

# Backstay Concepts in Buildings

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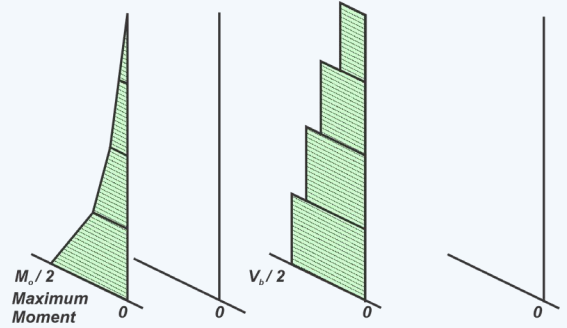
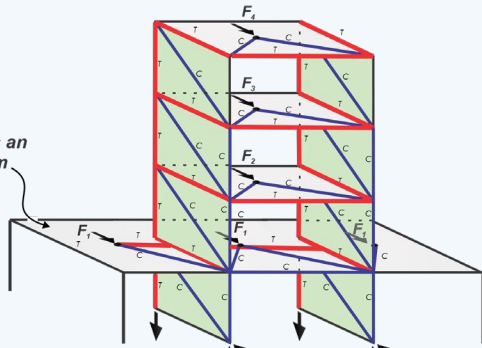
## NO BACKSTAY EFFECT

$$V_b = 3F_1 + F_2 + F_3 + F_4$$

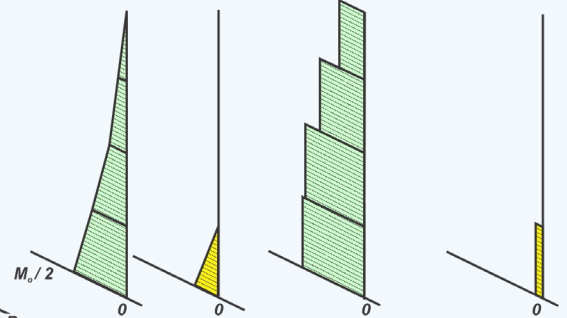
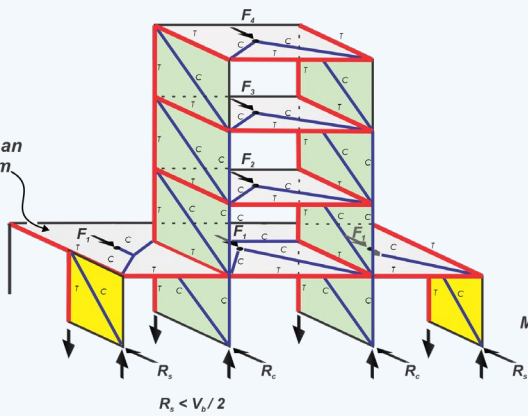
Bending Moment

Shear Force Diagrams

Podium acting as an inertial diaphragm

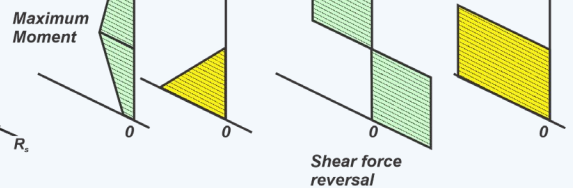
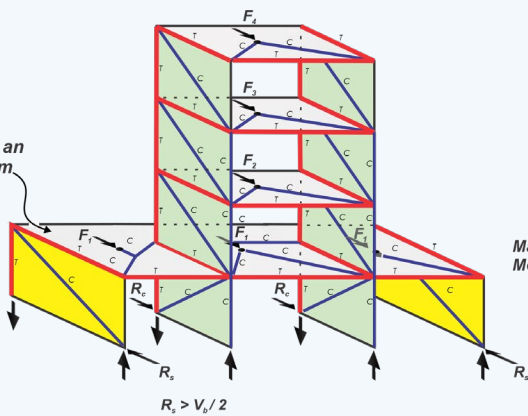


Podium acting as a transfer diaphragm



## STRONG BACKSTAY EFFECT

Podium acting as a transfer diaphragm



Adapted from:

Ingham, J. and Restrepo, J.I., *Introduction to the Strut-and-Tie Method of Analysis and Design*. A course jointly organized by the New Zealand Concrete Society and the New Zealand Concrete and Cement Association. Auckland, February 2000.