



USER MANUAL

PLPak Version 1.01

**STRUCTURAL ANALYSIS SOFTWARE USING BOUNDARY
ELEMENTS METHOD**

PLPAK basic tutorials

Tutorial 11 – PLGen manual wall assembly

CONTACT DETAILS:

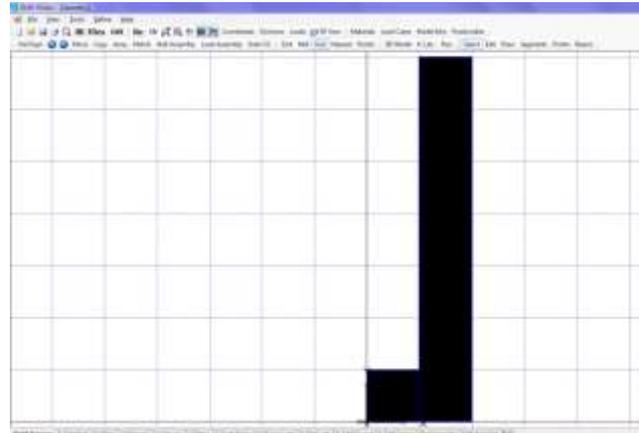
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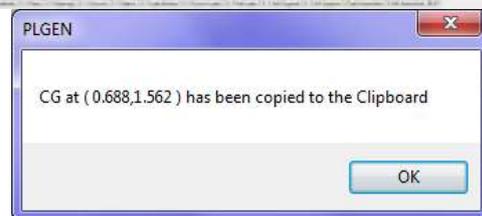
Tutorial 11

The objective of this tutorial is to appreciate the Wall Assembly function given complex profiles.

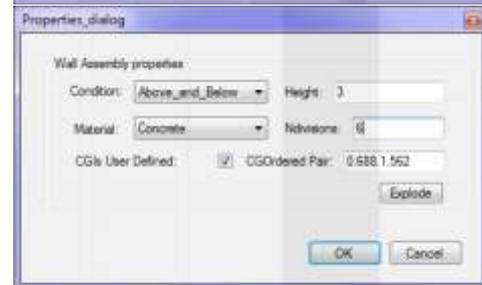
I – In PLGen, draw these objects as shown ma square to the left and a rectangle to the right. Define the rectangle as Wall Support and the square as a column. Bear in mind that the column has only one division and the wall was a default of 4.



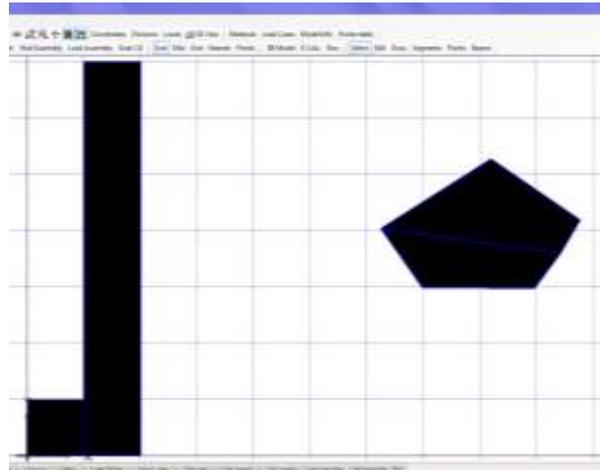
II –When using Wall Assembly they will both have the same number of divisions. However, this is not desired what is required is to maintain the column as it is and increase the number of divisions in the wall to 6. Select them both and click on Grab CG tool then the CG is automatically copied into the clipboard. III - Select only the column and right click to open its Properties Dialog box, tick User Defined CG and paste the copied CG into the CG Coordinates box, then click OK.



IV - Select the wall and click on wall assembly to be able to put the CG that was grabbed since in Wall Properties it is not possible to put the CG. After creating the wall assembly, right click and enter the CG and change the number of divisions to 6. The inertia of the column and the wall assembly will be calculated based on the location of the CG of the assembly. When viewing the elements in PLPost, the results will be based on the fact that they are one object and not two separate objects.



V – Another use of Wall Assembly is when we have a complex column profile like a pentagon shaped column for example. Draw or export a pentagon shape in PLGen. The pentagon is drawn as a combination of two 4-sided objects since other-wise it can only be defined as an opening or a slab. Define both objects as columns.



VI – Select them both and grab their CG.



VII – Right-click to open their properties dialog box and tick user defined CG and enter the grabbed CG. From then on they will act as one column.

