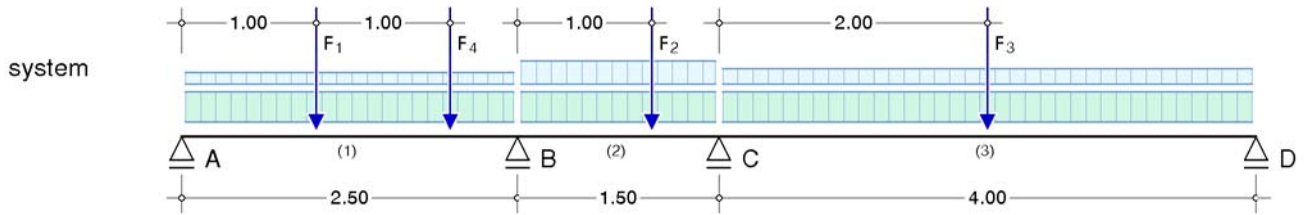


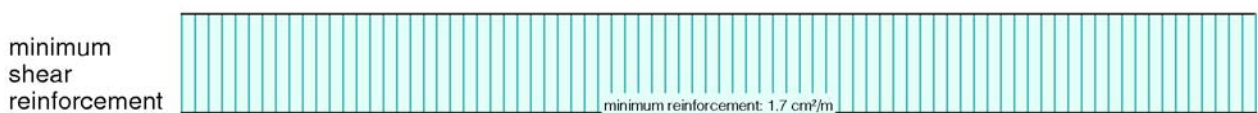
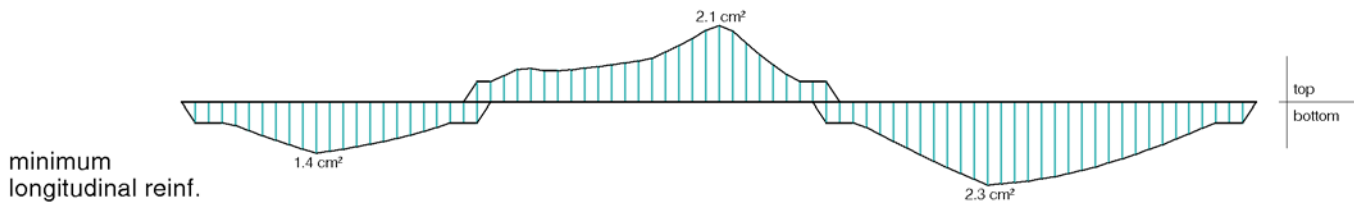
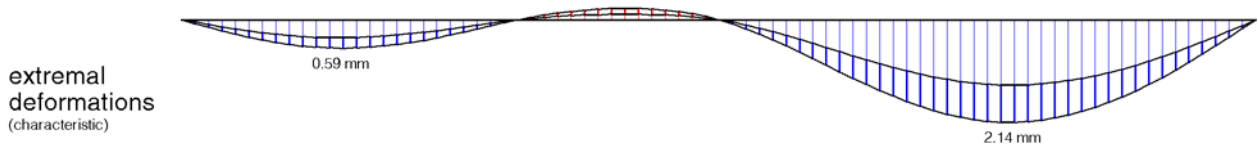
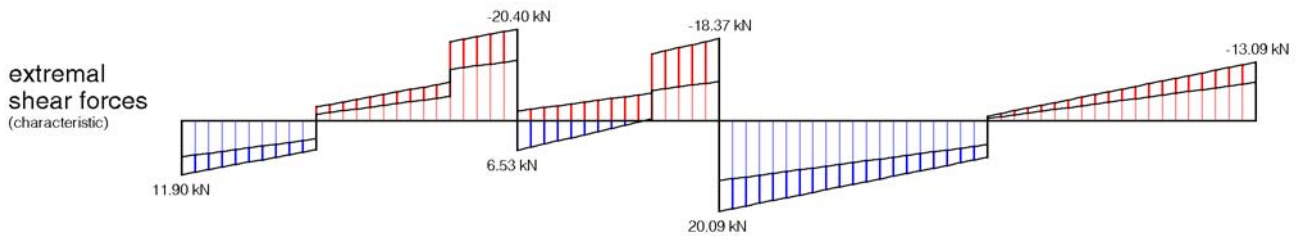
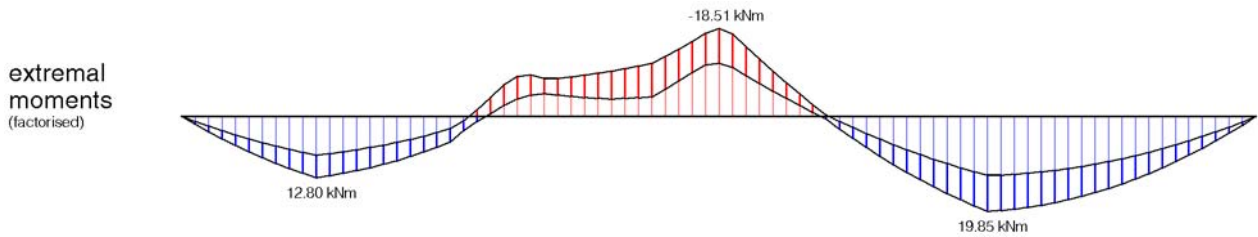
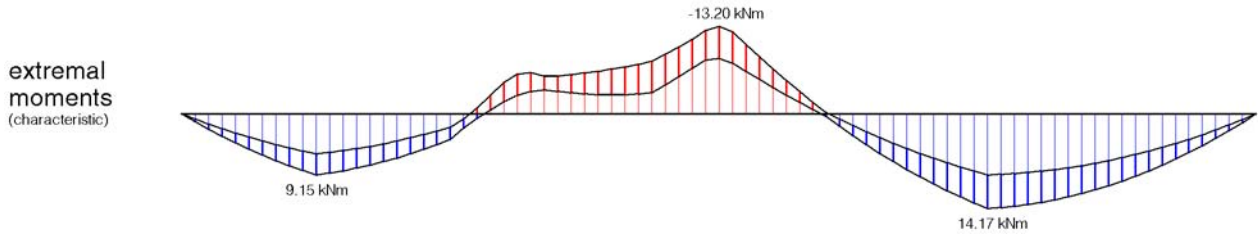
34: BEAM AXIS C STB.



loading: line load(constant span by span):
 span 1: $g/p = 4.00 / 1.50 \text{ kN/m}$, span 2: $g/p = 4.00 / 3.00 \text{ kN/m}$, span 3: $g/p = 4.00 / 2.00 \text{ kN/m}$,

point loads:
 $F_1: G/P = 6.00 / 3.00 \text{ kN}$, $F_2: G/P = 6.00 / 3.00 \text{ kN}$, $F_3: G/P = 6.00 / 3.00 \text{ kN}$,
 $F_4: G/P = 6.00 / 3.00 \text{ kN}$,

material: reinforced concrete: C30/37, BSt 500, rectangular section: $h/b = 26.0 / 18.0 \text{ cm}$ (design acc. to EC2)
 bending design calc. (reinf. edge dist. $r=5.0 \text{ cm}$, support width of inner bearings $a=24.0 \text{ cm}$) incl. shear design calc.



selected: upper layer: 2 Ø12 mm with exist. $A_s = 2.3 \text{ cm}^2$ > 2.1 cm^2
 lower layer: 3 Ø12 mm with exist. $A_s = 3.4 \text{ cm}^2$ > 2.3 cm^2
 links (double shear): Ø8 mm every 60 cm with exist. $A_s = 1.7 \text{ cm}^2/\text{m}$ > 1.7 cm^2/m

support reactions
 (characteristic)

	A kN	B kN	C kN	D kN
minimum	7.98	11.28	22.04	8.58
perman.	8.18	15.33	23.82	8.68
maximal	11.90	26.93	38.46	13.09