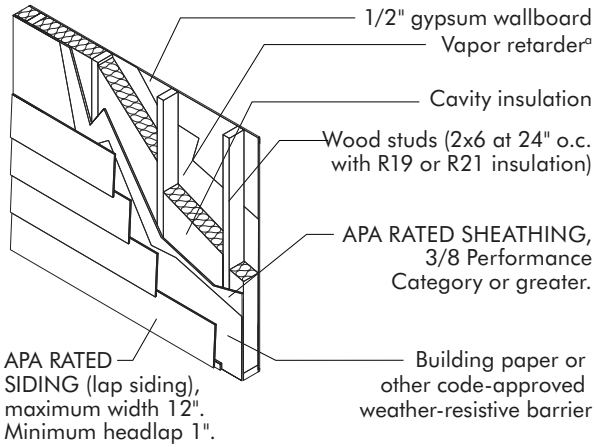
ENERGY-EFFICIENT WALL ASSEMBLIES

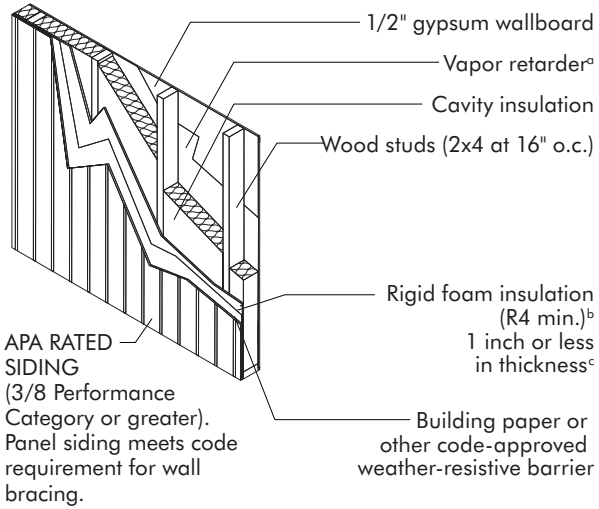
APA RATED LAP SIDING OVER WOOD STRUCTURAL PANEL SHEATHING AND ADVANCED FRAMING



	R
Outside surface (15 mph wind)	0.17
APA RATED SHEATHING	0.43 - 0.78
Cavity insulation	
Option A - R20	20.00
Option B - R21	21.00
1/2" gypsum wallboard	0.45
Inside surface (stillair)	0.68

Insulation Option	Average U[(b)]	Minimum Effective R = 1/U
A	0.061	16.27
B	0.060	16.70

APA RATED SIDING OVER RIGID FOAM INSULATION SHEATHING AND CONVENTIONAL FRAMING



	R
Outside surface (15 mph wind)	0.17
APA RATED SIDING	0.43 - 0.78
Rigid foam insulation	4.00 (min.)
Cavity insulation	
Option C – R13	13.00
Option D – R15	15.00
Option E – R20	20.00
Option F – R21	21.00
1/2" gypsum wallboard	0.45
Inside surface (still air)	0.68

Insulation Option	Average U(b)	Minimum Effective R = 1/U
C	0.065	15.44
D	0.061	16.42
E	0.048	20.94
F	0.047	21.45

(a) See APA Technical Note: APA Rated Siding Panels over Rigid Foam Insulation Sheathing, Form C465.
(b) Average U values include adjustment for 25% framing area with studs spaced 16" o.c. When studs are spaced 24" o.c. (22% framing area), average U values are slightly lower and corresponding R values are higher. Average U value is based on R value at framing of 4.38 for 2x4 wood studs and 6.88 for 2x6 wood studs.
(c) Consult rigid foam manufacturer for R-value and panel permeability values. (See APA Technical Topics: Wood Moisture Content and the Importance of Drying in Wood Building Systems, Form TT-111).