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UofO CAD Standards
And Design Guidelines



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University of Ottawa

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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 our services. 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. In that way it's easier for users to understand.

As everybody in the industry changing their standard to keep up with technology, UofO is revealing their CAD standards and Design guidelines. UofO 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, mainly destined for the internal use of the UofO and for external Consultants for final delivery or on demand.

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 UofO Standard.



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2 Delivery of the Project

2.1 Supporting file format

UofO 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 by 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 and / or Submittal

All files must be submitted using UofO CAD and design standards. UofO 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 relevant AutoCAD files startups, templates, block library and supporting design standards on the UofO website. Final submission of new files must meet this requirement in terms CAD and design guidelines.

2.2.1 Symbol and block library

UofO has developed the main symbols and block library for the AutoCAD files and other construction standards which suits its needs.

2.2.2 AutoCAD base plan

UofO 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.

2.2.3 Template drawing

Drawing templates are in metric units and basically in millimeters. The templates are provided with all the Built-up Layers, Symbols, blocs, Templates Title sheets and other. This template could be used to start new project or drawing.

The electronic format of the Template drawings can be obtained by contacting:

Alvaro Pérez Martinez

aperezma@uottawa.ca

3 Drawing Quality Assurance

UofO will be monitoring this standard through different criteria.

3.1 File review

All relevant Layers, Colors, Line types and similar must be following UofO standard highlighted below.
All the entities must be on their correct layers.

External referencing shall only be used when its required. And it must be in appropriate layer.



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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 respect to the listed parameters, and 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.

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.

4.1 Major Files

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

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 payers 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.



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Four letter major - X-XXXX-XXXX-X

The four-letter major identifies the most common types of information. This 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.

Required Layer name Formats:

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.

A-WALL-INTR-N	Architecture - Wall - Interior - New
A-WALL-INTR-X	Architecture - Wall - Interior - Remove
A-DOOR-INTR	Architecture - Door - Interior (“Existing” implied)
A-DOOR-INTR-N	Architecture - Door - Interior - New
A-WIND-EXTR	Architecture - Window - Exterior (“Existing” implied)

Symbols Examples:

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

E-SITE-SYMB Electrical - Site Distribution - Symbols (Power poles, luminary, etc.)

Details 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.

A-DETL-LINE	Architectural - Detail - Line work (Wall, floor and roof line work)
A- DETL -TEXT	Architectural - Detail - Text (Annotations, title, graphic scale, etc.)
A- DETL -DIMS	Architectural - Detail - Dimensions
A- DETL -HCTH	Architectural - Detail - Hatching (Insulation, wood grain, etc.)

Plan Views Examples:

M-ANNO-TEXT	Mechanical - Annotation - Text (Titles, graphic scale, annotation bubbles)
S-WALL-CONC	Structural - Wall -Concrete

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.

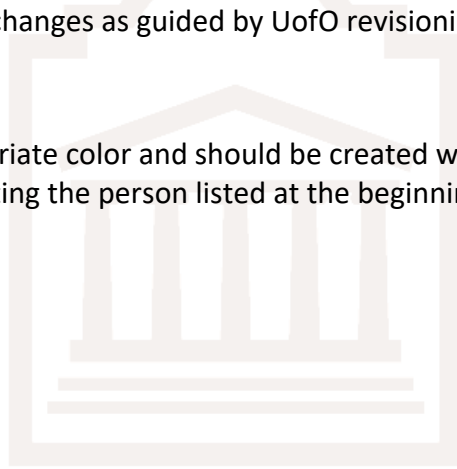
5 Color standards And line weights (STB)

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 UofO 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 file will be provided by contacting the person listed at the beginning of this document.



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6 Block and symbol Standard

The UofO 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 UofO 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 conform to the AIA layering standard. Block should be created on layer 0 in addition to being set at “ByLayer” for colour and linetype should be “Byblock”, 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 UofO 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:

- 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.
- 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 UofO, the following Fonts (Myriad, Minion, Arial and Times New Roman) are permitted in UofO 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 UofO.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.

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.

Text styles 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.

Standard Text Heights:

2.5mm	notes, dimensions, annotations
4.5mm, 5.0mm	Major Headings/Titles
3.5mm	Subheadings

8 Dimension style and Multileader style

UofO Dim style is 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 UofO 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.

Two formats are used to cover most applications for UofO projects:

- Engineering with arrowheads for dimension and leader terminators
- 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)

Dimension styles 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 UofO line type definitions is provided with in template file of CAD Standard. It is posted on a UofO website.

Line types must be defined in metric units (mm).

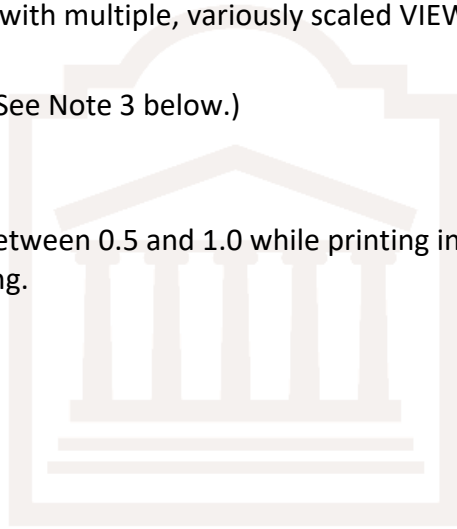
- The global line type scale (LTscale) must always be set to 1.0.
- object LTscales should also be set to 1.0 unless specifically required to be otherwise by project constraints.

Final Drawings:

Title sheet must be in paper space with multiple, variously scaled VIEWPORTS.

- MEASUREMENT = 1
- LTSCALE between 0.5 and 1.0 (See Note 3 below.)
- 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.



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9 Sheets and title blocks

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

UofO 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
- Project manager
- UofO project number
- Drawing number
- Revision Table
- Consultant logo or Company name (Address and Contact information)
- North arrow
- Seal (Professional Stamp)
- Sheet Number
- Other as necessary

UofO Logo:

The UofO 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.



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10 Unit and Scales

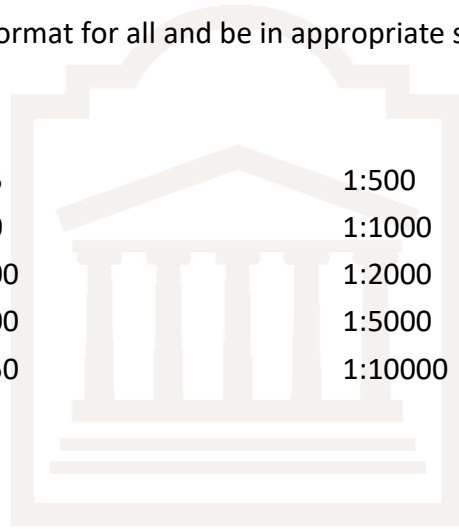
All UofO projects to be completed in metric units. For further clarity, all units to be in millimeters (mm), except civil drawings which may be drawn in metres (m). Metre based drawings must be dimensioned to three decimal places.

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:

1:1	1:25	1:500
1:2	1:50	1:1000
1:5	1:100	1:2000
1:10	1:200	1:5000
1:20	1:250	1:10000



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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.

File naming examples:

Architectural

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



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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 are incorporated in the Template drawings listed at the beginning of this document.



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13 Final Delivery & Quality Assurance

The UofO 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 UofO.

Architectural:

UofO is expecting to receive only **FLOOR PLANS (include furniture and equipment)** and **RCP (reflected ceiling plans)** dwgs according to the current standards. This AutoCAD files must follow layering standard and the primary blocks which mainly include – but not limited to:

- Door & Room numbers attributes, Door and Window blocks, and similar.
- M&E: All blocks, symbols, and attributes.

Mechanical, Electrical & Plumbing:

UofO 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 mainly include – but not limited to:

- M&E: All blocks, symbols, and attributes.



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Appendix A – CAD Layers

The list provided below is the most used layers for UofO 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:



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A-Floor-Edge	A-FR-EDG	1	Continuous	20	Full Saturation	Always true	Architectural - Floor, Edge
A-Floor-Gate	A-FR-ELV-GOP	5	Continuous	40	Full Saturation	Always true	Architectural - Floor, Elevator cam and equipment
A-Floor-Rad	A-FR-MWLR	154	Continuous	25	Full Saturation	Always true	Architectural - Floor, Millwork
A-Floor-Rad-Lower	A-FR-MWLR-STG	161	HIDDEN2	15	Full Saturation	Always true	Architectural - Floor, Millwork, Lower cabinets, storage under counter
A-Floor-Rad-Lower-N	A-FR-MWLR-STG-N	5	HIDDEN2	15	Full Saturation	Always true	Architectural - Floor, Millwork, Lower cabinets, storage under counter - New work
A-Floor-Rad-N	A-FR-MWLR-N	4	Continuous	25	Full Saturation	Always true	Architectural - Floor, Millwork - New work
A-Floor-Rad-Upper	A-FR-MWLR-UPR	200	HIDDEN2	15	Full Saturation	Always true	Architectural - Floor, Millwork, Upper cabinets
A-Floor-Rad-Upper-N	A-FR-MWLR-UPR-N	11	HIDDEN2	15	Full Saturation	Always true	Architectural - Floor, Millwork, Upper cabinets - New work
A-Floor-Rail	A-FR-FDB-FLB	2	Continuous	25	Full Saturation	Always true	Architectural - Floor, Plumbing fixtures
A-Floor-Race	A-FR-FNC	200	FDMCLINE2	25	Full Saturation	Always true	Architectural - Floor, Fence
A-Floor-Race-N	A-FR-FNC-N	11	FDMCLINE2	25	Full Saturation	Always true	Architectural - Floor, Fence - New work
A-Floor-Rest	A-FR-FNC-GTB	1	Continuous	15	Full Saturation	Always true	Architectural - Floor, Finish transition strips
A-Floor-Gril	A-FR-GRIL	3	Continuous	15	Full Saturation	Always true	Architectural - Floor, Grilles
A-Floor-Level	A-FR-LVL	1	Continuous	20	Full Saturation	Always true	Architectural - Floor, Level changes, ramps, pits, depressions
A-Floor-Level-Symbol	A-FR-LVL-SYB	2	Continuous	10	Full Saturation	Always true	Architectural - Floor, Level changes, ramps, pits, depressions Reference symbols
A-Floor-Opening	A-FR-OPG	2	Continuous	10	Full Saturation	Always true	Architectural - Floor, Openings (cross inside openings)
A-Floor-Opening	A-FR-OPG-OLN	2	Continuous	25	Full Saturation	Always true	Architectural - Floor, Outline (around openings)
A-Floor-Radi-Edge	A-FR-RDP-EDG	1	Continuous	15	Full Saturation	Always true	Architectural - Floor, Radiator Edge
A-Floor-Rim	A-FR-RIB	1	Continuous	20	Full Saturation	Always true	Architectural - Floor, Riser treads, escalators, ladders
A-Floor-Rim-Edge	A-FR-RIB-EDG	1	Continuous	10	Full Saturation	Always true	Architectural - Floor, Riser treads, escalators, ladders Edge
A-Floor-Rim-Upper	A-FR-RIB-UPR	1	Continuous	20	Full Saturation	Always true	Architectural - Floor, Riser treads, escalators, ladders handrails / guard rails
A-Floor-Rim-Symbol	A-FR-RIB-SYB	2	Continuous	10	Full Saturation	Always true	Architectural - Floor, Riser treads, escalators, ladders Reference symbols
A-Floor-Tiles	A-FR-TOL-PRT	1	Continuous	25	Full Saturation	Always true	Architectural - Floor, Toilet partitions
A-Floor-Type-Door	A-FR-TOL-PDR	1	Continuous	25	Full Saturation	Always true	Architectural - Floor, Toilet partitions Door
A-Furniture	A-FRN-FRN	1	Continuous	20	Full Saturation	Always true	Architectural - Furnishings, Furniture in Contract
A-Furniture-Seat	A-FRN-FSR	1	Continuous	20	Full Saturation	Always true	Architectural - Furnishings, Road seating
A-Furniture-Work	A-FRN-FSR-WSP	2	Continuous	20	Full Saturation	Always true	Architectural - Furnishings, Road workstation
A-Furniture-Lab	A-FRN-LAB-FRN	90	Continuous	25	Full Saturation	Always true	Architectural - Furnishings, Road laboratory furniture
A-Furniture-Lab-End	A-FRN-LAB-EDG	1	Continuous	25	Full Saturation	Always true	Architectural - Furnishings, Rurne hoods
A-Furniture-Lab-End-N	A-FRN-LAB-EDG-N	4	Continuous	25	Full Saturation	Always true	Architectural - Furnishings, Rurne hoods - New work
A-Furniture-Lab-Lower	A-FRN-LAB-LAB	44	HIDDEN2	15	Full Saturation	Always true	Architectural - Furnishings, Road laboratory base cabinets and hidden elements
A-Furniture-Lab-Lower-N	A-FRN-LAB-LAB-N	2	HIDDEN2	15	Full Saturation	Always true	Architectural - Furnishings, Road laboratory base cabinets and hidden elements - New work
A-Furniture-Lab-N	A-FRN-LAB-N	3	Continuous	25	Full Saturation	Always true	Architectural - Furnishings, Road laboratory furniture - New work
A-Furniture-Lab-Upper	A-FRN-LAB-UGG	10	HIDDEN2	25	Full Saturation	Always true	Architectural - Furnishings, Road laboratory upper cabinets, elements
A-Furniture-Lab-Upper-N	A-FRN-LAB-UGG-N	1	HIDDEN2	25	Full Saturation	Always true	Architectural - Furnishings, Road laboratory upper cabinets, elements - New work
A-Furniture-Lock	A-FRN-LCK	2	Continuous	25	Full Saturation	Always true	Architectural - Furnishings, Lockers
A-Furniture-Lower	A-FRN-LGG-WSP	2	HIDDEN2	15	Full Saturation	Always true	Architectural - Furnishings, Furniture in Contract, Lower cabinets, storage under workstation
A-Furniture-Upper	A-FRN-LGG	1	HIDDEN2	20	Full Saturation	Always true	Architectural - Furnishings, Furniture in Contract, Upper cabinets/storage
A-Glass	A-GZ-DXT	1	Continuous	25	Full Saturation	Always true	Architectural - Glazing, Exterior
A-Glass-Fram	A-GZ-DXT-FRM	3	Continuous	10	Full Saturation	Always true	Architectural - Glazing, Exterior Frame
A-Glass-Sill	A-GZ-DXT-SIL	1	Continuous	25	Full Saturation	Always true	Architectural - Glazing, Exterior Sills
A-Hatch	A-AN-HTC	8	Continuous	10	25 Percent	Always true	Architectural - Annotation, Texture or hatch patterns
A-Hatch-Edge	A-AN-HTC-GRS	1	Continuous	15	Full Saturation	Always true	Architectural - Annotation, Texture or hatch patterns separations
A-Hatch-Edge-N	A-AN-HTC-GRS-N	4	Continuous	15	Full Saturation	Always true	Architectural - Annotation, Texture or hatch patterns separations - New work
A-Hatch-N	A-AN-HTC-N	8	Continuous	10	25 Percent	Always true	Architectural - Annotation, Texture or hatch patterns - New work
A-Roof-Edge	A-RF-EDG	1	Continuous	20	Full Saturation	Always true	Architectural - Roof, Edge
A-Roof-Edge	A-RF-EDG	1	Continuous	15	Full Saturation	Always true	Architectural - Roof, Equipment
A-Roof-Outline	A-RF-OTL	1	Continuous	20	Full Saturation	Always true	Architectural - Roof, Outline
A-Roof-Slope	A-RUN-DOT	1	Continuous	20	Full Saturation	Always true	Architectural - Unidentified sbs objects, Exterior
A-Window-Gril	A-WN-GRIL	1	Continuous	15	Full Saturation	Always true	Architectural - Unidentified sbs objects, Grilles
A-Window-Inter-TOO1	A-WN-INT1	1	Continuous	15	Full Saturation	Always true	Architectural - Unidentified sbs objects, Interior Type 1
A-Window-Inter-TOO2	A-WN-INT2	2	Continuous	25	Full Saturation	Always true	Architectural - Unidentified sbs objects, Interior Type 2
A-Window-Sill	A-WN-WIN-S	1	Continuous	15	Full Saturation	Always true	Architectural - Unidentified sbs objects, Window sills
A-Window-Upper	A-WN-UPR	1	HIDDEN2	25	Full Saturation	Always true	Architectural - Unidentified sbs objects, Upper
A-Wall-Caul	A-WL-CAV	1	Continuous	15	Full Saturation	Always true	Architectural - Walls, Cauly
A-Wall-Edge	A-WL-EDG	2	Continuous	40	Full Saturation	Always true	Architectural - Walls, Edge
A-Wall-Extr	A-WL-EXT	7	Continuous	50	Full Saturation	Always true	Architectural - Walls, Exterior
A-Wall-Extr-Misc	A-WL-EXT-MISC	7	Continuous	15	Full Saturation	Always true	Architectural - Walls, Exterior Miscellaneous
A-Wall-Extr-TOO1	A-WL-EXT1	7	Continuous	20	Full Saturation	Always true	Architectural - Walls, Exterior Type 1
A-Wall-Extr-TOO2	A-WL-EXT2	5	Continuous	50	Full Saturation	Always true	Architectural - Walls, Exterior Type 2
A-Wall-Extr-TOO3	A-WL-EXT3	1	Continuous	10	Full Saturation	Always true	Architectural - Walls, Exterior Type 3
A-Wall-Extr-TOO4	A-WL-EXT4	7	Continuous	20	Full Saturation	Always true	Architectural - Walls, Exterior Type 4
A-Wall-Fat	A-WL-FAT	1	Continuous	20	Full Saturation	Always true	Architectural - Walls, Fatness
A-Wall-Gril	A-WL-GRIL	1	Continuous	15	Full Saturation	Always true	Architectural - Walls, Grilles
A-Wall-Int	A-WL-INT	4	Continuous	40	Full Saturation	Always true	Architectural - Walls, Interior
A-Wall-Int-Gyp	A-WL-INT-GYS	59	Continuous	40	Full Saturation	Always true	Architectural - Walls, Interior gypse
A-Wall-Int-Gyp-N	A-WL-INT-GYS-N	71	Continuous	40	Full Saturation	Always true	Architectural - Walls, Interior gypse - New Work
A-Wall-Int-Masn	A-WL-INT-MSN	24	Continuous	40	Full Saturation	Always true	Architectural - Walls, Interior masonry
A-Wall-Int-Masn-N	A-WL-INT-MSN-N	30	Continuous	40	Full Saturation	Always true	Architectural - Walls, Interior masonry - New Work
A-Wall-Int-Metal	A-WL-INT-MTL	200	Continuous	40	Full Saturation	Always true	Architectural - Walls, Interior metal
A-Wall-Int-Metal-N	A-WL-INT-MTL-N	11	Continuous	40	Full Saturation	Always true	Architectural - Walls, Interior metal - New Work
A-Wall-Int-Misc	A-WL-INT-MISC	3	Continuous	15	Full Saturation	Always true	Architectural - Walls, Interior Miscellaneous
A-Wall-Int-Patt	A-WL-INT-PAT	8	Continuous	25	30 Percent	Always true	Architectural - Walls, Interior Hatch patterns
A-Wall-Int-Patt	A-WL-INT-PAT	1	Continuous	25	Full Saturation	Always true	Architectural - Walls, Interior Portal-height
A-Wall-Int-Slope	A-WL-INT-SLN	181	Continuous	40	Full Saturation	Always true	Architectural - Walls, Interior slope
A-Wall-Int-Slope-N	A-WL-INT-SLN-N	2	Continuous	40	Full Saturation	Always true	Architectural - Walls, Interior slope - New Work
A-Wall-Int-Wood	A-WL-INT-TM	80	Continuous	40	Full Saturation	Always true	Architectural - Walls, Interior wood
A-Wall-Int-Wood-N	A-WL-INT-TM-N	1	Continuous	40	Full Saturation	Always true	Architectural - Walls, Interior wood - New Work
A-Wall-Move	A-WL-MOV	2	Continuous	25	Full Saturation	Always true	Architectural - Walls, Movable
A-Wall-Opening	A-WL-OPG	1	Continuous	20	Full Saturation	Always true	Architectural - Walls, Openings
C-Curb	C-DW-CUR	2	Continuous	25	Full Saturation	Always true	Civil - Driveways, Curb
C-Prkv-Mrkng	C-PRV-MRK	1	Continuous	15	Full Saturation	Always true	Civil - Parking lots, Pavement markings
C-Road	C-RD-ROD	2	Continuous	25	Full Saturation	Always true	Civil - Roadways
Defpoints	DEFPOINT	7	Continuous	-1	Normal	Always false	Dimension Definition Points
	ELECTRICAL						
E-Annotation	E-AN-TXT	2	Continuous	25	Full Saturation	Always true	Electrical - Annotation, Text
E-Cmp-Misc	E-CL-MISC	1	Continuous	10	Full Saturation	Always true	Electrical - Ceiling, Motion sensor
E-Cmp-Text	E-CL-TXT	2	Continuous	25	Full Saturation	Always true	Electrical - Ceiling, Text
E-Clock	E-CL-CLK	1	Continuous	10	Full Saturation	Always true	Electrical - Clock system
E-Cont-Door	E-CL-COM-DOOR	1	Continuous	10	Full Saturation	Always true	Electrical - Controls and instrumentation, Equipment doors
E-Cont-Door-N	E-CL-COM-DOOR-N	4	Continuous	10	Full Saturation	Always true	Electrical - Controls and instrumentation, Equipment doors - New work
E-Def	E-AN-DET	11	Continuous	25	Full Saturation	Always true	Electrical - Detail
E-Elc-Cond	E-EL-CND	3	E_C_ELECTRICAL_CONDUIT	25	Full Saturation	Always true	Electrical - Electrical, Dimensionary / bypass conduit / culvert
E-Elc-Cond-Clng	E-EL-CND-CLG	2	E_C_ELECTRICAL_CONDUIT	25	Full Saturation	Always true	Electrical - Electrical, Dimensionary / bypass conduit / culvert Ceiling
E-Elc-Cond-N	E-EL-CND-N	4	E_C_ELECTRICAL_CONDUIT	40	Full Saturation	Always true	Electrical - Electrical, Dimensionary / bypass conduit / culvert - New work
E-Elc-Cond-Test	E-EL-CND-TXT	2	Continuous	25	Full Saturation	Always true	Electrical - Electrical, Dimensionary / bypass conduit / culvert Test
E-Elv	E-EV-ELV	51	Continuous	25	Full Saturation	Always true	Electrical - Elevation
E-Elv-Rad	E-EL-RAD	1	Continuous	10	Full Saturation	Always true	Electrical - Electric heat, Radiator
E-Flw-Eqpm	E-FL-EPG	1	Continuous	10	Full Saturation	Always true	Electrical - Fire protection, Equipment
E-Flw	E-FL-FLW	2	Continuous	25	Full Saturation	Always true	Electrical - Lighting
E-Lite-Cir	E-LI-CIR	3	Continuous	10	Full Saturation	Always true	Electrical - Lighting, Circuits
E-Lite-Cir-N	E-LI-CIR-N	4	Continuous	10	Full Saturation	Always true	Electrical - Lighting, Circuits - New work
E-Lite-Cng	E-LI-CLG	2	Continuous	25	Full Saturation	Always true	Electrical - Lighting, Ceiling
E-Lite-Cng-D	E-LI-CLG-D	2	A_HIDDEN2	40	Full Saturation	Always true	Electrical - Lighting, Ceiling - Existing to demolish
E-Lite-Cng-Misc	E-LI-CLG-MISC	2	Continuous	25	Full Saturation	Always true	Electrical - Lighting, Ceiling Motion sensor
E-Lite-Cng-N	E-LI-CLG-N	2	Continuous	40	Full Saturation	Always true	Electrical - Lighting, Ceiling - New work
E-Lite-Cng-Pat	E-LI-CLG-PTN	8	Continuous	25	30 Percent	Always true	Electrical - Lighting, Ceiling Hatch patterns
E-Lite-Cng-Test	E-LI-CLG-TXT	2	Continuous	25	Full Saturation	Always true	Electrical - Lighting, Ceiling Test
E-Lite-Emer	E-LI-EMF	1	Continuous	10	Full Saturation	Always true	Electrical - Lighting, Emergency
E-Lite-Exit	E-LI-EXIT	1	Continuous	10	Full Saturation	Always true	Electrical - Lighting, Exit
E-Lite-Exit-N	E-LI-EXIT-N	4	Continuous	10	Full Saturation	Always true	Electrical - Lighting, Exit - New work
E-Lite-Swch	E-LI-STC	1	Continuous	10	Full Saturation	Always true	Electrical - Lighting, Switches

E-Lite-Swch-D	E-LI-STC-E	3	A, HIDDEN	40	Rail Saturation	Y/No-true	Electrical - Lighting, Switches - Existing to demolish
E-Lite-Swch-N	E-LI-STC-N	4	Continuous	40	Rail Saturation	Y/No-true	Electrical - Lighting, Switches - New work
E-Lite-Swch-Text	E-LI-STC-TXT	2	Continuous	25	Rail Saturation	Y/No-true	Electrical - Lighting, Switches Text
E-Lite-Swch-Text-N	E-LI-STC-TXT-N	2	Continuous	25	Rail Saturation	Y/No-true	Electrical - Lighting, Switches Text - New work
E-Lite-Text	E-LI-TXT	2	Continuous	25	Rail Saturation	Y/No-true	Electrical - Lighting, Text
E-Plan-Inf	E-PL-INF	7	Continuous	25	Rail Saturation	Y/No-true	Electrical - Key plan (floor plan), Reference, external files
E-Pwr	E-PO-POB	1	Continuous	18	Rail Saturation	Y/No-true	Electrical - Power
E-Pwr-Cmb	E-PO-CB	2	Continuous	25	Rail Saturation	Y/No-true	Electrical - Power, Circuit numbers
E-Pwr-Emer	E-PO-EME	2	Continuous	25	Rail Saturation	Y/No-true	Electrical - Power, Emergency
E-Pwr-Eqpm	E-PO-EQP	2	Continuous	25	Rail Saturation	Y/No-true	Electrical - Power, Equipment
E-Pwr-Eqpm-Swch	E-PO-EQP-STC	1	Continuous	18	Rail Saturation	Y/No-true	Electrical - Power, Equipment Switches
E-Pwr-Box	E-PO-BOX	1	Continuous	18	Rail Saturation	Y/No-true	Electrical - Power, Junction box
E-Pwr-Panel	E-PO-PNL	2	Continuous	25	Rail Saturation	Y/No-true	Electrical - Power, Panels
E-Pwr-Panel-Text	E-PO-PNL-TXT	2	Continuous	25	Rail Saturation	Y/No-true	Electrical - Power, Panels Text
E-Pwr-Recp	E-PO-REC	1	Continuous	18	Rail Saturation	Y/No-true	Electrical - Power, Receptacles
E-Pwr-Recp-Ceiling	E-PO-REC-CIG	1	Continuous	18	Rail Saturation	Y/No-true	Electrical - Power, Receptacles Ceiling
E-Pwr-Recp-D	E-PO-REC-CIG-E	2	A, HIDDEN	40	Rail Saturation	Y/No-true	Electrical - Power, Receptacles - Existing to demolish
E-Pwr-Recp-N	E-PO-REC-CIG-N	4	Continuous	40	Rail Saturation	Y/No-true	Electrical - Power, Receptacles - New work
E-Pwr-Swch	E-PO-STC	1	Continuous	18	Rail Saturation	Y/No-true	Electrical - Power, Switches
E-Pwr-Test	E-PO-TST	2	Continuous	25	Rail Saturation	Y/No-true	Electrical - Power, Test
E-Pwr-Test-D	E-PO-TXT-E	2	Continuous	25	Rail Saturation	Y/No-true	Electrical - Power, Test - Existing to demolish
E-Pwr-Test-N	E-PO-TXT-N	2	Continuous	25	Rail Saturation	Y/No-true	Electrical - Power, Test - New work
E-Pwr-Uthr	E-PO-UHR	1	Continuous	18	Rail Saturation	Y/No-true	Electrical - Power, Under-floor raceways
E-Pwr-Uthr-D	E-PO-UHR-E	2	A, HIDDEN	40	Rail Saturation	Y/No-true	Electrical - Power, Under-floor raceways - Existing to demolish
E-Pwr-Uthr-N	E-PO-UHR-N	4	Continuous	40	Rail Saturation	Y/No-true	Electrical - Power, Under-floor raceways - New work
E-Pwr-Wall	E-PO-WLF	1	Continuous	18	Rail Saturation	Y/No-true	Electrical - Power, Wall Fixture
E-Pwr-Wthr	E-PO-WTR	1	Continuous	18	Rail Saturation	Y/No-true	Electrical - Power, Transformers
E-Rect	E-PR-REC	25	Continuous	25	Rail Saturation	Y/No-true	Electrical - Section
E-Sect	E-PL-SRT-SYS	1	Continuous	18	Rail Saturation	Y/No-true	Electrical - Security system
E-Sound-Eqpm	E-SD-EQP	1	Continuous	18	Rail Saturation	Y/No-true	Electrical - Sound / PA system, Equipment
E-Sound-Splr	E-SD-SPK	1	Continuous	18	Rail Saturation	Y/No-true	Electrical - Sound / PA system, Speakers
E-Sound-Splr-Ceiling	E-SD-SPK-CIG	1	Continuous	18	Rail Saturation	Y/No-true	Electrical - Sound / PA system, Speakers Ceiling
E-Unid-Eqpm	E-UN-EQP	1	Continuous	18	Rail Saturation	Y/No-true	Electrical - Unidentified file objects, Equipment
E-Wall-Eqpm	E-WL-EQP	1	Continuous	18	Rail Saturation	Y/No-true	Electrical - Walls, Equipment
E-Wall-Swch	E-WL-STC	1	Continuous	18	Rail Saturation	Y/No-true	Electrical - Walls, Switches
F-Prot-Eqpm	F-FP-EQP	2	Continuous	25	Rail Saturation	Y/No-true	Fire Protection - Fire protection system, Equipment
F-Prot-Eqpm-D	F-FP-EQP-E	4	A, HIDDEN	40	Rail Saturation	Y/No-true	Fire Protection - Fire protection system, Equipment - Existing to demolish
F-Prot-Eqpm-Text	F-FP-EQP-TXT	2	Continuous	25	Rail Saturation	Y/No-true	Fire Protection - Fire protection system, Equipment Text
F-Prot-Hose	F-FP-HOS	1	Continuous	18	Rail Saturation	Y/No-true	Fire Protection - Fire protection system, Hose
F-Prot-Panel	F-FP-PNL	1	Continuous	18	Rail Saturation	Y/No-true	Fire Protection - Fire protection system, Panels
F-Prot-Panel-Text	F-FP-PNL-TXT	2	Continuous	25	Rail Saturation	Y/No-true	Fire Protection - Fire protection system, Panels Text
F-Prot-Pipe	F-FP-PIP	2	Continuous	25	Rail Saturation	Y/No-true	Fire Protection - Fire protection system, Piping
F-Prot-Pipe-D	F-FP-PIP-E	4	A, HIDDEN	40	Rail Saturation	Y/No-true	Fire Protection - Fire protection system, Piping - Existing to demolish
F-Prot-Pipe-N	F-FP-PIP-N	4	Continuous	40	Rail Saturation	Y/No-true	Fire Protection - Fire protection system, Piping - New work
F-Prot-Smoke	F-FP-SMK	1	Continuous	18	Rail Saturation	Y/No-true	Fire Protection - Fire protection system, Smoke detector / heat sensors
F-Prot-Smoke-Ceiling	F-FP-SMK-CIG	2	Continuous	25	Rail Saturation	Y/No-true	Fire Protection - Fire protection system, Smoke detector / heat sensors (Dimensional/Bypass conduct)
F-Prot-Smoke-D	F-FP-SMK-E	4	A, HIDDEN	40	Rail Saturation	Y/No-true	Fire Protection - Fire protection system, Smoke detector / heat sensors - Existing to demolish
F-SPR-Ceiling	F-FP-SPK	1	Continuous	18	Rail Saturation	Y/No-true	Fire Protection - Sprinkler Ceiling heads
F-SPR-Eqpm	F-FP-SPK-EQP	1	Continuous	18	Rail Saturation	Y/No-true	Fire Protection - Sprinkler, Equipment
F-SPR-Pipe	F-FP-SPK-PIP	3	M, Sprinkler Line	25	Rail Saturation	Y/No-true	Fire Protection - Sprinkler, Piping
G-ANNO-Inf-Text	G-AN-TXT	2	Continuous	25	Rail Saturation	Y/No-true	General - Annotation, Labels Text
G-ANNO-Npt	G-AN-NPL	250	Continuous	25	Rail Saturation	Y/No-false	Annotation, Non-Plotting
G-ANNO-Proj	G-AN-SMP	7	Continuous	25	Rail Saturation	Y/No-true	General - Annotation, Date/Time/Revision stamp
G-ANNO-Idma-Npt	G-AN-IDE-NPL	7	Continuous	25	Rail Saturation	Y/No-true	General - Annotation, Lead-me layer Non-plotting elements
G-ANNO-Notes	G-AN-NTV	25	Continuous	25	Rail Saturation	Y/No-true	General - Annotation, Revisions
G-ANNO-Stamp-Npt	G-AN-SMP-NPL	250	Continuous	25	Rail Saturation	Y/No-false	General - Annotation, Professional stamp Non-plotting elements
G-ANNO-Symb-Text	G-AN-SYM-TXT	2	Continuous	25	Rail Saturation	Y/No-true	General - Annotation, Symbols Text
G-ANNO-Text	G-AN-TXT	2	Continuous	25	Rail Saturation	Y/No-true	General - Annotation, Text
G-ANNO-Tbl	G-AN-DWG-TIT	2	Continuous	25	Rail Saturation	Y/No-true	General - Annotation, Drawing or detail title
G-ANNO-Tbl	G-AN-TIT-AND	7	Continuous	50	Rail Saturation	Y/No-true	General - Annotation, Border and title block
G-ANNO-Tbl-Logo	G-AN-TIT-CML	7	Continuous	50	Rail Saturation	Y/No-true	General - Annotation, Border and title block Company logo
G-ANNO-Tbl-Npt	G-AN-TIT-NPL	250	Continuous	25	Rail Saturation	Y/No-false	General - Annotation, Border and title block Non-plotting elements
G-ANNO-Tbl-Orth	G-AN-TIT-OTL	7	Continuous	140	Rail Saturation	Y/No-true	General - Annotation, Border and title block Outline
G-ANNO-Tbl-Thin	G-AN-TIT-MIN	7	Continuous	25	Rail Saturation	Y/No-true	General - Annotation, Border and title block Minor linework
G-ANNO-Tbl-Thi	G-AN-TIT-SLE	7	Continuous	25	Rail Saturation	Y/No-true	General - Annotation, Border and title block Titles
G-ANNO-View-Npt	G-AN-VPT-NPL	1	Continuous	15	Rail Saturation	Y/No-false	General - Annotation, Viewport Definition Non-plotting elements
R-URN	R-URN	5	HIDDEN	15	Rail Saturation	Y/No-true	Interiors - Furnishings - NK
R-URN-E	R-URN-E	1	Continuous	15	Rail Saturation	Y/No-true	Interiors - Furnishings - Existing to remain
R-URN-N	R-URN-N	4	Continuous	25	Rail Saturation	Y/No-true	Interiors - Furnishings - NK - New work
R-URN-Npt	R-URN-NPL	8	HIDDEN	15	Rail Saturation	Y/No-false	Interiors - Furnishings, Non-plotting graphic information
R-URN-Text	R-URN-TXT	161	Continuous	15	Rail Saturation	Y/No-true	Interiors - Furnishings, Read Text
R-URN-Tree	R-URN-T	3	Continuous	40	Rail Saturation	Y/No-true	Landscape - Plant and landscape material, Tree
M-ANNO	M-ANNO	2	Continuous	25	Rail Saturation	Y/No-true	Mechanical - Annotation, Text
M-ANNO-Text-D	M-AN-TXT-E	2	Continuous	25	Rail Saturation	Y/No-true	Mechanical - Annotation, Text - Existing to demolish
M-ANNO-Text-N	M-AN-TXT-N	2	Continuous	25	Rail Saturation	Y/No-true	Mechanical - Annotation, Text - New work
M-Cmpa	M-CM-PAS	4	Continuous	40	Rail Saturation	Y/No-true	Mechanical - Compressed / processed air systems
M-Cmpa-Eqpm	M-CM-PAS-EQP	4	Continuous	40	Rail Saturation	Y/No-true	Mechanical - Compressed / processed air systems, Equipment
M-Cmpa-N	M-CM-PAS-N	4	Continuous	40	Rail Saturation	Y/No-true	Mechanical - Compressed / processed air systems - New work
M-Cmpa-Text	M-CM-PAS-TXT	2	Continuous	25	Rail Saturation	Y/No-true	Mechanical - Compressed / processed air systems, Text
M-Cmpa-Ther	M-CM-PAS-TST	2	Continuous	25	Rail Saturation	Y/No-true	Mechanical - Compressed / processed air systems, Thermostats
M-Cndw-Rats	M-CW-SYS-RET	4	Continuous	40	Rail Saturation	Y/No-true	Mechanical - Condenser water systems, Return
M-Cndw-Sply	M-CW-SYS-SUP	4	Continuous	40	Rail Saturation	Y/No-true	Mechanical - Condenser water systems, Supply
M-Contr	M-CT-ONU	1	Continuous	18	Rail Saturation	Y/No-true	Mechanical - Control and instrumentation
M-Contr-Ther	M-CT-ONU-TST	1	Continuous	18	Rail Saturation	Y/No-true	Mechanical - Control and instrumentation, Thermostats
M-Contr-Ther-D	M-CT-ONU-TST-E	2	A, HIDDEN	40	Rail Saturation	Y/No-true	Mechanical - Control and instrumentation, Thermostats - Existing to demolish
M-Contr-Ther-N	M-CT-ONU-TST-N	4	Continuous	40	Rail Saturation	Y/No-true	Mechanical - Control and instrumentation, Thermostats - New work
M-Contr-Ther-Wire	M-CT-ONU-TWR	3	Continuous	35	Rail Saturation	Y/No-true	Mechanical - Control and instrumentation, Thermostats Wiring
M-Cwtr	M-CL-CWR	4	Continuous	40	Rail Saturation	Y/No-true	Mechanical - Chilled water systems
M-Cwtr-Cnd	M-CL-CND	4	Continuous	40	Rail Saturation	Y/No-true	Mechanical - Chilled water systems, Condensate piping
M-Cwtr-Cnd-D	M-CL-CND-E	2	A, HIDDEN	40	Rail Saturation	Y/No-true	Mechanical - Chilled water systems, Condensate piping - Existing to demolish
M-Cwtr-Cnd-N	M-CL-CND-N	4	Continuous	40	Rail Saturation	Y/No-true	Mechanical - Chilled water systems, Condensate piping - New work
M-Cwtr-Cnd-Text	M-CL-CND-TXT	2	Continuous	25	Rail Saturation	Y/No-true	Mechanical - Chilled water systems, Condensate piping Text
M-Cwtr-N	M-CL-CYS-N	4	Continuous	40	Rail Saturation	Y/No-true	Mechanical - Chilled water systems - New work
M-Cwtr-Pipe	M-CL-PP	4	Continuous	40	Rail Saturation	Y/No-true	Mechanical - Chilled water systems, Piping
M-Cwtr-Pipe-Ctr	M-CL-PP-CEN	4	CENTRO	40	Rail Saturation	Y/No-true	Mechanical - Chilled water systems, Piping Center
M-Cwtr-Pipe-Text	M-CL-PP-TXT	2	Continuous	25	Rail Saturation	Y/No-true	Mechanical - Chilled water systems, Piping Text
M-Cwtr-Return	M-CL-RRT	4	M, Chilled Water Return Line	40	Rail Saturation	Y/No-true	Mechanical - Chilled water systems, Return
M-Cwtr-Return-N	M-CL-RRT-N	4	M, Chilled Water Return Line	40	Rail Saturation	Y/No-true	Mechanical - Chilled water systems, Return - New work
M-Cwtr-Return-Text	M-CL-RRT-TXT	2	Continuous	25	Rail Saturation	Y/No-true	Mechanical - Chilled water systems, Return Text
M-Cwtr-Sply	M-CL-SUP	4	M, Chilled Water Supply Line	40	Rail Saturation	Y/No-true	Mechanical - Chilled water systems, Supply
M-Cwtr-Sply-N	M-CL-SUP-N	4	M, Chilled Water Supply Line	40	Rail Saturation	Y/No-true	Mechanical - Chilled water systems, Supply - New work
M-Cwtr-Sply-Text	M-CL-SUP-TXT	2	Continuous	25	Rail Saturation	Y/No-true	Mechanical - Chilled water systems, Supply Text
M-Cwtr-Test	M-CL-TST	2	Continuous	25	Rail Saturation	Y/No-true	Mechanical - Chilled water systems, Test
M-Cwtr	M-CL-CG	11	Continuous	25	Rail Saturation	Y/No-true	Mechanical - Detail
M-Drwa	M-DR-CWB-DRS	4	Continuous	40	Rail Saturation	Y/No-true	Mechanical - Domestic water systems
M-Elev	M-EL-EV	50	Continuous	25	Rail Saturation	Y/No-true	Mechanical - Elevation
M-Elct-Ceiling	M-EL-CLG-HIT	1	Continuous	18	Rail Saturation	Y/No-true	Mechanical - Electric heat, Ceiling
M-Eqpm	M-EL-EQP	6	Continuous	50	Rail Saturation	Y/No-true	Mechanical - Equipment
M-Eqpm-Ctr	M-EL-EQP-CEN	1	CENTRO	18	Rail Saturation	Y/No-true	Mechanical - Equipment, Centerline

M-WAC	M-PL-WVC	4	Continuous	40	Full Saturation	Y/No-true	Mechanical - HVAC
M-WAC-Head	M-HV-MBB-GDT	4	Continuous	40	Full Saturation	Y/No-true	Mechanical - HVAC, Mixing box, Dual duct
M-WAC-Boas	M-HV-MBB-GDT	4	Continuous	40	Full Saturation	Y/No-true	Mechanical - HVAC, Mixing box, Single duct
M-WAC-Ceif	M-HV-CLG-DF	2	Continuous	20	Full Saturation	Y/No-true	Mechanical - HVAC, Ceiling Diffusers
M-WAC-Ceif-N	M-HV-CLG-DF-N	4	Continuous	40	Full Saturation	Y/No-true	Mechanical - HVAC, Ceiling Diffusers - New work
M-WAC-Ceif-Returns	M-HV-DIF-RET	2	Continuous	20	Full Saturation	Y/No-true	Mechanical - HVAC, Ceiling Diffusers Returns
M-WAC-Ceif-Text	M-HV-DIF-RET	2	Continuous	20	Full Saturation	Y/No-true	Mechanical - HVAC, Ceiling Diffusers Text
M-WAC-Cold	M-HV-CAR	4	Continuous	40	Full Saturation	Y/No-true	Mechanical - HVAC, Cold air
M-WAC-Cing	M-HV-CLG	2	Continuous	20	Full Saturation	Y/No-true	Mechanical - HVAC, Ceiling
M-WAC-Cing-Gril	M-HV-CLG-GR	2	Continuous	20	Full Saturation	Y/No-true	Mechanical - HVAC, Ceiling Grilles
M-WAC-DmpR	M-HV-DMP	4	Continuous	40	Full Saturation	Y/No-true	Mechanical - HVAC, Fine, smoke, volume damper
M-WAC-DmpR-Return	M-HV-DMP-RET	3	Continuous	30	Full Saturation	Y/No-true	Mechanical - HVAC, Fine, smoke, volume damper Return
M-WAC-DmpR-Gply	M-HV-DMP-GUP	3	Continuous	30	Full Saturation	Y/No-true	Mechanical - HVAC, Fine, smoke, volume damper Supply
M-WAC-Duct	M-HV-DUC	4	Continuous	40	Full Saturation	Y/No-true	Mechanical - HVAC, Ductwork
M-WAC-Duct-MiscId	M-HV-DUC-MIS	1	Continuous	10	Full Saturation	Y/No-true	Mechanical - HVAC, Ductwork Material beyond cut
M-WAC-Duct-MiscU	M-HV-DUC-MIS	2	Continuous	20	Full Saturation	Y/No-true	Mechanical - HVAC, Ductwork Material cut by the view
M-WAC-Duct-N	M-HV-DUC-N	4	Continuous	40	Full Saturation	Y/No-true	Mechanical - HVAC, Ductwork - New work
M-WAC-Duct-Pat	M-HV-DUC-PTN	9	Continuous	20	10 Percent	Y/No-true	Mechanical - HVAC, Ductwork hatch patterns
M-WAC-Duct-Pat-N	M-HV-DUC-PTN-N	4	Continuous	10	Full Saturation	Y/No-true	Mechanical - HVAC, Ductwork hatch patterns - New work
M-WAC-Eqpm	M-HV-EQP	1	Continuous	10	Full Saturation	Y/No-true	Mechanical - HVAC, Equipment
M-WAC-Eqpm-Test	M-HV-EQP-TXT	2	Continuous	20	Full Saturation	Y/No-true	Mechanical - HVAC, Equipment Test
M-WAC-Gcha	M-HV-GIX	3	Continuous	30	Full Saturation	Y/No-true	Mechanical - HVAC, Exhaust air
M-WAC-Gcha-D	M-HV-GIX-D	2	A_HIDEN2	40	Full Saturation	Y/No-true	Mechanical - HVAC, Exhaust air - Existing to demolish
M-WAC-Gcha-Test	M-HV-GIX-TXT	2	Continuous	20	Full Saturation	Y/No-true	Mechanical - HVAC, Exhaust air Test
M-WAC-Fls	M-HV-FLS	3	TRACS	30	Full Saturation	Y/No-true	Mechanical - HVAC, Flies
M-WAC-Fls-Return	M-HV-FLS-RET	3	TRACS	30	Full Saturation	Y/No-true	Mechanical - HVAC, Flies Return
M-WAC-Fls-Gril	M-HV-FLS-GR	2	Continuous	20	Full Saturation	Y/No-true	Mechanical - HVAC, Floor Grilles
M-WAC-Gril	M-HV-GR	1	Continuous	10	Full Saturation	Y/No-true	Mechanical - HVAC, Grilles
M-WAC-Hsta	M-HV-HNR	1	Continuous	40	Full Saturation	Y/No-true	Mechanical - HVAC, Hot air
M-WAC-Insu	M-HV-INS	1	HIDEN2	10	Full Saturation	Y/No-true	Mechanical - HVAC, Insulation
M-WAC-Opng	M-HV-OPG	2	Continuous	20	Full Saturation	Y/No-true	Mechanical - HVAC, Openings
M-WAC-Ovhd	M-HV-OHD	1	Continuous	10	Full Saturation	Y/No-true	Mechanical - HVAC, Overhead
M-WAC-Pate	M-HV-PTN	9	Continuous	20	10 Percent	Y/No-true	Mechanical - HVAC, Texture or hatch patterns
M-WAC-Returns	M-HV-RET	1	Continuous	10	Full Saturation	Y/No-true	Mechanical - HVAC, Returns
M-WAC-Returns-D	M-HV-RET-D	2	A_HIDEN2	40	Full Saturation	Y/No-true	Mechanical - HVAC, Returns - Existing to demolish
M-WAC-Returns-Gril	M-HV-RET-GR	1	Continuous	10	Full Saturation	Y/No-true	Mechanical - HVAC, Returns Grilles
M-WAC-Returns-Gril-D	M-HV-RET-GR-D	2	A_HIDEN2	40	Full Saturation	Y/No-true	Mechanical - HVAC, Returns Grilles - Existing to demolish
M-WAC-Returns-Gril-N	M-HV-RET-GR-N	4	Continuous	40	Full Saturation	Y/No-true	Mechanical - HVAC, Returns Grilles - New work
M-WAC-Returns-N	M-HV-RET-N	4	Continuous	40	Full Saturation	Y/No-true	Mechanical - HVAC, Returns - New work
M-WAC-Returns-Pat	M-HV-RET-PTN	9	Continuous	20	10 Percent	Y/No-true	Mechanical - HVAC, Returns Hatch patterns
M-WAC-Returns-Text	M-HV-RET-TXT	2	Continuous	20	Full Saturation	Y/No-true	Mechanical - HVAC, Returns Text
M-WAC-Returns-Text-N	M-HV-RET-TXT-N	2	Continuous	20	Full Saturation	Y/No-true	Mechanical - HVAC, Returns Text - New work
M-WAC-Shadow	M-HV-SHD	4	Continuous	20	25 Percent	Y/No-true	Mechanical - HVAC, Shadow areas
M-WAC-Sply	M-HV-SUP	4	Continuous	40	Full Saturation	Y/No-true	Mechanical - HVAC, Supply
M-WAC-Sply-D	M-HV-SUP-D	2	A_HIDEN2	40	Full Saturation	Y/No-true	Mechanical - HVAC, Supply - Existing to demolish
M-WAC-Sply-Gril	M-HV-SUP-GR	1	Continuous	10	Full Saturation	Y/No-true	Mechanical - HVAC, Supply Grilles
M-WAC-Sply-Gril-D	M-HV-SUP-GR-D	2	A_HIDEN2	40	Full Saturation	Y/No-true	Mechanical - HVAC, Supply Grilles - Existing to demolish
M-WAC-Sply-Gril-N	M-HV-SUP-GR-N	4	Continuous	40	Full Saturation	Y/No-true	Mechanical - HVAC, Supply Grilles - New work
M-WAC-Sply-N	M-HV-SUP-N	4	Continuous	40	Full Saturation	Y/No-true	Mechanical - HVAC, Supply - New work
M-WAC-Sply-Pat	M-HV-SUP-PTN	9	Continuous	20	10 Percent	Y/No-true	Mechanical - HVAC, Supply Hatch patterns
M-WAC-Sply-Skch	M-HV-SUP-SCH	4	Continuous	40	Full Saturation	Y/No-true	Mechanical - HVAC, Supply Sketch
M-WAC-Sply-Skch-N	M-HV-SUP-SCH-N	4	Continuous	40	Full Saturation	Y/No-true	Mechanical - HVAC, Supply Sketch - New work
M-WAC-Sply-Symb	M-HV-SUP-SYE	3	Continuous	20	Full Saturation	Y/No-true	Mechanical - HVAC, Supply Reference symbols
M-WAC-Sply-Text	M-HV-SUP-TXT	2	Continuous	20	Full Saturation	Y/No-true	Mechanical - HVAC, Supply Text
M-WAC-Sply-Text-D	M-HV-SUP-TXT-D	2	Continuous	20	Full Saturation	Y/No-true	Mechanical - HVAC, Supply Text - Existing to demolish
M-WAC-Sply-Text-N	M-HV-SUP-TXT-N	2	Continuous	20	Full Saturation	Y/No-true	Mechanical - HVAC, Supply Text - New work
M-WAC-Text-N	M-HV-TXT-N	2	Continuous	20	Full Saturation	Y/No-true	Mechanical - HVAC, Text - New work
M-Water	M-PL-WWR	2	M_HOT_WATER_LINE	20	Full Saturation	Y/No-true	Mechanical - Hot water heating system
M-Water-D	M-PL-WWR-D	2	A_HIDEN2	40	Full Saturation	Y/No-true	Mechanical - Hot water heating system - Existing to demolish
M-Water-D	M-PL-WWR-N	4	M_HOT_WATER_LINE	40	Full Saturation	Y/No-true	Mechanical - Hot water heating system - New work
M-Water-Pipe	M-HW-PIP	2	Continuous	20	Full Saturation	Y/No-true	Mechanical - Hot water heating system, Piping
M-Water-Return	M-HW-RET	2	M_HOT_WATER_RETURN	20	Full Saturation	Y/No-true	Mechanical - Hot water heating system, Return
M-Water-Return-N	M-HW-RET-N	4	M_HOT_WATER_RETURN	40	Full Saturation	Y/No-true	Mechanical - Hot water heating system, Return - New work
M-Water-Sply	M-HW-SUP	2	M_HOT_WATER_SUPPLY	20	Full Saturation	Y/No-true	Mechanical - Hot water heating system, Supply
M-Water-Sply-N	M-HW-SUP-N	4	M_HOT_WATER_SUPPLY	40	Full Saturation	Y/No-true	Mechanical - Hot water heating system, Supply - New work
M-Water-Text	M-HW-TXT	2	Continuous	20	Full Saturation	Y/No-true	Mechanical - Hot water heating system, Text
M-Pipe	M-PL-PIP	5	Continuous	50	Full Saturation	Y/No-true	Mechanical - Piping
M-Pipe-Cair	M-PP-CAB	4	M_COMPRESSED_AIR_LINE	40	Full Saturation	Y/No-true	Mechanical - Piping, Compressed air
M-Pipe-Cnds	M-PP-CND	1	M_CONDENSATE_DRAIN_LINE	10	Full Saturation	Y/No-true	Mechanical - Piping, Condensate piping
M-Pipe-Ctr	M-PP-CER	1	CENTRU	10	Full Saturation	Y/No-true	Mechanical - Piping, Centerline
M-Pipe-Drp	M-PP-DRP	3	Continuous	30	Full Saturation	Y/No-true	Mechanical - Piping, Drip irrigation tubing
M-Pipe-Drp-N	M-PP-MND-N	4	Continuous	40	Full Saturation	Y/No-true	Mechanical - Piping, Minor I - Drip - New work
M-Pipe-Eqpm	M-PP-EQP	5	Continuous	50	Full Saturation	Y/No-true	Mechanical - Piping, Equipment
M-Pipe-N	M-PL-PIP-N	4	Continuous	40	Full Saturation	Y/No-true	Mechanical - Piping - New work
M-Pipe-Ntg	M-PP-NIT	4	M_NITROGEN_LINE	40	Full Saturation	Y/No-true	Mechanical - Piping, Nitrogen
M-Pipe-Strm	M-PP-STR	1	Continuous	10	Full Saturation	Y/No-true	Mechanical - Piping, Storm Sewer
M-Pipe-Test	M-PP-TXT	2	Continuous	20	Full Saturation	Y/No-true	Mechanical - Piping, Test
M-Pipe-Valv	M-PP-VAL	3	Continuous	30	Full Saturation	Y/No-true	Mechanical - Piping, Valves
M-Pipe-Vent	M-PP-VEN	8	M_VENT_LINE	20	30 Percent	Y/No-true	Mechanical - Piping, Vents
M-Pipe-Vent-D	M-PP-VEN-D	2	A_HIDEN2	40	Full Saturation	Y/No-true	Mechanical - Piping, Vents - Existing to demolish
M-Pipe-Vent-Labv	M-PP-LEB-VEN	2	M_VENT_LINE	20	30 Percent	Y/No-true	Mechanical - Piping, Vents Laboratory vent
M-Pipe-Wtr	M-PP-WTB-GUP	4	M_Feud_Water	40	Full Saturation	Y/No-true	Mechanical - Piping, Water supply
M-Plan-Rfl	M-PL-RFL	7	Continuous	20	Full Saturation	Y/No-true	Mechanical - Key plan (floor plan), Reference, external files
M-Roof-Eqpm	M-RF-EQP	1	Continuous	10	Full Saturation	Y/No-true	Mechanical - Roof, Equipment
M-Set	M-PL-SEC	7	Continuous	20	Full Saturation	Y/No-true	Mechanical - Sections
M-Strm-Hld	M-CT-HWP	2	Continuous	20	Full Saturation	Y/No-true	Mechanical - Steam system, Hot water / high-pressure piping
M-Strm-Sply	M-CT-GUP	2	Continuous	20	Full Saturation	Y/No-true	Mechanical - Steam system, Supply
M-Strm-Sply-Test	M-CT-SUP-N	4	Continuous	40	Full Saturation	Y/No-true	Mechanical - Steam system, Supply - New work
M-Strm-Sply-Text	M-CT-GUP-TXT	2	Continuous	20	Full Saturation	Y/No-true	Mechanical - Steam system, Supply Text
M-Strm-Sply-Text-D	M-CT-GUP-TXT-D	2	Continuous	20	Full Saturation	Y/No-true	Mechanical - Steam system, Supply Text - Existing to demolish
M-Unid-Duct-MiscU	M-UN-DCT-CUT	3	Continuous	30	Full Saturation	Y/No-true	Mechanical - Unidentified site objects, Ductwork Material cut by the view
R-UMBING							
R-Dome-Cpb	R-DD-CMP	4	M_Domestic_Cold_Water	40	Full Saturation	Y/No-true	Plumbing - Domestic water system, Cold water piping
R-Dome-Cpb-D	R-DD-CMB-D	2	A_HIDEN2	40	Full Saturation	Y/No-true	Plumbing - Domestic water system, Cold water piping - Existing to demolish
R-Dome-Cpb-Test	R-DD-CMP-TXT	1	Continuous	10	Full Saturation	Y/No-true	Plumbing - Domestic water system, Cold water piping Test
R-Dome-Hltp	R-DD-HWP	4	M_Domestic_Hot_Water	40	Full Saturation	Y/No-true	Plumbing - Domestic water system, Hot water / high-pressure piping
R-Dome-Hltp-Sply	R-DD-HWP-SCP	4	M_Domestic_Hot_Water_Recycle	40	Full Saturation	Y/No-true	Plumbing - Domestic water system, Hot water / high-pressure piping Recirculation piping
R-Dome-Hltp-Test	R-DD-HWP-TXT	2	Continuous	20	Full Saturation	Y/No-true	Plumbing - Domestic water system, Hot water / high-pressure piping Test
R-Drn	R-PL-DRN	4	M_DRAIN	40	Full Saturation	Y/No-true	Plumbing - Drains
R-Drn-Blue	R-DN-BLU	4	M_Blue_Drain_Line	40	Full Saturation	Y/No-true	Plumbing - Drains, Blue
R-Drn-Brown	R-DN-BRW	4	M_Brown_Drain_Line	40	Full Saturation	Y/No-true	Plumbing - Drains, Brown
R-Drn-D	R-PL-DRN-D	2	A_HIDEN2	40	Full Saturation	Y/No-true	Plumbing - Drains - Existing to demolish
R-Drn-Glas	R-DN-GLS	4	M_Glass_Drain_Line	40	Full Saturation	Y/No-true	Plumbing - Drains, Glass
R-Drn-Labv	R-DRN-LVT	4	Continuous	40	Full Saturation	Y/No-true	Plumbing - Drains, Laboratory vent
R-Drn-Labv	R-DRN-LWT	4	Continuous	40	Full Saturation	Y/No-true	Plumbing - Drains, Laboratory waste
R-Drn-Labv-Test	R-DN-LWT-TXT	2	Continuous	20	Full Saturation	Y/No-true	Plumbing - Drains, Laboratory waste Test
R-Drn-N	R-PL-DRN-N	4	M_DRAIN	40	Full Saturation	Y/No-true	Plumbing - Drains - New work
R-Drn-Sawr	R-DN-SDW	1	Continuous	10	Full Saturation	Y/No-true	Plumbing - Drains, Sanitary sewer
R-Drn-Strm	R-DN-STR	2	Continuous	20	Full Saturation	Y/No-true	Plumbing - Drains, Storm Sewer
R-Drn-Text	R-DN-TXT	2	Continuous	20	Full Saturation	Y/No-true	Plumbing - Drains, Test
R-Drn-Text-D	R-DN-TXT-D	2	Continuous	20	Full Saturation	Y/No-true	Plumbing - Drains, Test - Existing to demolish
R-Drn-UGnd	R-DN-UGD	4	M_DRAIN	40	Full Saturation	Y/No-true	Plumbing - Drains, Underground

P-Drain-Wast	P-DRN-WST	4	M	WASTE DRAIN LINE	40	Roll Saturation	ylao-true	Plumbing - Drains, Waste
P-Drain-Drain	P-PL-DRN-IND	3	Continuous		38	Roll Saturation	ylao-true	Plumbing - Floor, Drainage slope indications
P-Gas	P-PL-GAS	4	M	GAS LINE	40	Roll Saturation	ylao-true	Plumbing - Gas
P-Gas-New	P-PL-GAS-N	4	M	GAS LINE	40	Roll Saturation	ylao-true	Plumbing - Gas - New work
P-Medg	P-PL-MGS	4	M	GAS LINE	40	Roll Saturation	ylao-true	Plumbing - Medical gas
P-Medg-Cair	P-PL-MGS-CAR	4	M	COMPRESSED AIR LINE	40	Roll Saturation	ylao-true	Plumbing - Medical gas, Compressed air
P-Medg-Nitg	P-PL-MGS-NIT	4	M	NITROGEN LINE	40	Roll Saturation	ylao-true	Plumbing - Medical gas, Nitrogen
P-Pipe	P-PL-PIP	5	Continuous		50	Roll Saturation	ylao-true	Plumbing - Piping
P-Pipe-Fat	P-PL-PIP-FTN	1	Continuous		38	Roll Saturation	ylao-true	Plumbing - Piping, Texture or hatch patterns
P-Pipe-Fat-N	P-PL-PIP-FTN-N	4	Continuous		38	Roll Saturation	ylao-true	Plumbing - Piping, Texture or hatch patterns - New work
P-Pipe-Shad	P-PL-PIP-SHD	4	Continuous		25	Percent	ylao-true	Plumbing - Piping, Shadow area
P-Pipe-Test	P-PL-PIP-TXT	2	Continuous		25	Roll Saturation	ylao-true	Plumbing - Piping, Test
P-Sew	P-PL-SSU	1	Continuous		38	Roll Saturation	ylao-true	Plumbing - Sanitary sewer
P-Sew-Vent	P-PL-SSU-VEN	3	Continuous		35	Roll Saturation	ylao-true	Plumbing - Sanitary sewer, Vents
P-Strm	P-PL-STM	2	M	STORM LINE	25	Roll Saturation	ylao-true	Plumbing - Storm sewer
P-Strm-Pipe	P-PL-PIP-STM	2	Continuous		25	Roll Saturation	ylao-true	Plumbing - Storm sewer, Piping
P-Strm-Rfd	P-RF-DRN	1	Continuous		38	Roll Saturation	ylao-true	Plumbing - Drainage, Roof drains
P-Strm-Rfd-Test	P-RF-DRN-TXT	2	Continuous		25	Roll Saturation	ylao-true	Plumbing - Storm sewer, Roof drains Test
P-Vacu	P-PL-VCC	4	M	VACUUM AIR LINE	40	Roll Saturation	ylao-true	Plumbing - Vacuum
P-Watr	P-WT-GUP	4	M	FEED WATER	40	Roll Saturation	ylao-true	Plumbing - Water supply
P-Watr-Dic	P-WT-GUP-DI2	4	M	DEIONIZED WATER LINE	40	Roll Saturation	ylao-true	Plumbing - Water supply, De-ionized water supply - system
P-Watr-Dic-Test	P-WT-DI2-TXT	2	Continuous		25	Roll Saturation	ylao-true	Plumbing - Water supply, De-ionized water supply - system Test
P-Watr-Dwt	P-WT-DI2-GUP	4	M	DISTILLED WATER LINE	40	Roll Saturation	ylao-true	Plumbing - Water supply, Distilled water supply - system
P-Watr-Dwt-Test	P-WT-DI2-TXT	2	Continuous		25	Roll Saturation	ylao-true	Plumbing - Water supply, Distilled water supply - system Test
	STRUCTURE							
S-Beam	S-PL-BEM	3	Continuous		50	Roll Saturation	ylao-true	Structural - Beams
S-Beam-Cing	S-PL-BEM-CLG	3	HIDDEN		20	Roll Saturation	ylao-true	Structural - Beams, Ceiling
S-Brng	S-PL-BRG	3	PHANTOM		50	Roll Saturation	ylao-true	Structural - Bracing
S-Col	S-PL-COL	6	Continuous		50	Roll Saturation	ylao-true	Structural - Columns
S-Col-Steel	S-PL-COL-STL	5	Continuous		50	Roll Saturation	ylao-true	Structural - Columns, Steel
S-Conc	S-PL-COM-ELE	6	Continuous		50	Roll Saturation	ylao-true	Structural - Concrete elements
S-Grid	S-PL-GRD	1	CENTER		20	Roll Saturation	ylao-true	Structural - Grid line
S-Grid-Iden	S-PL-GRD-TAG	1	Continuous		50	Roll Saturation	ylao-true	Structural - Grid line, Identification Tags
S-Slab	S-PL-SLB	6	Continuous		50	Roll Saturation	ylao-true	Structural - Slabs
S-Slab-Curb	S-PL-SLB-CRB	12	Continuous		15	Roll Saturation	ylao-true	Structural - Slabs, Curb
S-Steel	S-PL-STE-EL	5	Continuous		50	Roll Saturation	ylao-true	Structural - Steel elements
S-Wal	S-PL-WAL	6	Continuous		50	Roll Saturation	ylao-true	Structural - Walls
	TELECOMMUNICATION							
T-Comm	T-TC-COM	1	Continuous		38	Roll Saturation	ylao-true	Telecommunications - Telephone communications
T-Comm-Wall	T-WL-COM	1	Continuous		38	Roll Saturation	ylao-true	Telecommunications - Telephone communications, Walls
T-Data	T-TC-DLS	1	Continuous		38	Roll Saturation	ylao-true	Telecommunications - Data / LAN system
T-Data-Cndt	T-TC-DLS-CND	1	Continuous		38	Roll Saturation	ylao-true	Telecommunications - Data / LAN system, Diversionary / bypass conduit / culvert
T-Data-D	T-TC-DLS-E	2	A	HIDDEN	40	Roll Saturation	ylao-true	Telecommunications - Data / LAN system - Existing to demolish
T-Data-N	T-TC-DLS-N	4	Continuous		40	Roll Saturation	ylao-true	Telecommunications - Data / LAN system - New work
T-Data-Test	T-TC-DLS-TXT	2	Continuous		25	Roll Saturation	ylao-true	Telecommunications - Data / LAN system, Test
T-Data-Wall	T-WL-DLS	1	Continuous		38	Roll Saturation	ylao-true	Telecommunications - Data / LAN system, Walls
T-Ser-Eqpm	T-SE-EQP	1	Continuous		38	Roll Saturation	ylao-true	Telecommunications - Security system, Equipment
T-Tv	T-TC-TVS	1	Continuous		38	Roll Saturation	ylao-true	Telecommunications - Television and video systems
	XXXX							
E-Anno-Wipe	E-AN-WOT	250	Continuous		9	Roll Saturation	ylao-true	Other Discipline - Annotation, Wipeout
E-Plan-Pdf	E-PL-PDF	7	Continuous		25	Roll Saturation	ylao-true	Other Discipline - Key plan (Floor plan), Reference, external files



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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

<u>EXT.</u>	<u>DISCRIPTION</u>	<u>EXT.</u>	<u>DISCRIPTION</u>
Anno	Annotation	Fire	Fire
Clng	Ceiling	Lite	Lighting
Detl	Detail	Powr	Power
Door	Door	Sert	Security system
Elev	Elevation	Prot	Fire Protection
Elht	Electric Heat	Spkl	Sprinkler
Flor	Floor	Furn	Furniture
Glaz	Glazing	Plnt	plant and Landscape
Hwtr	Hot water Heating system	Site	Site
Plan	Plan	Cmpa	compressed air system
Roof	Roof	Cndw	Condenser water system
Sect	Section	Cont	Controls
Unid	Unidentified	Cwtr	Chilled water system
Wall	Wall	Domw	Domestic water system
Driv	Driveway	Eqpm	Equipment
Prkg	Parking Lot	HVAC	HVAC
Road	Roadways	Hwtr	Hot water heating system
Cont	Controls	Pipe	Pipe
Elec	Electrical	Stem	Steam
Dran	Drain	Mdgs	Medical Gas
Sswr	Sanitary sewer	Strm	Storm
Vacu	Vacuum	Watr	Water supply
Beam	Beams	Brcg	Bracing
Cols	Columns	Grid	Grids
Slab	Slabs	Comm	Communication
Data	Data/LAN system	Tvvs	Television system

Optional Four-Letter Major

This field contains building components and materials. This also provide building systems and other supporting data.

x-xxxx-XXXX-x

<u>EXT.</u>	<u>DISCRIPTION</u>	<u>EXT.</u>	<u>DISCRIPTION</u>
C008	Color 8 hatch pattern	Dims	Dimensions
Evtr	Elevator cars	Note	Notes
Patt	Patterns	Scrn	Screened
Spce	Space	Strs	Stairs
Symb	Symbols	Text	Text
Accs	Access	Blkh	Bulkheads
Bndy	Boundary	Uppr	Upper
C001	Color 1 (red)	C002	Color 2(yellow)
C003	Color 3(Green)	C004	Color 4(cyan)
C005	Color 5(blue)	C006	Color 6(magenta)
C007	Color 7(white)	C008	Color 8 hatch pattern\
Extr	Exterior	Fram	Frame
Intr	Interior	Levl	Level
Nplt	Non-plotting	Radi	Radiator
Edge	Edge	Expj	Expansion Joint
Fnsh	Finish	Gril	Grills
Hrail	Handrails	Mrkg	Markings
Opng	Openings	Otln	Outlines
Tptn	Toilet Partition	Shea	Shear walls
Sill	Sills	Cavi	Cavity
Head	Door/Window headers	Move	Movable
Prht	Partial Height	Curb	Curb
Msns	Motion sensors	Emer	Emergency
Circ	Circuits	Exit	Exits
Swch	Switches	Refr	Reference
Cnmb	Circuit Number	Jbox	Junction Box
Panl	Panel	Recp	Receptacles
Urac	Under-floor raceways	Xfmr	Transformers
Clhd	Ceiling Head	Pros	date/time/file name
Revs	Revision	Rdme	Read-me layer non pltg

Titl	Title	Ttlb	title block
View	Views	Tree	Trees
Ther	Thermostats	Retn	Return
Sply	Supply	Cnds	Condensate
Cntr	Centerline	Boxd	Mixing Box,Dual duct
Boxes	Mixing Box, Single Duct	Cdff	Ceiling diffuser
Dmpr	Dampers	Duct	Ducts
Exhs	Exhaust Air	Flex	Flex
Hota	Hot Air	Insu	Insulation
Ovhd	Overhead	Shad	Shadow Area
Drip	Drip irrigation tubing	Nitg	Nitrogen
Valv	Valve	Vent	Vents
Hpip	High pressure Pipe	Glas	Glass
Labv	Laboratory Vent	Labw	Laboratory Waste
Ugnd	Underground	Cair	Compressed Air

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**

EXT.

DISCRIPTION

1 to 9	Options or Phases 1 to 9
D	Existing to demolish
E	Existing
M	To be Moved or Relocated
N	New work

Examples

Architectural Floor Plan

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.*

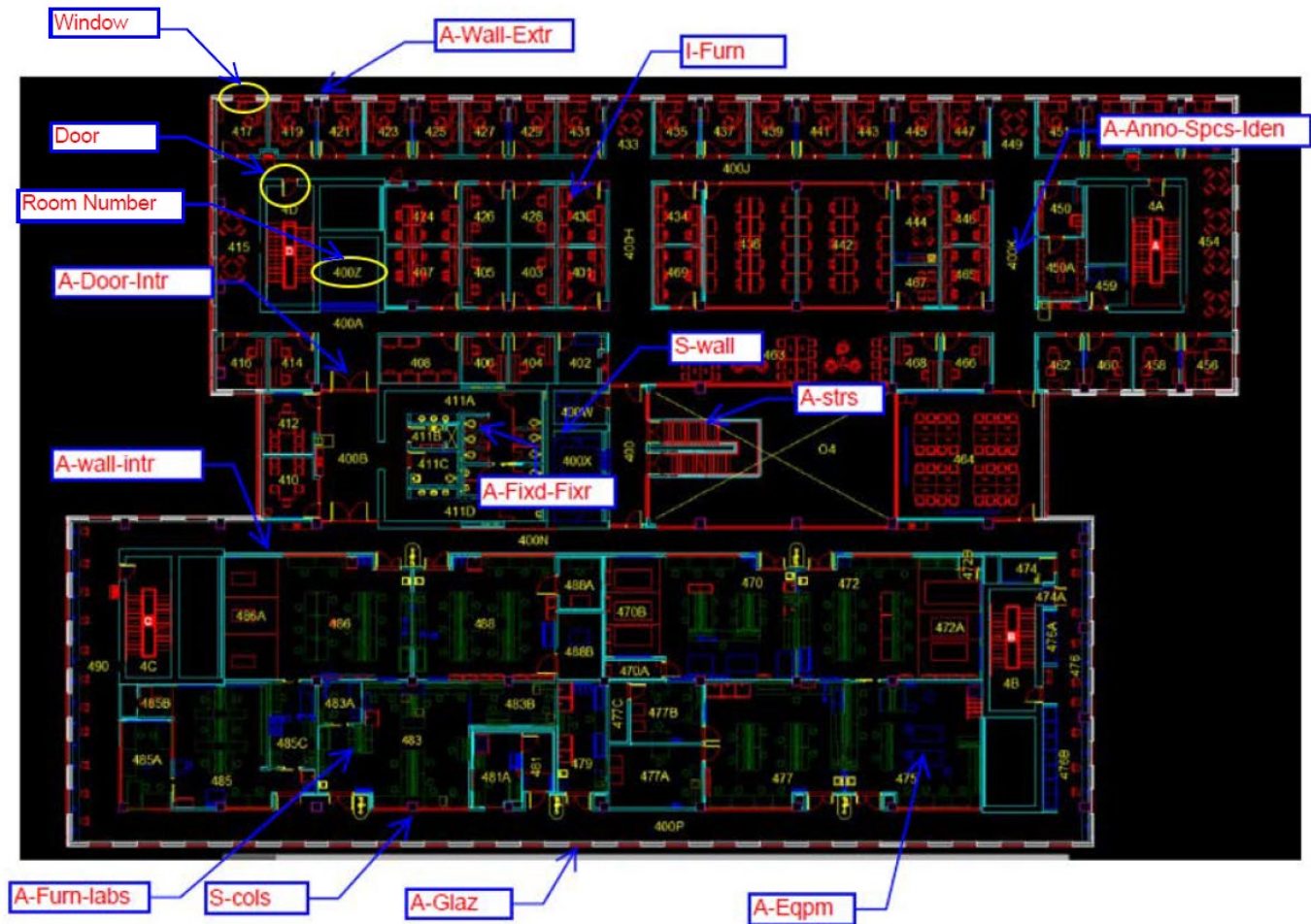


Figure 1 Layers and Blocks description

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

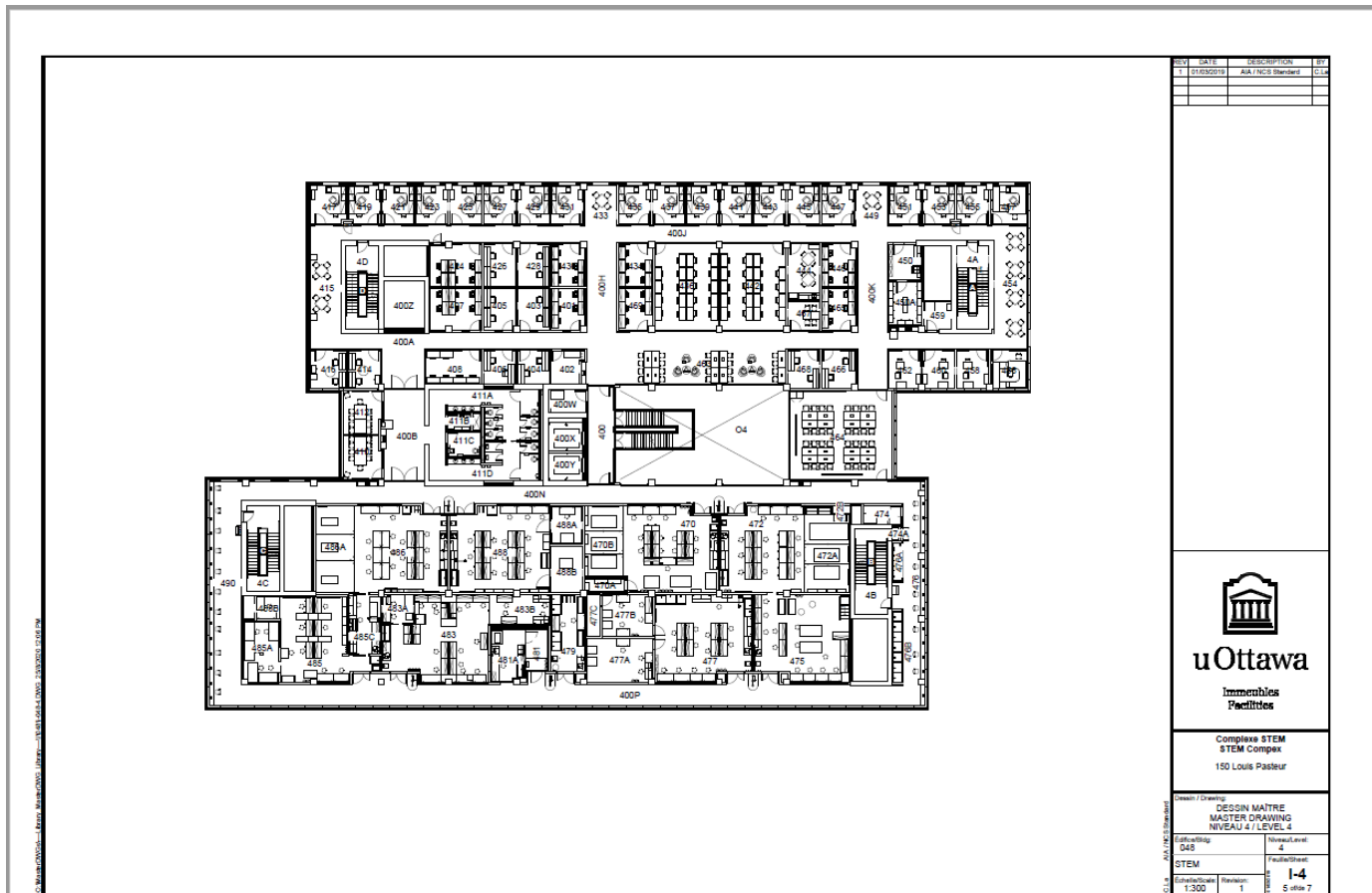


Figure 2 Final result of Architectural Floor plan

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RCP (Reflected Ceiling Plan) Floor Plan

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

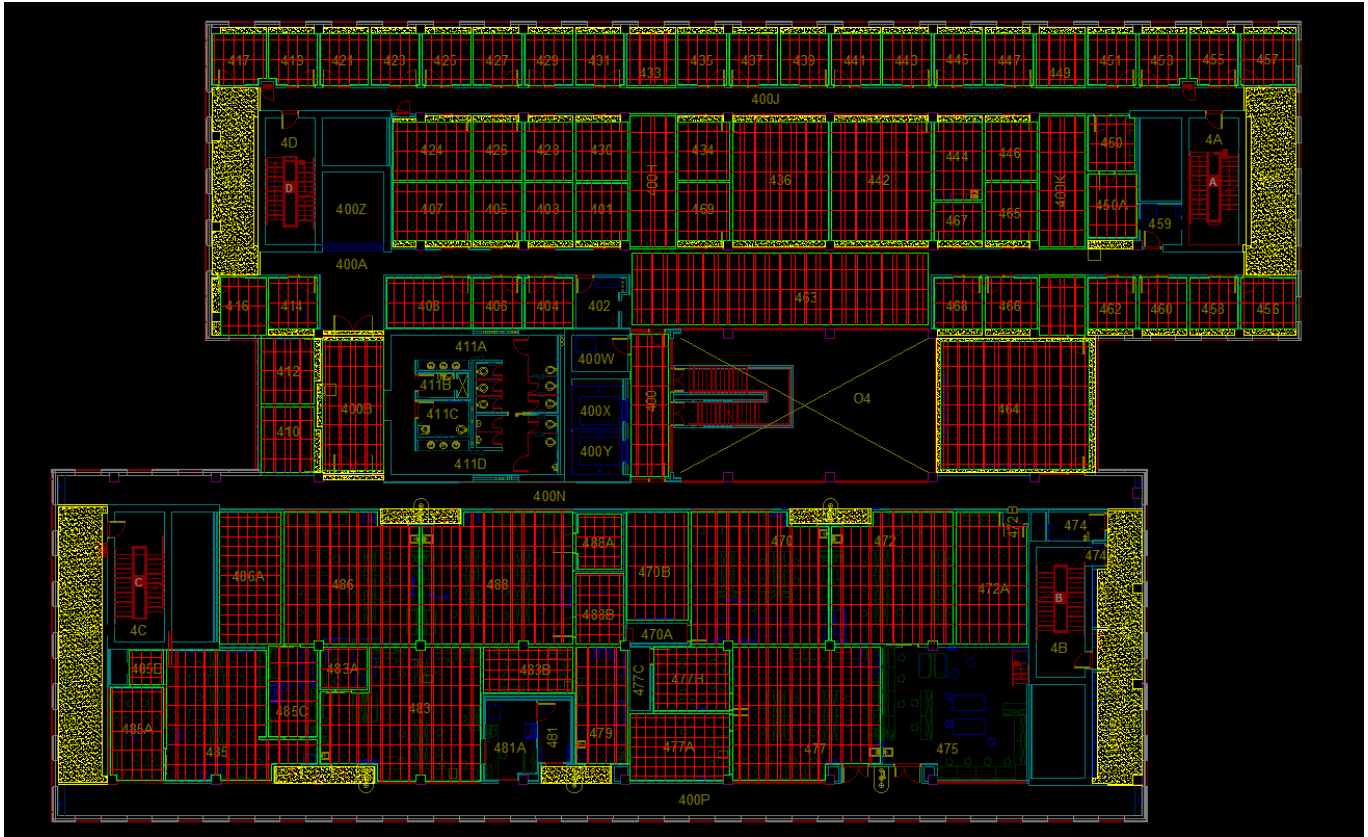


Figure 3 Working AutoCAD file of Reflected Ceiling Plan

This will be the outcome of the illustrated RCP (Reflected Ceiling plan) floor plan.

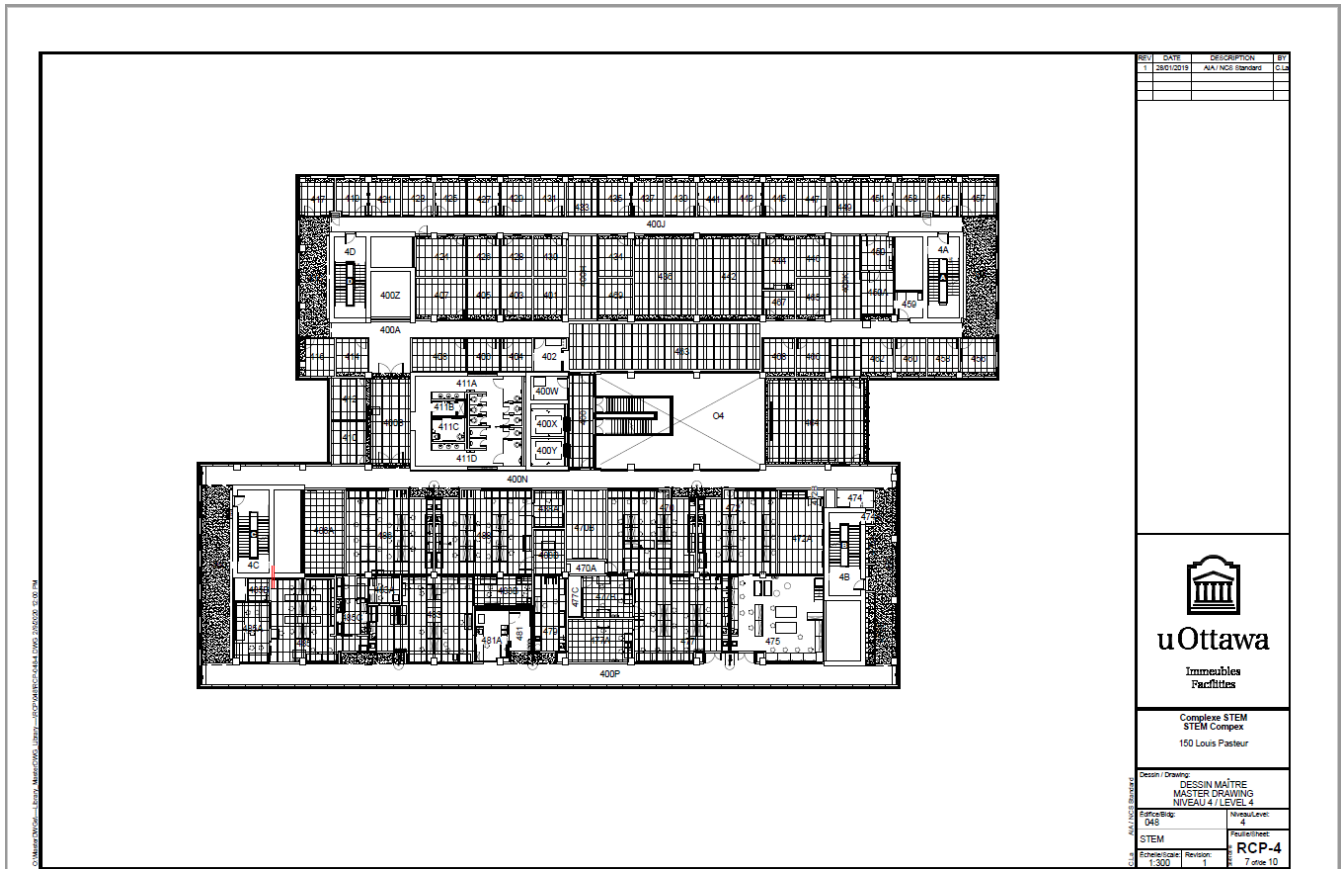


Figure 4 Final result of Reflected Ceiling Plan

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Glossary

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

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

“AIA” shall mean 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.

“UofO” shall mean University of Ottawa.

“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.

