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1 Introduction

AutoCAD standards & Design guidelines is a document contains all the standards which are required to create digitized file from AutoCAD software. AutoCAD files are very important asset in the industry. They are the main source of information for the facilities management and very important for the future projects. This is the reason AutoCAD files must be standardized for the institution and external consultant. In that way it’s easier for users to understand.

As everybody in the industry changing their standard to keep up with technology, University of Ottawa is introducing their CAD standards and Design guidelines. The document is not only made for standardization but also to fulfill our as‐builts requirements from internal and external consultants.

University of Ottawa is taking a step forward to keep up with technology related to building information modelling (BIM), Revit and new standards creation will be taking in place to being up to date with the emerging technology of architecture, engineering, and construction industry.

1.1 Scope

This AutoCAD and Design standards must be applied for files which are generated by AutoCAD. The standards must be followed by both internal UoFO services and external consultants.

AutoCAD files including as‐builts must meet this standard. Consultants shall update their drawing based on contractor mark‐ups, all construction changes and final site investigation as per uOttawa Standard.
2 Delivery of the Project

2.1 Supporting file format

University of Ottawa requires all the AutoCAD drawings need to be supported by Autodesk native format and it needs to be in DWG format (Minimum AutoCAD version 2015). They may not be submitted in any other format such as PDF or DWF format unless specified in contract. University will not accept format that are no longer supported by Autodesk.

2.2 Starting of the project

All files must be created using University of Ottawa CAD and design standards. University of Ottawa undertake the quality assurance and drawings coordination to ensure that those files meet all the requirement. In terms of AutoCAD files provided by consultants or externally, UofO project manager or in charge of this facility will provide necessary requirements to meet the standards. All the necessary requirements are provided for the AutoCAD files startups, templates, block library and supporting design standards on the UofO website. Submission of new files must meet this requirement in terms CAD and design guidelines.

CAD standards of University of Ottawa is available on its website at https://www.uottawa.ca/facilities/sectors/integrated-project-delivery

Symbol and block library

University of Ottawa has developed symbols and block library for the AutoCAD files and other construction standards. These are available on the website at: https://www.uottawa.ca/facilities/sectors/integrated-project-delivery

2.2.1 AutoCAD base plan

Base plan is basically a drawing which shows area of work on the property. It is used to get information about the size of the project and area of project.

2.2.2 Template drawing

Drawing templates are in metric units and basically in millimeters. The templates are provided with all the layers, dimension styles, text styles, and with blocks included. This template must be used to start new project or drawing.

Please visit University of Ottawa standards website from here to get this data: https://www.uottawa.ca/facilities/sectors/integrated-project-delivery
3 Drawing Quality Assurance

University of Ottawa will be monitoring this standard through different criteria.

3.1 File review

- Layer management
  All files must be created using university of Ottawa layering standard. Layer names must meet the standard layers. University of Ottawa follows AIA layering Standards. All the entities must be on their correct layers. (See section 4-layer standards)

- Color management
  University of Ottawa line weight and colors must be used. (See section 5-layer standards)

- Text style management
  All file must use standard text sizes and fonts mentioned as in standard. (See section 6- text styles)

- Dimension style management
  UofO dimension styles must be used. (See section 7- text styles)

- Line type and hatch pattern management
  Standard line types and hatch pattern only being used for AutoCAD files. There are different line types and colors for each specific layer.

  Line types file is provided on our website at: https://www.uottawa.ca/facilities/sectors/integrated-project-delivery

- Title blocks and scales
  File must be set in their respective title blocks and scale. Title blocks must contain necessary information. Graphical or written scale must be written on all plans, elevation, section and details. Etc. (See section 9-sheets and title blocks) for necessary information to provide in title block.

  Title blocks are provided in template file. Which is available at: https://www.uottawa.ca/facilities/sectors/integrated-project-delivery

- External references

  External referencing only being used when its required. And it must be in appropriate layer.
4 Layers Standards

Layers are the tool to differentiate data with the help of lines and colors. It depicts data by their work group. Layering is the way to identify the entities with help of graphical screen represent without using annotation.

AIA Layering Key style: The key style is set to AIA Key style without modification or adjustment. New layers may be added to a drawing with uOttawa permission, but only as required by project constraints and always in conformance to the AIA Standards. For example, new layers may be created using Status to separate existing, demolition and new construction geometry.

University of Ottawa follows the AIA layering standard. All digital AutoCAD files must follow this standard.

A complete list of layers is provided in Appendix A
A detailed explanation of layers naming convention and creation of new layers is provided in Appendix B

To simplify the layering, drawing data can be broken into two major groupings: Major Files and Supporting Files. The level of complexity and number of layers required for the two groups are significantly different.

All layers must meet AIA layering standard as described in standards.

4.1 Major Files

Major Files contain basic plan views of the project. (i.e. base plan, floor plans, site plan, etc.

This AutoCAD files must follow AIA layering standards and all the entities must be in their appropriate layers. For example, these major AutoCAD files which include walls, doors, windows, floor fixtures, curtain wall, structural elements, stairs must be in their appropriate layers.

4.2 Supporting Files

Supporting files may contains sections, details, elevations, title page, legend, etc.

This data requires minimum layering requirements. Details does not need to be in separate layers. For example, in building details can be drawn in minimum use of layers, although the annotation and dimensions should be in their appropriate layers.
4.3 Layers naming convention

Layering of AutoCAD files must follow AIA layering standards.

The layer is the basic tool for organizing and managing graphic information. Layers are used to sort graphic objects into groupings of related data. AIA has developed a modular, alphanumeric layer nomenclature format designed to sort graphic data in a specific manner.

The layer name format consists of five fields separated by hyphens.

- The first two fields — Discipline, Four letter major
- The last two fields — optional four-letter majors and optional one letter status

X-XXXX-XXXX-X

X - Discipline
XXXX – Four letter Majors
XXXX – optional four-letter majors
X – optional one letter status

Two-Field paysers name cannot be accepted.

**Discipline Field - X-XXXX-XXXX-X**

The Discipline Field describes Major layer content. It may represent whole drawing or parts of different disciplines. For example, “A” used for “Architectural” floor plans. Which includes whole drawing.

Disciplines List:

- A-Architectural,
- B-Geotechnical,
- C-Civil,
- E-Electrical,
- F-Fire Protection,
- G-General,
- I-Interiors,
- L-Landscaping,
- M-Mechanical,
- P-Plumbing,
- Q-Equipment,
- S-Structural,
- T-Telecom,
- V-Survey/Mapping,
- Z-Contractors.
Four letter major - X-XXXX-XXXX-X

The four-letter major identifies the most common types of information. These four-letter major disciplines are provided in Annex A – CAD layers. This field has most common group abbreviations. It can also be used for supporting data such as sections, details.

Examples of Four-Letter Major Field.

WALL – Wall
ANNO – Annotation
CLNG – Ceiling
DOOR – Door
DETL – Detail

Optional Four-Letter Majors - X-XXXX-XXXX-X

The optional Four-letter majors field describes the identity of each layer more in depth. It contains information like physical properties, materials, graphics, text, etc. the full list of optional Four-letter majors Field is provided in Appendix A – CAD layers.

Optional one letter status - X-XXXX-XXXX-X

The Optional One letter name extension allows user to add information about Construction, status, geometry, etc. it may be used with any valid layer from standard layers.

Appendix B contains a complete list of Optional one letter status abbreviations and their descriptions.

Layer name Formats:

Required:
 Discipline Field - Architecture
 Four letter Major Field - Wall
 Optional Four-Letter Major - Interior

A-WALL-INTR

Optional:
 First layer name Extension A-WALL-INTR-BRCK Brick
 Second layer name extension A-WALL-INTR-E Existing
Architectural Floor Plan Examples:

Where plans are specifically titled “New” (or “Existing”), the “N” (or “E”) Second Layer Name Extension modifier indicating the construction status may be omitted, but all disparate construction status extensions must be included.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-WALL-INTR-N</td>
<td>Architecture - Wall - Interior - New</td>
</tr>
<tr>
<td>A-WALL-INTR-X</td>
<td>Architecture - Wall - Interior - Remove</td>
</tr>
<tr>
<td>A-DOOR-INTR</td>
<td>Architecture - Door - Interior (“Existing” implied)</td>
</tr>
<tr>
<td>A-DOOR-INTR-N</td>
<td>Architecture - Door - Interior - New</td>
</tr>
<tr>
<td>A-WIND-EXTR</td>
<td>Architecture - Window - Exterior (“Existing” implied)</td>
</tr>
</tbody>
</table>

Symbols Examples:
When a symbol is placed to represent an object, it must be placed in a symbols layer.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-SITE-SYMB</td>
<td>Electrical - Site Distribution - Symbols (Power poles, luminary, etc.)</td>
</tr>
</tbody>
</table>

Detail Examples:

Supporting data such as dimensions, annotation, and hatching should be separated as indicated in the examples below. Color should be set “By layer” for most of the entities in a layer and specifically where necessary to obtain varying line weights in that layer.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-DETL-LINE</td>
<td>Architectural - Detail - Line work (Wall, floor and roof line work)</td>
</tr>
<tr>
<td>A-DETL-TEXT</td>
<td>Architectural - Detail - Text (Annotations, title, graphic scale, etc.)</td>
</tr>
<tr>
<td>A-DETL-DIMS</td>
<td>Architectural - Detail - Dimensions</td>
</tr>
<tr>
<td>A-DETL-HCTH</td>
<td>Architectural - Detail - Hatching (Insulation, wood grain, etc.)</td>
</tr>
</tbody>
</table>

Plan Views Examples:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M-ANNO-TEXT</td>
<td>Mechanical - Annotation - Text (Titles, graphic scale, annotation bubbles)</td>
</tr>
<tr>
<td>S-WALL-CONC</td>
<td>Structural - Wall -Concrete</td>
</tr>
</tbody>
</table>
4.4 Creating New Layers

Provided standard Layers List (Appendix A – CAD Layers) might not contain all the layers, in that case this section provides instruction to create new layers.

These new layers must follow layer naming standard. It must include discipline field, Four Letter Major field. However, these layers might use other naming conventions as Optional Four-letter majors for detailed explanation.

5 Color standards And line weights (STB)

- These CAD Standards are based on Style Tables (STB) rather than traditional Color Table (CTB) files. The standard AIA and AEC style tables should be used with all new projects. In any instance where legacy files are used as a starting point for new projects, the legacy drawings should be converted (preferably using the Layer Translator) to match AIA/AEC layering conventions.
- Style Tables (STB) are based on layer and object lineweights, where Color Tables (CTB) are based on the objects’ color determining their lineweights. Adjusting the layers’ colors and lineweights through Layer Manager should in most cases correct any legacy drawings.
- Revision Tables: The revision tables included in the templates are a separate element from the title block geometry to allow for easier manipulation of the revision table data. Revision Tables are to include documented version and revision changes as guided by uOttawa revisioning standards which are a separate document from this CAD Standard.
- Layers must be assigned to appropriate color and should be created with color “by Layer” where possible. STB is provided on the website.
6 Block and symbol Standard

The uOttawa standard block and symbol libraries are posted on the website with CAD Standard. Libraries are available in with this version of Standard. However, any blocks created or used in uOttawa compliant drawings must adhere to the following:

- **Block Units**: Symbols and blocks are to be drawn in native units. Units defined in block.
- **Layering**: Block layers must confirm to the AIA layering standard. Block should be created on layer 0 in addition to being set at “ByLayer” for colour and linetype, then when it is inserted on the appropriate layer, it will take on all the appropriate properties.
- **Annotative**: Where possible, symbols (i.e. non-real-world blocks) should be set annotative.
- **Dynamic and Multi-view**: Intelligent blocks should be used/created where applicable.
- **Attributes**: Applicable attributes should be used where practical.
- **Non-block Representations**: In no instance should geometry (plines, &c) be used to represent block items. That is, for example, simple rectangles or circles may not be used to draw desks.
- **Palettes/DesignCenter**: AutoCAD Palettes and DesignCentre should be used as the primary methods for inserting blocks. In the case of RCP blocks, use only DesignCenter.
- **Existing Blocks**: Do not create blocks where existing uOttawa standard blocks already exist.

6.1 Symbol (Annotative)

Symbols are AutoCAD® blocks that are pictorial representations of objects not drawn to scale, such as an electrical outlet symbol. Drawing scale affects symbols in the same manner as annotation and therefore must be inserted into a working drawing at a scale factor corresponding to the drawing or plot scale as required.

**Note**: It is now possible to create annotative blocks that can scale themselves automatically to any given scale. To avoid confusion, it is strongly recommended to use only one method throughout each project drawing set: the traditional method that lets the user choose the insertion scale, or the Annotative option that automatically manages the insertion scale.

Basic rules for the creation of symbols must be followed:

a) Symbols should be drawn at actual plotted size and not smaller than 2.5 mm. The Annotative option can also be selected when creating the block.

b) Symbols should be inserted using the plotted scale if they are inserted in model space, and 1 if they are inserted in paper space (layout), i.e., 50x on a 1:50 floor plan in model space, or 1x on a 1:1 drawing sheet in paper space. If the block was created with the annotative option selected, it will scale itself automatically during the insertion.
7 Text Style

In accordance with the practices in place across the entire University of Ottawa, the following Fonts (Myriad, Minion, Arial and Times New Roman) are permitted in uOttawa documentation. These may be used in regular, italic, bold or bold italic variants, but no other fonts are to be used in any instance. The one exception to this above stated rule is RomanS.SHX. This is a Roman Simplex Shape font. It should only be used in rare instances where the text is intended to change line weight in accordance with the layer on which it is placed.

The text styles defined in the uOttawa.DWT (Template) are Arial and TimesNewRoman. Other text styles (Standard, ArchDim, Annotative) all call on the Arial.TT font. It is unacceptable to either create new styles or to use the font selection features in the Mtext command. An Arial-Bold font has been added to the standard for convenience. Consultants with specific fonts in their logos are asked to generate non-textstyle dependent (e.g. traced) variants of their logos.

Text height must be set to 0 so that it can be changed to suit different scaling requirements. Company Logo can be created with custom fonts. Paragraphs must be created with MTEXT objects.

7.1 Text Style Naming & Height

It must reflect the information below:

- Usage
- Font name
- Any other special requirements

Examples:

```
TITLE_ARIAL_WF-1.2   ARIAL and width factor 1.2 used for titles.
NOTES_ARIAL_ANNO     ARIAL and annotative property enabled for notes.
```

Text Height

Standard Text Heights:

- 2.5mm  notes, dimensions, annotations
- 4.5mm, 5.0mm  Major Headings/Titles
- 3.5mm  Subheadings
8 Dimension style and Multileader style

All drawings are to be dimensioned using the uOttawa dim style which is architectural in appearance and based on Arial text style. Where AEC content (e.g. walls, doors, windows, &c) exist, appropriate AEC dimensioning tools should be used. The AEC dim styles call on the uOttawa dim style in order that they may be indistinguishable from one another in completed AutoCAD drawings. Dimension style usage should be uniform throughout each project drawing set.

Consultants using non-annotative. Dimension styles are required to maintain proper scale and layering of dimensions, including viewport visibilities.

Two formats are used to cover most applications for uOttawa projects:
  a) Engineering with arrowheads for dimension and leader terminators
  b) Architectural with ticks for dimension terminators and arrowheads for leader terminators

Dimension styles format:

E = Engineering
A = Architecture
Any Letter = User-Defined

Drawing Scale: 100 = 1:100
50 = 1:50
0 = Annotative
Units: mm = Millimeters, m= Metres

Modifiers: None = Normal
0 = Both extension lines suppressed
1 = First extension line suppressed
2 = Second extension line suppressed
CL = Centerline extension lines
Anno = Annotative (always as last modifier)

Examples:
A_50mm             architectural dimension for floor plans
E_1000m            engineering dimension for site plans

8.1 Multileader style

Multileader style should be uniform throughout the project. It should be annotative and in appropriate scale.

It follows same naming convention as dimension styles.
8.2 Line types

The complete uOttawa line type definitions is provided with in template file of CAD Standard. It is posted on a uOttawa website. Line types must be defined in metric units (mm) to conform to uOttawa standard.

- The global line type scale (LTscale) must always be set to 1.0.
- object LTsizes should also be set to 1.0 unless specifically required to be otherwise by project constraints.

1. Final Drawings: Title sheet must be in paper space with multiple, variously scaled VIEWPORTS.
   a) MEASUREMENT = 1
   b) LTSCALE between 0.5 and 1.0 (See Note 3 below.)
   c) PSLTSCALE = 1 (On)

The LTSCALE value should be set between 0.5 and 1.0 while printing in paper space depending on the size of the line types used in the drawing.

9 Sheets and title blocks

Sheets and Title blocks are available at:

https://www.uottawa.ca/facilities/sectors/integrated-project-delivery

9.1 Sheet Sizes

Standard page sizes are to be set to ANSI X3.151-1987 sized papers in sizes A and B and architectural sized papers in ARCH C, D, and E. For further clarity, their sizes and ratios are:

ANSI A expand (aka Letter format), aspect ratio of 1.2941
   Horizontal: 11"x8½" (279x216mm) Ratio 22:17 (two titleblock options provided)
   Vertical: 8½" x11" (216x279mm) Ratio 17:22

ANSI B expand (aka Ledger or Tabloid format), aspect ratio of 1.5455
   Horizontal: 17"x11" (432x279mm) Ratio 17:11 (two titleblock options provided)
   Vertical: 11"x17" (279x432mm) Ratio 11:17

Arch C 24"x18" (610x457mm) Ratio 4:3

Arch D 36"x24" (610x914mm) Ratio 3:2

Arch E 48"x36" (1219x914mm) Ratio 4:3
9.2 Title Blocks:
uOttawa title blocks have been modernized to include Fields. Sizes have been adjusted for the above page sizes and to allow for Océ, PDF, DWF and JPEG printers.

All project drawings must be compiled on standard sheets and must be in accordance with the PSPC corporate identity. The lead technologist for each project will coordinate the size of the sheet to be used and provide a standard title block and the content of the title block fields. Title block must contain necessary information. Mentioned below:

- Project name
- Building Name & Address
- Drawing Title, e.g. floor plan, building
designed by and date
- Drawn by and date
- Approved by and date
- Consultant Project #
- Project manager
- uOttawa project number
- Drawing number
- Revision Table
- Consultant logo or Company name (Address and Contact information)
- North arrow
- Seal (Professional Stamp)
- Sheet Number

uO Logo

The uOttawa 2019 logo has been converted to DWG and has been blocked. The logo should never be used at a scale less than 25 in a metric drawing or less than 1 in an imperial drawing. An appropriate scale for the page size has been set on each title block.

10 Unit and Scales

All uOttawa projects to be completed in metric units. For further clarity, all units to be in millimeters (mm), except civil drawings which may be drawn in metres (m). Metre based drawings must be dimensioned to three decimal places.

This rule is to be applied at the base drawing level. Blocks should be drawn in their own native units, and such units should be specified at the time of block creation. That is, furniture or other items dimensioned in inches by their manufacturers should be drawn in inches and the items’ block definition should then be set to inches.
Drawing scales must be in metric format for all and be in appropriate scales.

Preferred Viewport Scale:

<table>
<thead>
<tr>
<th>Scale 1:</th>
<th>Scale 1:25</th>
<th>Scale 1:500</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:1</td>
<td>1:25</td>
<td>1:500</td>
</tr>
<tr>
<td>1:2</td>
<td>1:50</td>
<td>1:1000</td>
</tr>
<tr>
<td>1:5</td>
<td>1:100</td>
<td>1:2000</td>
</tr>
<tr>
<td>1:10</td>
<td>1:200</td>
<td>1:5000</td>
</tr>
<tr>
<td>1:20</td>
<td>1:250</td>
<td>1:10000</td>
</tr>
</tbody>
</table>

11 Drawing file naming and Tab naming

All AutoCAD file must be named and arranged in appropriate manner. Naming of the AutoCAD files must be easily understandable and logical. It can be named with project name and type of drawings. (Architectural, Electrical, Mechanical, Fire, etc...)

Tabs in AutoCAD files must be named appropriate letters and numbers

Example:

**Architectural**

floor plan tabs must be names as
A000, A001, A002, A003 etc...

**Electrical**

E000, E001, E002, E003, etc....

**Mechanical**

Front End: M000
Fire Protection: M100
Plumbing: M200
HVAC: M300
Utilities: M400
Controls: M500
12 Furniture and interior design

Furniture and interior standards will be provided with future version of CAD standards.

While furniture blocks, and layers must follow standards as mentioned in document. New furniture blocks can be created with proper layers and block standards.

13 Final Delivery & Quality Assurance:

The University of Ottawa reserves the right to use this document as the basis of a quality assurance document for all submitted drawings. Files not conforming to this standard may be deemed to be incomplete. Please ensure that all applicable standards have been applied before submitting work for acceptance to uOttawa PRS.

Architectural:

University of Ottawa is expecting to receive only FLOOR PLANS (include furniture and equipment's) and RCP (reflected ceiling plans) drawings according to the current standards. This AutoCAD files must follow layering standard and 3 primary blocks (Room Number, Door and window). All the rest of AutoCAD files as per the design and construction guidelines.

Mechanical & Electrical:

University of Ottawa is expecting to receive HVAC, Fire protection, Utilities, Plumbing, Controls and electrical details all in their own separate files. This AutoCAD file must contain Xref of their floor plans. Final delivery of this AutoCAD files must be in one folder which contains their Xref files. AutoCAD files must be generated with UofO blocks which are provided in the template.
Appendix A – CAD Layers

The list provided below is the most used layers for University of Ottawa following AIA standards. New layers can be created using this AIA format. A layer name may include additional information for grouping that described building system or related data.

Full List of layers with line types, colors and plotting styles provided below:
<table>
<thead>
<tr>
<th>Name</th>
<th>LAT/ED</th>
<th>Color</th>
<th>Linetype</th>
<th>Lineweight</th>
<th>PlotStyleName</th>
<th>Plottable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arch-Dec6</td>
<td>0</td>
<td>1175</td>
<td>Hidden</td>
<td>119</td>
<td>HIDDEN2</td>
<td>0</td>
<td>Architectural - Doors</td>
</tr>
<tr>
<td>Arch-Dec5</td>
<td>0</td>
<td>1175</td>
<td>Hidden</td>
<td>119</td>
<td>HIDDEN2</td>
<td>0</td>
<td>Architectural - Doors</td>
</tr>
<tr>
<td>Arch-Dec4</td>
<td>0</td>
<td>1175</td>
<td>Hidden</td>
<td>119</td>
<td>HIDDEN2</td>
<td>0</td>
<td>Architectural - Doors</td>
</tr>
<tr>
<td>Arch-Dec3</td>
<td>0</td>
<td>1175</td>
<td>Hidden</td>
<td>119</td>
<td>HIDDEN2</td>
<td>0</td>
<td>Architectural - Doors</td>
</tr>
<tr>
<td>Arch-Dec2</td>
<td>0</td>
<td>1175</td>
<td>Hidden</td>
<td>119</td>
<td>HIDDEN2</td>
<td>0</td>
<td>Architectural - Doors</td>
</tr>
<tr>
<td>Arch-Dec1</td>
<td>0</td>
<td>1175</td>
<td>Hidden</td>
<td>119</td>
<td>HIDDEN2</td>
<td>0</td>
<td>Architectural - Doors</td>
</tr>
<tr>
<td>Arch-Dec0</td>
<td>0</td>
<td>1175</td>
<td>Hidden</td>
<td>119</td>
<td>HIDDEN2</td>
<td>0</td>
<td>Architectural - Doors</td>
</tr>
</tbody>
</table>

Note: The table above contains a list of architectural elements and their corresponding properties, such as name, layer, color, linetype, linewidth, plot style name, and plottable status. Each element is described with a brief explanation or function within an architectural context.
Appendix B – layer Field Description

**Four Letter Major**

In this list below, the following abbreviations used to create layers. These can be used to create new layers.

This field is only use for group field:

\[x-XXXX-xxxx-x\]

<table>
<thead>
<tr>
<th>EXT.</th>
<th>DISCRIPTION</th>
<th>EXT.</th>
<th>DISCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
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### Optional Four-Letter Major

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x-xxxx-XXXX-x
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OPTIONAL ONE LETTER STATUS

This layer field names can also be used in single layer field and vice versa. This field contain building systems and other supporting data. In some condition this field can be four-letter status which requires supporting data for layers.

x-xxxx-xxxx-X

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Examples

Architectural Floor Plan

This will be the final outcome of the illustrated Architectural floor plan.

Figure 1 Final result of Architectural Floor plan
Layers Description

These are some of the key layers and blocks of Architectural floor plans. Architectural floor plans must have these three blocks (mentioned in yellow outline):

- *Room number*,
- *Door*,
- *Window*.

Note: These are a sampling for layers. For More details and Examples of AutoCAD Architectural, mechanical and electrical files are provided at:

Website
RCP (Reflected Ceiling Plan) Floor Plan

This is what the AutoCAD file should look like while working.

Figure 3 Working AutoCAD file of Reflected Ceiling Plan
This will be the final outcome of the illustrated RCP (Reflected Ceiling plan) floor plan.
Glossary

“AutoCAD” shall mean CAD software developed by Autodesk Inc.

“Layers” shall mean the dividing elements for AutoCAD drawings.

“AIA” American institute of Architects

“Multileader” shall mean A line with an arrowhead and attached text pointing at another object.

“Title block” shall mean title block is a border drawing inserted as an AutoCAD block on another drawing. The title block utility can update attributes on the title block. It contains different types of information about project and drawing.

“Viewport” shall mean the window or frame within which a view of the drawing is visible. In some complex AutoCAD programs viewports are considered complex objects and can be placed in drawings. Many programs also support the use of multiple viewports which can simultaneously show different parts of the same drawing. This is especially important when working in 3D.

“Template” shall mean A drawing template file is a drawing file that has been saved with a .dwt file extension, and it specifies the styles, settings, and layouts in a drawing, including title blocks. The default drawing template files are provided as samples

“Attribute” shall mean Information or data about a drawing object which can be hidden or appear in the drawing as text. Often this information can be extracted from the drawing and used in a spreadsheet or other program.

“CAD” Computer-aided design and drafting.

“Units” shall mean Units of measure represented by numbers in a CAD program. Usually units are inches or feet but can be anything from millimeters to light years.