3. FRAMING CONSTRUCTION - OTHER THAN ROOF (Continued):

3.14 Jack Studs:
1st Story:
Install a minimum of (3–2x) jack studs under all beams, LVL, etc. (unless noted otherwise)
2nd Story:
Install a minimum of (2–2x) jack studs under all beams, LVL, etc. (unless noted otherwise)

NOTE:
Jack studs on upper level need to have the same number of jack studs on the lower level directly beneath to carry load to foundation.

Jack Stud Requirements-502.5

		Header Width		
		3" (2–2x)	4.5" (3–2x)	6" (4–2x)
Headers Supporting	Header Span (ft.)	Number of Jack Studs Required at Each End of the Header		
Roof and Ceiling	2	1	1	1
	4	1	1	1
	6	2	1	1
	9	2	2	1
	10	3	2	2
Roof, Ceiling and One Floor (Center Bearing)	2	1	1	1
	4	2	1	1
	6	2	2	1
	8	3	2	2
	10	4	3	2
Roof, Ceiling and One Floor (Clear Span)	2	1	1	1
	4	2	2	1
	6	3	2	2
	8	4	3	2
	10	5	3	3
Roof, Ceiling and Two Floors (Center Bearing)	2	1	1	1
	4	2	2	1
	6	3	2	2
	8	4	3	2
	10	5	3	3
Roof, Ceiling and Two Floors (Clear Span)	2	2	1	1
	4	3	2	2
	6	5	3	3
	8	6	4	3
	10	7	5	4

3.15 When ceiling joists are parallel to an exterior wall and rafters bear on the exterior stud wall's top plate, tie the rafters near the top plate to the ceiling joists with 6' long 2x6 runners at 4' o/c across the top of the ceiling joists.
3.16 At all stairs, every stud at each stringer must be nailed to each stringer with a minimum of 2–16d nails.
3.17 Steel pipe columns must be in contact with the supported member and continue solid to the supporting masonry or concrete foundation. No intermediate wood blocking should be used.
3.18 Install extra joists under all parallel partition walls, unless noted otherwise (extra joists may be substituted with 2x4 ladder blocks with Simpson Z4 clips at each end.)
3.19 Provide 1x4 cross bridging at mid point of span or 8'–0" o/c maximum in all floors.
3.20 All exterior corners (inside and outside corners) shall be braced with ½" CDX plywood, nailing schedule shall be 8d commons at 6" o.c at all intermediate studs. (option – approved diagonal corner braces both directions at all corners).
3.21 All columns or solid framing shall extend down thru all levels and terminate at the basement floor and be supported by a thickened slab, grade beam, or footing designed to carry load.
3.22 Provide double 2x6 strongback at mid span, or per truss manufacturer, for ceiling joists with span greater than 10'–0"
3.23 Provide collar ties at upper ⅓ of vertical distance between ridge board and ceiling joists at 4'–0" o/c maximum or per truss manufacturer.
3.24 Hip, valley rafters, and ridge boards shall be one "2x" size larger than rafters, or per truss manufacturer.
3.25 Roof decking shall be ½" OSB minimum and shall be used with clips.
3.26 Where pre–engineered floor and roof trusses are used, truss manufacturer must provide shop drawings which bear the seal of a registered engineer in state in which work is to be performed.
3.27 All framed wall dimensions are based on 2x4 studs unless otherwise noted.

4. FOUNDATION WALLS:

4.1 All full height foundation walls are shown on a detail sheet.
4.2 All masonry or concrete basement wall construction must be inspected by the County Building Official, Architect, or Engineer for compliance with structural specifications.
4.3 Where full–height foundation or basement walls run parallel to floor framing, blocking must be provided between joists at 3'–0" o/c for not less than six joist spacings out from the wall.
4.4 Details of any earth retaining structures not attached to the house structure will be shown on separate details. (These walls may be designed only after grade conditions are known.)

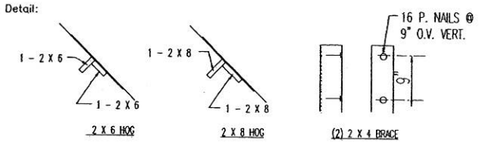
5. ROOF CONSTRUCTION:

5.1 All roof trusses must be built in accordance with truss manufacturers direction.
5.2 Rafters shall be 2x6 SPF @ 16" o/c for standard weight shingles except as noted. They are to be cut into hips, ridges, etc., unless noted as over–built.
5.3 Collar ties shall be 2x6 @ 48" o/c at all ridges unless noted otherwise and located a minimum 3' below the ridge. Collar ties may be closer to ridge if alternate bracing provided. Vaulted ceilings require special collar tie details or structural ridge beam. See plans as required.
5.4 A minimum of three collar ties shall be used at all ridges even if two ties must be put on one set of rafters.
5.5 All hips and ridges are a size larger than the rafters froming into them unless noted otherwise.
5.6 All hogs on ceiling joists or rafters are 8' long (2)–2x6 hog troughs unless noted otherwise. Rafters may be spliced over hogs.
5.7 Gable end framing must be braced parallel to ridges with a minimum of 2x6 diagonal braces @ 6' o/c along the gable wall to the interior ceiling joists. Braces are to bear on (2)–2x6 hogs and to gable wall at approximately mid–height of gable wall. Braces shall be at approximately 45° angle. Other bracing may be used if it meets the Engineer's approval.
5.8 Carry braces to partitions or beams below. Never brace rafter hogs to (2)–2x6 hogs on ceiling joists, unless shown on plans.
5.9 Ceiling joists when erected parallel to rafters must be sistered to rafters and nailed with 3–16d nails at each rafter. If a kneewall is used and ceiling joists cannot touch rafters, then rafters must be braced to the ceiling joists with 2x4 diagonal rafter ties spaced @ 48" o/c. Reverse collar ties may be used behind kneewalls.
5.10 Roof Plan Legend:

A. ⊗ or ◯ Indicates location of roof brace at rafter level.
B. ⊗→ Arrow away from brace point indicates direction of roof brace to partition, beam or other brace point below.
C. ⊗← Arrow into brace point indicates a vertical or almost vertical roof brace to partition, beam or other brace point below.

D. All roof braces are (2)–2x4 "T" nailed with 16d nails @ 9" o/c vertically from top to bottom. All braces longer than 10' must be braced horizontally in two directions at mid–height or be increased to (2)–2x6s.
E. Maximum spacing of roof braces is to be as follows:
i. For (2)–2x6 hog.....6'–0" o/c
ii. For (2)–2x8 hog.....7'–6" o/c

Detail:



6. THERMAL & MOISTURE PROTECTION

6.1 The following specification shall govern with modifications as specified herein: American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) Handbook of Fundamentals.
6.2 Install flashing and sheet metal in compliance with "Architectural Sheet Metal Manual" by Smacna.
6.3 Flashing:
Approved corrosion–resistive flashing shall be provided in the exterior wall envelope in such a manner as to prevent entry of water into the wall cavity from penetration of water to the building structural framing components. Aluminum flashing may not be used in contact with cementitious material, except as counter flashing. The flashing shall extend to the surface of the exterior wall finish and shall be installed to prevent water from reentering the exterior wall envelope. Approved corrosion–resistant flashings shall be installed at all of the following locations:
A. At top of all exterior window and door openings in such a manner as to be leakproof, except that self–flashing windows having a continuous lap of not less than 1⅛" (28mm) over the sheathing material around the perimeter of the opening, including corners, do not require additional flashing.
B. At the intersection of chimneys or other masonry construction with frame or stucco walls, with projecting lips on both sides under stucco copings.
C. Continuously above all projecting wood trim.
D. Where exterior porches, decks or stairs attach to a wall or floor assembly of wood–fram construction.
E. At wall and roof intersections.
F. At built–in gutters.

6.4 Shingles shall be asphalt–fiberglass composition three–tab unless noted otherwise, conforming to U.L. Class "A" fire resistance, U.L. Wind resistance, ASTM D3462 and ASTM D3018 type 1 with a 20 year (min.) limited mfr. warranty. Shingles shall be installed as per manufacturer's instructions.
6.5 Slopes of 3⅛ inches in 12 inches or greater: asphalt shingle roofs shall have an underlayment of not less than three ply of No. 15 felt, applied as required in Section R–802 and Table No. R–803.4.
6.6 The net free ventilating area shall not be less than 1 to 150 of the area of the space ventilated except that the area may be 1 to 300, provided at least 50 percent of the required ventilating area is provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet above eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents. The net free cross ventilation area may not be less than 1 to 300 of the area of the space ventilated when the vapor barrier having a transmission rate not exceeding 1 perm is installed on the warm side of the ceiling.

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DATE: 5 JUNE 2006
PROJECT NO.: 2530
ISSUED FOR: PERMIT & CONSTRUCTION
5 JUNE 2006

G1.2