

### 3. VIGAS POSICIONADAS

3.1.- CARGAS Y MOMENTOS MAXIMOS V. ANT. a)  $S = 3.7m$   
 SON 4 VIGAS  $L_v = 33.10m, L_a = 32.37m, H = 2.00$

PP VIGA  $0.771 \times 2.5 = 1.9287m \quad M_{PV} = 752.57m$   
 PP SOBRECARGA  $0.20 \times 3.7 \times 2.5 = 1.850 \checkmark$   
 PP P+B+P  $(0.53 \times 2.5 + 0.06 \times 2.4 \times 11) / 4 = 0.747 \checkmark \quad M_{P+B+P} = 242.3 \checkmark$   
 $+ 0.04 \times 2$

SOBRECARGA, CARGA DE RUEDA DE DISCO

VEHICULO  $P_d = 1.2 \times CD \times CE \times P = 19.7377 \text{TON}$

CAMION

MS20-44+2%  $CD = (1.5 + (3/3)^{0.6} (5/L)^2 (8/L)^3)^{0.1} = 1.863 \quad M_{K} = 307.4 \checkmark$   
 CON:  $S/L_a = 0.114 \quad CE = 1 + 15.2 \times S/L_a + 78 = 1.217 \quad (M_{KMAX} = 15576 \text{ kg})$   
 $kg/L_a^3 = 3.808$   
 S/GUIDE SPECIFICATIONS FOR DISTRIBUTION OF LOADS FOR HIGHWAY BRIDGES AASHTO 1994

### 3.2.- PROPIEDADES MECANICAS

ELEM'S  
 -  $3\phi 80 @ 100$   
 $R 63 \times 3.5$   
 $\Delta 7 \times 3.5$   
 $R 70 \times 16.5$   
 $\Delta 50 \times 25$   
 $R 20 \times 170$   
 $\Delta 120 \times 15$   
 $R 140 \times 10$

3. HORM. +  $M_8 \times 27\phi 6" @ 0.11u + R 3.70 \times 20 \times 1/4$

$A = 0.7562m^2 \quad 78.31 \quad 1.4423$   
 $\eta_c = 1.0932m \quad 1.0595 \quad 1.5319$   
 $f_c = 0.400534MY \quad 425630 \quad 0.810748$   
 $W_p = \dots \quad 11/3 \quad 1.213565$   
 $W_s = 0.441709 \checkmark \quad 452540 \quad 1.732103$   
 $W_i = 0.366381 \checkmark \quad 401741 \quad 1.529234$   
 $f'_c = 300 \text{ kg/cm}^2 \quad m_p = 7.12 \quad m_c = \sqrt{250/30}$   
 $E_c = 17770 \text{ ton/cm}^2$   
 $E_s = 1970 \checkmark$

### 3.3.- TENSIONES Y POSICIONADO

$P_v + POSICION = VACIO + ELA + (P+B+P) = P_{ERM} + SC = SEDV.$

