

The moments M , M' , and M'' at the beam ends, at the column bottom, and at the column top, respectively, are obtained by rotational equilibrium of the corresponding elements (Fig. 7.5.3):

$$\begin{aligned}
 M_4 &= V_4 \frac{l}{3} = \frac{80}{3} Wh, & M'_4 &= H_4 \frac{2}{h} = \frac{80}{3} Wh, & M''_4 &= H_4 \frac{2}{h} = \frac{80}{3} Wh, \\
 M_3 &= V_3 \frac{l}{1} = \frac{80}{12} Wh, & M'_3 &= H_3 \frac{2}{h} = \frac{80}{3} Wh, & M''_3 &= H_3 \frac{2}{h} = \frac{80}{9} Wh, \\
 M_2 &= V_2 \frac{l}{1} = \frac{80}{24} Wh, & M'_2 &= H_2 \frac{2}{h} = \frac{80}{9} Wh, & M''_2 &= H_2 \frac{2}{h} = \frac{80}{15} Wh, \\
 M_1 &= V_1 \frac{l}{1} = \frac{80}{36} Wh, & M'_1 &= H_1 \frac{2}{h} = \frac{80}{15} Wh, & M''_1 &= H_1 \frac{2}{h} = \frac{80}{21} Wh, \\
 M_0 &= H_0 \frac{2}{h} = \frac{80}{21} Wh.
 \end{aligned}$$

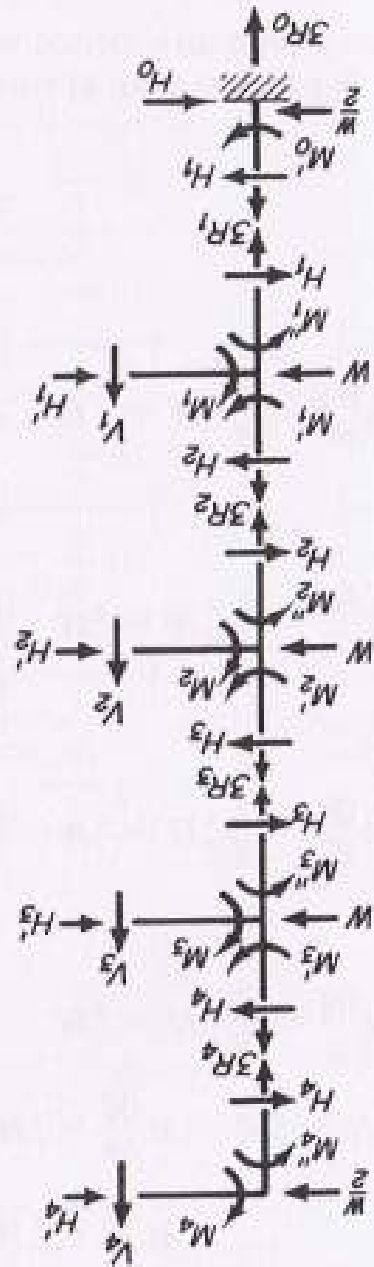


FIGURE 7.5.3

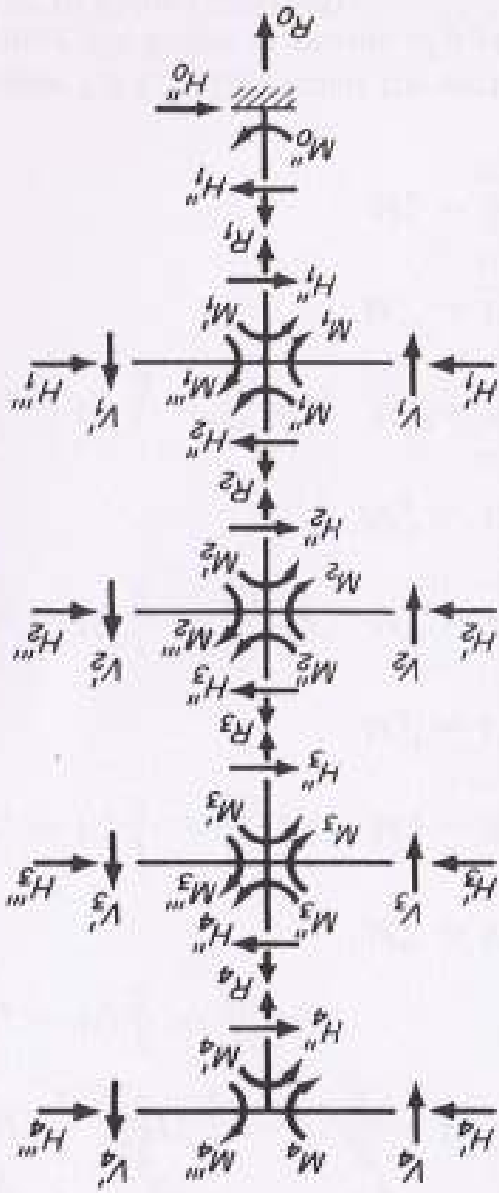


FIGURE 7.5.4