FAB196818

Tricks for Getting Great-Looking Advance Steel Presentations

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Autodesk

Learning Objectives

- Learn best practices for creating the documentation
- Explore the tools for customizing your styles and other templates
- Learn advanced options which can influence your presentations
- Discover how you can share your customization with other users

Description

This class is designed to show you how to get the most out of Advance Steel's powerful features to make your presentations look great. This course will cover a variety of options to help you develop your own presentations while improving your productivity and efficiency. This includes sections on shop drawings, general arrangement drawings, as well as bill-of-materials.

Speaker

Philippe Bonneau is the Technical Marketing Manager for Advance Steel software at Autodesk. Prior to joining Autodesk, Philippe spent 20 years filling various roles in the structural industry, including working in steel engineering & detailing companies and then acting as product manager for Advance Steel at a Platinum Autodesk partner. Philippe attended the University du Maine in Le Mans, France. He is based in Paris, France.

Best practices for creating the documentation

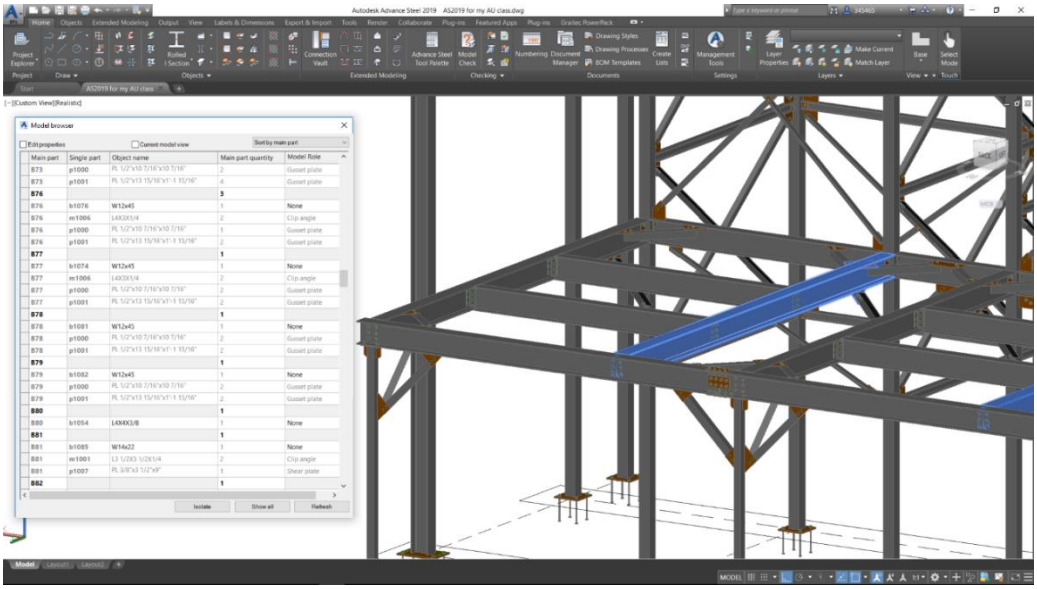
This section will walk you through different methods for checking your 3D model and will cover best practices for creating the documentation with tools available out-of-the-box in Advance Steel 2019.

Validate your 3D model

It is always a good thing to check your model before creating the documentation out of it, in Advance Steel you will find different tools for checking e.g. if elements are well-connected together and if the numbering has been run correctly.

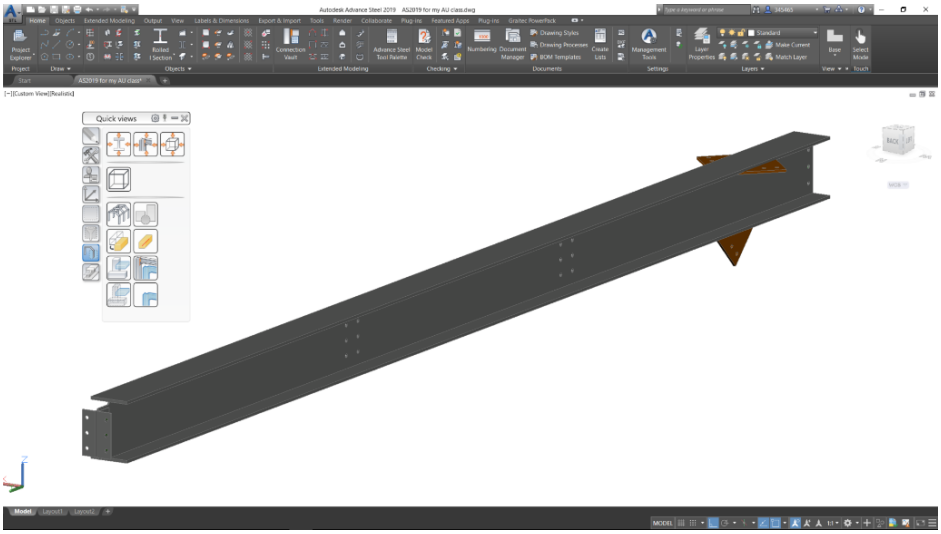
Model browser

The Model Browser provides a complete control of all the elements of the model. You can open the Model Browser at any time to get up-to-date information on each object. The list of elements and their properties are displayed as a table. The set of displayed properties can be customized by adding or removing columns.



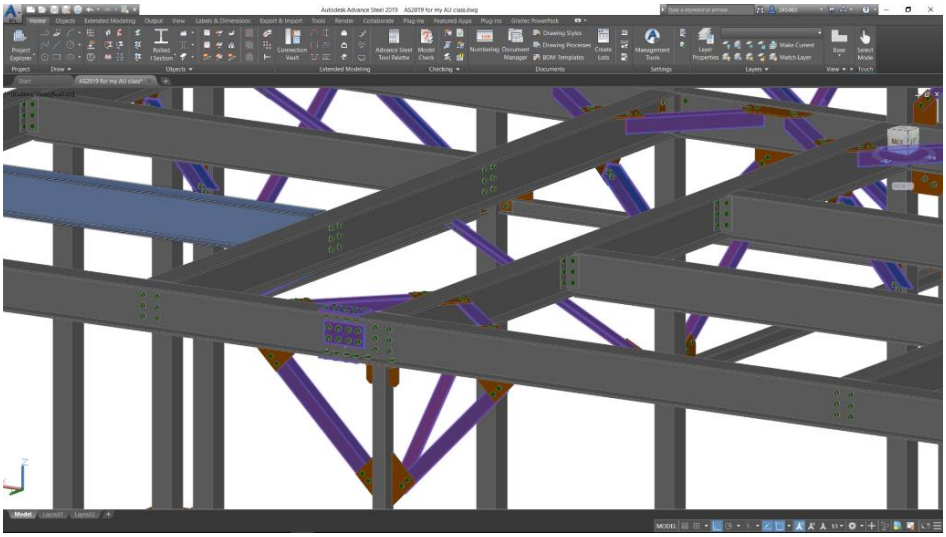
Display an entire assembly

You can easily display an entire assembly, just pick any part in your 3D model and display what is shop-bolted or shop-welded with this part by using the “Show only selected assemblies” icon.



Mark loose parts

You can easily find and mark loose parts (= standalone parts) in red color by clicking “Mark loose parts” icon.

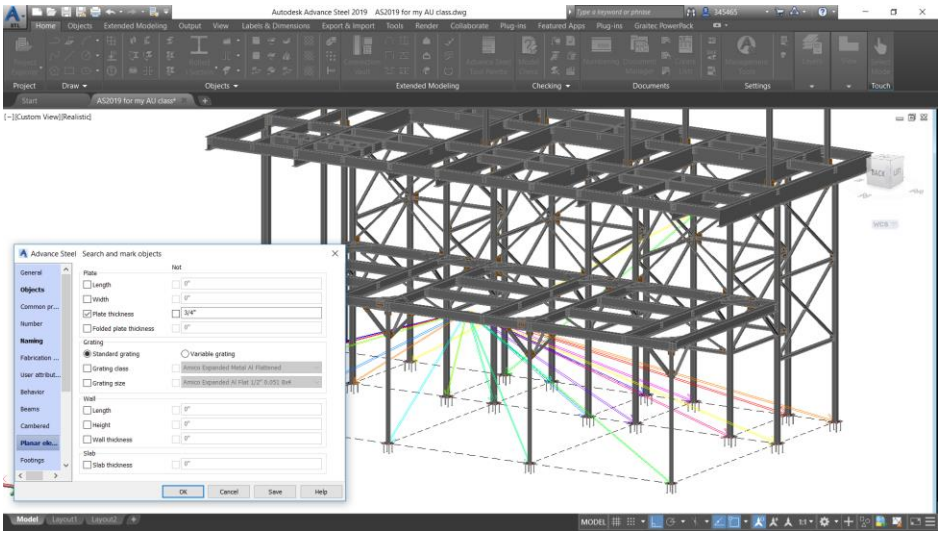


Shop drawings

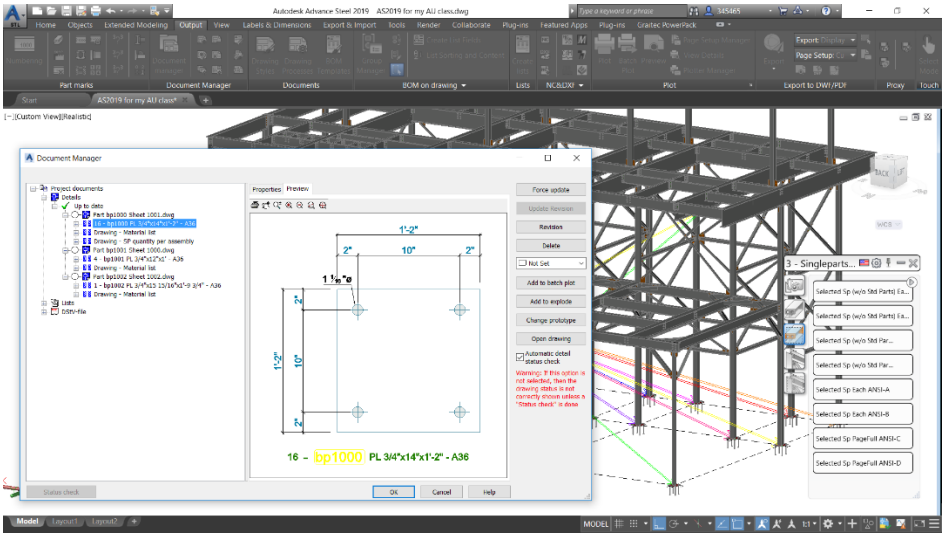
Advance Steel provides ready-to-use templates that aid the creation of high-quality shop drawings.

Use a dedicated process for selected parts

You can use the Search tool to find specific parts…

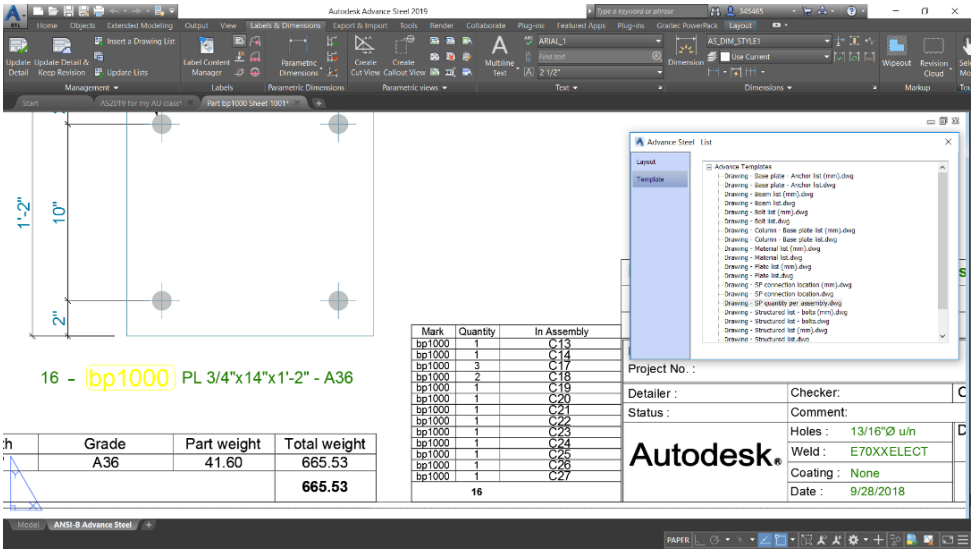


… and then create their shop drawings with a drawing process based on selected parts.



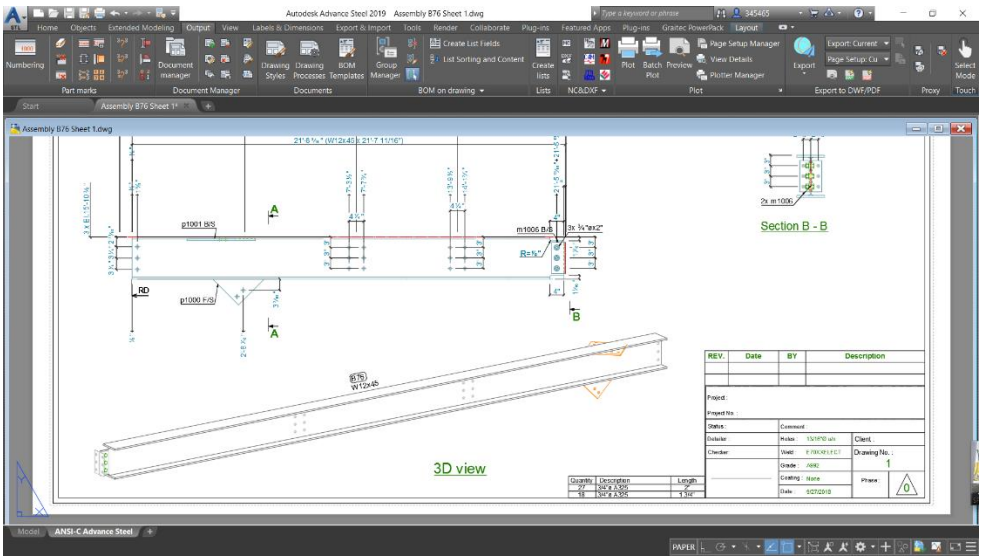
Include a Qty per assembly list on a Single Part drawing

The “Qty per assembly” will list the number of instances per assembly which helps organize the fabrication at the workshop.



Add a 3D view on an assembly drawing

You can easily add an isometric view of a (complex) assembly to its shop drawing.



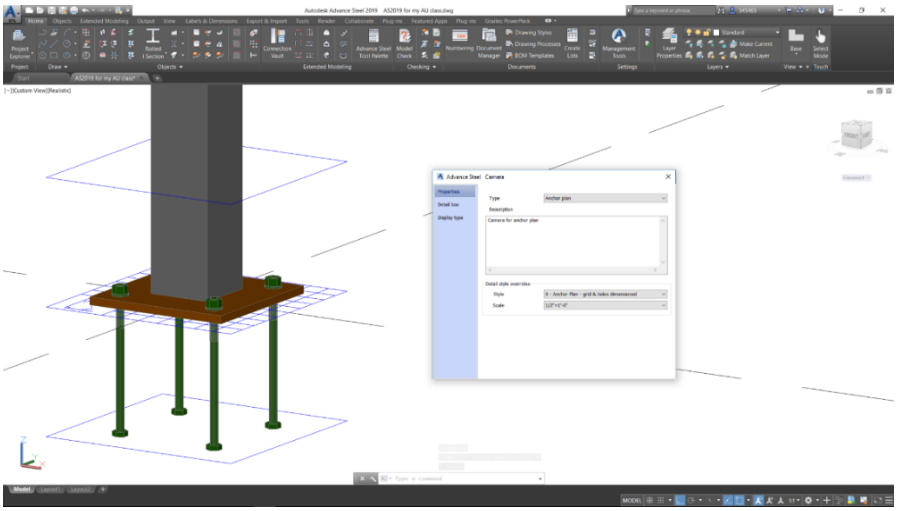
General Arrangement drawings

General arrangement drawings can be quickly created in isometric, top, elevation, and anchor views, and automatically dimensioned and labeled by using drawing styles or processes.

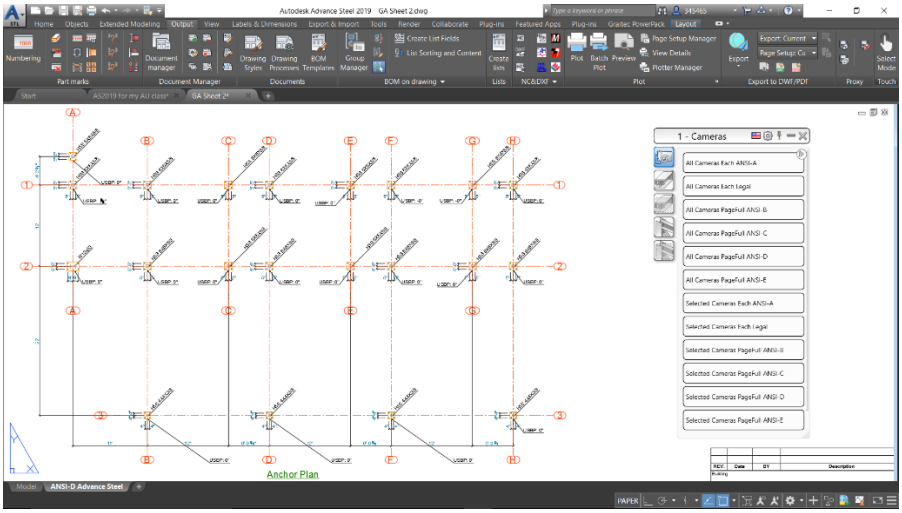
Create views with cameras

You need to create cameras at key locations before you start generating the (general arrangement) drawings.

In the camera properties tab, you can specify the type of camera and the style & scale to be used to generate the drawing using this camera.

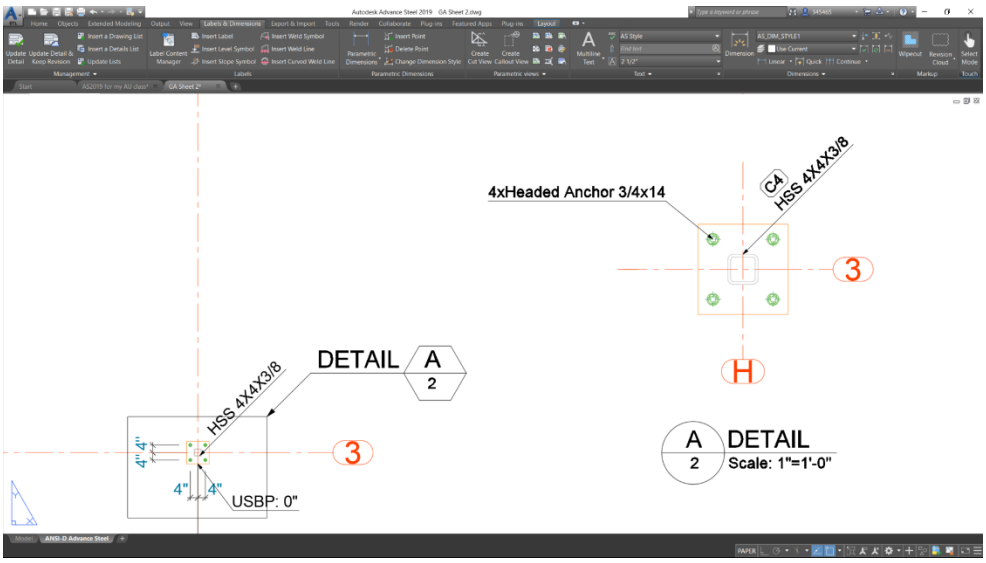


You can then create drawings from the cameras using drawing processes and edit the cameras later to adjust the resulting drawing views.



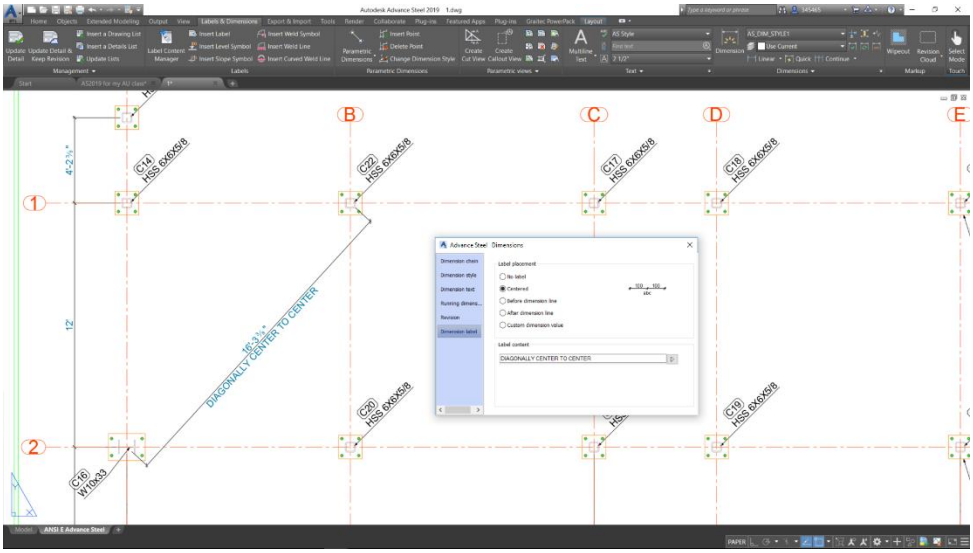
Create a callout view

You can use the feature “Call out on drawing” to create a call-out from a 2D view or 3D view on your drawing.



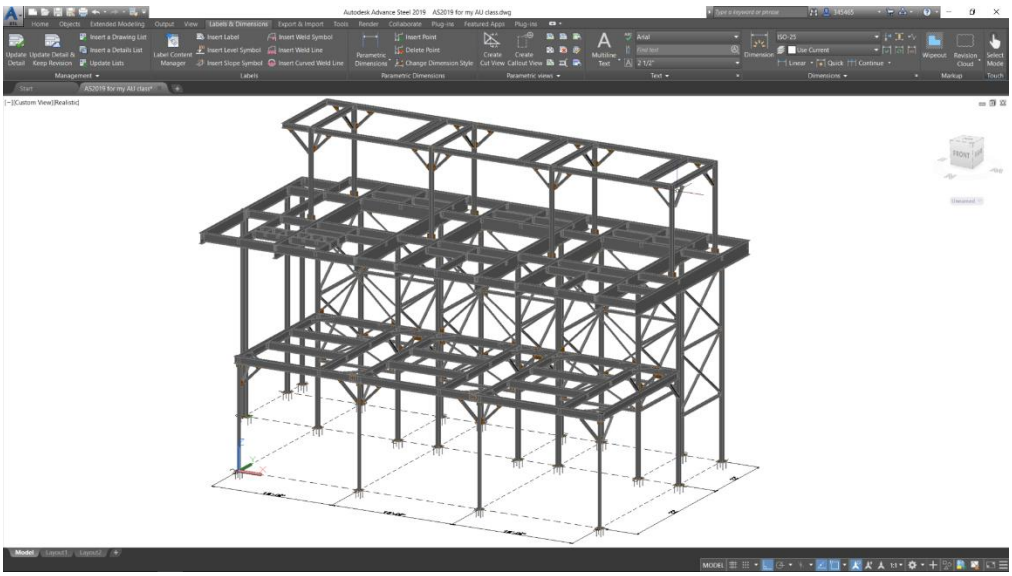
Labels in dimensions

Both automatic and manual dimension lines can be affixed with a text label entered by the user or filled automatically by using available attributes.

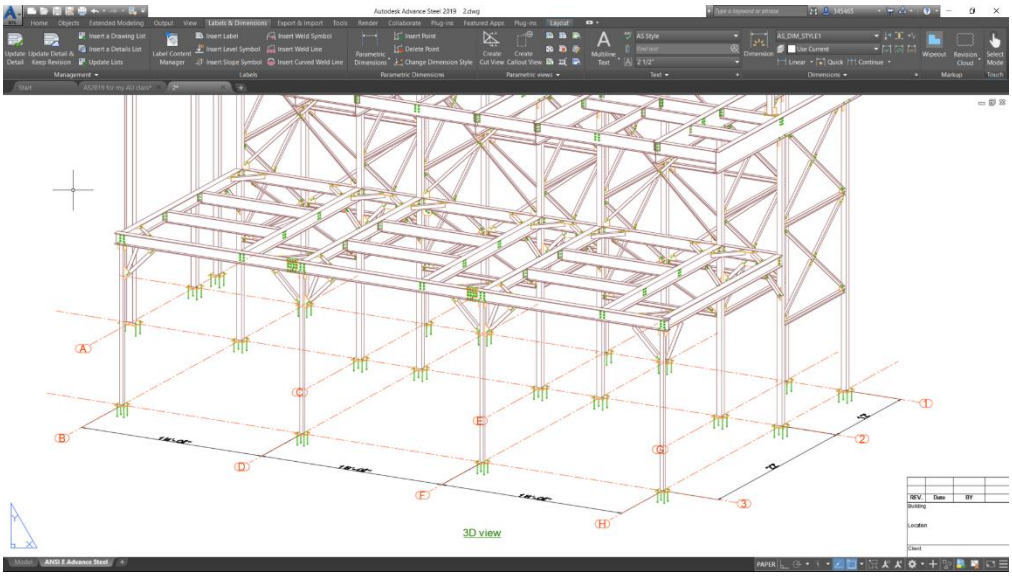


Dimensioned grid on an isometric view

If you want to see grid dimensions on an isometric view within your general arrangement drawing, you need to create these dimensions in your 3D model first.



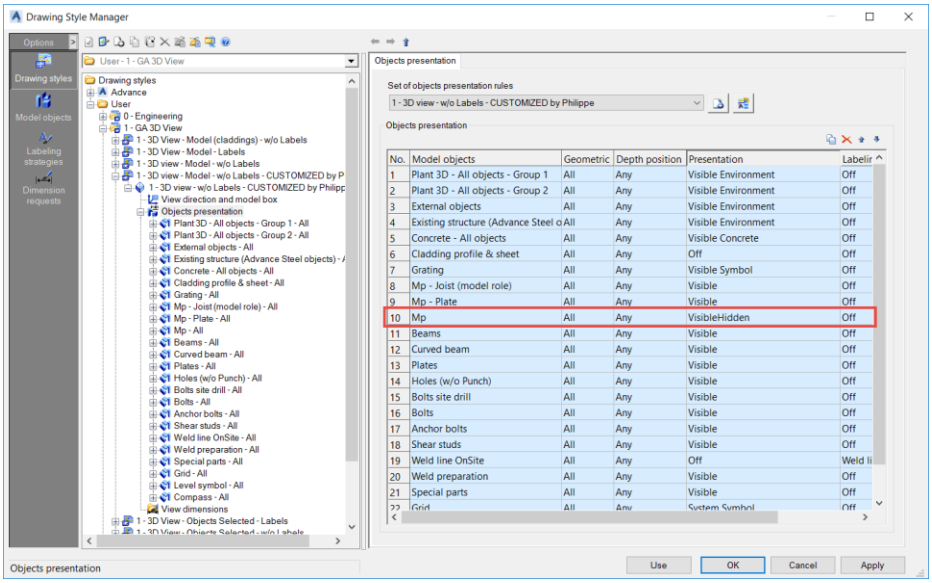
Then you can use a drawing style based on a selection and make a window selection so that these dimensions are part of your selection.



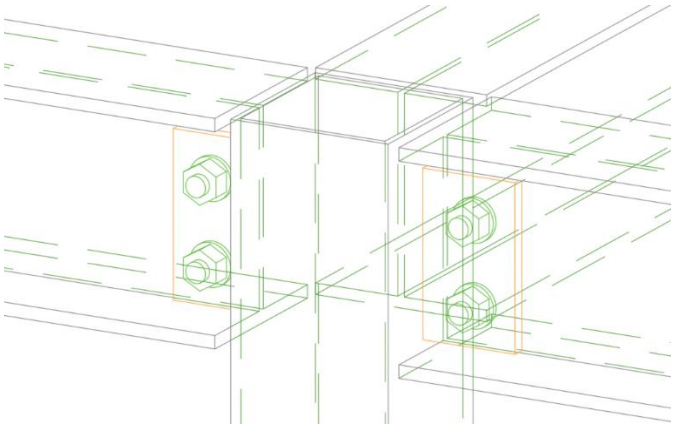
Show main parts with hidden lines

You can customize a drawing style to see main parts with hidden lines.

Just access the drawing style (to be customized) from the drawing styles manager and change the object presentation table so that “Mp” (main parts) are displayed with “VisibleHidden” (visible & hidden lines) on the view within the drawing.



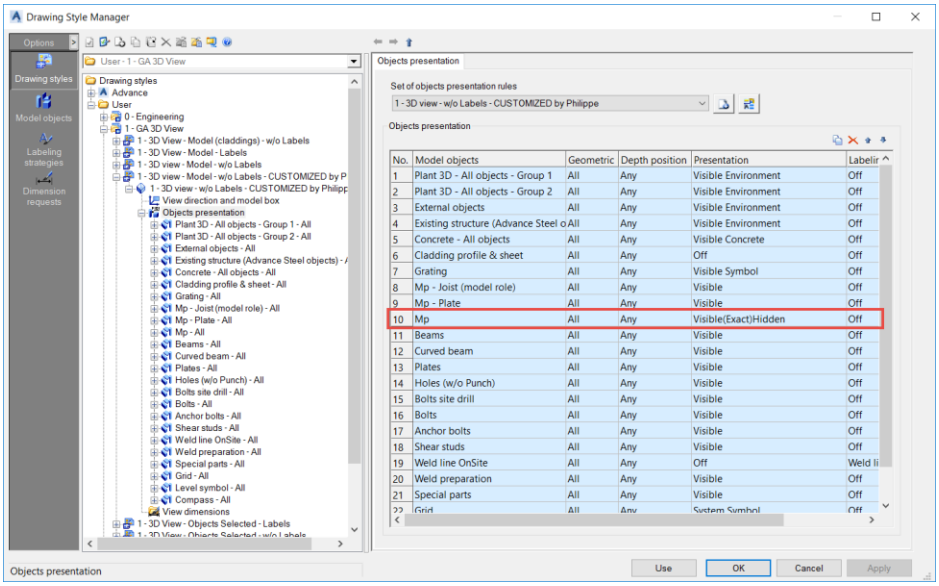
Here is how the result looks like on a 3D view:



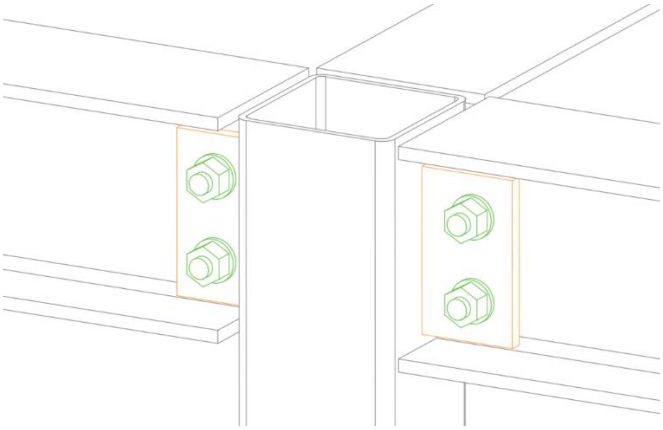
Show main parts with exact representation

You can customize a drawing style to see main parts with beam corners.

Just access the drawing style (to be customized) from the drawing styles manager and change the object presentation table so that “Mp” (main parts) are displayed with “Visible(Exact)Hidden” (visible & hidden lines & exact shape representation) on the view within the drawing.



Here is how the result looks like on a 3D view:

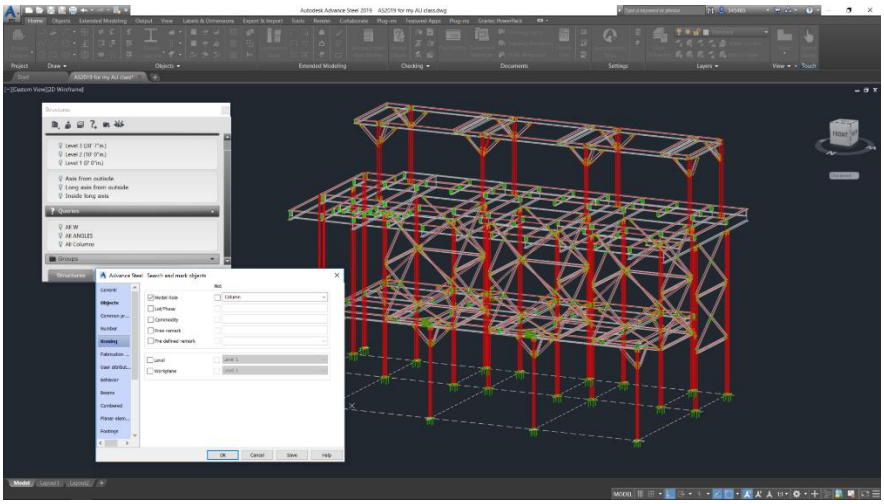


Bill-of-materials

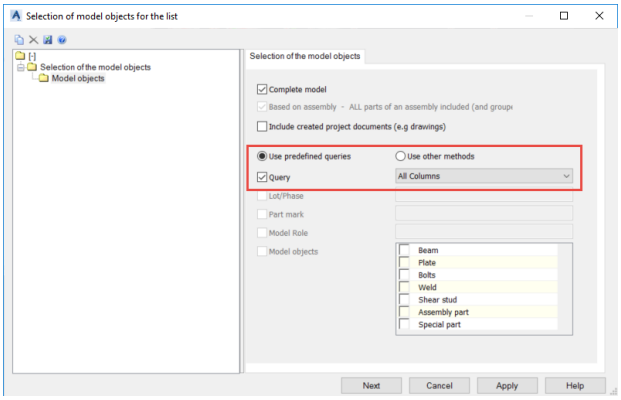
Bills of material (BOMs) can be easily created using ready-to-use templates. Quantities are defined by the parts used in the information-rich model, helping to eliminate waste with more accurate BOMs.

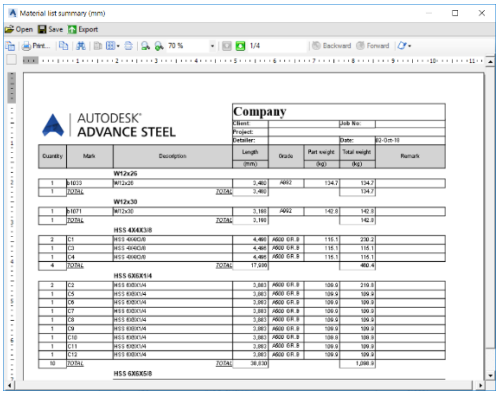
Generate a BOM based on a query

The Project Explorer offers the possibility to create a Query (e.g. search for Advance Steel objects which model role is “Column”).



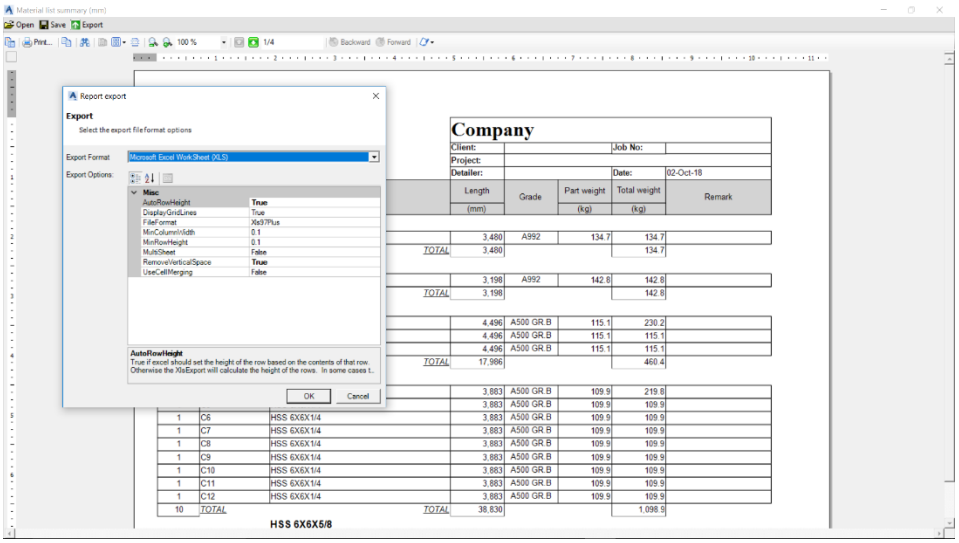
Then you can use this Query to generate a BOM only for elements selected with this Query.



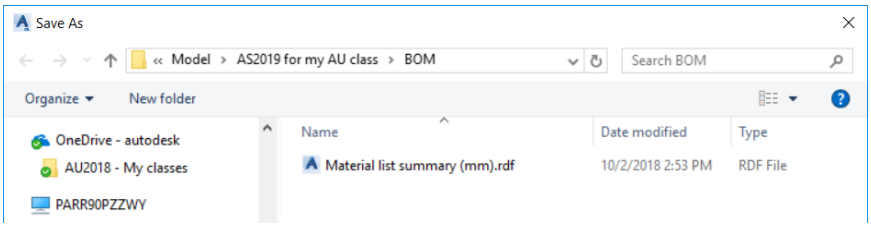


Export a BOM to MS Excel

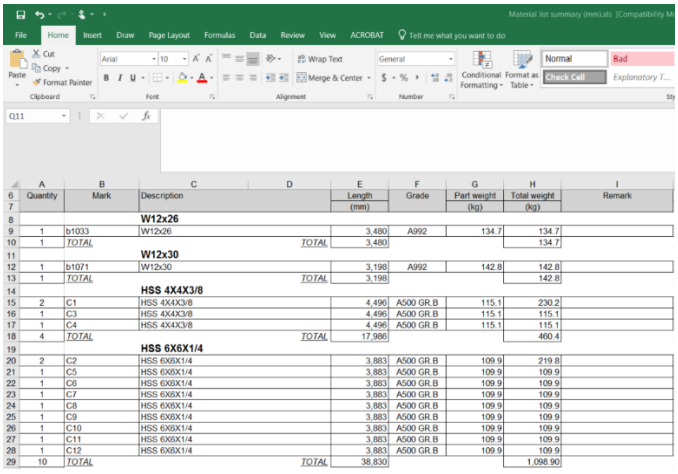
Once a BOM has been created, it can then be easily printed, saved or exported to various file formats such as PDF or XLS.



Bill-of-materials are automatically stored in the BOM folder under the Project path.



You can open the file in Microsoft Excel directly by double-clicking on the XLS file.



Quantity	Mark	Description	Length (mm)	Grade	Part weight (kg)	Total weight (kg)	Remark
		W12x26					
1	b1033	W12x26	3,480	A992	134.7	134.7	
1	*TOTAL*	*TOTAL*	3,480			134.7	
		W12x30					
1	b1071	W12x30	3,198	A992	142.8	142.8	
1	*TOTAL*	*TOTAL*	3,198			142.8	
		HSS 4X4X3/8					
2	C1	HSS 4X4X3/8	4,496	A500 GR.B	115.1	230.2	
1	C3	HSS 4X4X3/8	4,496	A500 GR.B	115.1	115.1	
1	C4	HSS 4X4X3/8	4,496	A500 GR.B	115.1	115.1	
4	*TOTAL*	*TOTAL*	17,986			460.4	
		HSS 6X6X1/4					
2	C2	HSS 6X6X1/4	3,883	A500 GR.B	109.9	219.8	
1	C5	HSS 6X6X1/4	3,883	A500 GR.B	109.9	109.9	
1	C6	HSS 6X6X1/4	3,883	A500 GR.B	109.9	109.9	
1	C7	HSS 6X6X1/4	3,883	A500 GR.B	109.9	109.9	
1	C8	HSS 6X6X1/4	3,883	A500 GR.B	109.9	109.9	
1	C9	HSS 6X6X1/4	3,883	A500 GR.B	109.9	109.9	
1	C10	HSS 6X6X1/4	3,883	A500 GR.B	109.9	109.9	
1	C11	HSS 6X6X1/4	3,883	A500 GR.B	109.9	109.9	
1	C12	HSS 6X6X1/4	3,883	A500 GR.B	109.9	109.9	
10	*TOTAL*	*TOTAL*	38,830			1,098.90	

Tools for customizing your styles and other templates

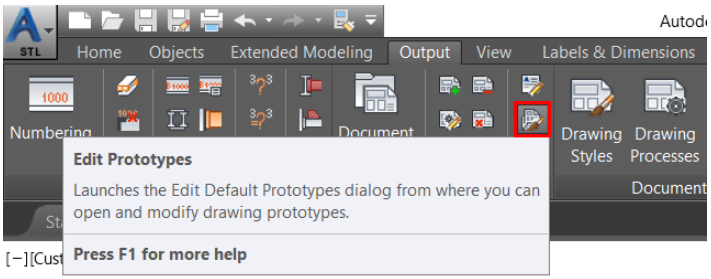
You have the possibility to customize templates & styles used for creating the documentation.

Prototypes customization

Advance Steel uses default templates (called prototypes) to generate the drawings.

Shortcut to find them more easily

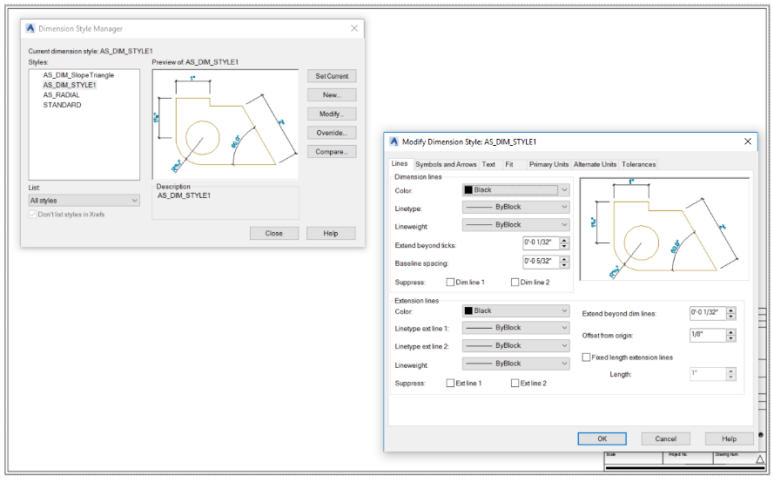
You can open the sub-folder where the prototypes are stored by clicking the “Edit prototypes” button available in the Output ribbon, Document Manager panel.



Dimension settings

Advance Steel (automatic & manual) dimensions are using the dimension style which defines their appearance – color, format, text size, extension lines, etc.

This can be defined within each prototype through the “Dimension style” dialog box.



Objects color on drawings

You can control the objects color on drawings through various defaults.

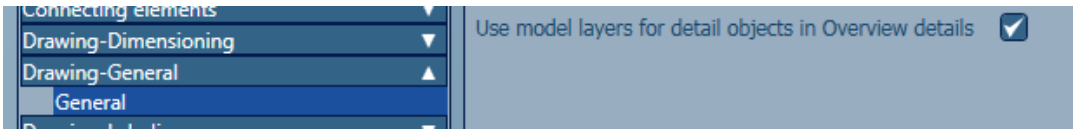
Single part and assembly drawings color

For all single part and assembly drawings, the color of the objects is based on line type. The same color is used for the visible lines of any object, without differentiating between beams, plates or bolts. These colors are specified in the Management Tools, under the Drawing-Presentation/Colors category.

Remark: you can specify colors before or after the drawing is created. Updating the drawings will always use the current setting of the color defaults:

General arrangement drawings color

You can specify colors for detailed objects on general arrangement drawings in the Management Tools, under the Drawing-General category, using the Use model layers for detail objects in Overview details option:



When this option is not checked, the same rules as for assigning the object color based on line type (like for Single Part/Assembly drawings) will be used.

When this option is checked, the colors used for the object visible lines will be the same as the colors in the model. Based on line color, you can differentiate between object types (such as columns, rafters and plates), if they are placed on different color layer in the 3D Model.

Drawing Styles Manager

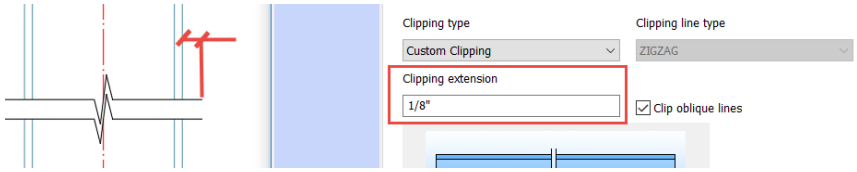
You can access a variety of predefined drawing styles for the automatic creation of documents out of your 3D model, but also customize drawing styles to suit your company needs.

Override color settings on General Arrangement drawings

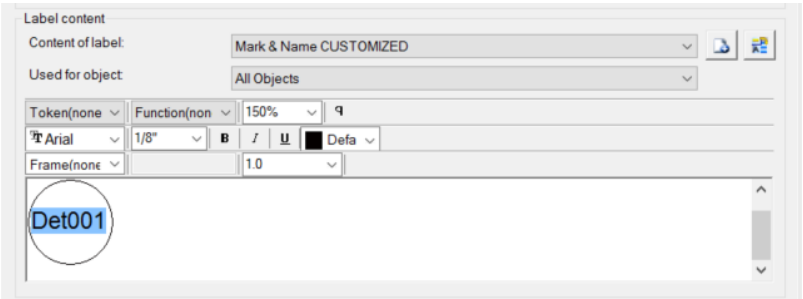
You can override those color settings and force a color to be used for a specific object/line type. This is done by customizing a drawing in the Drawing Styles Manager.

View clipping

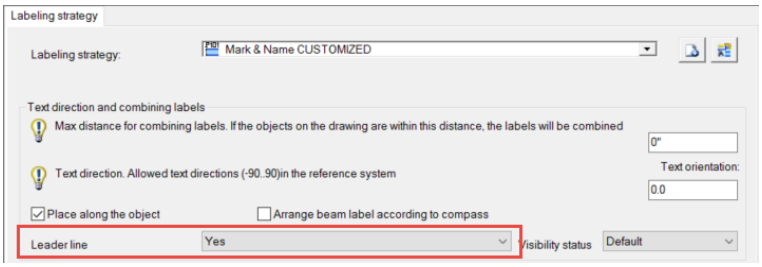
You can control the clipping type, size and extension.



Label content & presentation



Labels with/without leader line

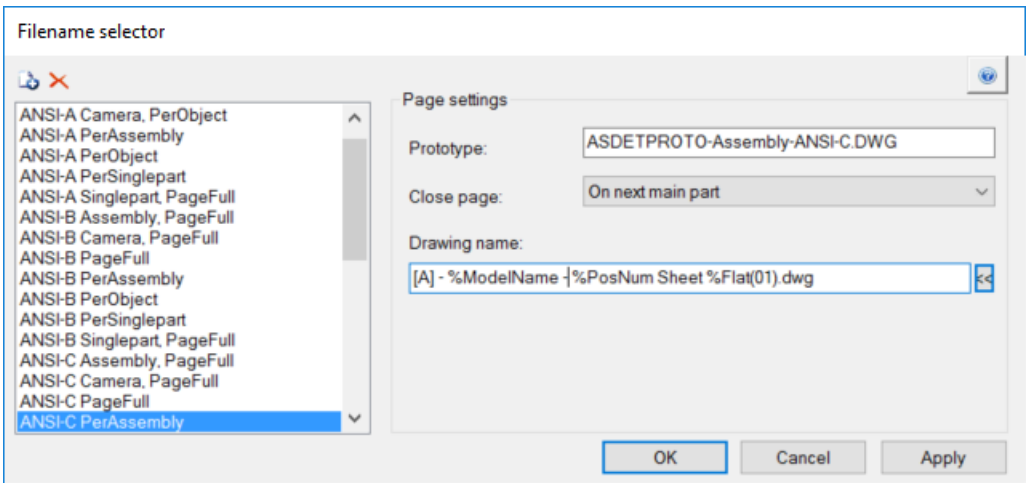


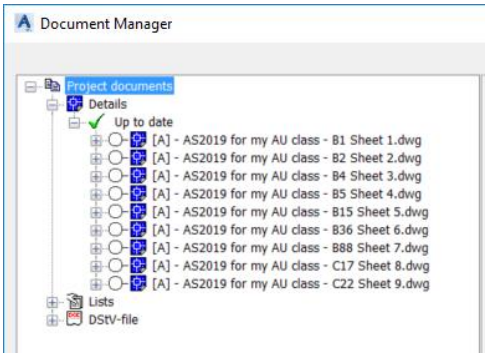
Drawing Processes Manager

You can use the Drawing Processes Manager to create new processes and manage, modify or delete existing processes.

Drawing file name

You can easily customize the drawing file name for shop drawings in the Drawing Process Manager.



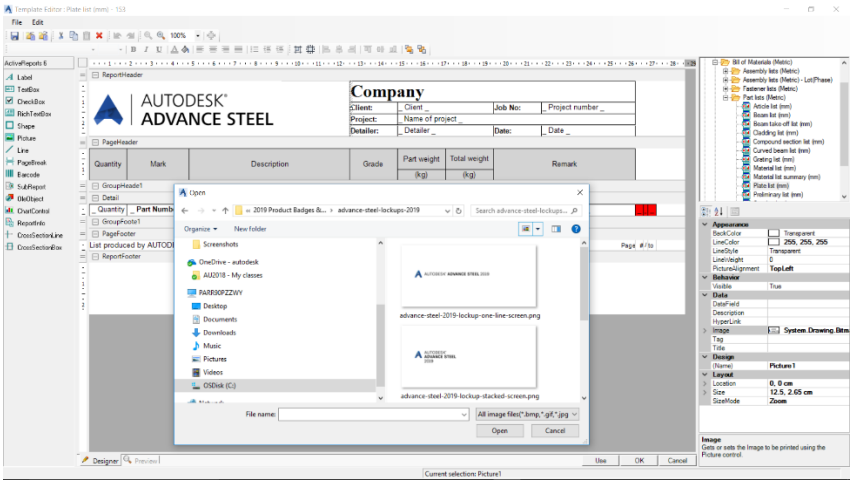


BOM editor

You can customize your own BOM templates in the BOM editor.

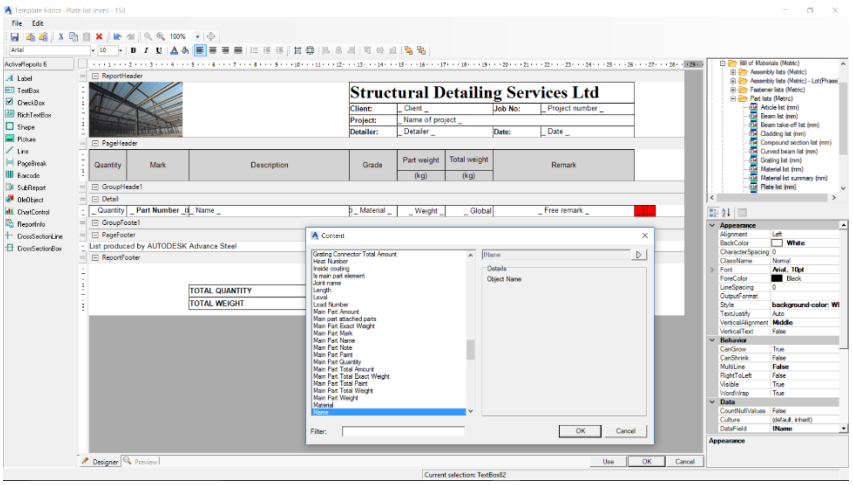
Header customization

To change the image in the logo, select the Image line in the Properties and then click the ellipses symbol (...) at the end of the line. You can select a file that is in any common image format, up to a maximum of approximately 200kb in size.



Report contents & sorting

To change intelligent text, right-click on the box and select Field Content. Select the required token in the list on the left side of the dialog box.



Advanced options which can influence your presentations

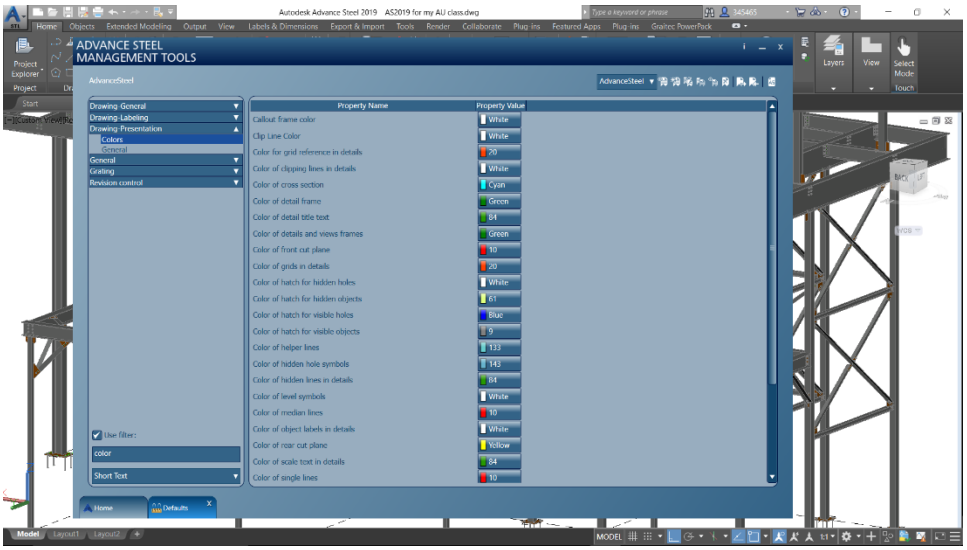
There are different areas with advanced options for customizing your outputs.

Defaults in the Management Tools

The system for setting options in Advance Steel is different to other programs. The system is called Management Tools and the basic program settings are in the Defaults section.

Filter tool

Within the Defaults category, it is possible to use a Filter to get access to the defaults which name corresponds to the request.



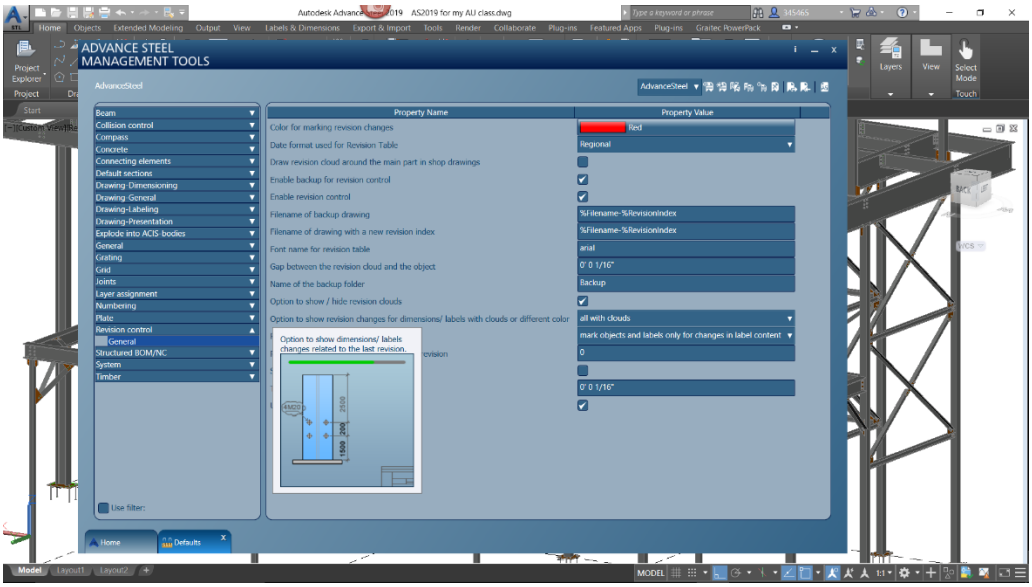
Filter tool within the Management Tools.

Most common settings available in Defaults

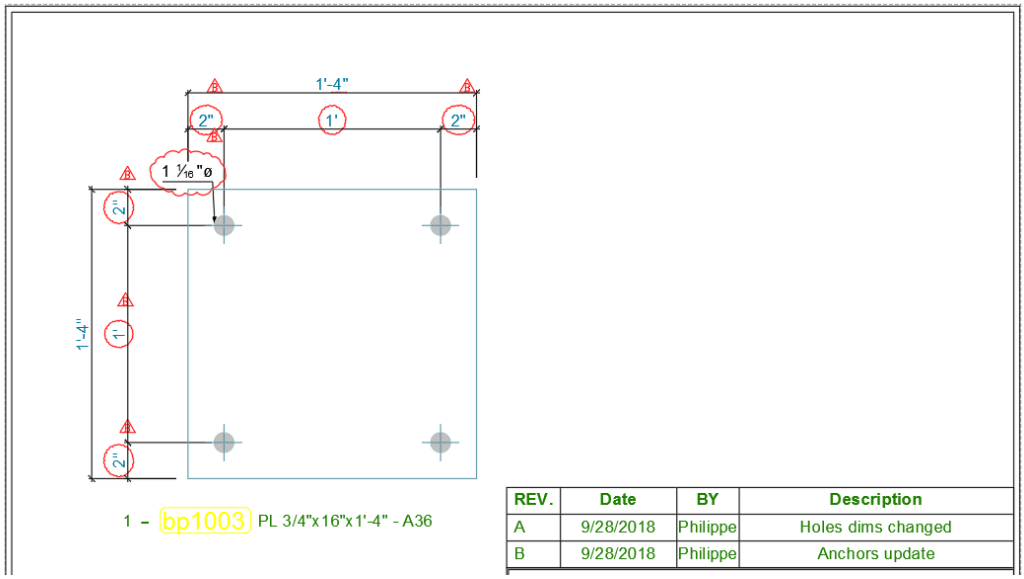
Some of the more common settings to adjust include the following:

Defaults specific to revision control

You can find the settings related to Revision control under the Revision control category.



For example, if you ask for revision clouds and to show the revision index next to the revision cloud, then you get a result like this one:

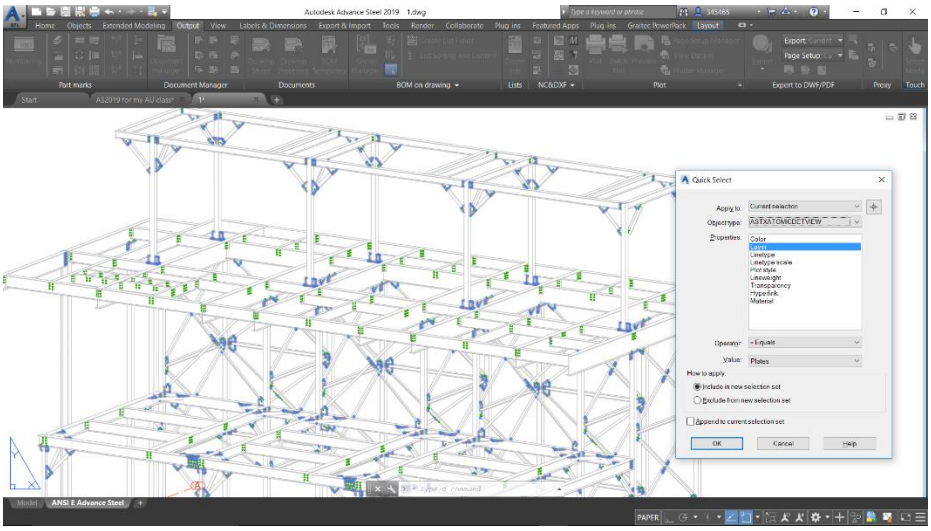


Drawing clean-up

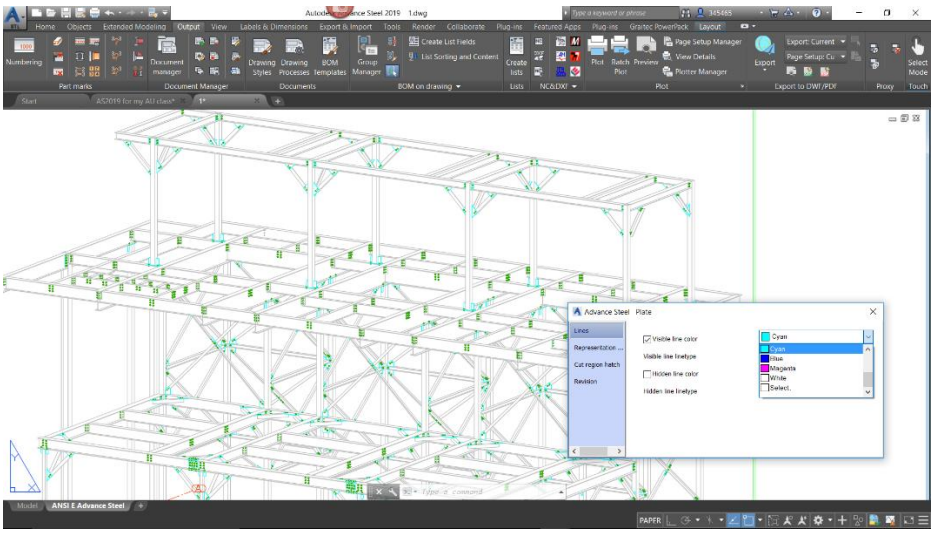
Advance Steel offers various tools for editing your drawings.

Quick select

The Quick Select command creates a selection set by filtering by object type and property. You can select all your Advance Steel 3D model and the Quick Select can help you select Advance Steel objects or AutoCAD entities such as construction lines.

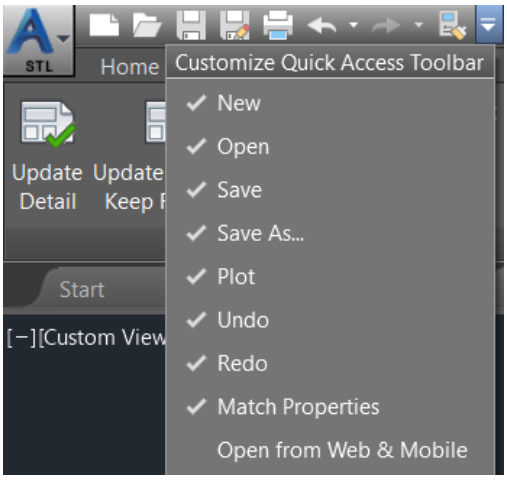


As an example, you can search for Advance Steel objects located on layer “Plates” and then easily change their color through their properties dialog box.



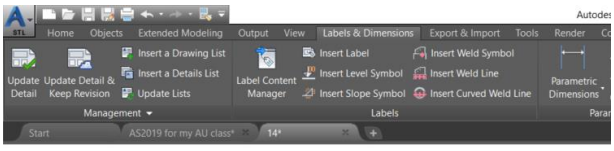
Match properties

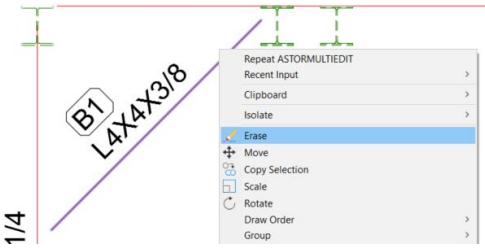
You can use the Match properties command from an object to another one within a drawing, it has a few limitations, but it works fine for things like the display properties (e.g. visible lines color).

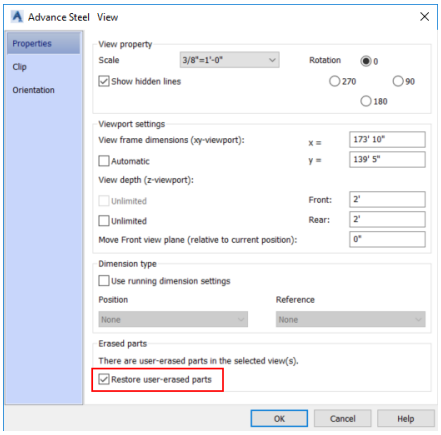


Remove parts from the drawing

You can remove (delete) parts from your drawings by erasing them. Just press the “Update Detail” button once you erased them so that they disappear from your drawing.



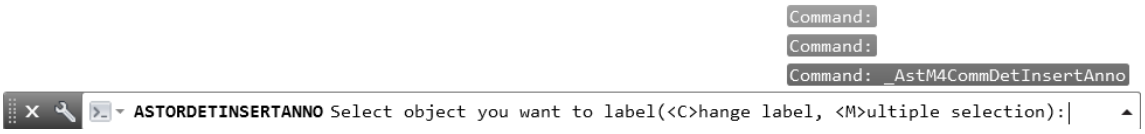




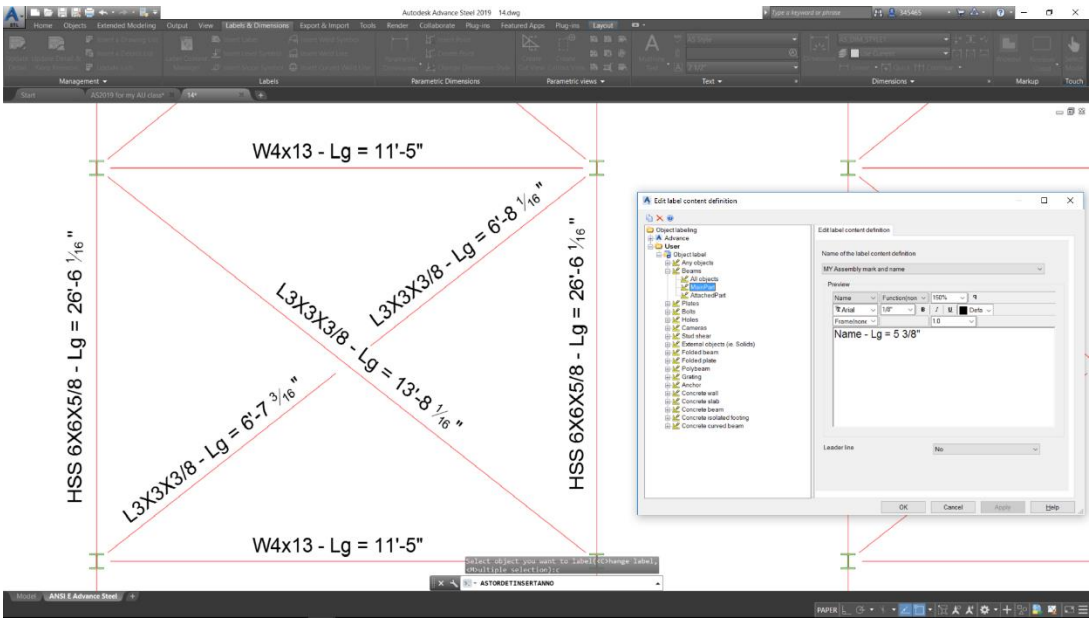
Tip: if you want to make them appear again, double-click on the green frame around the view, select the “Restore user-erased parts” option and press OK.

Insert a label on multiple selected objects

When inserting a manual label, you can press C first and get access to the list of label definitions to specify which configured label definition you would like to apply for this label or create your own label definition.

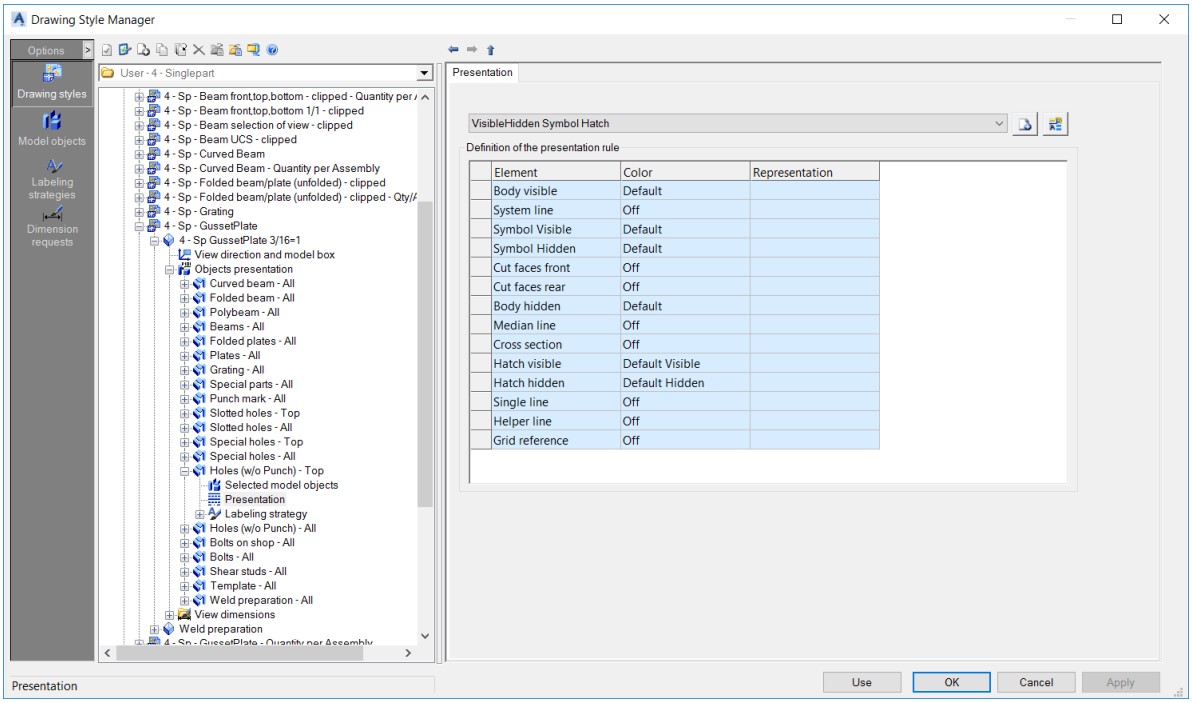


When inserting labels within a drawing, you can press M first and then select several objects within a view to get multiple labelled items in one shot.

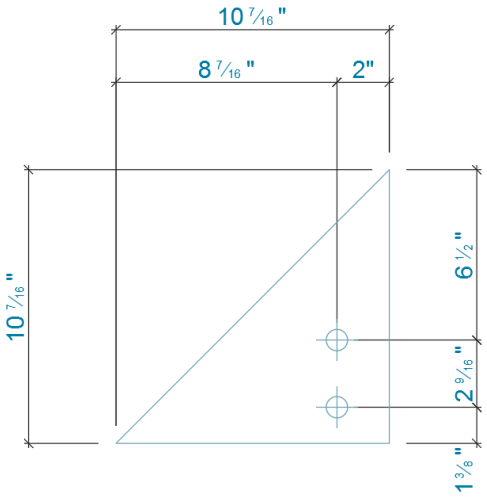


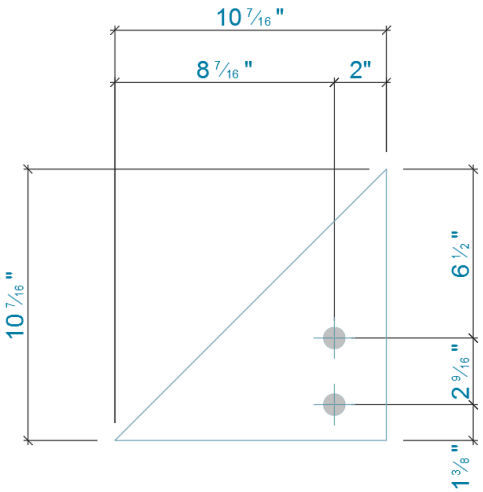
Holes representation

You can configure drawing styles to display holes with or without hatch.



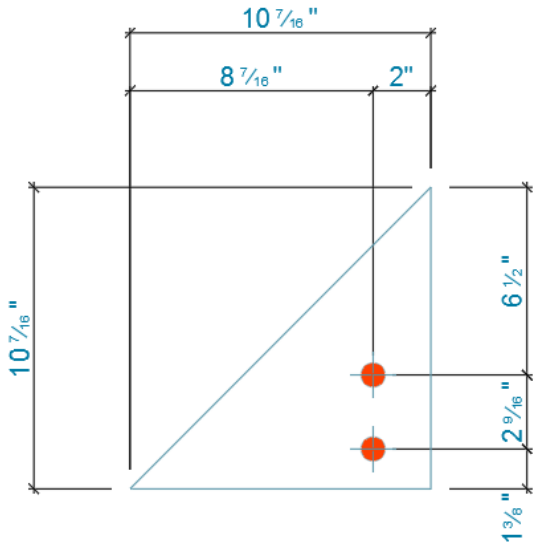
Depending on the drawing style configuration, here is how the obtained drawing will look like:





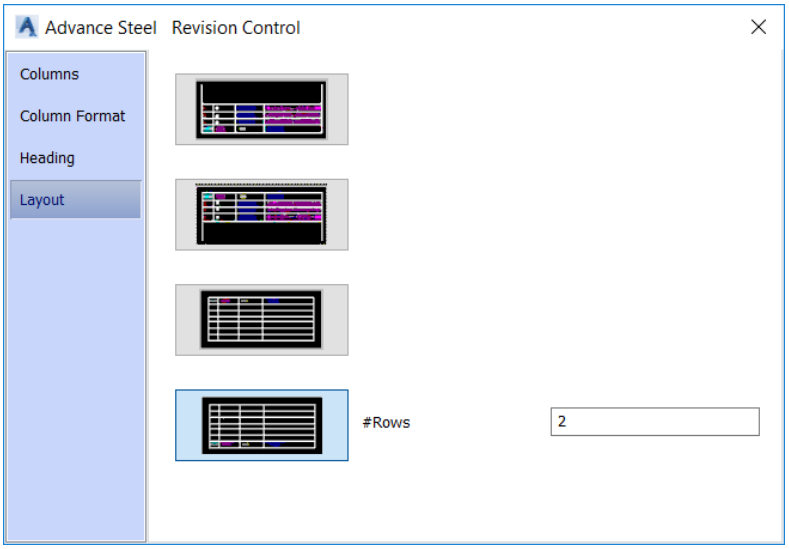
The color of the hatch can be controlled from the Management Tools, within the Drawing – Presentation category:

As a result, here is how holes look like:



Revision table layout

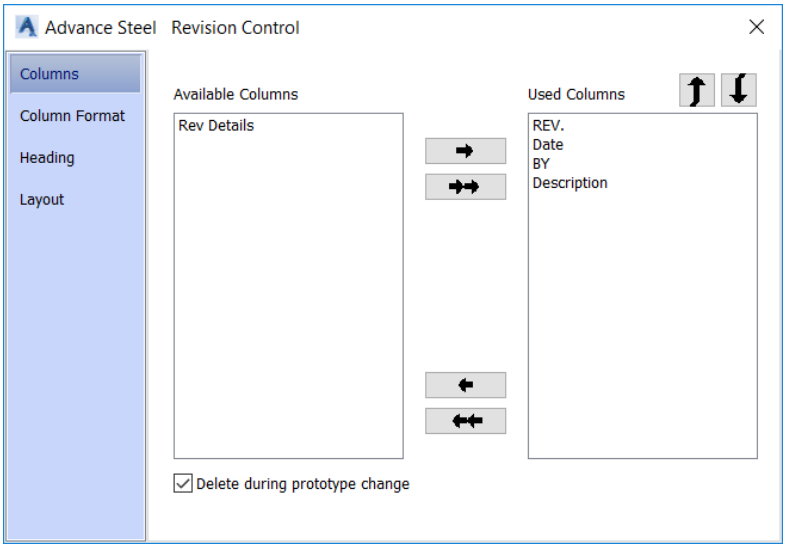
Once a revision table is inserted on your drawing, you can open its properties dialog box and go to the Layout tab, where you can set up the layout to control the size and initial appearance of the revision table.



The first two options from the Layout tab create the revision table only as a header in the first stage - multiple lines are added once revisions are created on drawings.

The last two options create a revision table with empty lines.

Using the other tabs of the Revision Control dialog, you can format text styles, colors, and column types.



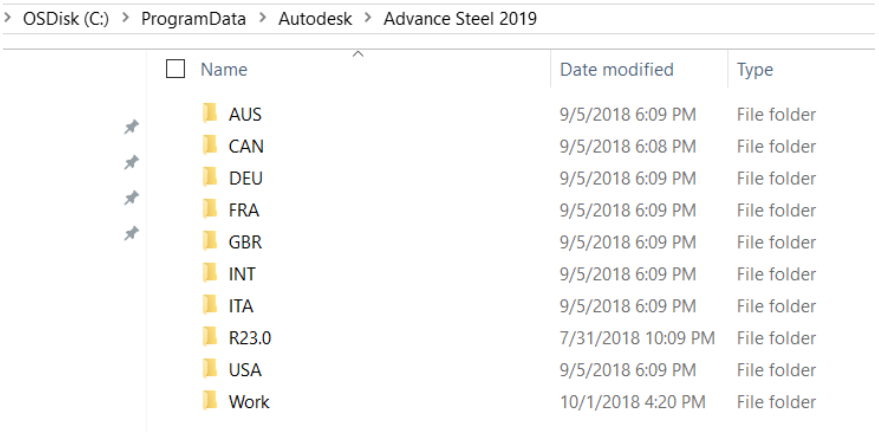
Share your customization with other users

You may have created user sections, custom bolts, customized specific templates such as drawing styles or BOMs that you want to be available to other users, here are some ways to make sure all users have the same settings.

Copy settings from a computer to another one

On the original computer, here are the settings to be copied:

- Copy the entire folder located at C:\ProgramData\Autodesk\Advance Steel 2019



- Paste it to a safe location (a computer on your network)

- At this safe location, delete all the “ASSettings_User.xml” and “*_log.ldf” files from all sub folders

On the destination computer(s), here what should be done:

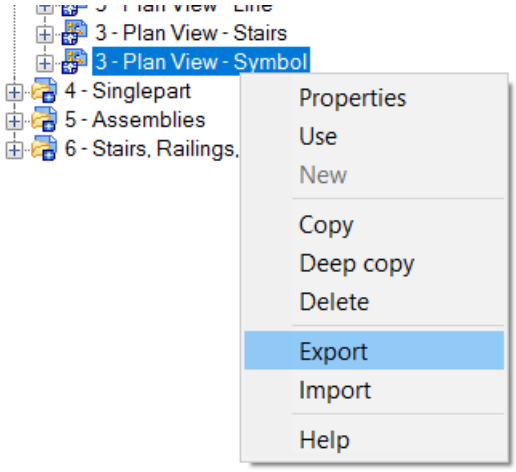
- Make a backup copy of the files installed from the installation, e.g. rename the entire folder located at C:\ProgramData\Autodesk\Advance Steel 2019 to something different

- Copy the settings (from the computer on your network) to each destination computer to the C:\ProgramData\Autodesk” folder.

Export / import a Drawing Style

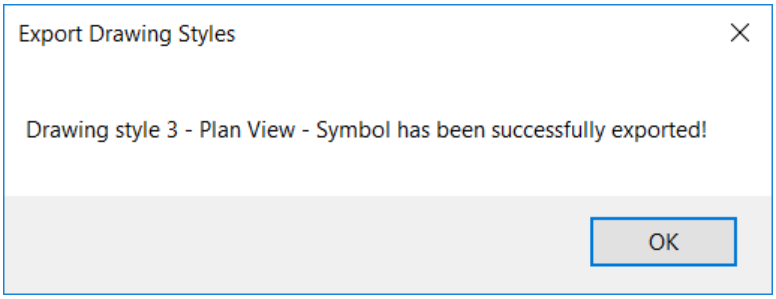
You can export/import a customized drawing style from the Drawing Styles Manager.

Export a drawing style

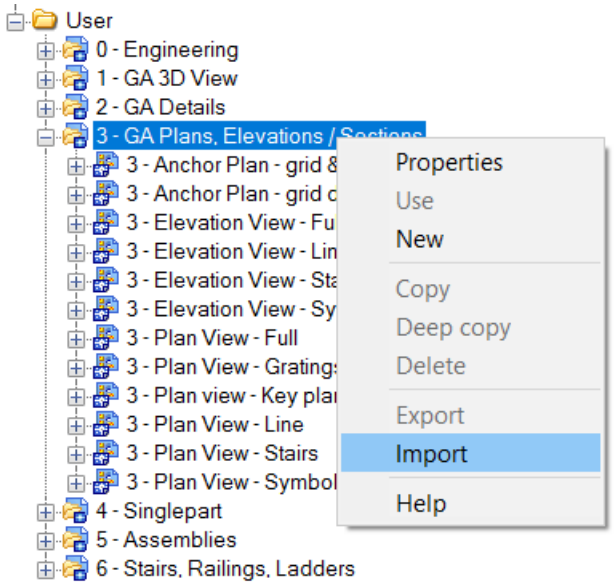


- Select a drawing style to export.
- Click “Export”.
- In the Export dialog box, enter the name of the export database file.
- Click Export.

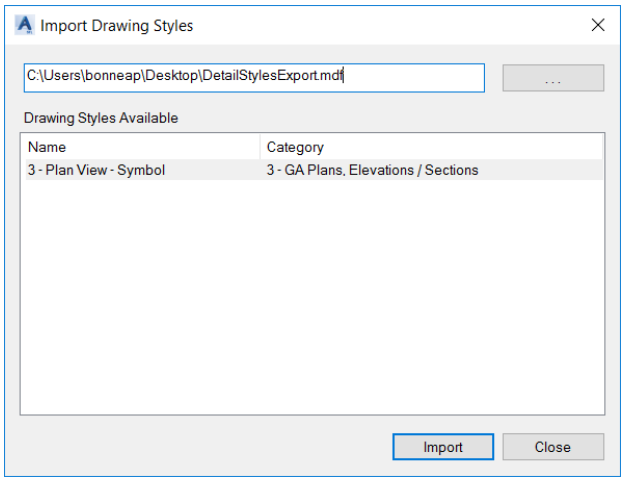
The drawing style is exported as an .mdb file.



Import a drawing style



- Select a category in which to import the drawing style.
- Click “Import” and press the Browse button.
- From the Import dialog box, select the .mdb file with the drawing style to import.



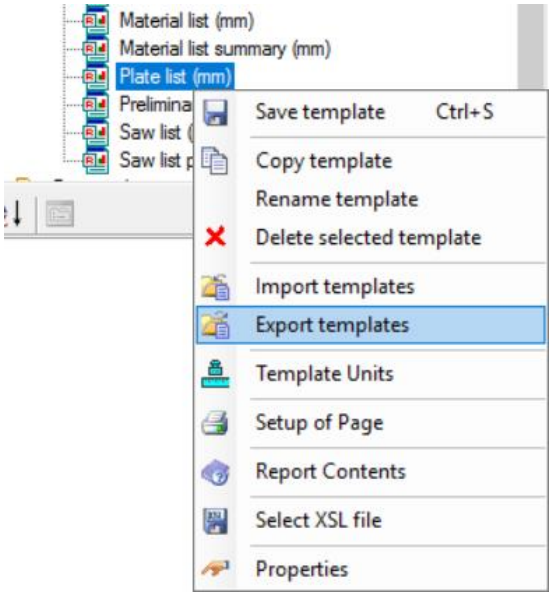
- Select a drawing style and click Import.
- The Import Drawing Styles dialog appears.
- Change the name of the drawing style and the category (as necessary) and click Next to import the drawing style.

The drawing style is imported in the selected category.

Export / import a BOM template

You can export/import a customized BOM template from the BOM editor.

Export a BOM template



- Select a BOM template to export.
- Click OK.

The BOM template is exported as a .temp file.

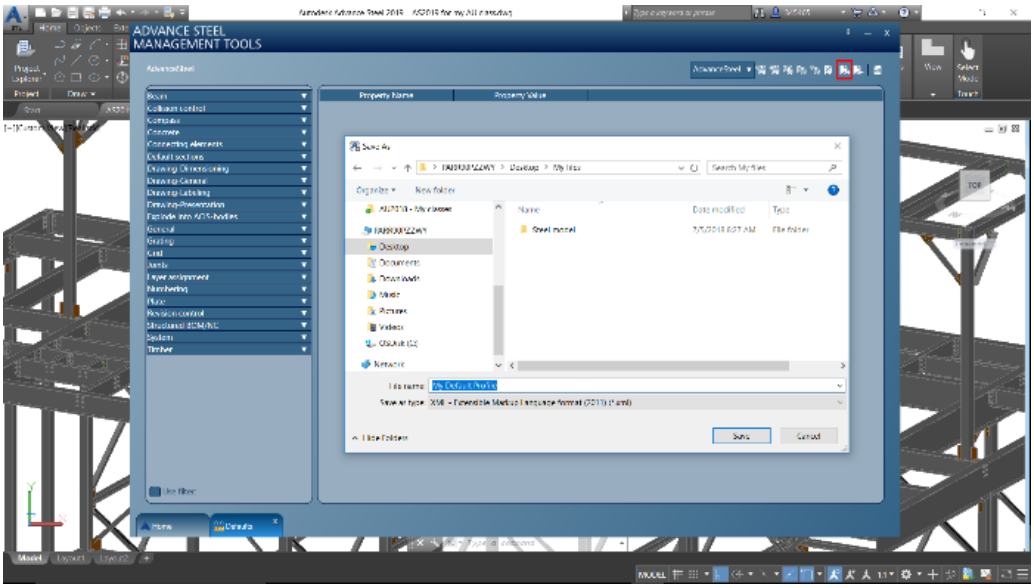
Import a BOM template

- Select a BOM template and click Import templates.
- The Import templates dialog appears.
- Select the branch (e.g. User) where the BOM template will be imported
- Click OK.

The BOM template is imported in the selected category.

Export / import values in the Management Tools

You can import / export your Management Tools Default Profile.



Migration tool

Introduced in Advance Steel 2018 and enhanced in Advance Steel 2019, the Migrate Custom Settings tool helps migrate more easily customized settings and files to the newest release.