

Insertion point and transform stiffness

Test Problem	
Name:	Insertion point and transform stiffness
Description:	3D demonstration of insertion-point, end-offset, and transform-stiffness application.
Program:	SAP2000
Version:	12.0.1
Model ID:	94

Demonstration of [SAP2000](#) **insertion-point** and end-offset application, including the effects associated with **transform stiffness**.

Hand calculations

Screenshots

The visuals which follow illustrate the modeling and performance of two systems, one with default settings which transform stiffness to account for insertion-point offset, and one which does not transform stiffness.

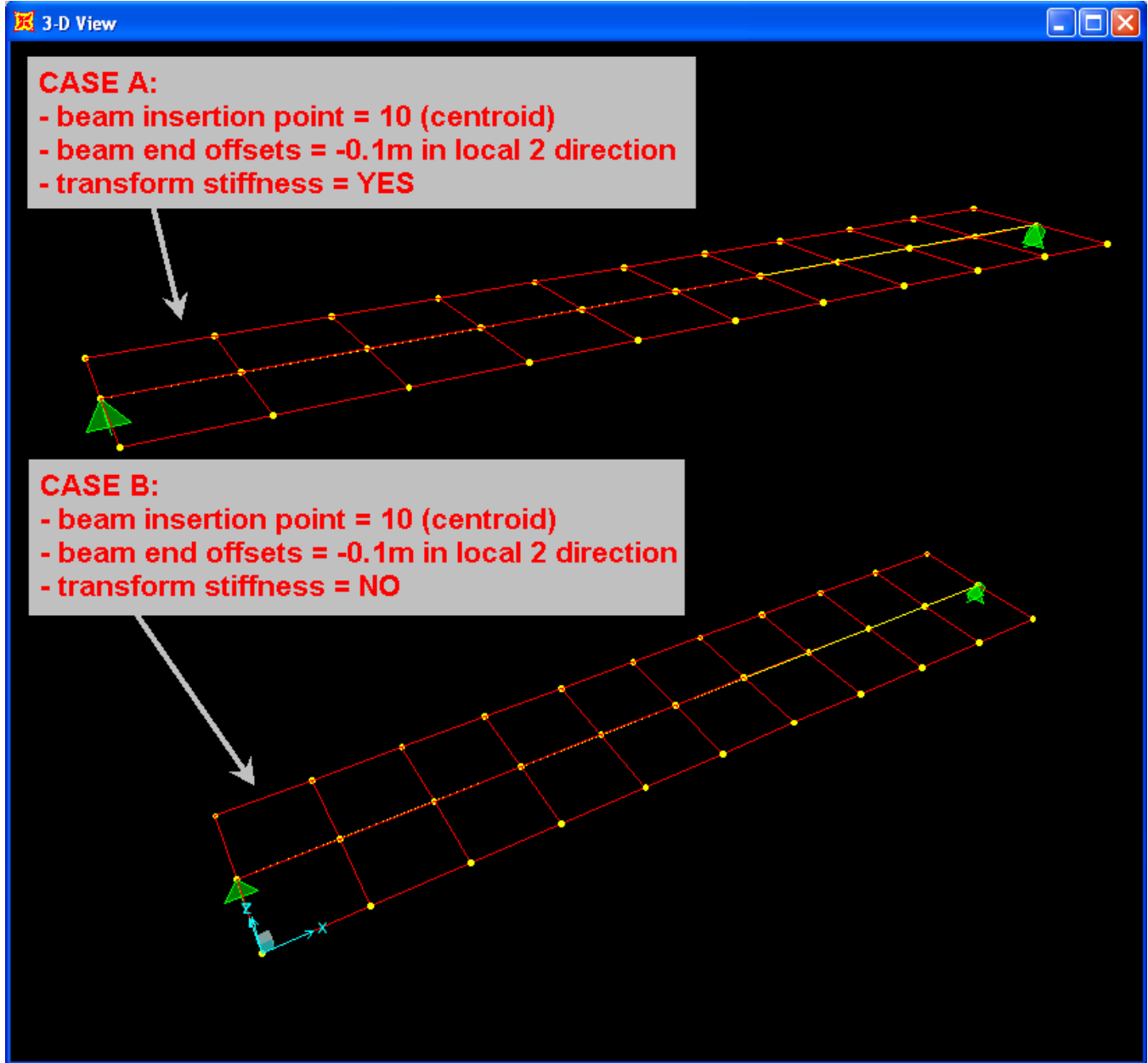


Figure 1 - Geometry

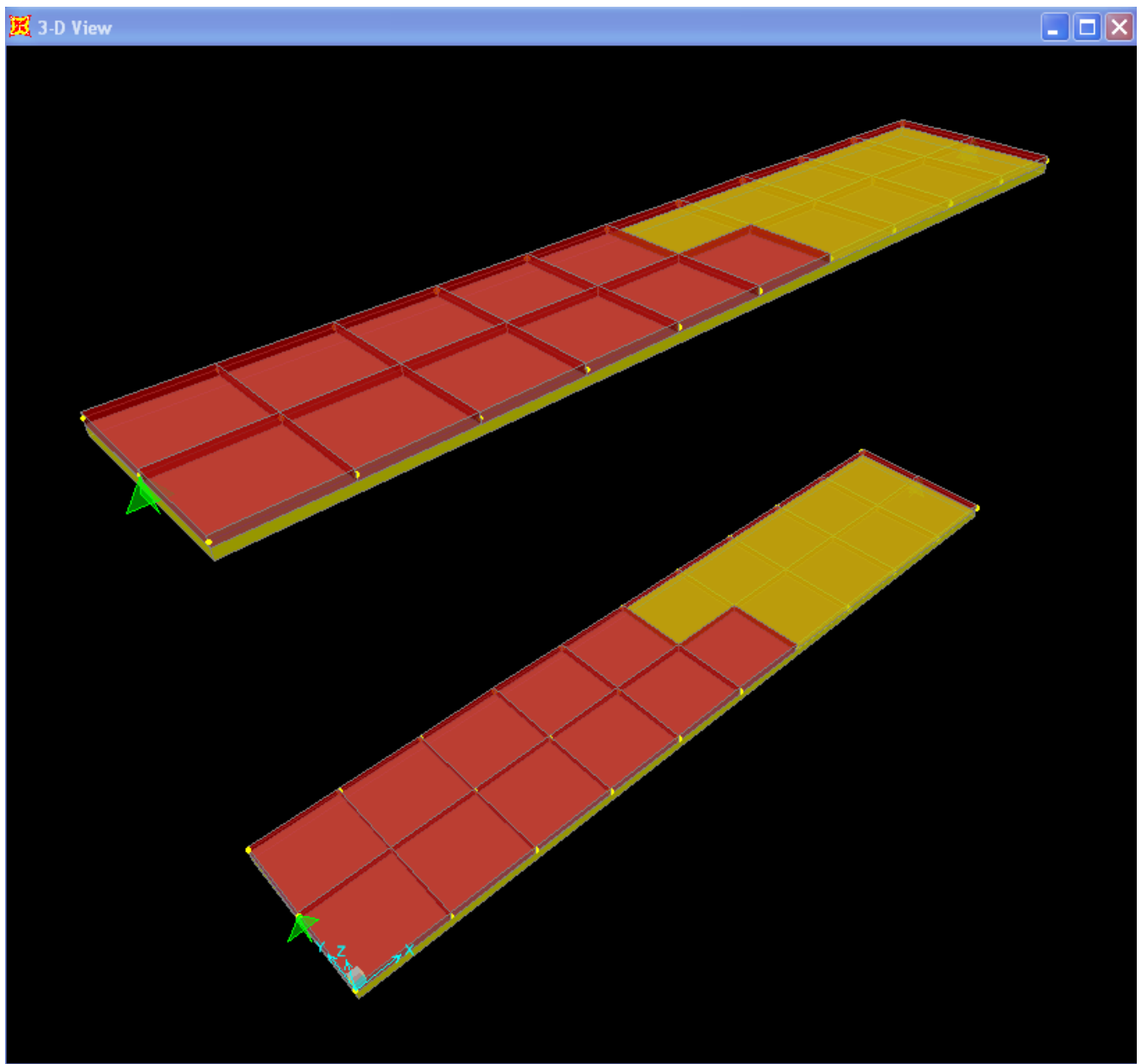


Figure 2 - Extruded geometry

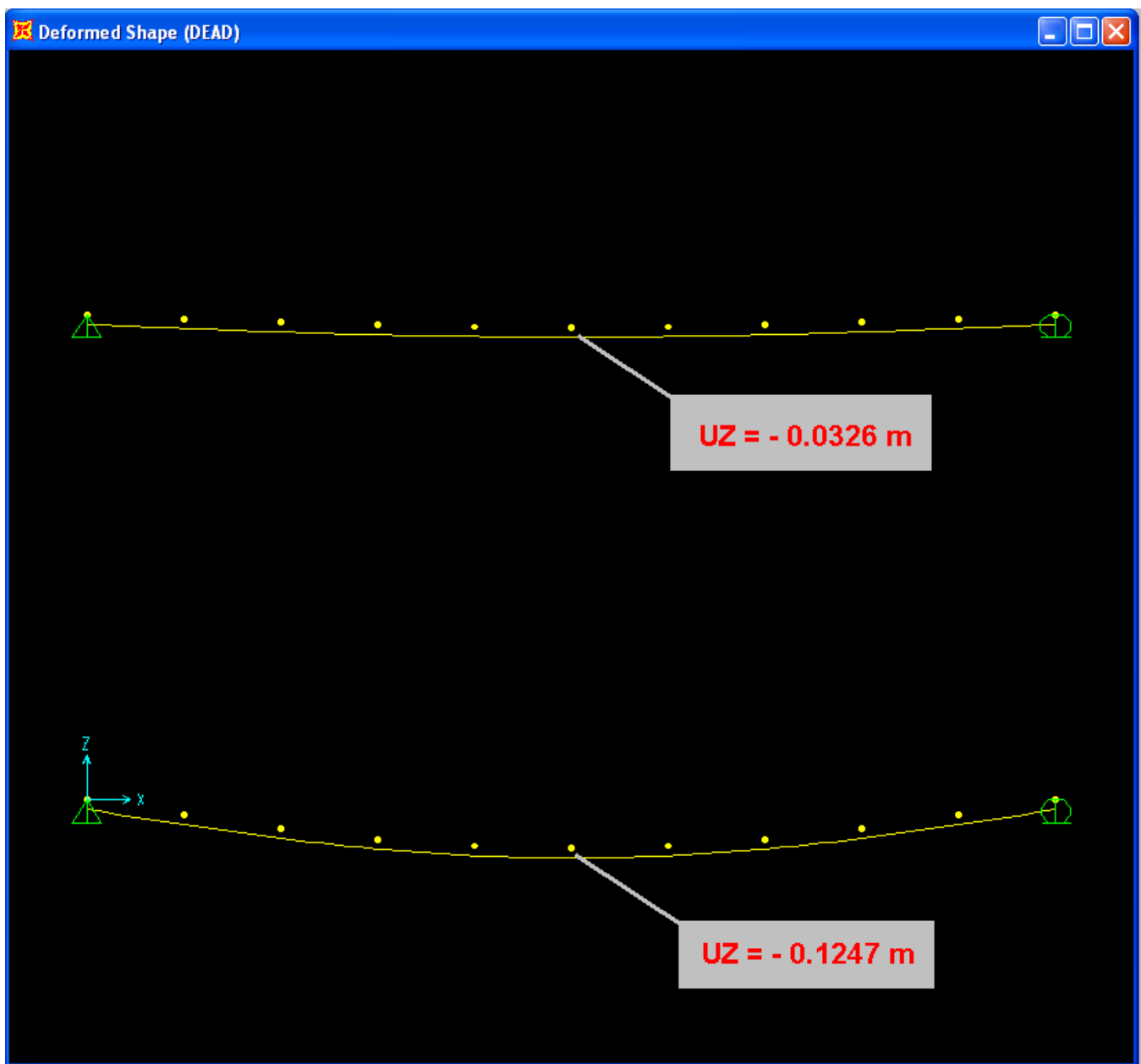


Figure 3 - Deflections

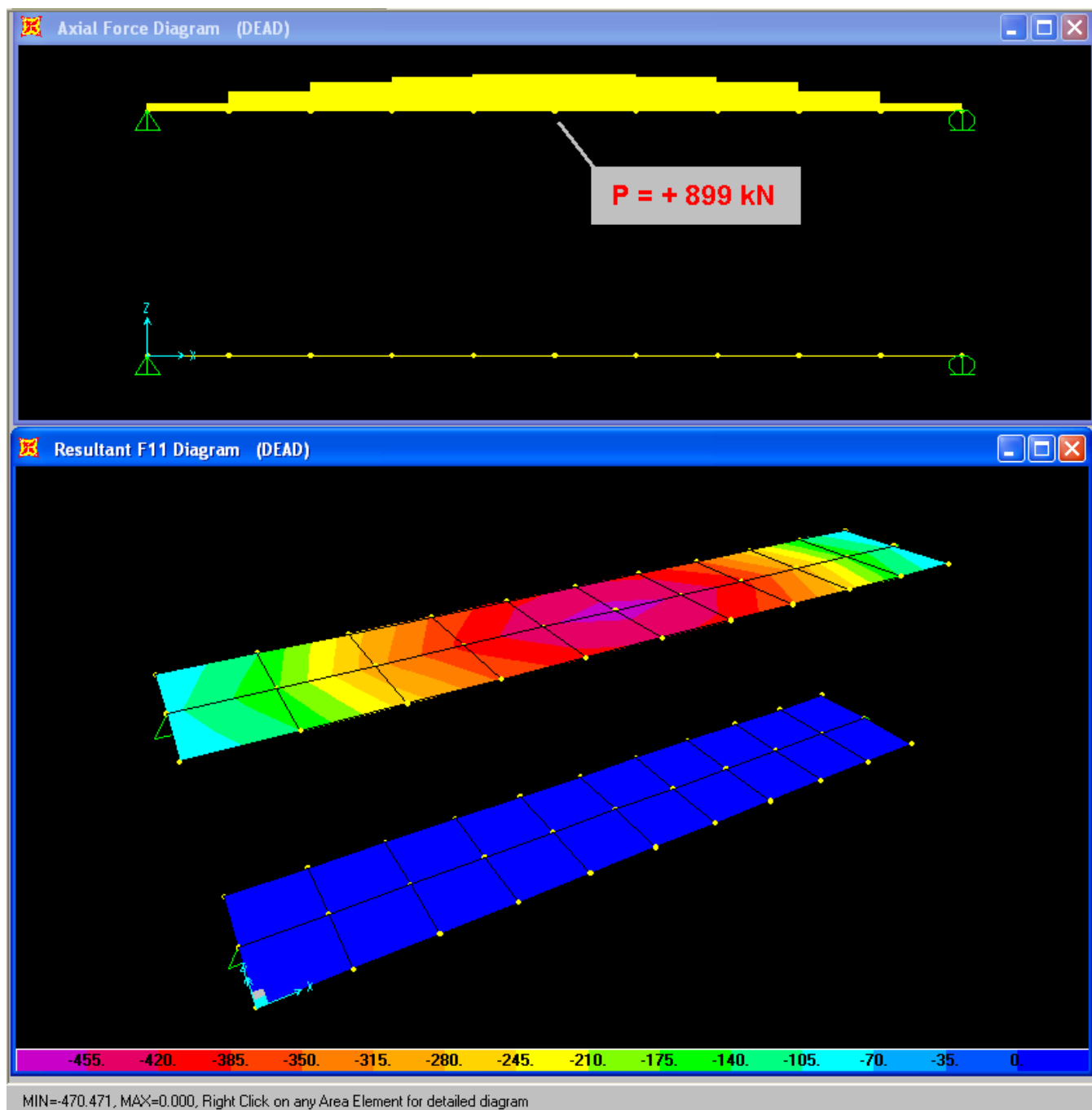


Figure 4 - Axial forces

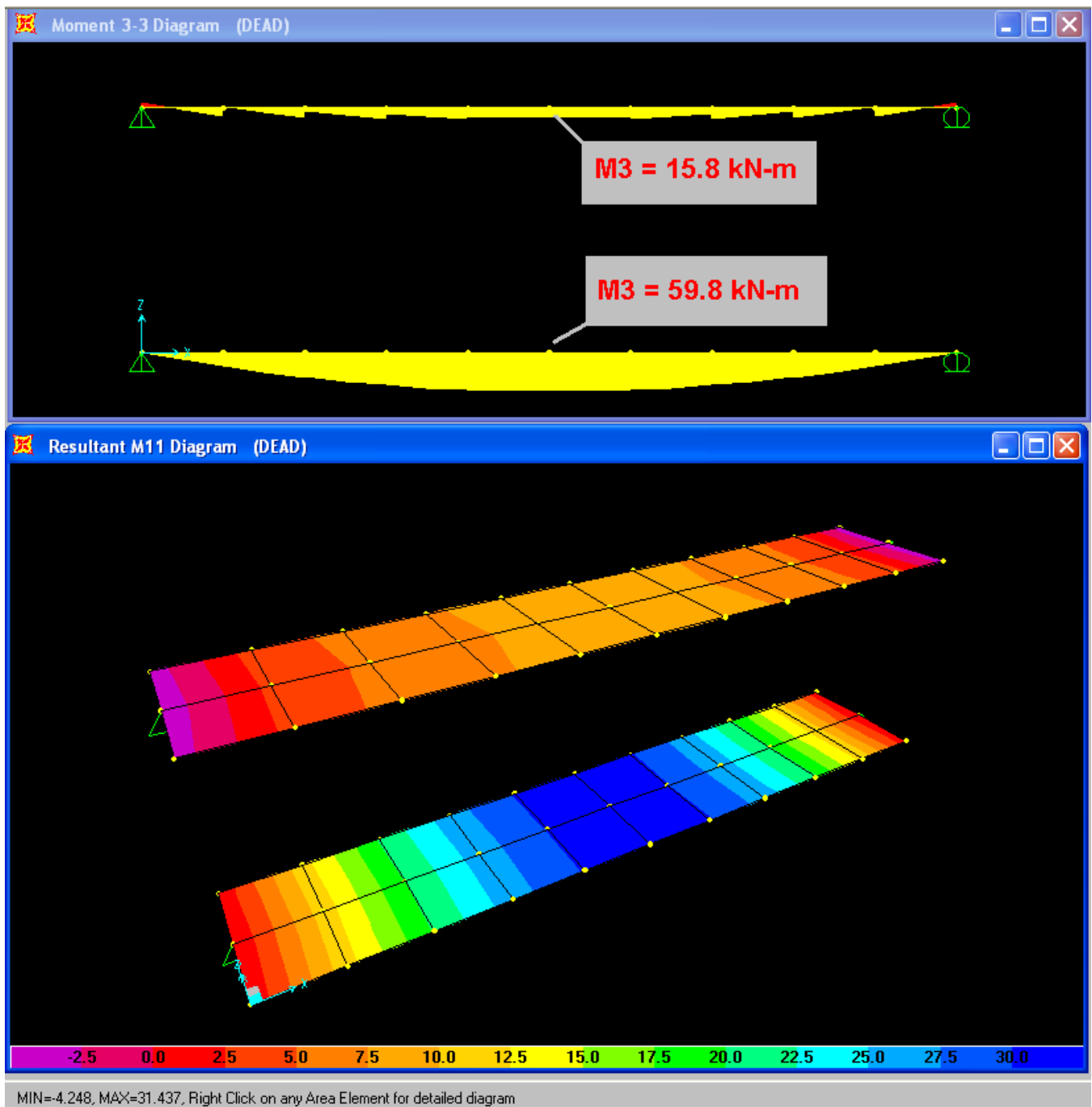


Figure 5 - Moment

Attachments

- [SAP2000 V12.0.1 model](#) (zipped SDB file)
- [Hand calculations](#) (PDF)