TO A DOOR OR WINDOW OPENING

**POLK COUNTY PUBLIC WORKS
BUILDING INSPECTION DIVISION
286 - 3352**

Wall section for 720 sq. foot and less (floating slab) detached garage.



Maximum span for roof rafters:

- 2x8 - 16" o.c. - 16' 4"
- 2x8 - 24" o.c. - 13' 4"
- 2x6 - 16" o.c. - 12' 5"
- 2x6 - 24" o.c. - 10' 1"
- 2x4 - 16" o.c. - 7' 11"
- 2x4 - 24" o.c. - 6' 5"

**NOTE: THERE ARE HEIGHT RESTRICTIONS IN THE FOLLOWING ZONING DISTRICTS: ESTATE - 24 FEET
COUNTRYSIDE AND AGRICULTURAL - NO RESTRICTIONS
ALL OTHER RESIDENTIAL DISTRICTS - 18 FEET
THE HEIGHT IS MEASURED TO THE PEAK OF THE ROOF.**

POLK COUNTY PUBLIC WORKS
BUILDING INSPECTION DEPARTMENT
286-3352

Wall section for all residentially zoned garages 721 sq. ft. and over and all 2 story garages

Roof system can be either trusses
- submit design from manufacturer -
or can be stick built - verify dimension
of lumber and spacing with building
inspector.

Corner bracing can either be
plywood, oxboard, or approved
metal bands.

Studs can be spaced either
16" or 24" on center.
When using the 24" spacing
the framing must be "stacked"
- roof framing directly over
stud.

Frost depth footings (42") required.
Either a spread footing (shown) or
a 8" trench is acceptable

1/2" sill bolt embedded 7" into concrete spaced 6' on center

4" slab with remesh.

Foundation reinforcements:

16' x 8" spread footing - 2 #4 rebars continuous.

8" trench footing - #4 rebar 6' on center
vertically and one near the top and one
near the bottom horizontally.

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THE HEIGHT IS MEASURED FROM FINISH GRADE TO THE PEAK OF THE ROOF.