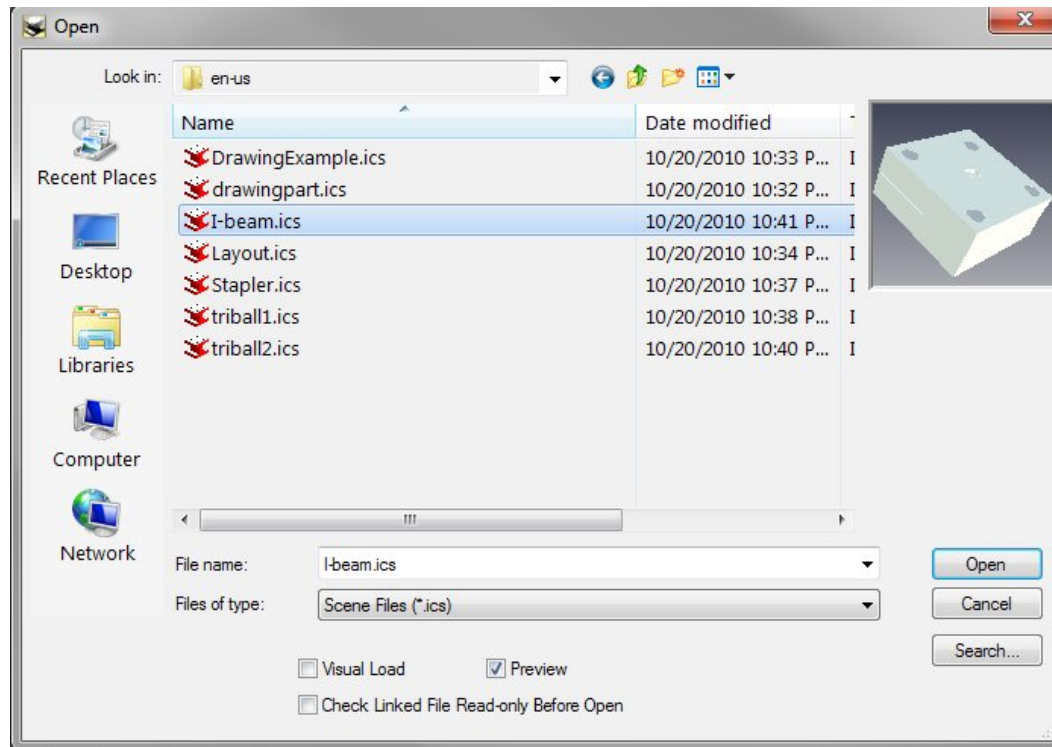# IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

Supplementary to IRONCAD Getting Started Guide on creating drawing or drafting sheets from part/s from a working scene, title blocks and adding BOM column feature. What will be shown are step by step screen shots similar to what will be seen as you follow this supplementary guide.

SP RE
dynam cs

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

For this supplementary guide, the model used is the I-beam.ics from C:\Program Files>IronCAD>2015>Tutorials>en-us>I-beam.ics. This documentation will highlight some items from the ICGSG on the Standard Views Creation and the use of Select Par/Assembly to Project feature. Also, it will show the options available on adding columns on the default Bill of Materials. It will also present how it will done in CAXA Draft. Doing sections and annotations have been covered by the ICGSG and will not be shown here.

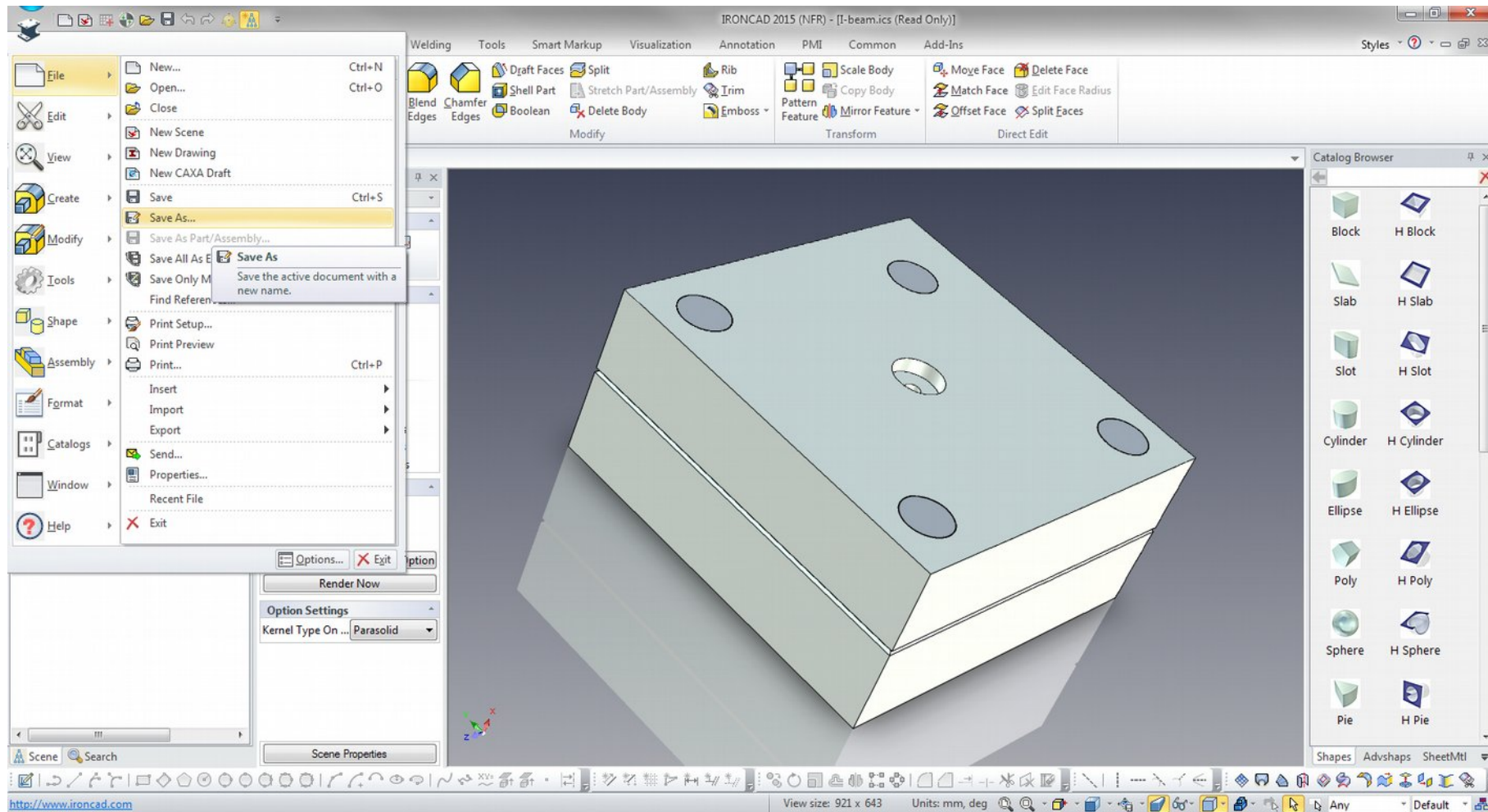To begin with open the en-us folder to access the I-beam.ics
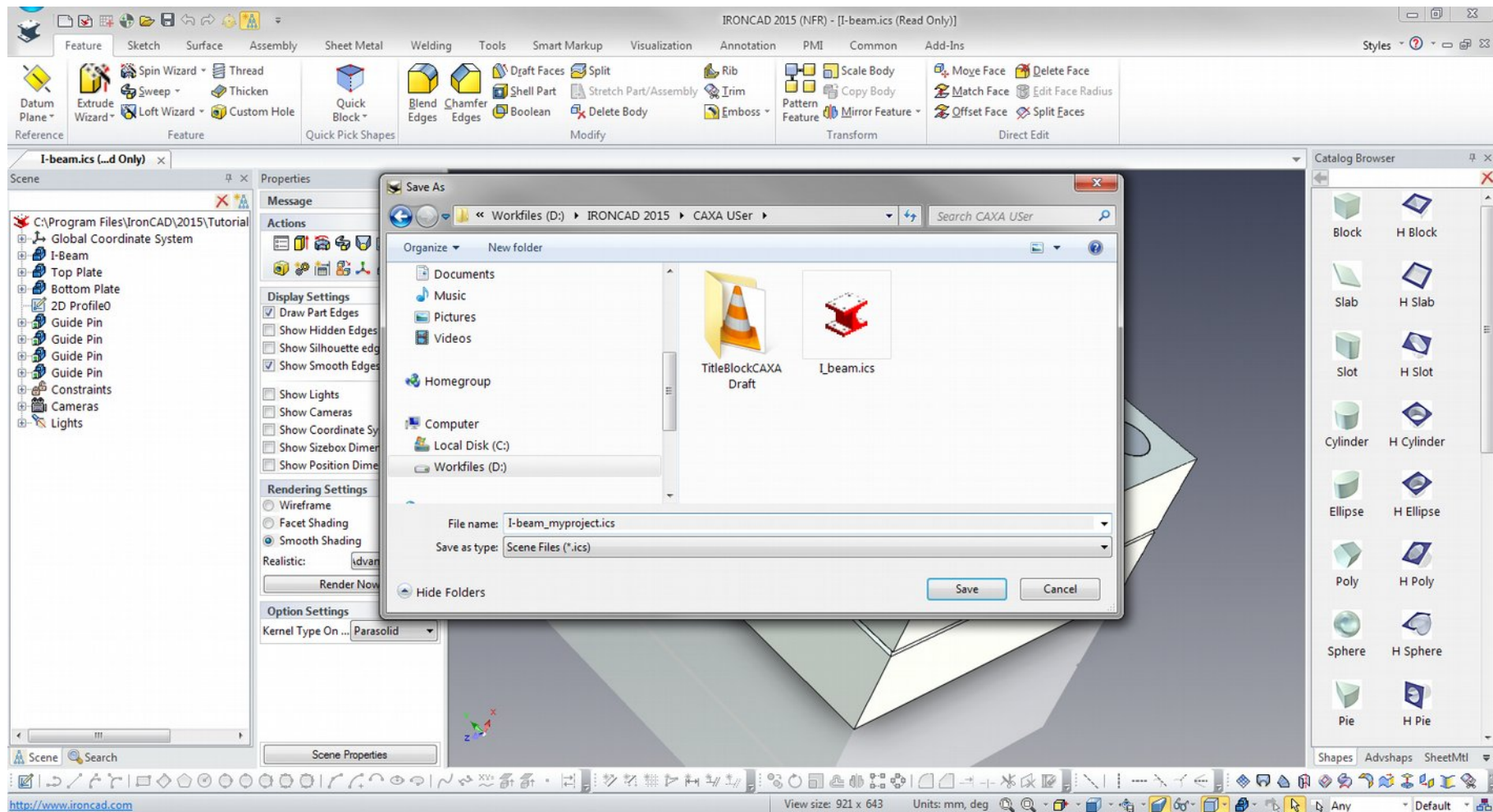
IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
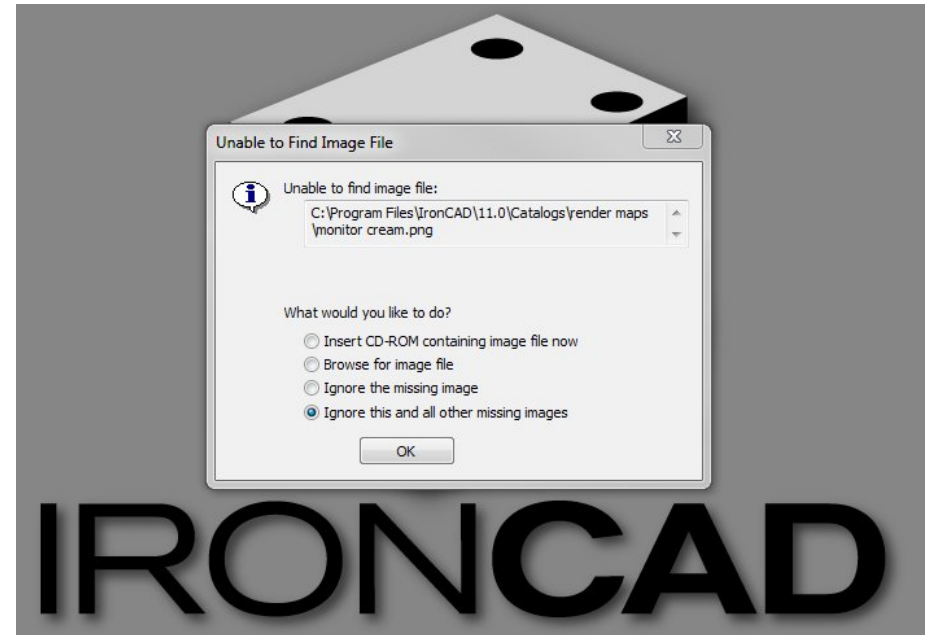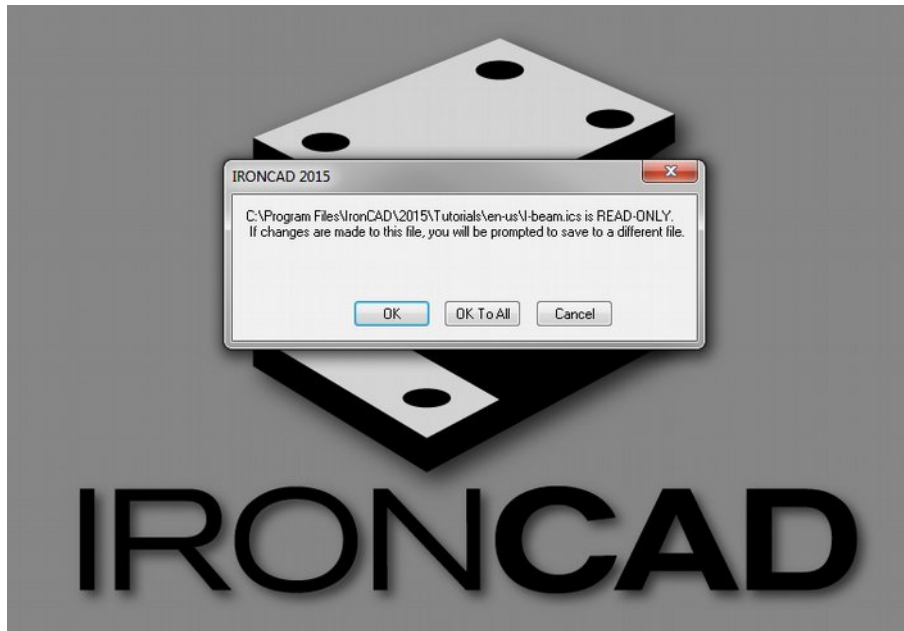
Click OK on the prompt screen and on the next screen select as what is shown and again click OK.
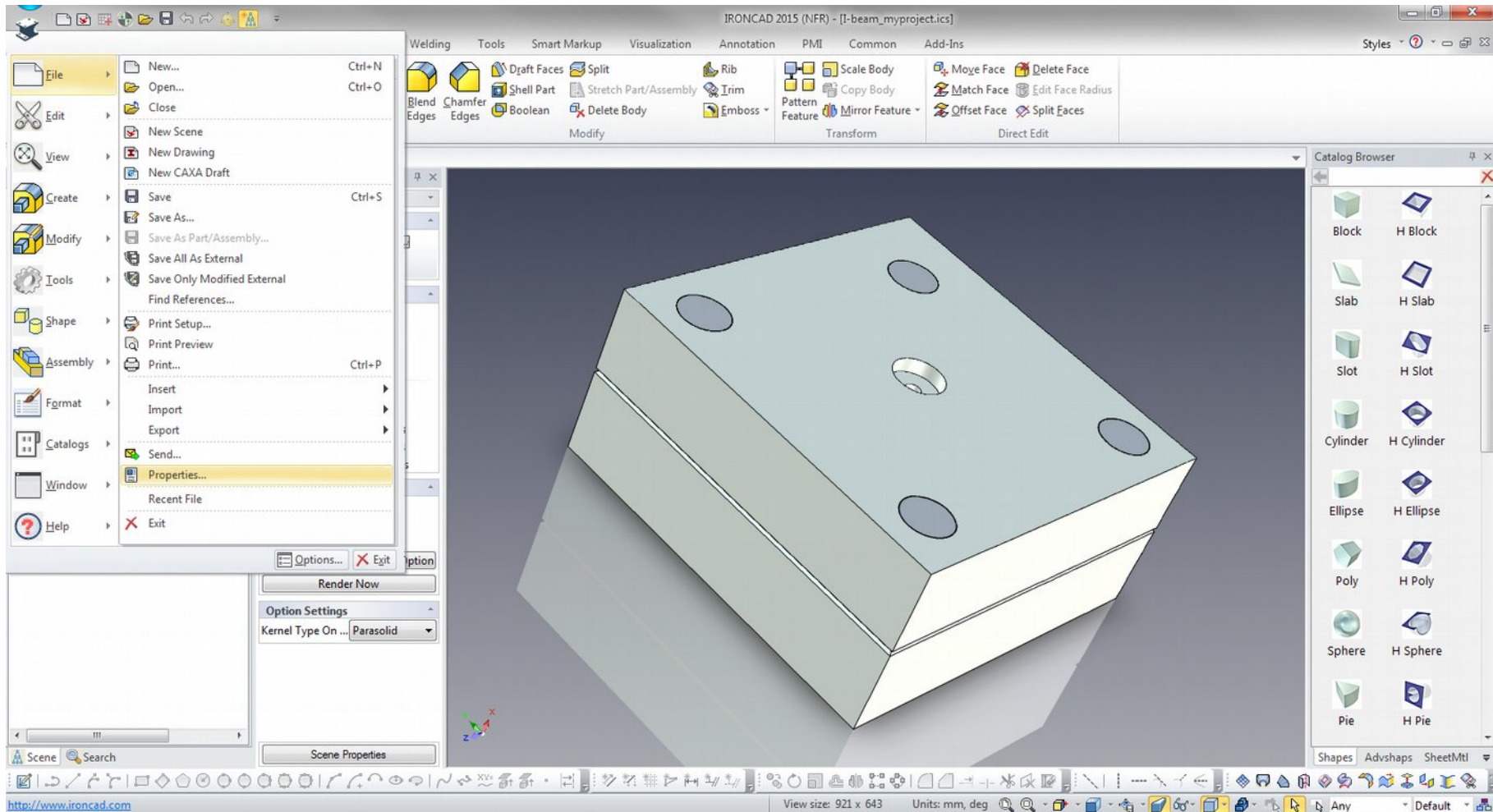
IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

Select Save As and set it to your selected working directory.

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

This as an example on my system.

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

Go to File>Properties to fill the necessary details.

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

On the IronCAD tab of Document Properties, fill the title, the author and click Apply. On the IronCAD Custom, select the list on the drop down list on name and fill the value. Click Apply and OK.

SPIRE dynamics

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
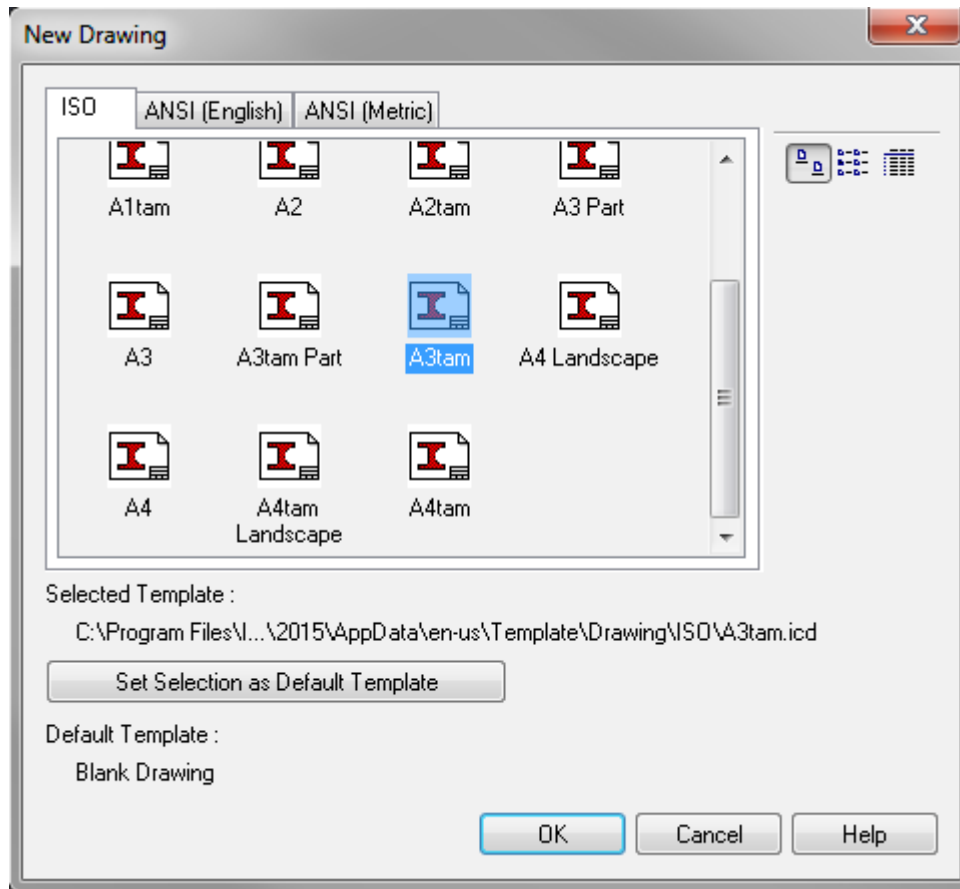
Go to File>New>Drawing. On the New Drawing dialog screen, select the ISO tab and select A3tam template, third angle metric templates available from this link http://www.ironcad.com/support/community/i...showtopic=10056.

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

On the Properties pane, LMB click Standard View icon from the Actions selection.
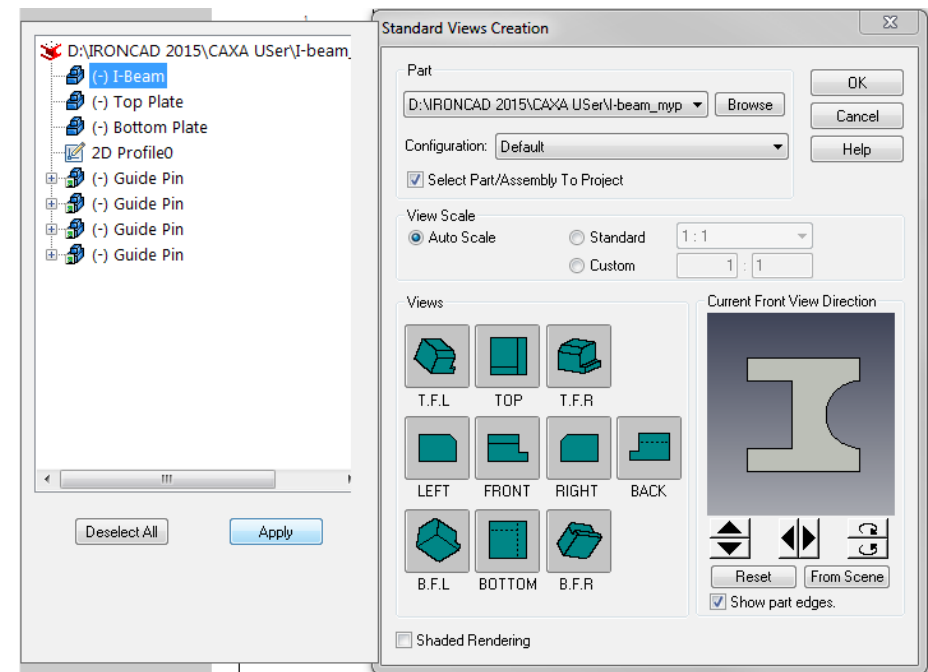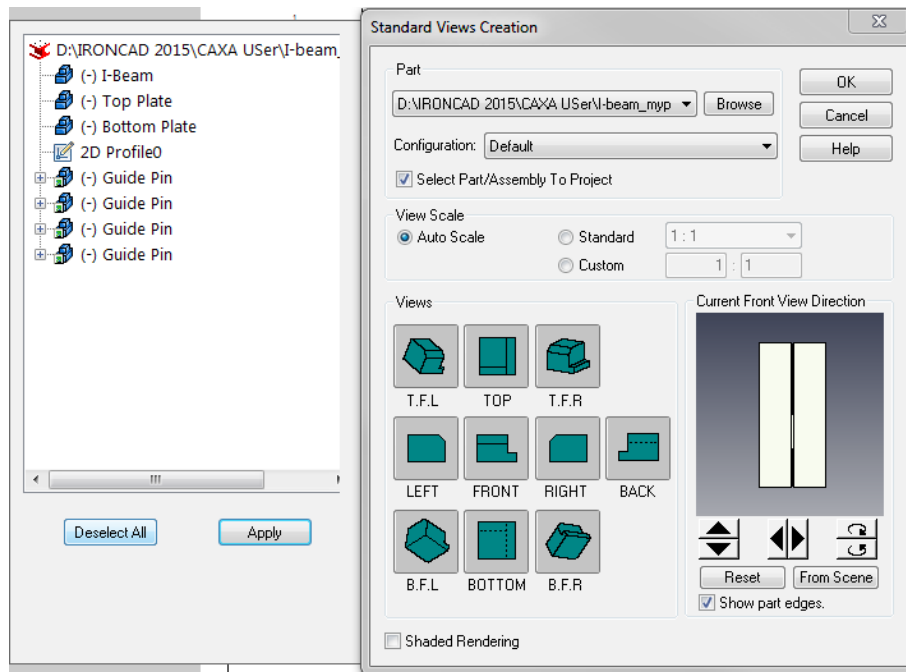

On the Standard View Creation dialog, tick Select Part/Assembly To Project option. As it opens a scene list, LMB select I-Beam and click Apply. Check and confirm the Current Front View Direction and select the Views to show.

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
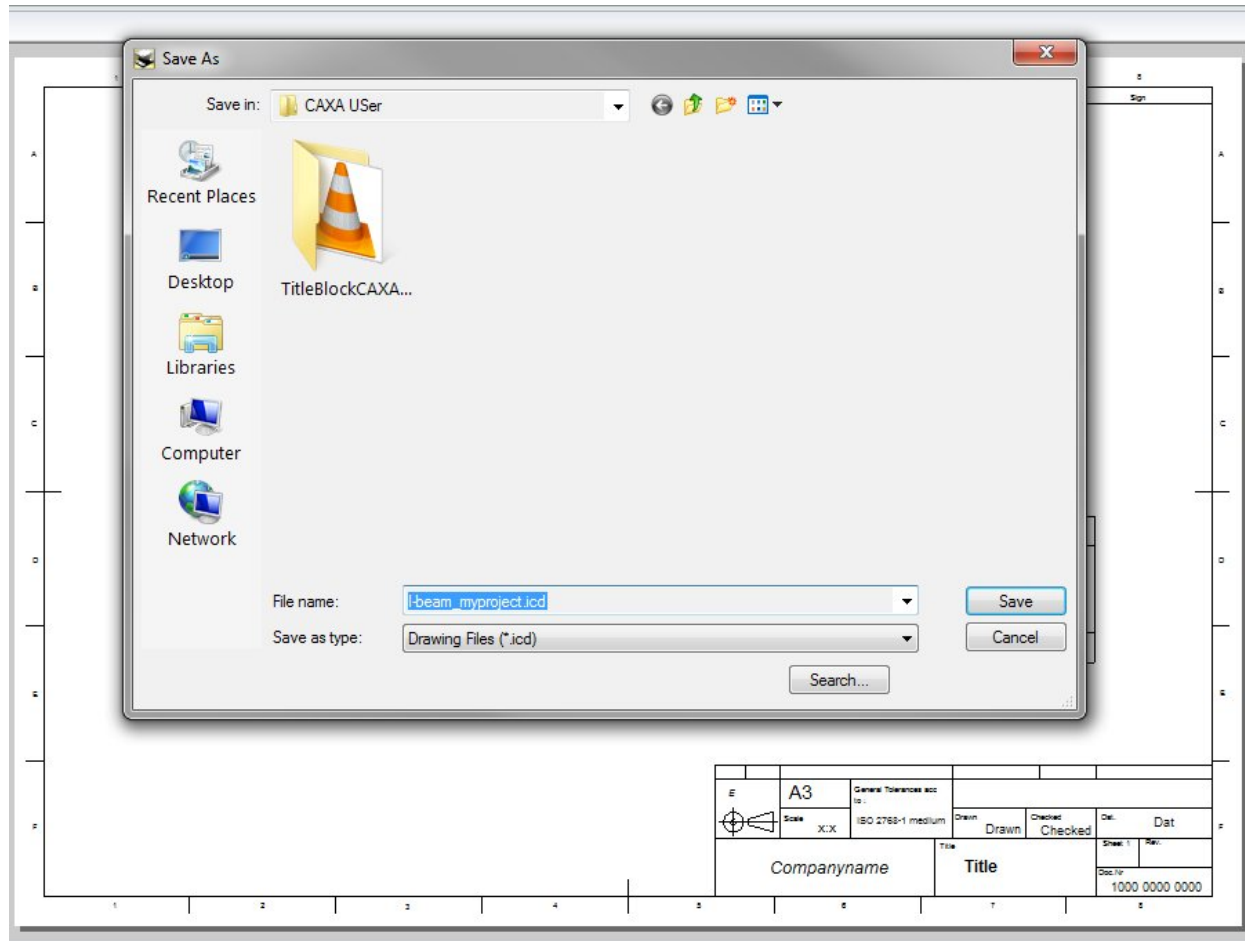
Go to File>Save As to your working directory. Saved it with a file name I-beam_myproject.icd
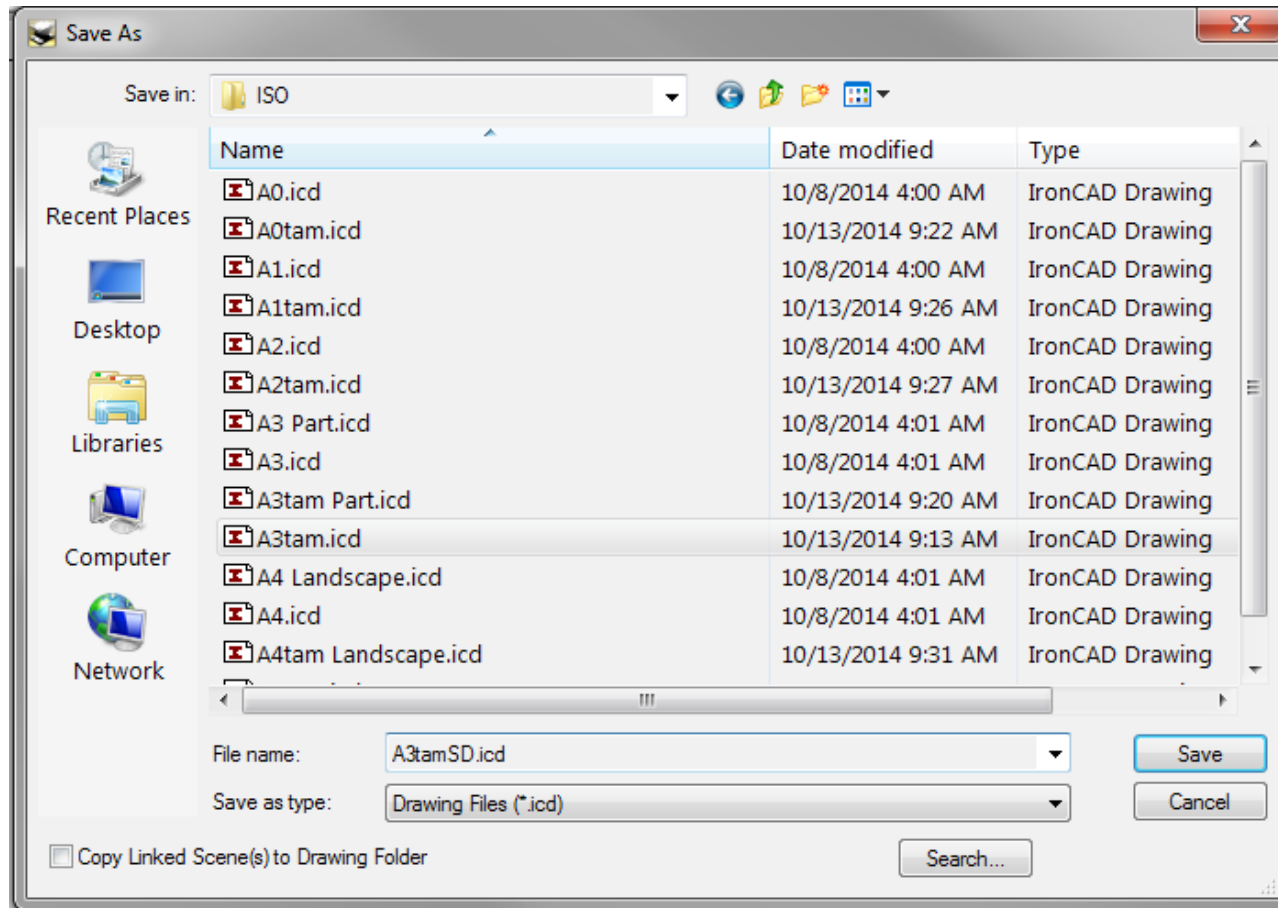
IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
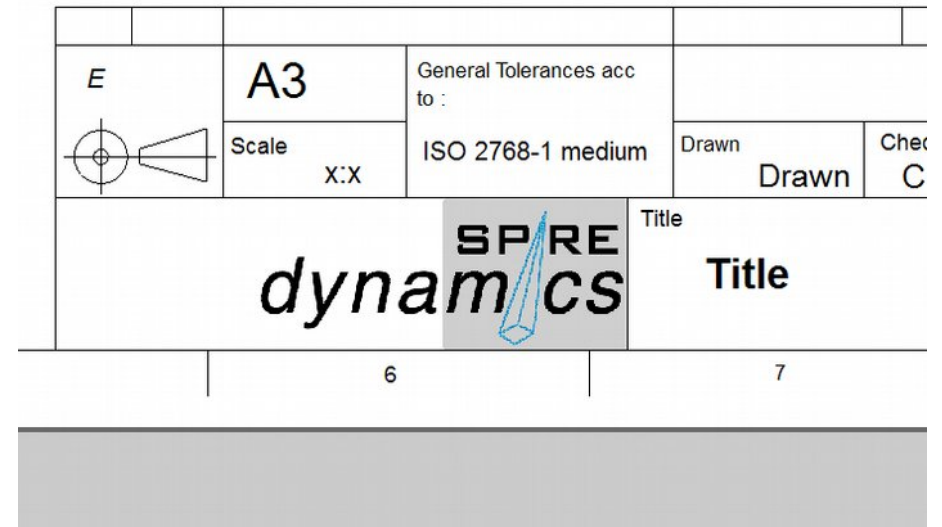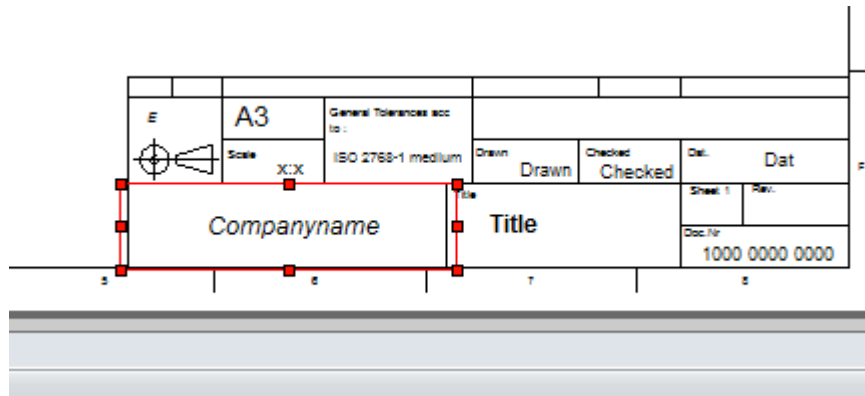
On the Companyname text, you may edit through Properties and replace the entry or delete the Text and replace it with your company logo bitmap image by going to the IC menu button>Create>Object>Insert Object>Create from File>File Folder>Save. Re-size the bitmap to fit and put in place box where the Companyname used to be. You may Save As again as customize A3tamcompany template.icd (shown on the next slide) on the Program Files>IronCAD>2015>AppData>>en-us>Template>Drawing>ISO folder and close the drawing. Open the file name I-beam_myproject.icd to continue.

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
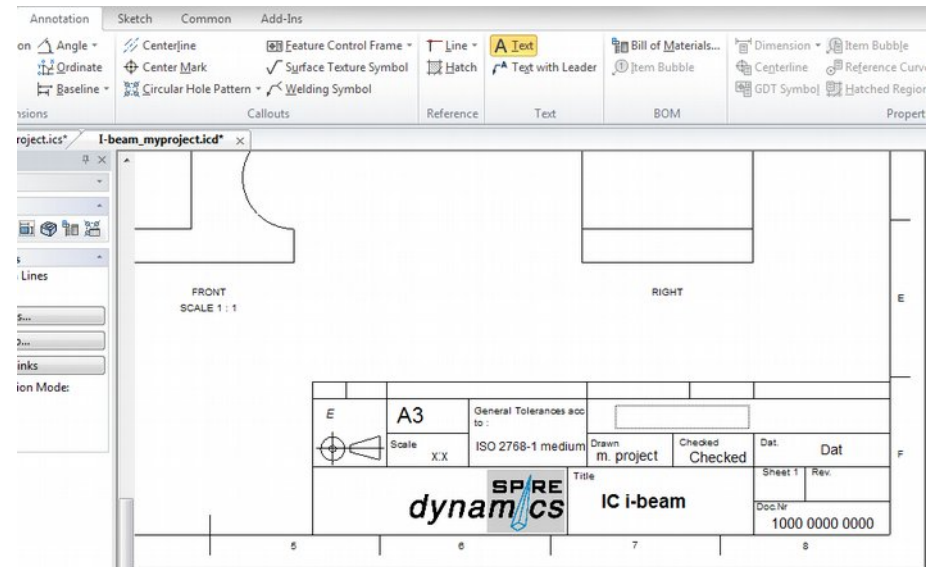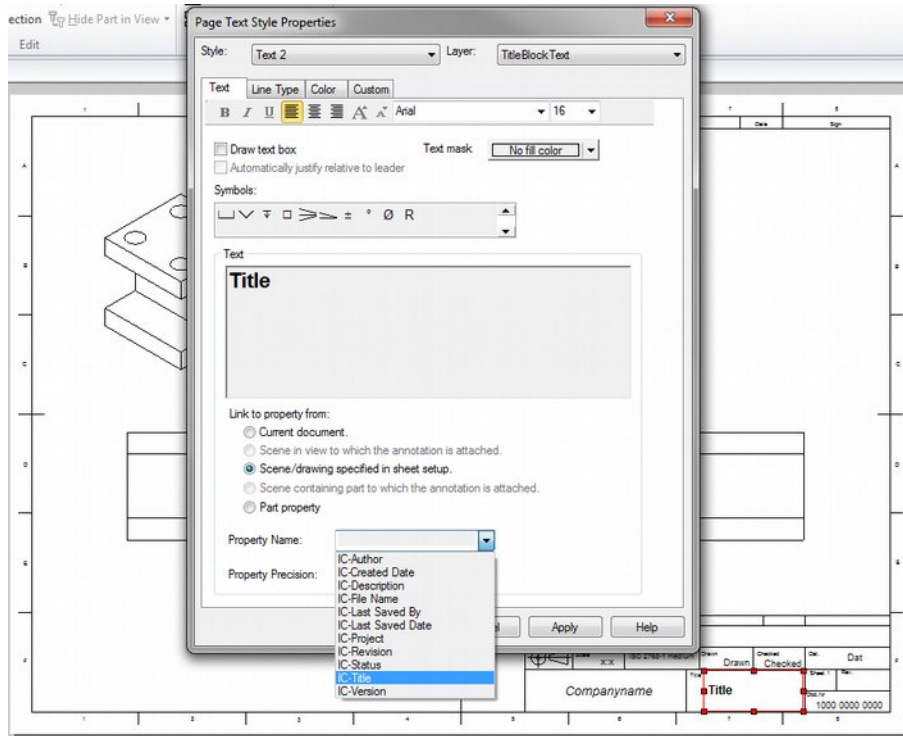
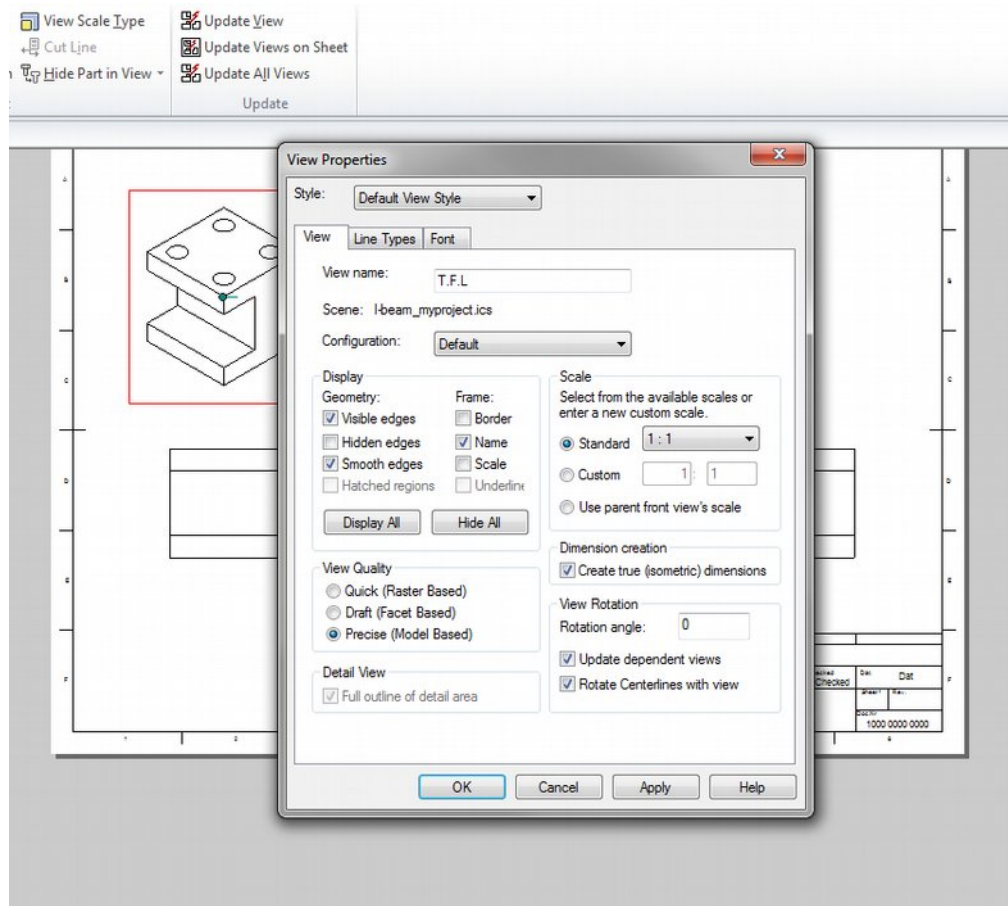RMB click Title on the Tile Block to select Properties. On the Page Text Style Properties dialog, select Link to property from as shown. On the Property Name drop down list, select IC-Title and click Apply > OK.

SPIRE
dynamics

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

RMB click on the Drawing View, on the View Properties dialog, Display shows Geometry and Frame features to tick select. Tick Name to display on Drawing View. Repeat the step for each Drawing View required on the sheet.

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
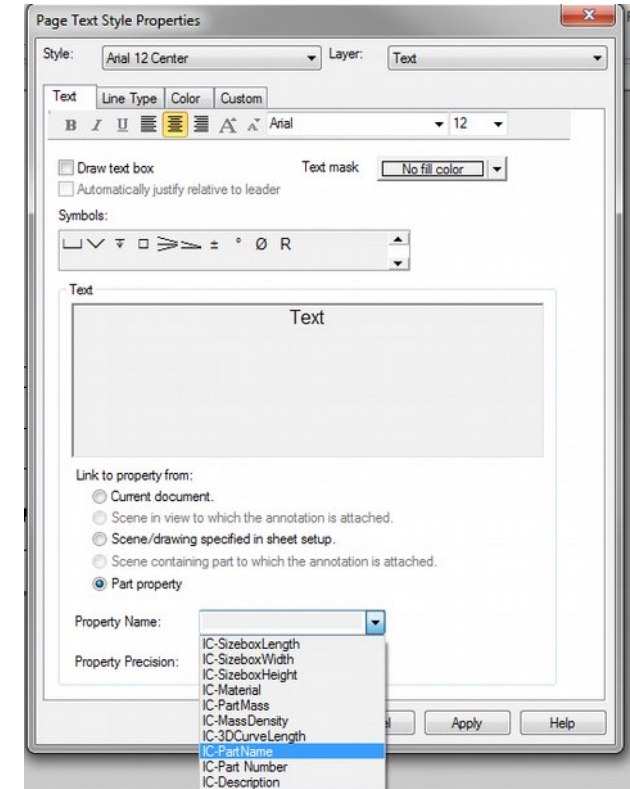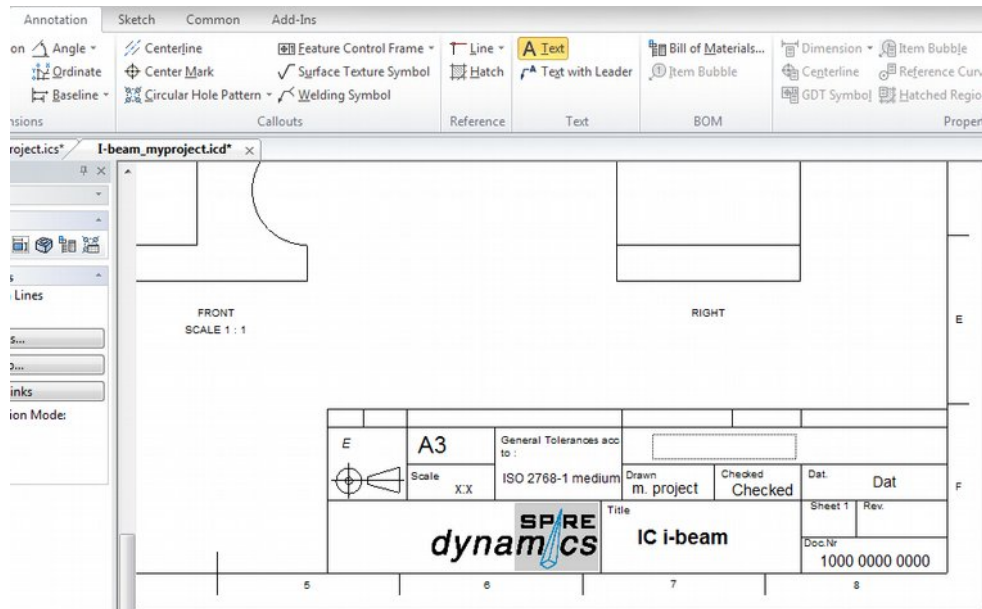
Create a Part Name field on the Title Block as shown

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

At the Actions from the Properties Pane, LMB select New Sheet. From New Sheet dialog on the ISO tab, select your customize template. As for this guide, A3tamSD is used.

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

On the Standard View Creation dialog, tick Select Part/Assembly To Project option. As it opens a scene list, LMB select Top Plate and click Apply. Check and confirm the Current Front View Direction and select the Views to show.
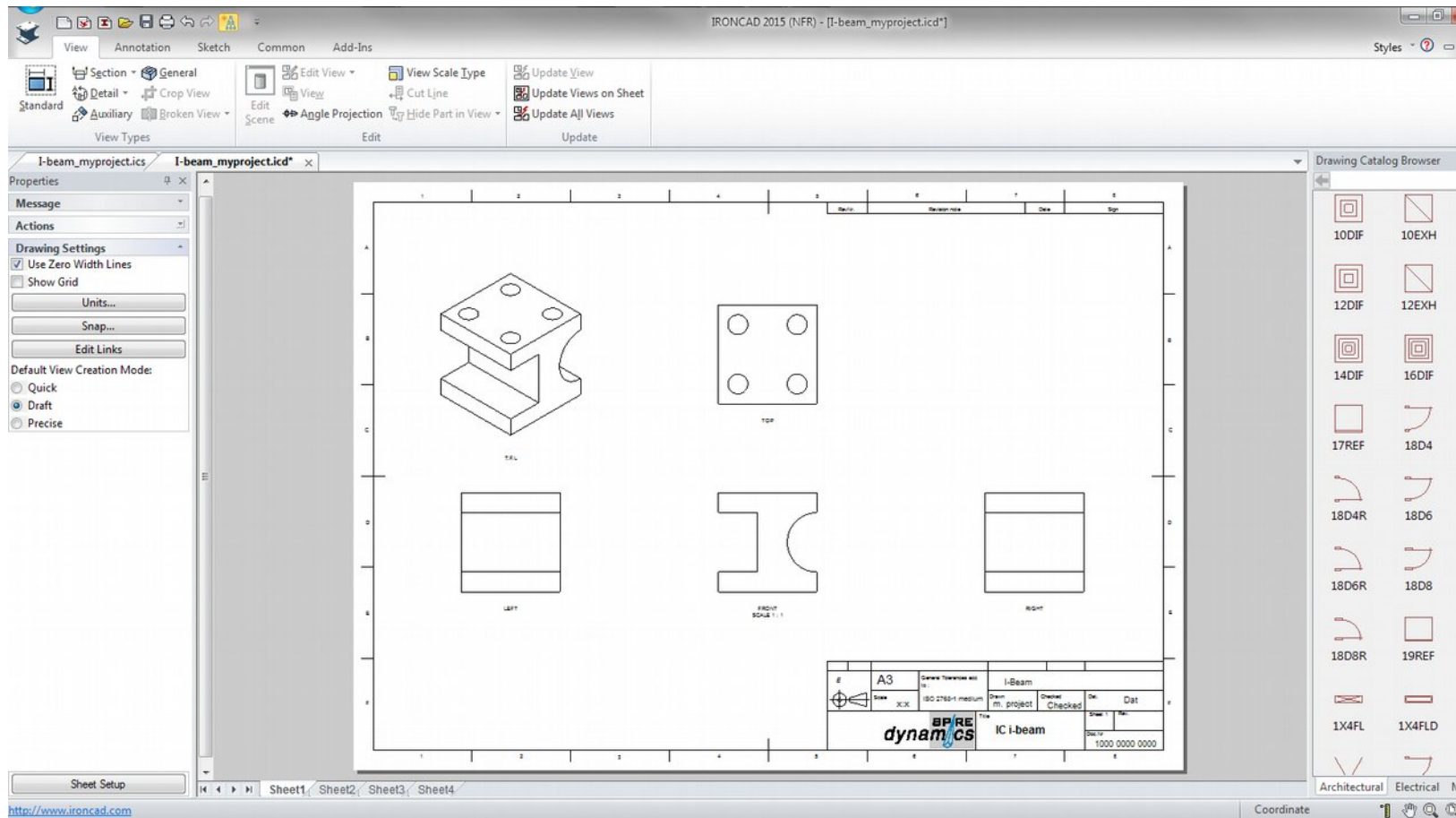
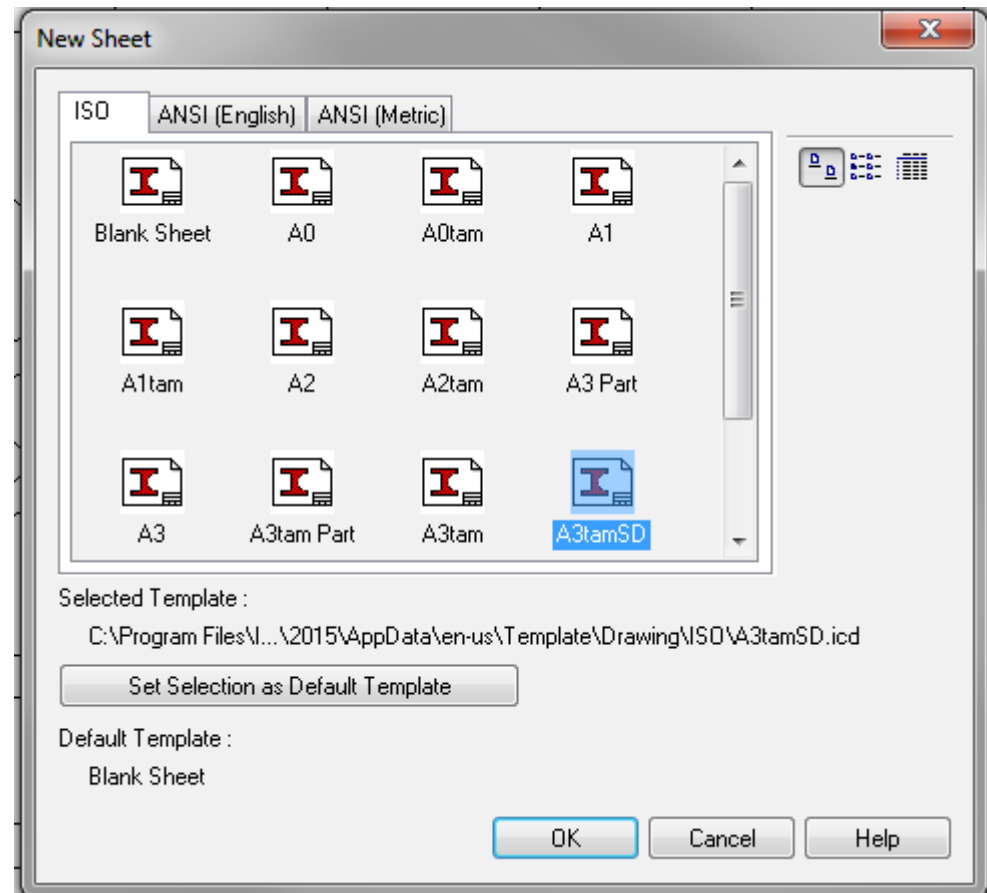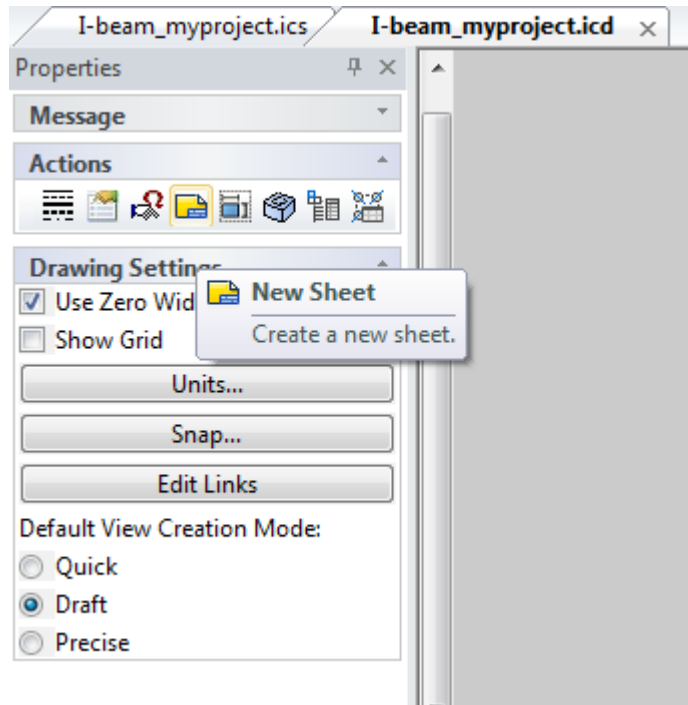# IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

Create a Part Name field on the Title Block as shown

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

Create a New Sheet and on the Standard View Creation, select Bottom Plate to create Drawing Views selected.
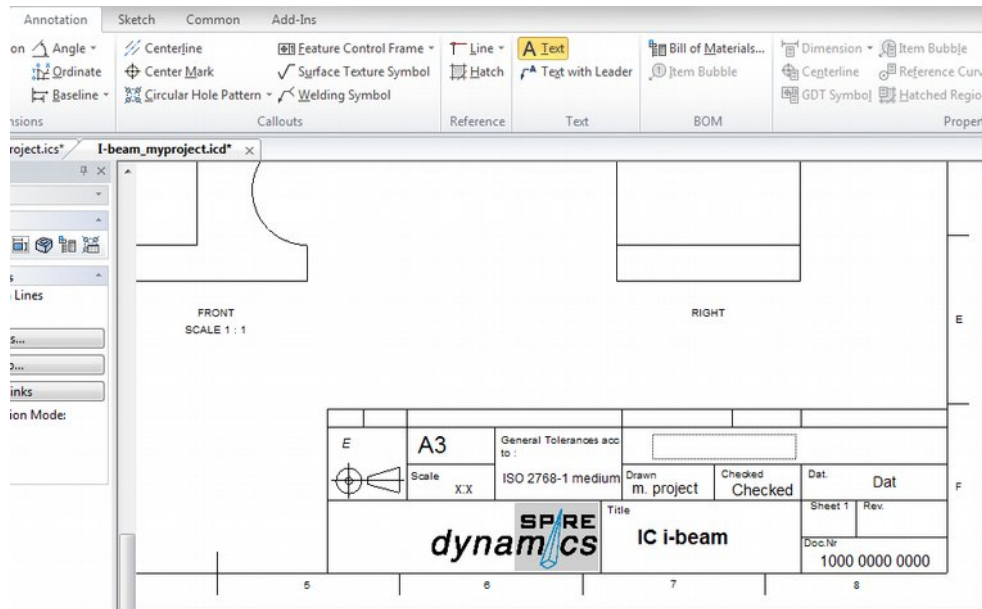
IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

Create a Part Name field on the Title Block as shown
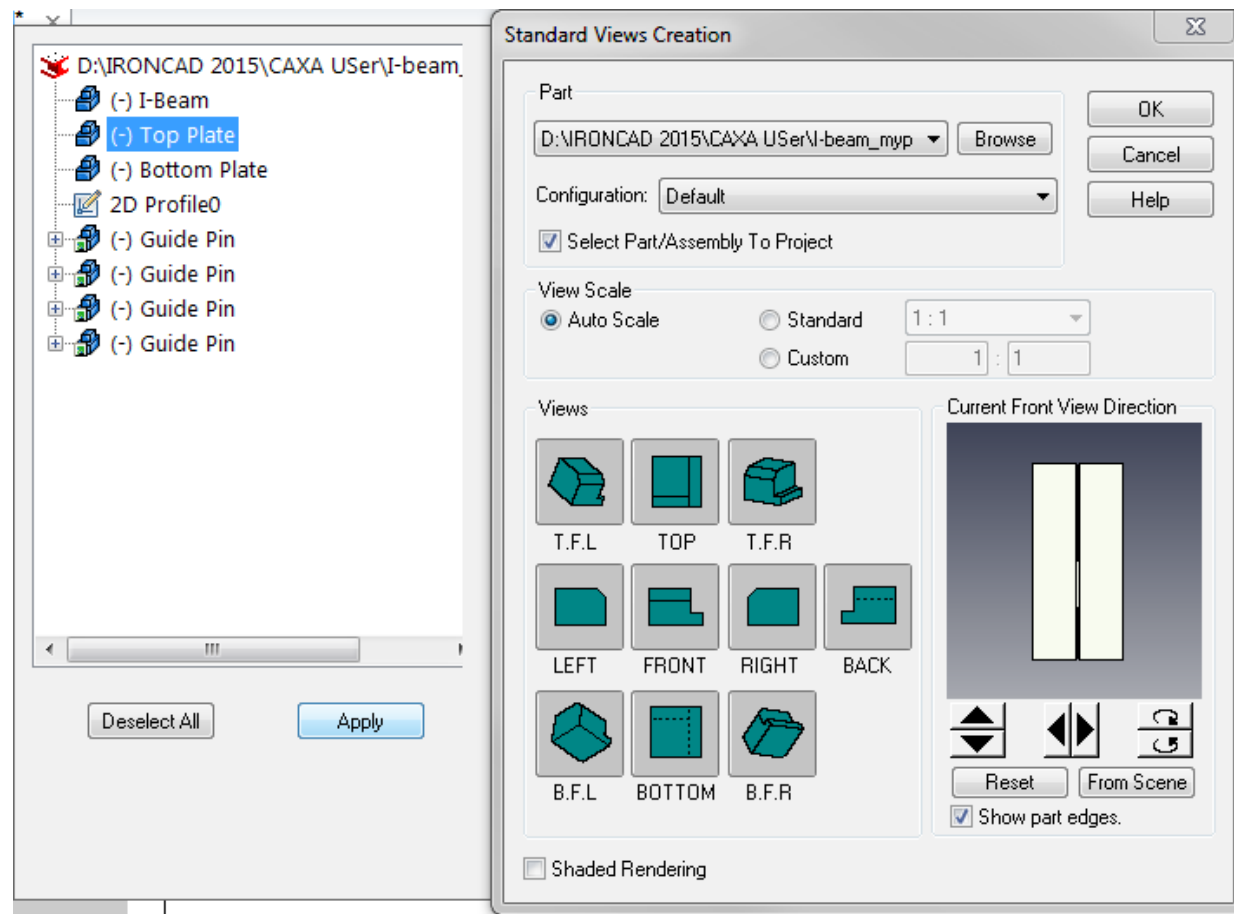
IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
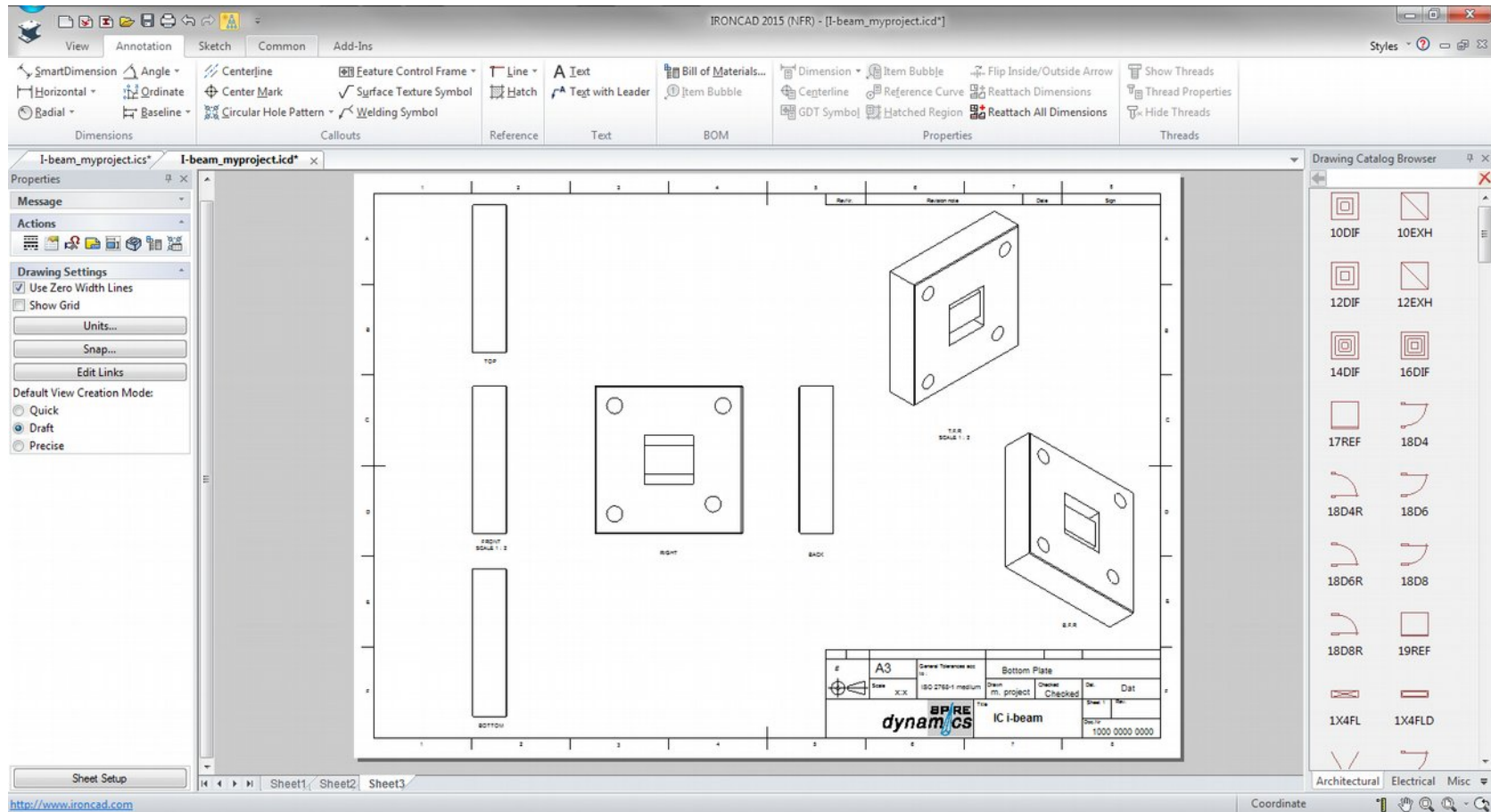
IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
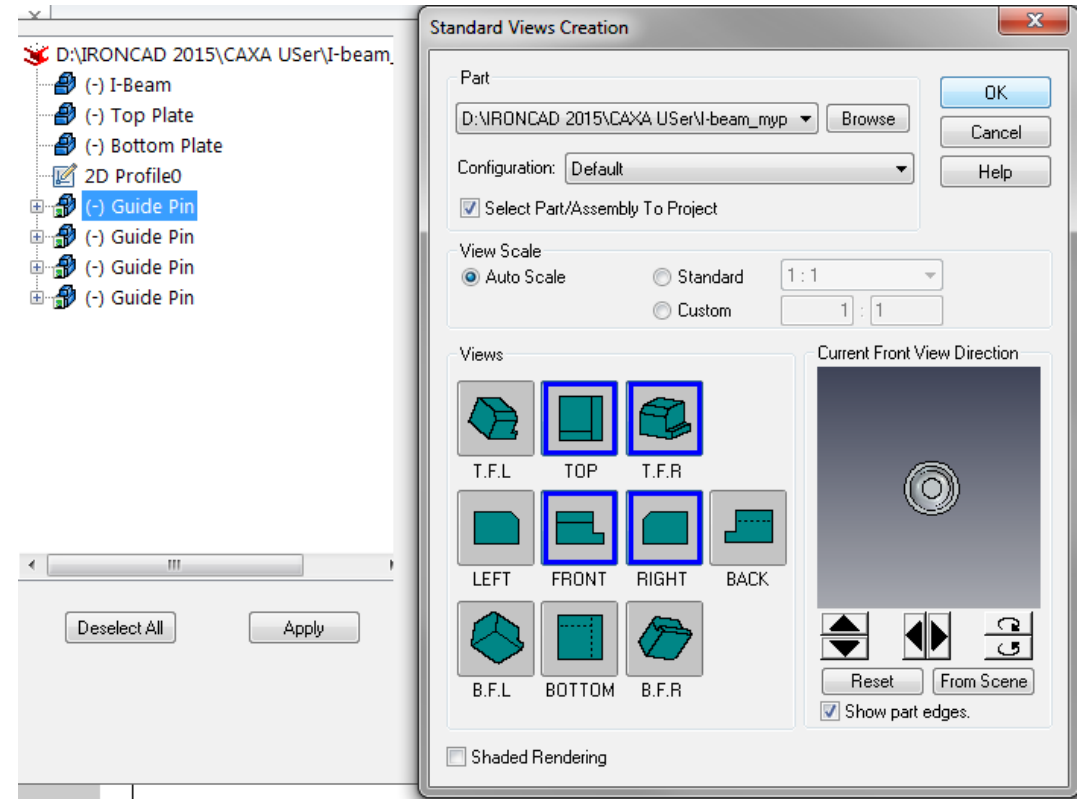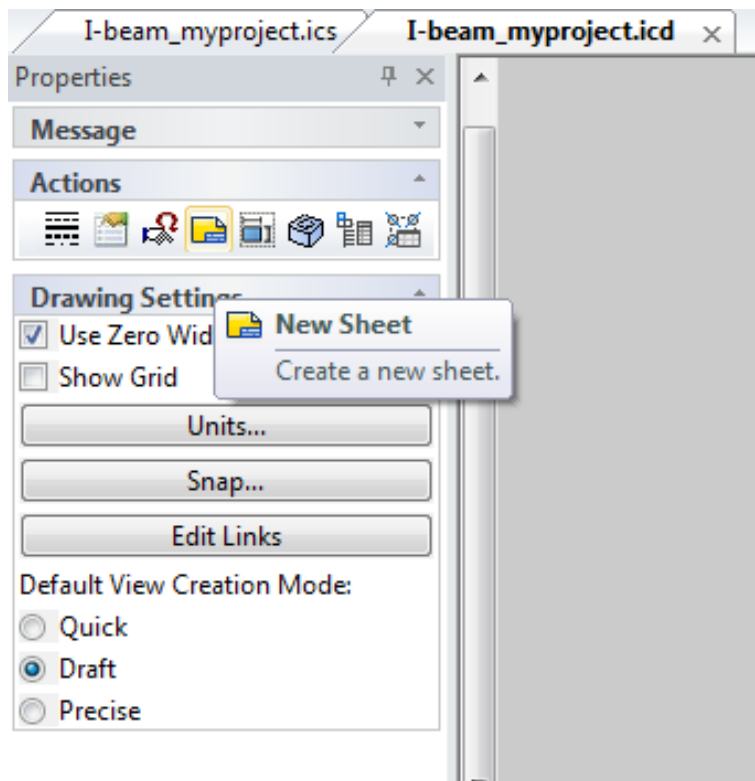
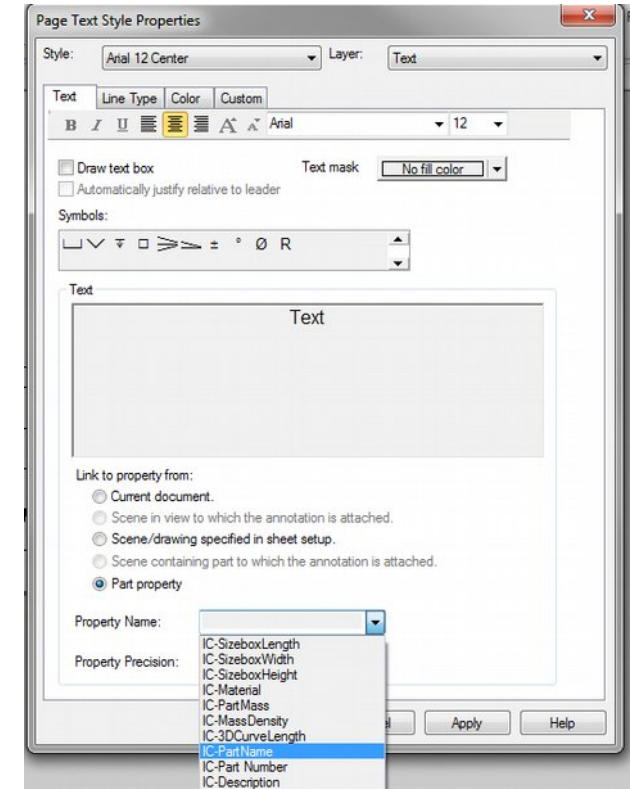
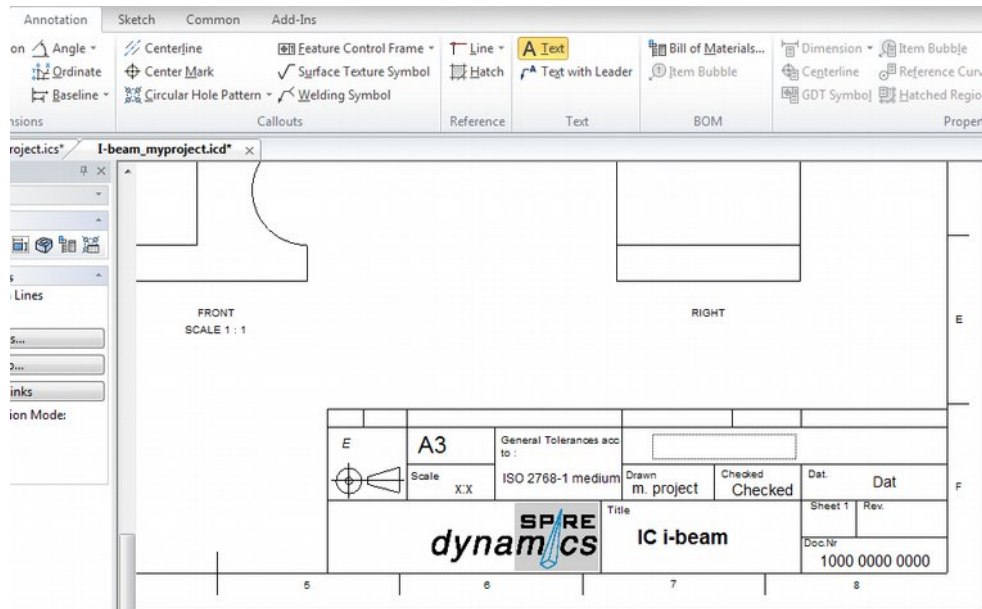Create a New Sheet and on the Standard View Creation, select Guide Pin. Orient Current Front View Direction and to create Drawing Views selected.
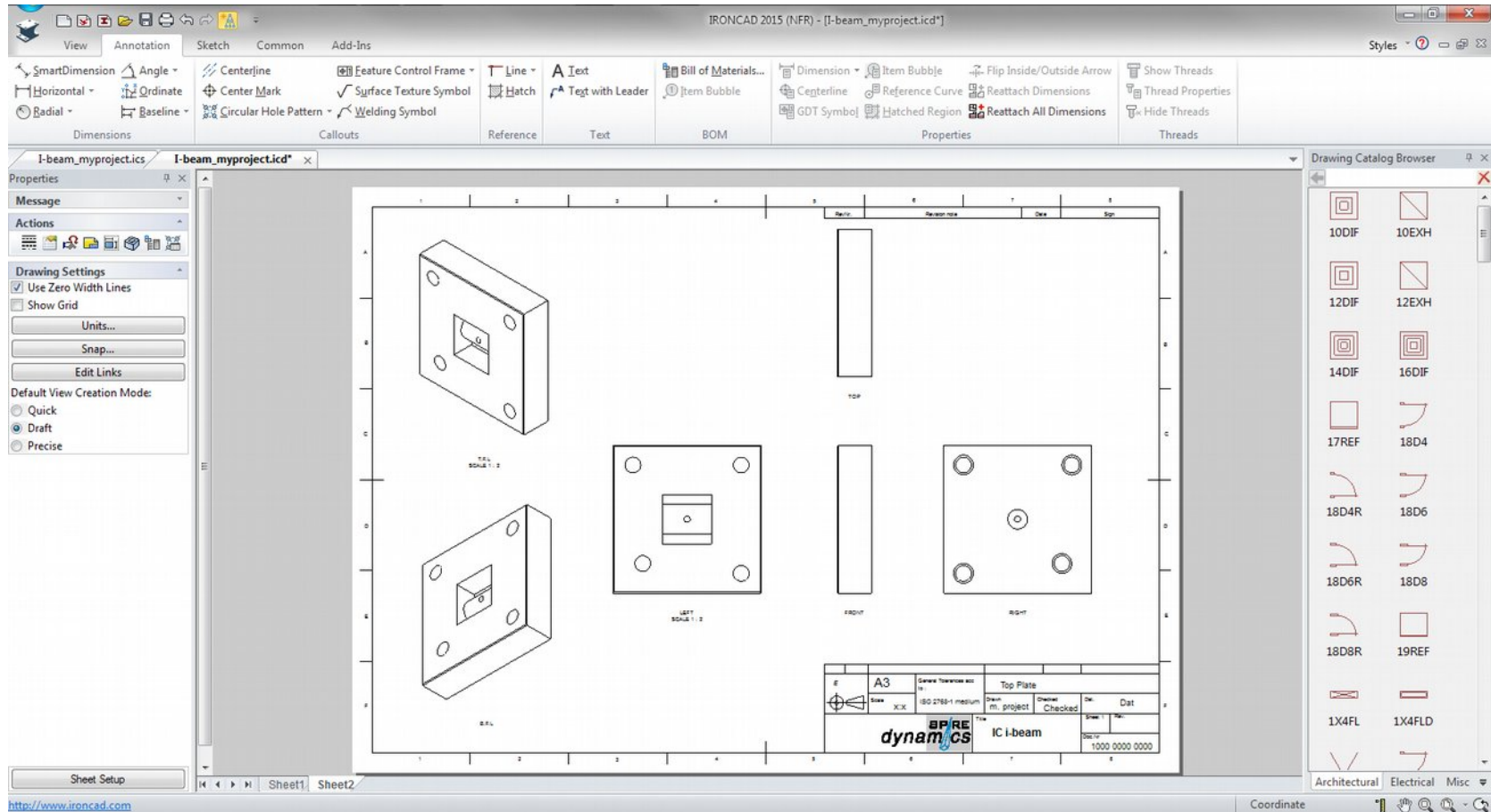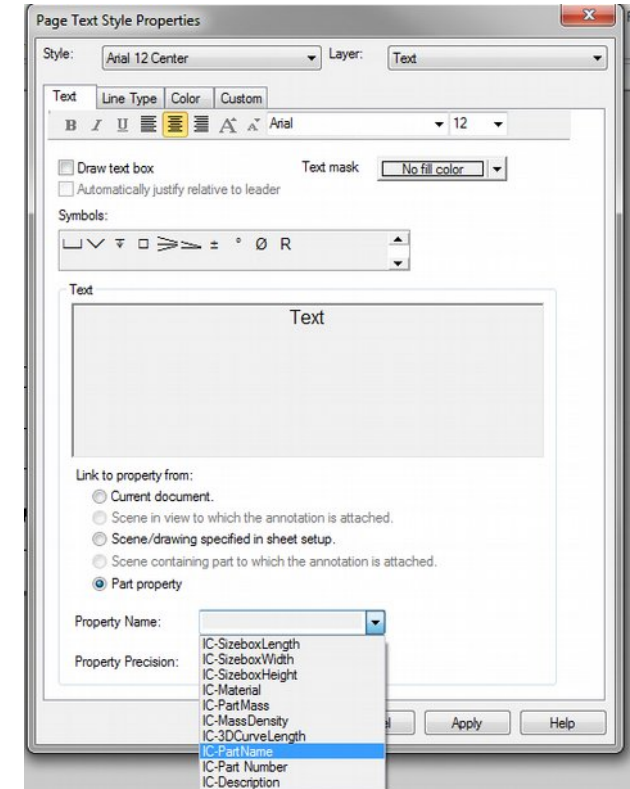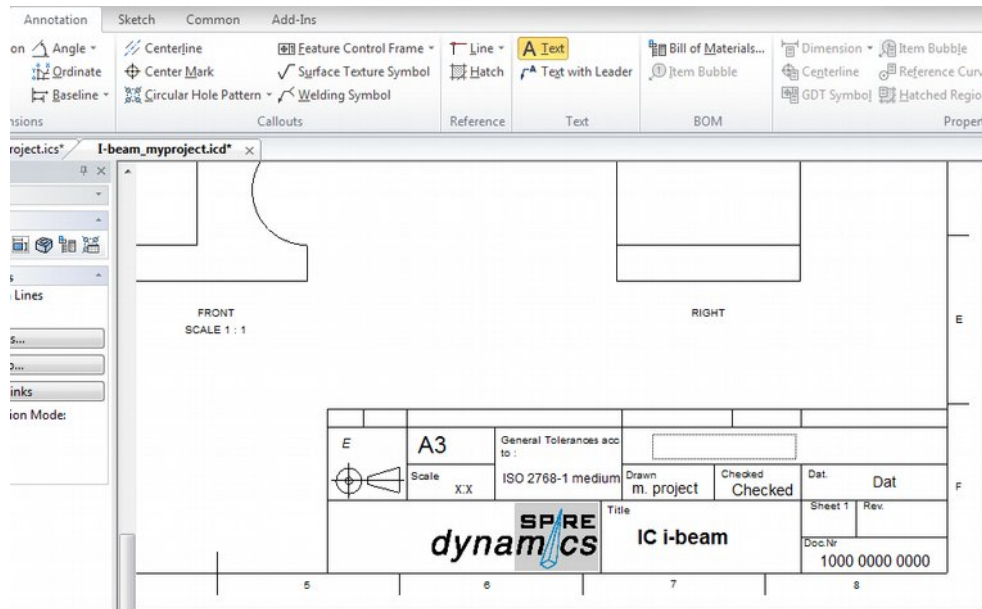
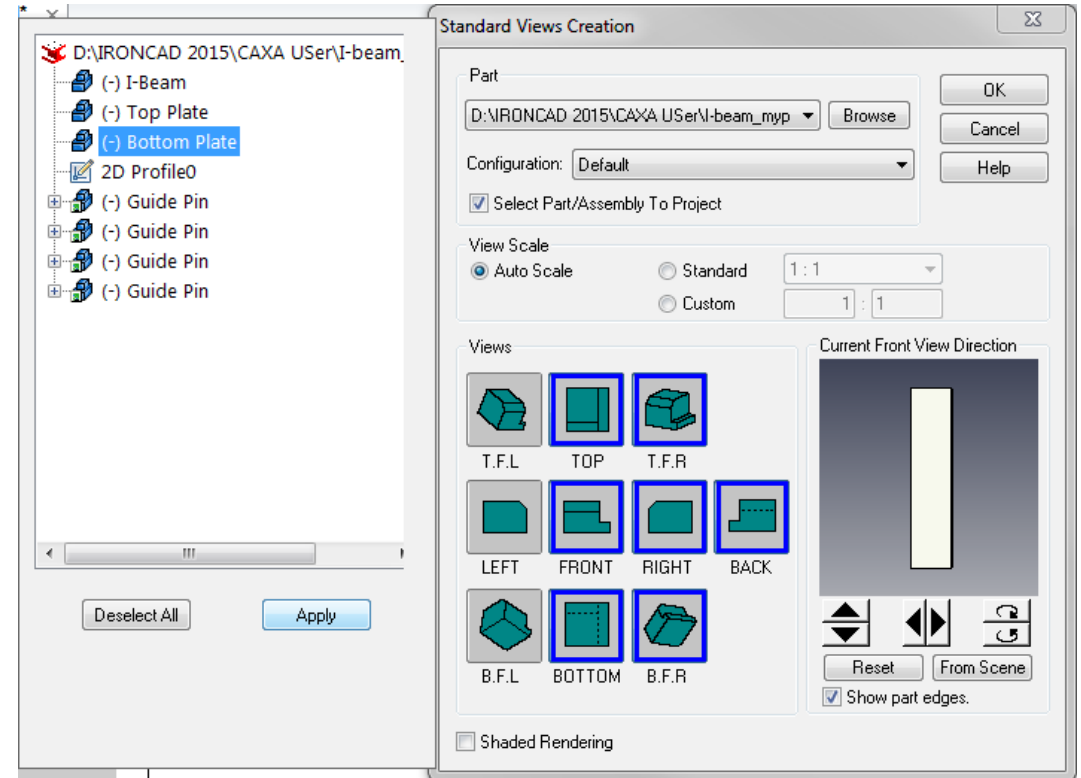# IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

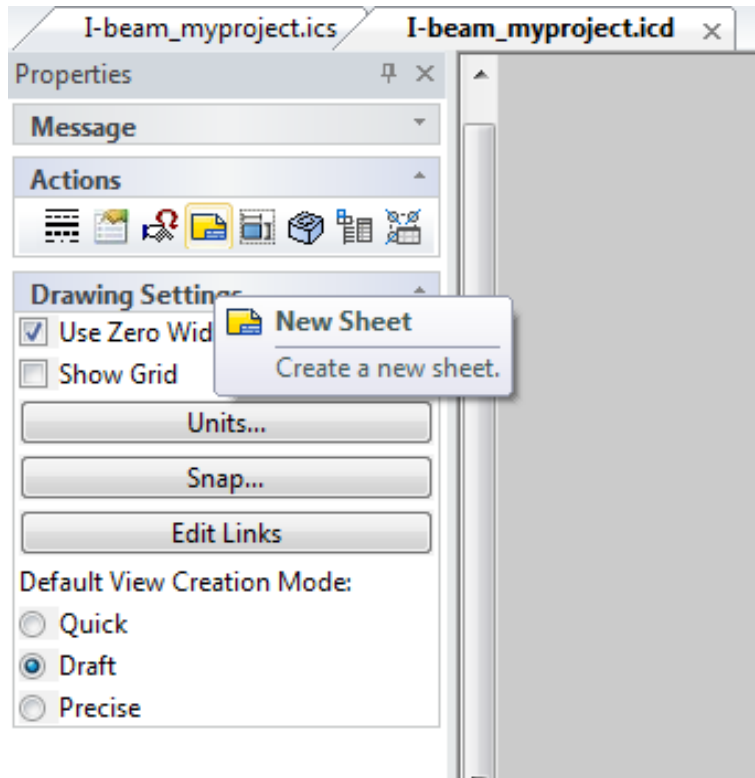
Create a Part Name field on the Title Block as shown

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

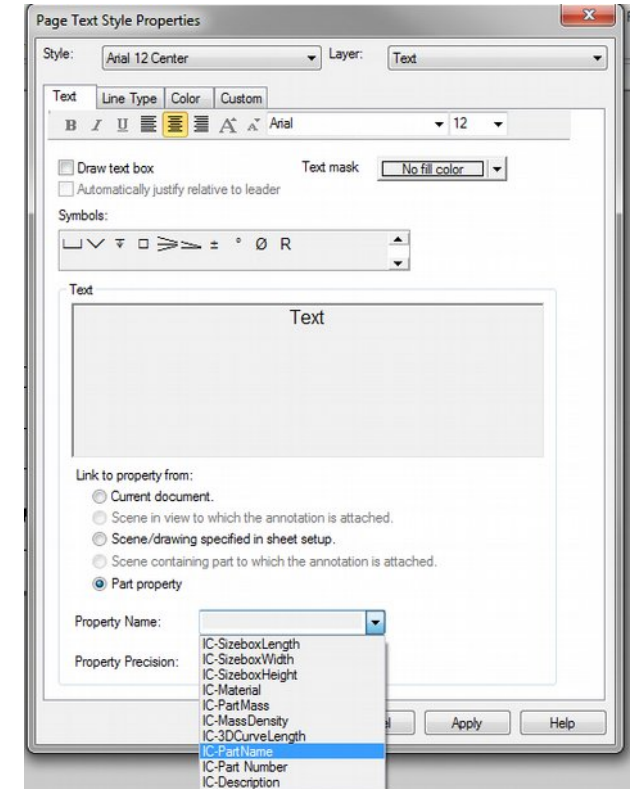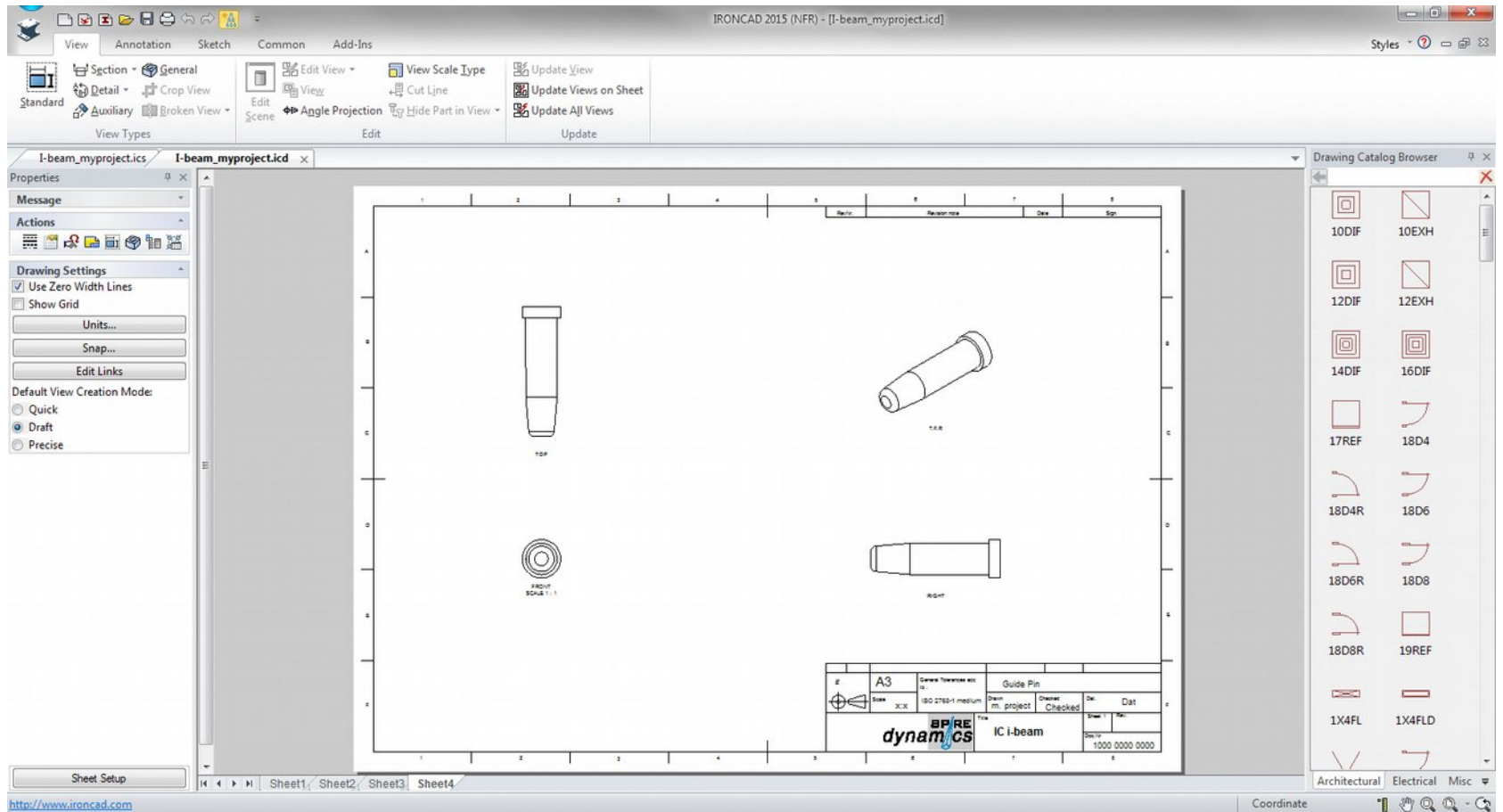# IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
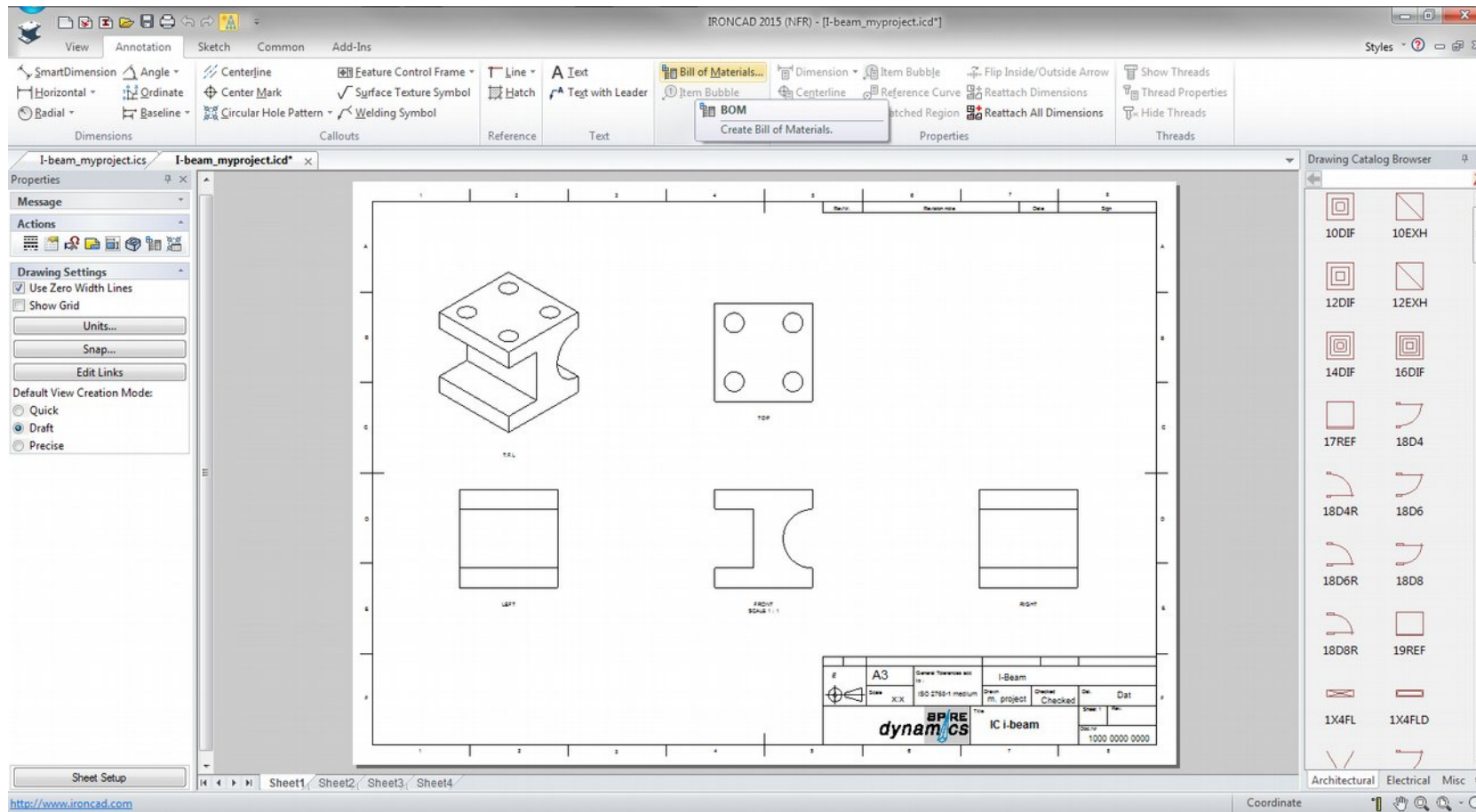
LMB click on Sheet1 tab, and from the Annotation tab, LMB click on Bill of Materials

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
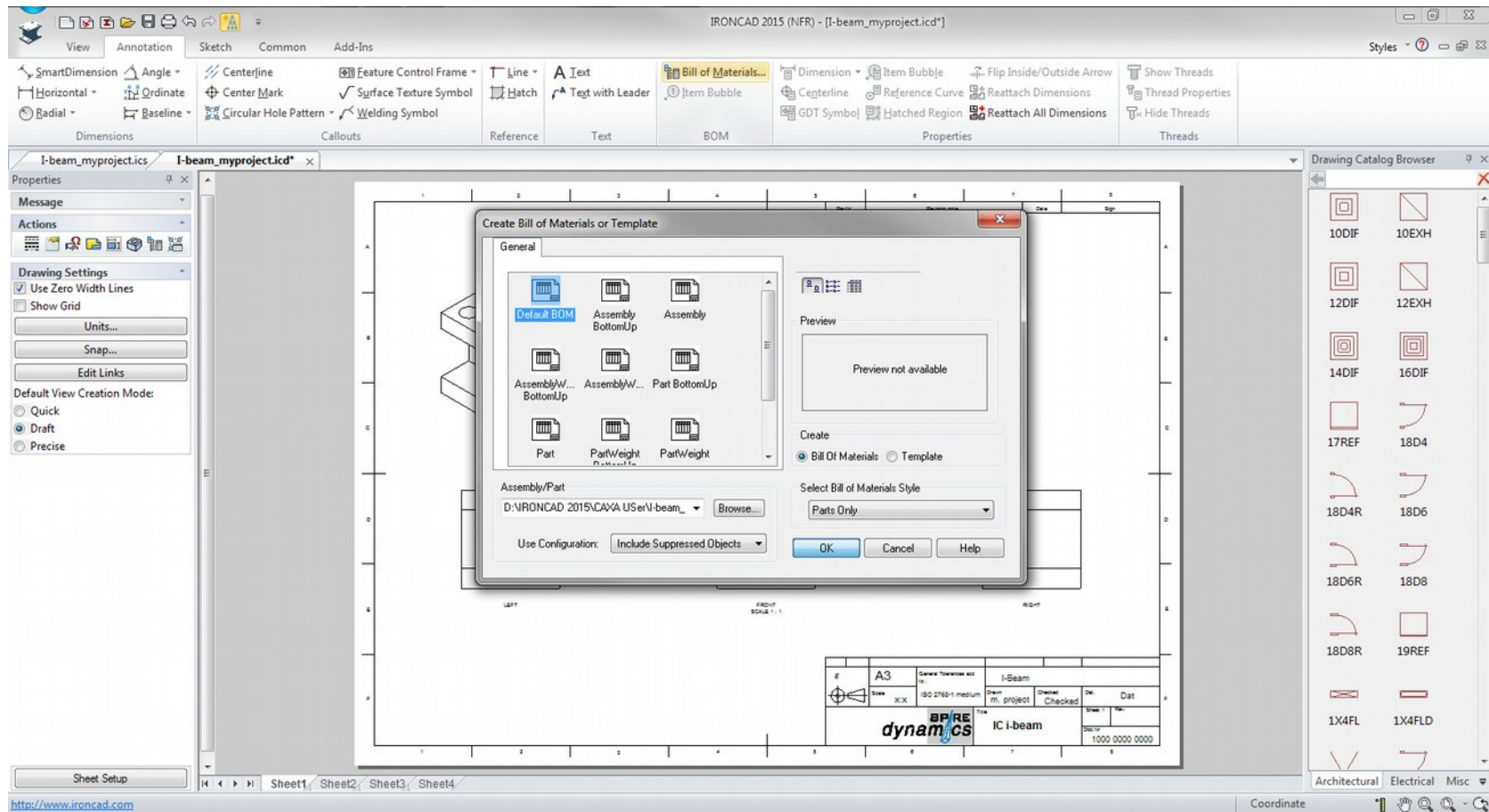
On the Create Bill of Materials or Template dialog, LMB select Default BOM

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
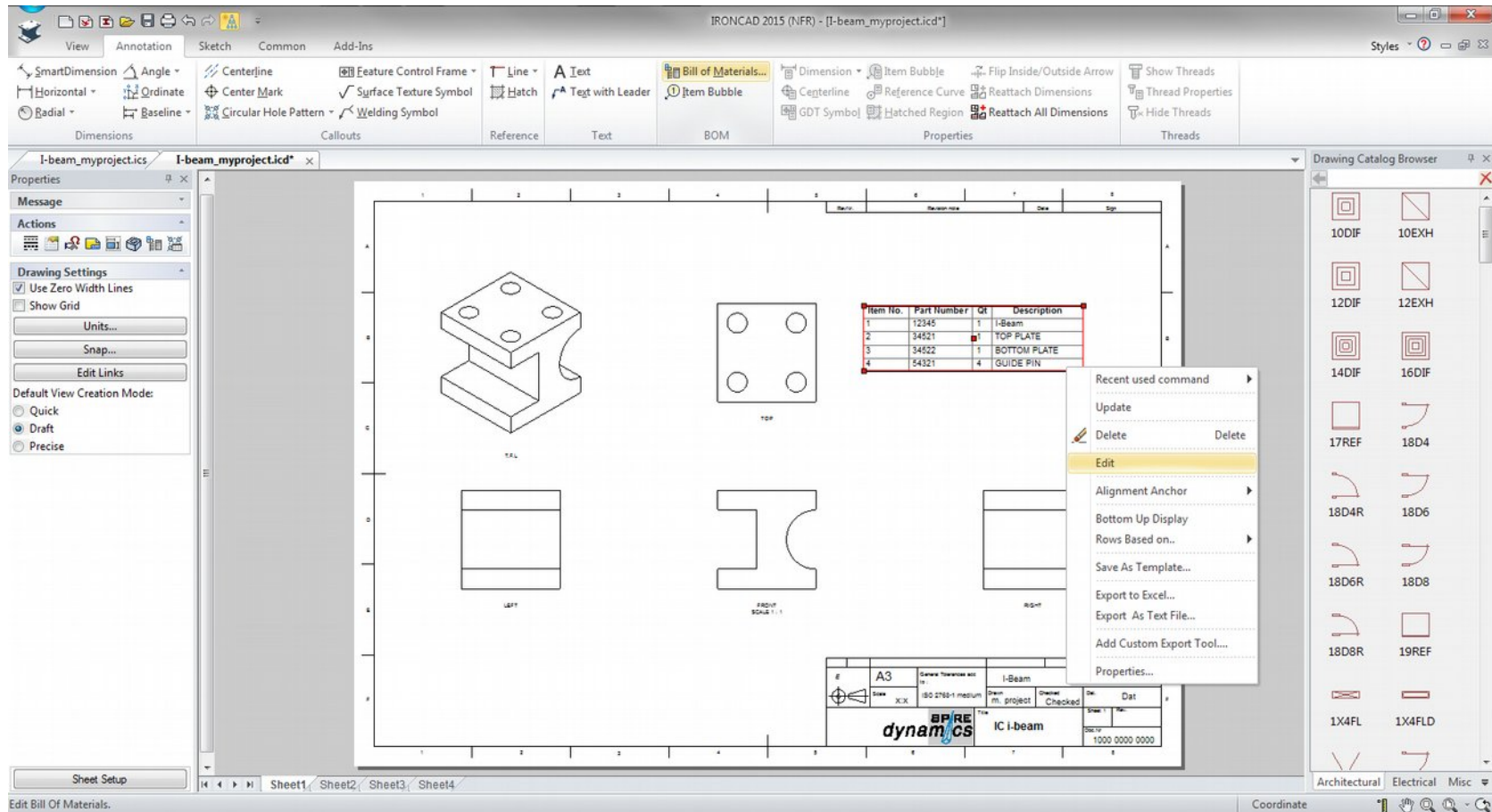
On the generated BOM on the Sheet1, RMB click and select edit to add a new column.

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
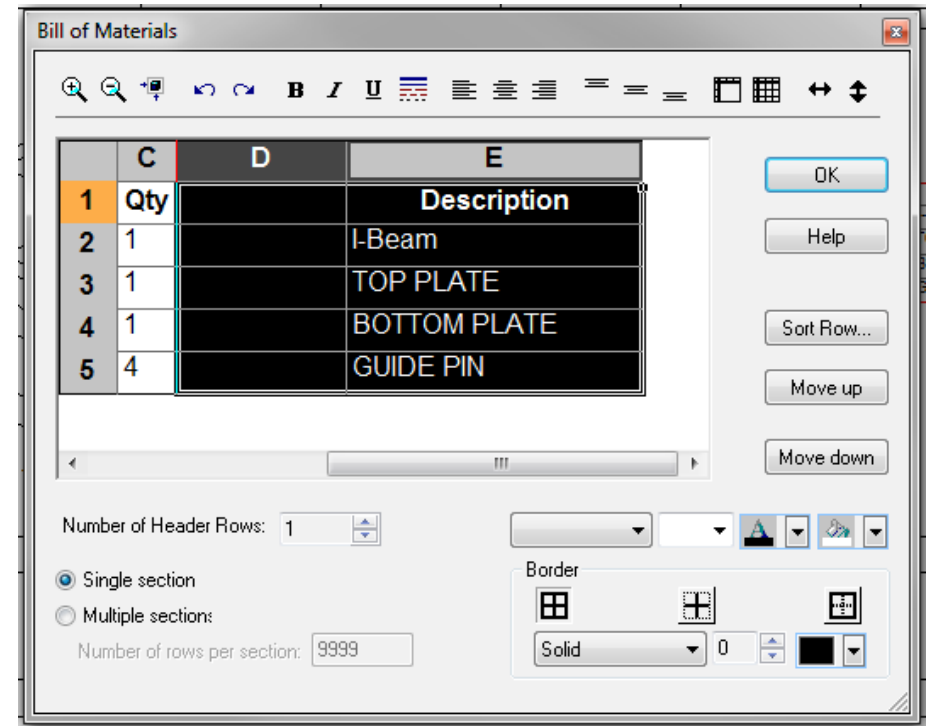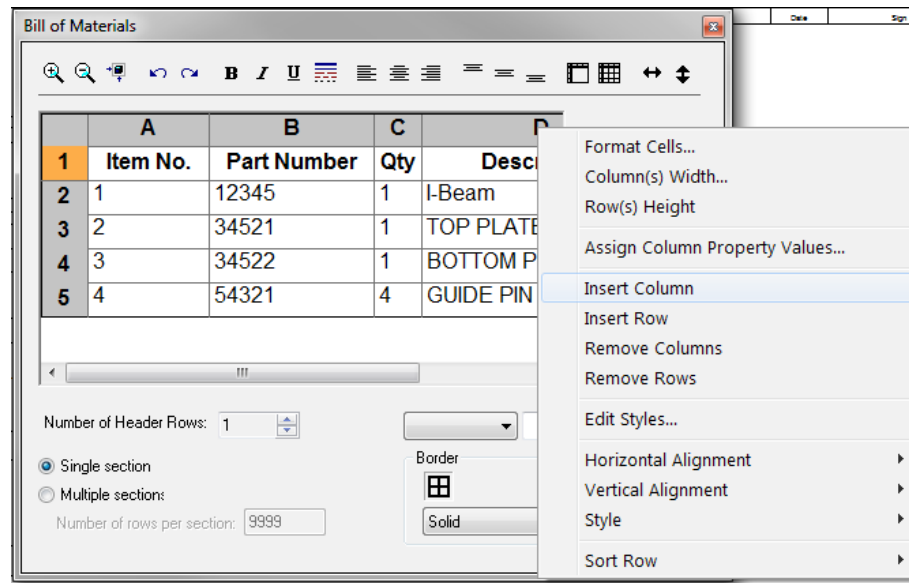
On the Bill of Materials dialog, RMB click the header on the D column. Drag column E to the left to retain the column position.

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
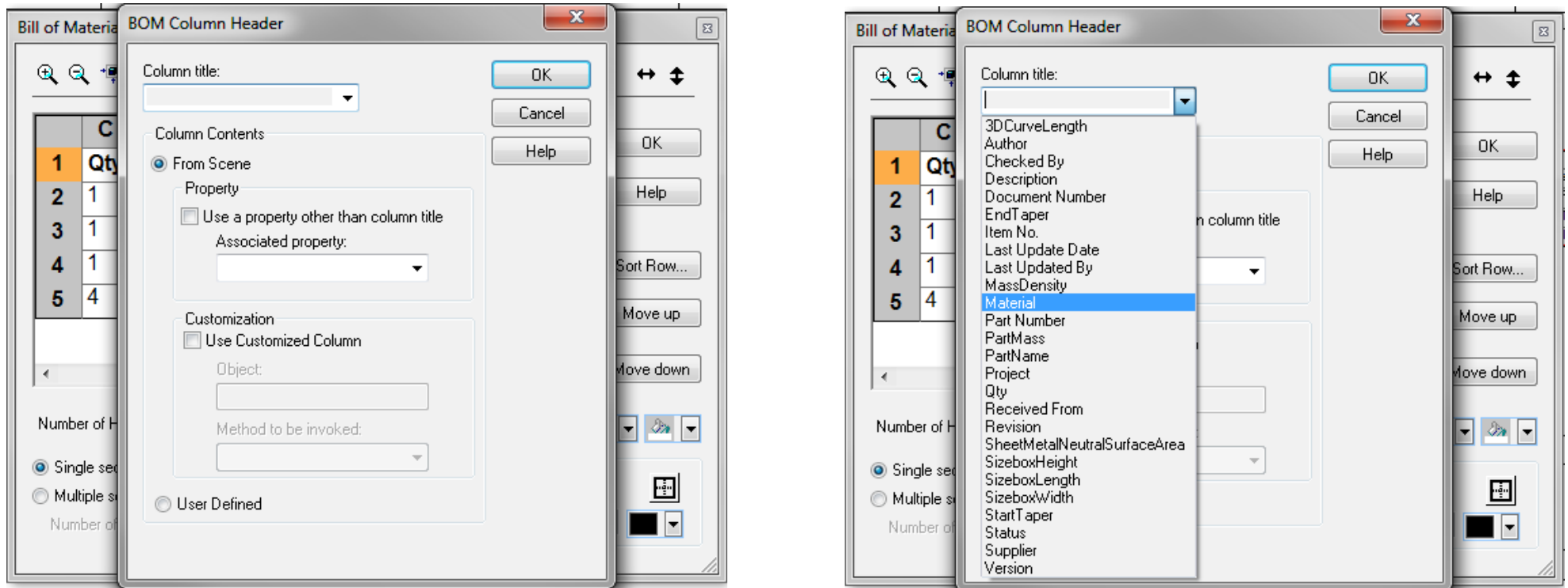
On the Bill of Materials dialog, LMB double click the E column to open the BOM Column Header dialog. From the Column title drop down list, select Material and click OK.

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
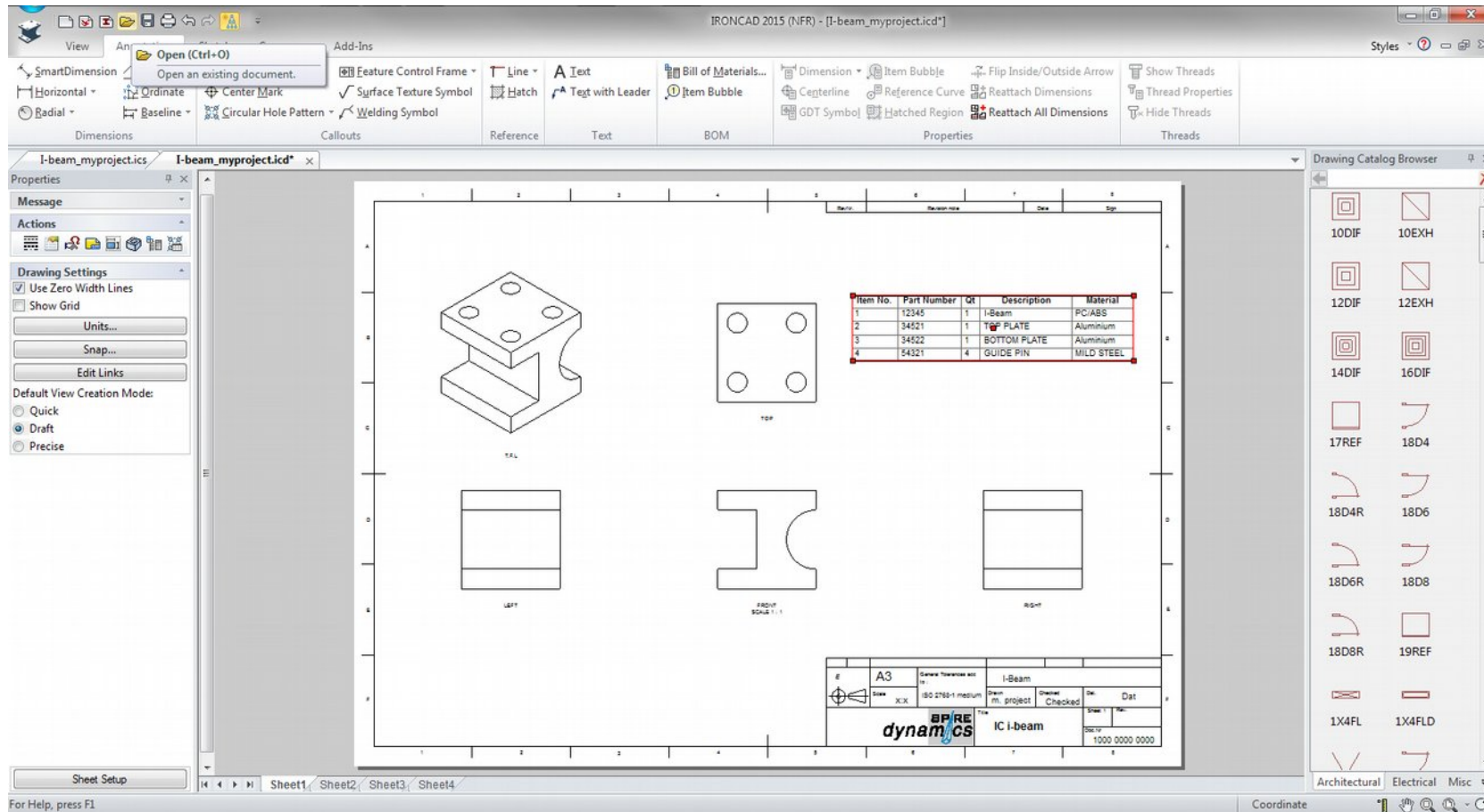
The BOM displays updated column field. Follow the previous step to show more required information to display on the BOM

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

CAXA Draft or IRONCAD Draft works differently from IRONCAD Drawing if based your experience as a IRONCAD Drawing user. The basic conventions and templates are also different but drafting tools available for CAXA Draft is more robust for detailing work as it picks up more line details projected from the 3D model created.

I like to thank the guidance from IRONCAD SUPPORT / USER COMMUNITY members: Kevin DeVoll, Darius Leczynski, Jonas Bryntesson, Malcolm Crowe and others for their insight on guiding users to work with CAXA Draft.

The methodology used for this CAXA Draft section of this guide is to migrate a basic IRONCAD Drawing user familiarity. Setting up CAXA Draft to display features previously done with IRONCAD Drawing. The CAXA Draft features: a set of Draft templates different from Drawing templates; frames, BOM behavior, association are set differently.

SP/RE
dynam/cs

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

IRONCAD.CAXA Draft new drawing always opens on a Model Space mode as a sheet tab indicates Model. By default it is set to create a 2D model or drawing as drafting feature of CAXA Draft, and project the 2D models to Viewport/s on the Layout Space as a convention of 2D CAD program. Layout Space is an insertion created by RMB click on the Model tab.
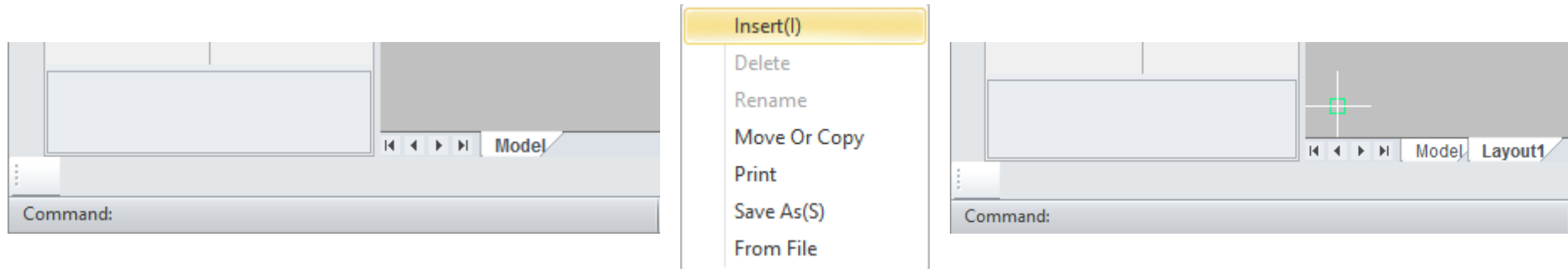
Layout Space is also used to project your 3D views using the features (e.g. Standard View from the Generate View group to display the 2D views of the created 3D model from IRONCAD's 3D Scene) and tools from the 3D Interface tab.
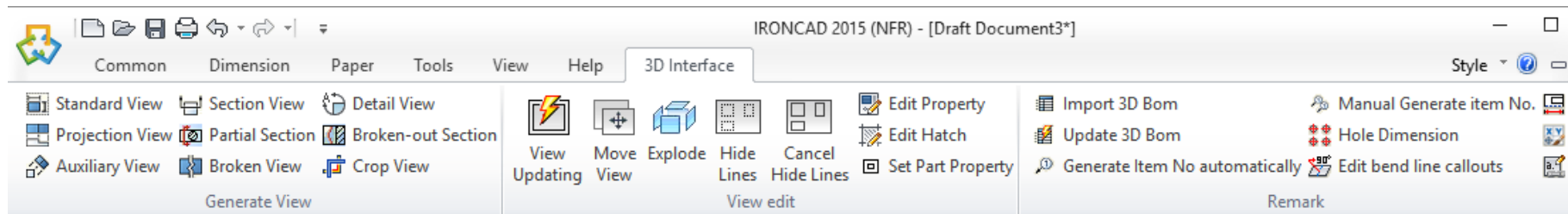
IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

CAXA Draft does not have sheet templates similar to IC Drawing stored on the template library. It must be noted that sheet frames and title blocks are independent entities associated with a drawing template, with each having a distinct file:

- drawing frame file format *.cfm (CAXA Frame)
- title block file format.chd (CAXA Header)
- Drawing template *.tpl (Template)

Combination of CFM and CHD all settings for dimensioning, Bill of Materials, title block, part sheet, etc. together form the TPL file.

Templates can be stored in two different places.
Program folder:
C:\Program Files\IronCAD\201x\bin\CAXADraft\Template\en-US
User folder:
C:\Users*USER\AppData\Local\CAXA\CAXA DRAFT MECHANICAL CXIC-INT20xx\xx.xx\en-US\Template*

TPL files saved under the Program folder will be shown as system-defined templates.
TPL files saved in specified folder will be shown as user-defined templates.

It is basically no difference between these files. They are saved, however, on these various points depending on some of the commands in the program. The templates in the two folders will be shown separately in the system.
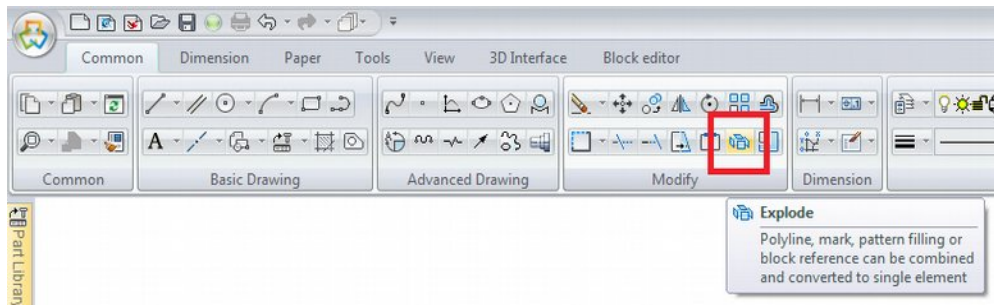
SPIRE
dynamics

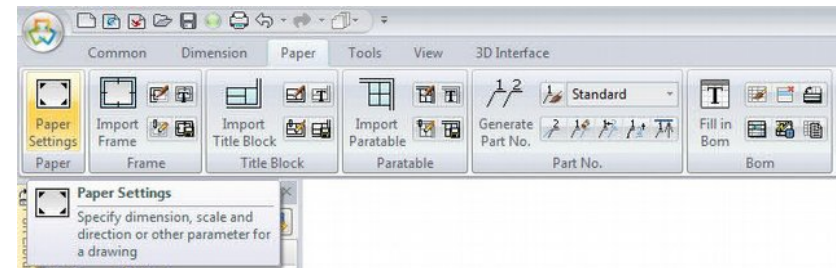# IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
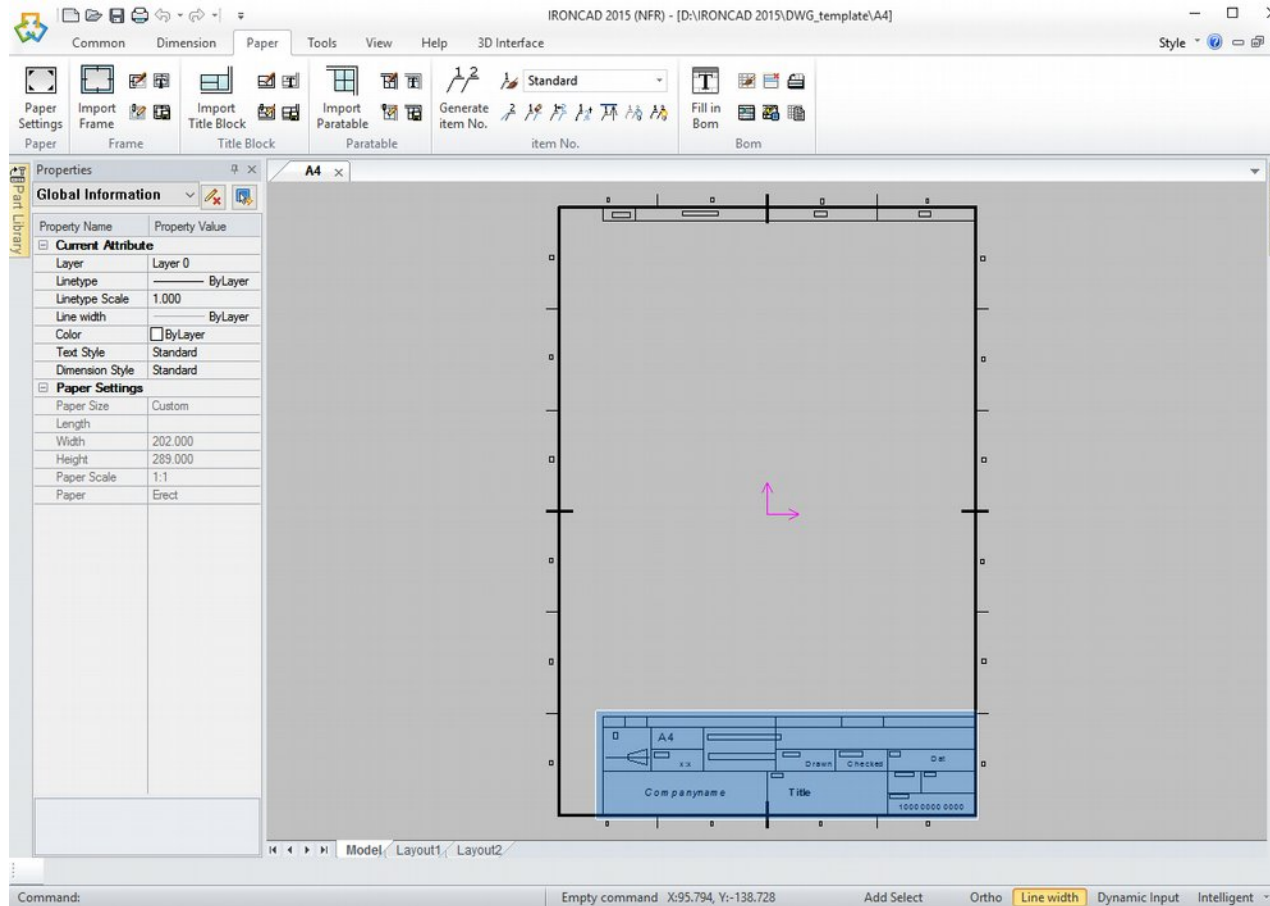
To set a similarity and keeping it simple, using the A4.icd to be exported as a .dwg to be used and set as a A4 drawing frame for template for CAXA Draft. Save it to working directory that you are working with IRONCAD. Box select the existing title block and delete.
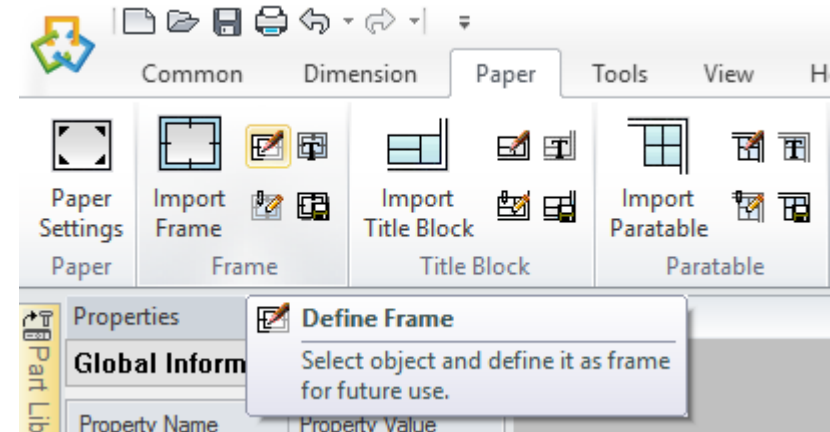
IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

If there are unnecessary objects that cannot be deleted, they may be grouped as an object. Disassemble everything, selecting all and explode the drawing frame (write explode [Enter] or click the Explode button from Modify icon group of the Common tab)

Or go to the Dimension tab for the Style Manager and unlock entities that needs to be selected and deleted.

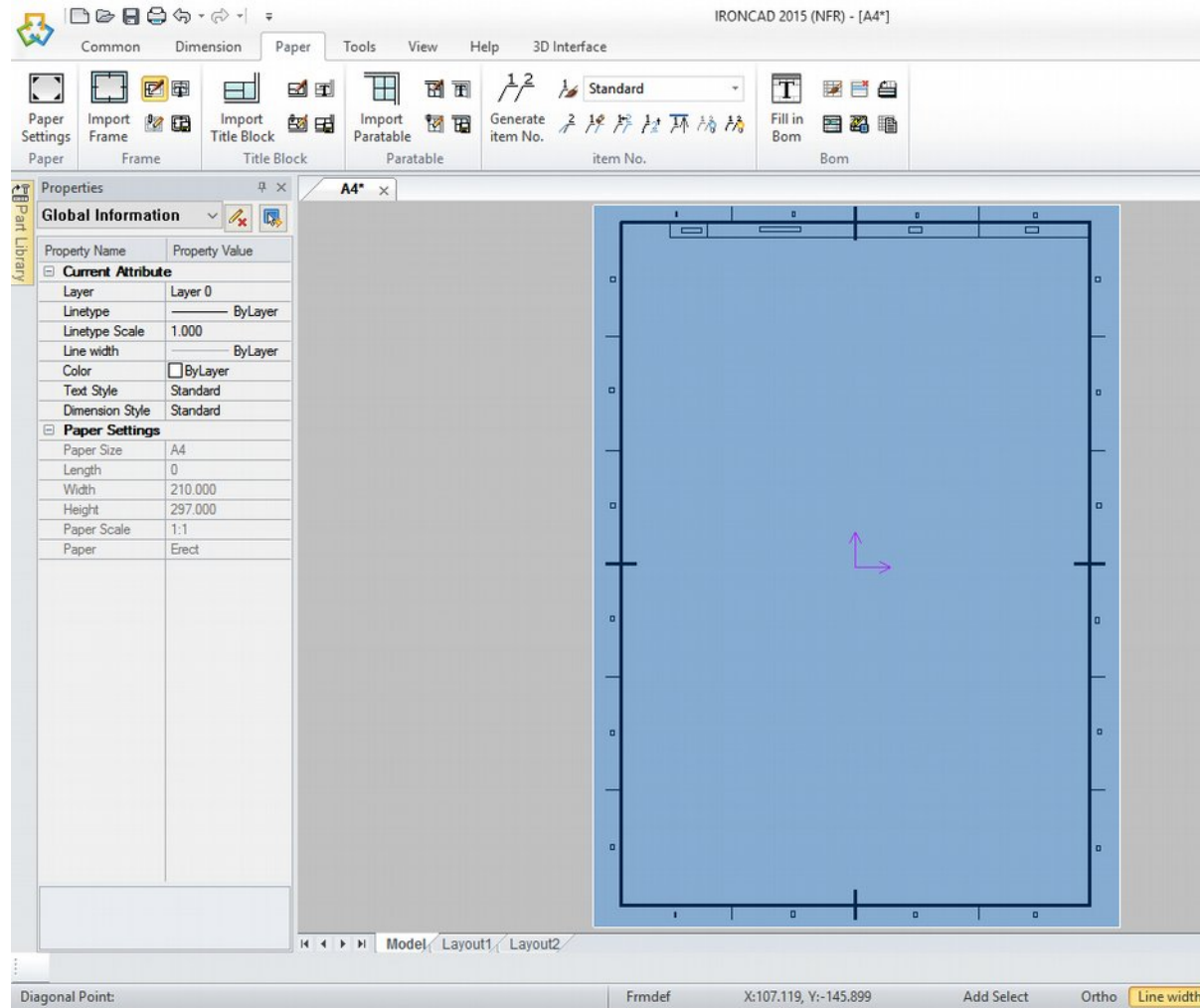Go to Paper Settings in the Paper tab.

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
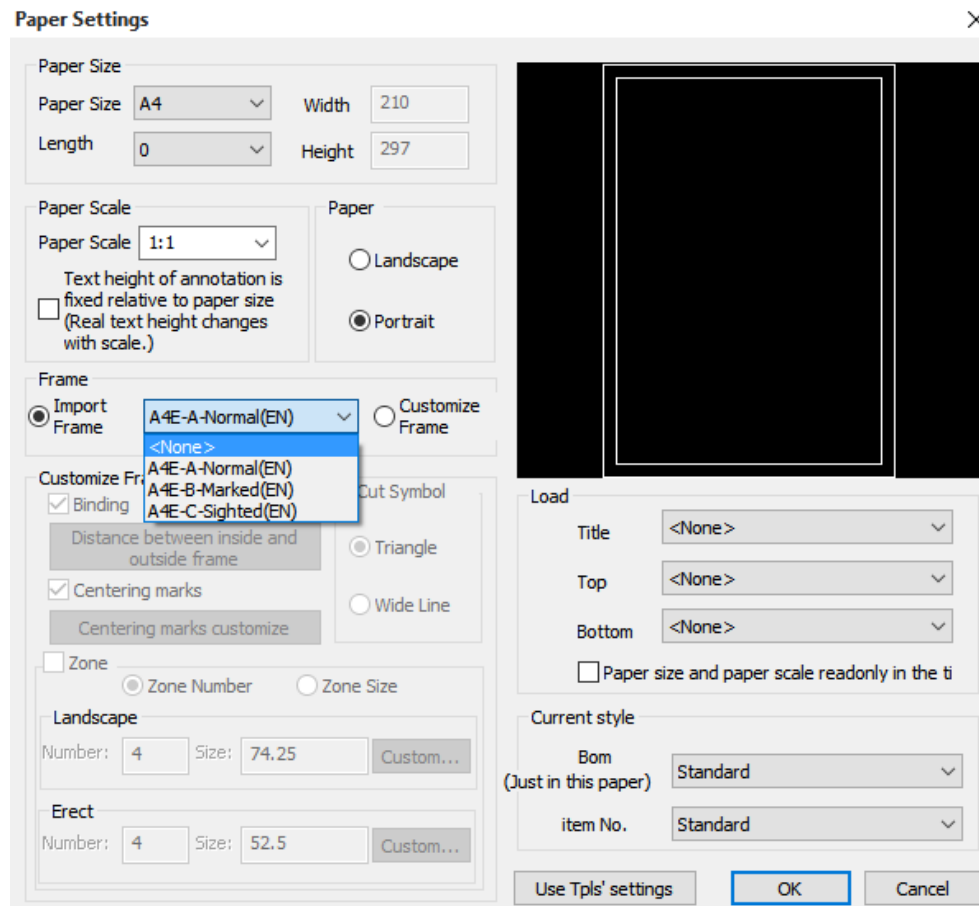
LMB click *Define Frame* button to select

Check the current settings: *Paper Size* is set to A4, paper orientation at *Portrait* and *Import Frame* is set to <None>. LMB click OK or press Enter.

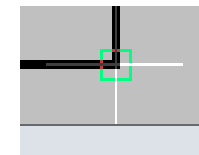# IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

Box select all lines and possible frame-text that completes the frame information, otherwise draw lines, boxes and place additional text information to complete before selection
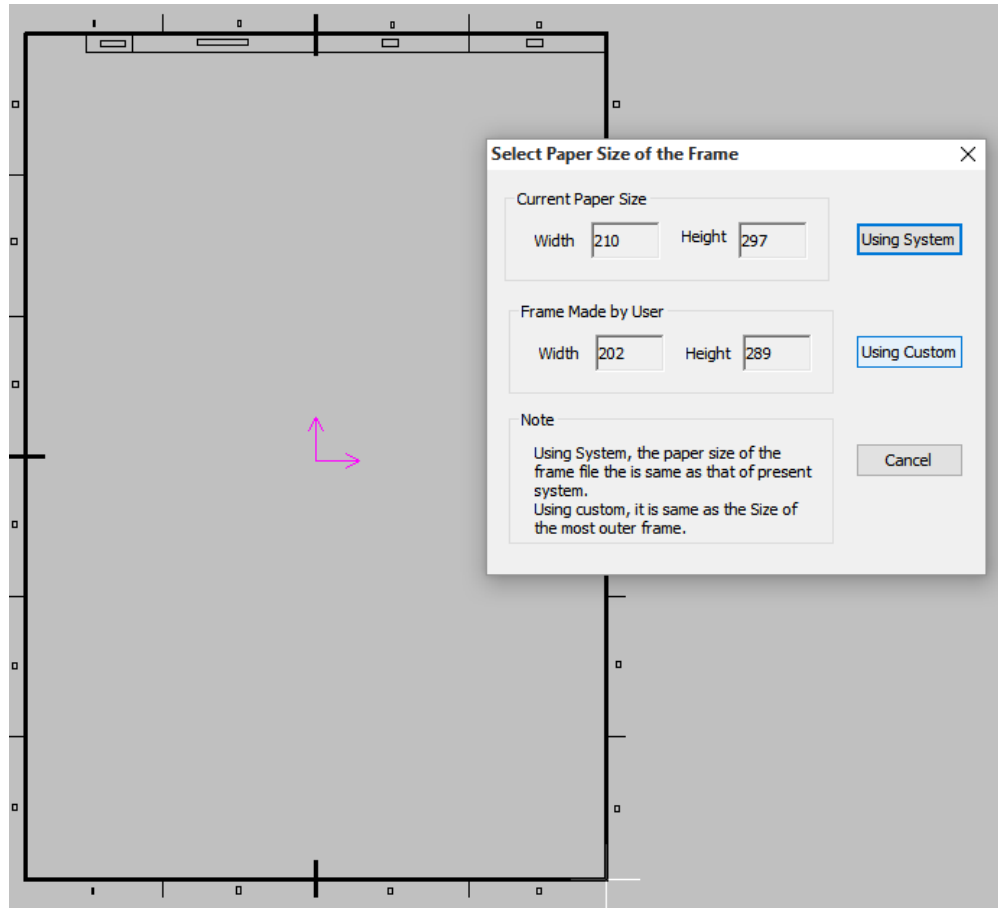
IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
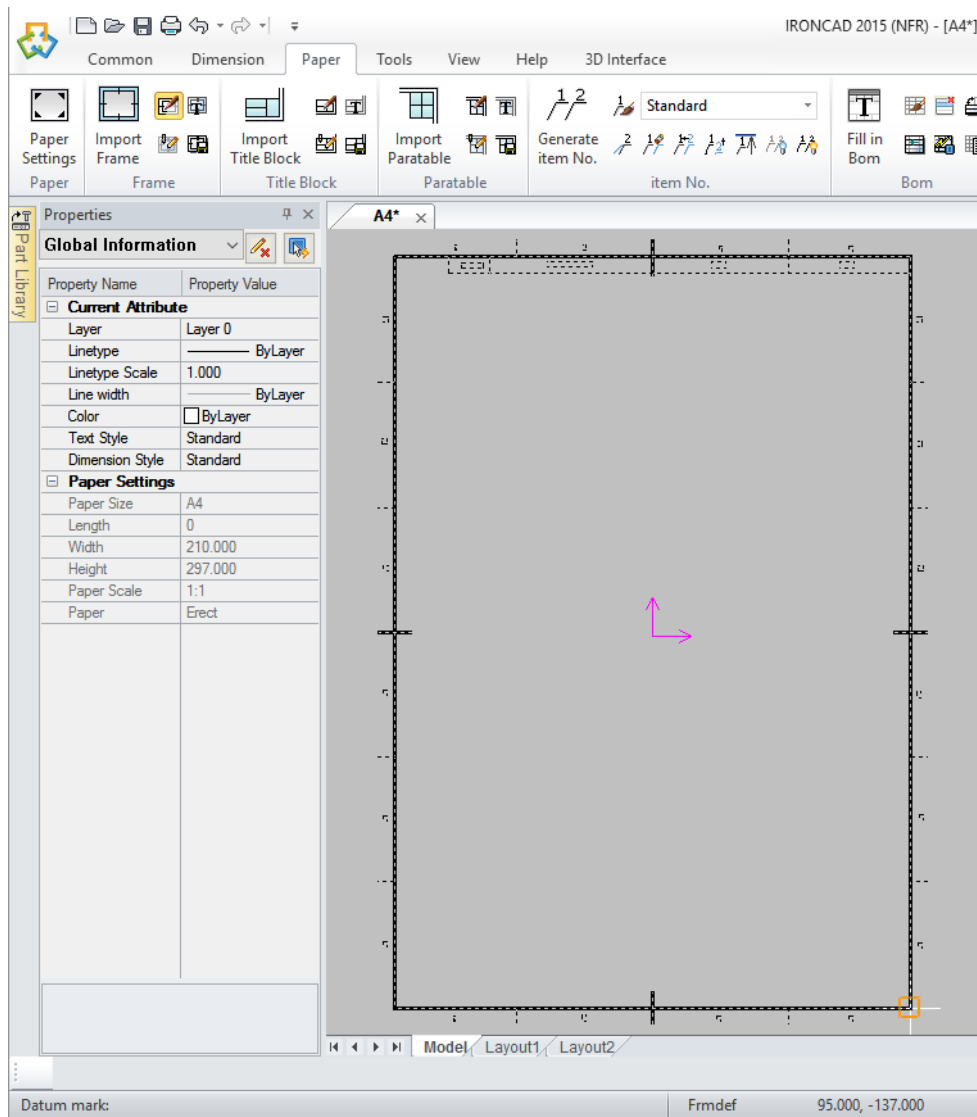
RMB click the orange boxed crosshair cursor at the snap at the bottom right hand corner of the frame after selection to define the base point which controls the frame placement.

LMB click the green boxed crosshair cursor at the Positon marker as defined.

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

Select Paper Size of the Frame ✕

Current Paper Size

Width 210   Height 297   [Using System]

Frame Made by User

Width 202   Height 289   [Using Custom]

Note

Using System, the paper size of the frame file the is same as that of present system.
Using custom, it is same as the Size of the most outer frame.

[Cancel]

The *Select Paper Size of Fame* window prompt is displayed after the corner click. LMB click the *Using Custom* button to save your customize frame other than that have the system-based (A4, A3, A2, etc)

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
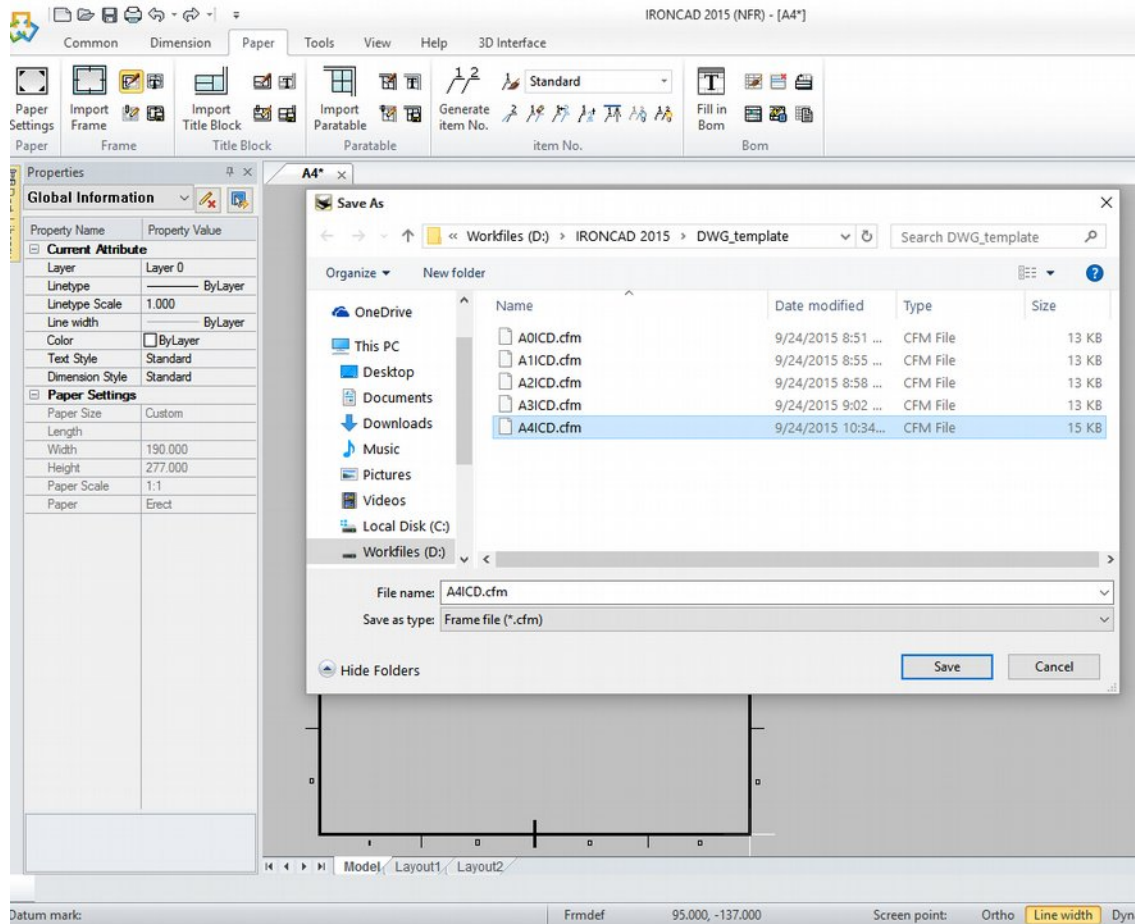
Name the file. You may do the same process outlined for other frame formats

The file type *.cfm (CAXA Frame) and ports as standard in the personal CAXA folder:

*C:\Users\ * USER * \AppData\Local\CAXA\CAXA DRAFT MECHANICAL CXIC-INT20xx \xx.xx \en-US\Template*
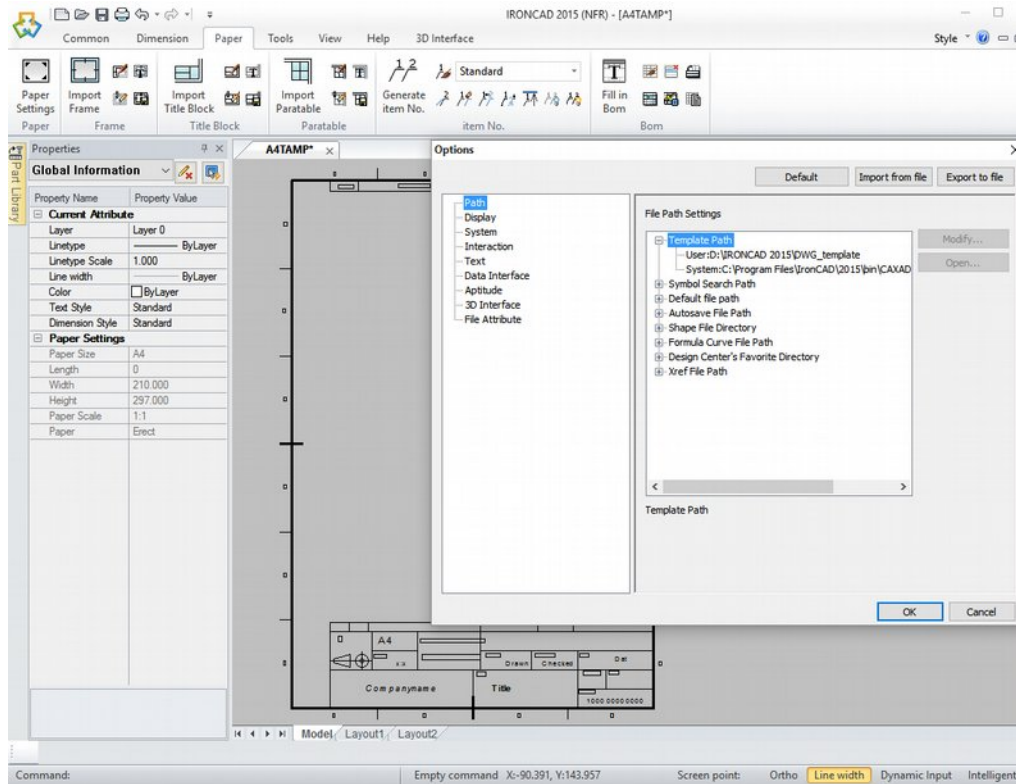
Or
*Program folder:
C: \Program Files\IronCAD\ 20xx\bin\ CAXADraft\ Template\en-US*

Or
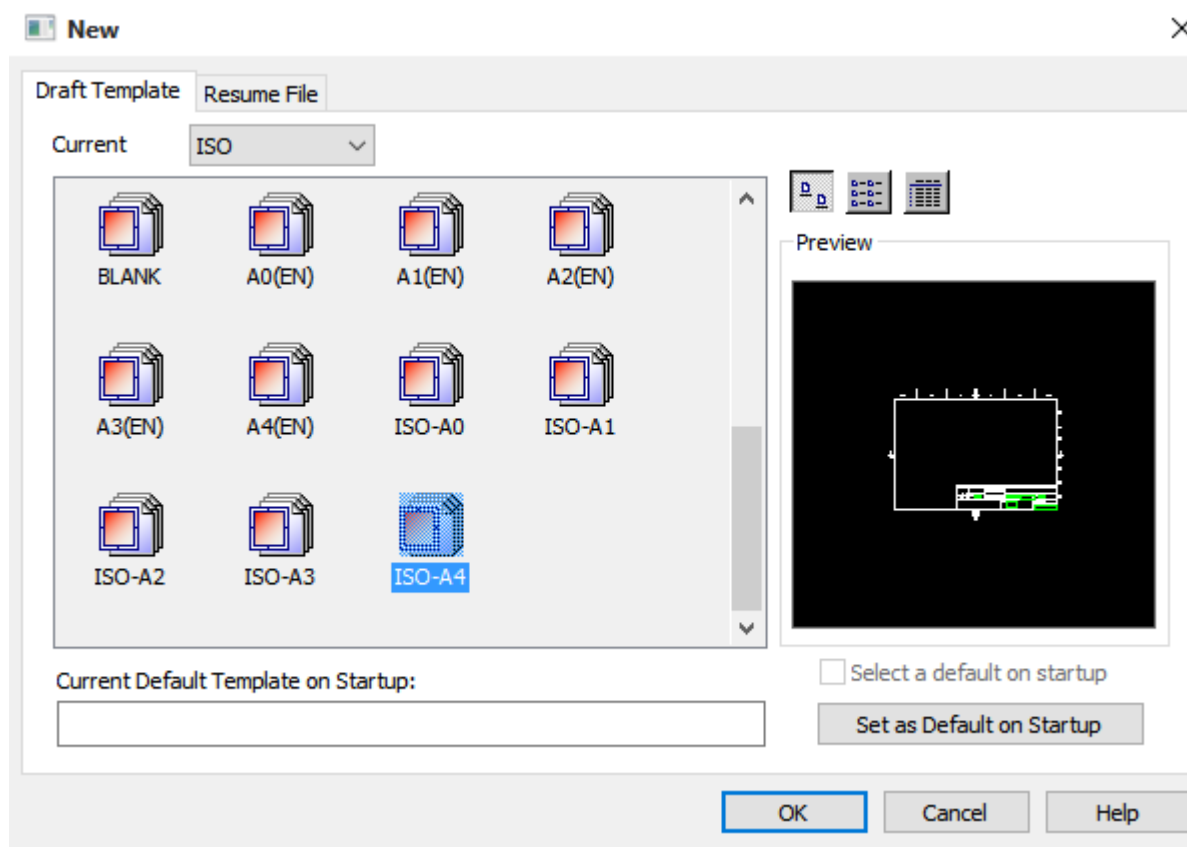*D:\IRONCAD 2015\DWG_template*
As shown on the new page

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

File can then be moved to the *User* or *Program Files* folder, if you rather store all the templates there.

of the Drawing). Open A4.dwg. Delete everything
Except the drawing title block. Select all lines and
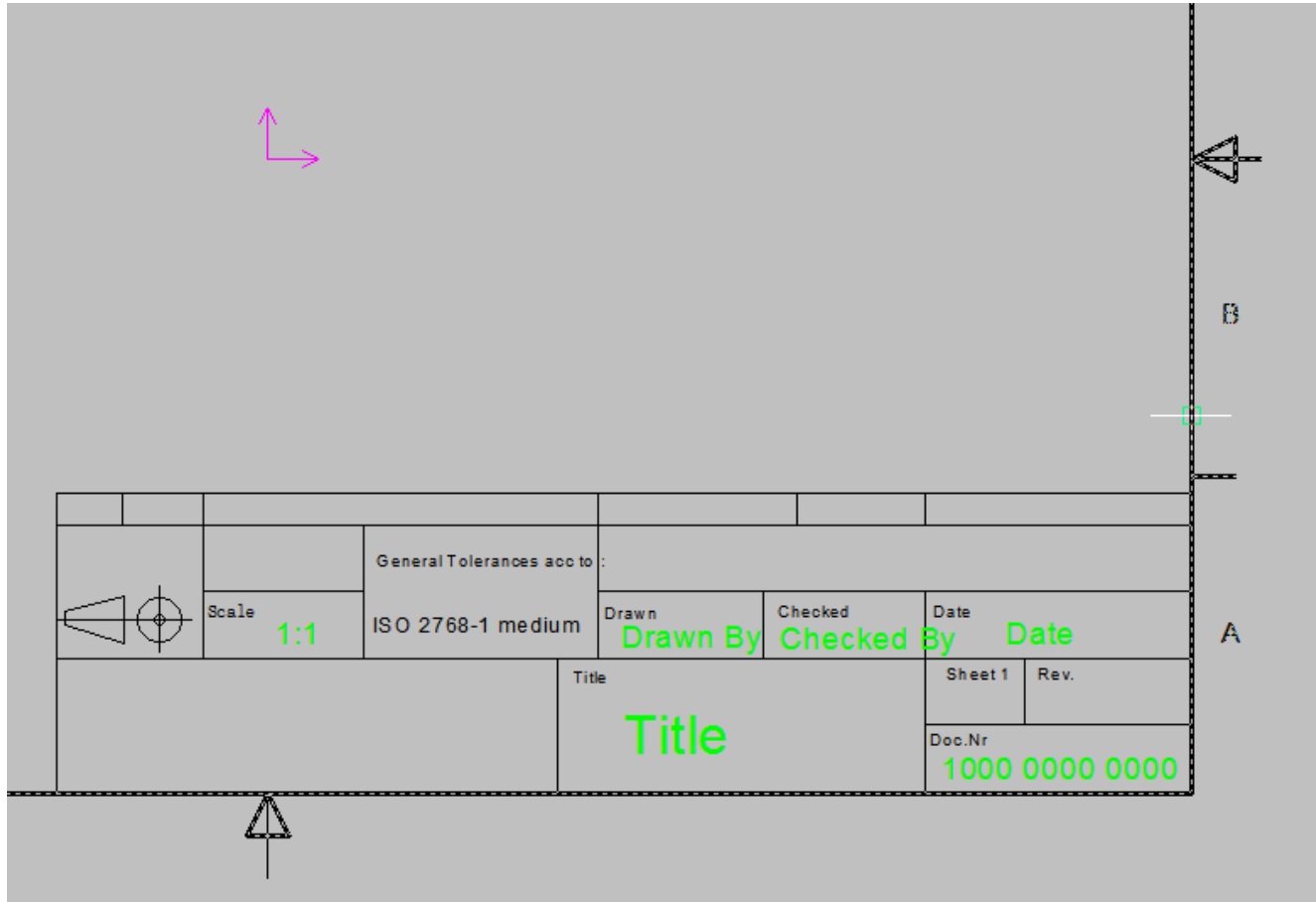all text.

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

Create drawing titleblock CHD
(lines and text which is usually
located in the right-hand bottom
of the Drawing). Open
A3(EN).template. Select all lines,
all text and delete everything
except the drawing title block.
This title block has a first angle
symbol and we have to edit
symbol so the title block will be
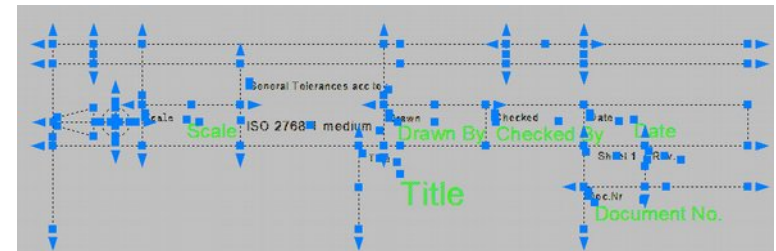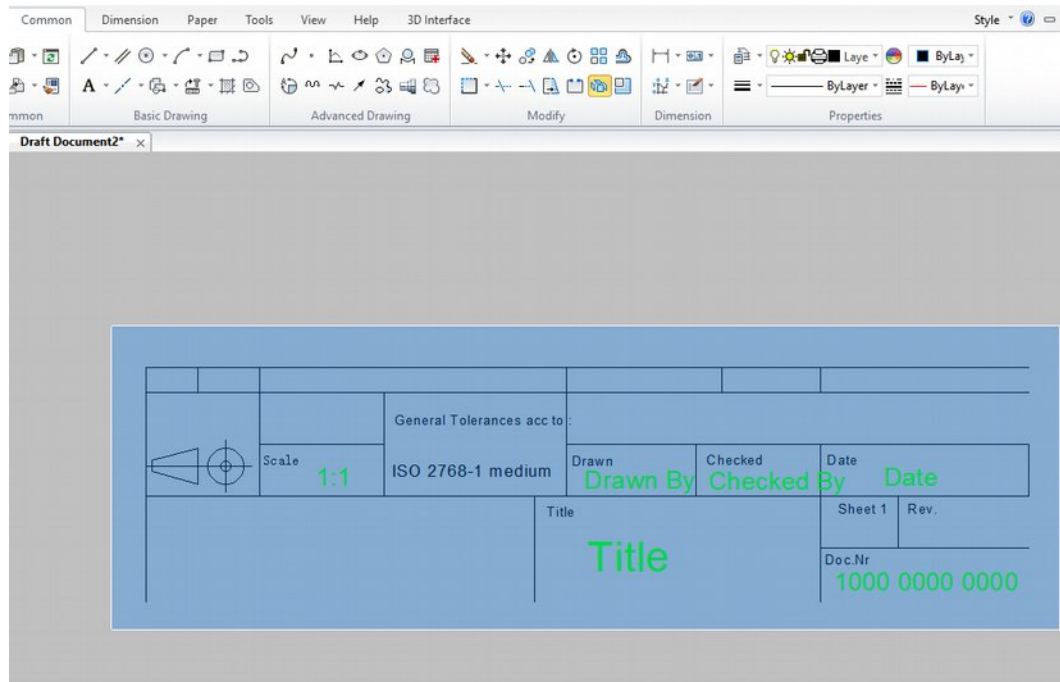specified for third angle
drawings.

of the Drawing). Open A4.dwg. Delete everything
Except the drawing title block. Select all lines and
all text.

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

Scroll to zoom in at the
title block. LMB click
select the existing frame
and delete.

General Tolerances acc to :

Scale		
1:1	ISO 2768-1 medium	

Drawn — Drawn By
Checked — Checked By
Date — Date

Title — Title

Sheet 1 | Rev.
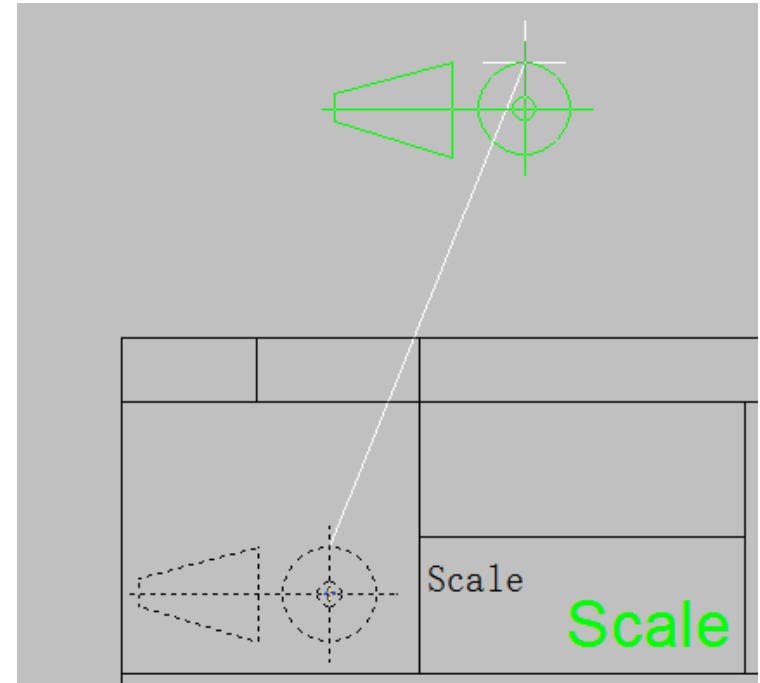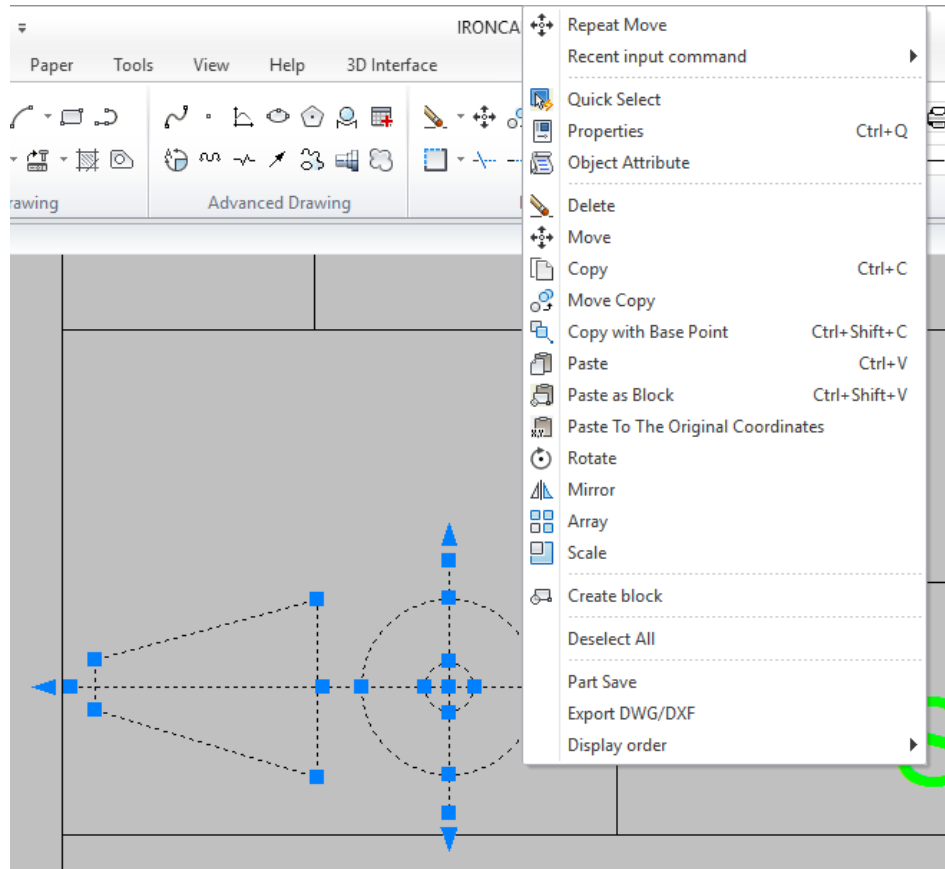
Doc.Nr — 1000 0000 0000

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

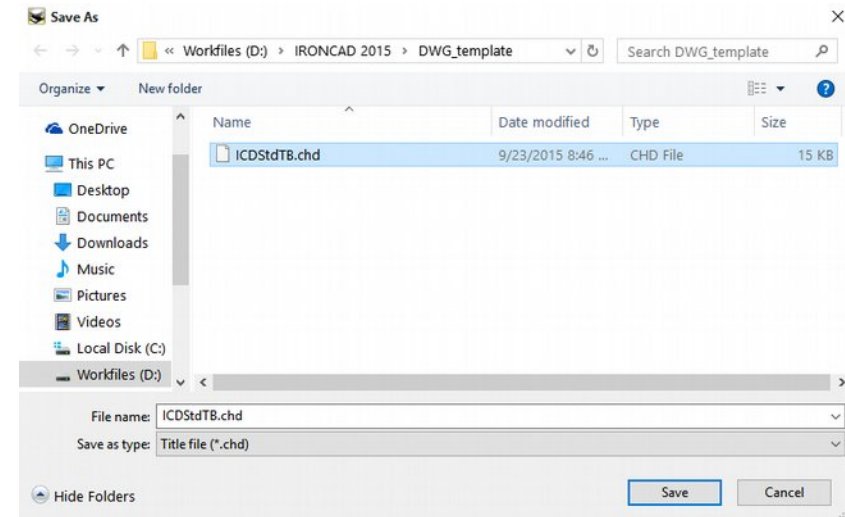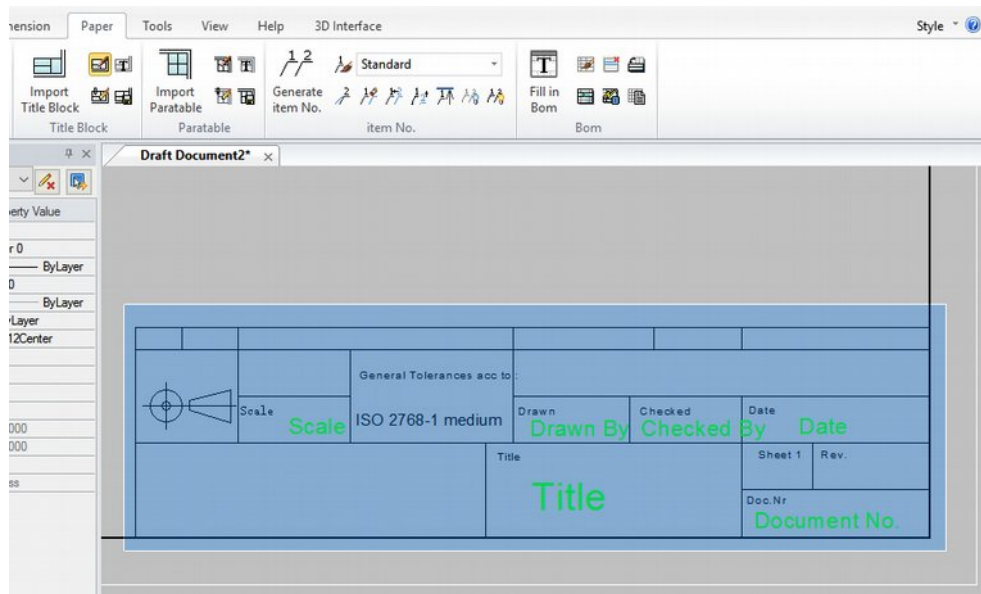LMB click the Explode icon and box select the title block.

of the Drawing). Open A4.dwg. Delete everything
Except the drawing title block. Select all lines and
all text.

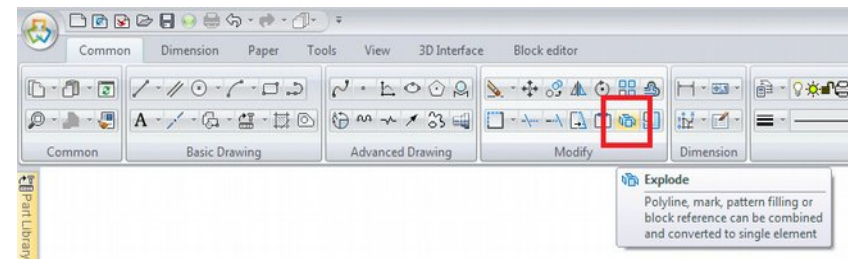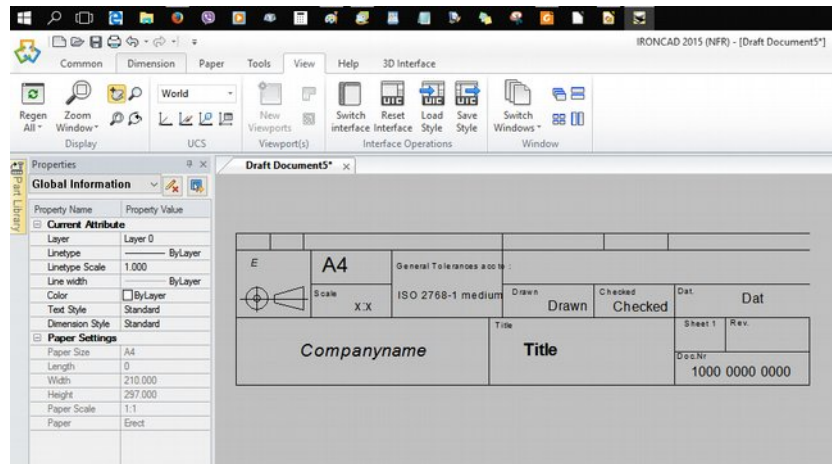# IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

LMB click select all the lines and circles on the
first angle drawing, RMB click to move in an
area to rearrange to display as the third angle
projection symbol. RMB click and move back to
position

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

With the paper frame shown, LMB click the *Define Title Block* button to box select the title block and mark the position. LMB click the *Save Title Block* button to save customized third angle title block.

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

Importing drawing titleblock CHD (lines and text which is usually located in the right-hand bottom of the Drawing). Open A4.dwg. Delete everything except the drawing title block. Select all lines and all text. Make sure that there are text boxes at each title heading and that text size for these is correct, it can be easily changed via *Property Browser* for Iindividual selected text boxes.

Disassemble the title block by exploding it (write explode [Enter] or click Explode button in the Modify icon group from the Common tab).
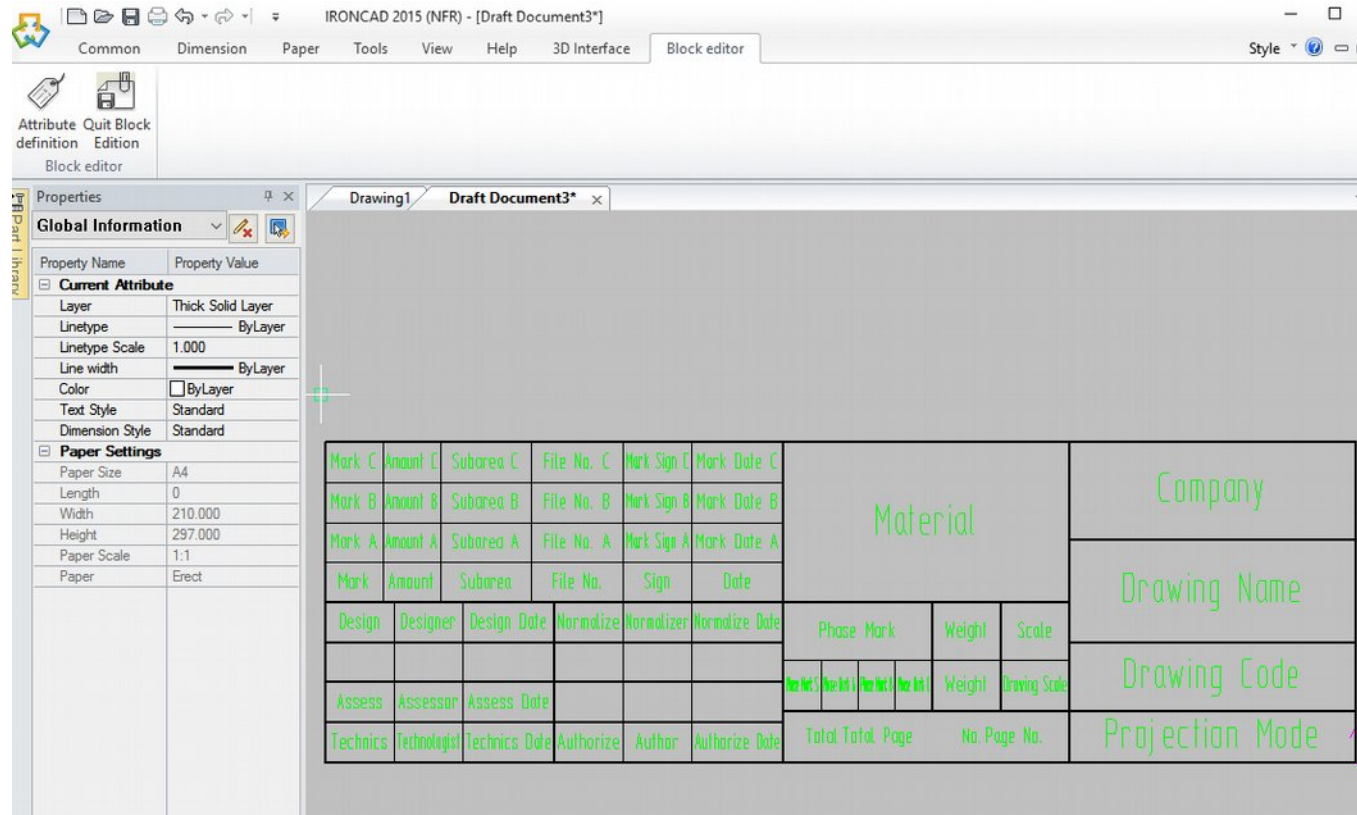
IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
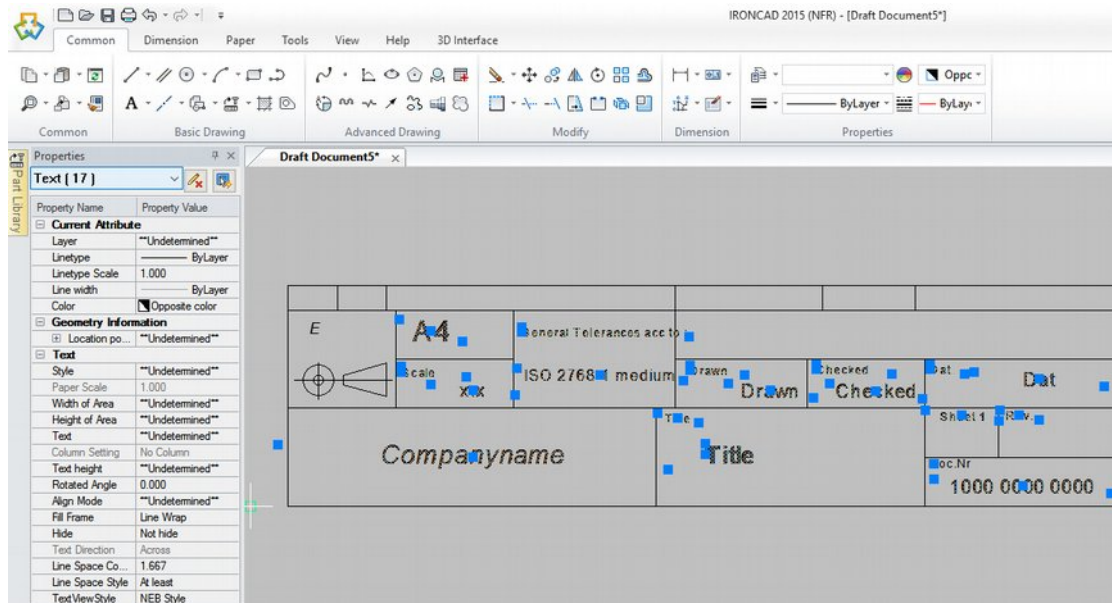
If necessary, remove the text boxes that are available for each property, if they are not already defined as system attribute, then these are created at a later stage.

The difference between plain text and a system attribute is that plain text is adjusted with the usual text tool that appears when you double-click a text box.

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

Just to view a standard CAXA Draft title block from a native CAXA template to illustrate the customization that can be done in CAXA.

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
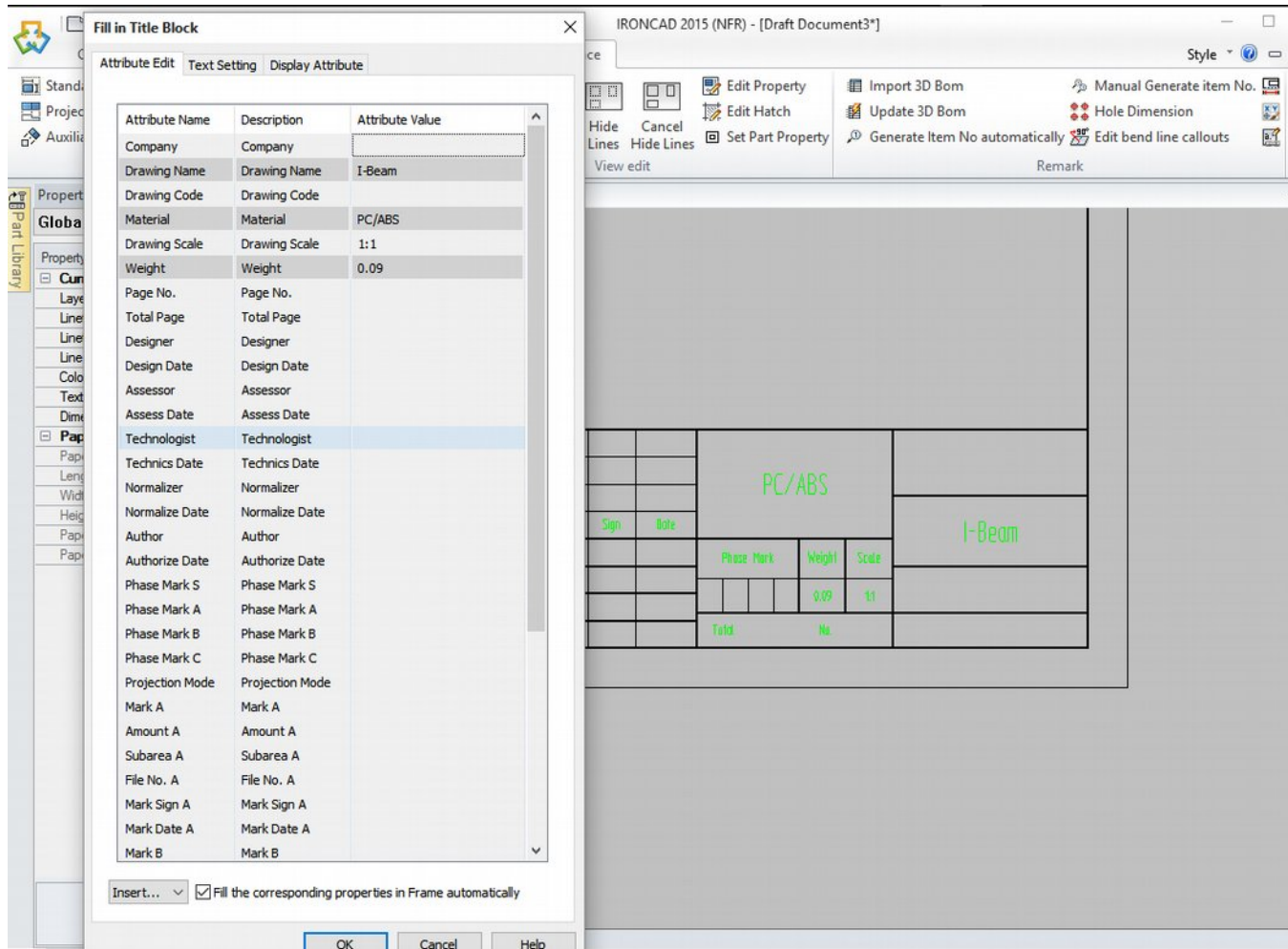
IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

Set Matching Rule ✕

Matching rules:

	Attribute Name	Match Name
1	Symbol	Part Number;Draft symbol;Draw
2	Name	Drawing Name;Pattern name;
3	Unit	Unit Name;
4	Number	PartQuantity;
5	Material	Material;
6	Single	PartMass;
7	Remark	Description;

Delete a Line   Save   Exit

Set Matching Rule ✕

Matching rules:

	Attribute Name	Match Name
8	Source	PartSource;
9	Drawing Name	PartName;
10	Drawing No.	Part Number;
11	Weight	PartMass;
12	Paper	Paper Size;
13	Scale	Paper Scale;
14	IC-Title	Title;

Delete a Line   Save   Exit

SPIRE
dynamics

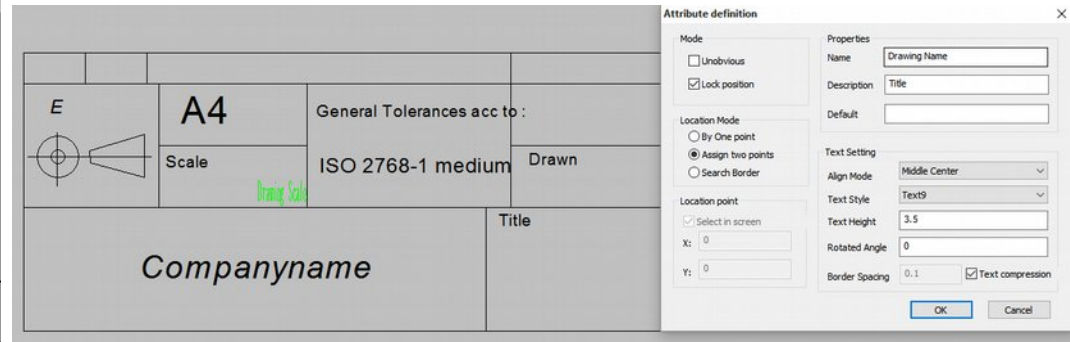# IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
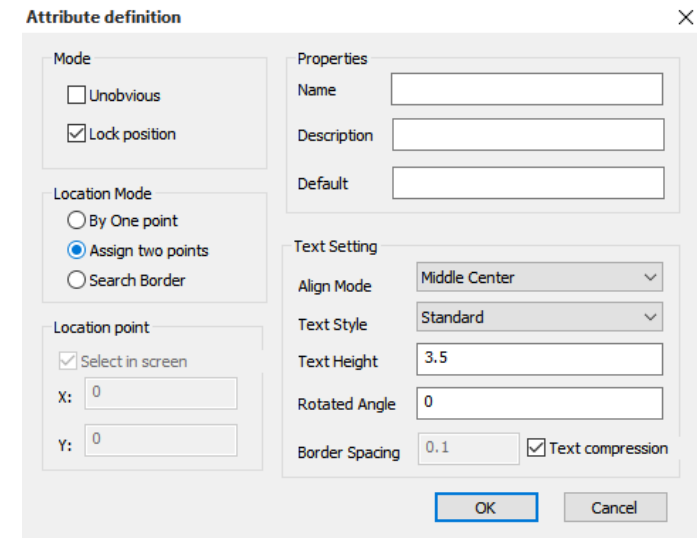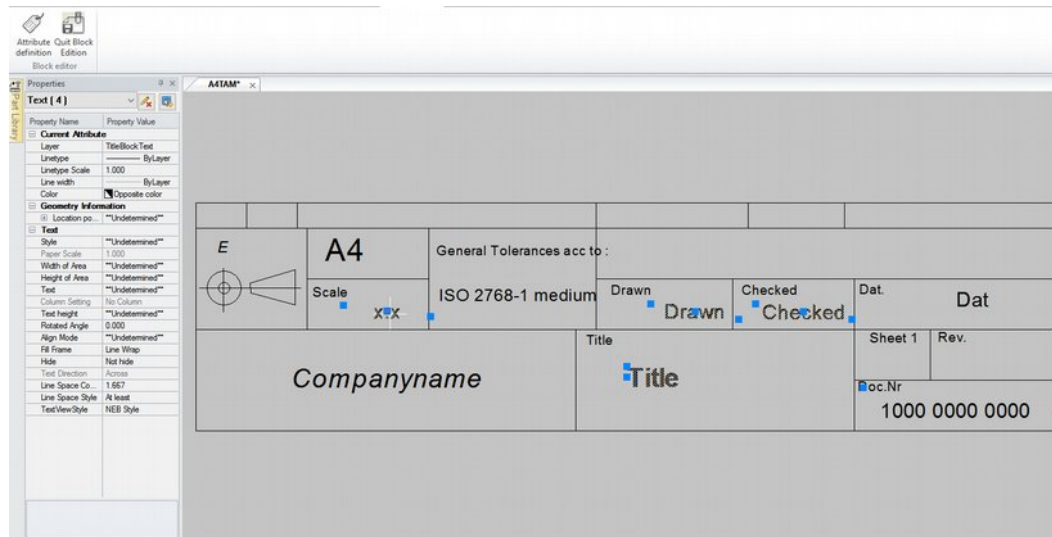
Sometimes it practical to delete all text box from the title block and specify anew if it seems not work with a imported title block.

LMB click *Edit Title Block* button and again LMB click *Attribute definition* button to open the Attribute definition window. Fill the name and description fields under Properties and tick Assign two points at Location Mode as it allow easier placement on the title block places.
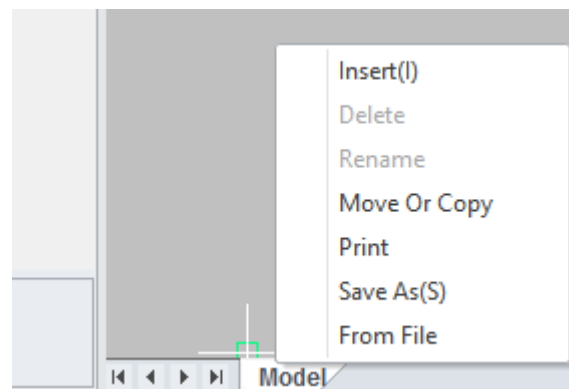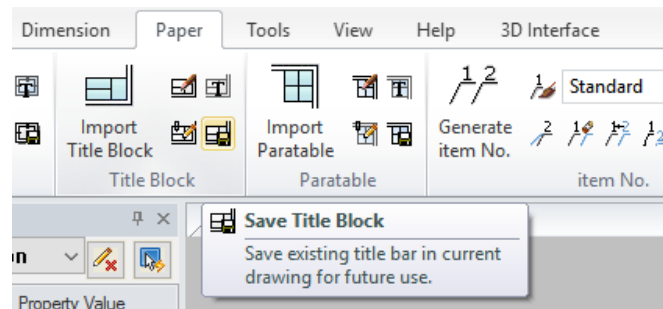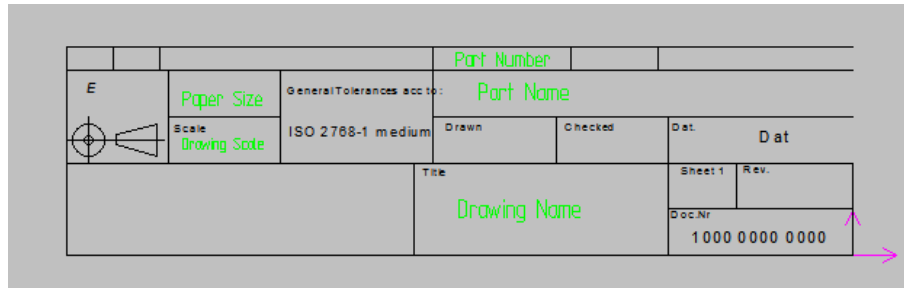
IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
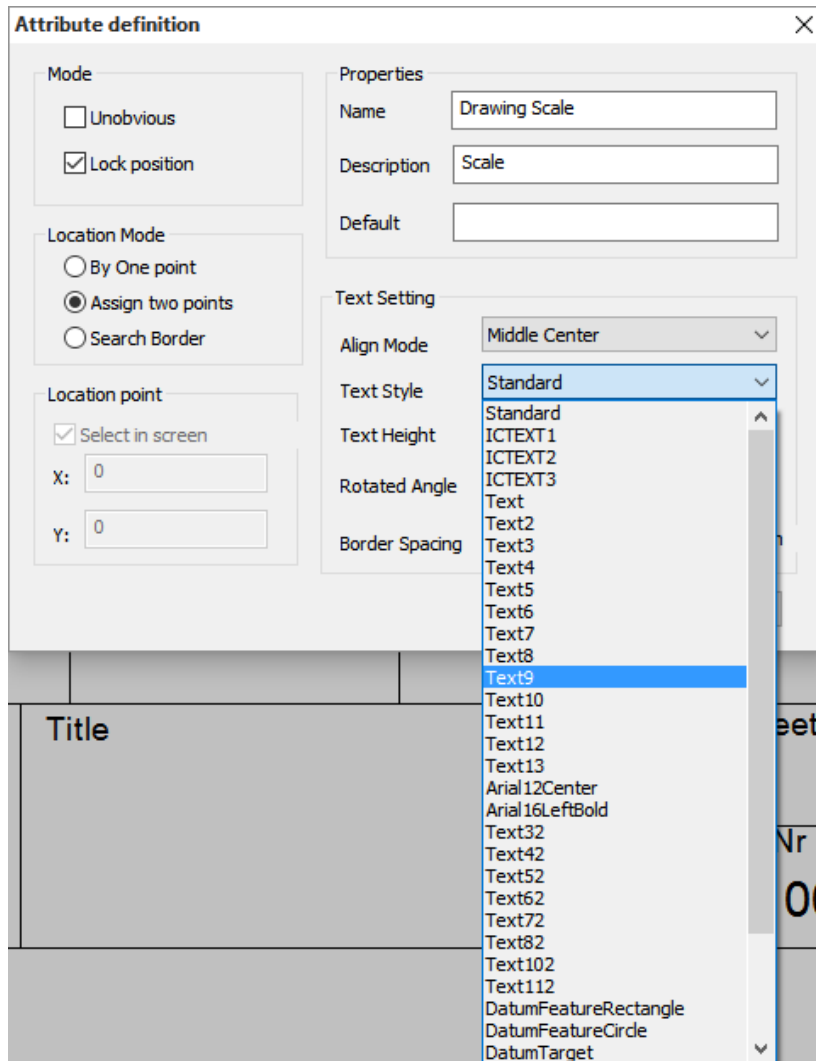
You may also select the Text Style from the Text Setting.
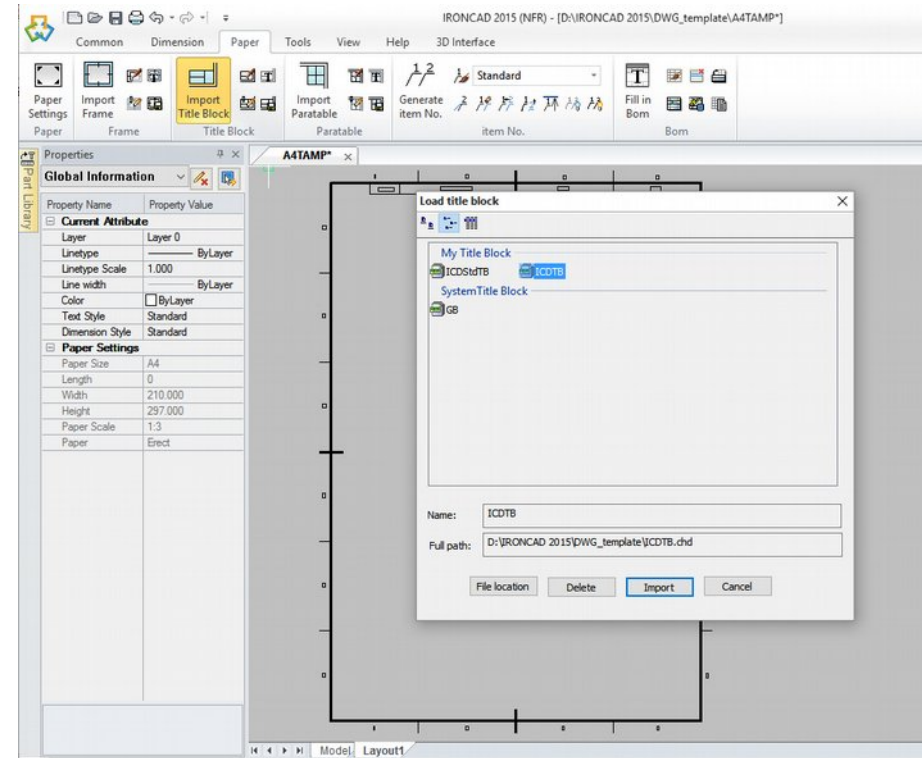
IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

After setting *Attribute Definition* on the title block,LMB click *Quit Block Edition* button to close. LMB click *Save Title Block* button and save as ICDTB.chd.

Create a layout by RMB click the Model tab.

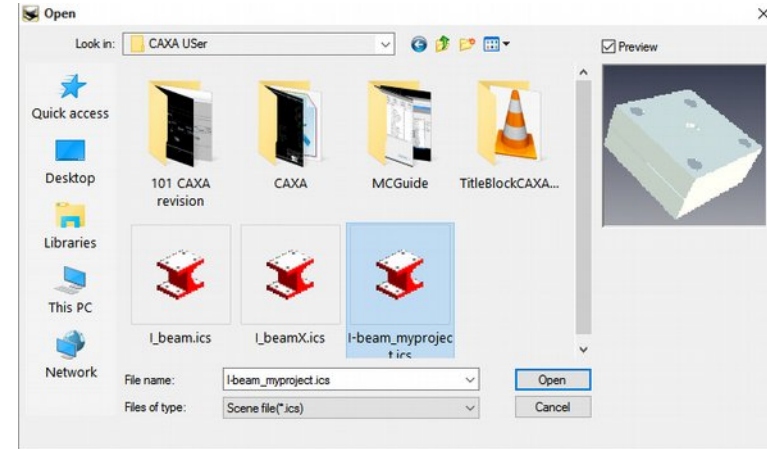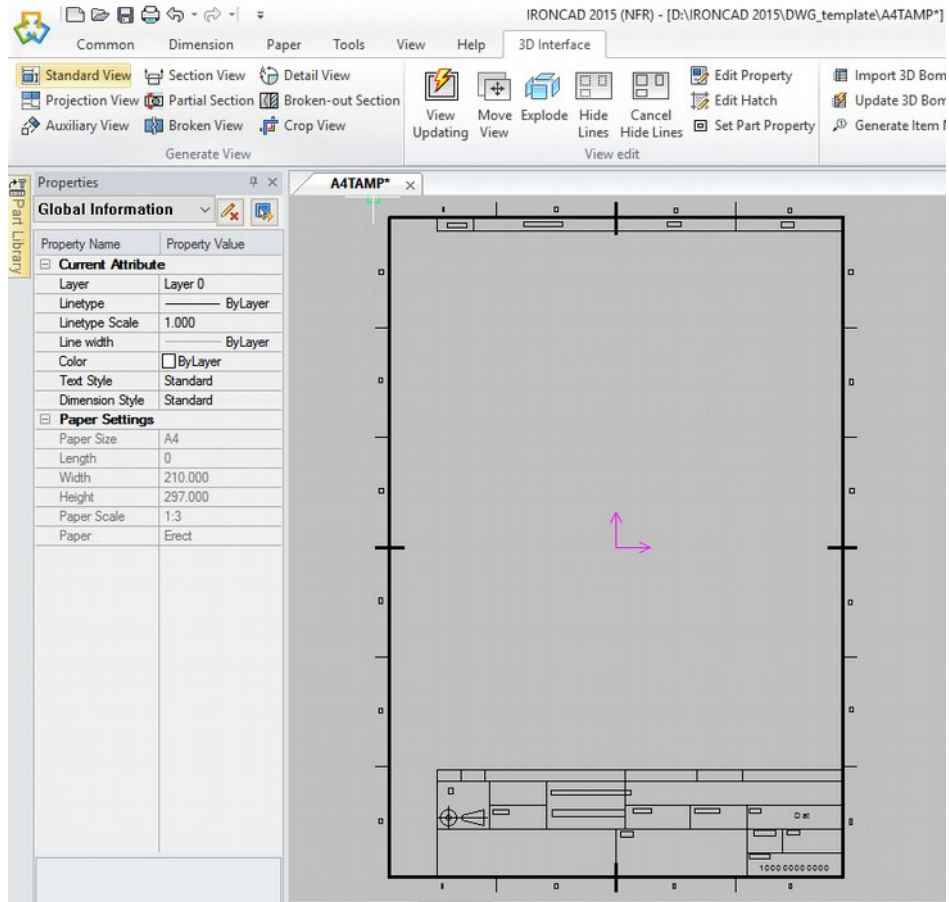# IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
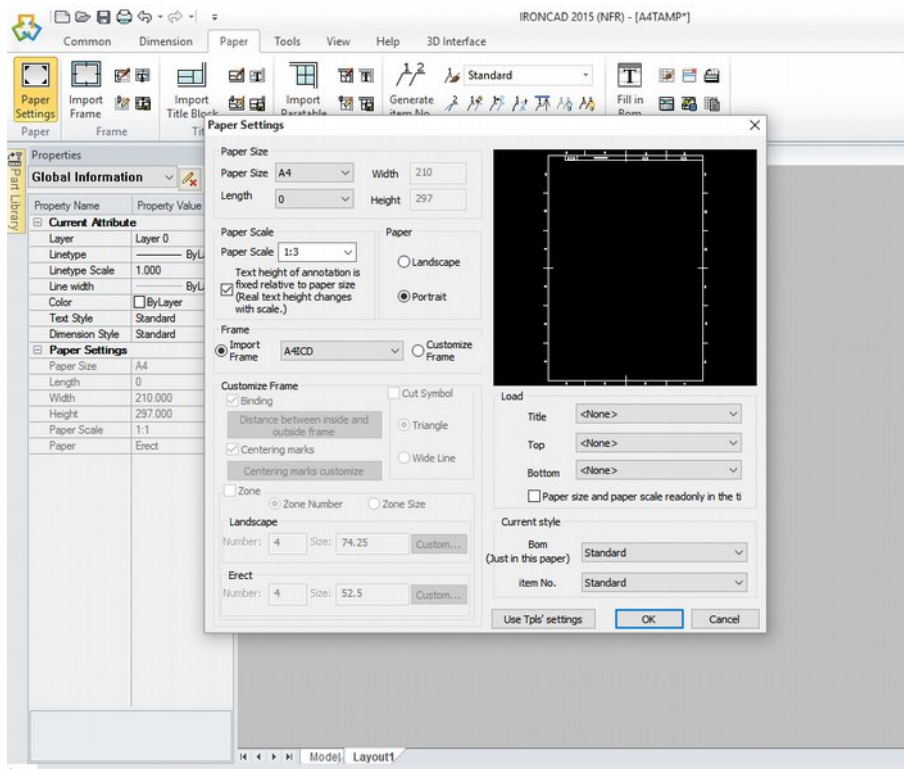
Go to *Paper Settings* and set paper size, scale, orientation and import frame type. LMB click OK
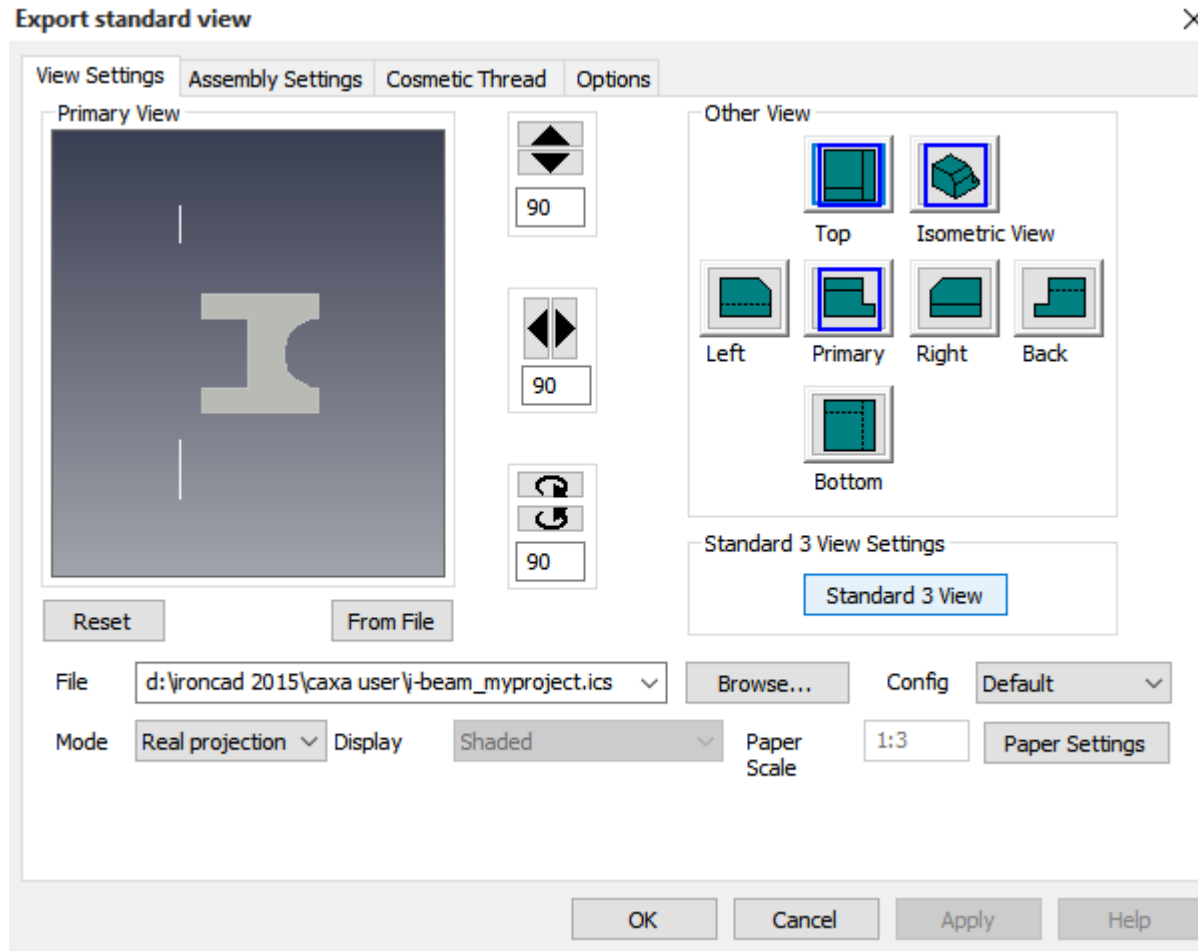

LMB click *Import Title Block* button and select the custom title block file.
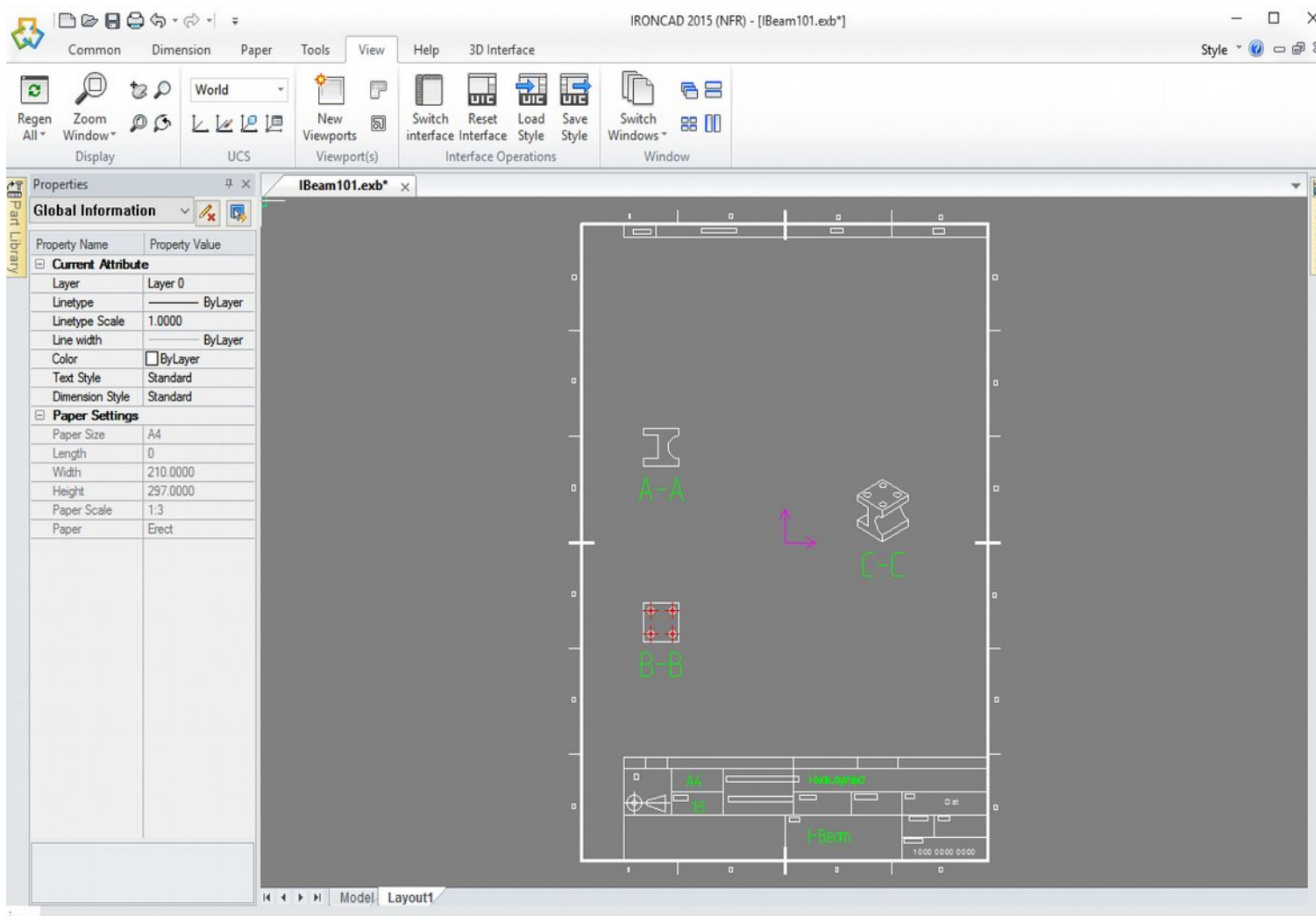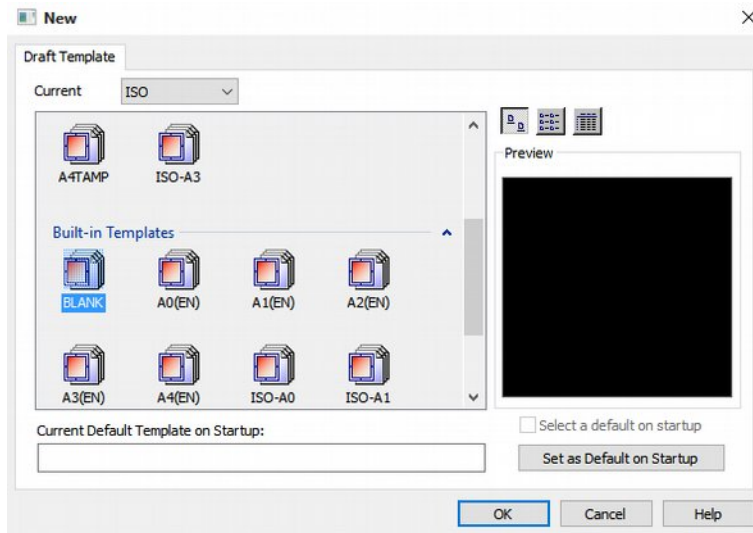
SPIRE
dynamics

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

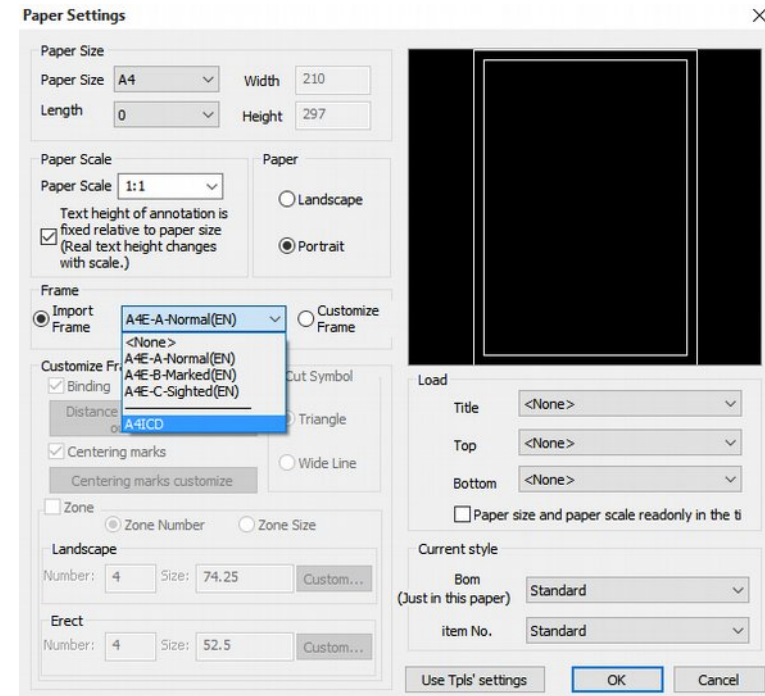# IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101
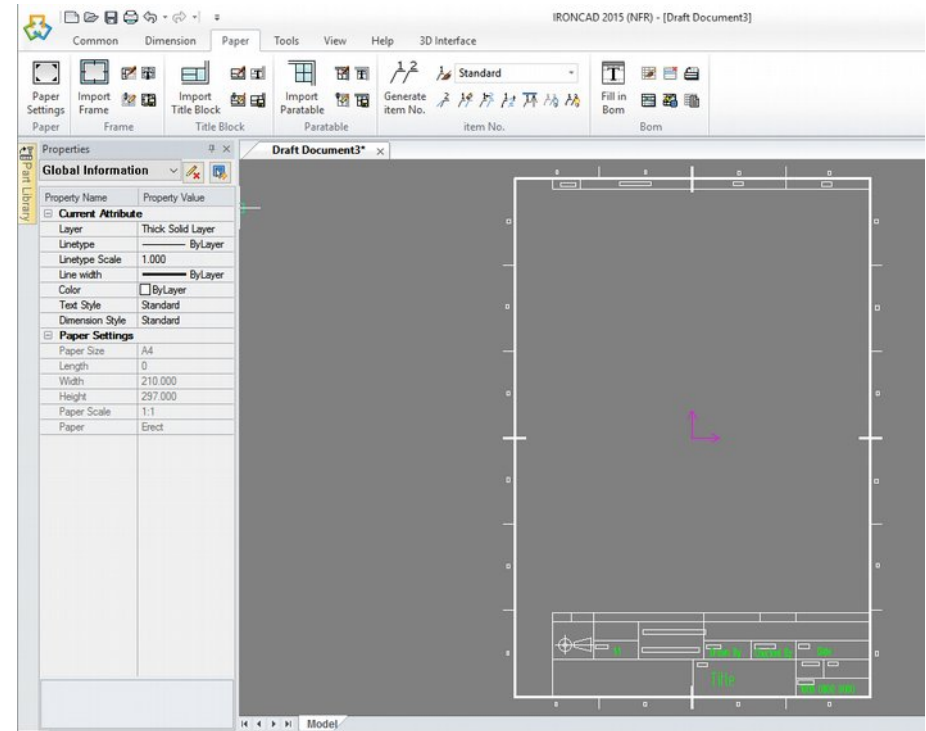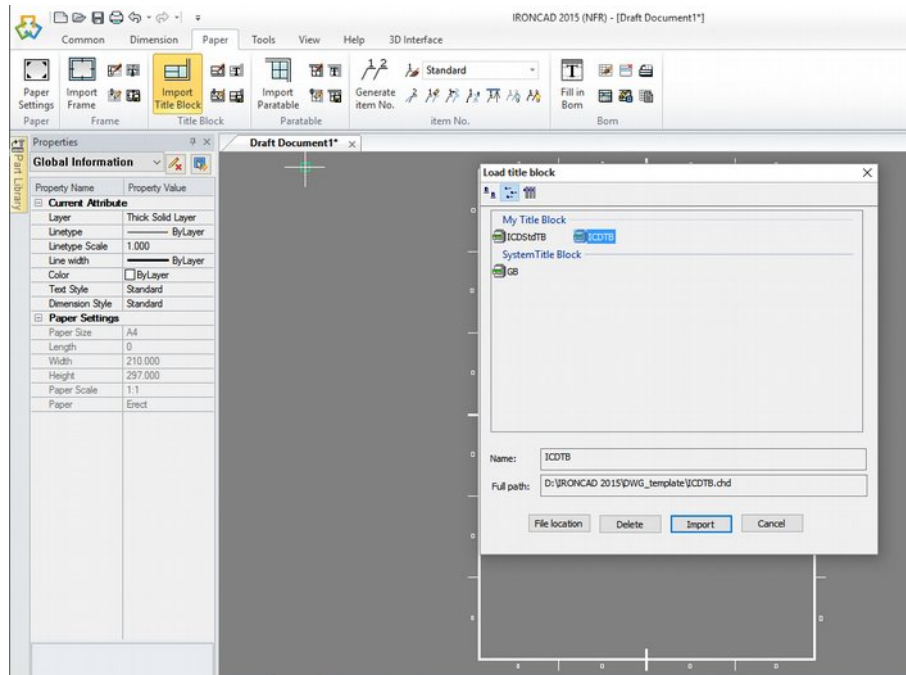
IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

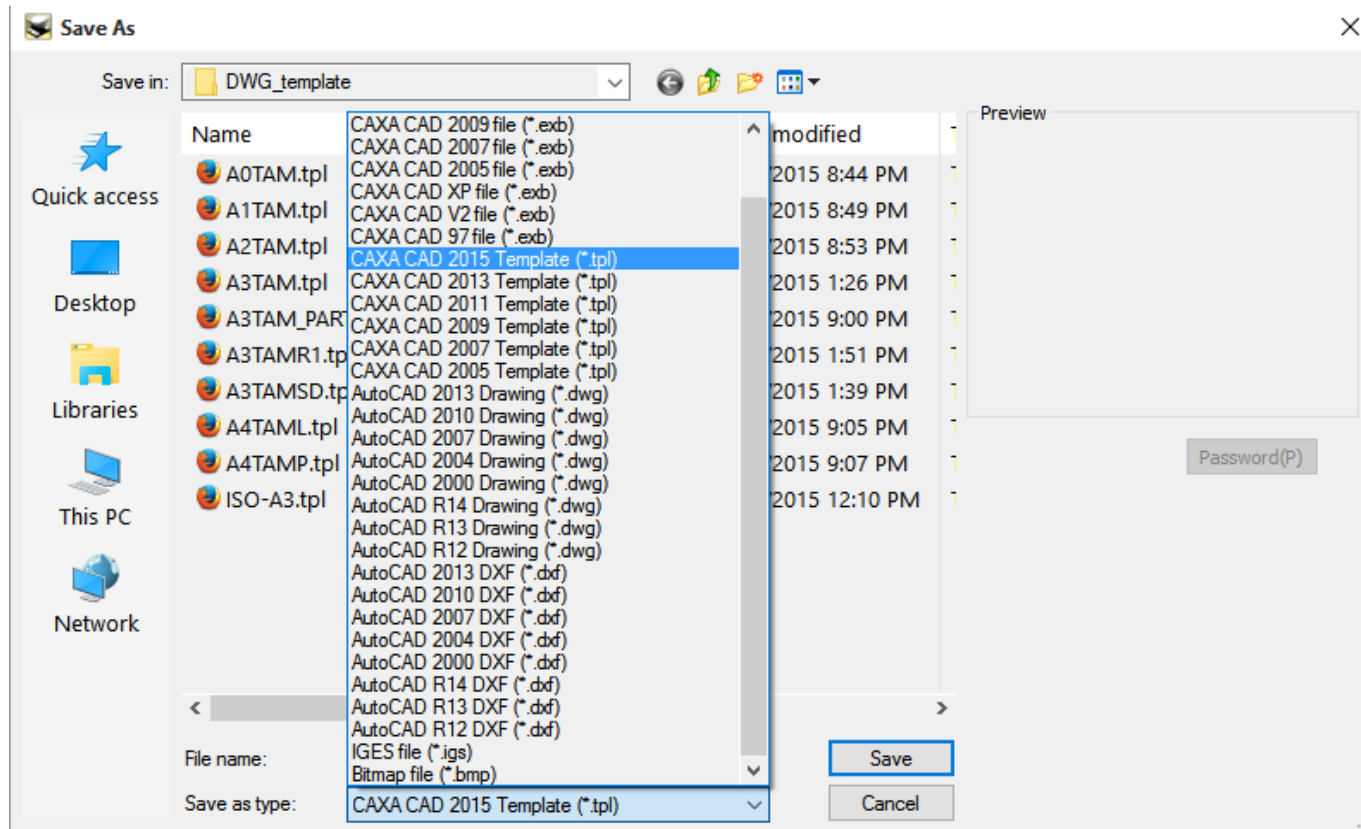Creating a customize template. Go to File>CaxaDraft>New>Draft TEmplate>ISO>Blank>OK

Go to *Paper Settings:* set paper size and the customize A4ICD frame from the Import Frame list and click OK

SP RE
dynam cs

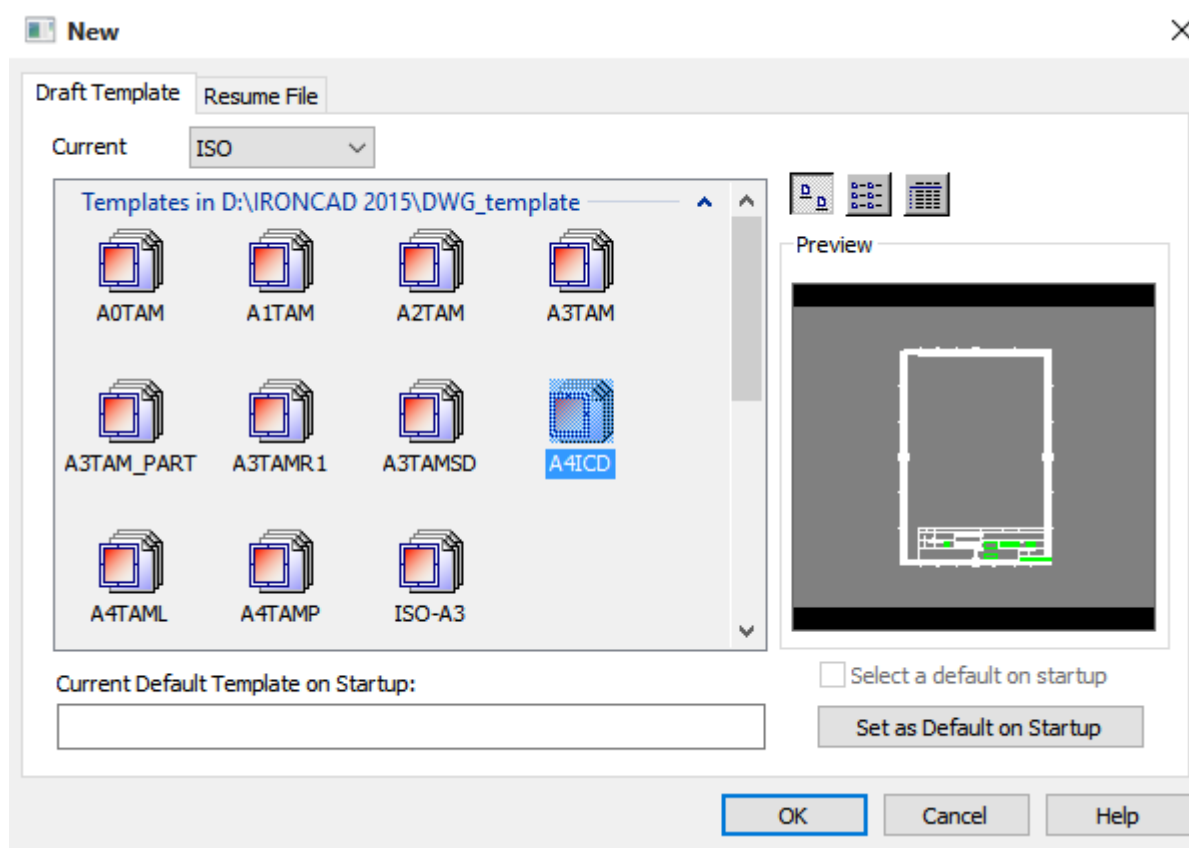# IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

Import the title block file you have created to complete your customize sheet.

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

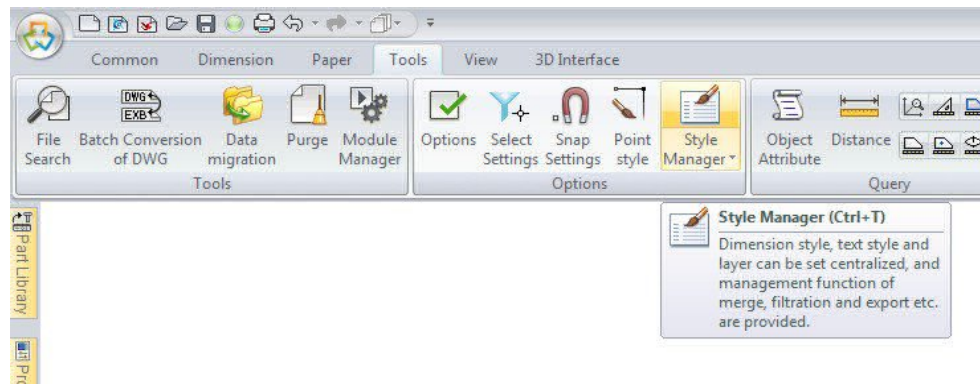Save as a customize template on the stored folder on the path as a .tpl file.

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

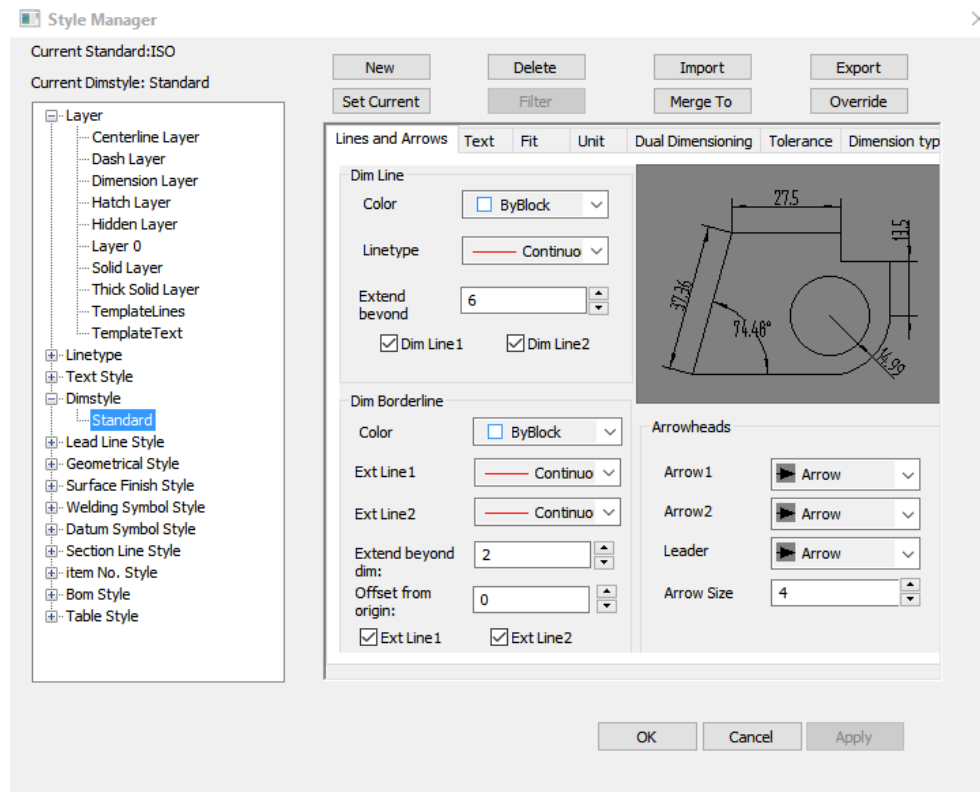BOM and Part Sheet in the template (.tpl)

Open a new CAXA Draft and select the template A4ICD or the customized template you have created.

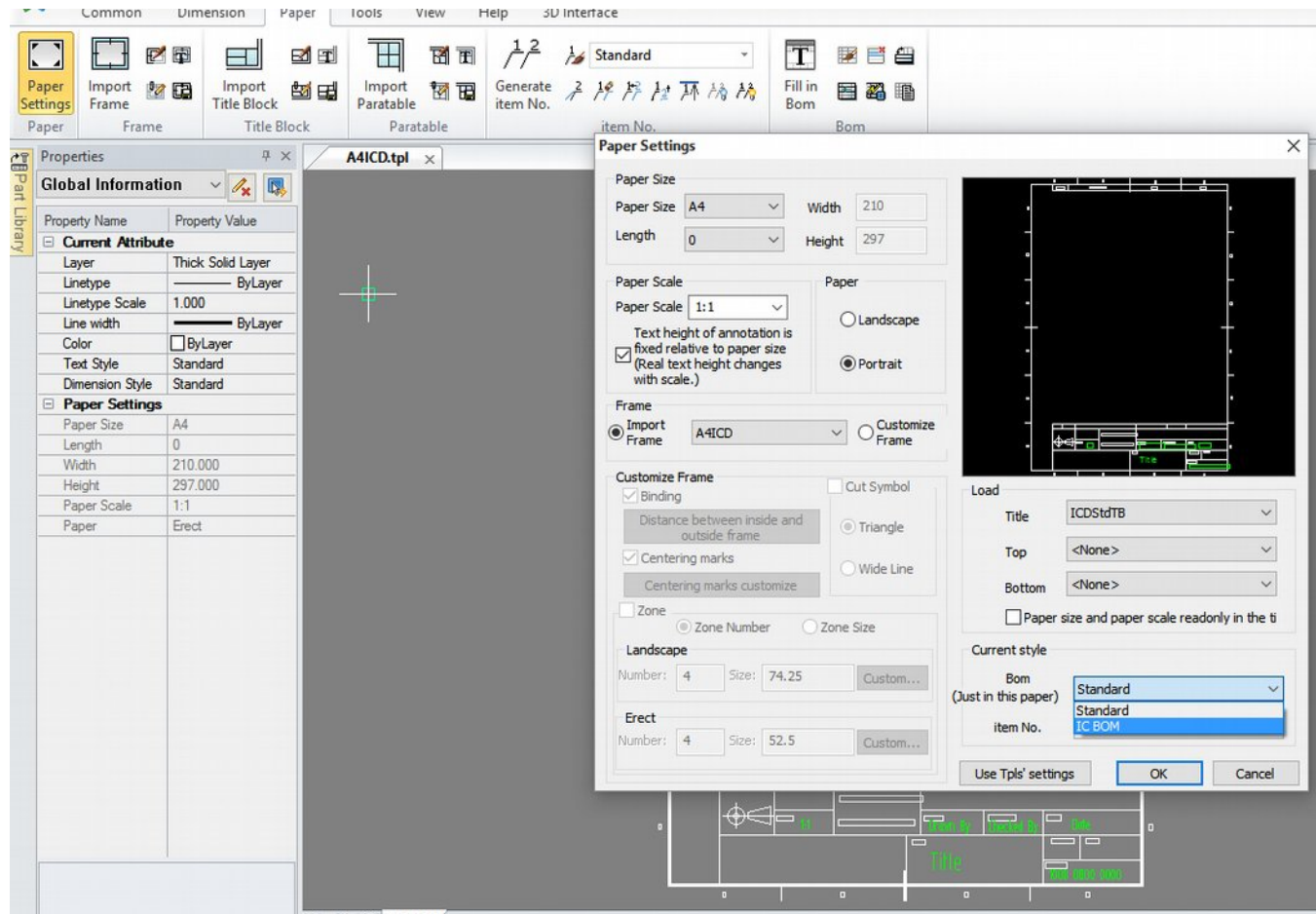# IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

Go through all settings by LMB click the *Style Manager* button on Options of the Tool tab.

This allows to check and set the settings for layers, line types, dimensioning styles, welds.etc.,
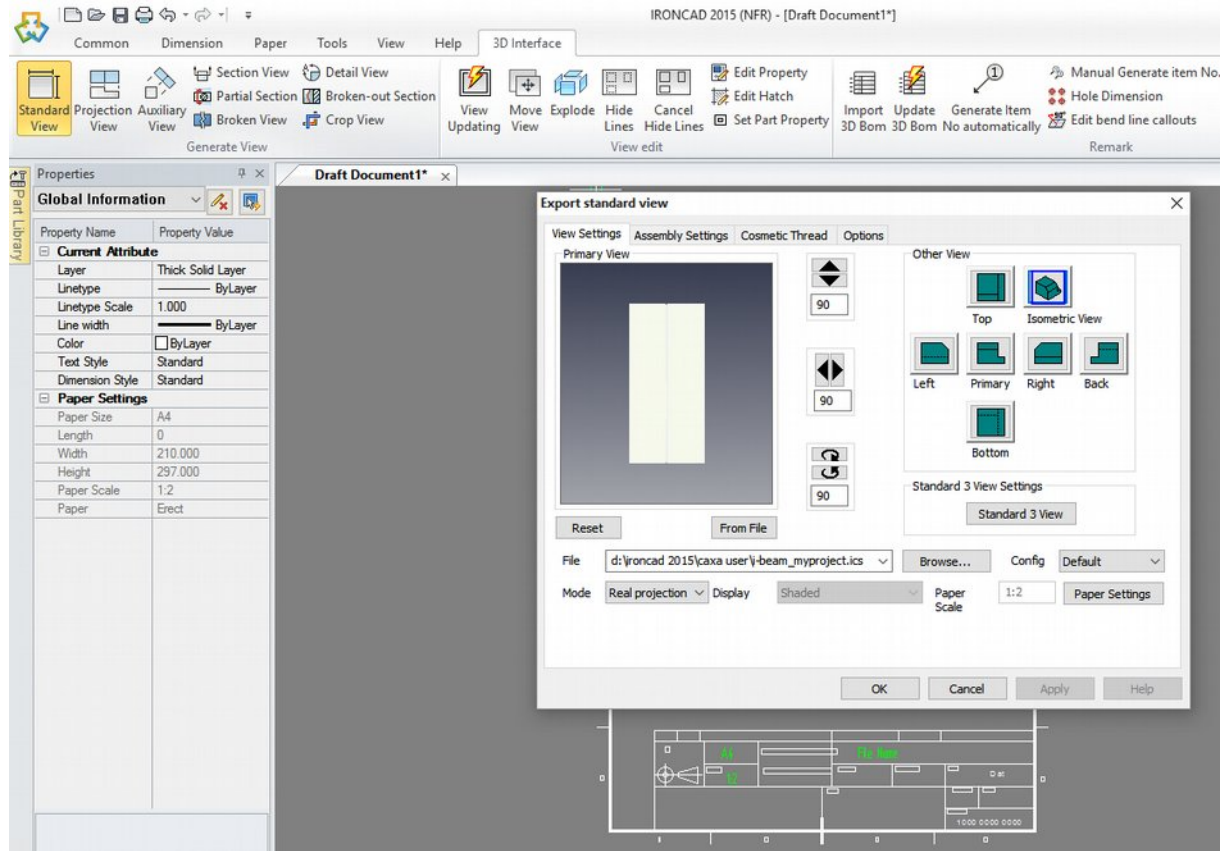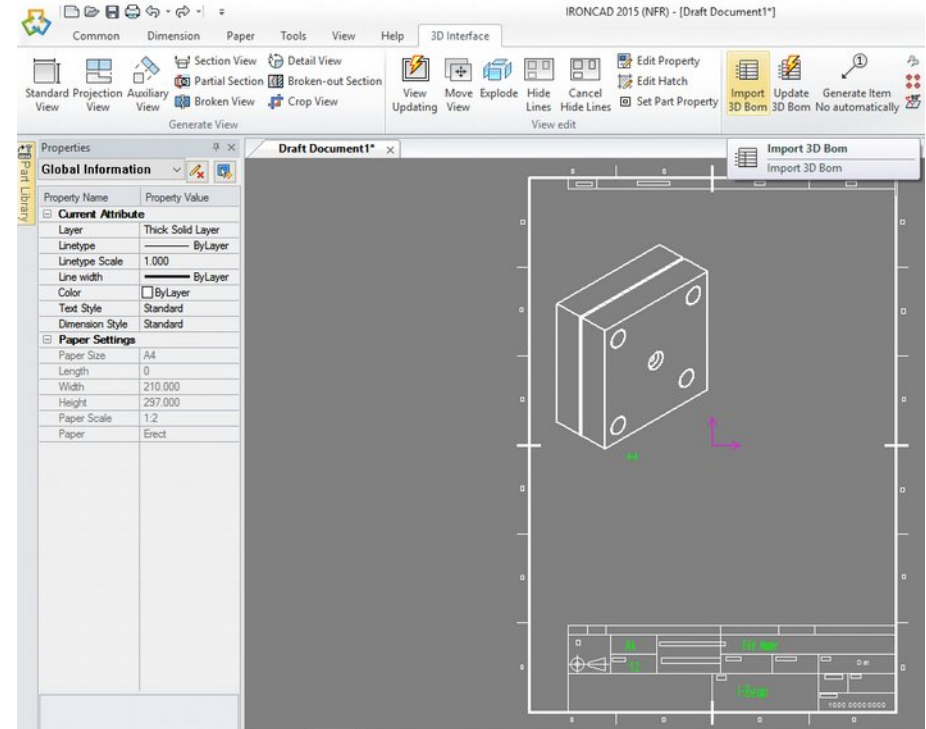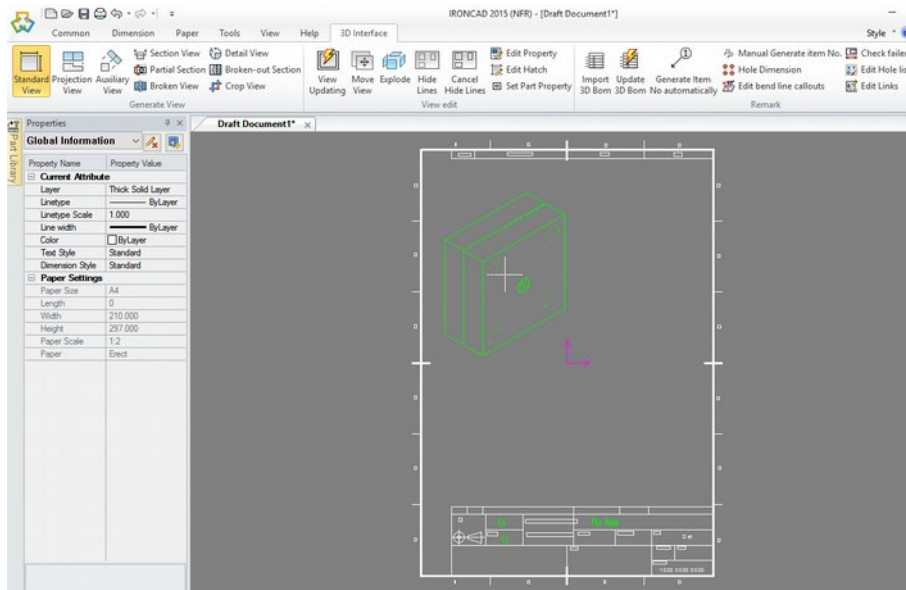
IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

Go to the Paper Settings and set the Bom to IC BOM on the Current style feature. Change the Paper Scale to 1:2.
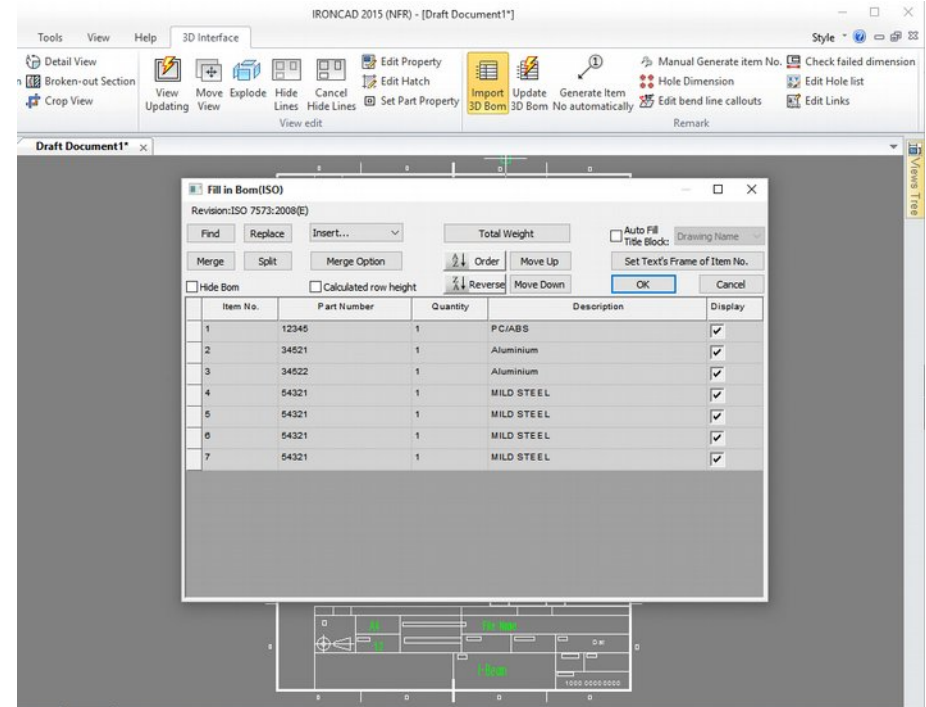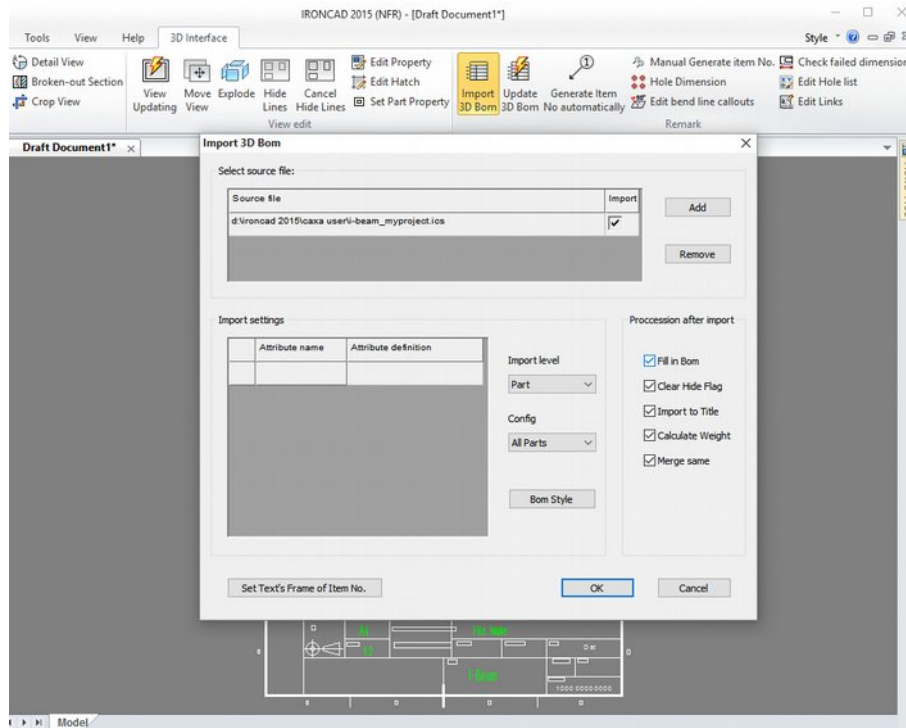
IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

LMB click the *Standard View* button from the 3D Interface tab. Browse the directory to select the 3D model scene file. Only display the Isometric View and click OK.

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

Position the placement of isometric drawing and LMB click select the *Update 3D Bom* button to set the BOM.

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101

Tick the Fill Bom box and LMB click OK. It opens the Fill in Bom(ISO) to view the BOM detail setting features, LMB click OK to exit.

IRONCAD SUPPLEMENTAL DRAWING & DRAFT 101