R H A
ROBERT HIDEY ARCHITECTS

GENERAL RECOMMENDATIONS AND NOTES:

• ALWAYS update the floor area table and double check the polyline for accuracy. The table for Area Calculations can be found here: **L > Templates > CAD > Sheet Notations > Calculations**

• Overall plan dimensions and major breaks in a plan should be at whole numbers. Half-inch dimensions are less desirable in the field during construction.

• When creating a slab edge plan, consider the details and coordinate between the two to verify that your offsets and depressed areas are aligned.

• Use care with with dynamic blocks so that they are not overly complicated, hard to use, and difficult to revise.

• On California projects, remember that the minimum heel height for a roof truss is to be 11.25" to accomodate insulation. Review with the Senior Project Director to confirm.

• **ORTHO** should ALWAYS be on to ensure all lines are drawn straight and perpendicular.

• Do not use polylines when drafting. It can create challenges when offsetting or trimming lines.

• The "**OVERKILL**" command is an easy way to eliminate lines that are on top of one another.

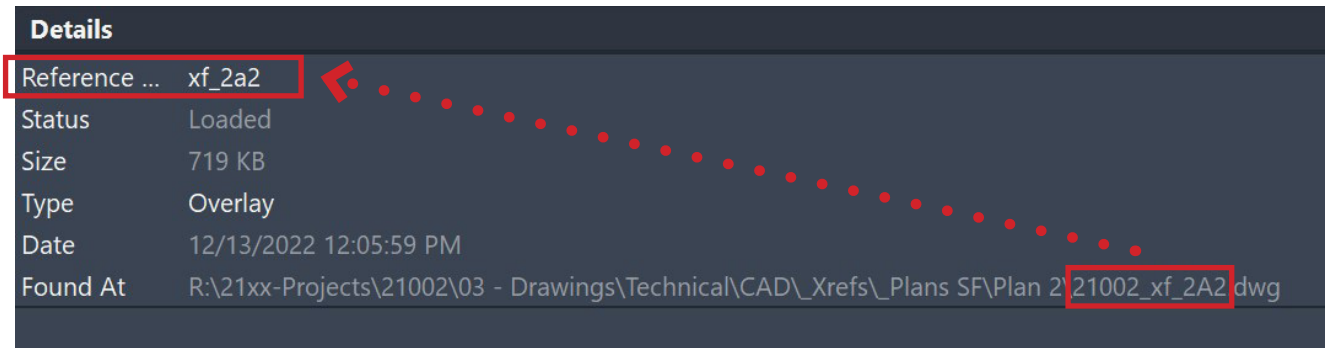
• When closing any file, use the "**CLL"** command to audit, purge, zoom extents, save and exit.

• Use the **FILLET** tool to trim lines at 90 degree angles.

• Layers that use color 9, 11, 13, 253 should always be "sent to back" for legibility when printing.

• Always xref the relevant floor plans into your files as an overlay to double check alignments and boundaries.

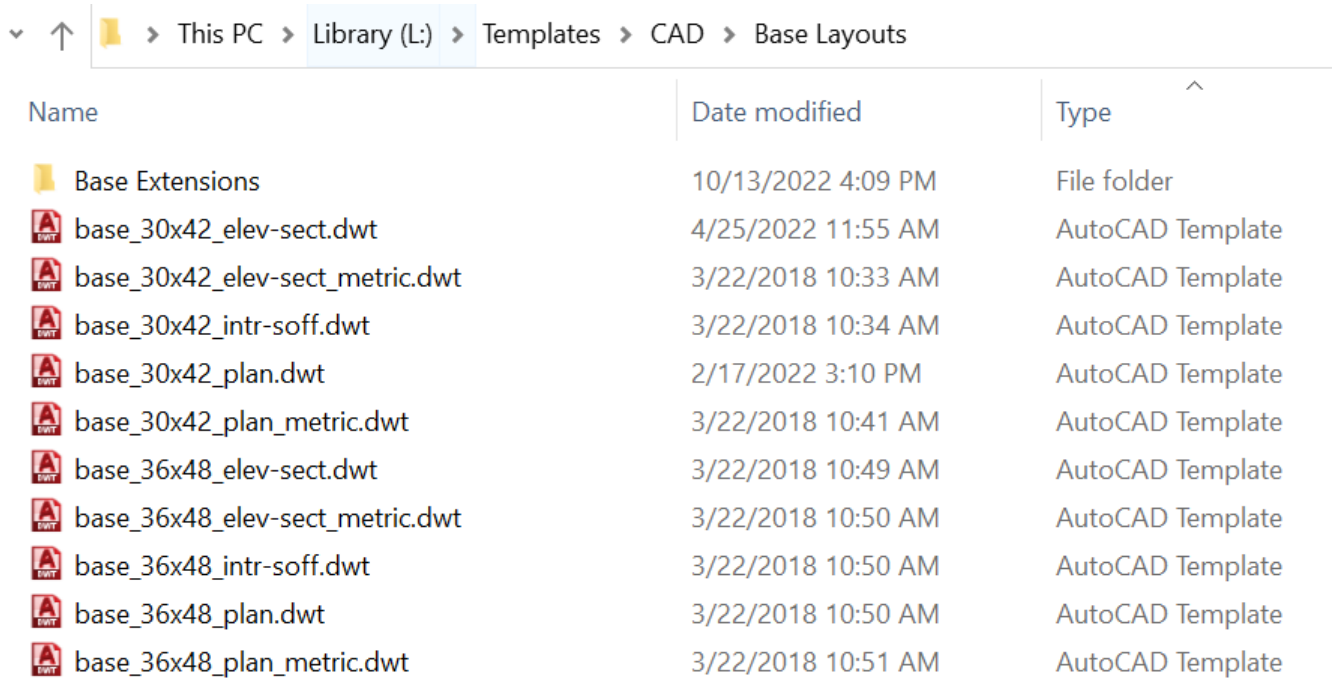
• Remove project number from the file name in the External Reference Manager for all xrefs.



CAD INPUT - STARTING A NEW PROJECT

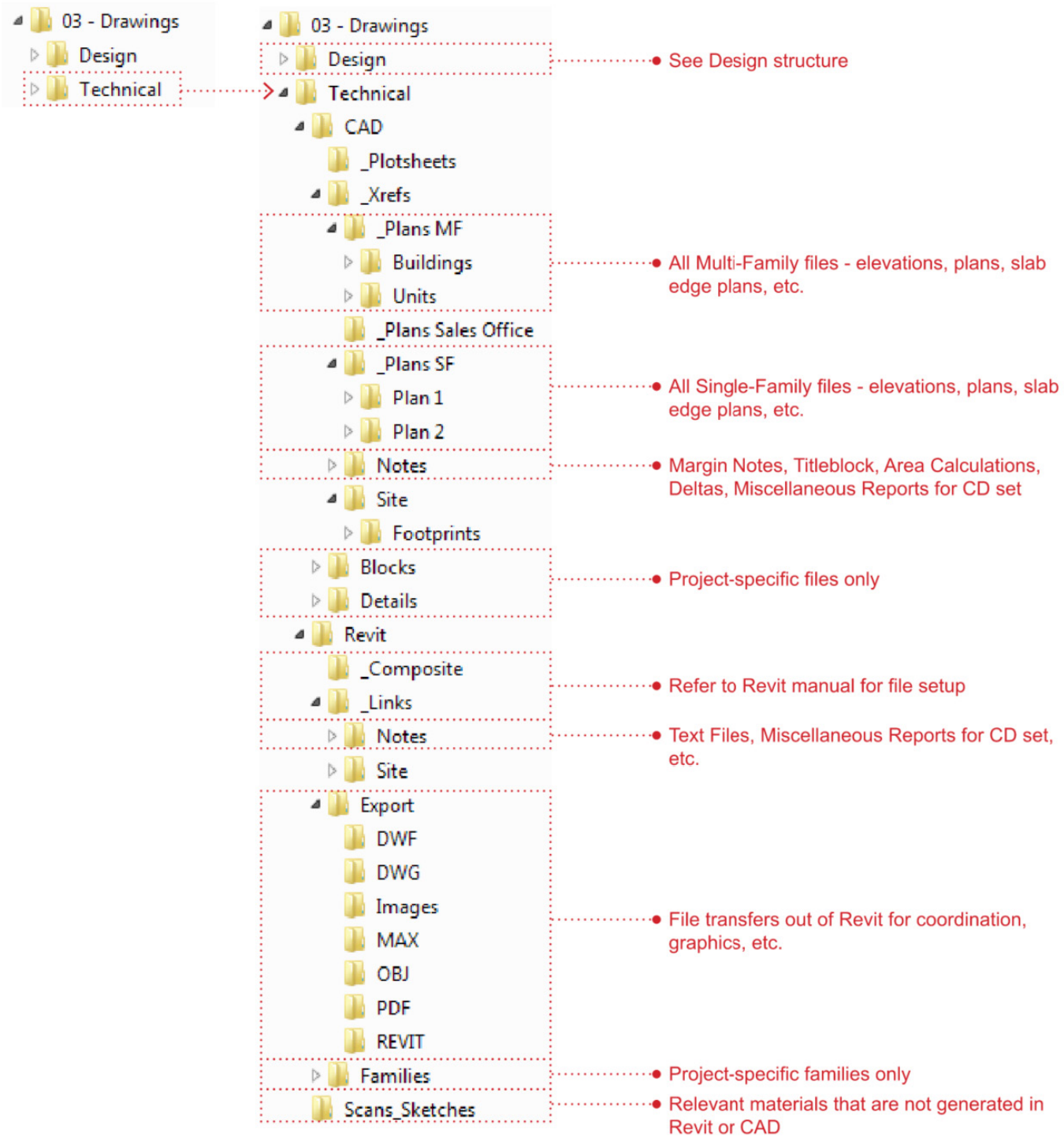
To begin input for a new file: **File > New > L: > Templates > CAD > Base Layouts**

- ALWAYS begin a new project from this location. Do not "save as" from a previous project.
- This folder contains all templates to begin floor plans, slab plans, elevation, sections, and interior elevations.
- All the necessary layers, dimension styles, etc. will exist within the template. If you need to create new layers for any reason, discuss with your team prior.



CAD INPUT - STARTING A NEW PROJECT

See folder structure below for more information on saving to proper locations.



CAD INPUT - FILE NAMING

A. XREF File Names - There are only two types of CAD file names. The first type is a Working file. The second type is a Plotsheet file.
   - When working on projects in Schematic Design, add the suffix **"_sd"** to the file name.

Working File Format for Single Family Projects:

Project Number	_	Drawing Type (Figure 1)	_	Plan Number	Elevation Type	Level
18029	_	xf	_	3	C	1

The first floor of Plan 3, elevation type "C" on project number 18029 would be: **18029_xf_3C1**

Working File Format for Multi-Family Projects:

Project Number	_	Drawing Type (Figure 1)	_	Building Number	Elevation Type	_	Level
18029	_	xf	_	B01	C	_	1

The first floor of Building 1, elevation type "C" on project number 18029 would be: **18029_xf_B01C_1**

Project Number	_	Drawing Type (Figure 1)	_	Unit Number	Elevation Type	_	Level
18029	_	xf	_	U01	C	_	1

The first floor of Unit 1, elevation type "C" on project number 18029 would be: **18029_xf_U01C_1**

Working File Format for Options:

Project Number	–	Drawing Type (Figure 1)	–	Plan Number	Elevation Type	–	Option Letter	Option sequence number	Level
18029	_	xof	_	3	C	_	A	1	1

In Plan 3, elevation type "C" on project number 18029, the first option on the first floor, would be: **18029_xof_3C_A11**
If a second option exists in the same area, the "Option Sequence Number" would change: **18029_xof_3C_A21**

Figure 1

Drawing Type	Drawing Type Description
xe	Exterior Elevation (including Roof Plan and Sections)
xf	Floor Plan
xi	Interior Elevation
xs	Slab Edge
xu	Utility / Reflected Ceiling Plan
xoe	Optional Elevation / Roof Plan
xof	Optional Floor Plan
xos	Optional Slab Edge
xou	Optional Utility

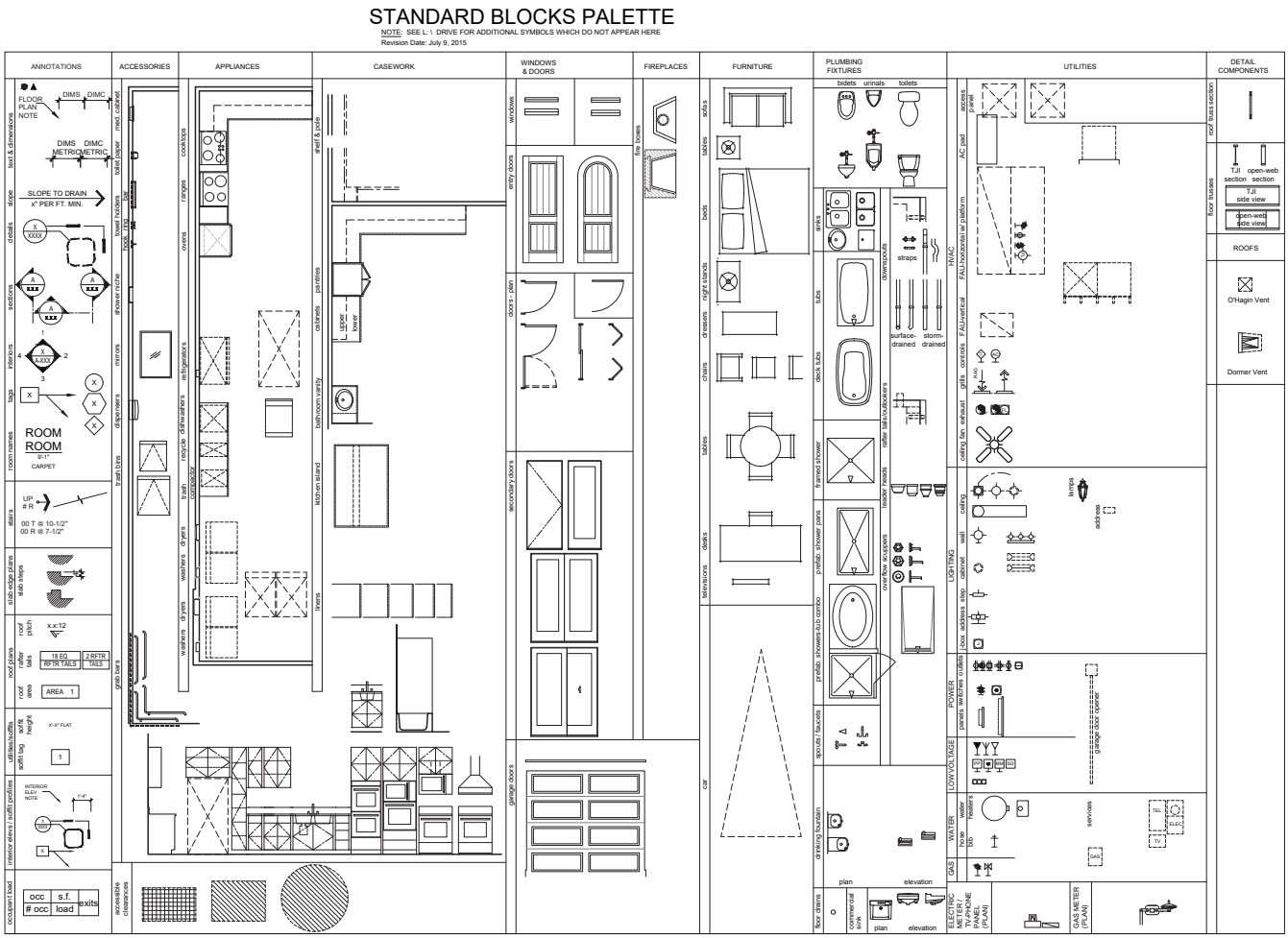
CAD INPUT - STARTING A NEW PROJECT

To use the Standard Blocks Palette in your CAD file: **Insert > Block >**

- The palette can be found in the **L: > Symbol Library > CAD > Standard Blocks Palette_2023.dwg.**
  NOTE: Do not add to, revise or save over this file. Please direct suggestions to a Director.

- Once this block palette is inserted, it can be exploded and the blocks can be used as needed.

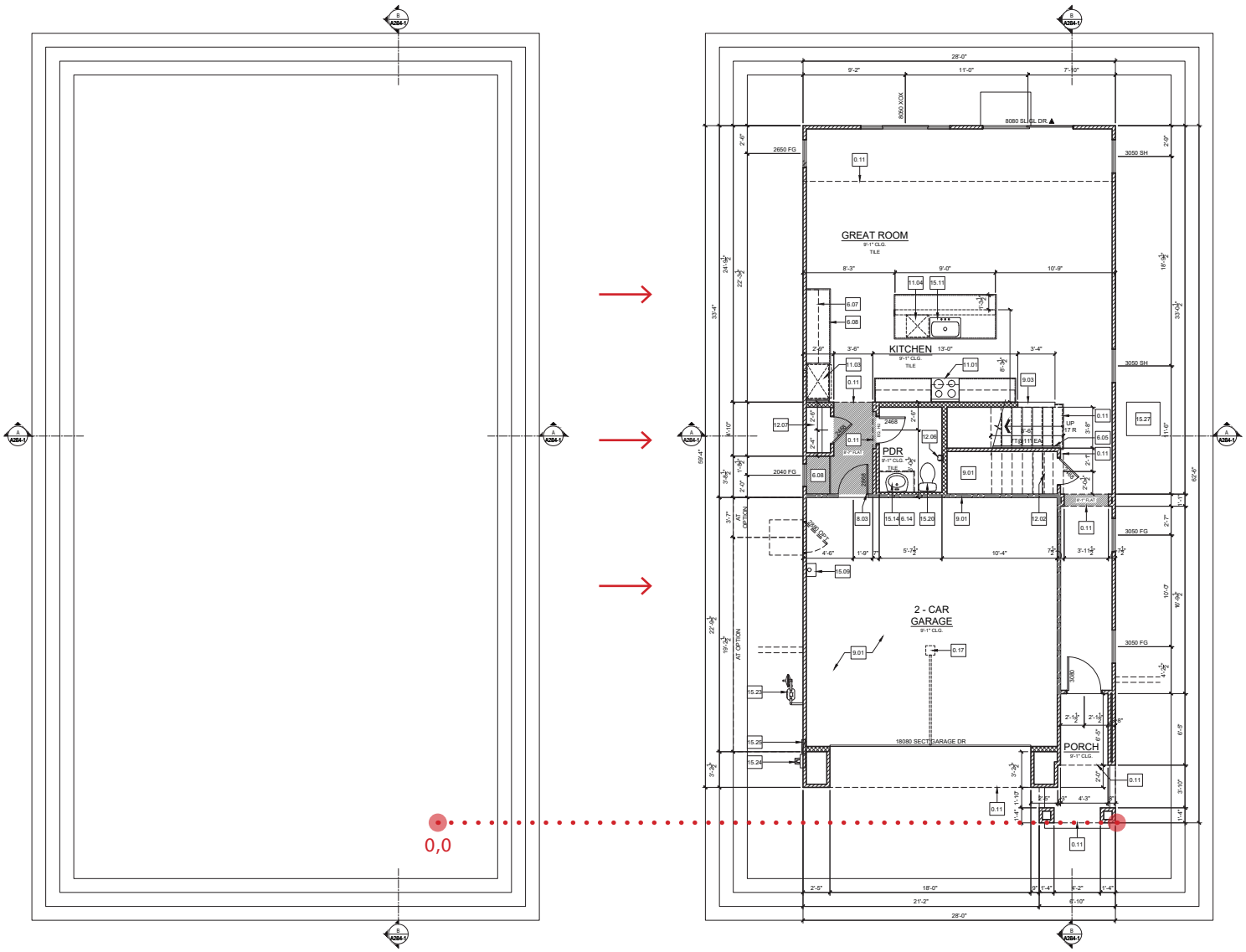
- This is not a complete document of blocks that exist in the L: Drive. Take some time to review the contents so you do not duplicate work.



- Refer to L > Tutorials > CAD for more information on creating new blocks for your project.

CAD INPUT - XFRAME FILE

All plans should have an XFRAME file as an external reference that is an **attachment**, not an overlay. The XFRAME is used for dimension location reference lines, section cut lines, and any other common information that will be used for plan variations.



- To start the XFRAME boundary, offset 5’-0” from the outside boundary of the floor plan using a polyline or rectangle on the Defpoints layer.

- Next, offset the 5’-0” boundary line by 15” to create four total boundary lines as shown above.

- As the project progresses, section cut lines will be added to the XFRAME file if they are common between plan variations.

- It is common to have a different XFRAME file for different plans within a project. For example, Plan 1 and Plan 2 will have different XFRAME files.

CAD INPUT - STARTING A NEW PLAN

To begin input for a new file: F**ile > New > L: > Templates > CAD > Base Layouts > base_30x42_plan**
The contents of this file only include dimensions styles, layers, and an indication of 0,0 point.

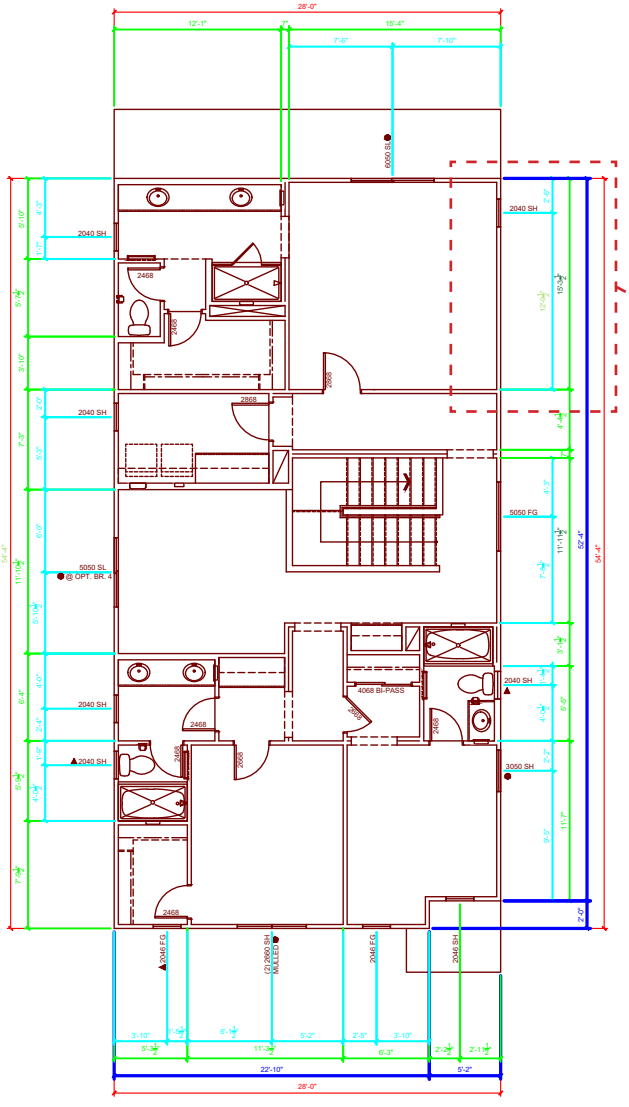
• ALWAYS begin a new plan from this location. Do not "save as" from a previous project. Templates include the latest revisions, information and standards.

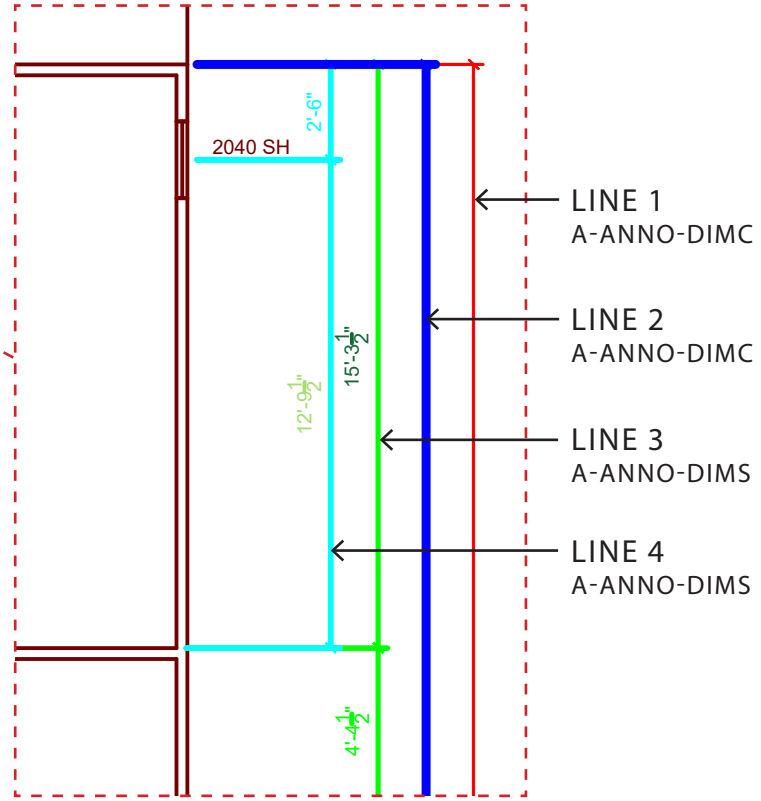
• Before beginning to draw, identify the lowest right corner of the floor plan. This will be the starting point of your drawing and should be located at 0,0 in AutoCAD.

• As an RHA standard, the garage should always be on the **left**- no matter how it was drawn by hand.

• Use _XREF1 and _XREF2 to overlay the first and second floor.
_XREF1= First Floor, _XREF2= Second Floor, 0=Xframe file (boundary lines and section cuts)

• When adding exterior dimensions, follow a hierarchy and be consistent on all plans.
Line 1 (Red) = Overall Dimensions
Line 2 (Blue) = Major Building Breaks
Line 3 (Green) = Interior walls along exterior
Line 4 (Cyan) = Centerline of exterior windows and doors





• Be consistent with the starting point of dimensions, i.e. top left, bottom left, etc. Try to coordinate dimension locations with major slab breaks that occur on the slab edge plan.

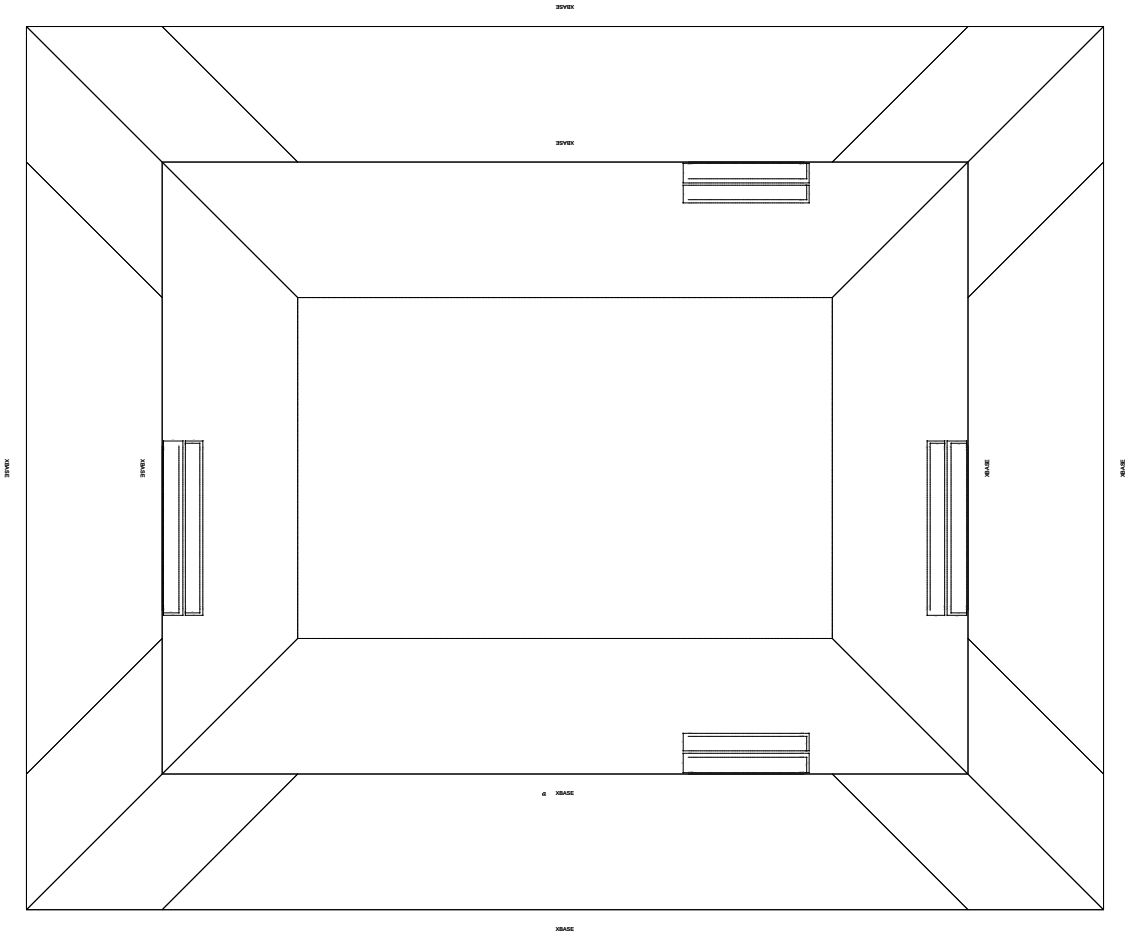
• Avoid 1/2" dimensions, and especially 1/4" at all times.

• Interior dimensions should be on A-ANNO-DIMS layer.

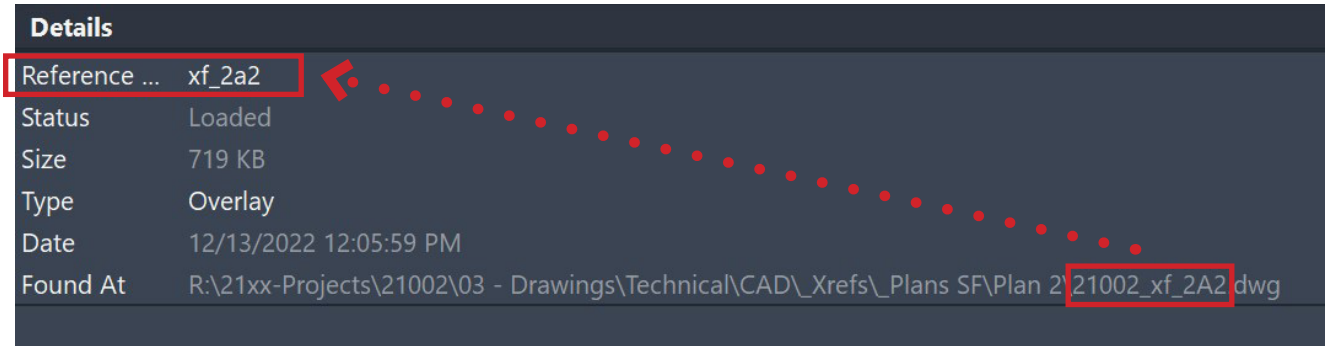
CAD INPUT - STARTING A NEW ELEVATION

To begin input for a new file: F**ile > New > L: > Templates > CAD > Base Layouts > base_30x42_elev-sect**

• ALWAYS begin a new elevation from this location. Do not "save as" from a previous project. Templates include the latest revisions, information and standards.



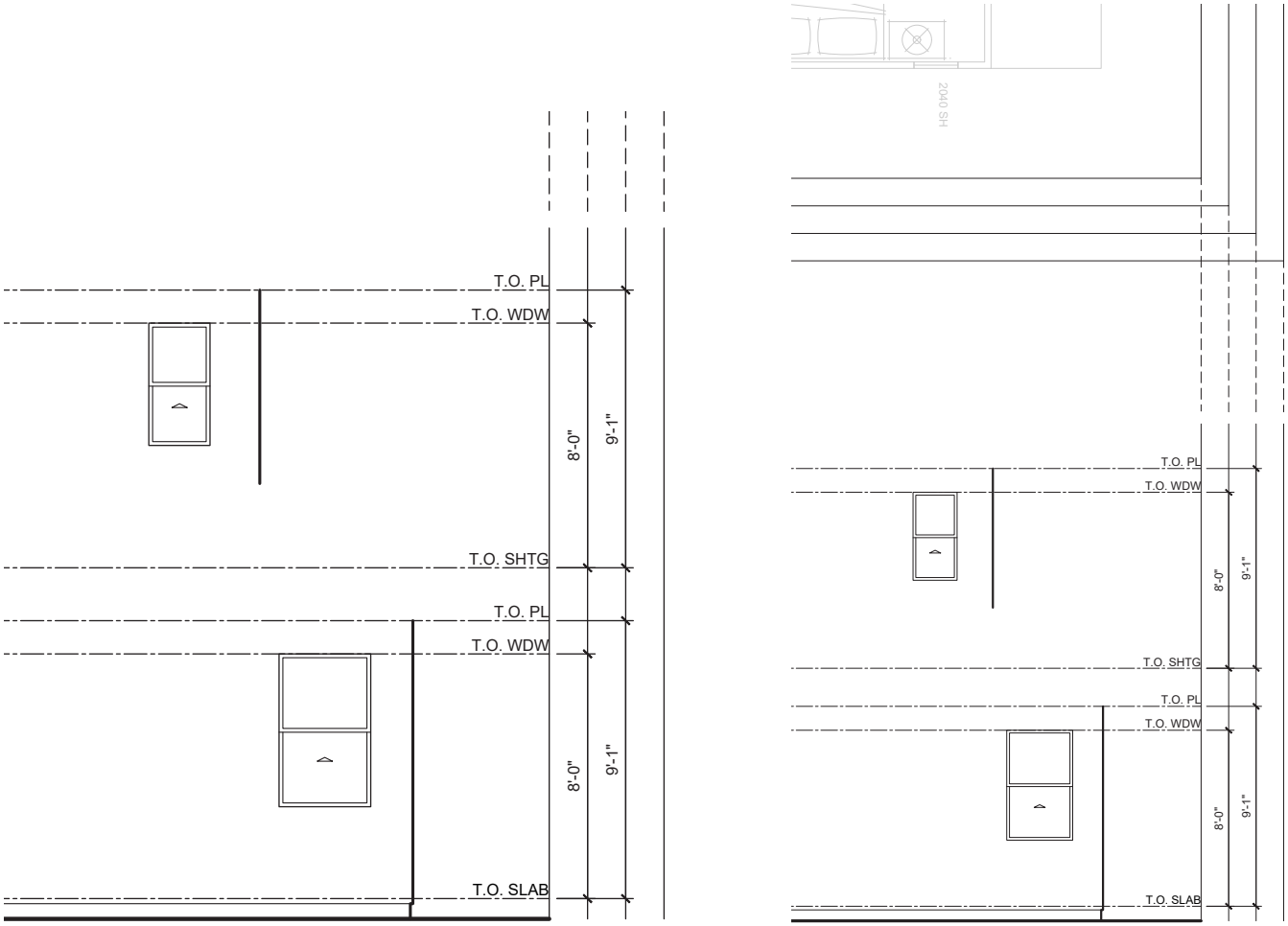
• Attach the first and second floor plans as an external reference to this drawing and place them on the appropriate layer (_XREF1 and _XREF2)



CAD INPUT - XE FILE

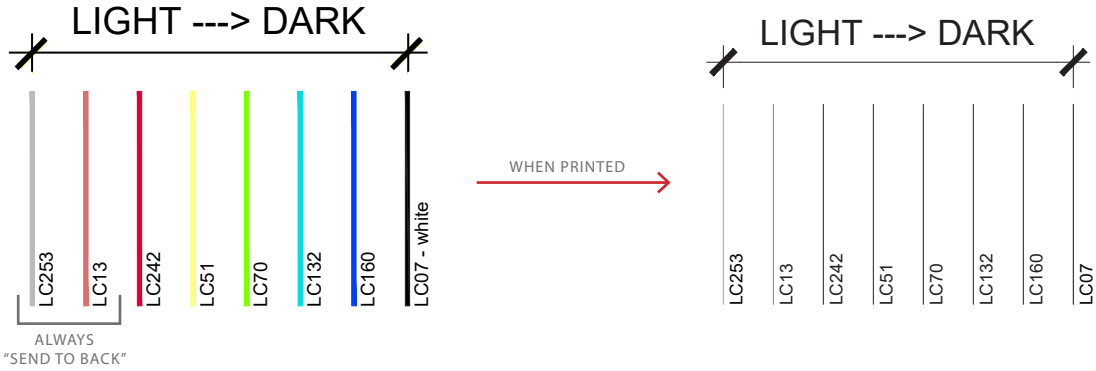
Most elevations should have an XE file as an external reference that is an attachment, not an overlay. The XE file is used to place information that is common among all elevation variations. When inserted into an elevation file, it should be placed on the 0 layer or _XREF-XE.

• Common reference heights, window locations, section information, etc. can all exist in the XE file so they only have to be drawn one time and will appear in each of the elevation style files.



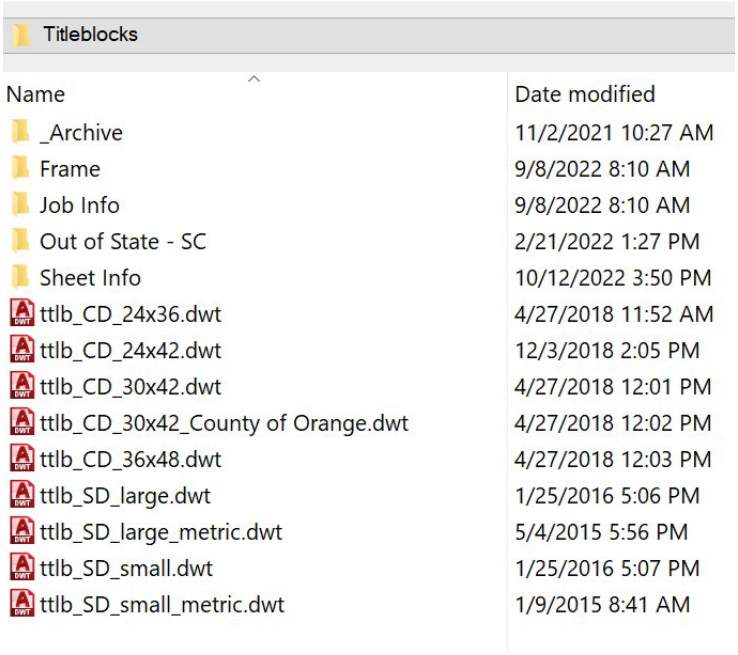
• Once the XE file has been generated, it can be referenced into elevation specific drawings and used as a base to build a complete elevation, with other blocks and annotations.

• Use the hierarchy of colors to provide depth of the elevation. Closer elements should have a darker color, and details further away should be lighter.



CAD INPUT -PLOTSHEETS

To generate a new titleblock: **File > New > L: > Templates > CAD > Titleblocks**



- Edit the project information based on your project including job number, project team, project name, and client information.

- Save the titleblock in your project folder: **Job Number > 01-Drawings >_Xrefs > Notes**

SINGLE FAMILY

Drawing Type	Plot Drawing Type	Sheet Name
Slab Edge	1	Axx1-x
Floor Plan	2	Axx2-x
Roof Plan	3	Axx3-x
Sections (Building, Stair, and Wall)	4	Axx4-x
Exterior Elevation	5	Axx5-x
Utility	6	Axx6-x
Interior Elevation	7	Axx7-x
Options	8	Axx8-x
Miscellaneous Plan Types	9	Axx9-x

MULT-FAMILY

Drawing Type	Plot Drawing Type	Sheet Name
Building Slab Edge Plan	1	Axx1-x
Building Composite Floor Plan and Roof Plan	2	Axx2-x
Unit Floor Plans and Unit Options	3	Axx3-x
Sections (Building, Stair, and Wall)	4	Axx4-x
Exterior Elevation	5	Axx5-x
Reflected Ceiling Plan and Schedules	6	Axx6-x
Interior Elevation	7	Axx7-x
Shafts – Elevator, Stairs, Chutes, etc	8	Axx8-x
Miscellaneous Plan Types	9	Axx9-x

CAD INPUT -PLOTSHEETS

To set up new plotsheets for CD's: **File > New > L: > Templates > CAD >Sheet Layouts > CD.** There are sheet templates for a variety of page sizes - *30x42, 24x36, 42x42, 36x48.*

- sheet_CD_30x42_01_cover.dwt
- sheet_CD_30x42_01_cover_metric.dwt
- sheet_CD_30x42_02_indx.dwt
- sheet_CD_30x42_02_indx_metric.dwt
- sheet_CD_30x42_03_gn1_CBC-2016.dwt
- sheet_CD_30x42_03_gn1_CRC-2019.dwt
- sheet_CD_30x42_03_gn2_CBC-2016.dwt
- sheet_CD_30x42_03_gn2_CRC-2019.dwt
- sheet_CD_30x42_03_gn3_CBC-2016.dwt
- sheet_CD_30x42_03_gn3_CRC-2019.dwt
- sheet_CD_30X42_04_Cal_Green.dwt
- sheet_CD_30x42_04_Cal_Green1-2016_no...
- sheet_CD_30x42_04_Cal_Green2-2016_no...
- sheet_CD_30x42_04_Cal_Green-2016_resi...
- sheet_CD_30x42_area.dwt
- sheet_CD_30x42_data.dwt
- sheet_CD_30x42_delta.dwt
- sheet_CD_30x42_detl.dwt
- sheet_CD_30x42_detl_metric.dwt
- sheet_CD_30x42_elev-sect1.dwt
- sheet_CD_30x42_elev-sect1_metric.dwt
- sheet_CD_30x42_elev-sect2.dwt
- sheet_CD_30x42_elev-sect2_metric.dwt
- sheet_CD_30x42_fireplace.dwt
- sheet_CD_30x42_intr.dwt
- sheet_CD_30x42_plan.dwt
- sheet_CD_30x42_plan_metric.dwt
- sheet_CD_30x42_sched_door.dwt
- sheet_CD_30x42_sched_door_metric.dwt
- sheet_CD_30x42_sched_fnsh.dwt
- sheet_CD_30x42_sched_wndw.dwt
- sheet_CD_30x42_site.dwt
- sheet_CD_30x42_soffit.dwt
- sheet_CD_30x42_unit.dwt

• Select the appropriate template for the plotsheet you are trying to generate.

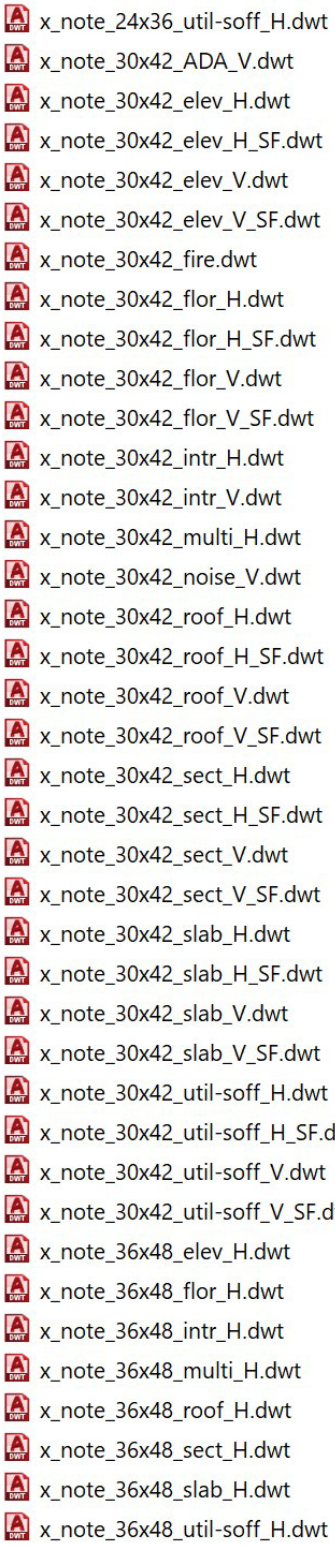
• Save the file in the project folder with the appropriate name based on the CAD Standards Manual.

• Attach the titleblock as an External Reference to the plotsheet file.

• Attach the associated files as an External Reference in Model Space and expand the viewport in Paper Space as needed. Adjust scale if required.

CAD INPUT - MARGIN NOTES AND SHEET NOTATIONS

To set up new notes for CD's: **File > New > L: > Templates > CAD > Sheet Notations > Margin Notes**



- ALWAYS save new margin notes from this location. Do not "save as" from a previous project, unless the notes are client-specific or the project is a re-use.

- Select the appropriate template for the notes you need.

- Save the file in the project folder with the appropriate name. Replace the "x" at the beginning with the job number.

- Attach the notes as an External Reference to the plotsheet file.

- Remove the notes that do not pertain to your project and review for missing information to be filled out on a project-specific basis.