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**Software user manual for
the prototypical plans**



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Autodesk AutoCAD

SOFTWARE USER MANUAL FOR THE PROTOTYPICAL PLANS



AUTODESK
AutoCAD



8.1

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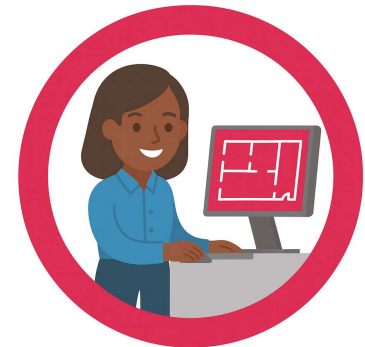
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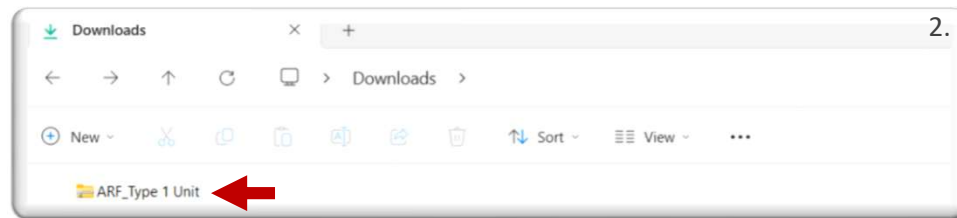
1 DOWNLOADING AND EXTRACTING THE ZIP FILE

Objective: To obtain and correctly extract the official AutoCAD templates and pen settings for the Prototypical Plans - ARF projects.

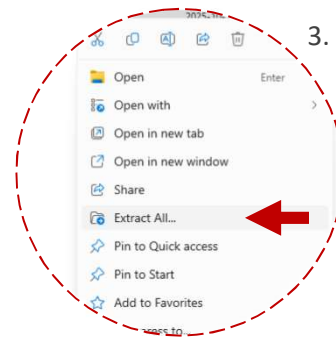
- Step 1:** Locate the download link from the City of Cape Town Website under Urban Planning and Design – Local Planning Support. (See the link below).

<https://www.capetown.gov.za/Work%20and%20business/Planning-portal/Online-planning-and-building-resources/localplanningsupport>

- Step 2:** Download the ZIP file (e.g. ARF_Type 1 Unit.zip).

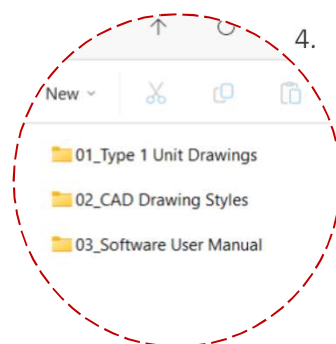


- Step 3:** In order to extract the downloaded content from the zipped folder - Right-click → Extract All → select a destination folder (e.g. Documents\ARF_Type 1 Unit). The necessary software files and PDFs will be available in the extracted folder for use.



- Step 4:** Once the files have been successfully extracted, organise your folders as follows:

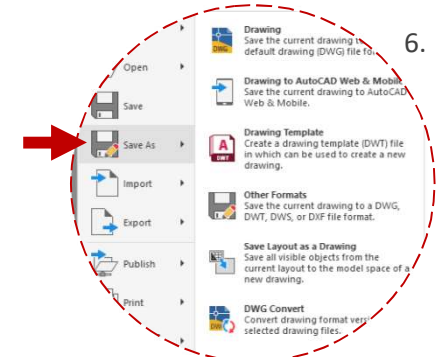
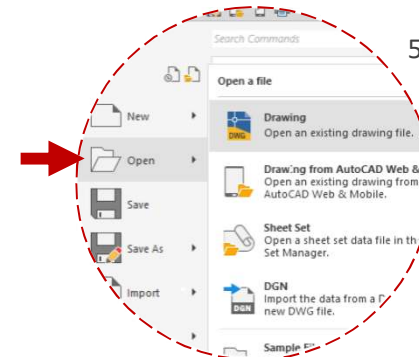
ARF_Project_Files\
 └─ 01_Type 1 Unit Drawings\
 └─ 02_CAD Drawing Styles\
 └─ 03_Software User Manual\



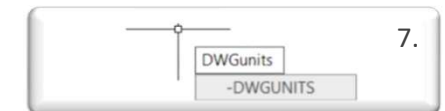
2 OPENING AND SAVING THE PROTOTYPICAL DRAWING

Objective: To open the official ARF template and rename it according to the project details.

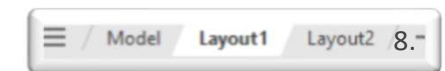
- Step 5:** Open AutoCAD using file (or AutoCAD logo) in the top left corner of your screen → File → Open → select the relevant DWG file (e.g. Type 1 Unit Drawing.dwg).
- Step 6:** Once opened, save a new copy using the following format: [ProjectCode]_[SiteLocation]_[UnitType]_ARF_[YYYYMMDD].dwg.



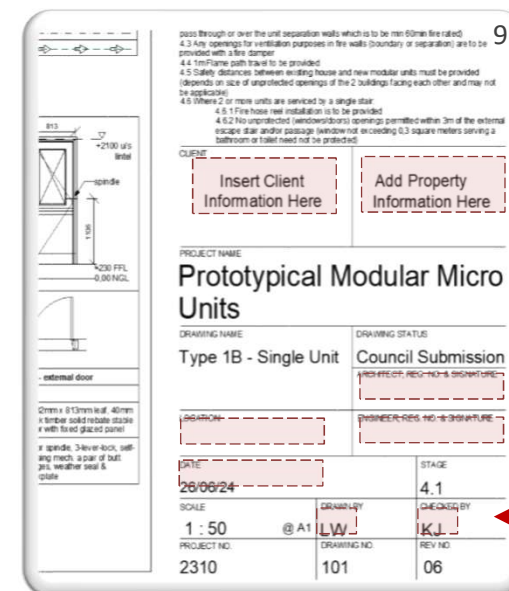
- Step 7:** Set units to millimetres using the UNITS command.



- Step 8:** Navigate to the PAPERSPACE Tab (Layout 1 of the DWG file)



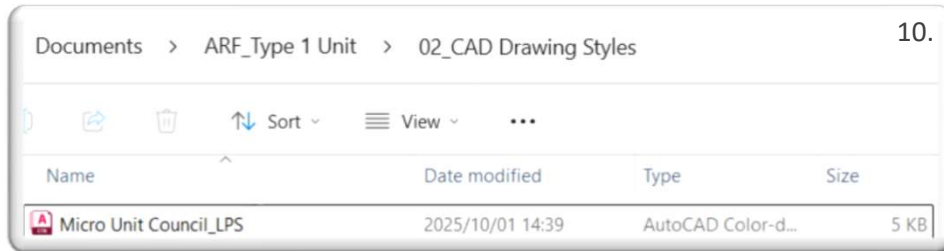
- Step 9:** Update title block and drawing register information according to project details and save the DWG file.



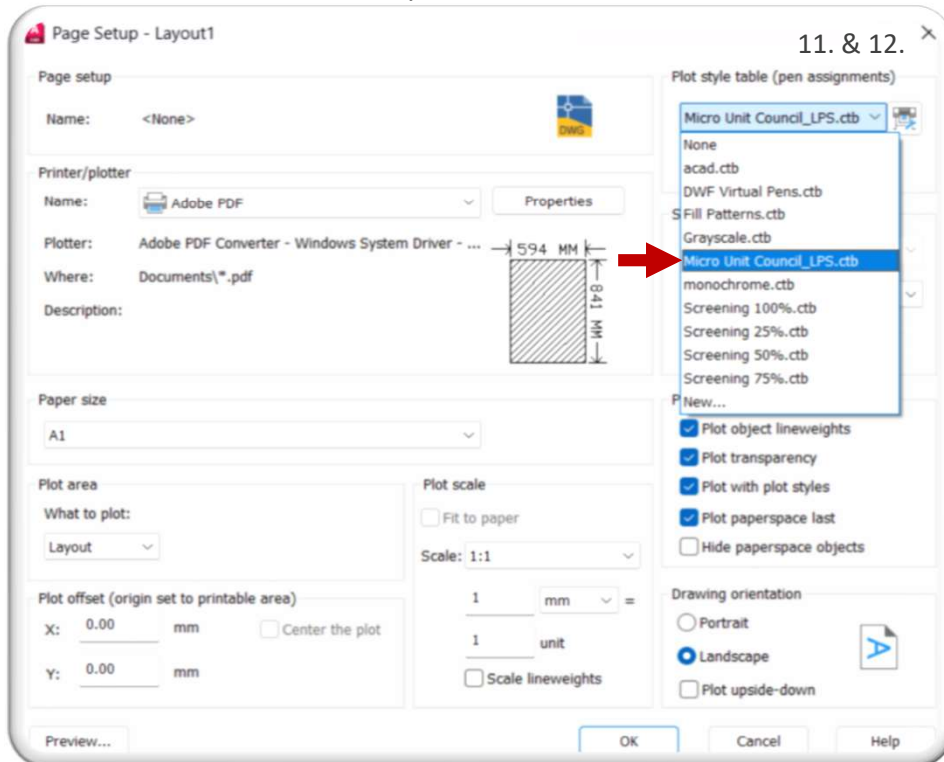
3 SETTING UP PENSETTINGS (CTB FILE)

Objective: To install and activate the correct City of Cape Town ARF pen settings for consistent print outputs

- **Step 10:** Locate the CTB file (*Micro Unit Council_LPS.ctb*) from the extracted folder in the 02_CAD Drawing Styles folder.



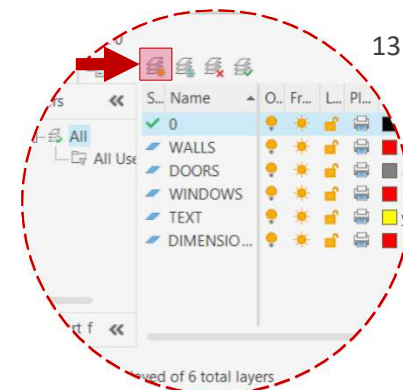
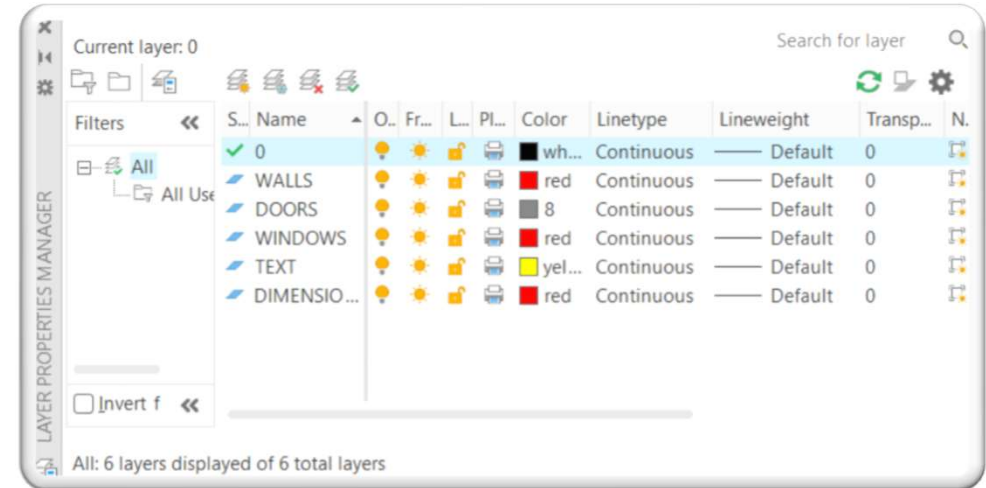
- **Step 11:** Copy CTB file in the folder into the Plot Styles directory on your computer: `C:\Users\<username>\AppData\Roaming\Autodesk\AutoCAD 2024\R24.3\enu\Plotters\Plot Styles`
- **Step 12:** Confirm in AutoCAD via Page Setup Manager → Modify → Plot Style Table (CTB). Select *Micro Unit Council_LPS.ctb* and apply.



4 WORKING WITH LAYERS AND DRAWING STANDARDS

Objective: To maintain consistent drafting standards across all ARF submissions.

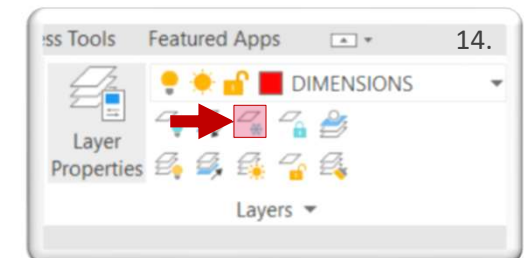
- Use existing ARF layers (WALLS, DOORS, WINDOWS, TEXT, DIMENSIONS).



- **Step 13:** Create new layers only when necessary, using the NEW LAYER icon in the layer dropdown, and assign appropriate colour, linetype and lineweight.

- **Important Note:** Do not override layer properties; allow CTB to control lineweights.

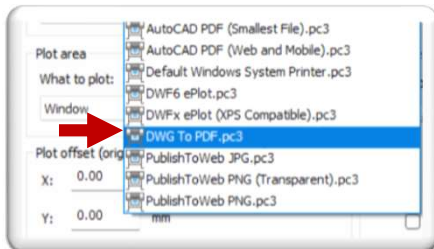
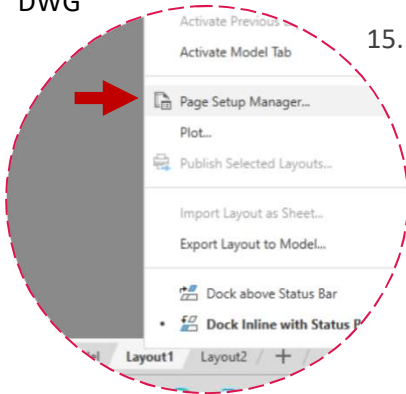
- **Step 14:** Purge unused layers regularly by using the PURGE function in the DWG and freeze unnecessary ones in layouts using the FREEZE icon in the layer dropdown



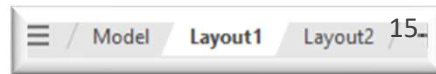
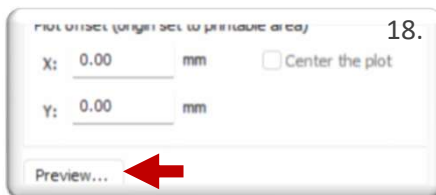
5 PRINTING TO PDF USING ARF PEN SETTINGS

Objective : To produce professional-quality PDFs for submission or review.

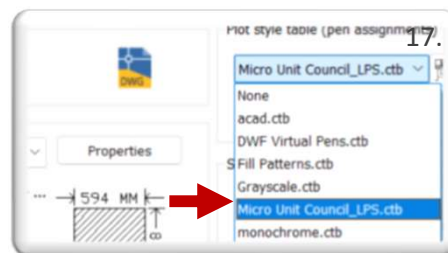
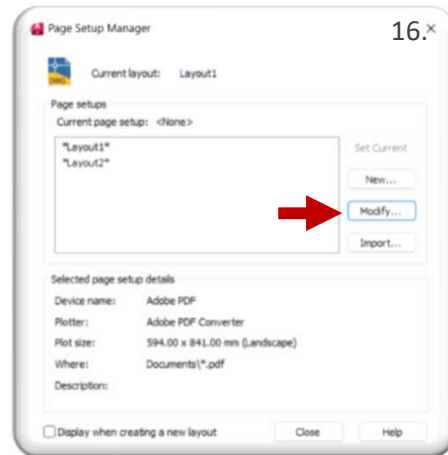
- **Step 15: Open the Paper Space tab** by selecting Layout 1 or 2 in the DWG



- **Printer/Plotter:** DWG to PDF;
- **Paper Size:** ISO A1 or A2.
- **Plot Scale:** 1:100, 1:50, etc
- **Orientation:** Landscape



- **Step 16: Once in Paper Space Right-click → Page Setup Manager → Modify.**

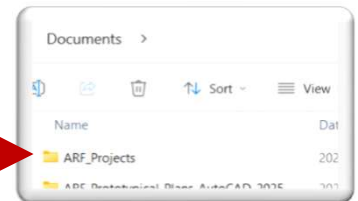
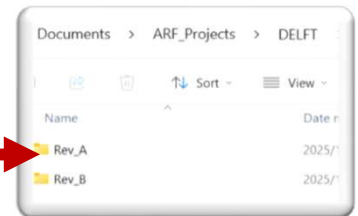


- **Step 17: Plot Style Table:** *Micro Unit Council_LPS.ctb* .
- **Step 18: Preview the drawing,** then Save PDF As→Project_Files\04_PDFs\ <filename>.pdf.

6 SAVING AND MAINTAINING FILE INTEGRITY

Objective: To install and activate the correct City of Cape Town ARF pen settings for consistent print outputs

- Keep prototypical files as read-only templates.
- Use consistent naming conventions (RevA, RevB, etc.).
- Back up all project files regularly.
- Include revision notes when re-issuing drawings
- Save project-specific drawings separately from templates.



7 SUMMARY CHECKLIST

Use the checklist below before submission:

- ☐ Downloaded and extracted ZIP folder
- ☐ Copied CTB file to Plot Styles directory
- ☐ Opened and renamed DWG file
- ☐ Updated title block and project info
- ☐ Verified pen settings and plotted test PDF
- ☐ Saved final drawing in project folder



- **DISCLAIMER:** Please note that making use of the Prototypical Plan designs and software files does not ensure approval. It is the responsibility of the registered professional to ensure compliance with the relevant legislation when making use of the materials in order to obtain the required statutory approvals.

GOOD PRACTICE RECOMMENDATIONS

These guidelines ensure consistent drafting quality, accuracy, and compliance with acceptable drafting standards and SANS 10400

LAYER MANAGEMENT AND NAMING CONVENTIONS

- Use predefined ARF layers wherever possible.
- Prefix new layers with 'ARF_' for traceability.
- Assign correct colours and lineweights (do not override by layer).
- Use PURGE and LAYDEL commands to clean drawings

FILE ORGANISATION AND VERSION CONTROL

- Maintain a clear folder hierarchy.
- Save incremental versions before major edits.
- **Avoid overwriting template files.**
- Use cloud or server backups regularly.

DRAWING STANDARDS AND DRAFTING PRACTICES

- Use millimetres as base unit (UNITS command).
- Keep text and dimensions annotative.
- Avoid exploding blocks; maintain annotation integrity.
- Use consistent text styles and run AUDIT/PURGE often.

EXTERNAL REFERENCES (Xrefs) AND COORDINATION

- Use relative paths for Xrefs.
- Bind or insert Xrefs before submission.
- Ensure shared coordinate origin (0,0,0).
- Apply consistent file naming conventions across disciplines.

PLOTTING AND OUTPUT QUALITY

- Always use *Micro Unit Council_LPS.ctb* for printing.
- Preview before plotting to confirm lineweights.
- Use DWG To PDF.pc3 plotter configuration.
- Select correct ISO paper sizes and check margins.

PERFORMANCE AND EFFICIENCY

- Limit the use of excessive hatching and detailed linework.
- Use blocks and dynamic blocks for repeated elements instead of copy-paste geometry.
- Optimise drawing regeneration by turning off unnecessary layers.
- Cleanly detach or reload Xrefs that are no longer needed.
- Use QSELECT and filters for efficient editing rather than manual selection.
- Configure AutoSave intervals to prevent data loss while minimising lag.

GENERAL BEST PRACTICES

- Always verify drawing orientation (north point, scale, and title alignment).
- Maintain a standard annotation scale.
- Use standard text styles, dimension styles, and multileader styles from template.
- Review SANS 10400 and MPBL compliance early in design to prevent rework.
- Coordinate with all disciplines before issuing any revised plans.
- Ensure issued drawings contain accurate issue status (e.g. "For Review", "For Construction").

SUBMISSION-READY CHECKLIST

Technical Checks:

- File audited and purged; no unresolved Xrefs or proxy objects.
- All annotations, dimensions, and symbols display correctly in paper space.
- Model and layout views aligned and scaled accurately.

Administrative Checks:

- Title block completed with project name, drawing title, revision, date, and preparer.
- Drawing number matches register or sheet index.
- Latest ARF or City of Cape Town template version used.

Output and Coordination:

- PDFs reviewed for clarity, correct sheet size, and readable lineweights.
- File naming follows prescribed convention (e.g. *ARF_UnitType1_Plan_RevA.dwg*).

This document provides guidance on using the City of Cape Town's ARF Prototypical Plans in AutoCAD. It outlines key steps for setup, drawing standards and file management to ensure consistent and submission-ready outputs.