Section cut first steps

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Tutorial	
Name:	Section cut first steps
Description:	Introductory tutorial for using section cuts.
Program:	SAP2000
Version:	all
Status:	Finalize
Id:	na

Section cuts can be used to obtain resultant forces acting at section cuts through a model. Section cuts can be defined using quadrilateral cutting planes, groups, or simply drawn in the graphical user interface. The sections below describe the basic procedure for each type of section cut.

Section Cuts Defined by Quadrilateral Cutting Planes

- Use "Define > Section Cuts > Add Section Cut..." menu command to launch the "Section Cut Data" form.
- Select Section Cuts Defined By "Quadrilateral Cutting Planes" and define the planes by specifying joint coordinates for the plane joints:

- Press F1 button to get context help on other fields available on the form.

- Once you run the analysis you can obtain section cut forces in a tabular format using "Display > Show Tables > ANALYSIS RESULTS > Structure Output > Other Output Items > Table: Section Cut Forces - Analysis"
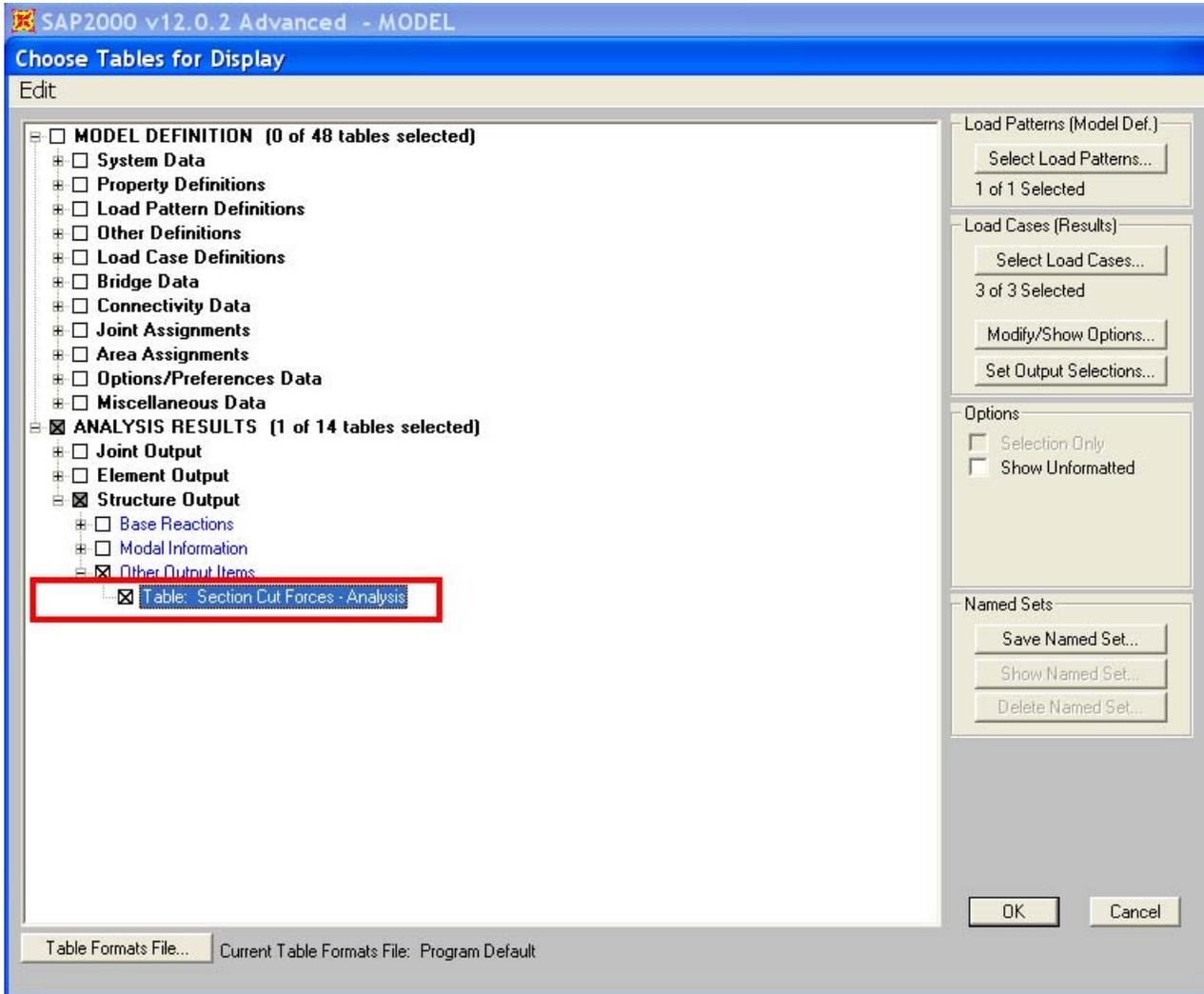
Section Cuts Defined by Groups

- The procedure is very similar to defining section cuts by quadrilateral cutting planes, except for that you specify a group of elements that will define the section cut. Then, SAP2000 calculates the section cut forces by summing the element joint forces from the frame, shell and link members included in the group that defines the section cut. The joints that are considered are those at the same location as the point objects that are included in the group:
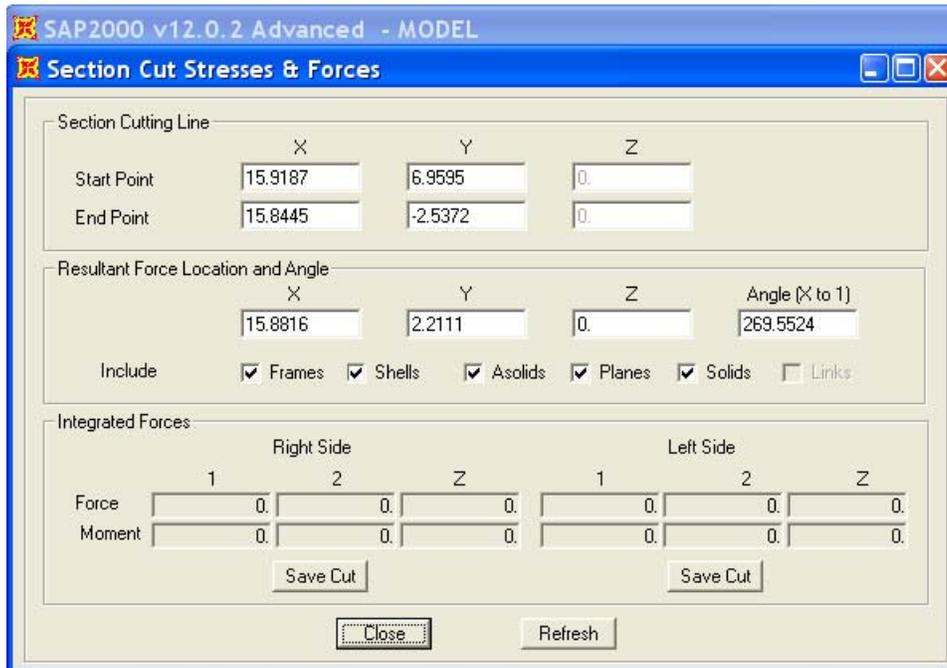
Section Cuts Drawn In Graphical User Interface

- Another alternative is to draw section cuts within the graphical interface using "Draw > Draw Section Cut" menu command. This will display the section cut forces directly on the "Section Cut Forces & Stresses" form shown below.

See Also

- [Section cuts](#) page in the Technical Knowledgebase
- F1 context help, Topic "Output Conventions"
- Example Problems B, N, S (available from F1 context help, Topic "Example Problems") illustrate the use of section cuts

Labels

status-ready-for-review section-cut quality-a first-steps