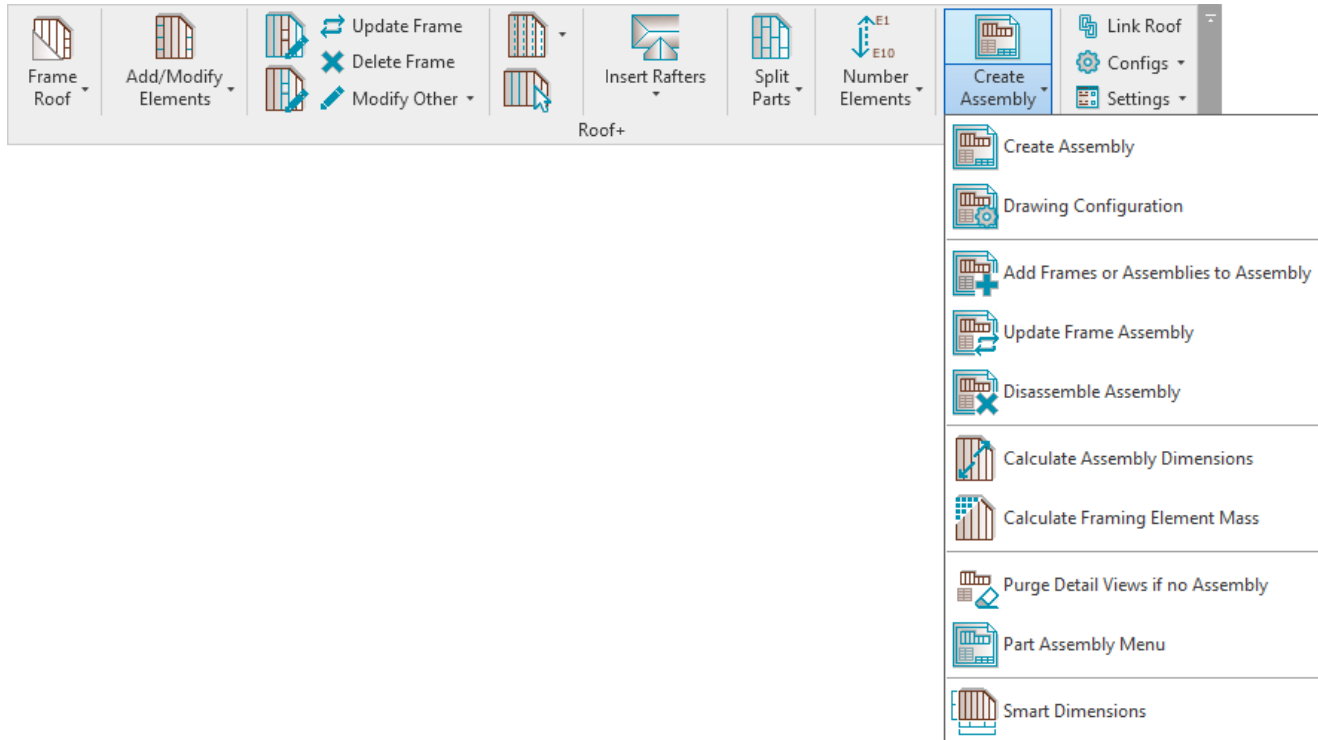


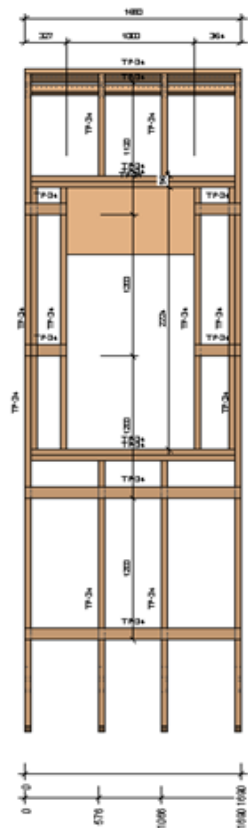
## SHOP DRAWINGS – Main Features

Modified on: Sat, 14 Sep, 2019 at 10:52 AM

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+** 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.



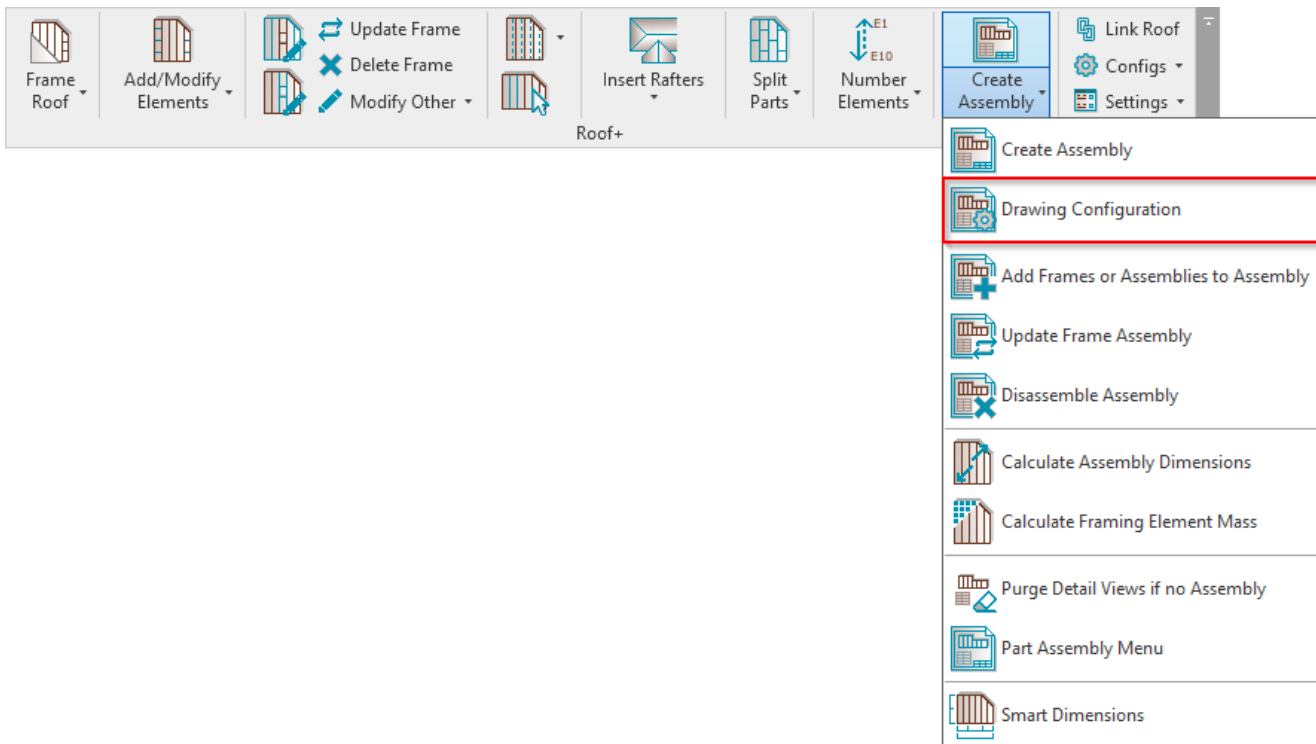
Frame Schedule				
Framing Member	FB	Count	Cut Length	Framing Member Mass
Roofing	TP-34	1	1000	2.77 kg
Board	TP-34	6		3.59 kg
Edge Joist	TP-34	2	551.1	25.05 kg
Header 1	TP-34	2	1594	16.06 kg
Header 2	TP-34	2	1594	16.06 kg
Joist	TP-34	2	2224	22.34 kg
Tail Joist	TP-34	4		29.30 kg
Trimmer	TP-34	2	1690	6.06 kg
Trimmer Joist	TP-34	2	2224	22.36 kg
23				111.36 kg



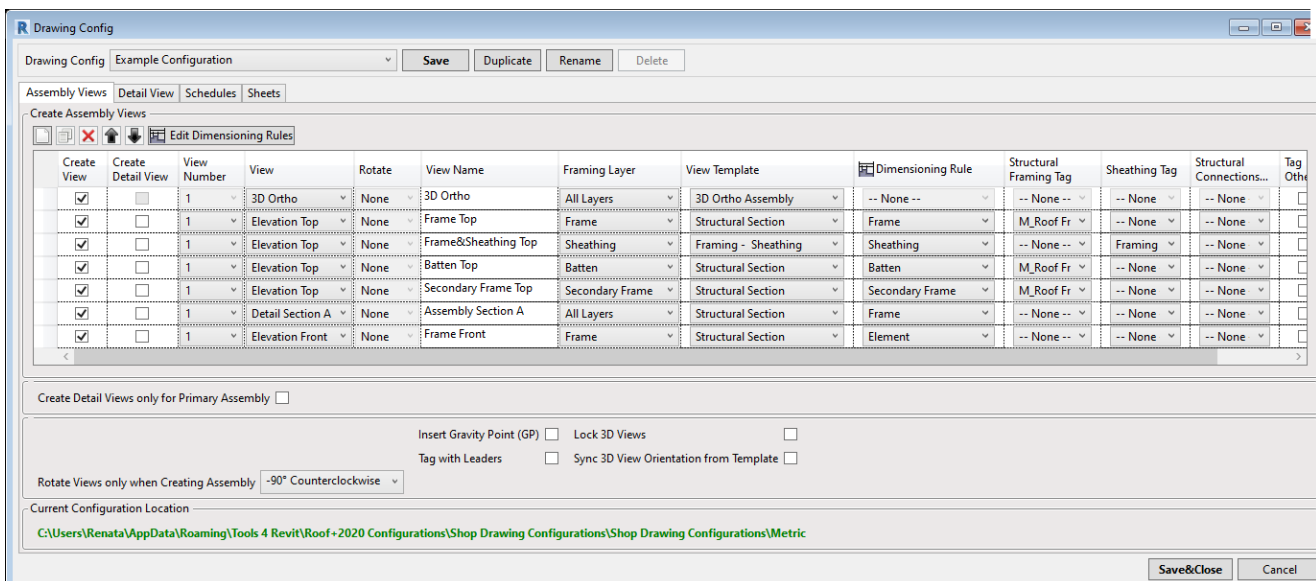
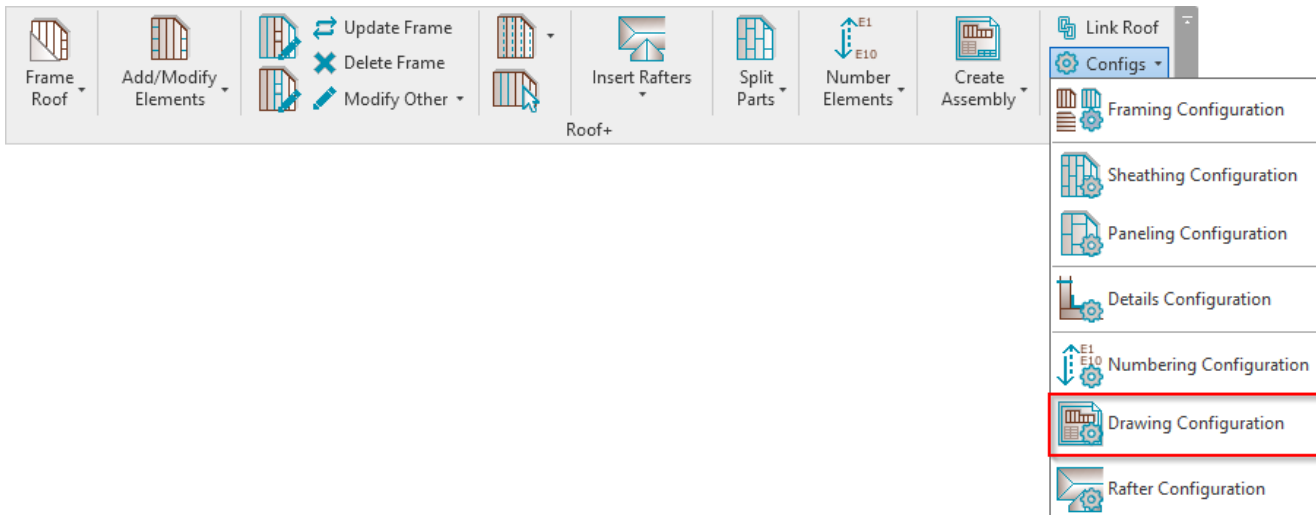
The basic shop drawing workflow consists of the following steps:

1. Roof+ → define **Drawing Configuration**
2. Roof+ → make shop drawings for one roof using **Create Assembly**
3. Roof+ → 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+ → make shop drawings for other roof segments
6. Roof+ → update shop drawings if any changes have been made to the model

## Drawing Configuration

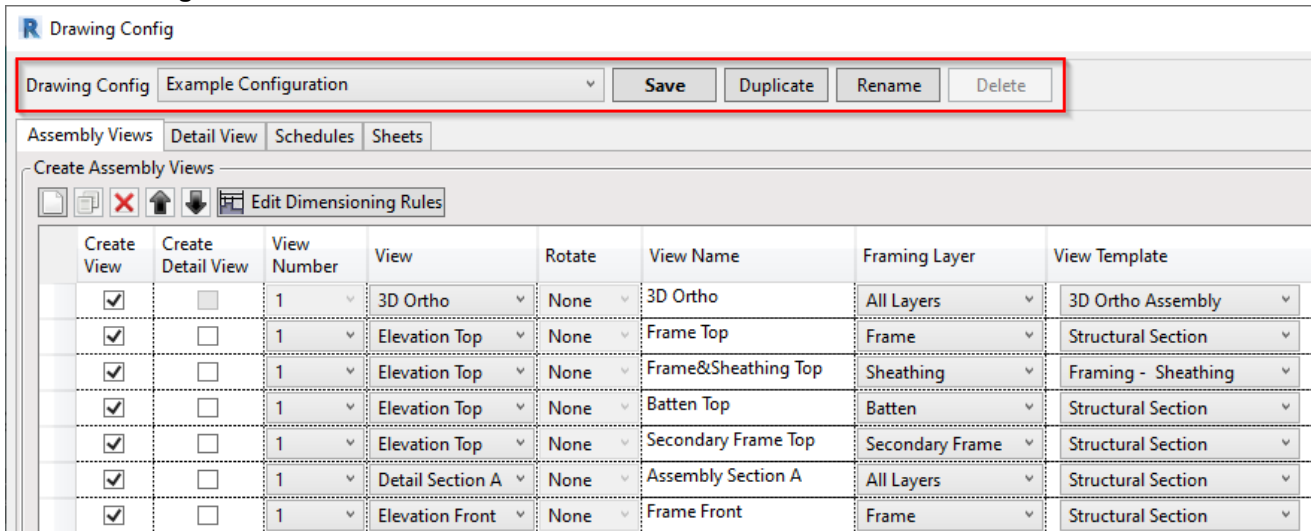


OR:



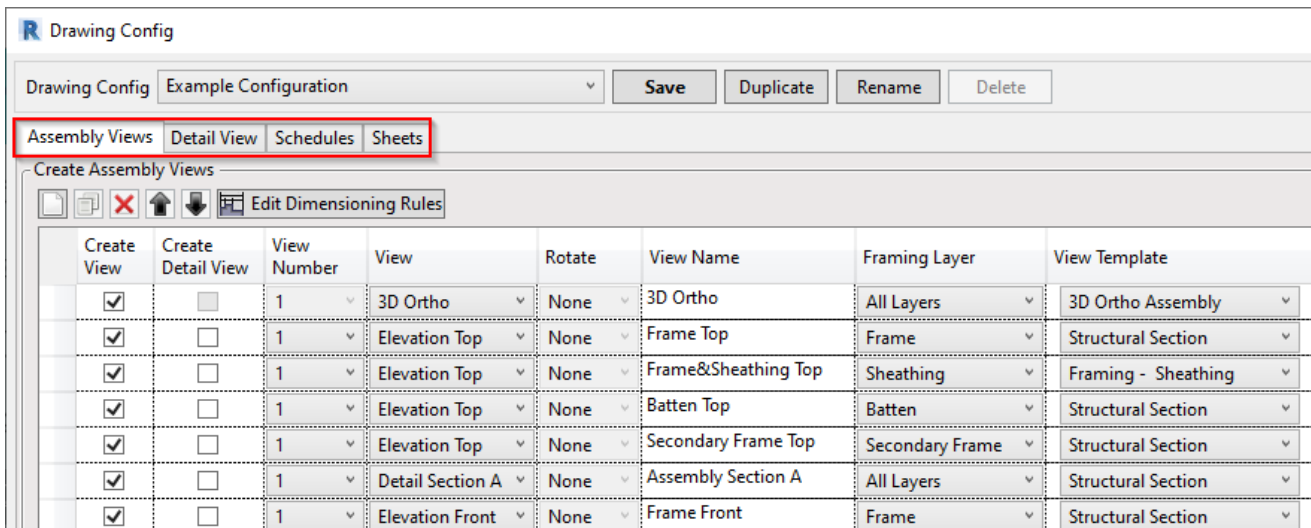
**Drawing Configuration** – predefine the settings for creating shop drawings. It is very versatile with thousands of different possibilities.

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



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:



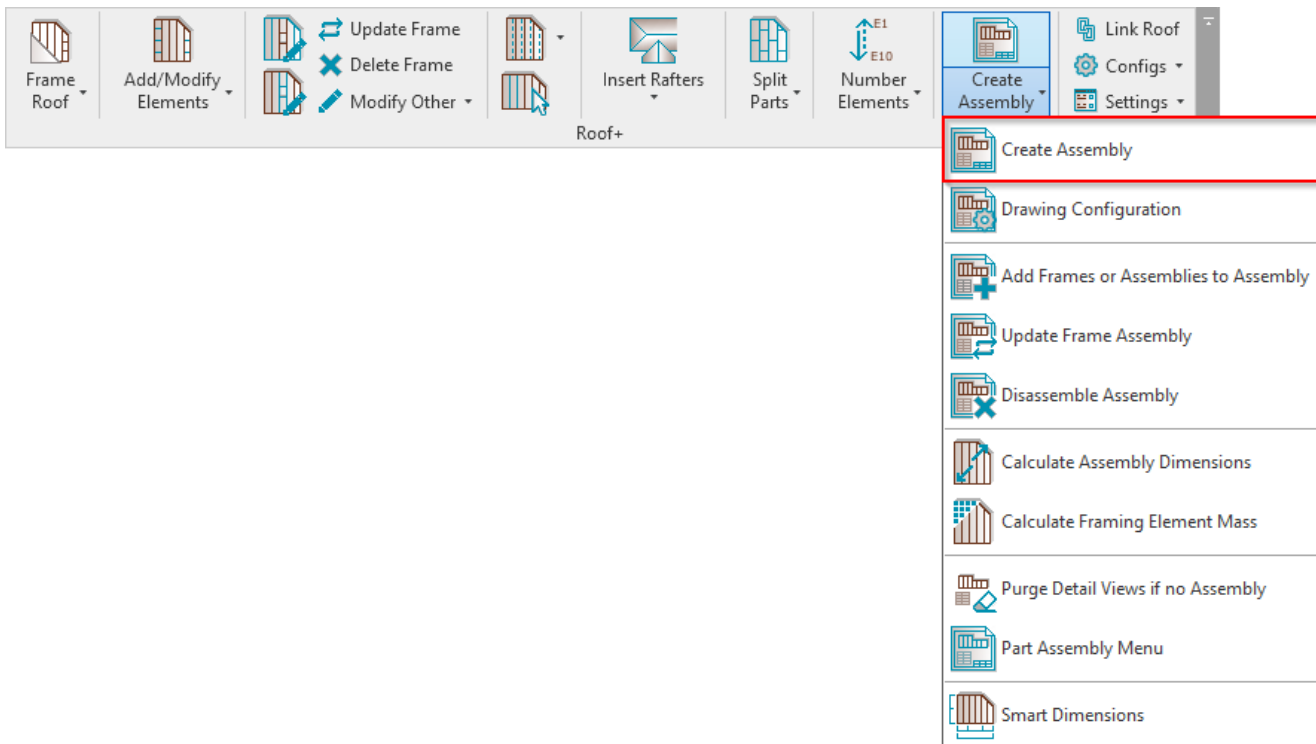
Create View	Create Detail View	View Number	View	Rotate	View Name	Framing Layer	View Template
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	3D Ortho	None	3D Ortho	All Layers	3D Ortho Assembly
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Elevation Top	None	Frame Top	Frame	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/44001788720-shop-drawings-%E2%80%93-drawing-configuration-%E2%80%93-assembly-views>)

**Read more about Schedules >>** (<https://agacad.freshdesk.com/support/solutions/articles/44001788727-shop-drawings-%E2%80%93-drawing-configuration-%E2%80%93-schedules>)

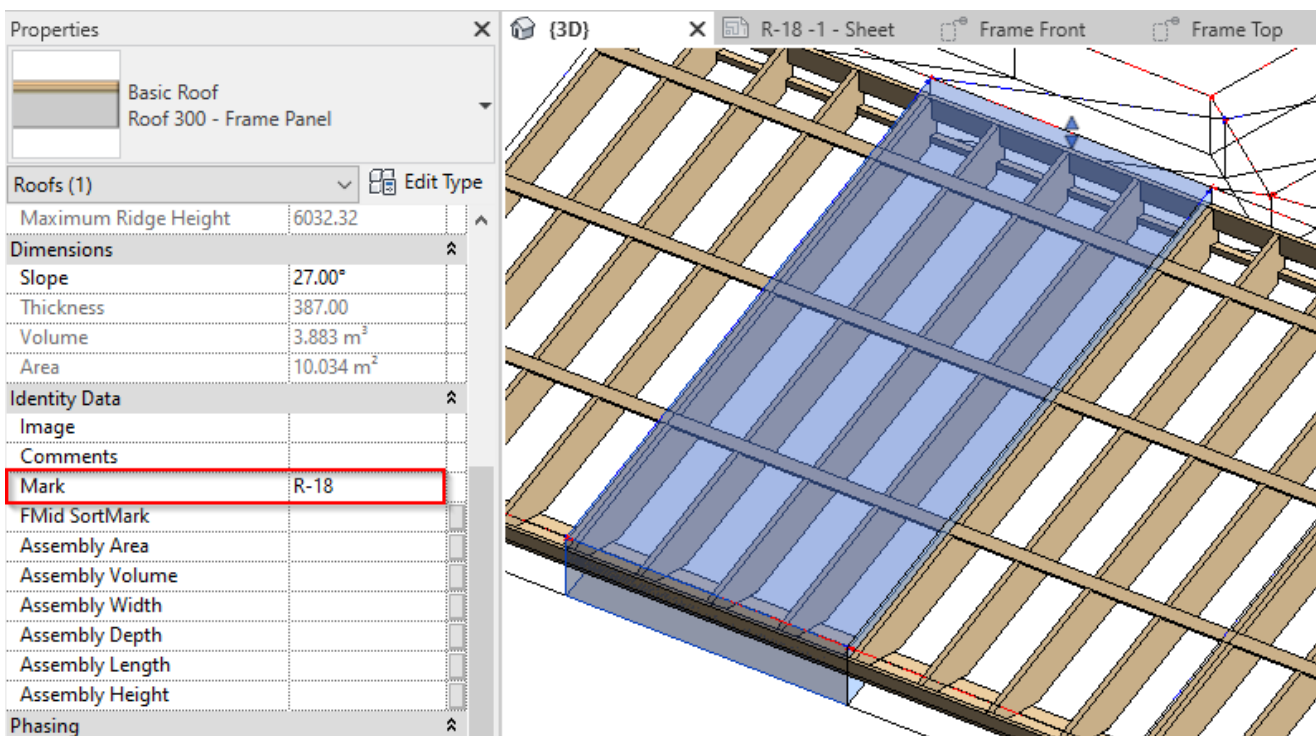
**Read more about Sheets>>** (<https://agacad.freshdesk.com/support/solutions/articles/44001788731-shop-drawings-%E2%80%93-drawing-configuration-%E2%80%93-sheets>)

## Create Assembly



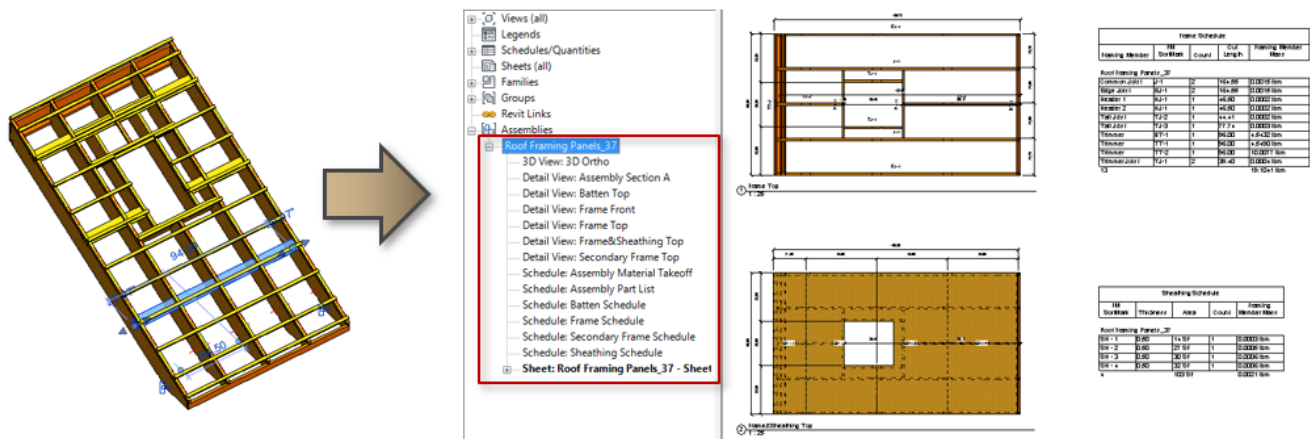
**Create Assembly** – makes shop drawings for selected roofs. Select any frame from the roof, and after clicking **Create Assembly**, the software will create shop drawings according to the predefined configuration.

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

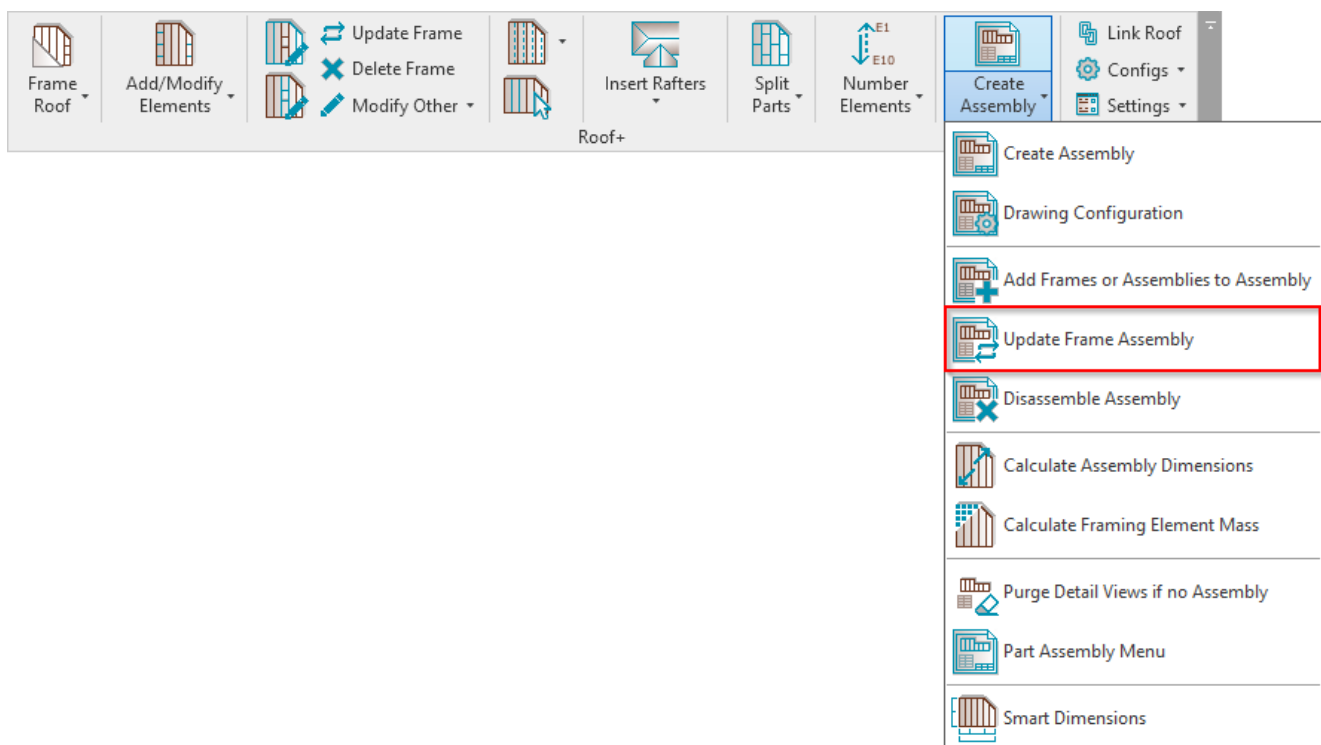


*This value will be used as the assembly name. You can find shop drawings in **Project Browser** under **Assemblies**.*

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

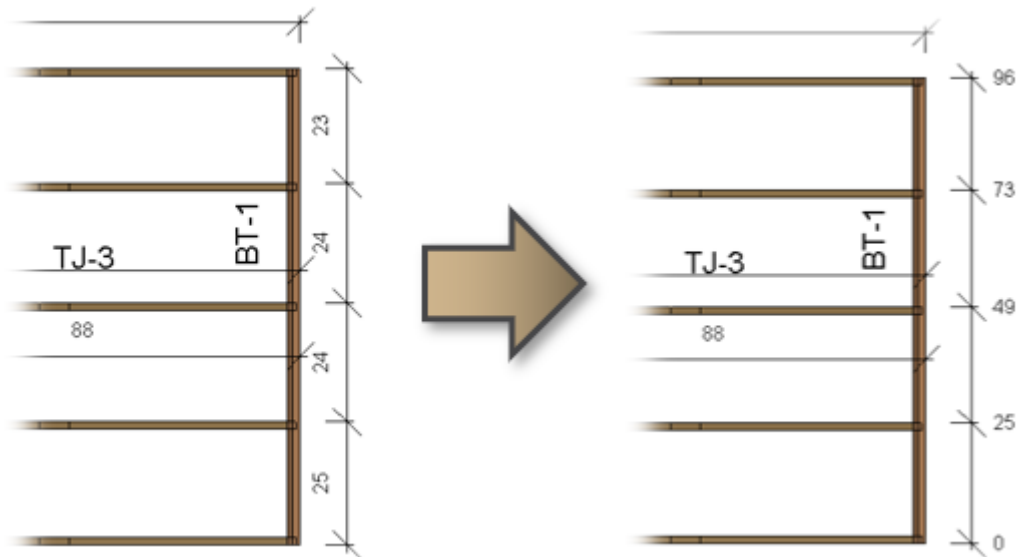


## Update Frame Assembly

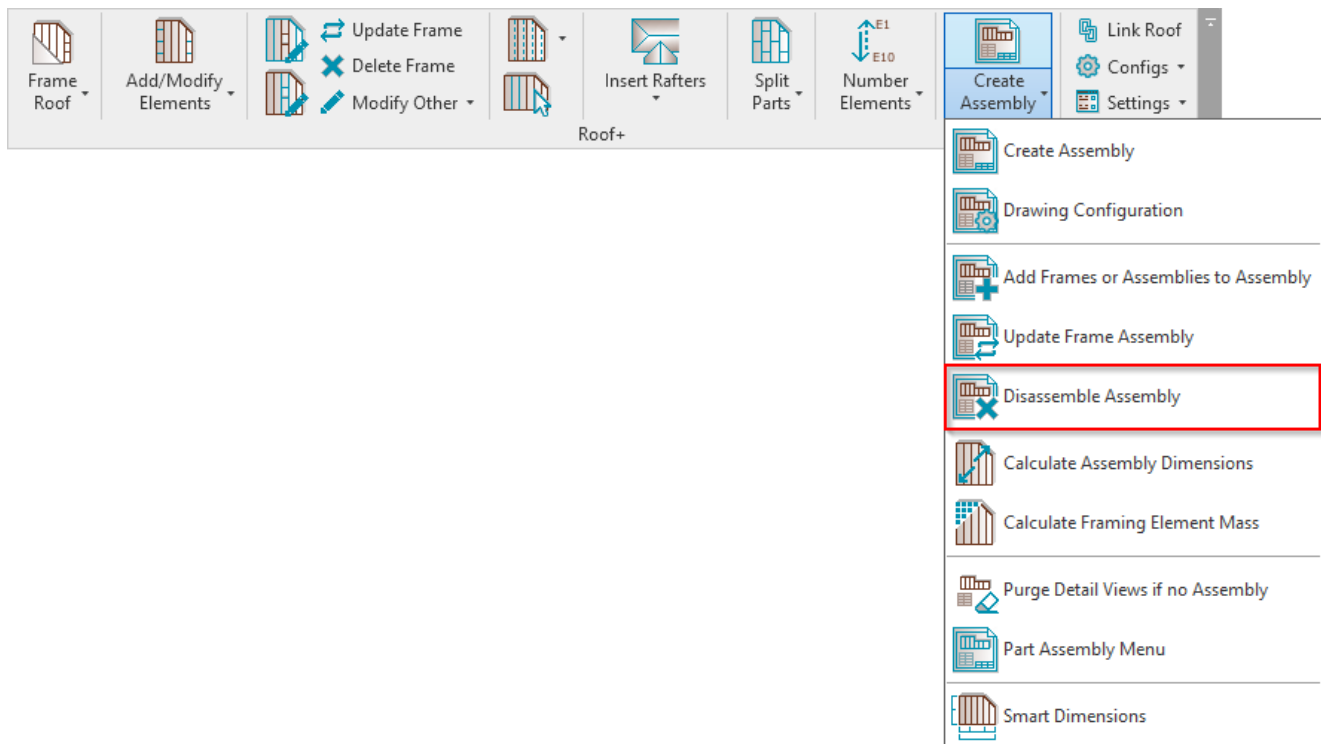


**Update Frame Assembly** – updates the selected assembly if any changes were made to the framing or to the Drawing Configuration.

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

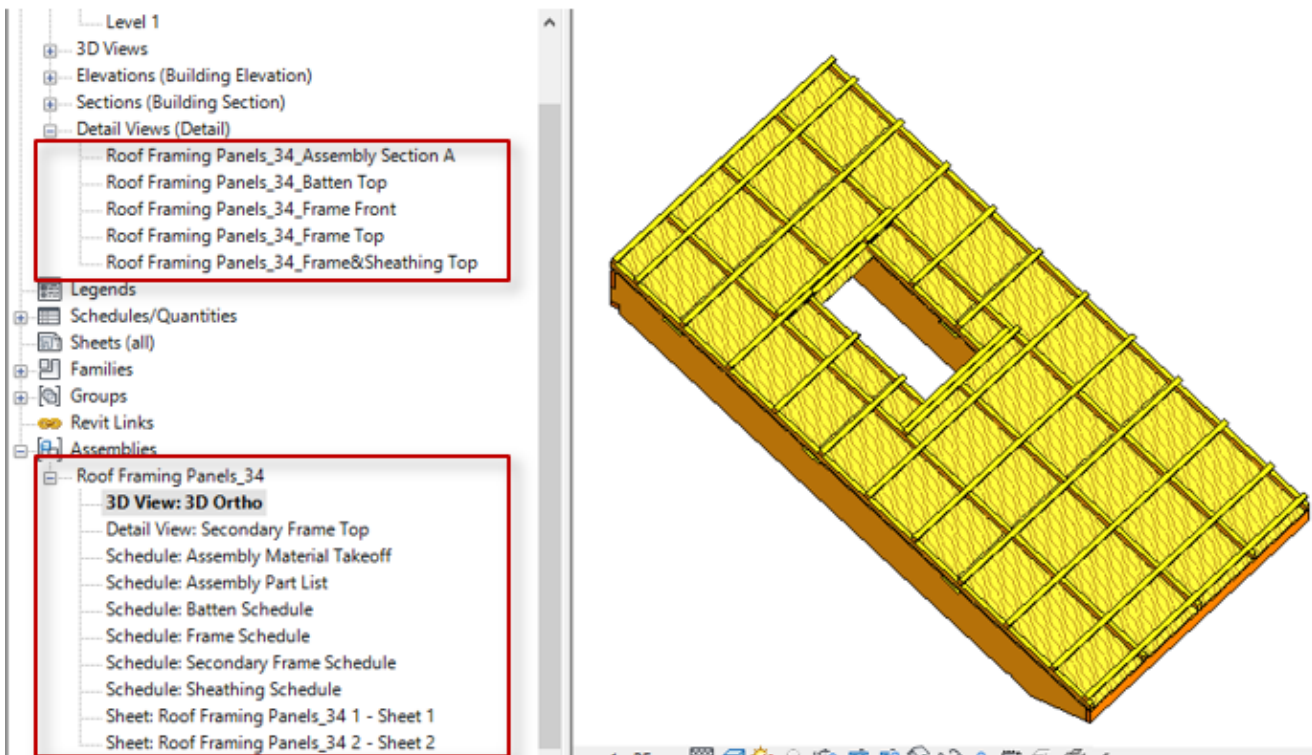


## Disassemble Assembly

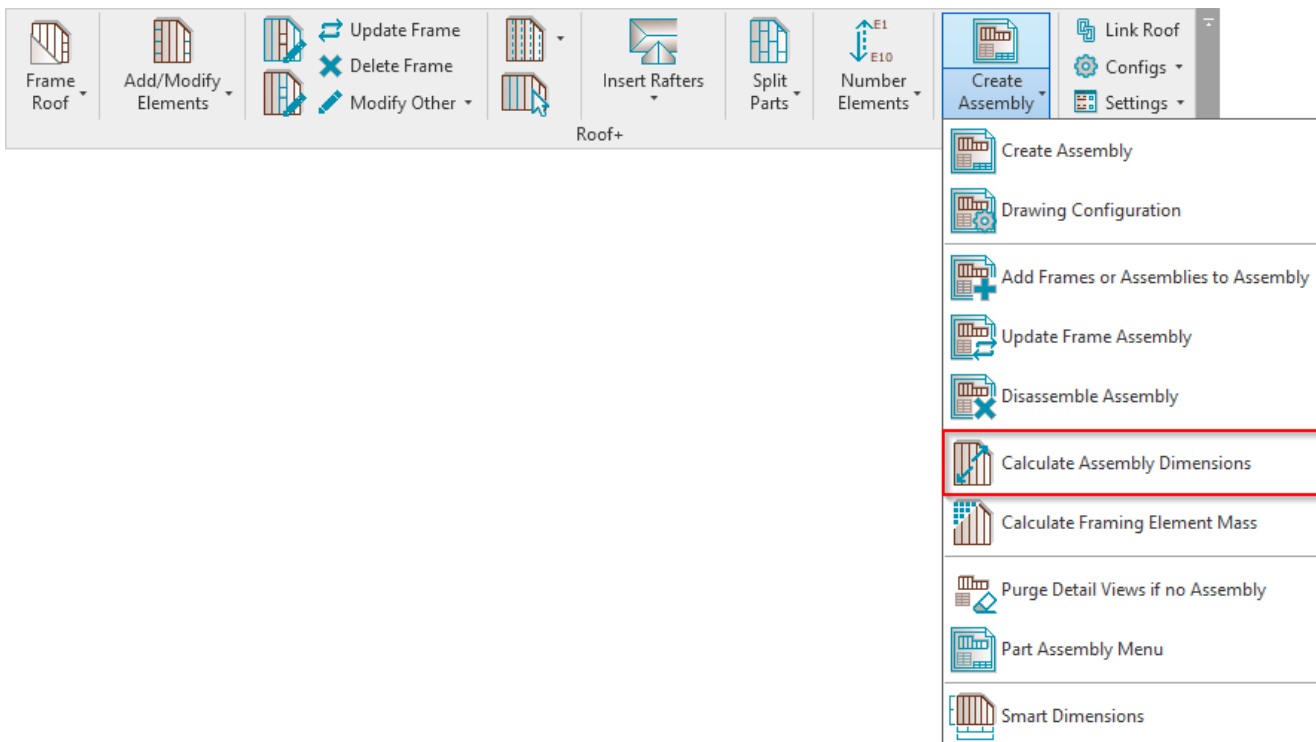


**Disassemble Assembly** – removes the assembly relationship between elements in the selected assembly and all associated views.

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

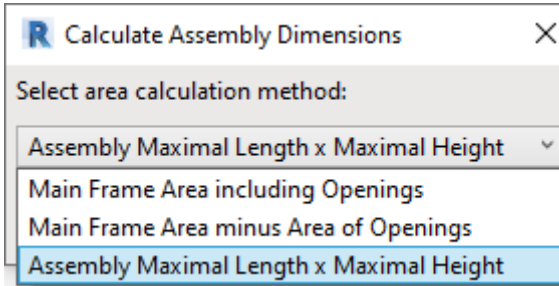


## Calculate Assembly Dimensions



**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:

Properties

Structural Framing Assembly  
R-18

Assemblies (1) Edit Type

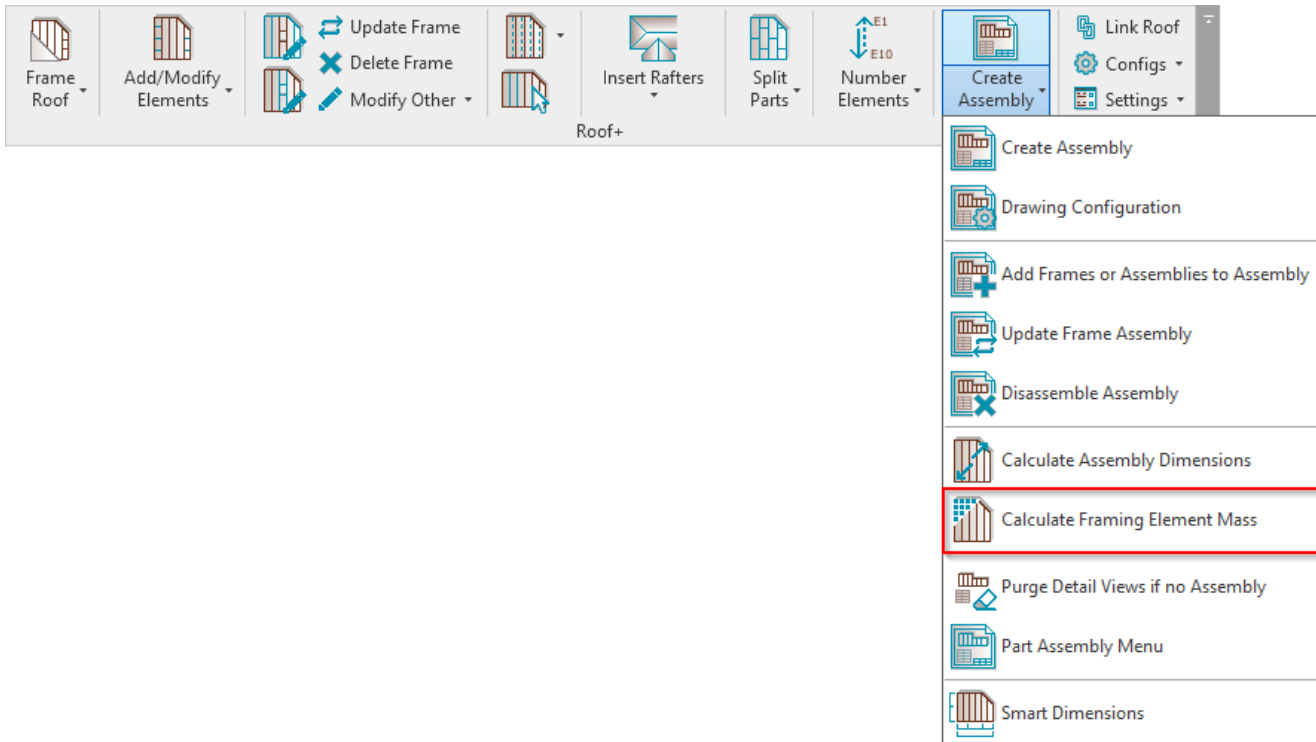
Mark	R-18
FM HostMemberSortMark	R-18
Framing Layer	Frame
Framing Member	Assembly
Framing Member Description	Assembly
Framing Member Mark	AS
Framing Member Type	Assembly
Framing Member Volume	0.348 m <sup>3</sup>
Framing	Roof
FM SortMark	
Framing Member Mass	313.796 kg
Assembly Area	0.742 m <sup>2</sup>
Assembly Volume	3.134 m <sup>3</sup>
Assembly Width	4226.47
Assembly Depth	4226.47
Assembly Length	2400.00
Assembly Height	309.00

Phasing

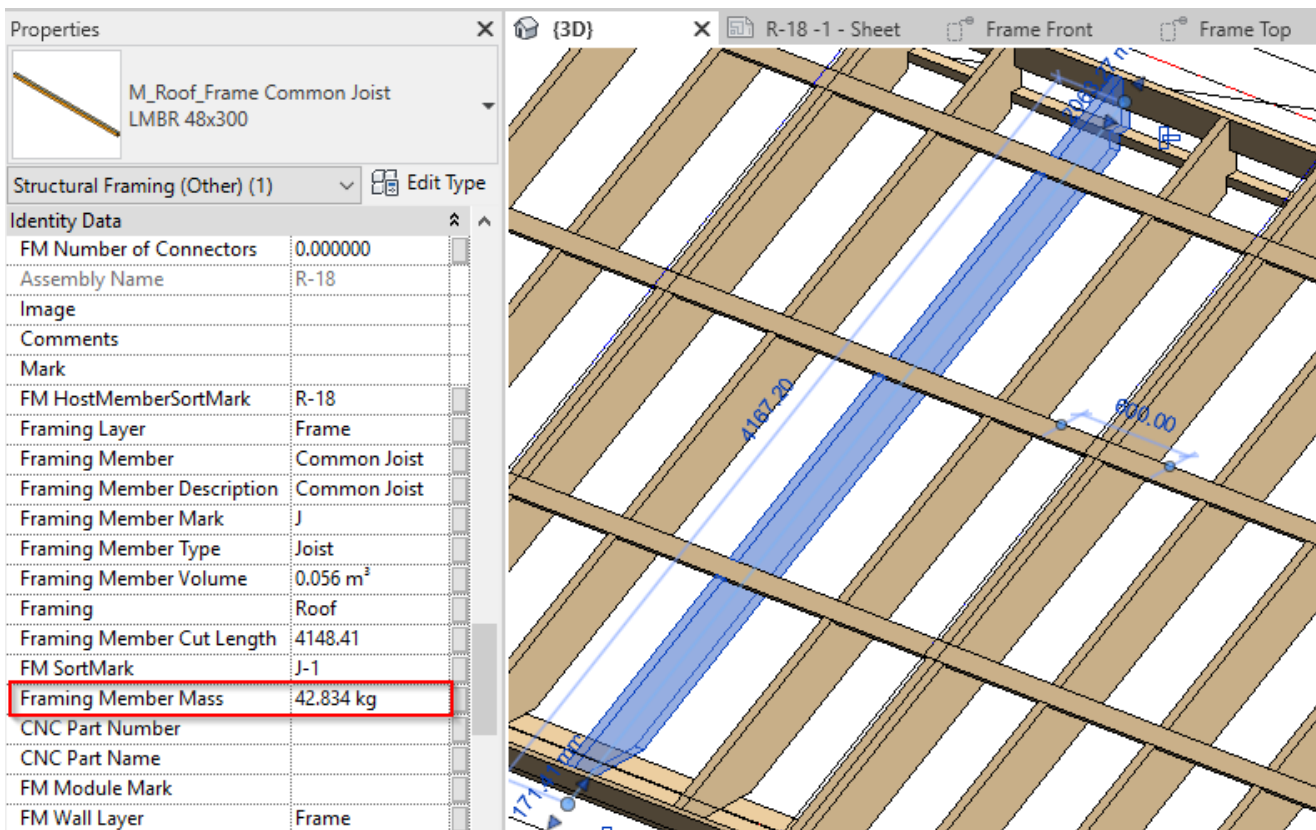
Phase Created	Roof Panel Lay...
Phase Demolished	None

(3D) R-18 - 1 - Sheet Frame Front Frame Top

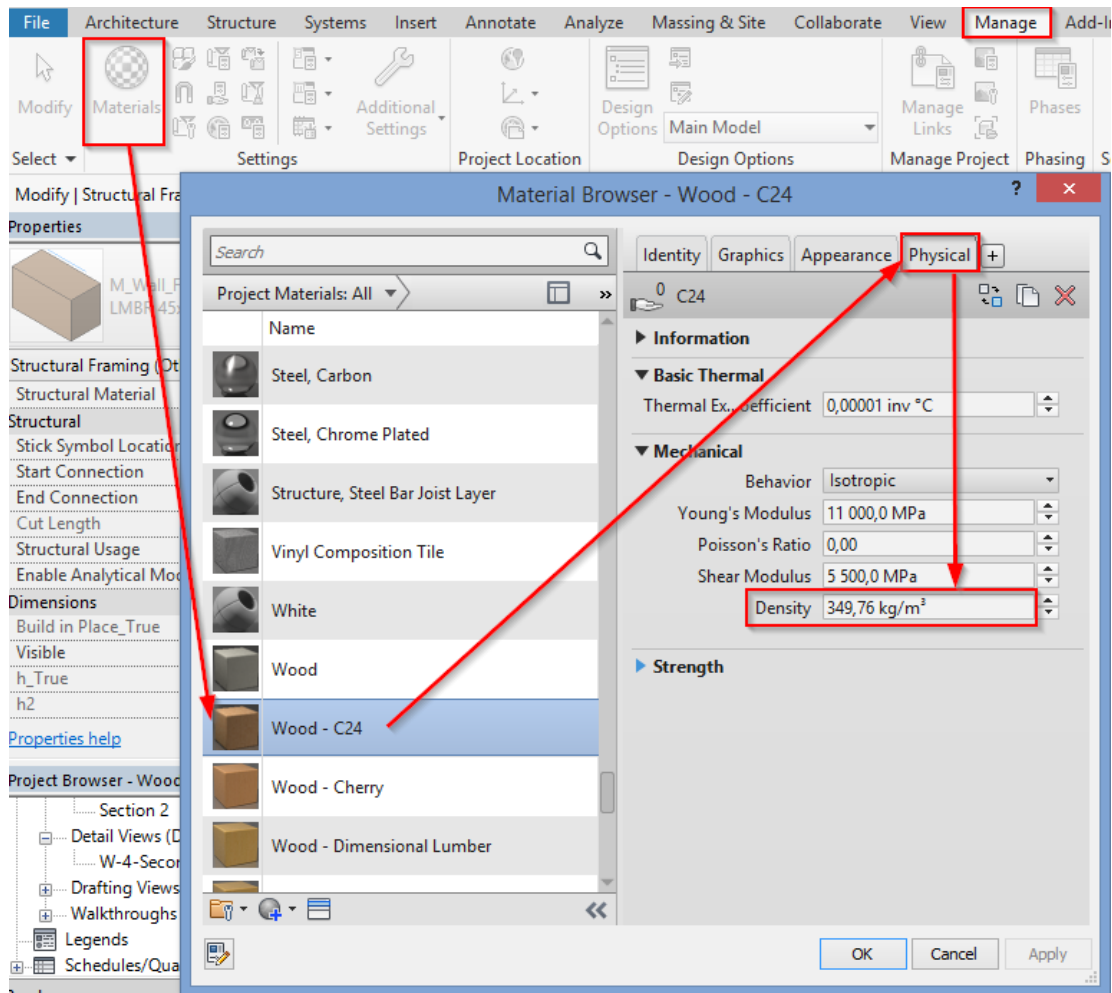
## Calculate Framing Element Mass



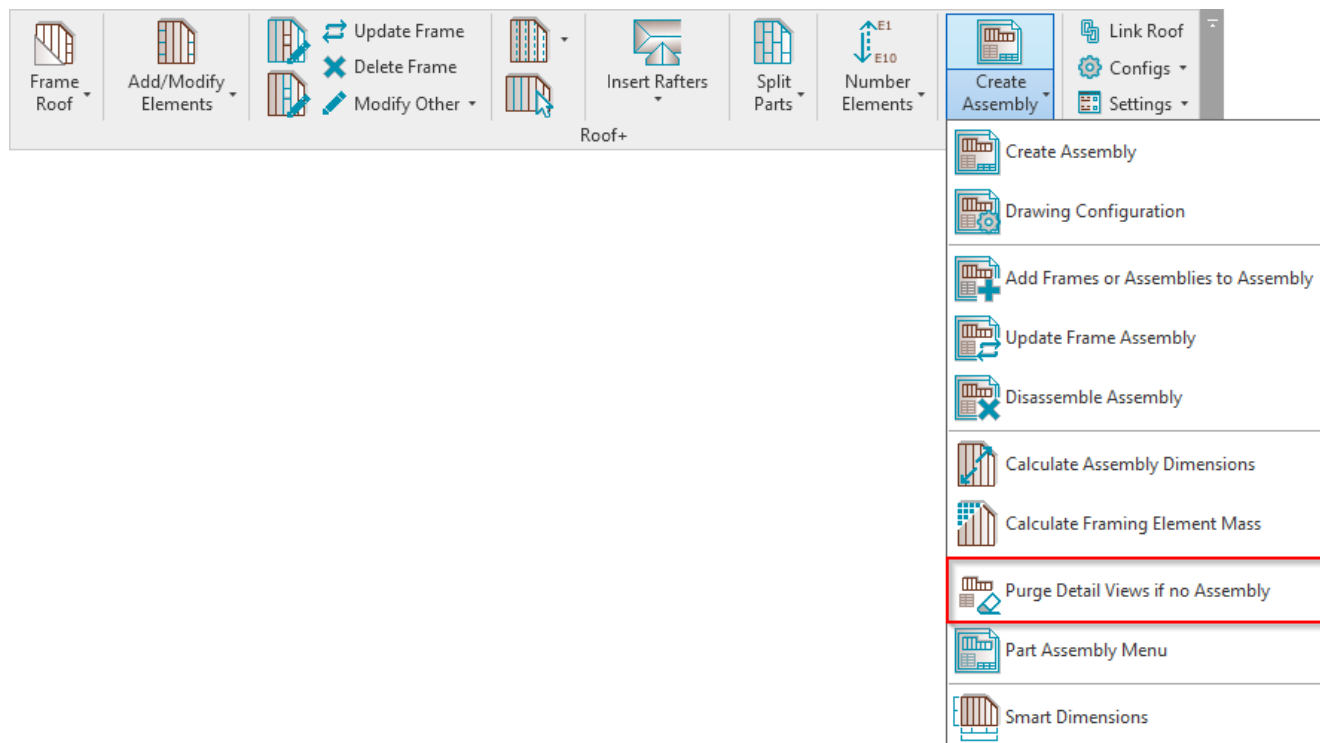
**Calculate Framing Element Mass** – calculates mass of selected framing elements, and writes result to **Framing Member Mass** parameter, which you can find in **Element Properties** → **Identity Data**.



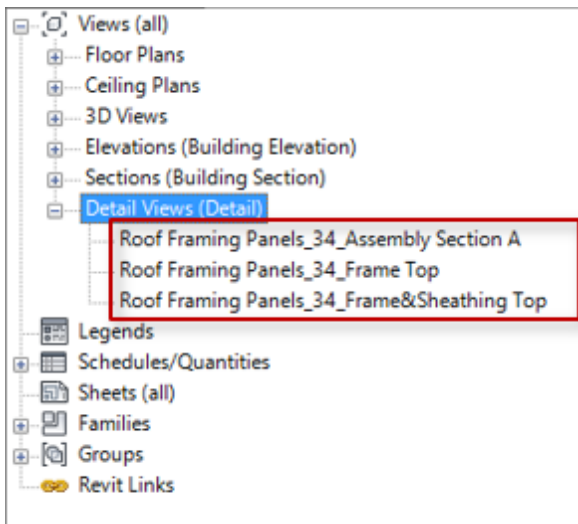
**Density** parameter must be filled in for the element in **Materials** → **Physical** tab:



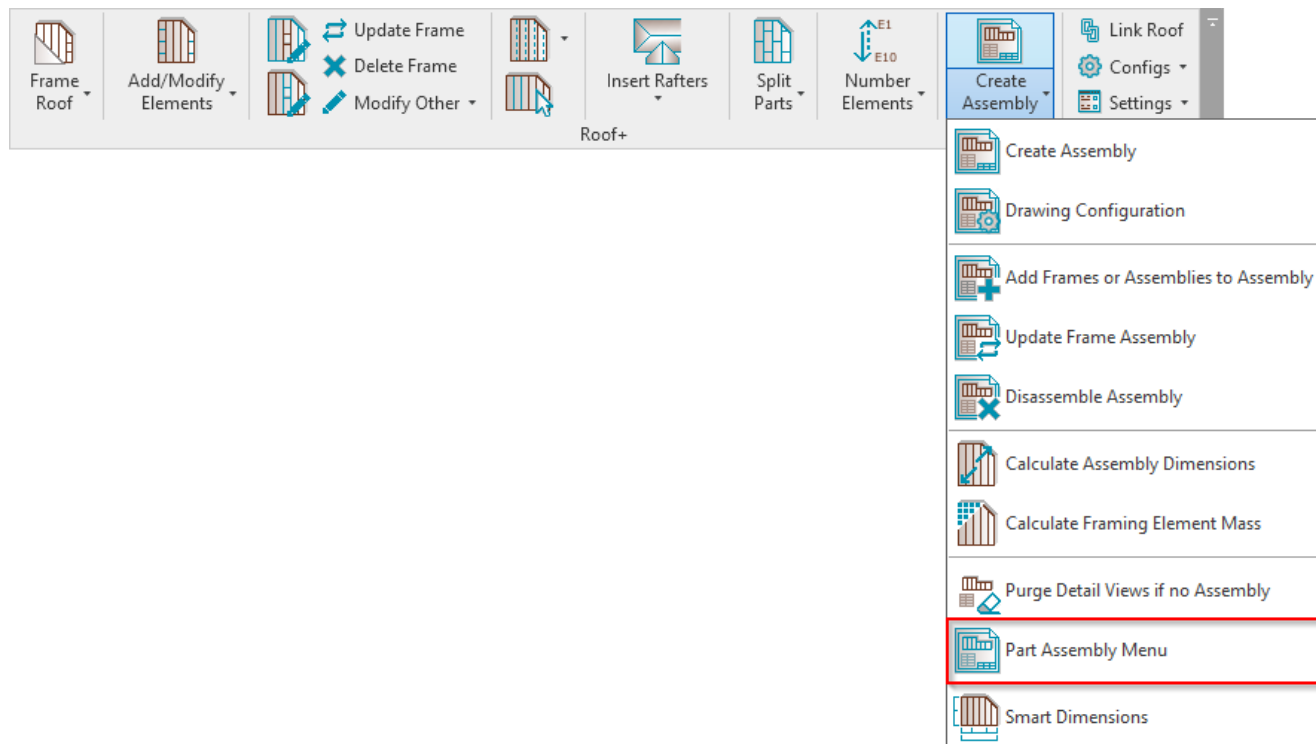
## Purge Detail Views if no Assembly



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



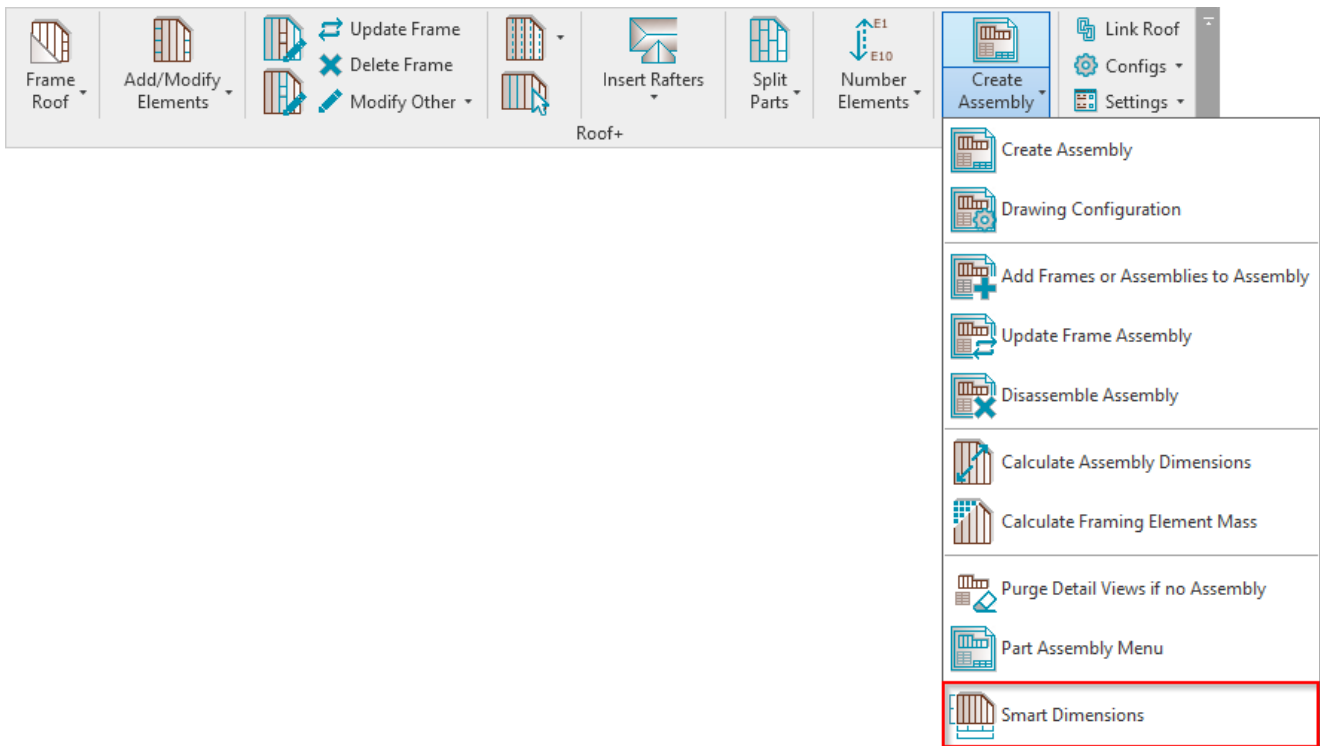
## Part Assembly Menu



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

**Read more >>** (<https://agacad.freshdesk.com/support/solutions/articles/44001788736-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/44001788737-shop-drawings-%E2%80%93-smart-dimensions-%E2%80%93-main-features>).