HOLD-DOWN TABLE

Wood Sections	Uplift Force Lbs	Top Connector Simpson **	Rating Lbs	Bottom Connector Simpson **	Rating Lbs
HEADERS					
	up to 455 lbs	LSTA9	775	H3	455
	up to 910 lbs	LSTA12	970	2-H3	910
	up to 1235 lbs	LSTA18	1235	LTT19	1350
	up to 1750 lbs	2-LSTA12	1940	LTT20	1750
	up to 2470 lbs	2-LSTA18	2470	HD2A-2.5	2565
	up to 2775 lbs	3-LSTA18	3705	HD2A-3.5	2775
	up to 3705 lbs	3-LSTA18	3705	HD5A-3	3705

To determine uplift force on header at each end, total the uplifts for each truss resting on the header and divide by 2
(assumes uniform load) Note: must use proper bolt anchors sufficient to support required load

Trusses/Girders - Uplift

up to 600 lbs - use H2.5A top, no special device required at bottom
over 600 lbs but under 990 lbs use H10 top, no special device required at bottom
up to 1215 lbs use TS22 or equivalent at top and LTT19 at bottom
up to 1750 lbs use 2-TS22 or equivalent at top and LTT20 at bottom
up to 2430 lbs use 2-TS22 or equivalent at top and HD2A bottom
up to 3645 lbs use 3-TS22 or equivalent at top and HD5A bottom
Must Use proper bolt anchors

Note: it is the contractors responsibility to provide a continuous load path from truss/rafter/ridge beam to foundation

Strap rafters to truss or at each end with min uplift resistance of 450 lbs each end
Strap ridge beam at each end with min uplift resistance of 1800 lbs

Note: Four (4) 12d comm toenails (2 on each side) required per truss/rafter per bearing point into plate to resist both lateral loads (wall to truss) and transverse loads (max plate height =12', not including gable)

Horizontal Resistance (from truss loads) - Note: these devices are in addition to required toe-nails

up to 110 lbs - use H2.5A
up to 525 lbs use H10
up to 1090 lbs use H10 plus A23

Note: hardware to be used must satisfy both uplift and horizontal resistance, combination of devices is acceptable

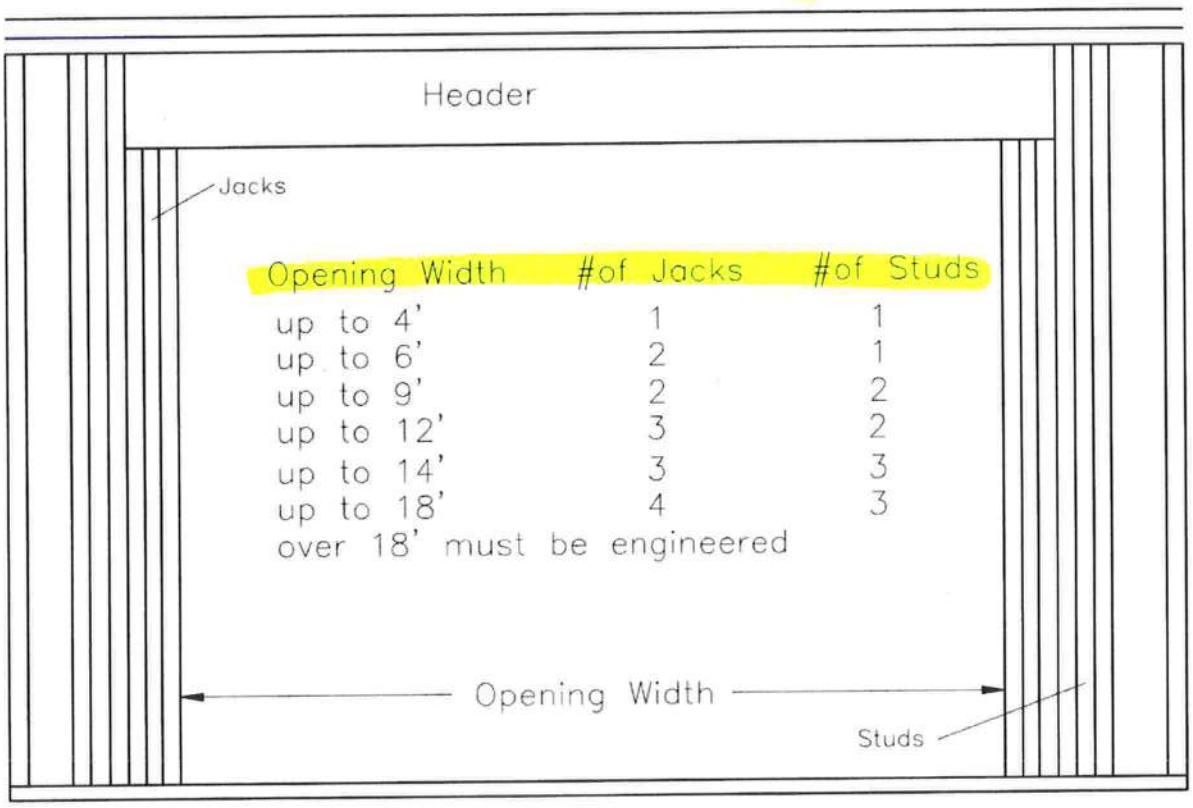
	top		bottom	
BEAM SEATS	LSTA18*	1235	LTT19*	1350
POSTS	2-LSTA18	2400	ABU44 or ABU66	2200
*** or per truss engineering**			Must Use proper bolt anchors	

STUDS

Wall Sheathing Nailing Adequate Exterior Walls bottom (8d nails at 3" O.C.), must cover sill plate
Wall Sheathing Nailing Adequate Exterior Walls Top (8d nails at 3" O.C.), as long as sheathing covers top plate, otherwise use SP2 @32" O.C. in addition to sheathing nailing,
Use SP2 top and SP1 bottom each stud an ancor bolts @ 32" O.C. for all interior load bearing walls that have uplift. Interior anchor bolts to be 1/2" x 8" A307 or 1/2" x 6" wedge anchor with 2" washers

Please Note:All Beams must be sheathed or strapped to double top plate (if applicable)
An equivalent device of same or other manufactures can be substituted for any of the devices specified on this page as long as it meets the required load capacities
Note: For nailing into SPF members, multiply table values by .86

Number of Jack and Stud Requirements per Opening Width
2x4 or 2x6 SPF #1&2 Construction – max Wall Height=12'
(based on 16" O.C. Stud Spacing)



Opening Width	#of Jacks	#of Studs
up to 4'	1	1
up to 6'	2	1
up to 9'	2	2
up to 12'	3	2
up to 14'	3	3
up to 18'	4	3

over 18' must be engineered

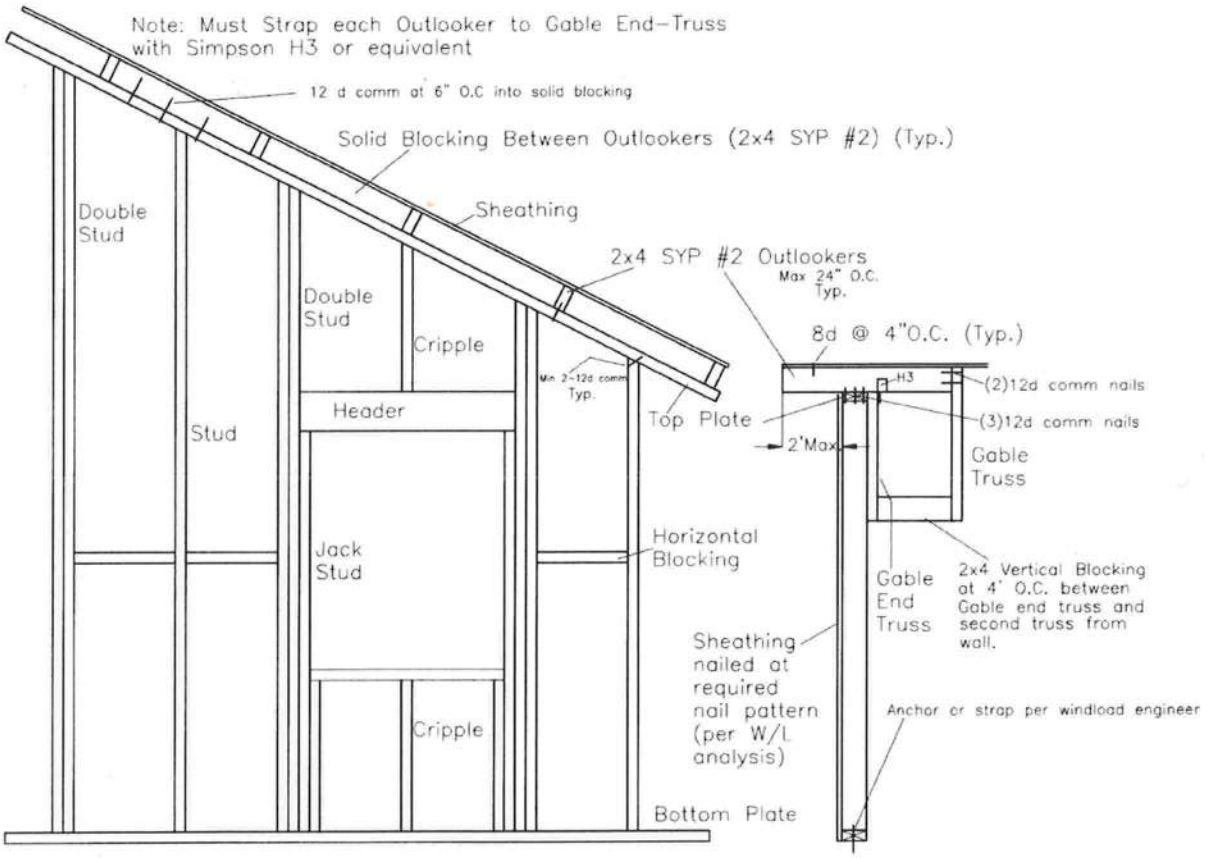
Note – Based on uniform loads. Heavy concentrated loads require engineering review

Acceptable Framing Method for Balloon Framed Gable End–Wall with trusses

Balloon Frame with 2x4 SPF No.1&2 @ 16" O.C. with the Following Conditions:
Up to 12' – Block at 8'
Over 12' but Under 14' – 2x4 SYP #2 at 16" O.C. and Block at 4',8'&12'
Over 14' but Under 17' – Double 2x4 SYP #2 at 16" O.C. and block at 4',8',12'&16'
Over 17' but Under 20' – Triple 2x4 SYP #2 at 16" O.C. and block at 4',8',12'&16'
Over 20' but Under 23' – Quadruple 2x4 SYP #2 at 16" O.C.and block at 4',8',12',16'&20'
Over 23' – Must be Engineered

In all cases a minimum of a double full length stud is required at each side of openings such as doors and windows

Blocking must be parallel to top and bottom plates with a minimum of 2–12d comm nails



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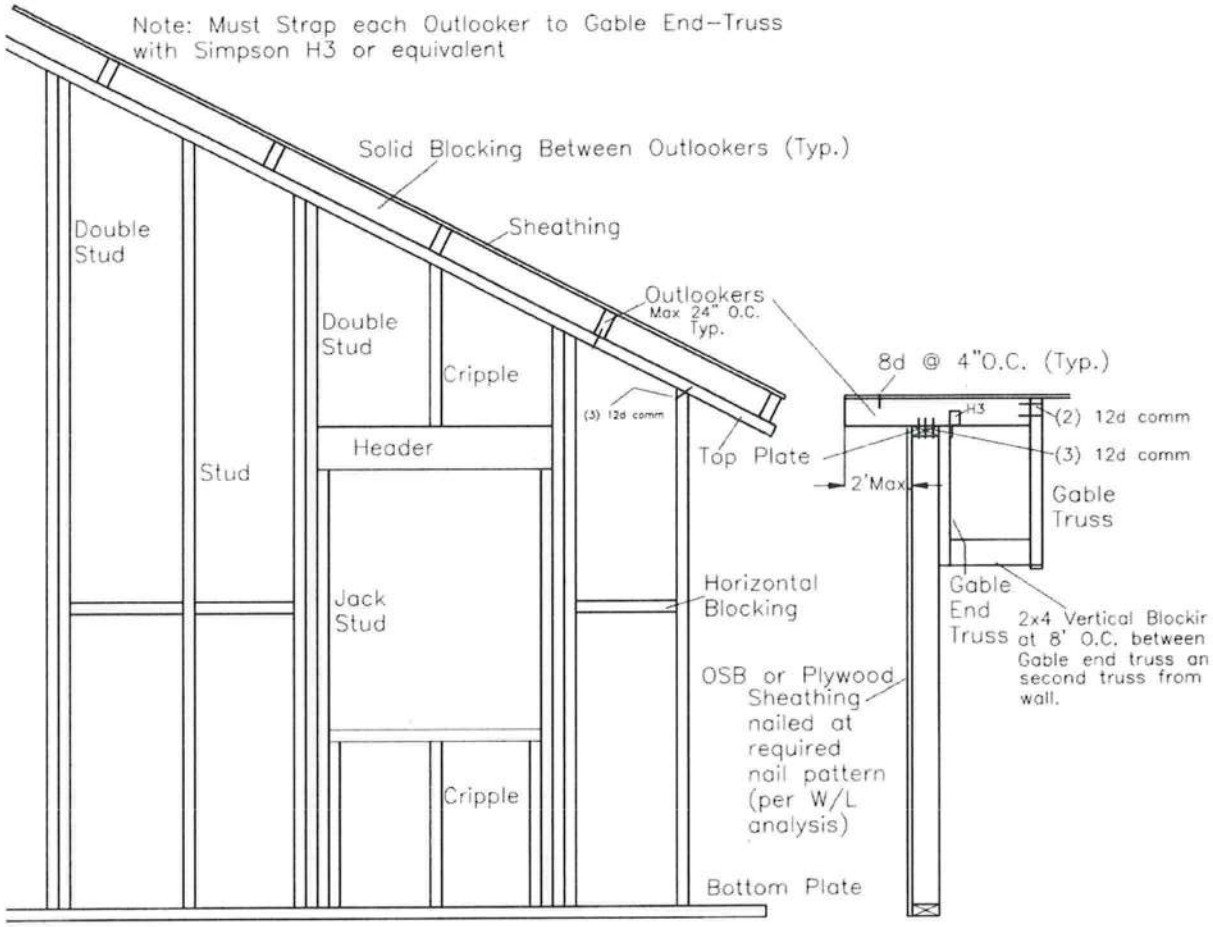
Acceptable Framing Method for Balloon Framed Gable End-Wall

Balloon Frame with 2x6 SYP No.2 @ 16" O.C. with the Following Conditions:
Up to 18' – Block at 8' and 16'
Over 18' but Under 21' – Double stud and block at 8' & 16'
Over 21' but Under 24' – Triple SYP #2 and block at 4',8',12' & 16'
Over 24' – Must be Engineered

In all cases a minimum of a double full length stud is required at each side of openings such as doors and windows

Blocking must be parallel to top and bottom plates with a minimum of 3–12d comm nails



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Gable Endwall Framing with Gable End–Truss