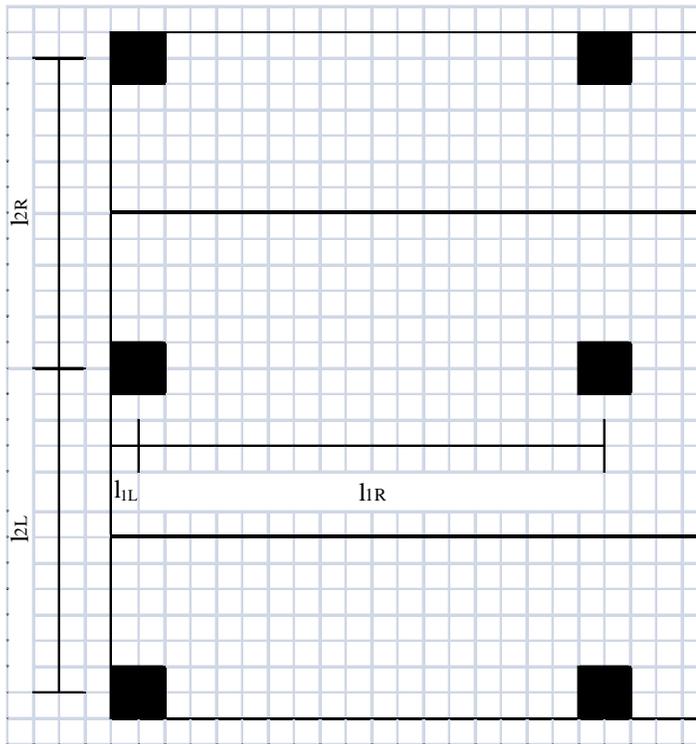


StructurePoint pcaSlab/spSlab v3.11 maintenance release

StructurePoint announced the release of pcaSlab/spSlab v3.11 in April 2010 with changes concerning the Canadian code CSA A23.3-04/94.

One of the key issues addressed in this release is a revised interpretation of CSA A23.3 length of attached torsional member (l_t) used in calculation of torsional stiffness (K_t , CSA A23.3-04 Cl. 13.8.2.8) at exterior supports. This revision results in redistribution of negative end moments to the midspan and may impact the corresponding reinforcement. A numerical comparison is provided below for illustration of this important change. This change does not affect ACI code option.



$$l_{1L} := 250 \cdot \text{mm}$$

Cantilever span is ignored in l_t calculation at exterior support in v3.11

$$l_{1R} := 6800 \cdot \text{mm}$$

$$l_{2L} := 8000 \cdot \text{mm}$$

$$l_{2R} := 8000 \cdot \text{mm}$$

Average length in spSlab v3.10

$$l_{1a} := \frac{(l_{1L} + l_{1R})}{2} \quad l_{1a} = 3525 \cdot \text{mm} \quad l_{2a} := \frac{(l_{2L} + l_{2R})}{2} \quad l_{2a} = 8000 \cdot \text{mm}$$

Attached torsional member length l_t

$$\min(l_{1a}, l_{2a}) = 3525 \cdot \text{mm} \quad K_t := 12014800 \cdot E_c \quad M_{\text{neg}} := 303.09 \cdot \text{kN} \cdot \text{m}$$

Average length in spSlab v3.11

$$l_{1a} := \frac{l_{1R}}{1} \quad l_{1a} = 6800 \cdot \text{mm} \quad l_{2a} := \frac{(l_{2L} + l_{2R})}{2} \quad l_{2a} = 8000 \cdot \text{mm}$$

Attached torsional member length l_t

$$\min(l_{1a}, l_{2a}) = 6800 \cdot \text{mm} \quad K_t := 4949600 \cdot E_c \quad M_{\text{neg}} := 253.43 \cdot \text{kN} \cdot \text{m}$$