

TIMBER

- EACH PIECE OF STRUCTURAL LUMBER, SHEATHING AND TIMBER SHALL BE MARKED WITH THE GRADE BY SUCH COMPETENT AND RELIABLE ORGANIZATION WHOSE REGULAR BUSINESS IS TO ESTABLISH LUMBER GRADES.
- ALL LUMBER EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE, SHALL BE MILL SIZED AND SURFACED ON (4) SIDES. ALL SHALL BE STRAIGHT STOCK, FREE FROM WARP OR CUP, AND SINGLE LENGTH PIECES. SPLICES WILL NOT BE PERMITTED EXCEPT WHERE SPECIFICALLY SO DETAILED OR AS DIRECTED BY THE ENGINEER.
- ROUGH HARDWARE, JOIST HANGERS, STRAPS, HOLDOWNS, ETC., SHALL BE MANUFACTURED BY "SIMPSON" COMPANY OR APPROVED EQUAL. THE MAXIMUM SIZE AND NUMBER OF FASTENERS SPECIFIED BY THE MANUFACTURER SHALL BE USED UNLESS NOTED OTHERWISE.
- BLOCKING AND FIRESTOPPING TO BE INSTALLED AS REQUIRED TO SUPPORT ALL ITEMS OF FINISH SUCH AS BULKHEADS AND BUCKS. PROVIDE FIREBLOCKING TO CUT OFF ALL CONCEALED DRAFT OPENINGS, BOTH VERTICAL AND HORIZONTAL, BETWEEN CEILING AND FLOOR AREAS. (AS REQUIRED BY BUILDING OFFICIAL AND ARCHITECT).
- BOLTS (IF APPLICABLE) SHALL BE INSTALLED IN HOLES BORED WITH A BIT 1/16" LARGER THAN THE DIAMETER OF THE DIAMETER OF THE BOLT. BOLTS AND NUTS SEATING ON WOOD SHALL HAVE CUT STEEL WASHERS UNDER HEADS AND NUTS. NUTS SHALL BE PULLED TIGHT AND AGAIN CHECKED AND TIGHTEN JUST PRIOR TO ENCLOSING BOLTED MEMBERS. COUNTER BORE FOR BOLTED HEADS OR NUTS ONLY WHERE SO INDICATED ON THE DRAWINGS AND THEN TO SUFFICIENT DEPTH TO HOUSE THE BOLT HEAD OR NUT AND WASHER. CUT OFF EXCESSIVE BOLT PROJECTION WHERE NECESSARY. NICK THREADS TO PREVENT LOOSENING.
- LAG SCREWS (IF APPLICABLE) SHALL BE SCREWED AND NOT DRIVEN INTO PLACE. LAG SCREWS FASTENING ONE WOOD MEMBER TO ANOTHER SHALL HAVE A PENETRATION INTO FAR MEMBER OF NOT LESS THAN (2/3) OF THE LENGTH OF THE LAG SCREW MEASURED UNDER THE HEAD U.N.O. IN PLACING LAG SCREWS IN WOOD, A HOLE SHALL FIRST BE BORED OF THE SAME DIAMETER AND DEPTH OF THE SHANK OF THE SCREW. AFTER WHICH THE HOLE SHALL BE CONTINUED TO A DEPTH EQUAL TO THE LENGTH OF THE LAG SCREW WITH A DIAMETER EQUAL TO THE DIAMETER OF THE SCREW AT THE ROOT OF THE THREAD.
- COMMON NAILS SHOULD BE USED WHEN NAILING IS SPECIFIED ON THESE PLANS (U.O.N.), SUCH AS AT SHEARWALLS AND DIAPHRAGMS. ALL OTHER NAILING MAY BE OF THE "BOX OR SINKER" TYPE.
- SHEATHING GRADE SHALL BE CD-X WITH EXTERIOR GLUE P.S. 1-83, UNLESS OTHERWISE NOTED OF PLANS:

DESCRIPTION	REQUIREMENTS
ROOF SHEATHING	5/8" APA RATED ROOF PLYWOOD SHEATHING. NAIL W/ 10d @ 6" O.C. BOUNDARY/EDGES AND 12" O/C FIELD.
FLOOR SHEATHING	3/4" APA RATED FLOOR PLYWOOD SHEATHING. NAIL W/ 10d @ 4" O.C. BOUNDARY/EDGES AND 12" O.C. FIELD.
WALL SHEATHING	1/2" APA RATED WALL PLYWOOD SHEATHING. NAIL W/ 10d @ 4" O.C. BOUNDARY/EDGES AND 12" O/C FIELD.
	WAFERBOARD AND ORIENTED STRAND BOARD CONFORMING TO NER-108 AND PRODUCT STANDARD 2-92, AND WITH THE SAME EXPOSURE DURABILITY CLASSIFICATION, NOMINAL THICKNESS AND SPAN/INDEX RATIO MAY BE SUBSTITUTED FOR PLYWOOD ONLY IF APPROVED BY THE STRUCTURAL ENGINEER.

- NOTES:
 - THE NAIL EDGE DISTANCE FOR 3" NOMINAL (2-1/2" ACTUAL) WIDE MEMBERS ON WHICH SHEETS ARE SPLICED SHALL BE 3/4" MIN.
 - THE NAIL EDGE DISTANCE FOR 2" NOMINAL (1-1/2" ACTUAL) WIDE MEMBERS ON WHICH SHEETS ARE SPLICED SHALL BE 3/8" MIN. CARE SHALL BE MADE NOT TO SPLIT THE MEMBERS.
 - NAILS MAY BE SLANT DRIVEN TO MAINTAIN MINIMUM EDGE DISTANCE.
- ALL ROUGH CARPENTRY WILL PRODUCE JOINTS TRUE AND TIGHT AND WELL NAILED WITH MEMBERS ASSEMBLED IN ACCORDANCE WITH THE DRAWINGS AND ALL PERTINENT BUILDING CODES. THE SHIMMING OF SILLS, JOISTS SHORT STUDS, TRIMMERS, HEADERS OR OTHER FRAMING MEMBERS SHALL NOT BE PERMITTED. ALL WALLS AND PARTITIONS SHALL BE STRAIGHT, PLUMB AND ACCURATELY LOCATED. CAREFULLY SELECT ALL STRUCTURAL MEMBERS. INDIVIDUAL PIECES SHALL BE SELECTED SO THAT KNOTS AND OBVIOUS MINOR DEFECTS WILL NOT INTERFERE WITH THE PLACING OF BOLTS, OR PROPER NAILING OR THE MAKING OF SOUND CONNECTIONS. LUMBER MAY BE REJECTED BY THE ENGINEER FOR EXCESSIVE WARP, TWIST, BOW OR CROOK, MILDEW, FUNGUS OR MOLD AS WELL AS FOR IMPROPER GRADE MARKINGS, DEFECTS WHICH WILL RENDER A PIECE UNABLE TO SERVE ITS INTENDED FUNCTION SHALL BE DISCARDED.
- UNLESS OTHERWISE NOTED ON PLANS, LUMBER SHALL BE AT LEAST OF THE GRADES SHOWN IN THE TABLE BELOW. ALL LUMBER SHALL BE SURFACED AND FREE OF HEART CENTER. LUMBER SHALL MEET PIECES AND COMMERCIAL GRADE AS INDICATED ON THE PLANS AND THE DESIGN VALUES FOR VISUALLY GRADED LUMBER IN ACCORDANCE WITH THE NATIONAL DESIGN SPECIFICATION BY THE NATIONAL FOREST PRODUCTS ASSOCIATION, WHICHEVER IS GREATER. BASED VALUES SHOWN MAY BE ADJUSTED IN ACCORDANCE WITH THE NATIONAL DESIGN SPECIFICATION. "DF" INDICATES DOUGLAS-FIR-LARCH, "HF" INDICATES HEM-FIR "SPF" INDICATES SPRUCE-PINE-FIR.

TIMBER (CONT'D)

TYPE	PRIMARY USE	SIZES (IN)	MINIMUM GRADE	BASE VALUES (PSI)				
				Fb	Fv	*E	Fc//	Fc(perp)
SAWN LUMBER	STUDS	2x	DF #2	700	180	1.4	850	625
	JOISTS	2" & WIDER	DF #2	900	180	1.6	1350	625
	BEAMS	5"x5" & LARGER	DF #2	875	170	1.3	600	625
	POSTS	5"x5" & LARGER	DF #2	750	170	1.3	700	625
MICRO-LAMS	BEAMS	ANY	LAM	2400	275	1.8	2400	500
PSL	BEAMS	ANY	LAM	2900	285	2.0	2900	750

- "GANG-NAIL" PRE-ENGINEERED TRUSSES ARE TO BE CONSTRUCTED WITH METAL PLATE CONNECTORS AND DESIGNED AND MANUFACTURED BY OTHERS. DESIGN, CONSTRUCTION, AND INSTALLATION SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION AND OF THE TRUSS PLATE INSTITUTE. PROVIDE ALL REQUIRED BLOCKING AND BRACING REQUIRED BY THE MANUFACTURER FOR CONSTRUCTION AND ERECTION IN ADDITION TO BLOCKING SHOWN ON THE STRUCTURAL DETAILS. MEMBERS OF A COMPLETED TRUSS ARE NEVER TO BE NOTCHED OR CUT. THE TRUSS MANUFACTURER SHALL PROVIDE DESIGN CALCULATIONS AND SHOP DRAWINGS SIGNED AND SEALED BY A STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION. THE DESIGN SHALL ACCOUNT FOR ALL UNIFORM LOADS AND EQUIPMENT LOADS. CONTACT THE STRUCTURAL ENGINEER FOR UNIFORM LOADING AND REQUIREMENTS IF REQUIRED.

— TRUSS SHOP DRAWINGS SHALL SHOW THE TRUSS DESIGN LOADS, SIZE AND GRADE OF THE CHORDS AND WEBS, LOCATIONS OF THE JOINTS AND CONNECTIONS, SIZE AND TYPE OF METAL PLATES AND ALL BRACING AND BLOCKING REQUIREMENTS.

— LOCATION OF TRUSS BRACING REQUIRED BY THE PLANS OR TRUSS MANUFACTURER'S DESIGN SHALL BE INDICATED ON EACH TRUSS BY PAINT MARKING.

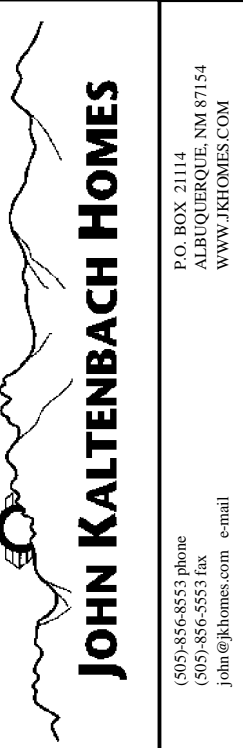
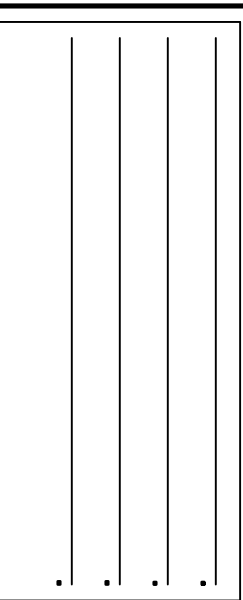
- PLYWOOD WEB JOISTS NOTED "TJ" ARE TO BE MANUFACTURED BY TRUSS-JOIST MACMILLAN (NER-200 & ICBO ER-4354) OR APPROVED EQUAL. PROVIDE BLOCKING, WEB STIFFENERS, AND BRACING OVER THE SPAN PER THESE STRUCTURAL DRAWINGS AND ALL MANUFACTURER'S RECOMMENDATIONS. TOP AND BOTTOM FLANGES OF JOISTS ARE NEVER TO BE CUT AND ALL HOLES THROUGH THE JOIST WEB ARE TO BE SPECIFICALLY APPROVED BY STRUCTURAL ENGINEER.
- WHERE PARALLAM "PSL" MEMBERS ARE INDICATED ON THE PLANS AND SCHEDULES THEY SHALL BE MANUFACTURED BY TRUS-JOIST MACMILLAN (NER-482 & ICBO ER-4979), OR BE AN APPROVED EQUAL PRODUCT. MEMBERS SHOWN ON THE PLANS AND SCHEDULES ARE DETERMINED FROM MANUFACTURER SUPPLIED INFORMATION AND SHOULD BE REVIEWED FOR COMPLIANCE BY THE MANUFACTURER'S CIVIL OR STRUCTURAL ENGINEER. LOADING INFORMATION MAY BE PROVIDED UPON REQUEST. NOTCHES, HOLES OR CUTS SHOWN IN THE TYPICAL DETAILS ARE ALLOWED WITHOUT ADDITIONAL APPROVAL; ALL OTHER MEMBER MODIFICATIONS ARE TO BE APPROVED BY THE STRUCTURAL ENGINEER.
- WHERE MICRO-LAM "LM" MEMBERS ARE INDICATED ON THE PLANS AND SCHEDULES THEY SHALL BE MANUFACTURED BY TRUSS-JOIST MACMILLAN (NER-481 & ICBO ER-4979), OR BE AN APPROVED EQUAL PRODUCT. BUILT UP MEMBERS ARE TO BE CONNECTED PER THE MANUFACTURER'S REQUIREMENTS UNLESS NOTED OTHERWISE IN THE BEAM SCHEDULE. MEMBERS SHOWN ON THE PLANS AND SCHEDULES ARE DETERMINED FROM MANUFACTURE SUPPLIED INFORMATION AND SHOULD BE REVIEWED FOR COMPLIANCE BY THE MANUFACTURER'S CIVIL OR STRUCTURAL ENGINEER. LOADING INFORMATION MAY BE PROVIDED UPON REQUEST. NOTCHES, HOLES, OR CUTS NOT SPECIFICALLY NOTED FOR EACH MEMBER ARE NOT ALLOWED WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER.
- WHERE TIMBERSTRAND "LSL" MEMBERS ARE INDICATED ON THE PLANS OR SCHEDULES, THEY SHALL BE MANUFACTURED BY TRUSS-JOIST MACMILLAN (NER-481 & ICBO ER-4979), OR AN APPROVED EQUAL PRODUCT. MEMBERS SHOWN ON THE PLANS AND SCHEDULES ARE DETERMINED FROM MANUFACTURE SUPPLIED INFORMATION AND SHOULD BE REVIEWED FOR COMPLIANCE BY THE MANUFACTURER'S CIVIL OR STRUCTURAL ENGINEER. LOADING INFORMATION MAY BE PROVIDED UPON REQUEST.

FASTENING SCHEDULE		
CONNECTION	FASTENING ^{a,m}	LOCATION
1. JOIST TO SILL GIRDER	3-8d common 3-3"x0.131" nails 3-3"14 gage staples	toenail
2. BRIDGING TO JOIST	2-8d common 2-3"x0.131" nails 2-3"14 gage staples	toenail each end
3. 1"x6" SUBFLOOR OR LESS TO EACH JOIST	2-8d common	face nail
4. WIDER THA 1"x6" SUBFLOOR TO EACH JOIST	3-8d common	face nail
5. 2" SUBFLOOR TO JOIST OR GIRDER	2-16d common	blind and face nail
6. SOLE PLATE TO JOIST OF BLOCKING	16d at 16" o.c. 3"x0.131" nails at 8" o.c. 3"14 gage staples at 12" o.c.	typical face nail
SOLE PLATE TO JOIST OR BLOCKING AT BRACED WALL PANEL	3-16d at 16" 4-3"x 0.131"nails at 16" 4-3" 14 gage staples per 16"	braced wall panels
7. TOP PLATE TO STUD	2-16d common 3-3"x0.131"nails 3-3" 14 gage staples	end nail
8. STUD TO SOLE PLATE	4-8d common 4-3"x0.131" nails 3-3" 14 gage staples	toenail
	2-16d common 3-3"x0.131"nails 3-3" 14 gage staples	end nail
9. DOUBLE STUDS	16d at 24" o.c. 3"x0.131" nails at 8" o.c. 3"14 gage staples at 8" o.c.	face nail
10. DOUBLE TOP PLATES	16d at 16" o.c. 3"x0.131" nails at 12" o.c. 3"14 gage staples at 12" o.c.	typical face nail
DOUBLE TOP PLATES	8-16d common 12-3"x0.131"nails 12-3" 14 gage staple typ. face nail	lap splice
11. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE	3-8d common 3-3"x0.131" nails 3-3"14 gage staples	toenail
12. RIM JOIST TO TOP PLATE	8d at 6" (152mm) o.c. 3"x0.131" nail at 6" o.c. 3"14 gage staple at 6" o.c.	toenail
13. TOP PLATES, LAPS AND INTERSECTIONS	2-16d common 3-3"x0.131"nails 3-3" 14 gage staples	face nail
14. CONTINUOUS HEADER, TWO PIECES	16d common	16" o.c. along edge
15. CEILING JOISTS TO PLATE	3-8d common 5-3"x0.131"nails 5-3" 14 gage staples	toenail
16. CONTINUOUS HEADER TO STUD	4-8d common	toenail
17. CEILING JOISTS, LAPS OCER PARTITIONS (SEE SECTION 2308.10.4.1, TABLE 2308.10.4.1)	3-16d common minimum 4-3"x0.131"nails 4-3" 14 gage staples	face nail
18. CEILING JOISTS TO PARALLEL RAFTERS (SEE SECTION 2308.10.4.1, TABLE 2308.10.4.1)	3-16d common minimum 4-3"x0.131"nails 4-3" 14 gage staples	face nail
19. RAFTER TO PLATE (SEE SECTION 2308.10.1, TABLE 2308.10.1)	3-8d common 3-3"x0.131"nails 3-3" 14 gage staples	toenail
20. 1" DIAGONAL BRACE TO EACH STUD AND PLATE	2-8d common 2-3"x0.131"nails 2-3" 14 gage staples face nail	face nail
21. 1"x8" SHEATHING TO EACH BEARING WALL	2-8d common	face nail
22. WIDER THAN 1"x8" SHEATHING TO EACH BEARING	3-8d common	face nail
23. BUILT-UP CORNER STUDS	16d common 3"x0.131"nails 3" 14 gage staples	24" o.c. 16" o.c. 16" o.c.
24. BUILT-UP GIRDER AND BEAMS	20d common 32" o.c. 3"x0.131" nails at 24" o.c. 3"14 gage staples at 24" o.c.	face nail at top and bottom staggered on opposite sides
	2-20d common 3-3"x0.131"nails 3-3" 14 gage staples	face nail at ends at each splice
25. 2" PLANKS	16d common	at each bearing
26. COLLAR TIE TO RAFTER	3-10d common 4-3"x0.131"nails 4-3" 14 gage staples face nail	face nail
27. JACK RAFTER TO HIP	3-10d common 4-3"x0.131" nails 4-3"14 gage staples	toenail
	2-16d common 3-3"x0.131"nails 3-3" 14 gage staples	face nail
28. ROOF RAFTER TO 2-BY RIDGE BEAM	2-16d common 3-3"x0.131" nails 3-3"14 gage staples	toenail
	2-16d common 3-3"x0.131"nails 3-3" 14 gage staples	face nail
29. JOIST TO BAND JOIST	3-16d common 5-3"x0.131"nails 5-3" 14 gage staples	face nail
30. LEDGER STRIP	3-16d common 4-3"x0.131"nails 4-3" 14 gage staples	face nail

FASTENING SCHEDULE		
CONNECTION	FASTENING ^{a,m}	LOCATION
31. WOOD STRUCTURAL PANELS AND PARTICLEBOARD, ^b SUBFLOOR, ROOF AND WAL SHEATHING (TO FRAMING):	1/2" and less 6d ^{n,1} 2½"x0.113" nail ^p ¼"x16 gage ^e 8d ^e or 6d ^e 2½"x0.113" nail ^p 2" 16 gage ^e 8d ^e	
SINGLE FLOOR (COMBINATION SUBFLOOR-UNDERLAYMENT TO FRAMING):	¼"x to 1½" 10d ^d or 8d ^d ¾" and less 6d ^d ¾" to 1" 8d ^d ¼"x to 1½" 10d ^d or 8d ^d	
32. PANEL SIDING (TO FRAMING)	1/2" or less 6d ^f 8d ^f	
33. FIBERBOARD SHEATHING: ⁹	½" 2½" No. 11 gage roofing nail ^h 6d common nail No. 16 gage staple ⁱ No. 11 gage roofing nail ^h 8d common nail No. 16 gage staple ⁱ	
34. INTERIOR PANELING	¼" ¾" 4d ^j 6d ^k	

FOOT NOTES:

- COMMON OR BOX NAILS ARE PERMITTED TO BE USED EXCEPT WHERE OTHERWISE STATED.
- NAILS SPACED AT 6 INCHES ON CENTER AT EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS EXCEPT 6 INCHES AT SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLEBOARD DIAPHRAGMS AND SHEARWALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.
- COMMON OR DEFORMED SHANK.
- COMMON.
- DEFORMED SHANK.
- CORROSION-RESISTANT SIDING OR CASING NAIL.
- FASTENERS SPACES 3 INCHES ON CENTER AT EXTERIOR EDGES AND 6 INCHES O.C. AT INTERMEDIATE SUPPORTS.
- CORROSION-RESISTANT ROOFING NAILS WITH 7/16-INCH-DIAMETER HEAD AND 1 1/2-INCH LENGTH FOR 1/2-INCH SHEATHING AND 1 3/4-INCH LENGTH FOR 25/32-INCH SHEATHING.
- CORROSION-RESITANT STAPLES WITH NOMINAL 7/16-INCH CROWN AND 1 1/8-INCH LENGTH FOR 1/2-INCH SHEATHING AND 1 1/2-INCH LENGTH FOR 25/32-INCH SHEATHING. PANEL SUPPORTS AT 16 INCHES (20 INCHES IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).
- CASING OR FINISH NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS.
- PANEL SUPPORTS AT 24 INCHES. CASING OR FINISH NAILS SPACED AT 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS.
- FOR ROOF SHEATHING APPLICATIONS, 8d NAILS ARE THE MINIMUM REQUIRED FOR WOOD STRUCTURAL PANELS.
- STAPLES SHALL HAVE A MINIMUM CROWN WIDTH OF 7/16 INCH
- FOR ROOF SHEATHING APPLICATIONS, FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.
- FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS FOR SUBFLOOR AND WALL SHEATHING AND 3 INCHES ON CENTER AT EDGES, 6 INCHES AT INTERMEDIATE SUPPORTS FOR ROOF SHEATHING.
- FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.



GENERAL WOOD NOTES

REVISIONS: 7/8/05

DATE: 5/16/05

CUSTOM

