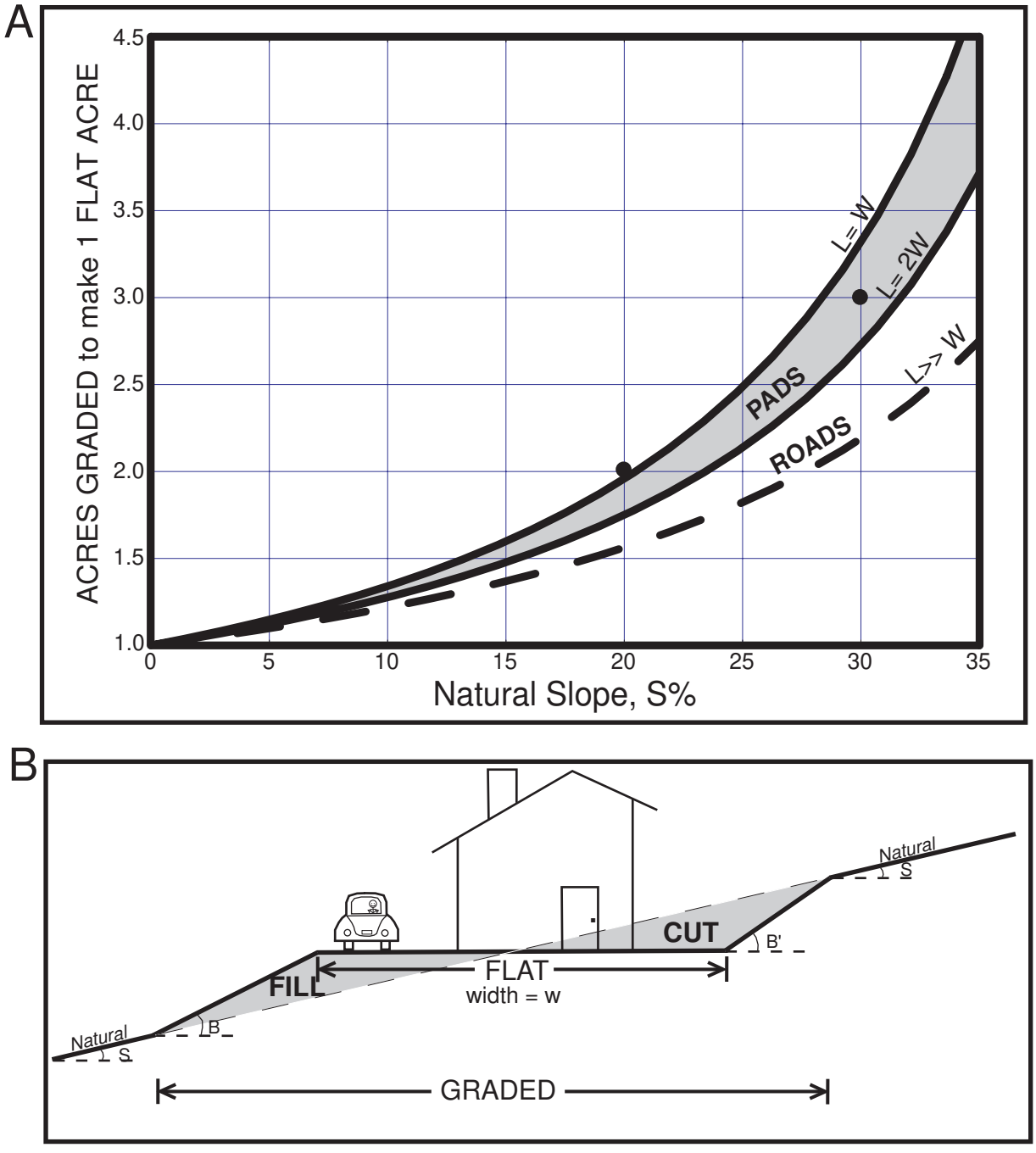

Figure 4. Surface alteration required to create a graded flat space.

A. The number of acres that must be graded to produce 1 flat acre on uniform natural slopes (S) up to 35 %. The graph also can be used with other units of area, such as square feet graded to produce 1 flat square foot. The upper curve represents a square pad (length (L) = width (W)). The middle curve represents a rectangular pad with a length twice its width (L = 2W). The dashed curve represents a hillside road (much longer than it is wide, L >> W). The volumes of cut (at angle B'= 67%) and fill (at B= 50%) are assumed equal. Dots on graph represent examples discussed in text.

B. Cross section to illustrate grading and notation. "W" is the width of the pad. "L", in part A, is the length of the pad along the slope contour ("L" is in and out of the cross section).