

Constructing an R40 Wall – One Option



2X6 outer and 2X4 inner walls, 24" stud spacing along wall, and 2-1/2" spacing between walls. Adding blown-in-batt (BIB) fiberglass insulation yields a wall with nominally R47 thermal resistance (considering insulation only), but actually about R37 when the effect of wood members is included. Sheetrock covers interior.

Some alternate constructions for similar thermal resistance include:

- A) 2X6 stud wall with BIB insulation and 3" of rigid foam insulation on outside of sheathing but under siding.
- B) 2X8 stud wall with BIB insulation and ZIP System R-Sheathing with 2-1/2" of rigid foam insulation bonded to the inside of the sheathing.
- C. Double-stud wall as here, but with more space between walls and blown-in cellulose insulation (greener than fiberglass, but slightly more required).