



EXPORT ELEMENTS for REVIT – User Manual



Version 1.1

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Table of Contents

1. Introduction	2
2. Installation	3
3. Limitations	4
4. License Validation	4
5. Copy / Paste Procedure	6
5.1. Step 1: Select the Structural Elements in REVIT®	6
5.2. Step 2: Export the Structural Elements in REVIT®	7
5.3. Step 3: Run the ETABS® Plugin	10
5.4. Step 5: Options for import process	12
i. Extend nodes to nearest storey	12
ii. Split vertical elements	12
iii. Choose common reference floor	12
iv. Import boundaries	13
5.5. Step 5: Import Elements	13
5.6. Step 6: Close the Plugin	14
6. Support	14



1. Introduction

XPORT ELEMENTS for REVIT[®] can copy structural elements from REVIT[®] and paste them as modeling objects in ETABS[®] 2016.

This copy / paste plugin has two simple interfaces: one for REVIT[®] and one for ETABS[®], as shown on *Figure 1*. In the REVIT[®] interface, the user can select and copy structural elements such as walls, slabs, structural framing, slant columns and vertical columns. The ETABS[®] interface converts these elements into model objects and automatically assigns the respective section geometry.

The process is fast, simple and straightforward, and gives the user control about the number of elements to be exported, which can be one single element or multiple elements.

¹ Revit is a registered trademark or trademarks of Autodesk, Inc., and/or its subsidiaries and/or affiliates in the USA and other countries.

² ETABS is a registered trademark of Computers and Structures, Inc. in the USA and other countries.

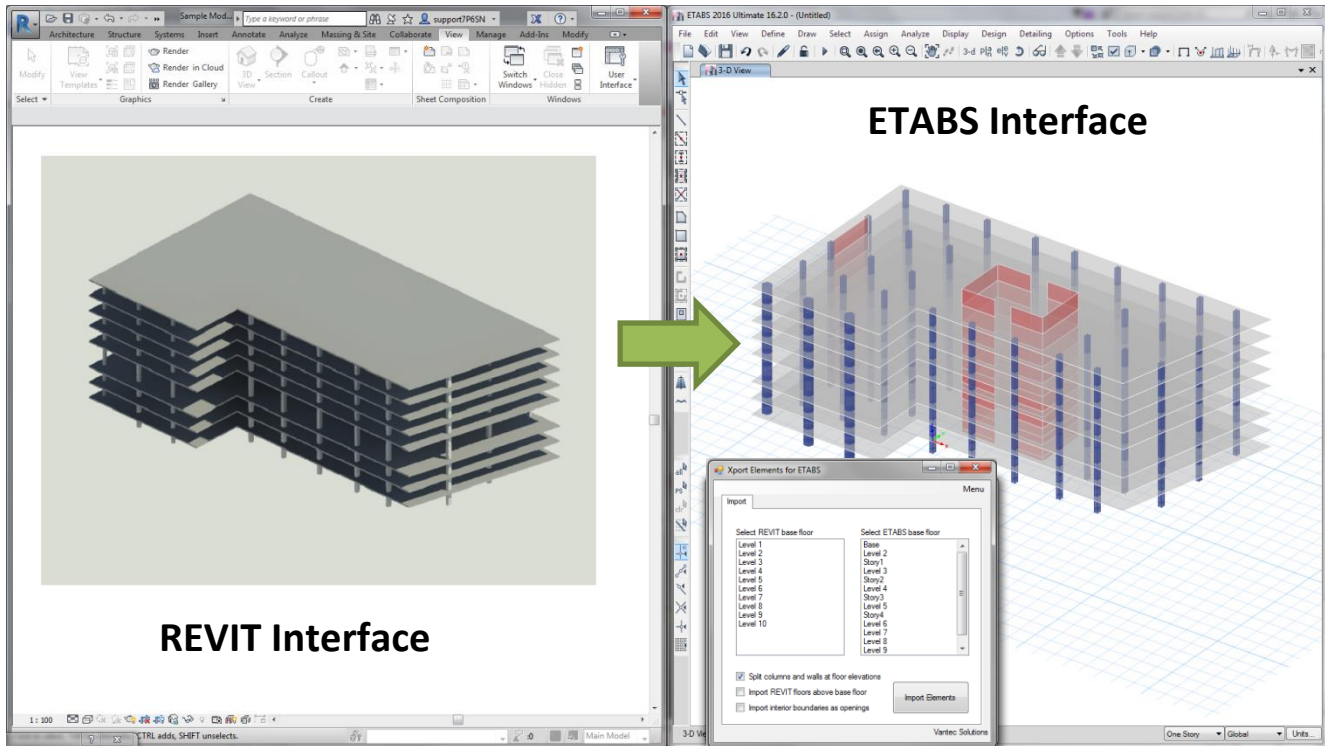


Figure 1

2. Installation

To install the XPORT ELEMENTS for REVIT plugin, run the MSI that you received in your email inbox.

If you want to install the program for several users in the same computer, run the MSI file on any account (user1) and then activate the plugin following the steps in the License



Validation section. After the license activation is complete, copy the “ETABS 2016.ini” file from

“C:\Users\user1\AppData\Local\Computers and Structures\ETABS 2016”

Onto the folder

“C:\Users\user2\AppData\Local\Computers and Structures\ETABS 2016” and so on.

3. Limitations

The app will copy up to 5000 Revit structural elements, such as slabs, structural frames, columns or walls, and paste them into an ETABS model.

4. License Validation

The first time the application is launched, the user will be asked to validate the license. As shown on *Figure 2*, the program will create a text file with a Request Code that must be sent to Vantec Solutions (support@vantecsolutions.com). Please also forward the confirmation email that you received either from our website or the Autodesk App Store with the order number.

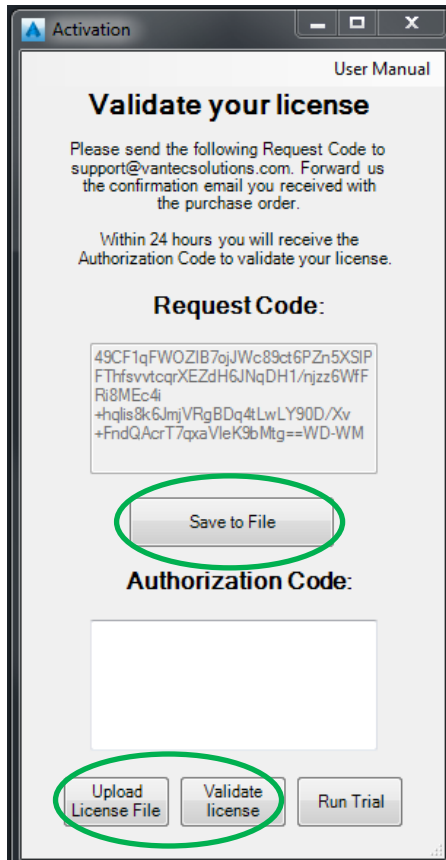


Figure 2

Within 24 hours we will send you back a text file with the Authorization Code. You must upload this file by clicking “Upload License File” and then “Validate License”. In the meantime, you can run the program in trial mode using the “Run Trial” button.



5. Copy / Paste Procedure

5.1. Step 1: Select the Structural Elements in REVIT®

The first step is in the REVIT® interface to select the structural elements that will be exported to ETABS. The structural elements that can be exported are the following:

- Slabs (concrete solid floors with uniform thickness).
- Beams (concrete structural framing)
- Slant Columns (rectangular or circular)
- Vertical Columns (rectangular or circular)
- Walls

Make sure that only these types of elements are visible when doing the selection. Please note that the analytical model must be invisible when selecting the elements.



5.2. Step 2: Export the Structural Elements in REVIT®

The REVIT® interface of the plugin can be accessed from the REVIT's Adds-ins tab, as shown on *Figure 3*.

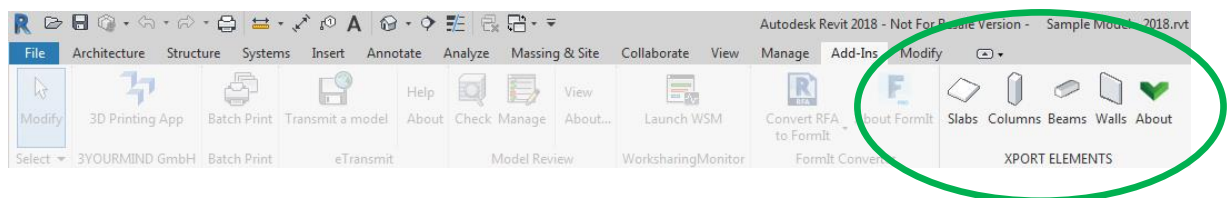


Figure 3

The plugin interface has five buttons: slabs, columns, beams, walls and about. After doing the selection (step 1), the user must click the structural type button corresponding to the elements selected.

To export column circular/rectangular sections from Revit, the user will have two options: (i) select the name of the parameters that define the section width and section height for rectangular columns, and the diameter/radius for circular columns, or (ii) check the automatically retrieve section dimensions. This interface is shown in *Figure 5*. The same interface is available for structural framing.

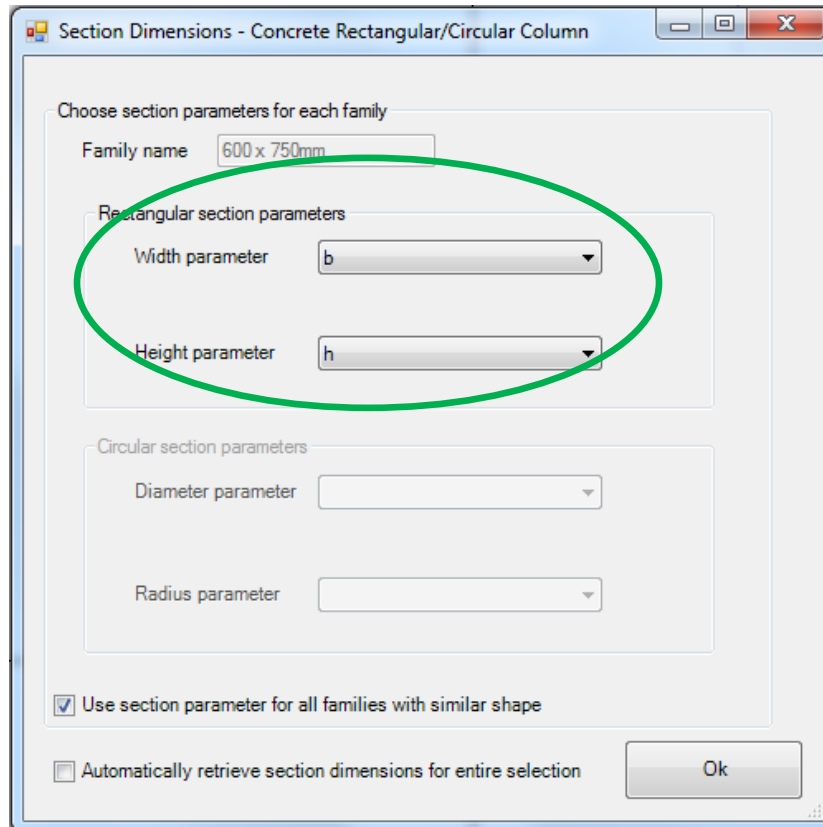


Figure 5

If the name of the parameters is the same for all the families in the model, then the option can be checked as in *Figure 5*.

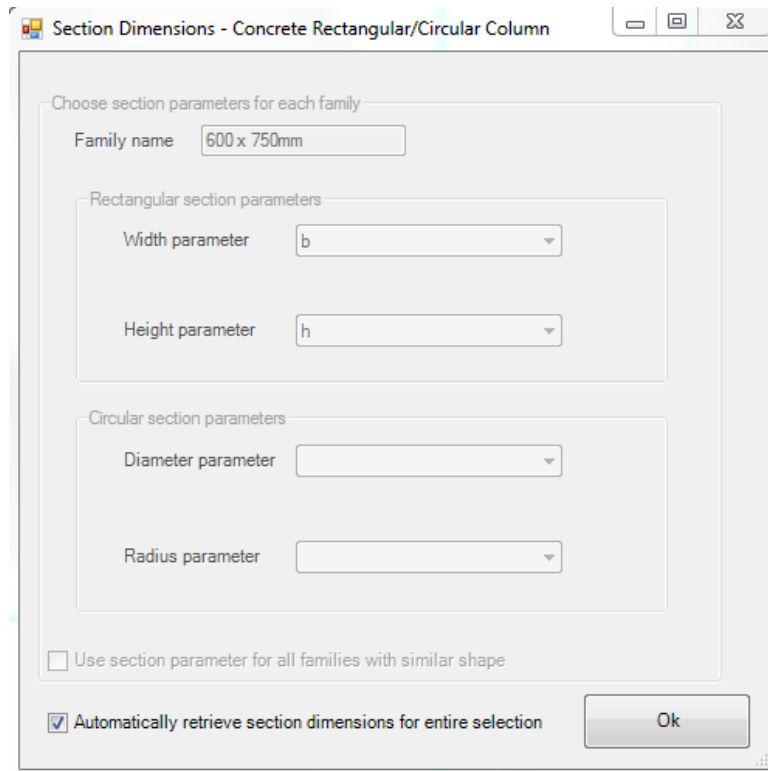


Figure 6

If the user does not know the name of the section parameters in the family, then the automatically retrieve section option can be used as in *Figure 6*.



The plugin will show the following message if the exporting process is successful:

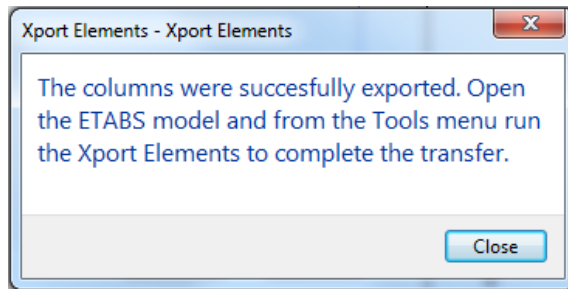


Figure 7

5.3. Step 3: Run the ETABS® Plugin

The ETABS® interface of the plugin can be executed by clicking the Tools menu, as shown in *Figure 8*, and then clicking on XPORT ELEMENTS for REVIT. In each session, ETABS will display a warning asking the user to authorize the plugin execution. This warning is shown on *Figure 9*.

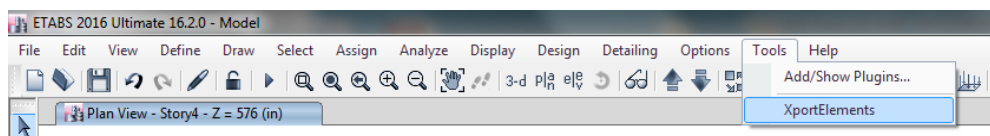


Figure 8

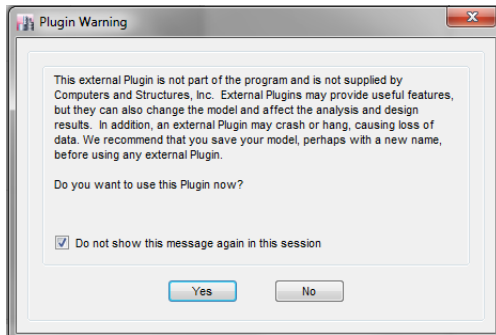


Figure 9

The ETABS[®] interface of the program is shown on *Figure 10*.

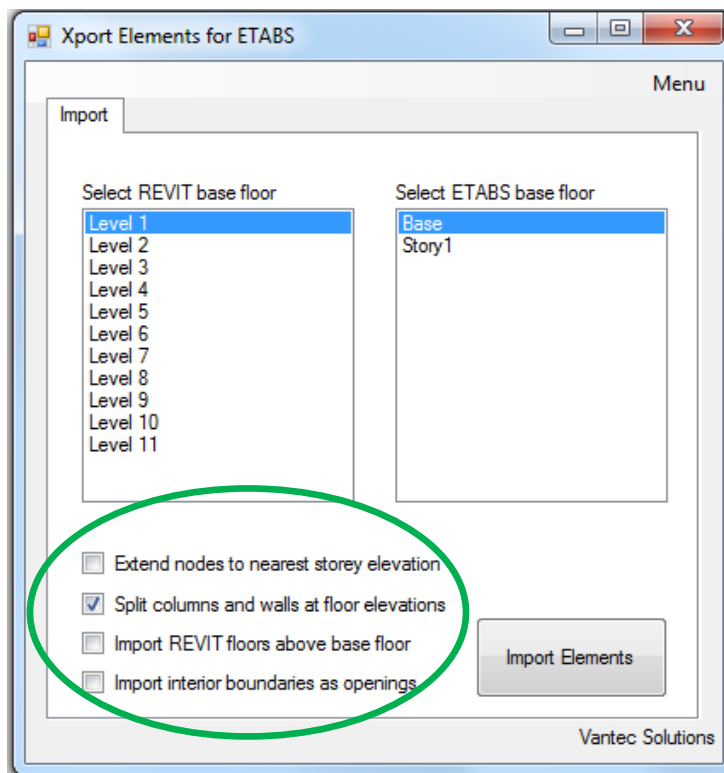


Figure 10



5.4. Step 5: Options for import process

i. Extend nodes to nearest storey

This option will extend all the vertical elements to the nearest storey elevation. For instance, if there is small a step in the Revit slab and the ETABS will not include such step, this approximation becomes useful.

ii. Split vertical elements

By default the option to split columns and walls at the floor elevations is selected, see *Figure 10*. If the user wants to keep the original end points from the Revit model, uncheck this option.

iii. Choose common reference floor

In order to import the elements, a common base floor must be identified by the user. The plugin will show two lists of floors: The first list show the floors for the elements exported from REVIT®; the second list shows the existing floors in the ETABS model®. The user must indicate the common floor in both lists.



The user can choose to create the REVIT[®] floors above the common floor by checking the box shown in *Figure 10*.

NOTE: New storeys will be created only when working on a new ETABS model, empty from any objects, without any section or area defined by the user. It is recommended that the empty ETABS model only has one storey.

iv. Import boundaries

An additional option in *Figure 10* is to import all the internal boundaries from the Revit elements as openings in the ETABS model. For instance a window or door that is hosted in a Revit wall, can be imported to ETABS as a wall with an opening object. Same applies for slabs any internal boundary can be added as an interior opening object. Revit openings cannot extend beyond the outer boundary of slabs and walls.

5.5. Step 5: Import Elements

After clicking the *Import Elements* button, the program will prompt to select a material and shell model type for



walls and slabs. In the case of columns, only material will be required.

The plugin will analyze the data copied from REVIT[®] and automatically create the exported elements in the ETABS[®] model. The plugin will show the following message if the exporting process is successful:

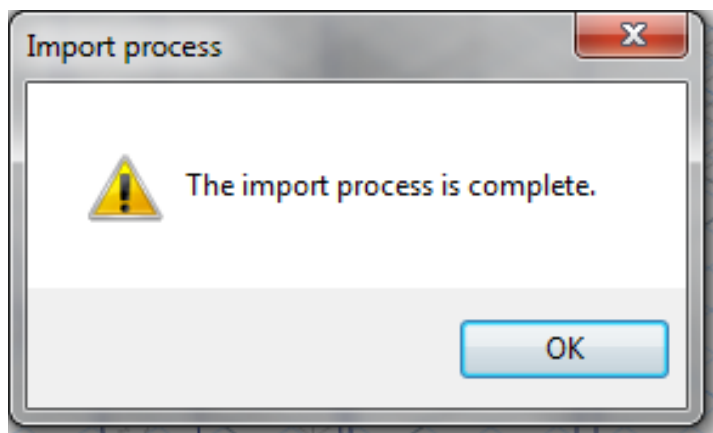


Figure 11

5.6. Step 6: Close the Plugin

Close the plugin after the paste is done. Do not keep the plugin running while opening a different ETABS[®] model.

6. Support

Please let us know if you have further questions. Our contact email is support@vantecsolutions.com.