

## Slenderness / Factors

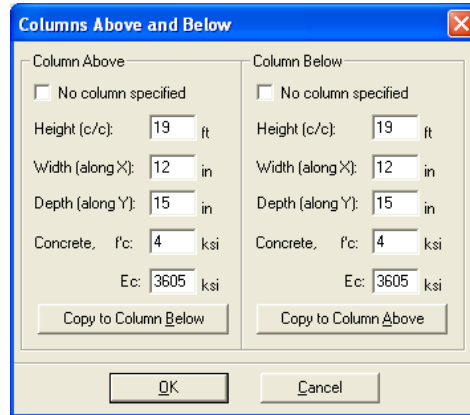
- Select **Input | Slenderness | Factors**. A dialog box appears. *Note: this command is available for slender columns only.*
- The default values, per the design code, for the stiffness reduction factor (used to compute the moment magnification factors) and the cracked section coefficients for beams and columns are displayed. To modify these values, select the USER-DEFINED option and enter your values.
- Choose the OK button.

## Slenderness / Design Column

- Select **Input | Slenderness | Design Column**. A dialog box appears. The x-axis or y-axis data groups may be disabled depending on the active run axis. *Note: this command is available for slender columns only.*
- Enter the clear column height in the corresponding text box.
- Specify whether the column is braced against sidesway or not by selecting or clearing the NONSWAY FRAME option.
- For a sway column, enter the ratio of the sum of the critical load of all story columns to the critical load of the column under consideration, (SUM PC)/PC. Also, enter the ratio of the sum of the factored axial load of all story columns to the factored axial load of the column under consideration, (SUM PU)/PU. Check 2<sup>ND</sup> ORDER EFFECTS ALONG LENGTH option to consider 2<sup>nd</sup> order effects along length. *Note: this option is available for ACI 318-14, ACI 318-11, and ACI 318-08 codes only. For more information, see discussion in section Error! Reference source not found. in Error! Reference source not found. Error! Reference source not found..*
- In the EFFECTIVE LENGTH FACTORS group, specify whether the k factor(s) are to be user-input or computed by the program, by selecting the corresponding option.
- If you chose INPUT K FACTORS, enter the effective length factors for nonsway and sway conditions, k(ns) and k(s), respectively.
- Repeat the steps above for each active axis.
- Choose the OK button.

## Slenderness / Columns Above and Below

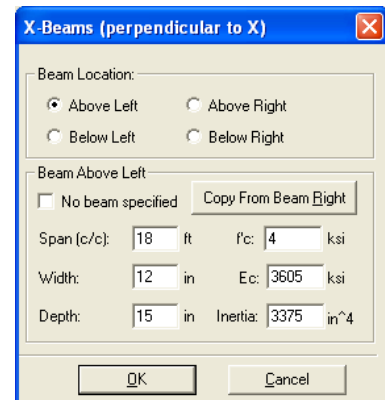
- Select **Input | Slenderness | Columns Above/Below**. A dialog box appears. *Note: this command is available for slender columns only for which the COMPUTE k FACTORS option is selected in the DESIGN COLUMN dialog box.*



- In the COLUMN ABOVE group, specify whether or not a column above the design column exists, by selecting or clearing the NO COLUMN SPECIFIED OPTION.
- If a column above exists; enter the center-to-center height, the width (along the x-axis), the depth (along the y-axis), the concrete compressive strength, and the concrete modulus of elasticity of the column above in the corresponding text boxes. For circular sections, enter zero for the DEPTH and input the section diameter in the WIDTH box. If zero is entered for both Width and Depth, the dimensions of the design column will be automatically used.
- Repeat the same for the column below or, if the column above and the column below are the same, choose the COPY TO COLUMN BELOW button.
- Choose the OK button.

### Slenderness / X-Beams

- Select **Input | Slenderness | X-Beams**. A dialog box appears. Beams defined using this command span perpendicular to the x-axis. *Note: this command is available for slender columns only for which the COMPUTE K FACTORS option is selected in the DESIGN COLUMN dialog box and the RUN AXIS is BIAxIAL or uniaxial ABOUT X-AXIS.*
- From the BEAM LOCATION group, choose the appropriate option. The data group below updates depending on the selection.
- For the selected beam, specify whether or not a beam exists, by selecting or clearing the NO BEAM SPECIFIED OPTION.
- If a beam exists; enter the center-to-center span length, width, depth, concrete compressive strength, concrete modulus of elasticity, and moment of inertia (if different than computed) of the beam.
- Repeat the steps above for the beams ABOVE RIGHT, BELOW LEFT, and BELOW RIGHT.
- Choose the OK button.



### Slenderness / Y-Beams

- Select **Input | Slenderness | Y-Beams**. A dialog box appears. Beams defined using this command span perpendicular to the y-axis. *Note: this command is available for slender columns only for which the COMPUTE K FACTORS option is selected in the DESIGN COLUMN dialog box and the RUN AXIS is BIAxIAL or uniaxial ABOUT Y-AXIS.*

- From the BEAM LOCATION group, choose the appropriate option. The data group below updates depending on the selection.
- For the selected beam, specify whether or not a beam exists, by selecting or clearing the NO BEAM SPECIFIED OPTION.
- If a beam exists; enter the center-to-center span length, width, depth, concrete compressive strength, concrete modulus of elasticity, and moment of inertia (if different than computed) of the beam.
- Repeat the steps above for the beams ABOVE RIGHT, BELOW LEFT, and BELOW RIGHT.
- Choose the OK button.

**Y-Beams (perpendicular to Y)**

Beam Location:

Above Left     Above Right  
 Below Left     Below Right

Beam Above Left

No beam specified    Copy From Beam Right

Span (c/c): 18 ft    f'c: 4 ksi  
Width: 12 in    Ec: 3605 ksi  
Depth: 15 in    Inertia: 3375 in<sup>4</sup>

OK    Cancel