



DRAFTSIGHT: WORKING WITH DRAWINGS

Open, check, and edit a drawing the way you already work



Often the drawings you work on are not your own. A client or a colleague made them, and every choice in the file is theirs: the layer names, the units, what sits on which layer, what has been switched off. Some of those choices you would have made differently. A few of them are mistakes. This guide starts there, because that is where the work often starts.

It assumes you have DraftSight installed and set up, and that you know your way around the interface. If you want the environment covered first, the guides “DRAFTSIGHT: Setting Up the Interface” and “DRAFTSIGHT: Working in the Interface” do that.

A DRAWING YOU DID NOT MAKE

A client sends you a DWG and asks for a few changes. You did not choose the layer names, you were not there when the units were set, and you cannot see what has been switched off, what is out of date, or what went wrong two revisions ago. Start editing right away and you take all of that with you. You find the problems one at a time, while you work, and by then your own work sits on top of them.

You probably already run some kind of check on a file like that, even if you never wrote it down. The routine below comes from decades of client drawings, in the classroom and in daily CAD practice. It costs a few minutes on a file you have never seen. Those minutes tell you what you are working on before you start, instead of halfway through the job.

THE ROUTINE

- 1. Open the file.**
See what it tells you before it shows you anything.
- 2. Save a working copy.**
The original stays untouched.
- 3. Check the layers.**
Which layers are there, and what is off, frozen, or locked?
Make all layers visible.
- 4. Zoom to the extents.**
See what the file shows you, and deal with anything that sits far outside the drawing.
- 5. Zoom to the part that is important to you.**
- 6. Check the units.**
Length units, angle measurement, precision.
- 7. Measure something.**
Is the size plausible, and does it agree with the units?
- 8. Walk the layers.**
Look at what each layer actually holds.
- 9. Check the styles.**
Which text, dimension, table, and leader styles does the file carry, and do they look deliberate?
- 10. Check the sheets.**
Are there sheets, are they used, and do they print correctly?
- 11. Then ask yourself what the client actually wants.**
By now you can judge what the request really involves.

The order is not critical. This sequence runs comfortably, and if a different order suits you better, use it.

Not every step finds something. On a well-built file you are through the list in a couple of minutes and find nothing at all. That is a good outcome: every step that comes up empty has ruled something out before you start changing things. So run the whole list, even when the drawing looks tidy.

Each step gets its own section, and that is where this guide does its work. The routine itself works in any CAD program. The sections tell you where each step lands in DraftSight, what it is called there, and where the route differs from the one you know.

THE EXAMPLE DRAWING

You can run the routine on any drawing that comes your way. The one in this guide is **Floorplan**, a floor plan of a small house on a lot, and every screenshot follows it through the routine. At first glance the file looks fine. It is not. Layers are switched off, locked, and frozen. The units say one thing, the geometry says another. One dimension does not match what it measures, a shed was drawn at half its stated size, and a sheet promises a scale the viewport does not deliver. Every step of the routine has something to find.

You do not need this file to follow the guide: your own inbox produces practice material by itself. The next drawing a client sends you is the real exercise.

Time to open it.

1. OPEN THE FILE

Open the file. Most of the time the drawing simply appears. Now and then a message comes first: the file is write protected, the file is damaged, or something the drawing expects to find is not there.

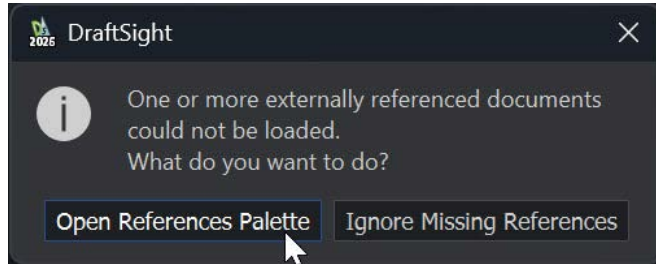


Figure 1. The missing-references message on opening

Read that message before you click it away. Take missing references as an example. DraftSight reports that one or more externally referenced documents could not be loaded and asks what you want to do, with two buttons: **Open References Palette** and **Ignore Missing References**.

Some users pick the second one without looking. Open the palette instead. It opens docked at the side of the screen; enlarge or undock it to your liking. It lists the references by type, so one look tells you whether you are missing another drawing or a few images, and the File information panel shows a missing reference as Not Found.

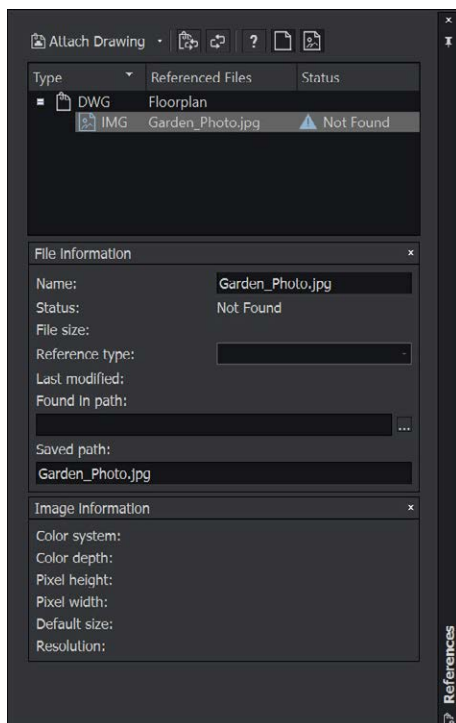


Figure 2. The References palette - Garden_Photo.jpg reports Not Found.

Why the reference is missing varies. Sometimes the file is there and only the path is wrong, and you point the reference to the right location. Sometimes the files were never sent, and now you know what to ask the client for. Sometimes the image itself was removed on purpose and the reference stayed behind, and removing the reference is the repair. Right-click the entry in the palette and pick the option that fits.

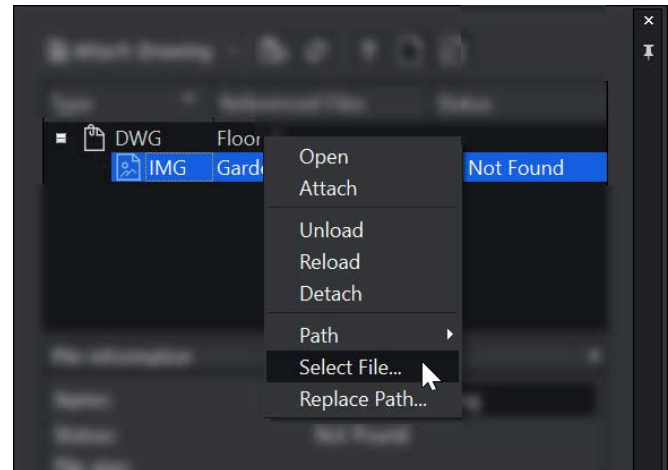


Figure 3. Right-click the reference and pick the option that fits

Fix it now. Postponed means forgotten, and the working copy you are about to make takes whatever you fixed along with it.

2. SAVE A WORKING COPY

Make a copy and work in the copy. Not because you expect to break anything, but because the original is your only record of how the file arrived: on what date, and in what state the client believes it was in. Save over it once and that record is gone, and with it your proof of which problems were already there and which ones are yours. That discussion with a client is a lot easier while you still have the file exactly as you received it.

That first Save As doubles as a check. If the copy writes away cleanly, the file is healthy and your rights are in order. If it does not, you know it now, before any work went into it.

You make the copy with Save As: from the Application Menu behind the DraftSight logo, with **Ctrl+Shift+S**, or from the right-click menu on a drawing tab. It is not on the Quick Access Toolbar out of the box.

After a Save As, DraftSight continues in the new copy, the same way AutoCAD does. Everything you do from that moment lands in the file you just created.

The name matters less than recognizing the working copy at a glance. This guide puts **Audit_** in front of the original name. If you have your own convention, keep it.

Leave the incoming file alone. If the job runs for a week, setting the original to read-only is a small extra safeguard that costs a few seconds. Right-click the drawing tab and choose **Open Containing Folder** to land where the file lives. Right-click the original there and set it to read-only in its properties.

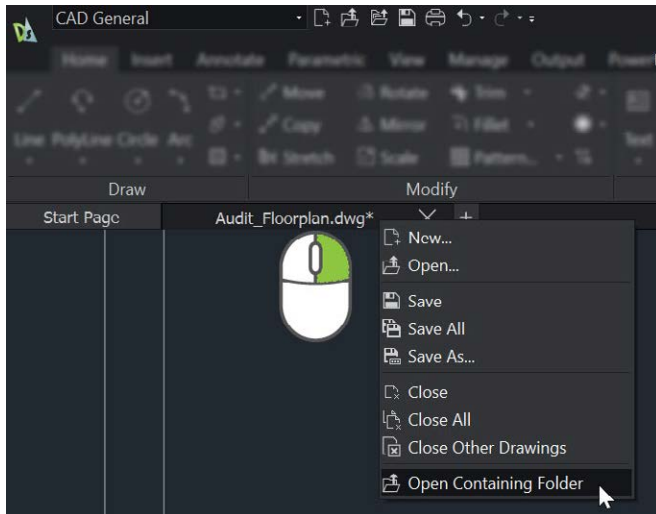


Figure 4. Right-click the drawing tab - Open Containing Folder

In this guide the working copy is called **Audit_Floorplan**, and that is the file you will see in the screenshots from here on. Everything after this happens in the working copy, because some of what follows changes the drawing.

3. CHECK THE LAYERS

Open the layers overview and read the status columns before you judge anything else. Off, frozen, and locked each hide something in their own way. Off and frozen both make a layer invisible. Locked keeps a layer visible and protects what is on it. Editing anything on the layer takes an unlock first, but adding new entities to it works fine. DraftSight fades a locked layer to half its normal intensity out of the box, so you can recognize it in the drawing itself.

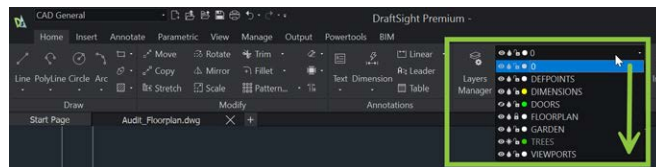


Figure 5. The layer dropdown - read the status icons per layer

The bottom row of the Layers panel holds three magic little buttons: **Show All Layers**, **Unisolate Layer**, and **Thaw All Layers**. Three clicks, and everything the drawing was hiding is on screen.

Together with the next step, that gives you a clear picture of the drawing in one glance. Does the screen turn into a cluttered mess and a bit of a shock? Two undos put you right back where you are now. But now you know what the drawing actually contains, and what you were handed. And does nothing change at all? Then you received a neatly built drawing, and that may well be the most valuable observation of them all.

One thing to keep straight while you look: this step reports, it does not judge. A layer that arrives switched off or frozen with content on it is not a mistake by definition. Often it is a deliberate

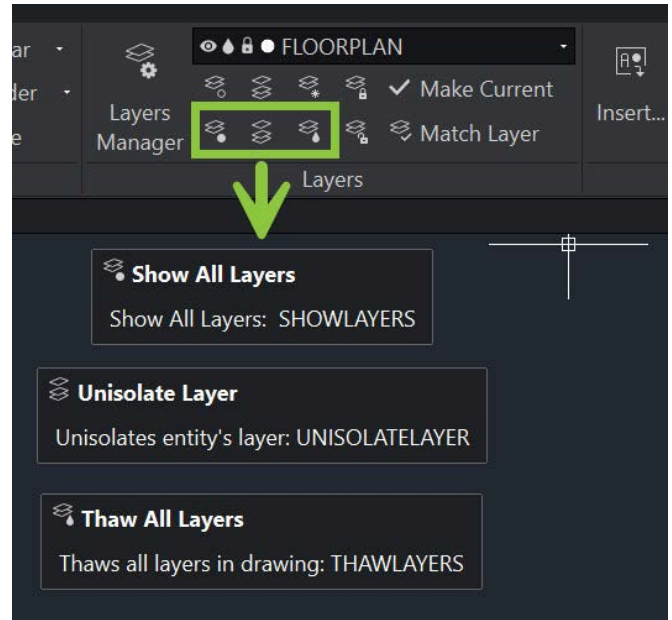


Figure 6. The bottom row of the Layers panel - Show All Layers, Unisolate Layer, Thaw All Layers

choice, made by someone who knew the file better than you do right now. You want to know what is hidden. Whether any of it should change is a different question, and it comes later, when you know what the job needs.

4. ZOOM TO THE EXTENTS

With every layer on and thawed, zoom out until everything the drawing holds is on screen. The fastest route is a double click on the mouse wheel, and the wheel also does your everyday zooming: roll to zoom in and out. That is the same in AutoCAD, so your hands already know it.

Prefer typing? In AutoCAD this is Zoom Extents. DraftSight calls it Zoom Fit. Type **Zoom** and the option list appears: Bounds, Center, Dynamic, Fit, Left, Previous, SElected, or a scale factor. Fit is the one you want.

Most of the time you now see the drawing you expected. Sometimes you see it shrunk to a postage stamp in a corner of the screen, and that means something sits far outside the drawing. A forgotten detail, a stray point, a block that landed on a wild coordinate.

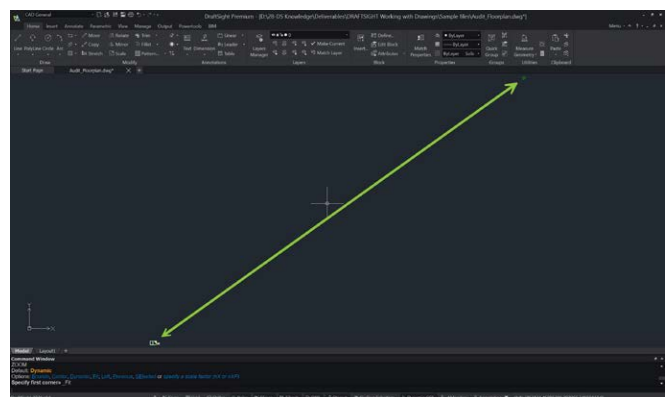


Figure 7. The postage stamp effect - the floor plan bottom left, the lonesome tree top right

The reflex is Zoom Previous and carry on. Do not leave it there! Find out what is out there and make a decision: delete it, or move it back to where it belongs. As long as it stays, every zoom to the extents keeps showing you the postage stamp.

One note from the help files: leftover points from deleted or modified entities can stretch the extents until the drawing rebuilds, so a Rebuild before this zoom gives the honest answer. Rebuild is DraftSight's name for the command you know as REGEN.

In our example the culprit is easy to name: far outside the floor plan lives a lonesome tree. The decision is the one you just read: delete it, or move it back to where it belongs.

Zoom Fit again. Does the drawing look better now? That is the point: the extents tell the truth again, and the whole drawing fits one screen.

What if switching every layer on and zooming to the extents has just wrecked the view? The screen is crowded with things you never asked for, and what you thought you were looking at is buried. Then you know why the previous drafter left the file the way it was: layers hidden, the view zoomed to what mattered.

A few undos take you back to where you were before you switched everything on. If closing the drawing without saving and opening it again feels faster, that works too: you are back at the working copy exactly as your Save As left it.

Keep what the mess told you: there is more in this drawing than it showed on arrival, or there is not. Both are valuable.

5. ZOOM TO THE PART THAT IS IMPORTANT TO YOU

Perhaps the drawing you received covers a huge building or project. Zoom in to what is important to you, the part where your work is going to happen. In our example, that is the floor plan. Now that you know what the drawing holds, it is time for some checks.

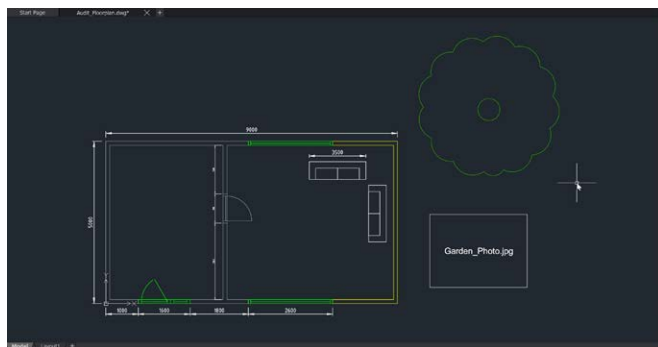


Figure 8. The whole drawing after Zoom Fit - the floor plan, and everything that lives around it

6. CHECK THE UNITS

Length units, angle measurement, precision. The file may say millimeters while the geometry says otherwise, and the only way to know is to look. In DraftSight the units live in the

Options dialog: **Options > Drawing Settings > Unit System**. The shortest route is the one you already use: type **Units** and DraftSight takes you there.

You read the length type and its precision and the angle type and its precision. The settings are saved in the drawing, so what you find is what the maker left behind.

Our example shows why this check earns its place. The units say Inches, while the drawing carries dimensions like 9000 and 5000. It is safe to assume those are millimeters. The angle type tells the same story: Deg/Min/Sec belongs to the inches world, while metric drawings usually run Decimal Degrees. Set both to what the drawing needs.

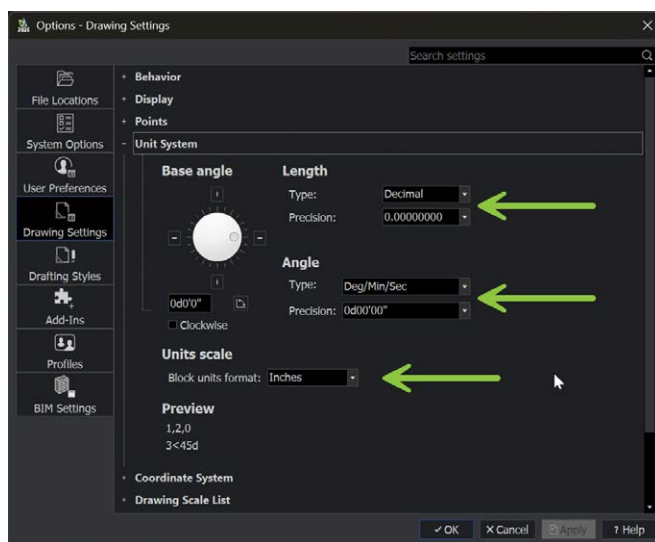


Figure 9. Unit System - length, angle, and block units, read from the drawing

While you are there, set the precision of both length and angle to what you want to read, and never pick a precision of 0. Keep at least one decimal.

DraftSight takes the setting literally: with a length precision of 0 you can still enter a text height of 2.5, but you can no longer read it back; DraftSight will tell you it is 3. So even if your own work needs no decimals, make sure you can read them. Hiding the decimal in your dimensions is a job for the dimension style, where it belongs.

Reading the settings is half the work. Whether they match the geometry is the other half, and that is the next step.

7. MEASURE SOMETHING

Pick geometry whose real size you can judge. A door opening, a countertop, a parking space. Measure it and ask two questions. Is the size plausible? Does it agree with the units you just checked? A door that measures 900 was drawn in millimeters, whatever the drawing settings claim.

Then measure the geometry under an existing dimension. This is the trust test for every number in the file. Dimension text and geometry do not always agree, because a dimension can be

overridden, and the text then says whatever its author typed into it. The geometry is the truth; the dimension is a claim about it. One overridden dimension tells you what the other claims are worth.

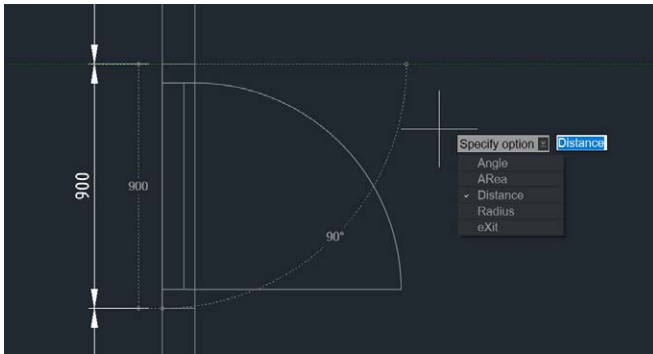


Figure 10. Measuring the door opening - Distance chosen from the option list

DraftSight groups its measuring tools under one ribbon button: **Measure Geometry**, at **Home > Utilities**, in the same location where AutoCAD keeps its Measure flyout. From the keyboard, the familiar habit works as expected: type **Dist**, short for Distance, and the autocomplete list shows the measuring command first. **Area** works the same way.

The button is split: the top half runs the option currently shown, while the bottom half opens a list containing Angle, Area, Distance, and Radius. There is one habit to adjust: AutoCAD starts on Quick and measures as you hover; DraftSight starts on Angle. For an everyday length check, click the bottom half and choose Distance. The button remembers your last choice for the rest of the session. After a restart, it returns to Angle.

8. WALK THE LAYERS

Layer status was one step, layer content is this one. Step through the layers one at a time and look at what each one actually holds, because a drawing can be tidy in the panel and messy underneath it. This is where you find the wall that was drawn on the dimensions layer.

DraftSight gives you two ways to do it, and both are called Layer Preview. In the Layers Manager palette, Layer Preview is a mode: switch it on, click a layer name, and the drawing area shows only that layer. Click the next name and you walk through the drawing layer by layer. A right-click adds Keep Selection and Isolate selected layers. While you are previewing, zooming and panning keep working. On a dual monitor setup this is where the palette earns its place: park the Layers Manager on the second screen and you walk the layers with nothing in the way.

The second way is the **LayerPreview** command with its own dialog. Type **LayerPreview** and it opens. It offers the layer list, Ctrl and Shift selections, a wildcard filter, and checkboxes that restore the layer state and the view when you close it. Zooming works differently here: click Preview to hand control to the drawing area, zoom and pan as you need, and press Esc to return to the dialog. The dialog itself stays open the whole time.

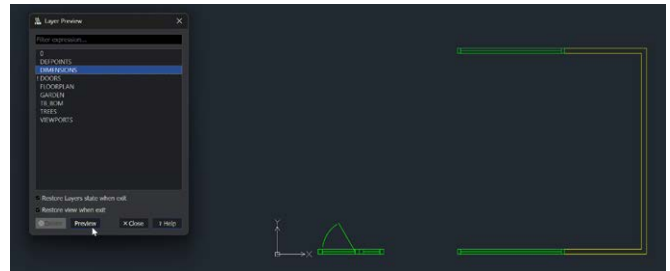


Figure 11. The Layer Preview dialog - the layer list, the restore checkboxes, and the Preview button

The AutoCAD habit this replaces is Layer Walk, and your fingers already know the route: type **LayWalk** and the autocomplete list answers with LayerPreview. AutoCAD has no preview you can zoom in while it runs. Here DraftSight gives you more than you are used to.

9. CHECK THE STYLES

This one is a reading, not a repair. The styles tell you how the drawing was built: a few well-defined styles is a good sign, a zoo of one-off styles announces improvisation. Knowing this before you annotate anything saves you from adding to the mess.

DraftSight keeps the whole check in one place. Type **TextStyle** and the Options dialog opens at Drafting Styles, where Text, Dimension, RichLine, Table, and MultiLeader sit as sections of the same page. Walk through them and read what the maker left behind: which styles exist, which one is active, and whether the settings look deliberate. Text, Dimension, Table, and MultiLeader are the ones that matter for everyday work.

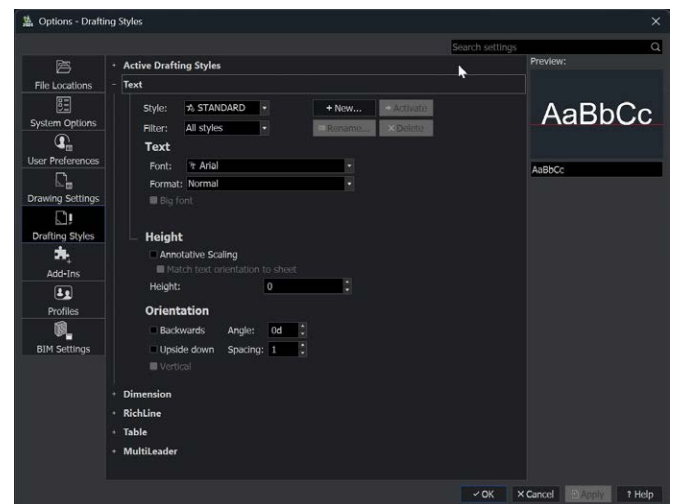


Figure 12. Drafting Styles, Text - style, font, and height in one view

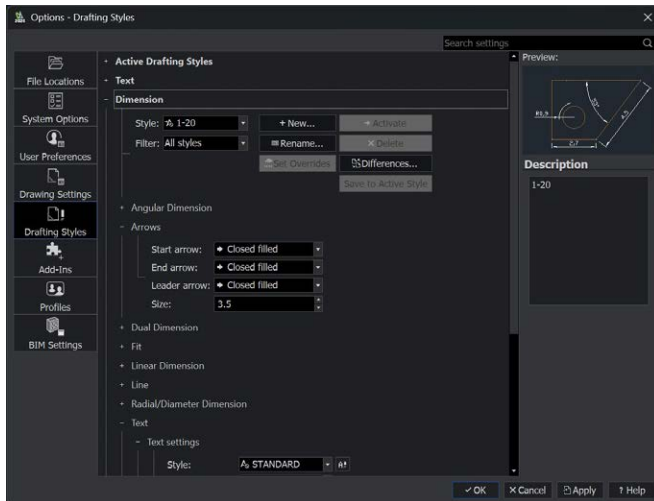


Figure 13. Drafting Styles, Dimension - arrows, fit, lines, and text per style

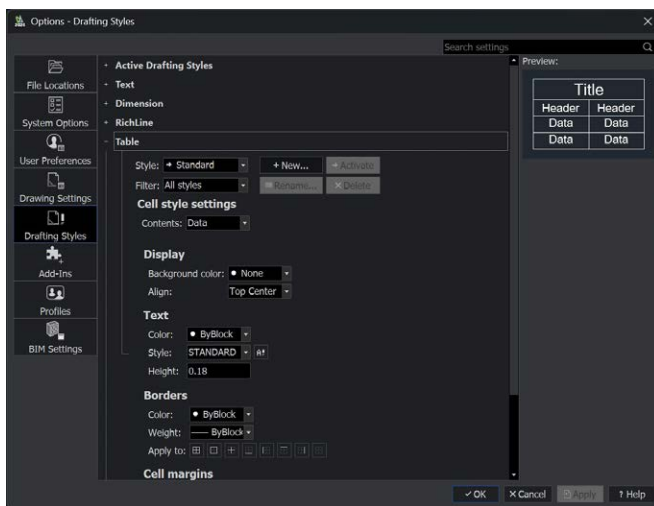


Figure 14. Drafting Styles, Table - display, text, and borders per cell type

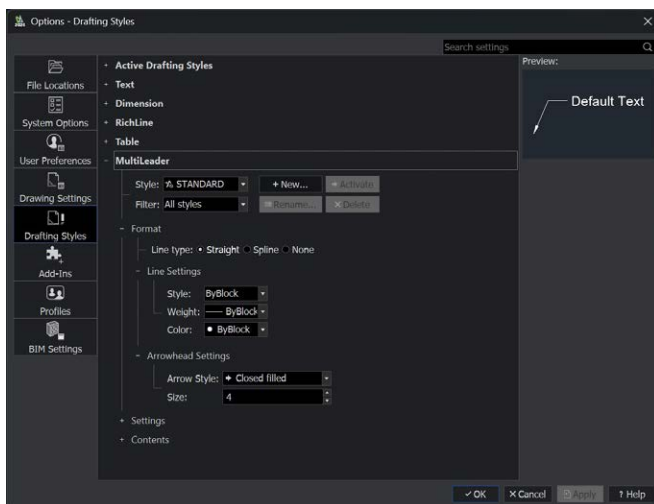


Figure 15. Drafting Styles, MultiLeader - line, arrowhead, and content settings

The Font field deserves one extra look. It names the font the text was set in, but it will not tell you whether that font is on your machine: when it is missing, DraftSight silently puts another

one in its place and the dialog keeps showing the original name. The preview underneath is your check: if it does not look like the font the name promises, the font did not travel with the file.

Leave everything as it is. Setting up styles properly, and building them into your own templates, is a subject of its own. Here you only want to know what you will be working with.

10. CHECK THE SHEETS

Model space tells you what was drawn. The sheets tell you what leaves the office. A sheet tab is always there, so its presence proves nothing: look whether the sheets are actually set up and used, and whether they print correctly. Some drawings are plotted straight from Model, and you want to know that before you touch anything in the file's output side.

The quickest answer comes from the print preview: one look tells you whether a sheet produces a drawing or a surprise. You will find it on the ribbon at **Output > Print Preview**, as the **Preview** command, and as a button in the print dialog itself.

While you are there, put the viewport scale next to what the title block claims. A title block that promises one scale above a viewport that delivers another is exactly the kind of find this routine exists for.

The sheets are also where you find out what did not travel with the file. A drawing leans on more than its own geometry: you met the missing images in step 1. Here it is the print settings, and this time the advice comes first.

Fresh out of the box, DraftSight handles the print side of an arriving drawing differently from what you are used to. Switch two options on, both under **Options > System Options > Printing**, General options: **Use Page Layout Manager** (DraftSight asks for a restart) and **Replace "DWG To PDF.pc3" with PDF built-in printer**. You set them once, and every AutoCAD drawing after that arrives the way you expect.

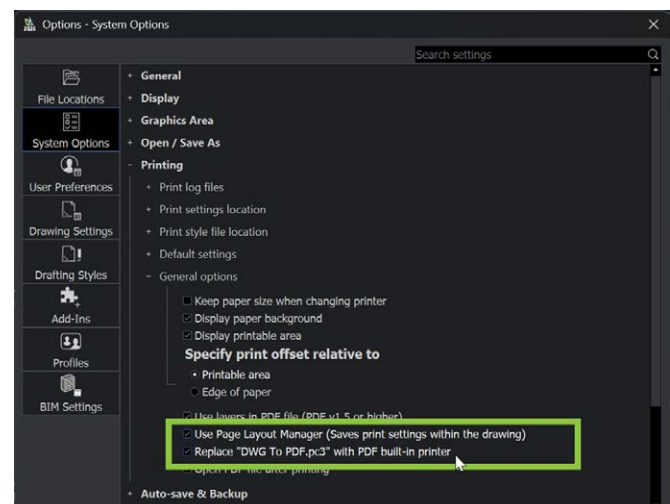


Figure 16. Options > System Options > Printing, General options - the two switches to set once

Here is what those two switches buy you. A drawing from AutoCAD brings its print story in three pieces: the layouts, the named page setups, and the plot device.

The layouts you have already seen. DraftSight calls them sheets, and your layouts arrived as exactly that: sheet tabs that kept their AutoCAD names, because those names travel in the DWG.

The named page setups travel inside the drawing too, and they now appear in the Page Layout Manager: names between asterisks are the layouts themselves, a name without asterisks is a page setup stored in the drawing, and the name in parentheses is the setup assigned to that layout. That is, entry for entry, the list you know from AutoCAD's Page Setup Manager, and the print dialog is reworded to match.

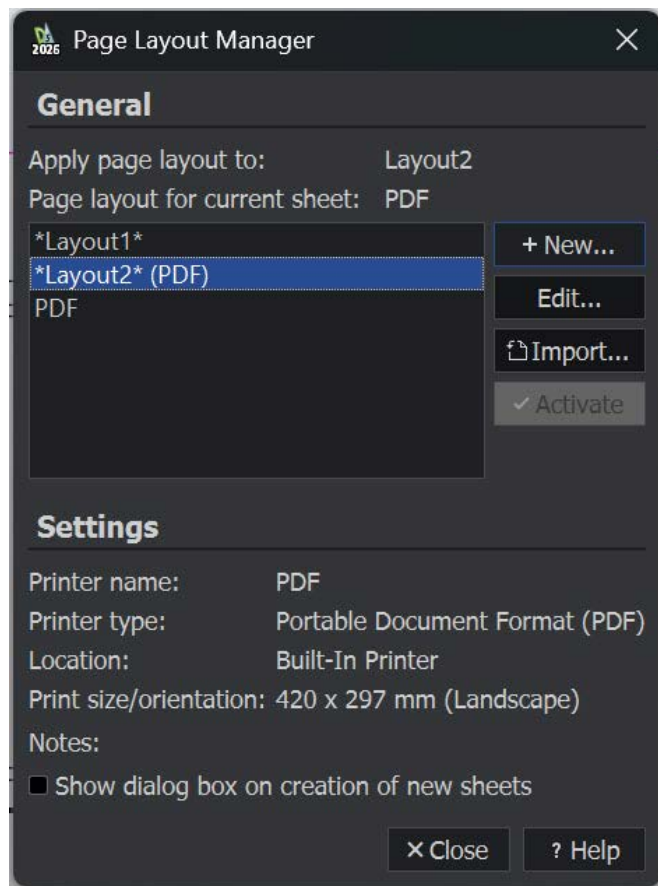


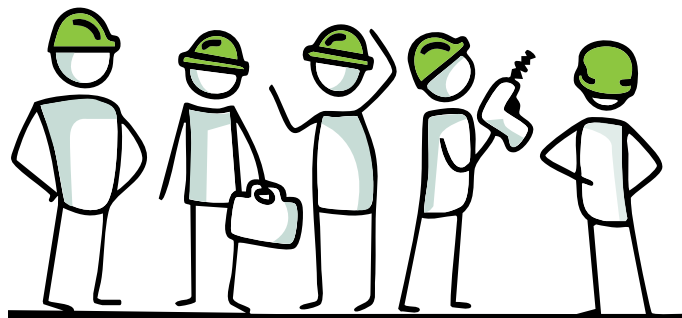
Figure 17. The Page Layout Manager - layouts between asterisks, a stored page setup without, the assigned setup in parentheses

The plot device sorts itself out as well. A Windows printer that exists on your machine simply keeps working: a sheet set up for the office LaserJet arrives pointing at the office LaserJet, with paper, print style, and scale intact.

A sheet carrying AutoCAD's PDF device, which runs through a pc3 configuration that is not on your machine, gets DraftSight's built-in PDF printer instead. Even the paper name survives, down to ISO full bleed A3. Printers that resolve are left alone; only the AutoCAD PDF family is swapped. Finish with the print preview: the sheet still has to prove itself there.

11. THEN ASK YOURSELF WHAT THE CLIENT ACTUALLY WANTS

The routine ends where the job begins. You know what the file contains, what it hides, and what it claims. Now read the request again. You can judge what it really involves, what it touches, and what it will disturb, and you know which questions to send back before you start. That judgment is what the few minutes of the routine were for.



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