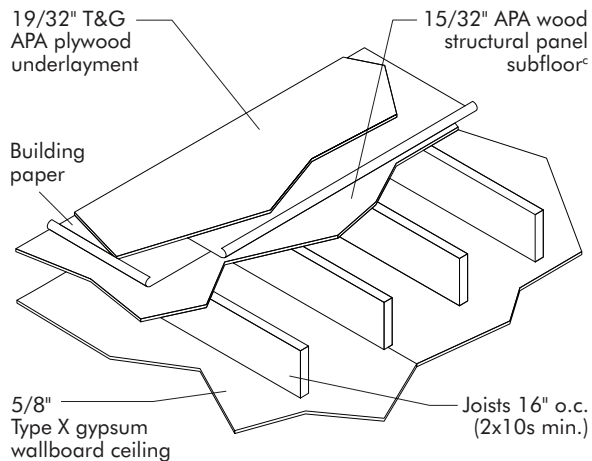


ONE-HOUR COMBUSTIBLE FLOOR-CEILING AND ROOF-CEILING ASSEMBLIES—LUMBER JOISTS

Some rated assemblies incorporate proprietary products. When designing and specifying, check the Underwriters Laboratories Inc. (U.L.) *Fire Resistance Directory* for complete details on a particular assembly. A change in details may affect the fire resistance of the assembly.

28A TWO-LAYER FLOOR SYSTEM WITH LUMBER JOISTS^{a,b}

For details, see U.L. Design Nos. L006, L201, L202, L206, L209, L210, L211 (2 hr), L212, L501, L502, L503, L505 (2 hr), L507, L511 (2 hr), L512, L513, L514, L515, L516, L517, L519, L522, L523, L525, L526, L532(1-1/2 hr), L533, L535, L536 (2 hr), L537, L539, L540, L541 (2 hr), L545, and L569. Also see U.L. Design Nos. L524 with steel joists spaced 24" o.c., L521, L528, L529, and L534 with wood trusses spaced 24" o.c., L549 with steel trusses spaced 48" o.c., and L527 with steel joists spaced 24" o.c.



- a. Substitution of 1-1/8" APA RATED STURD-I-FLOOR 48 oc for the combination of subfloor, paper and underlayment is often allowed. Check with local building official.
- b. Most building codes do not require the top layer of two-layer rated assemblies when used for roofs.
- c. Tests have shown that substitution of OSB or composite APA RATED SHEATHING subfloor and APA RATED STURD-I-FLOOR underlayment for the plywood panels in rated assemblies will not jeopardize fire-resistance ratings. Substitution is based on equivalent panel thickness, except that in two-layer wood assemblies, 7/16" OSB subfloor panels may be used in place of 15/32" plywood subfloor panels.
- d. Construction adhesive to conform to APA Specification AFG-01 or ASTM D3498.
- e. For proprietary names, see latest U.L. *Fire Resistance Directory*.

28B SINGLE-LAYER FLOOR SYSTEM WITH LUMBER JOISTS

For details, see U.L. Design No. L513. Also see U.L. Design Nos. L504 for stressed-skin panel (5/8" APA RATED STURD-I-FLOOR or SHEATHING plywood with joists spaced 12" o.c.), L507 for 5/8 CAT APA RATED STURD-I-FLOOR plywood with joists spaced 16" o.c., L508 for 1-1/8 CAT APA RATED STURD-I-FLOOR plywood with joists spaced 48" o.c., and L539, L540 with joists spaced 16" or 24" o.c. and separate ceiling assembly (for modular housing units). Also see U.L. Design Nos. L524 and L543 with steel joists spaced 19.2" or 24" o.c. (L543 with separate ceiling assembly).

