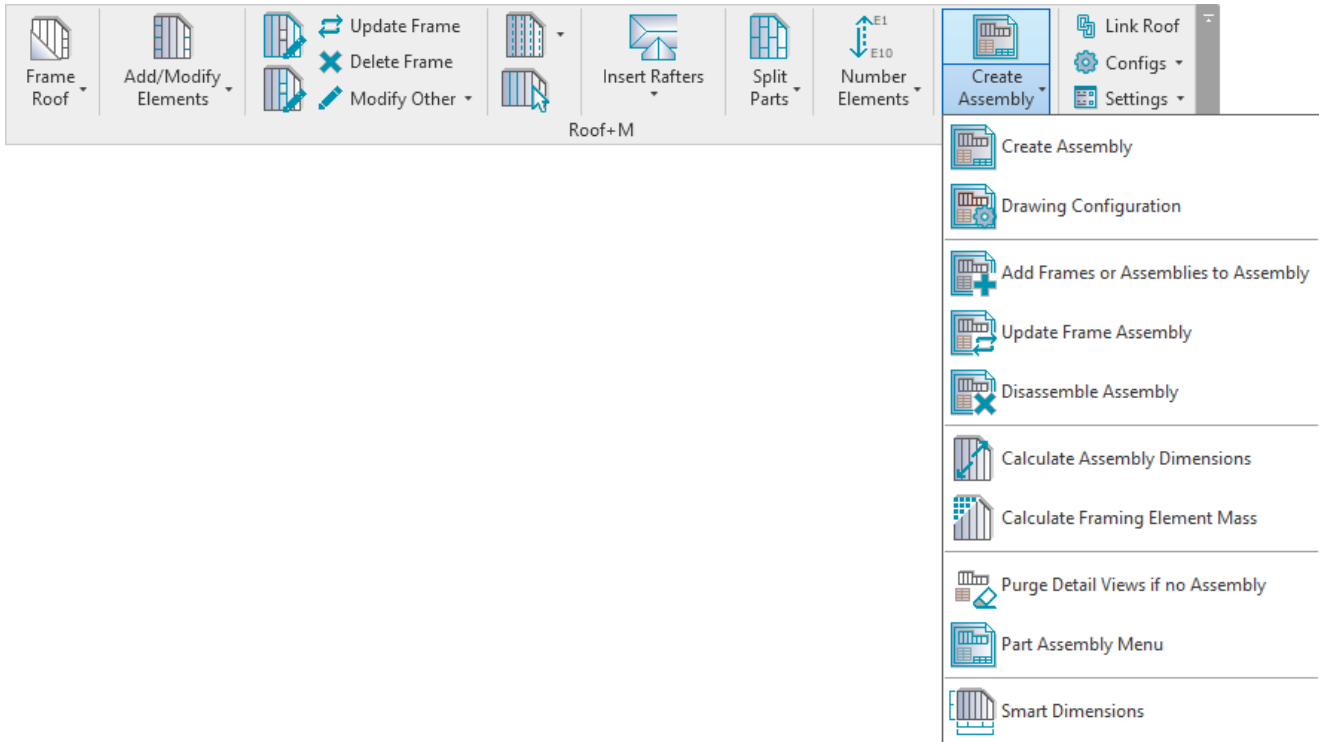


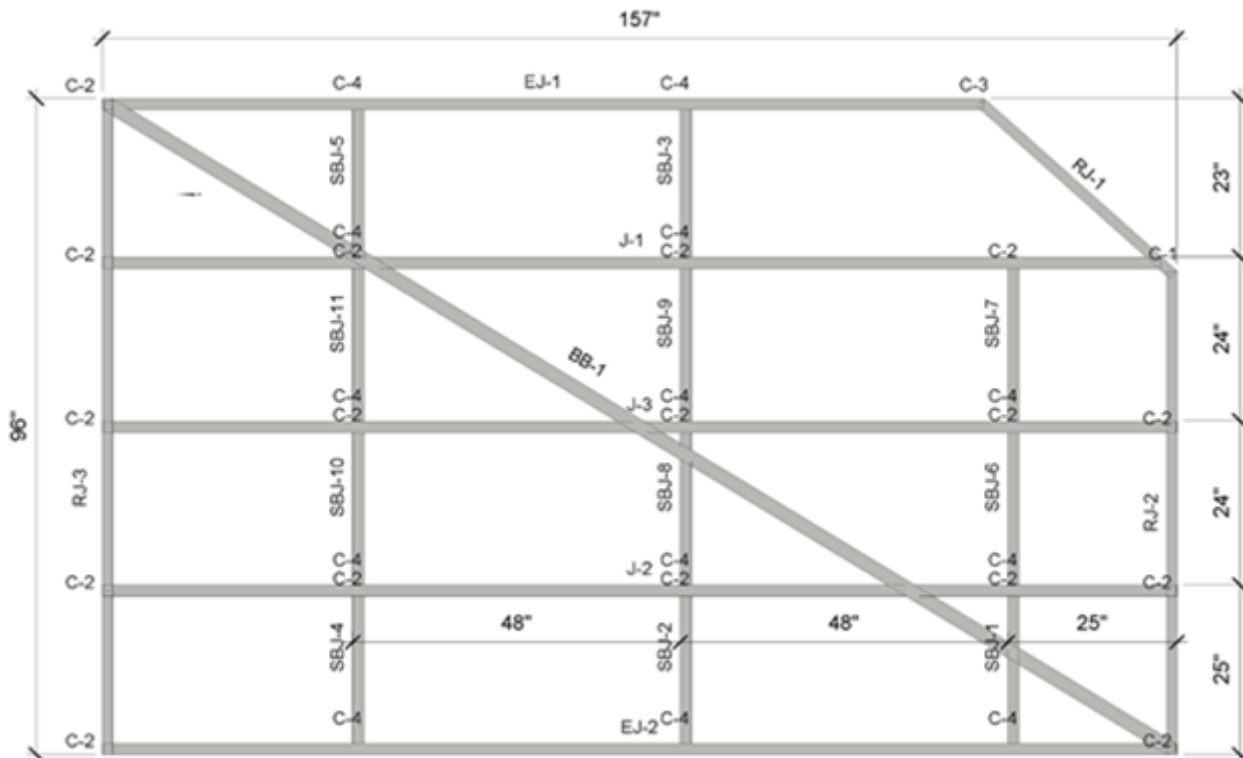
SHOP DRAWINGS – Main Features

Modified on: Sun, 17 Jan, 2021 at 6:50 PM

Finish your modeling with the built-in shop drawing generator and deliver your roof framing estimation in the same hour. Compile your complete shop drawings with dimensioning, part lists, and material take-off automatically.



Roof+M will collect all elements from one roof panel and make an assembly with predefined views, add dimensions, add tags, make sheets, and put the views into the sheets.

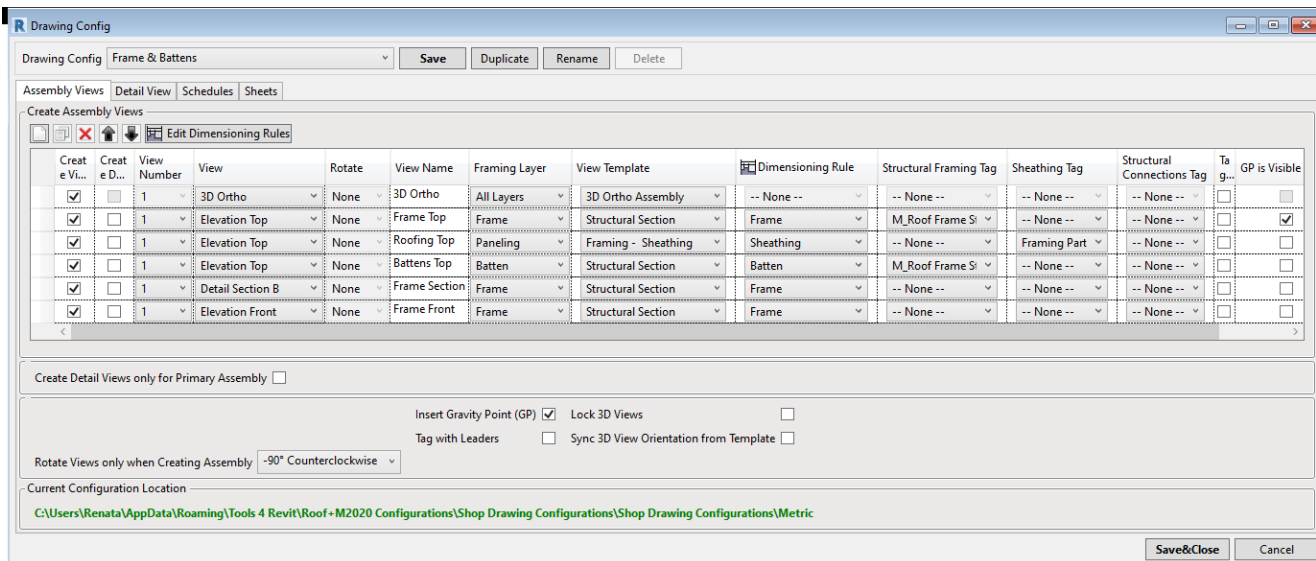
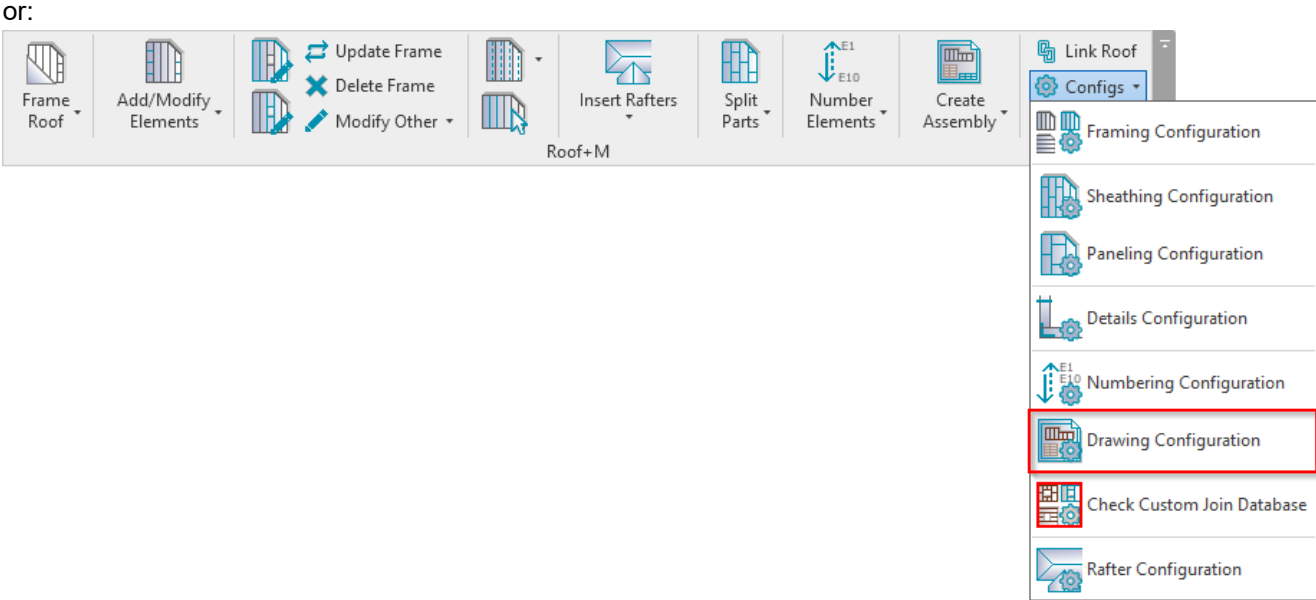
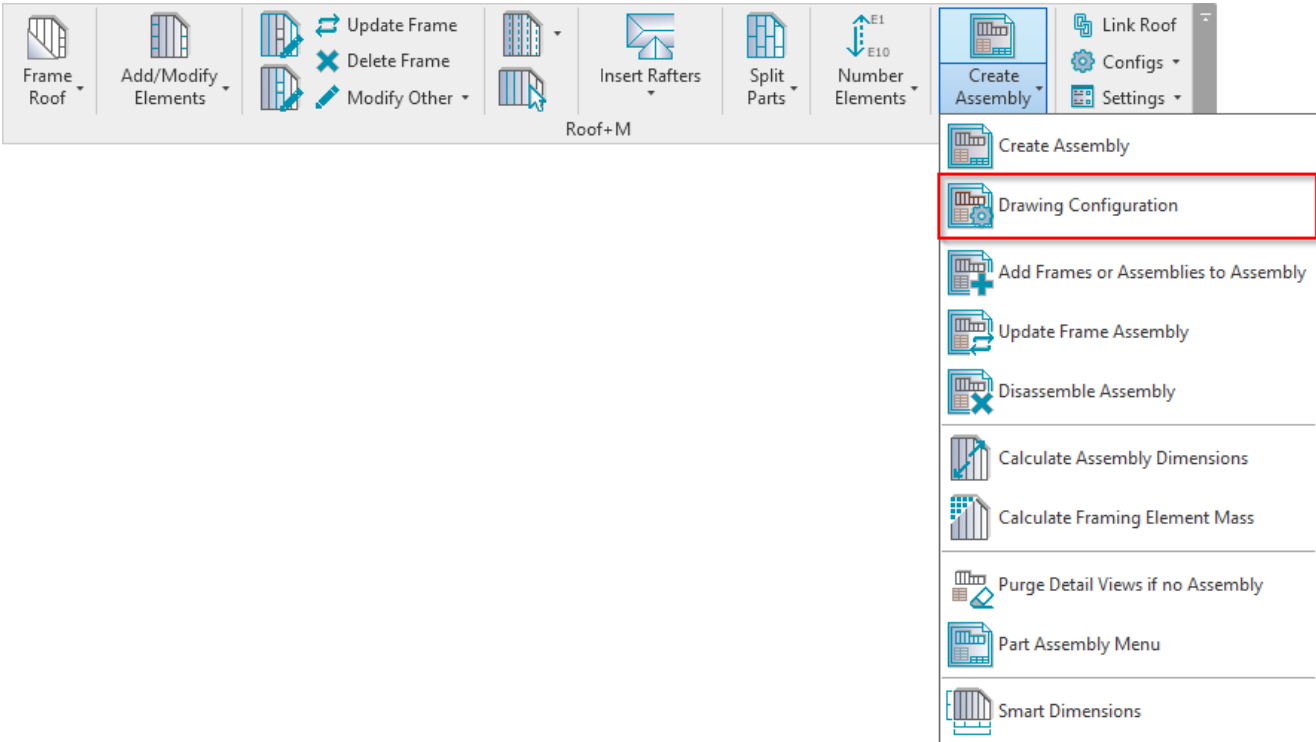


Assembly Part List				
Framing Member Type	Framing Member Description	FM SortMark	Count	Framing Member Mass
Metal Frame Panel - 10" _46				
Support	Support Clip	C-1	1	0.32 lbm
Support	Support Clip	C-2	17	5.62 lbm
Support	Support Clip	C-3	1	0.33 lbm
Support	Support Clip	C-4	13	7.95 lbm
Support: 32				14.23 lbm
Joist	Blocking	SBJ-1	1	3.88 lbm
Joist	Blocking	SBJ-2	1	3.88 lbm
Joist	Blocking	SBJ-3	1	3.88 lbm
Joist	Blocking	SBJ-4	1	3.88 lbm
Joist	Blocking	SBJ-5	1	3.88 lbm
Joist	Blocking	SBJ-6	1	4.03 lbm
Joist	Blocking	SBJ-7	1	4.03 lbm
Joist	Blocking	SBJ-8	1	4.03 lbm
Joist	Blocking	SBJ-9	1	4.03 lbm
Joist	Blocking	SBJ-10	1	4.03 lbm
Joist	Blocking	SBJ-11	1	4.03 lbm
Joist	Common Joist	J-1	1	27.91 lbm
Joist	Common Joist	J-2	1	28.33 lbm
Joist	Common Joist	J-3	1	28.33 lbm
Joist	Edge Joist	EJ-1	1	23.23 lbm
Joist	Edge Joist	EJ-2	1	28.33 lbm
Joist	Rim Joist 1	RJ-1	1	6.30 lbm
Joist	Rim Joist 1	RJ-2	1	11.77 lbm
Joist	Rim Joist 2	RJ-3	1	15.97 lbm
Joist: 19				213.73 lbm
Brace	Brace	BB-1	1	4.67 lbm
Brace: 1				4.67 lbm
				232.63 lbm

The basic shop drawing workflow consists of the following steps:

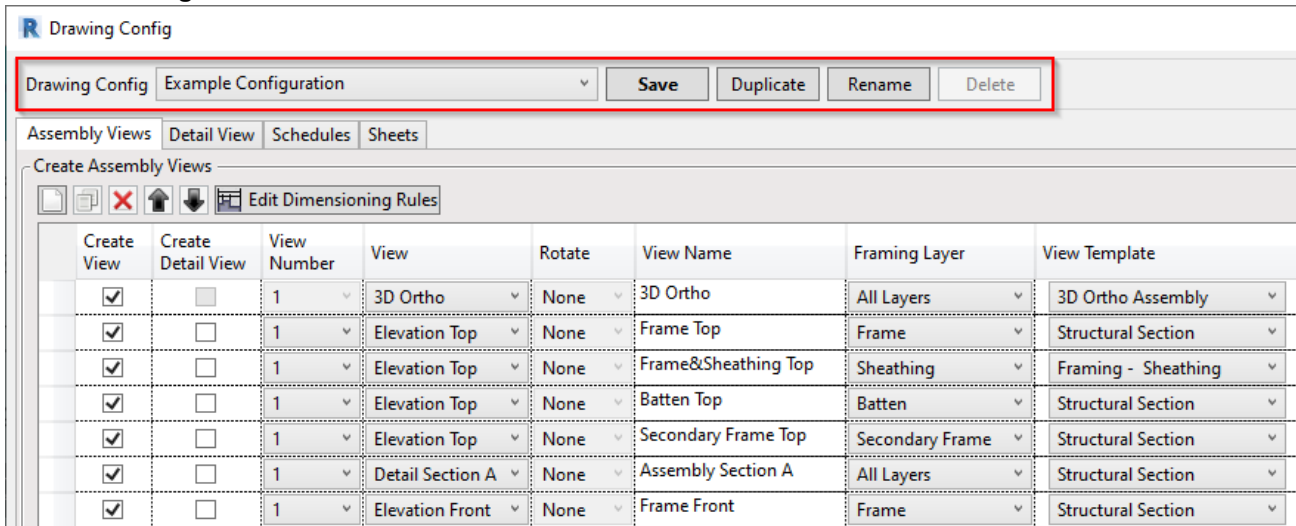
1. Roof+M → define **Drawing Configuration**
2. Roof+M → make shop drawings for one roof using **Create Assembly**
3. Roof+M → number the framing members
4. Add shop drawing views into the sheet for one roof and save it as a template for future roofs
5. Roof+M → make shop drawings for other roof segments
6. Roof+M → update shop drawings if any changes have been made to the model

Drawing Configuration



Drawing Configuration – predefine the settings for creating shop drawings. It is very versatile with thousands of different possibilities.

Configurations can be saved, duplicated, renamed, and deleted. You can check the location of configurations under **Current Configuration Location:**



Drawing Config

Drawing Config Example Configuration Save Duplicate Rename Delete

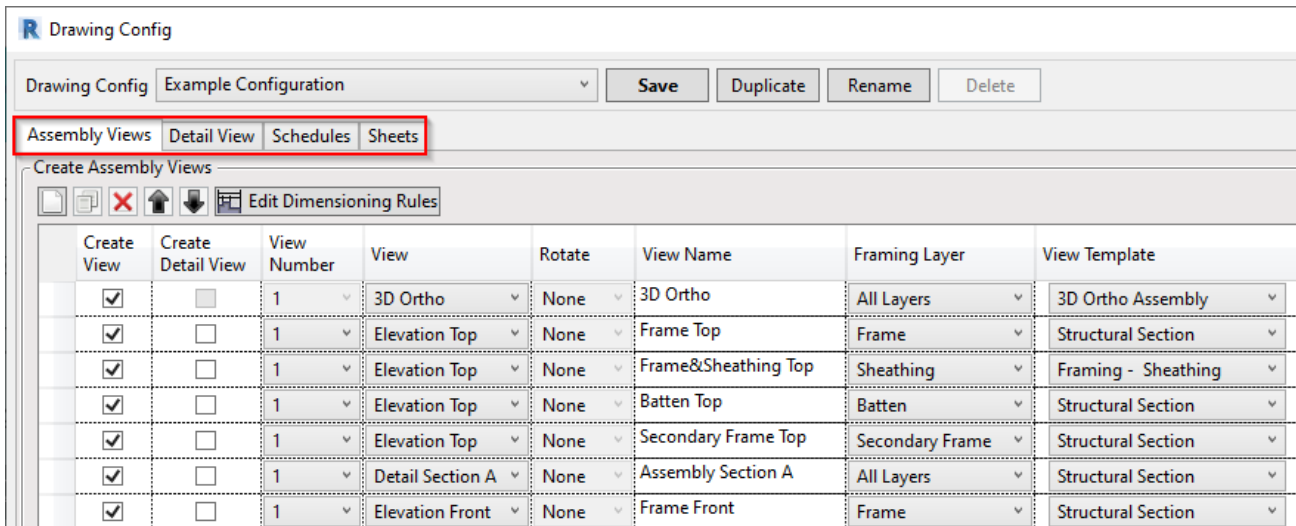
Assembly Views Detail View Schedules Sheets

Create Assembly Views

Edit Dimensioning Rules

Create View	Create Detail View	View Number	View	Rotate	View Name	Framing Layer	View Template
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	3D Ortho	None	3D Ortho	All Layers	3D Ortho Assembly
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Elevation Top	None	Frame Top	Frame	Structural Section
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Elevation Top	None	Frame&Sheathing Top	Sheathing	Framing - Sheathing
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Elevation Top	None	Batten Top	Batten	Structural Section
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Elevation Top	None	Secondary Frame Top	Secondary Frame	Structural Section
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Detail Section A	None	Assembly Section A	All Layers	Structural Section
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Elevation Front	None	Frame Front	Frame	Structural Section

The 4 tabs (**Assembly Views**, **Detail View**, **Schedules** and **Sheets**) are for setting up assembly views, detail views, schedules, and sheets, respectively:



Drawing Config

Drawing Config Example Configuration Save Duplicate Rename Delete

Assembly Views Detail View Schedules Sheets

Create Assembly Views

Edit Dimensioning Rules

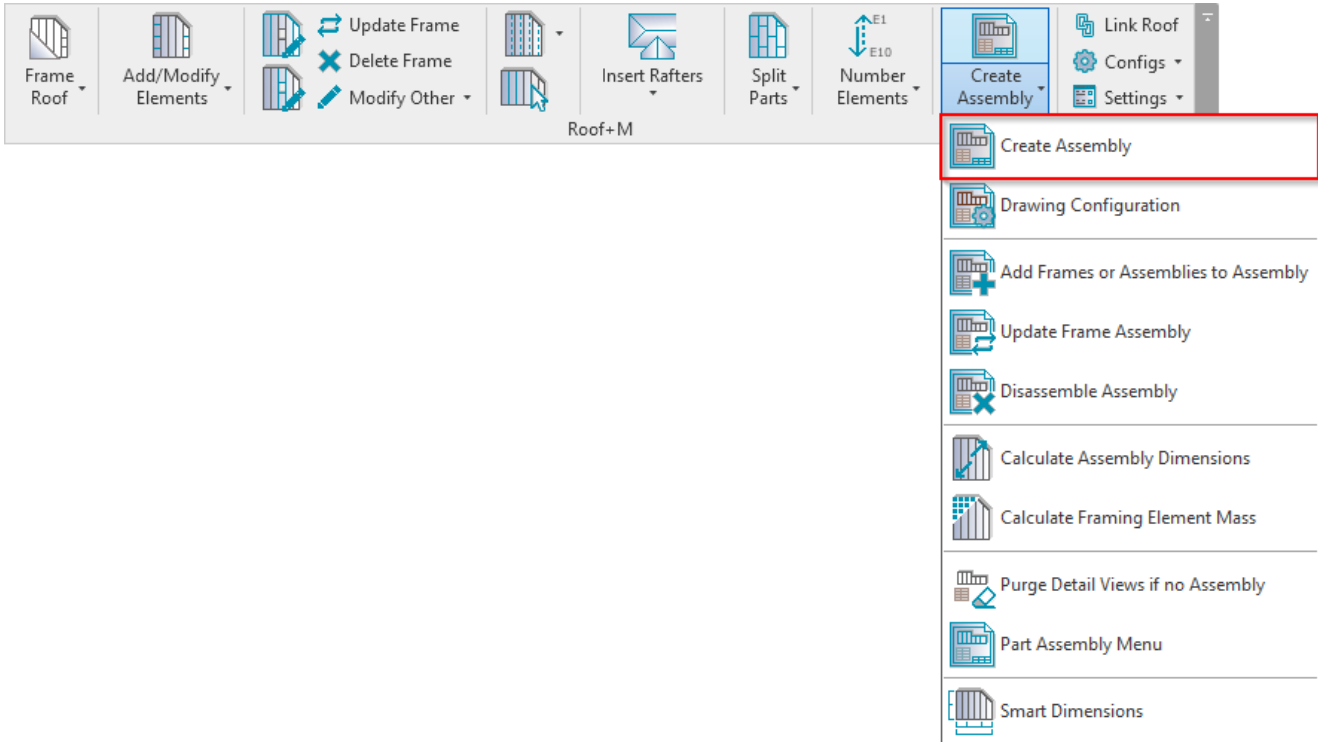
Create View	Create Detail View	View Number	View	Rotate	View Name	Framing Layer	View Template
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	3D Ortho	None	3D Ortho	All Layers	3D Ortho Assembly
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Elevation Top	None	Frame Top	Frame	Structural Section
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Elevation Top	None	Frame&Sheathing Top	Sheathing	Framing - Sheathing
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Elevation Top	None	Batten Top	Batten	Structural Section
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Elevation Top	None	Secondary Frame Top	Secondary Frame	Structural Section
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Detail Section A	None	Assembly Section A	All Layers	Structural Section
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Elevation Front	None	Frame Front	Frame	Structural Section

Read more about Assembly Views >> (<https://agacad.freshdesk.com/support/solutions/articles/44001800515-shop-drawings-%E2%80%93-drawing-configuration-%E2%80%93-assembly-views>).

Read more about Schedules >> (<https://agacad.freshdesk.com/support/solutions/articles/44001800519-shop-drawings-%E2%80%93-drawing-configuration-%E2%80%93-schedules>).

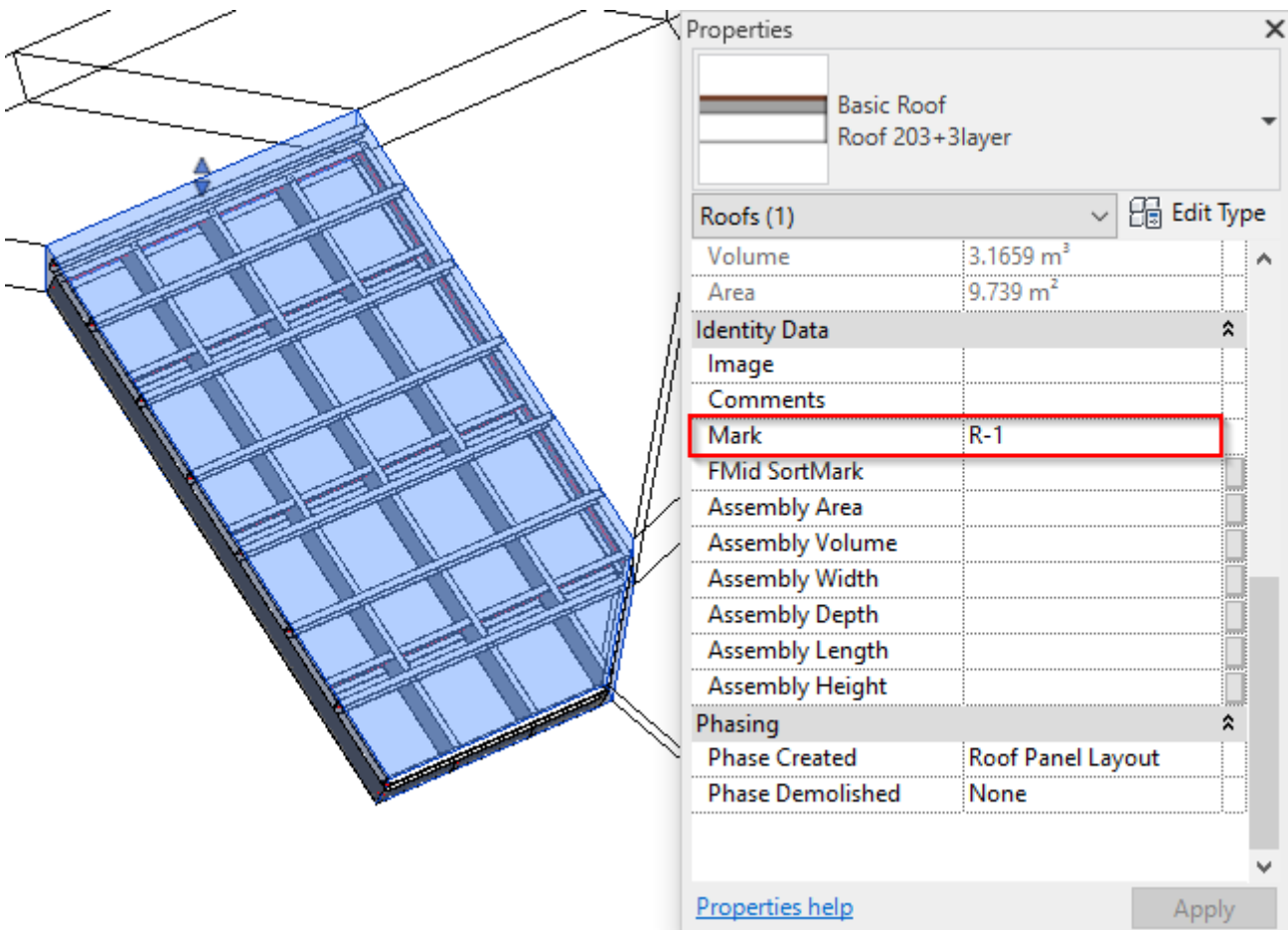
Read more about Sheets>> (<https://agacad.freshdesk.com/support/solutions/articles/44001800521-shop-drawings-%E2%80%93-drawing-configuration-%E2%80%93-sheets>).

Create Assembly



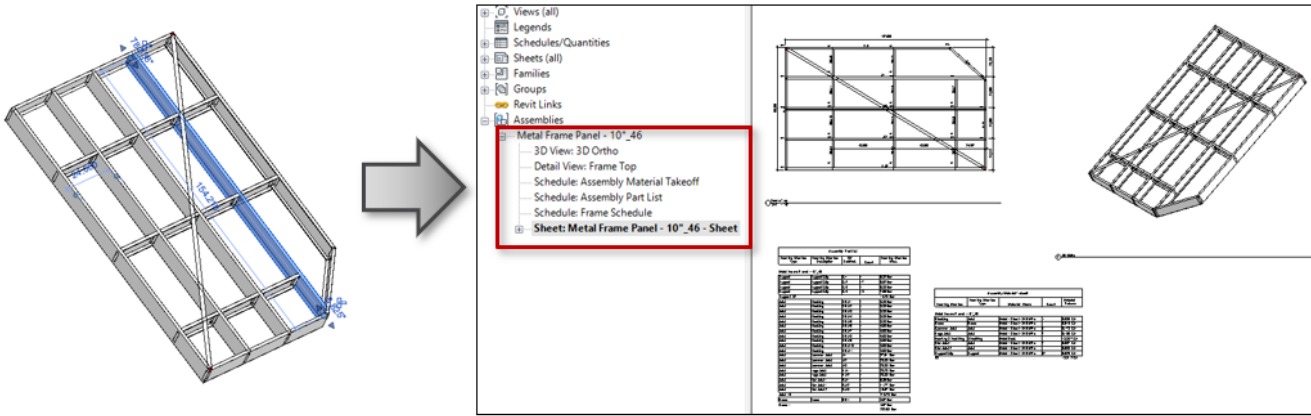
Create Assembly – makes shop drawings for selected roofs. Select any frame from the roof, and after clicking **Create Assembly**, the software will create shop drawings according to the predefined configuration.

*Mandatory condition: selected roof needs to have a **Mark** value assigned:*

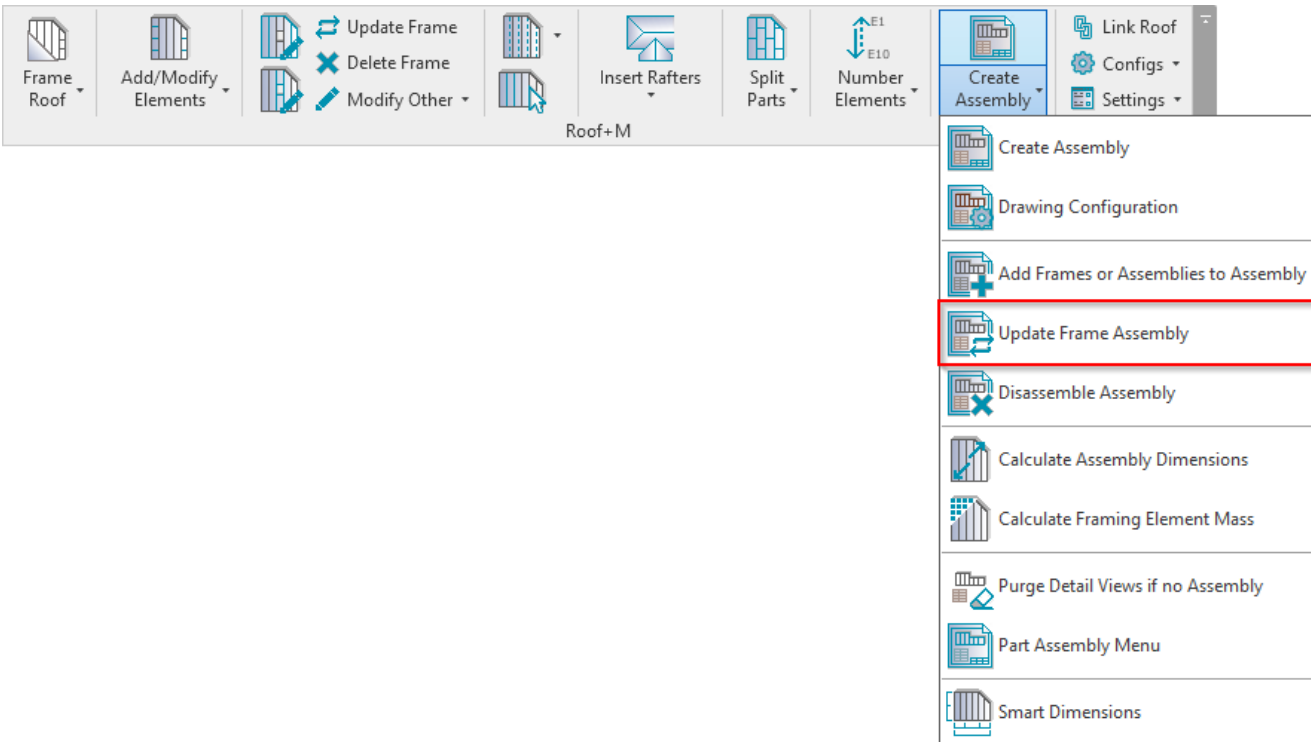


*This value will be used as the assembly name. You can find shop drawings in **Project Browser** under **Assemblies**.*

An assembly combines all parts into a single entity, which is scheduled and isolated to create shop drawing views with tags and dimensions.

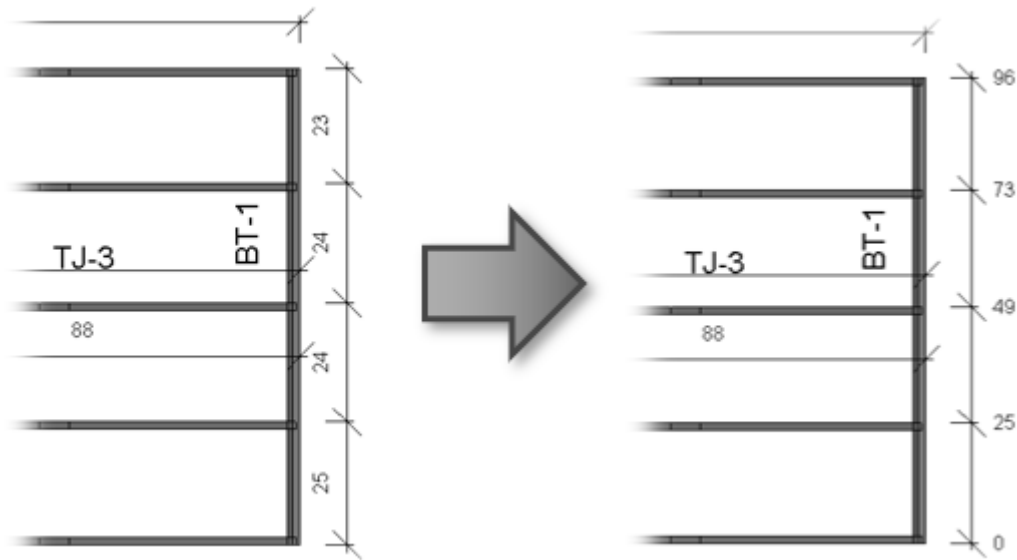


Update Frame Assembly

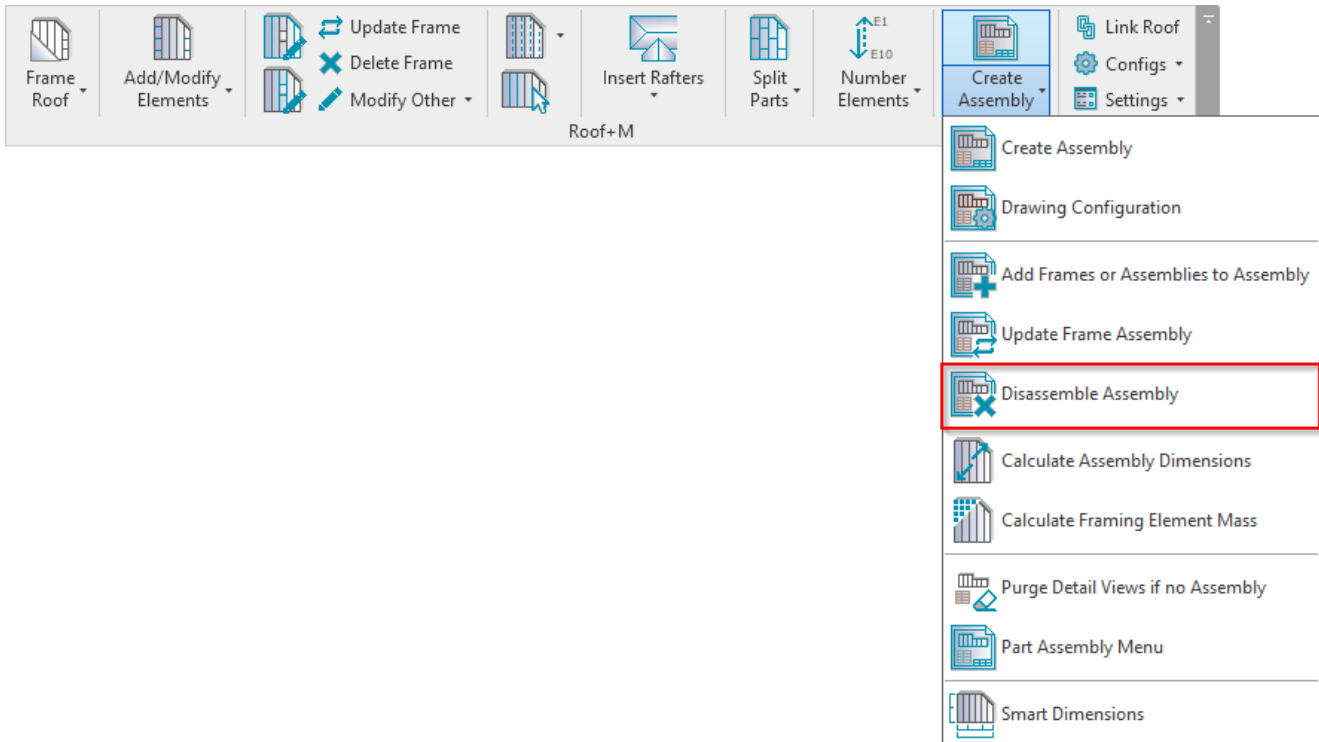


Update Frame Assembly – updates the selected assembly if any changes were made to the framing or to the Drawing Configuration.

Example 1: dimension type was changed in the configuration. Result after updating:

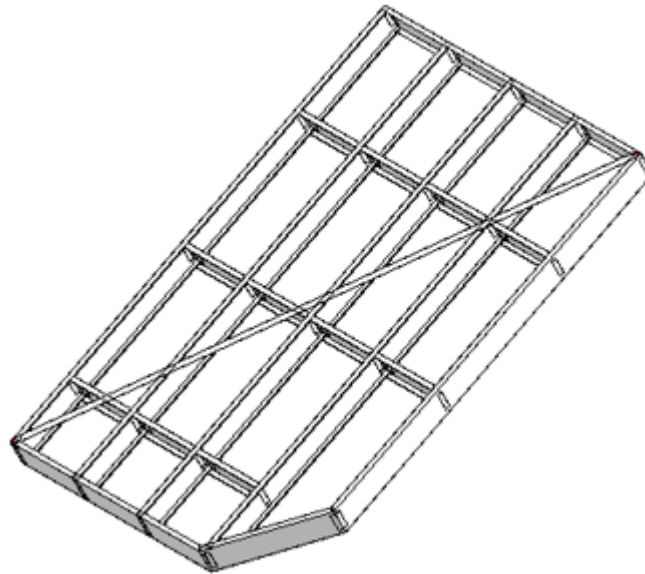
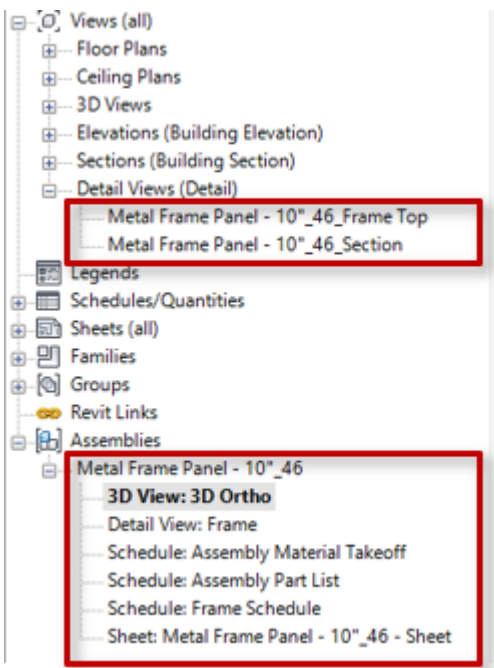


Disassemble Assembly

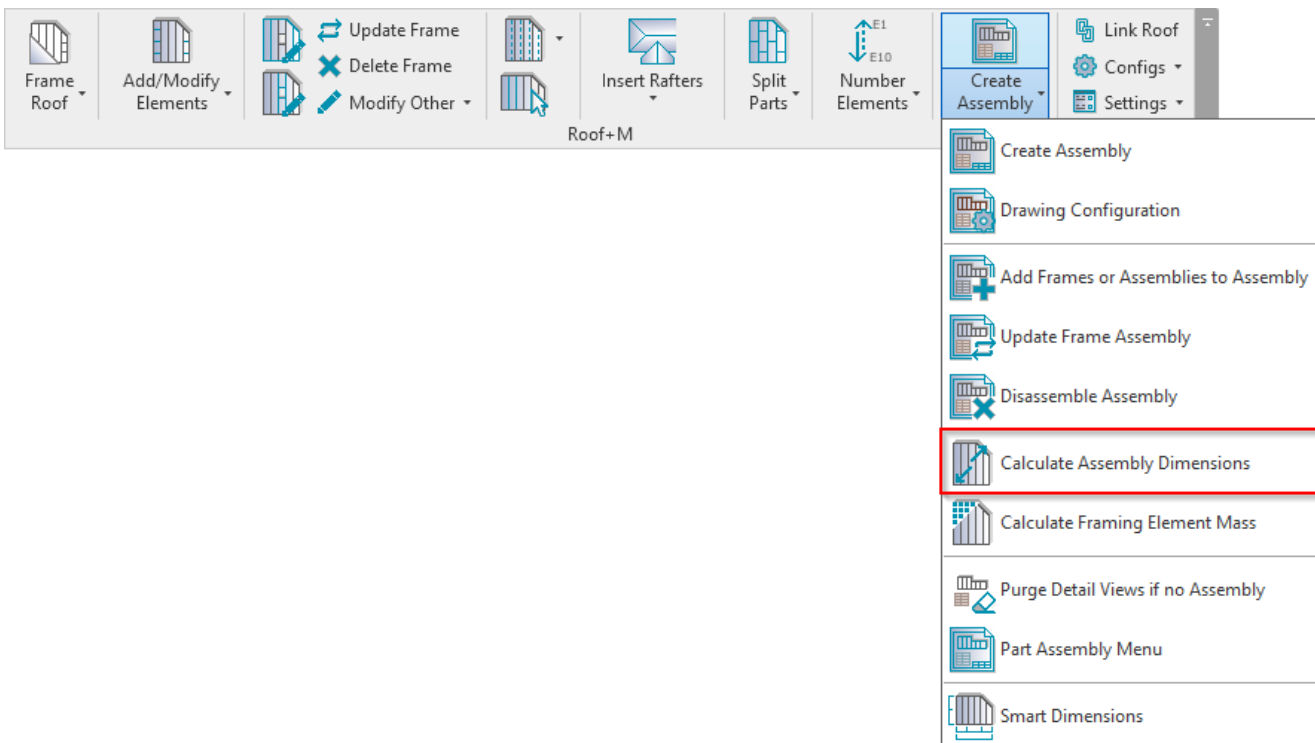


Disassemble Assembly – removes the assembly relationship between elements in the selected assembly and all associated views.

Recommended workflow: Instead of **Revit** → **Disassemble**, we recommend using **Roof+M** → **Create Assembly** → **Disassemble Assembly** as it doesn't show unnecessary pop-ups and deletes the gravity point.

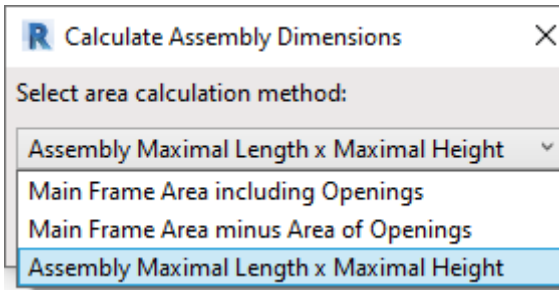


Calculate Assembly Dimensions

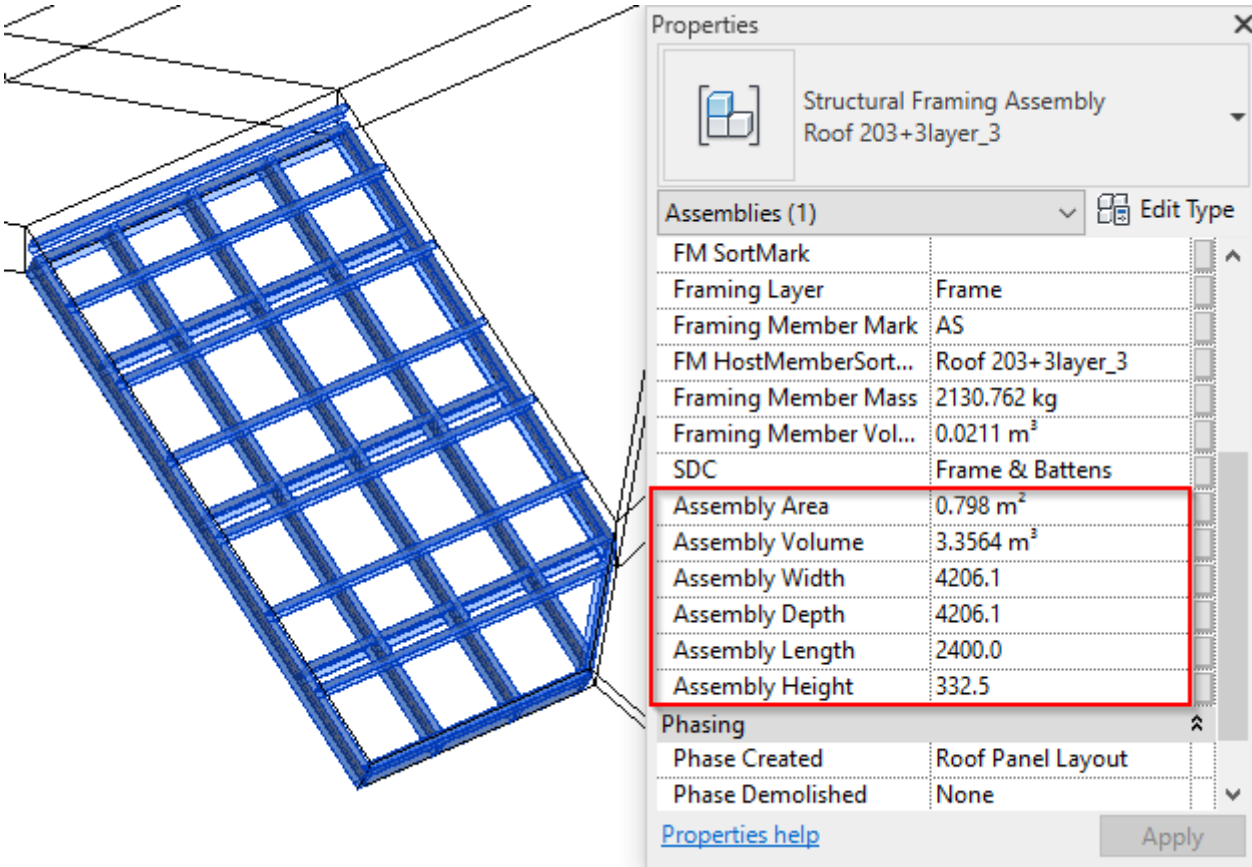


Calculate Assembly Dimensions – calculates assembly dimensions (area, volume, width, depth, length, height) by predefined rules and writes the results in assembly instance parameters (**Assembly Area**, **Assembly Volume**, **Assembly Width**, **Assembly Depth**, **Assembly Length**, **Assembly Height**) for later use in schedules.

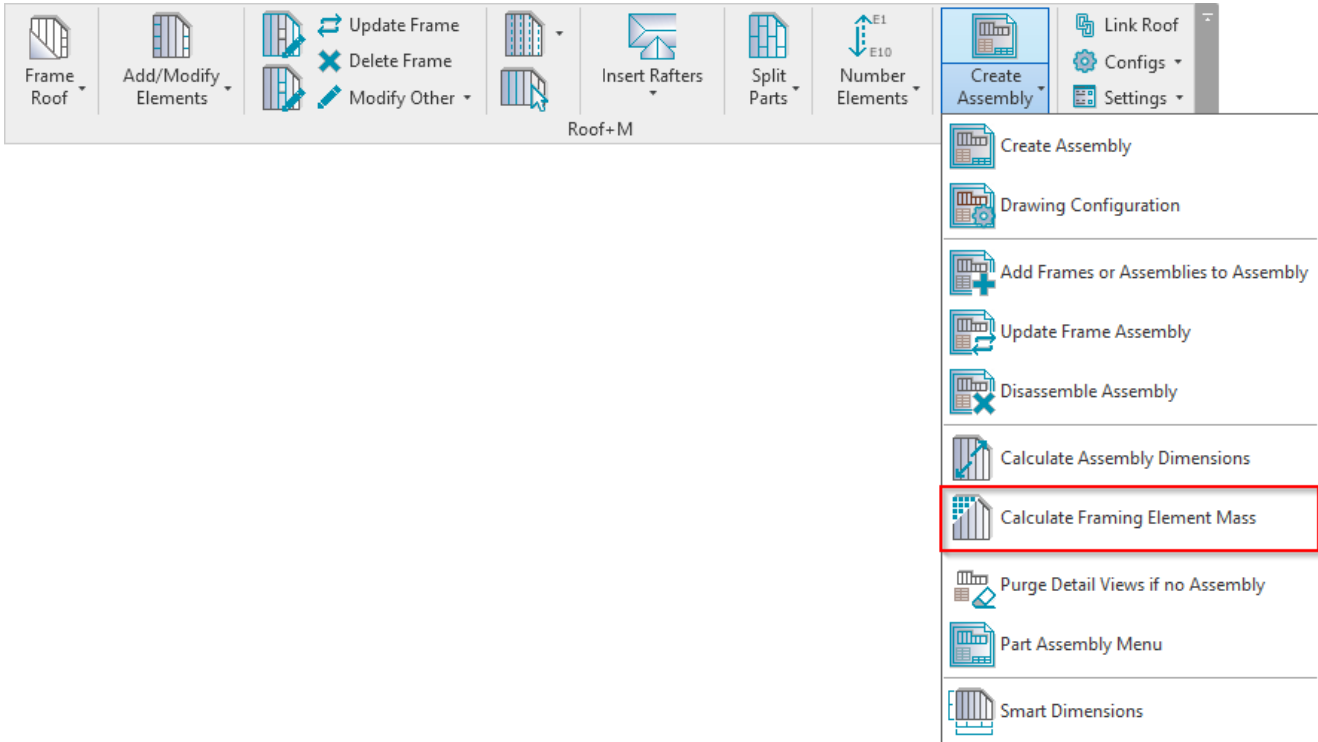
Select area calculation method:



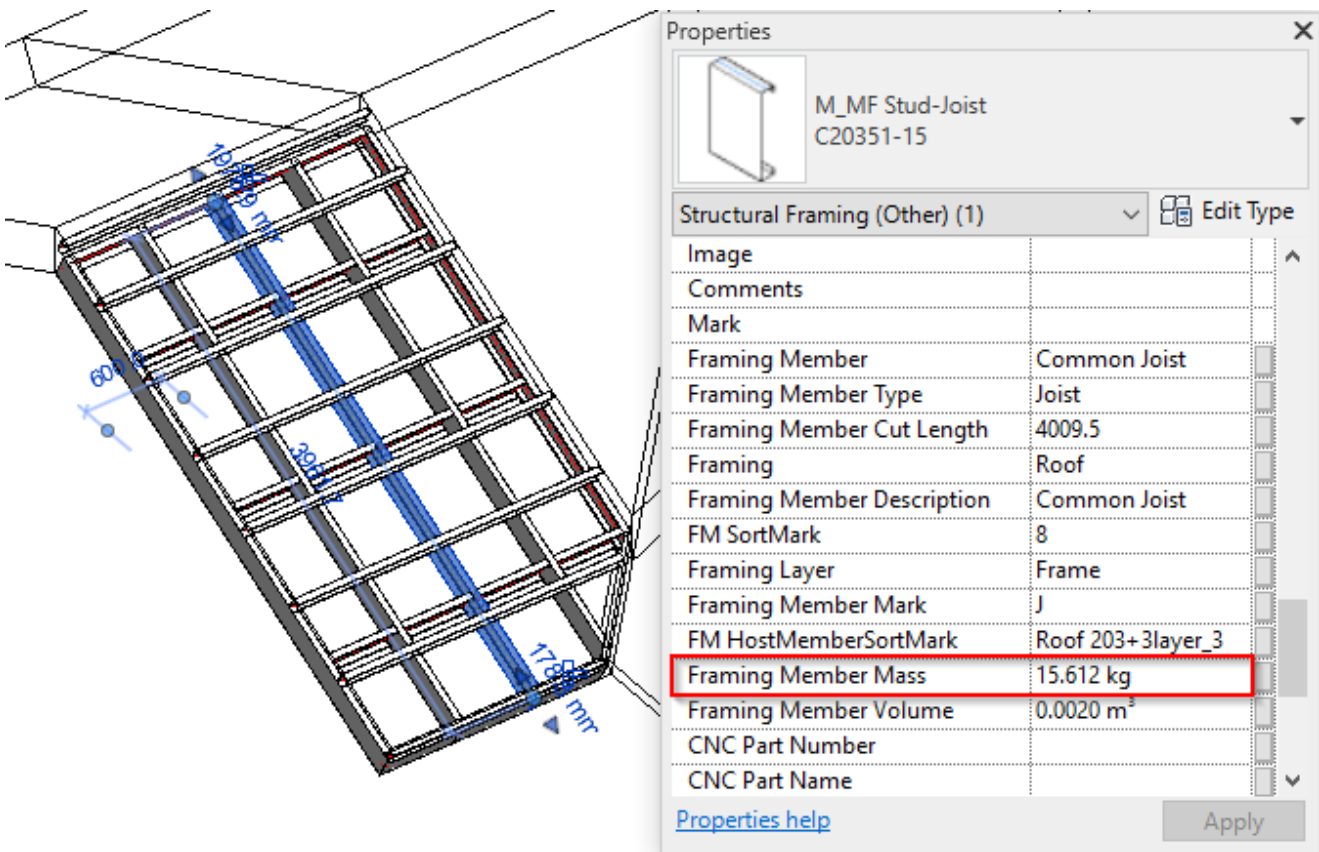
Result:



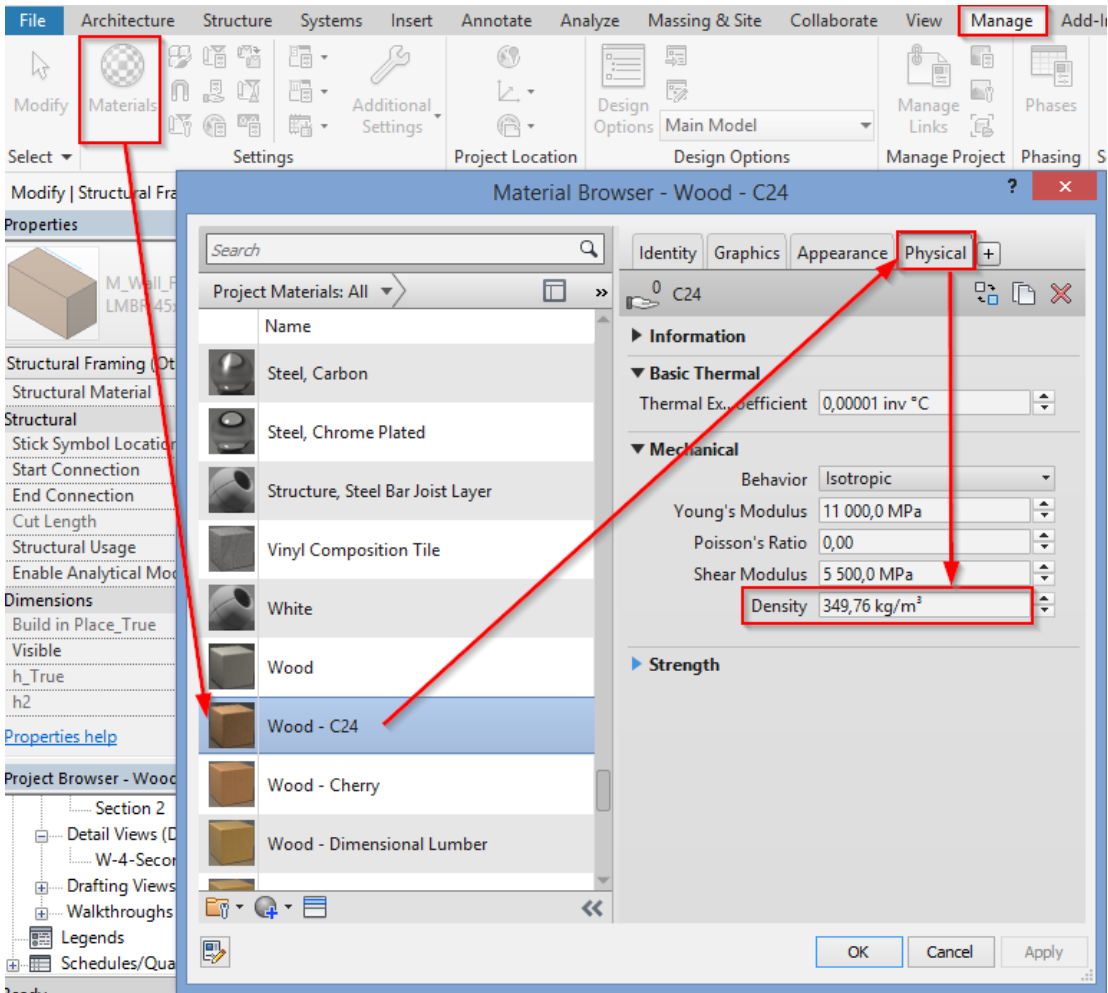
Calculate Framing Element Mass



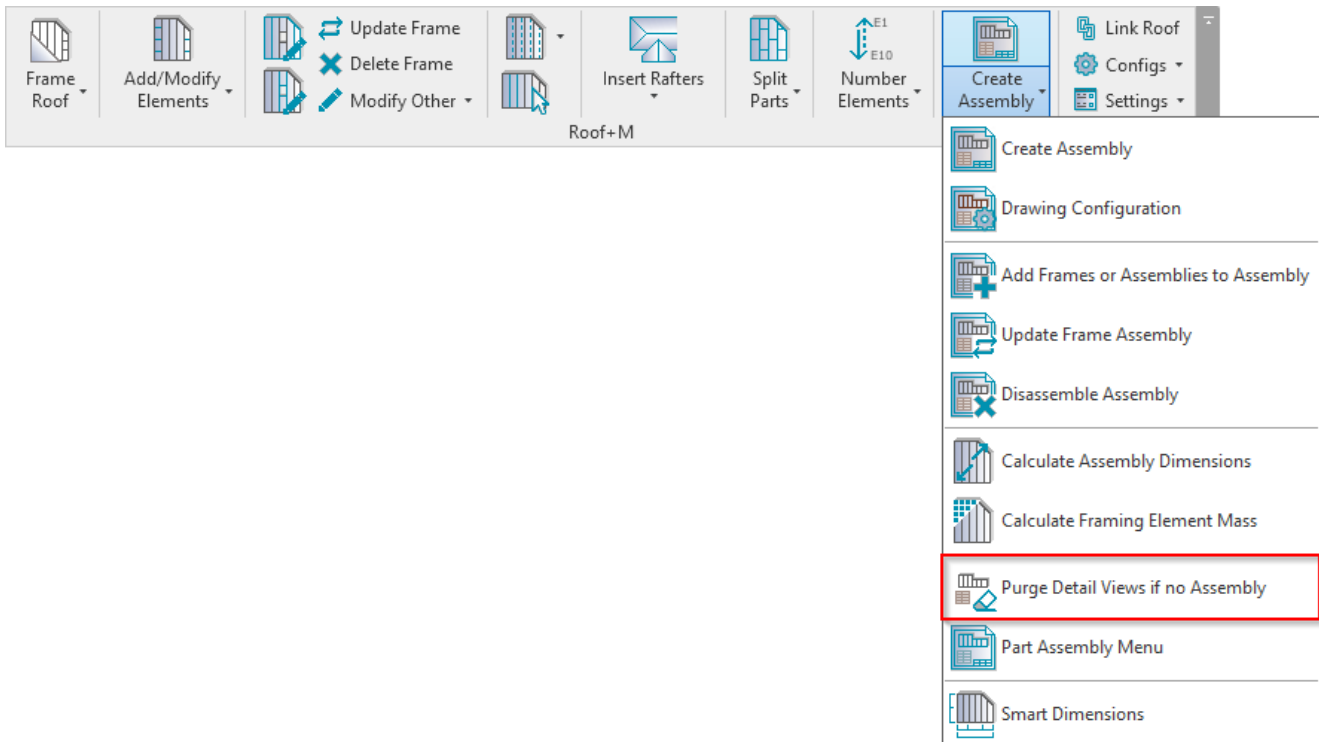
Calculate Framing Element Mass – calculates mass of selected framing elements, and writes result to **Framing Member Mass** parameter, which you can find in **Element Properties** → **Identity Data**.



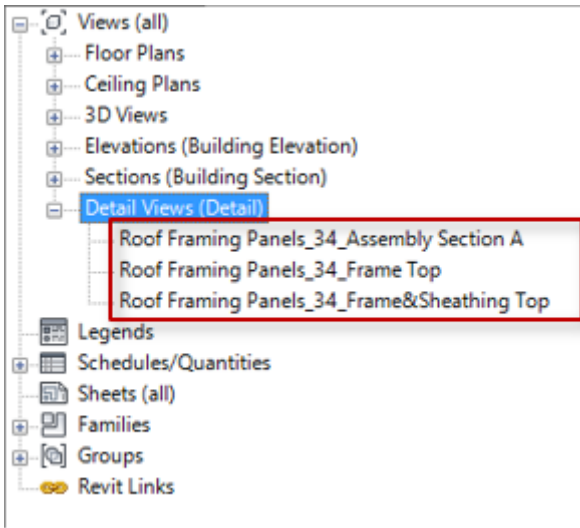
Density parameter must be filled in for the element in **Materials** → **Physical** tab:



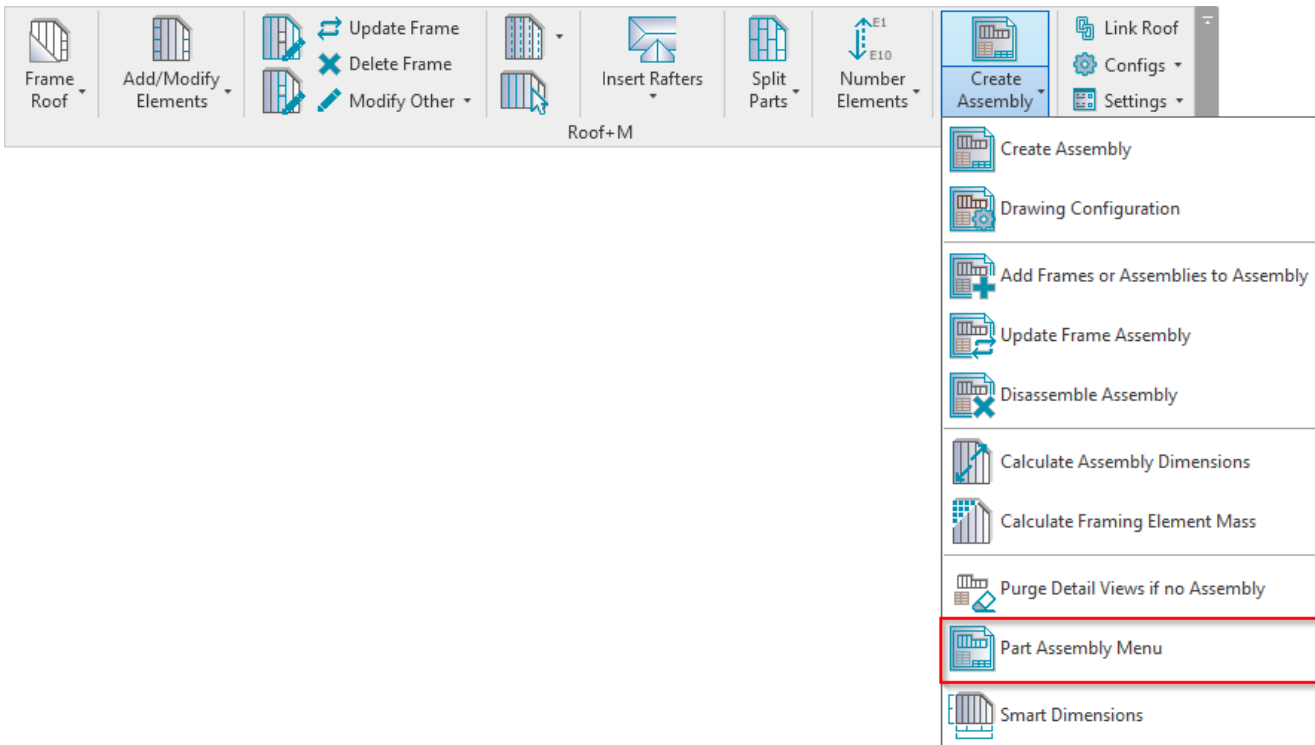
Purge Detail Views if no Assembly



Purge Detail Views if no Assembly – removes detail views if assembly has been disassembled.



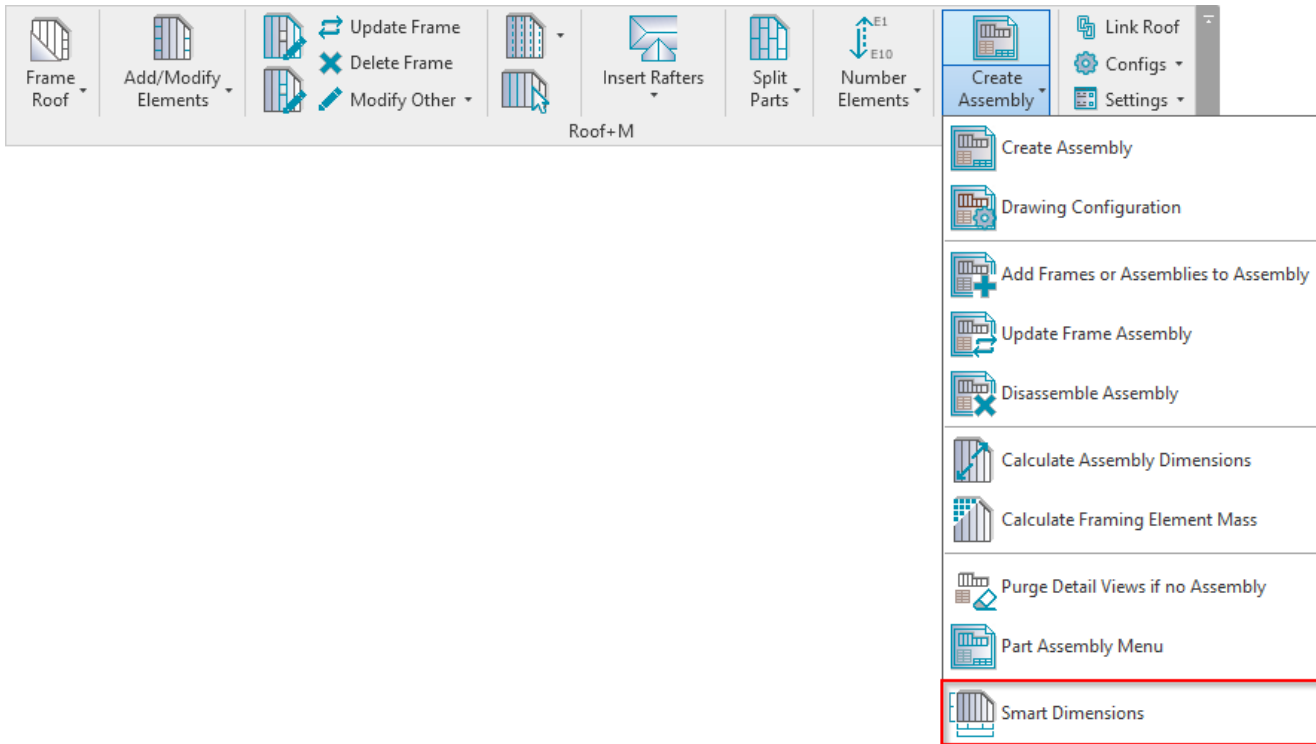
Part Assembly Menu



Part Assembly Menu – features for creating assemblies from parts and different part selection options.

Read more >> (<https://agacad.freshdesk.com/support/solutions/articles/44001800525-shop-drawings-%E2%80%93-part-assembly-menu>).

Smart Dimensions



Smart Dimensions – features for setting up dimensions in shop drawings.

Read more >> (<https://agacad.freshdesk.com/support/solutions/articles/44001800531-shop-drawings-%E2%80%93-smart-dimensions-%E2%80%93-main-features>).