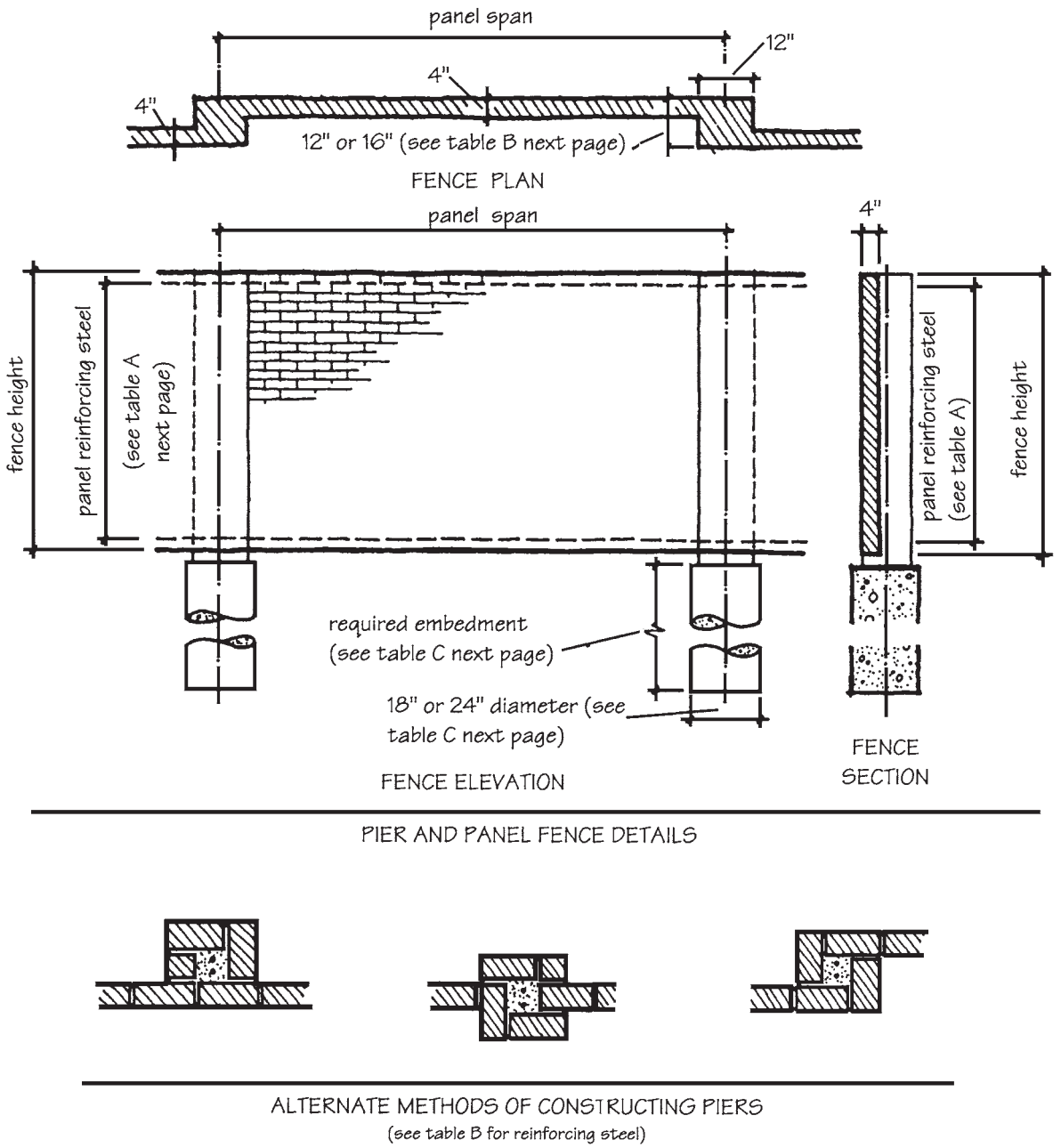

Figure 10-16 Single-wythe brick *BIA* pier and panel fences. (*From BIA* Technical Note 29A)

Mortared stone walls are laid on concrete footings poured below the frost line. Rubble stone or fieldstone walls are laid up in much the same way as dry-stack walls except that the voids and cavities are filled with mortar (*see Fig. 10-25*). Type S or Type N mortar should be used, and each course should be laid in a full mortar bed for maximum bond and strength. Building codes generally require that bond stones be uniformly distributed and account for no less than 10% of the exposed face area. Mortared rubble stone walls less than 24 in. thick must have bond stones at a maximum of 3 ft on center vertically and horizontally. For thicknesses greater than 24 in.,

TABLE A PANEL WALL REINFORCING STEEL

Wall span (ft)	Vertical Spacing* (in.)								
	Wind load 10 psf			Wind load 15 psf			Wind load 20 psf		
	A	B	C	A	B	C	A	B	C
8	45	30	19	30	20	12	23	15	9.5
10	29	19	12	19	13	8.0	14	10	6.0
12	20	13	8.5	13	9.0	5.5	10	7.0	4.0
14	15	10	6.5	10	6.5	4.0	7.5	5.0	3.0
16	11	7.5	5.0	7.5	5.0	3.0	6.0	4.0	2.5

*A, two - No. 2 bars; B, two - $\frac{3}{16}$-in. diam wires; C, two - 9 gauge wires.

TABLE B PIER REINFORCING STEEL*

Wall span (ft)	Wind load 10 psf			Wind load 15 psf			Wind load 20 psf		
	Wall height (ft)			Wall height (ft)			Wall height (ft)		
	4	6	8	4	6	8	4	6	8
8	2#3	2#4	2#5	2#3	2#5	2#6	2#4	2#5	2#5
10	2#3	2#4	2#5	2#4	2#5	2#7	2#4	2#6	2#6
12	2#3	2#5	2#6	2#4	2#6	2#6	2#4	2#6	2#7
14	2#3	2#5	2#6	2#4	2#6	2#6	2#5	2#5	2#7
16	2#4	2#5	2#7	2#4	2#6	2#7	2#5	2#6	2#7

*Within heavy lines 12 by 16-in. pier required. All other values obtained with 12 by 12-in. pier.

TABLE C REQUIRED EMBEDMENT FOR PIER FOUNDATION*

Wall span (ft)	Wind load 10 psf			Wind load 15 psf			Wind load 20 psf		
	Wall height (ft)			Wall height (ft)			Wall height (ft)		
	4	6	8	4	6	8	4	6	8
8	2′–0″	2′–3″	2′–9″	2′–3″	2′–6″	3′–0″	2′–3″	2′–9″	3′–0″
10	2′–0″	2′–6″	2′–9″	2′–3″	2′–9″	3′–3″	2′–6″	3′–0″	3′–3″
12	2′–3″	2′–6″	3′–0″	2′–3″	3′–0″	3′–3″	2′–6″	3′–3″	3′–6″
14	2′–3″	2′–9″	3′–0″	2′–6″	3′–0″	3′–3″	2′–9″	3′–3″	3′–9″
16	2′–3″	2′–9″	3′–0″	2′–6″	3′–3″	3′–6″	2′–9″	3′–3″	4′–0″

*Within heavy lines 24-in. diam. foundation required. All other values obtained with 18-in. diam. foundation.

Figure 10-17 Brick pier and panel fences. (*From BIA* Technical Note 29A)

provide one bond stone for each 6 sq ft of wall surface. The minimum thickness of the wall must be sufficient to withstand all horizontal forces and the vertical dead load of the stone itself. For relatively low mortared walls, a thickness of as little as 8 in. may be adequate, but 12-in.-thick walls are more commonly used.