

## CODE

## COMMENTARY

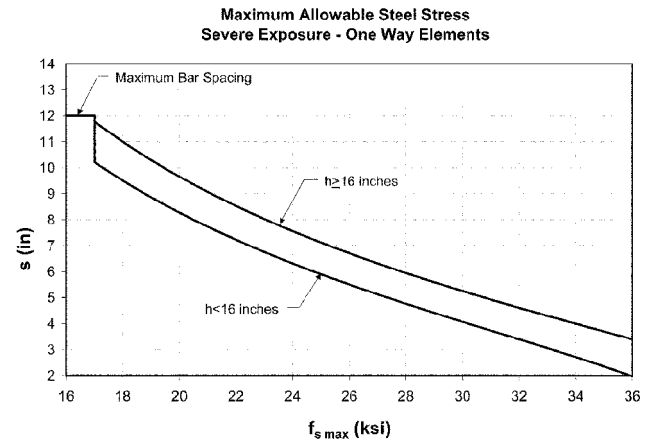


Fig. R10.6.4(c)—Maximum allowable steel stress, severe exposure—one-way elements.

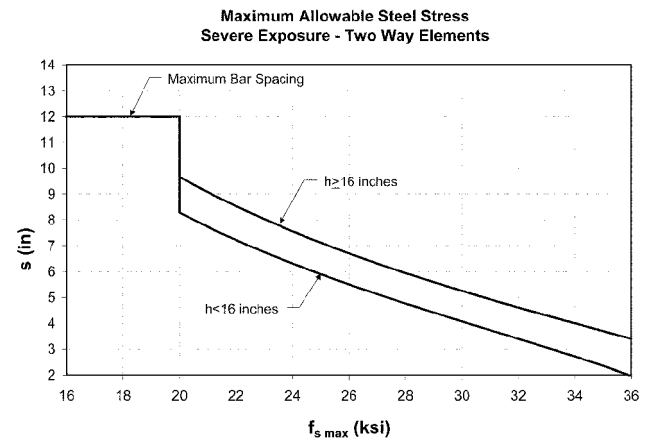


Fig. R10.6.4(d)—Maximum allowable steel stress, severe exposure—two-way elements.

**10.6.5** — Where appearance of the concrete surface is of concern and concrete cover exceeds 3 in., the service load flexural tension stress must not exceed the values given in 10.6.4, and the spacing  $s$  of reinforcement closest to the surface in tension shall not exceed that given by

$$s = \frac{540}{f_s} - 2.5c_c \quad (10-7)$$

but not greater than 12 in.

**10.6.6** — Where flanges of T-beam construction are in tension, part of the flexural tension reinforcement shall be distributed over an effective flange width as defined in 8.10, or a width equal to one-tenth the span, whichever is smaller. If the effective flange width exceeds one-tenth the span, some longitudinal reinforcement shall be provided in the outer portions of the flange.

**R10.6.5** — For most conditions, crack control criteria for environmental engineering concrete structures will satisfy appearance considerations. The exception is where a cover greater than 2 in. is used, because the cover in excess of 2 in. is neglected in Eq. (10-4) and (10-5). Equation (10-6) is taken from ACI 318-02, 10.6.4, and is intended to limit surface cracks to a width that is generally acceptable in practice.

**R10.6.6** — In major T-beams, distribution of the negative reinforcement for control of cracking must take into account two considerations: (1) wide spacing of the reinforcement across the full effective width of flange may cause some wide cracks to form in the slab near the web; and (2) close spacing near the web leaves the outer regions of the flange unprotected. The 1/10 limitation is to guard against too wide