

IRONCAD (CAXA) DRAFT and BRICSCAD – STANDARD LAYERS

It's important to ensure that all drawing elements are on an applicable "LAYER". The following is a list of Standard Layers for use with **Generated Views** within Layout Space. This list doesn't include any Standard or Custom Objects Layers for use with 2D and 3D Objects within Model Space. Refer to separate documents regarding these supplemental Object Layers (and Object Layer Groups).

Generally speaking, all drawing elements should have their style attributes (colour, linetype and lineweight) controlled BYLAYER; so that their style attributes will change with any changes made to the style attributes of the Parent layer. This is important when referencing external files. Depending on the CAD software, the style attributes of LAYERS in referenced models can often be displayed differently; but not the individual drawing elements. When a drawing element has its own style attributes (rather than BYLAYER), then it is not possible for it to be displayed differently when referenced into another file.

If necessary (instead of creating a specific layer), different linetypes can be applied to each of these layers; but do not change the lineweight. The actual printed lineweights should vary according to the printed sheet size, so having common lineweights on the same layers (and with colours BYLAYER) is helpful when it comes to printing. See document regarding printed lineweights.

Layer "0" (zero) is a special system layer that cannot be deleted in either BRICSCAD or CAXA. Some of the "Standard" named layers within CAXA are also system layers, and as such cannot be deleted in CAXA.

Within drawing templates set the default layer as "Standard Lines Continuous LW5". This default layer can also be used for "Generated Views". However, there is an invisible "Standard Views" layer specifically created for placing "Generated Views" and "Viewports".

Within BRICSCAD (and AUTOCAD) the "Defpoints" layer is automatically generated when a dimension is created. This layer stores the definition points of dimensions. These are the same points which appear at grip location when a dimension is selected. Objects on this layer can be either visible or hidden in the drawing area but will not appear when plotting. To avoid unexpected changes within the drawing, avoid placing other objects within this layer. Instead, use the "Standard Non-Printing" layer for other non-printing objects (i.e. construction lines).

Some colours do not contrast well with a white background (or when printed). Therefore, when a white background is used (instead of black) an alternative layer colour is shown. This alternative colour is also to be used when printing in colour.

Layer Name	Colour					Linetype	Lineweight	Application
	ACI	Name	R	G	B			
0	7	Opposite	0	0	0	Continuous	Zero	Special system layer. Use for elements inside blocks (annotation symbols). Block elements on this layer will be displayed as per the layer of the block. It is OK to also use this layer for inserting blocks, otherwise use other layers.
Defpoints <i>Non-Printing</i>	8	Grey	128	128	128	Dashed	Zero	System layer for dimension definition points. Don't use for drawing elements.
Standard Annotations	8	Grey	128	128	128	Continuous	Thin	Annotations with other text heights. Drawing Frames and Title Blocks.
Standard Annotations 013 <i>White Background and Printing</i>	1 12	Red	255 204	0 0	0 0	Continuous	Thin	1.3mm high text, dimensions, symbols. For smaller non-standard annotations when needed, for sheet sizes A4 – A2.
Standard Annotations 018 <i>White Background and Printing</i>	2 52	Yellow	255 204	255 204	0 0	Continuous	Thin	1.8mm high text, dimensions, symbols. For smaller non-standard annotations when needed, for sheet sizes A4 – A2.
Standard Annotations 025 <i>White Background and Printing</i>	3 92	Green	0 0	255 204	0 0	Continuous	Thin	2.5mm high text, dimensions, symbols. Standard for sheet sizes A4 – A2.
Standard Annotations 035 <i>White Background and Printing</i>	4 132	Cyan	0 0	255 204	255 204	Continuous	Thin	3.5mm high text, dimensions, symbols. Standard for sheet sizes A1 – A0. Also used in A4 – A2 for Reference Titles (Elevations, Details, Sections) and stamps.

Layer Name	Colour					Linetype	Lineweight	Application
	ACI	Name	R	G	B			
Standard Annotations 050 <i>White Background and Printing</i>	5 172	Blue	0 0	0 0	255 204	Continuous	Thin	5.0mm high text. Used in A4 – A2 for Drawing Titles. Also used in A1 – A0 for Reference Titles (Elevations, Details, Sections) and Stamps.
Standard Annotations 070 <i>White Background and Printing</i>	6 212	Magenta	255 204	0 0	255 204	Continuous	Thin	7.0mm high text, dimensions, symbols. Used in A1 – A0 for Drawing Titles.
Standard Annotations Lines LW3	8	Grey	128	128	128	Continuous	Thin	Thin border lines.
Standard Annotations Lines LW5	8	Grey	128	128	128	Continuous	Wide	Wide border lines.
Standard Annotations Logos	8	Grey	128	128	128	Continuous	Zero	If needed, the layer colour and lineweight can be modified to match the Client Logo.
Standard Hatching LW3	9	Light Grey	192	192	192	Continuous	Thin	For normal hatching. If needed can be used for Sheet Metal Bend Lines (using Dash Dot linetype and colour ACI 243).
Standard Images	9	Light Grey	192	192	192	Continuous	Zero	A common layer for inserted images.
Standard Lines Center LW3	8	Grey	128	128	128	Center	Thin	Center lines (axis of symmetry). Grid Lines (and reference symbols) should be placed on the Grid Layer. Cutting Planes (sectioning line symbols) should be placed on Annotations layers.

Layer Name	Colour					Linetype	Lineweight	Application
	ACI	Name	R	G	B			
Standard Lines Continuous LW3	7	Opposite	0	0	0	Continuous	Thin	Visible tangent lines (fillets). Break lines and cosmetic threads. Diagonals across holes or recesses within floors and walls. Visible masonry walls (or hatching). Fictitious outlines (parts removed). Imaginary intersection of surfaces. Outlines of revolved sections. General lines and symbols in P&IDs (diagrammatic).
Standard Lines Continuous LW5	7	Opposite	0	0	0	Continuous	Wide	Visible edges and contours. Broken-out section lines. Main lines in P&IDs (diagrammatic).
Standard Lines Continuous LW6	7	Opposite	0	0	0	Continuous	X Wide	Concrete reinforcement bars where "Wide" concrete outlines are used.
Standard Lines Dash Dot LW3	(216)	Violet	128	0	128	Dash Dot	Thin	Pitch lines. Path lines for indicating movement. Features in front of a cutting plane (use Phantom for adjacent parts). For repeated detail. Material that is to be removed. Developed views, and Sheet Metal Bend Lines (upward bends).
Standard Lines Dash Dot LW5	7	Opposite	0	0	0	Dash Dot	Wide	Pipelines, drains and services. Special surface or treatment requirement.
Standard Lines Dash Double Dot LW3	(136)	Teal	0	128	128	Dash Double Dot	Thin	Sheet Metal Bend Lines for downward bends (that is, hidden bend lines).

Layer Name	Colour					Linetype	Lineweight	Application
	ACI	Name	R	G	B			
Standard Lines Dot LW3	9	Light Grey	192	192	192	Dot	Thin	Sewing or stitching.
Standard Lines Hidden LW3	7	Opposite	0	0	0	Hidden	Thin	Hidden edges and contours. Jumper connections, magnetic or electric screen.
Standard Lines Grid LW3	9	Light Grey	192	192	192	Center	Thin	Grid lines and Reference Symbols.
Standard Lines Phantom LW3	9	Light Grey	192	192	192	Phantom	Thin	Outlines of adjacent parts. Alternative position, repetition, or reference.
Standard Non-Printing <i>Non-Printing</i>	9	Light Grey	192	192	192	Dashed	Zero	A common layer for placing non-printing drawing elements, such as construction lines or reference notes.
Standard References	9	Light Grey	192	192	192	Continuous	Zero	A common layer for inserted externally referenced models.
Standard Revisions <i>White Background and Printing</i>	1 12	Red	255 204	0 0	0 0	Continuous	Thin	For Revision Clouds and Symbols; along with inverted “On Hold” Clouds.
Standard Views <i>Invisible</i>	9	Light Grey	192	192	192	Dashed	Zero	A common invisible layer for Generated Views and Viewports.

Line Width = Lineweight