

INTRODUCTION

OVERVIEW - Getting the Big Picture and Geographic Orientation

Note: this eGuide is somewhat alive, changing, reorganizing and growing in response to new information and reader responses, so please forgive the errors and organizational flaws as we continue to add instead of polish. Feel free to e-mail comments, suggestions and even complaints: odin@archidigm.com



Contents:

[Site Map](#) --- [Basic Interface Concepts](#) --- [Options and AEC settings](#) --- [Getting Started](#)

This AutoCAD Architectural Desktop 2004 eGuide was designed for those who already know quite a bit about AutoCAD 2000 - 2004. This eGuide was designed to supplement our on/off-site training program. Additions, changes and updates will be posted no later than quarterly but may occur more frequently. We will highlight additions, changes and updates with our usual Datum graphic used throughout the ARCHidigm.com site. Visit the [Lounge](#) for more Tips-n-Tricks. AutoCAD® and Autodesk® Architectural Desktop are registered trademarks of Autodesk, Inc.

1 Site Map

1-i INTRODUCTION

All toolbar buttons everywhere are functional and will take you to where they are discussed.

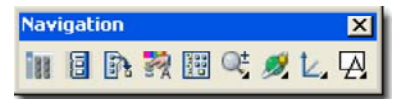
Items listed in this column include the hyperlinks associated with the toolbars, listed in the right column. As this eGuide is updated for ADT 4, information will be posted about what has been updated.

Toolbars listed in this column come from Architectural Desktop 3.3. They were not included in the 2004 release but you can migrate them manually or download our PowerSTRIP R4.0 Menu.

INTRODUCTION

[Site Map](#), [Basic Interface Concepts](#), [Options and AEC Settings](#), [Getting Started](#)

Status: 95% Complete



PART 1

AEC Display - Setup. Anatomy of Architectural Desktop objects; what controls their behavior and appearance. Template Files. [Drawing Setup](#). [Changing Display Configurations](#). [Display Manager Window](#). Object Styles. [Style Manager Window](#). Display Properties.

Status: 95% Complete - more detailed information will be added over time for Style Properties as they apply to all objects.



MANAGEMENT

PART 2

Layer Management. Layer Manager and Layer Keys. Layer Standard Properties. Layer Key Styles and Overrides. Layer Snapshots. Layer Filters and Groups. Remapping Object Layers.

Status: 0% Complete - things have not changed very much for this topic so it will be updated later.



PART 3

Walls. Importing Wall Styles. Copying Wall Styles. Adding and Justifying Walls. Wall Properties. Convert to Walls. Wall Priorities and Cleanup Groups. Wall Style Properties. Wall Problems.

Status: 99% Complete.



PART 4

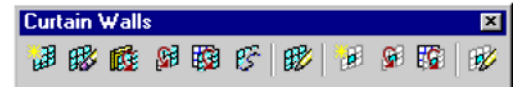
Wall Tools. Wall Modifiers. Wall Endcaps. Merge Walls. Roof and Floor Lines. Interference conditions. Sweeping. Wall Body Modifiers. Wall Dimensions.

Status: 95% Complete



PART 5

Curtain Walls. Importing Curtain Wall Styles. Adding Curtain Walls. Converting Walls, Linework and Layout Grids to Curtain Walls. Modifying Curtain Walls. Editing Curtain Wall in-place. Working with Curtain Wall Styles. Curtain Wall Units. This is a huge subject - more will be coming.



Status: 0% Complete

PART 6

Doors, Windows, Openings and Window Assemblies. Loading Door, Window and Window Assembly Styles. Working with these objects and controlling their behavior. How to display unique features, like sills and thresholds. How to Profile your own Door, Window or Opening to create your own Style. All about Window Assemblies.

Status: 75% Complete - Assemblies portion has not been updated. I will update this at the same time as the Curtain Walls but it's a big job and will occur much later.



PART 7

Stairs and Railings. Loading Stair and Railing Styles. Adding Stairs. Modifying Stairs. Working with Stair Styles. Adding Railings. Modifying Railings. Converting to Railings. Anchoring Railings. Working With Railing Styles.

Status: 99% Complete



PART 8

Roofs and Roof Slabs. Adding Roofs. Converting to Roofs. Modifying Roofs. Display Properties. Customizing and Tricks - Arched Roofs. Loading Roof Slab Styles. Adding Roof Slabs. Modifying Roof Slabs. Converting to Roof Slabs. Roof Slab Styles. Roof Slab Edge Styles.

Status: 99% Complete



PART 9

Roof Slab Tools. Roof Slab Trim, Extend, Miter and Cut. Roof Slab Vertexes. Holes, Add, Subtract and Dormers. Customizing and Tricks - California Framing and Barrel Vaults.

Status: 95% Complete



PART 10

Slabs. Slab Tools. Loading Slab Styles. Adding Slabs. Modifying Slabs. Converting to Slabs. Slab Styles. Slab Edge Styles. Slab Trim, Extend, Miter and Cut. Slab Vertexes. Holes, Add and Subtract. Customizing and Tricks - Shower Bases.

Status: 99% Complete



PART 11

Spaces. Overview. Adding Spaces. Modifying Spaces. Joining, Dividing, and Swapping Spaces. Interference. Generating Spaces from Walls and Linework. Space Styles. Display Properties. Space Database Information. Converting to Space Boundaries. Customizing and Tricks.

Status: 0% Complete



PART 12

Grids. Adding Column Grids. Modifying Column Grids - controlling spacing and editing with Grips. Clipping Column Grids. Display Properties of Column Grids. Annotating Column Grids and controlling numbering. Adding Ceiling Grids. Modifying Ceiling Grids - controlling spacing. Clipping Ceiling Grids. Display Properties of Ceiling Grids. Customizing - adding ceiling fixtures to Ceiling Grids.



Status: 0% Complete

PART 13

Structural Members. Loading Structural Member Styles. Adding Columns, Braces and Beams. Modifying Members. Trim Planes. Converting to Members. Structural Member Styles. Display Properties. Structural Member Catalog. Customizing and Tricks - Profiling your own Structural Member.

Status: 0% Complete



PART 14

Elevations. Overview and Xref discussion. Adding Elevation Lines. Modifying Elevation Lines. Elevation Line Display Props. Creating 2D and 3D Elevations. Modifying 2D and 3D Elevations. Working with 2D and 3D Elevation Display Properties for Color and lineweight control. Materials for Elevations.

Status: 95% Complete.



PART 15

Sections and Live Sections. Overview and Xref discussion. Adding Section Lines. Modifying Section Lines. Section Line Display Props. Creating 2D, 3D and Live Sections. Modifying 2D, 3D and Live Sections. Working with 2D and 3D Section Display Properties for Color and lineweight control.

Status: 95% Complete



PART 16

Design Content. Overview of Multi-view Blocks. Examples of Design Content types (this will be a work in progress). Modifying Design Content objects. Changing Text in Design Content Blocks. Changing or adding View Directions (often needed for such things as Reflected Ceiling Plans). This Part is not complete. Note: There are actually four toolbar options for this topic but the content is the same.

Status: 0% Complete



PART 17

Documentation Content. Adding Documentation Marks. Modifying Documentation Marks. Opening Documentation Marks and Modifying for use as New Marks.

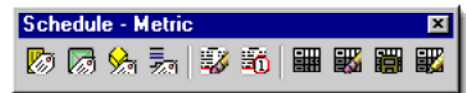
Status: 0% Complete



PART 18

Schedules. Drawing Scale for Tag and Schedule sizing. Anatomy of a Schedule. Adding Tags. Adding Schedule Data. Renumbering and Modifying Tags and Schedule Data. Property Set Definition Styles. Schedule Data Format Styles. Schedule Table Styles. Exporting Schedules.

Status: 80% Complete



PART 19

Dimensions and Dimension Labels. AEC Dimension Overview. Adding AEC Dimensions. Manually Adding AEC Dimensions, Objects and Points. Removing Attached Objects and Points. Converting AutoCAD Dimensions to AEC Dimensions and Exploding AEC Dimensions to get AutoCAD Dimensions. AEC Dimension Styles. Match Properties. Activating Text Grips. AEC



Wizard. Dimension Labels. Customizing and Tricks.

Status: 0% Complete

PART 20

Areas. Adding Area objects. Create Area object from other objects. Modifying Area objects. Area object Properties. Join, Subtract and Intersect Area objects. Edit Area object Vertices. Trim and Divide Area objects. Convert Area objects to Plines. Area Styles. Area Name Definitions. Area Calculation Modifiers. Area Evaluations (Reports).

Status: 90% Complete



PART 21

Area Groups. Adding Area Groups. Modifying Area Groups. Using Grips on Area Groups. Attaching and Detaching Areas to/from Area Groups. Converting Area Group contents to Plines. Creating Area Group Styles. Creating Area Group Template files and Creating Area Groups from these Template files.

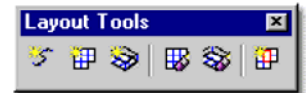
Status: 0% Complete



PART 22

Layout Tools. Working with the Layout Curve. Display Properties. This Part is not complete.

Status: 0% Complete



PART 23

Anchors. Working with the Curve Anchor. Working with the Node Anchor. Anchor Object Properties. Display Properties. Customizing and Tricks - Ceiling Fixtures and Anchoring to Ceiling Grids. This Part is not complete.

Status: 0% Complete



PART 24

AEC Polygons. Adding AEC Polygons. Modifying AEC Polygons. AEC Polygon Styles. Converting Polyline base Polygons into AEC Polygons.

Status: 99% Complete



PART 25

AEC Blocks - Profiles. Multi-View Block concept. Adding Multi-View Blocks. Modifying Multi-View Blocks. Multi-View Block Definition Styles. Creating Multi-View Blocks. Adding Mask Blocks. Modifying Mask Blocks. Mask Block Definition Styles. Create AEC Content Wizard. Profiles. Customizing and Tricks.

Status: 90% Complete - I may add content on the AEC Wizard but I don't see it as a high priority unless readers feel otherwise.



PART 26

Utilities. Adding Notes to objects. Object Viewer. Quick Slice. Referencing Objects. Create Hidden Line Removal. **AEC Object Explode.** Customizing and Tricks.

Status: 99% Complete

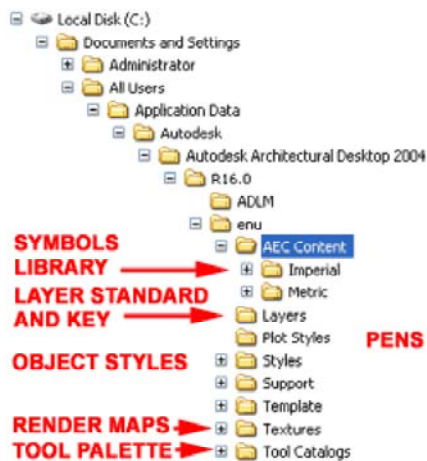


PART X - Appendix. This is where you will find extra items that were added late, are part of every topic or downloadable examples.

2 Basic Interface Concepts

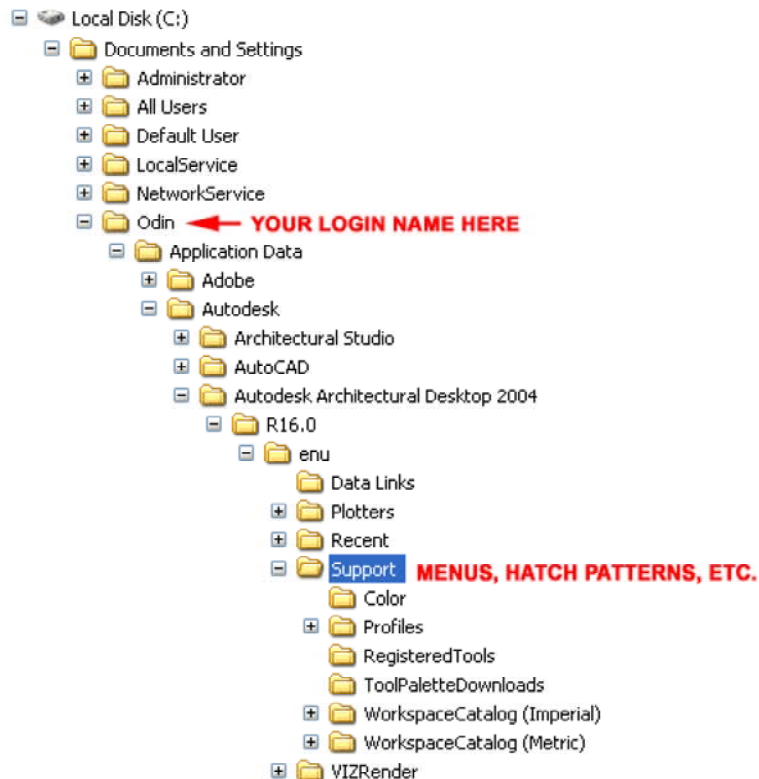
Hey, where did all of my stuff go?

Autodesk® AutoCAD® 2004 and **Autodesk® Architectural Desktop 2004** (referred to in this guide as ADT 4) now meet Microsoft® Compliance and Certification requirements for Windows® 2000 and XP operating systems. What this means to previous users of AutoCAD and Architectural Desktop is that software data is no longer stored in one convenient folder but spread out a bit. You will still find the primary application data under **Program Files\Autodesk Architectural Desktop 2004** but for a lot of the items that are likely to be unique between users, you will find them under the **Documents and Settings** folder as illustrated to the right. The primary reason I have decided to comment on this spaghetti nest of folders is that you may need to do some GUI and file location adjustments to ADT 4 in order to feel more comfortable with this upgrade. The menu files that you may want to work with, for example, are now stored under **Documents and Settings\LoginName\Application Data\Autodesk Architectural Desktop 2004\R16.0\enu\Support**. If you do not find the items you are looking for under this path, your IT Manager may have set your system up for "roaming" accounts and thus this information resides somewhere on an office Server (don't ask me where, it's different for every office).



If you don't tinker with software and just run it as is, out of the box, then you may still want to become familiar with these path locations because they apply to many things inside Architectural Desktop. The most important location path to know is where ADT keeps all of your Content files (all those Multi-View Blocks and Object Styles). By default, you will find the Content files at **\Documents and Settings\All Users\Application Data\Autodesk Architectural Desktop 2004\R16.0\enu\AEC Content** and after this folder you can choose between Imperial or Metric Content if you happen to have installed both.

If you do tinker with software, these locations, paths and folders can be moved around and relocated to a central server. The primary issue with relocating this information to a central server is network speed and getting all of the paths set within ADT to find this information. For more information on Installation and Deployment see the [Architectural Desktop 4 Deployment eGuide](#).



Default Folder Structure

Primary Program Application Files

C:\Program Files\Autodesk Architectural Desktop 2004\

Primary Program Application PC System Data Files

C:\Documents and Settings\All Users\Application Data\Autodesk\Autodesk Architectural Desktop 2004\R16.0\enu

Primary Program Application User Data Files

C:\Documents and Settings\[User Login Name]\Application Data\Autodesk\Autodesk Architectural Desktop 2004\R16.0\enu

Adjusting to the New Interface for AutoCAD and ADT Users

When ADT 4 has been installed and launched for the first time, previous users of AutoCAD and ADT may find the new GUI interface surprisingly light. For new users, the process of selecting objects and right-clicking on the mouse, appears to be your best option for learning about the commands that are now no longer accessible through pull-down menus or toolbar buttons. For those migrating from ADT 3 - 3.3, ARCHIdigm has created a toolbar and menu system called the "[PowerSTRIP](#)" that you can download, install and use as a separate menu that has all of the old ADT 3.3 toolbar buttons. There are also other options that you can employ to add more traditional menu/command items to the GUI interface:

1) To get the AutoCAD pull-down and toolbar menus back as they have been for years, you can use the **MenuLoad** command and find the **ACAD.mnc** file under the **Support** folder - see comments above for "[Hey, where did all of my stuff go?](#)"

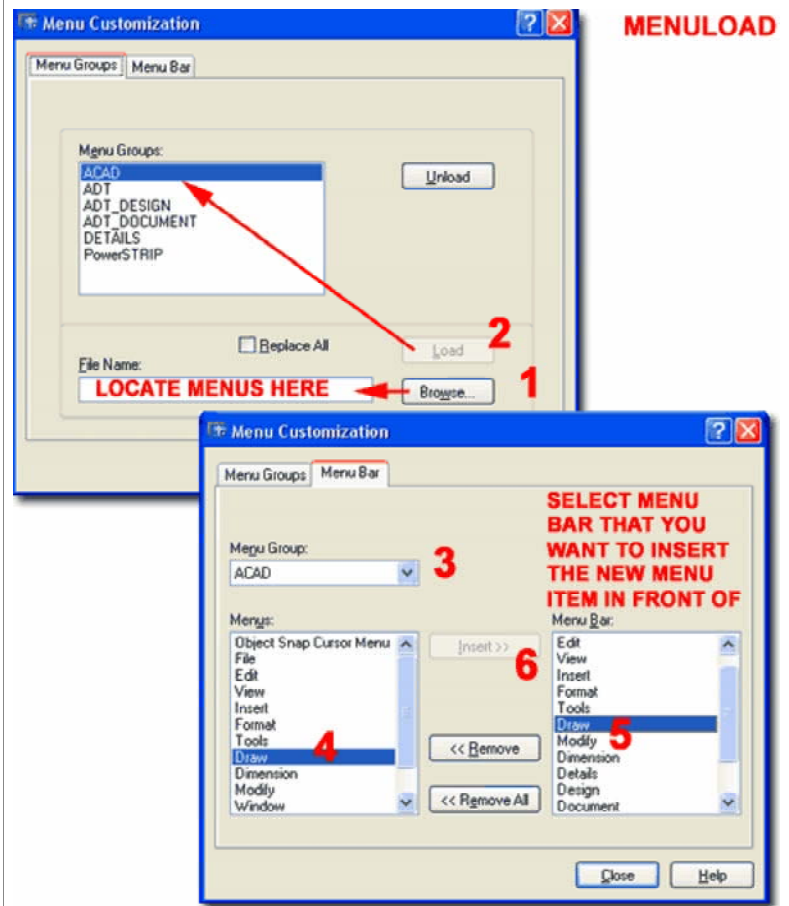
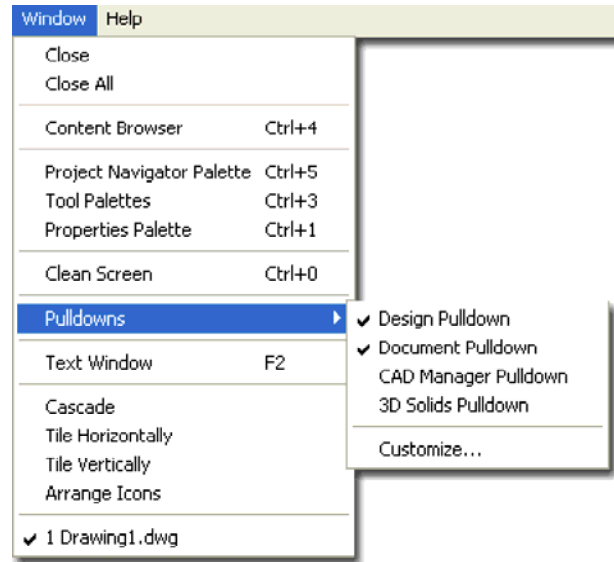
Once you have located the ACAD.mnc file and loaded it, you will have to use the **Menu Bar** tab of the **Menu Customization dialog box** to **Insert Menu Items** from the **ACAD Menu Group** over to the current **Menu Bar**. There are only a few pull-down menus to worry about, such as **Draw, Modify** and **Dimensions**. If you don't need these pull-down menus, then at least you will now have access to the Toolbars including the slick new Style toolbar which has a Text Style pull-down (I've asked for this for many years now).

2) To get some of the older ADT 3 - 3.3 pull-down menus back, you can use the **Window pull-down menu** to access a cascading menu called "**Pulldowns**". On this menu you should find the old ADT "**Design**" and "**Documentation**" pull-down menus. It would have been great if they had just expanded the list to include all of the old menus and included the [Express menu](#) item as well (even if it reminded you to load it first).

3) To get the old **Layer Manager dialog box** you will now have to type **..Layer** on the command line (notice the dot preceding the word "layer")

4) If your computer feels sluggish with all the glossy new graphics they added to ADT 4, you can take a few steps to speed it up. One of the biggest changes you can make is to [turn off the Materials Display when using Shaded Modes](#). You will find this setting on the **System** tab of the **Options dialog box** - see **Properties** button to **Render options**. **Uncheck Render options**. Though this is a really neat feature that has been available for a few years now, it puts a bit of a strain on older systems with poorer graphics cards. The new Palettes add a graphic strain to computer video cards as well, particularly if they have been set to be transparent. To turn Off Transparency for the Palettes, right-click over the Title Bar and look for the "Transparency..." pop-up menu option. Keeping the [Properties Palette](#) active at all times also tends to create a lag effect as it continually updates the data and options you have for objects being drawn.

Note: If you still have ADT 3.3 around, you can copy the AecArchX.mnu and .dll files over to ADT 4 and use the MenuLoad command to bring the old toolbars over. You could even bring in the old pull-down menus too.



ADT Pull-down Menu Layout

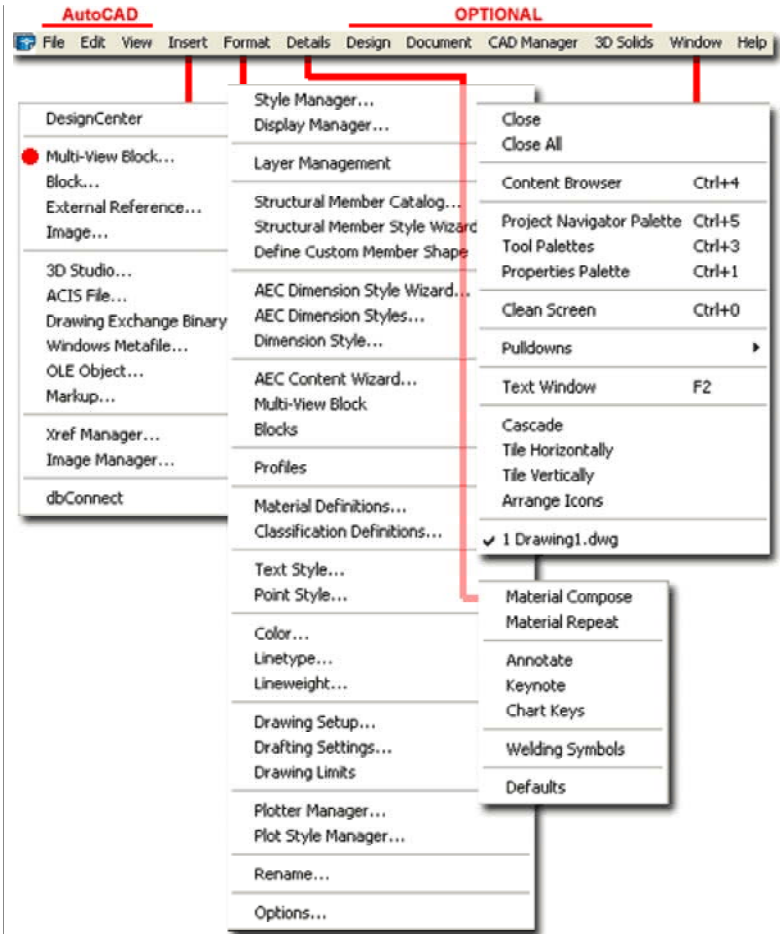
ADT 4 has had a major menu renovation job done since ADT 3.3 and in the default installation state, you will not find any pull-down menus that are specifically for ADT. What you will find is that many ADT tools and commands have been integrated into pull-downs that have the same name in AutoCAD 2004: **Format**, **Insert** and **Window** for example. Of this set, you will find most of the ADT specific commands and tools listed under the **Format pull-down menu**.

Illustrated to the right I show some other pull-down menus that you can either load or toggle On for Architectural Desktop. The **Details** pull-down menu is for the newly integrated AEC Details tool that had to be run separately in the past; this is an optional item that you can choose to install when first installing ADT. The **Design**, **Document**, **CAD Manager** and **3D Solids** pull-down menus are all menus that you can toggle On or Off via the Windows > Pulldowns > cascading menu.

Even though you can activate some of the older pull-down menus, as discussed above, they are not the same as their predecessors and are instead, rather light on the command offerings. For those who use ADT as a regular AutoCAD drafting tool as well, even those pull-down menus have been removed from the default installation state of ADT and you many have to load those just to get access to some of the cool new features offered in AutoCAD 2004, such as the Text Styles drop-down list.

The reason ADT 4 is so light on pull-down menus and toolbars is that a massive rewrite has transpired to make the interface and command access more "user friendly". That remains to be seen but however you feel about the new GUI interface and command access, there's really no way to avoid it. The new **Tool Palettes**, with the slick 32 bit fully rendered 3D icons contains more than pretty pictures of objects; it actually has embedded information about those objects that you cannot set through the Object Styles anymore. This information, found via the Tool Palettes icon Properties, usually contains default settings for dimensions, heights and similar values to be discussed throughout this guide.

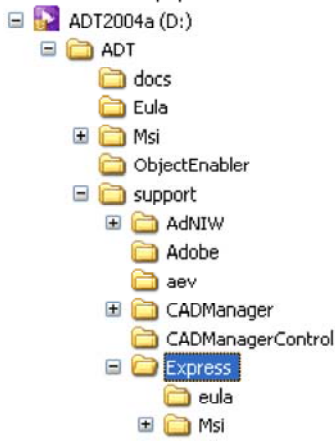
Due to this restructuring and rewrite, it appears that a lot of commands and command options have fallen out of easy reach and special care has to be taken now to find them. Though a good deal of commands and command options have been integrated into the object specific pop-up menus, I continue to find holes where things were left out. One particular example is the command that allows you to Convert Plines to Walls. Many users employ this technique because it is a natural way to outline a building envelope; you would expect that by selecting a Pline and right-clicking that you would see the option to Convert to Wall. There is in fact an option to Convert to Mass Elements and Profiles but not Walls. Therefore, I suggest that new and older users alike read the command line options while using this program so you don't miss out on great tools. When you type "wall", for example, this is the list you will see: [Add/ COnvert/ Properties/ Styles/ Cleanup groups/ Dimension/Interference/ Reverse].



The **Design** pull-down menu focuses on the production end of the design process with access to the primary ADT design objects such as Walls, Doors, Windows, Beams, Slabs, Roofs, Stairs and more. This menu also provides access to Properties and Style tools for these objects but most of the editing can be done in-place or via the Properties Palette.

The **Documentation** menu offers access to some very basic documentation tools such as Areas, Schedules, AEC Dimensions, Sections and Elevations and a few more. For documentation symbols and object tags, you have to use the DesignCenter or the Tool Palettes.

Express Tools - They Are Back!



If you insert **Disk 1** of 2 for the **Architectural Desktop installation**, you can now click your way down through the Support folder to find the **Express folder** where the full set, Volumes 1-9, are ready to be installed. These, by the way, can only be installed for AutoCAD 2004 and other 2004 Flavors; i.e., you cannot install them for older releases.

If you are new to the Express Tools, illustrated to the right, you are in for a major treat. The Express Tools are a compilation of unique routines that were never an integrated part of AutoCAD but usually worked

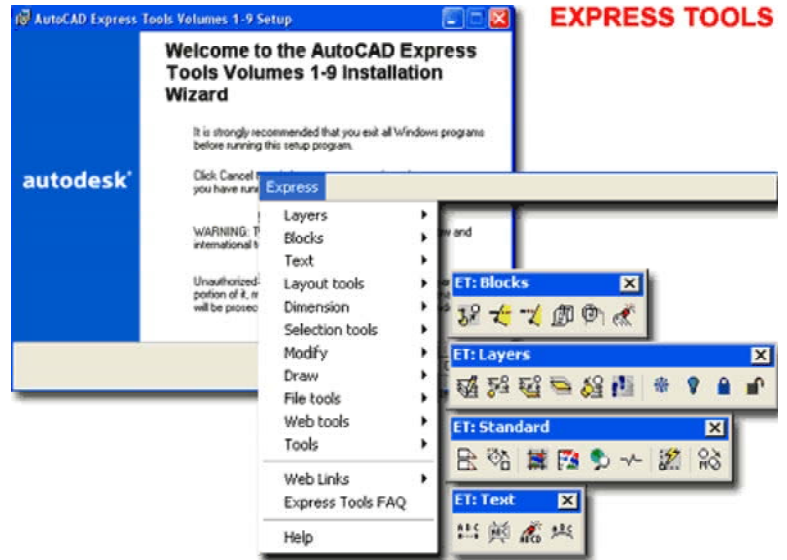
extremely well. Most of these tools were written and developed by other AutoCAD users and programmers and that was why they were never fully integrated (never fully supported, that is).

Of the set, I think it fair to say that the Layer tools are the most widely used and valued. My personal favorite is the Layer Freeze (LayFrz) command that also works inside Viewports by only Freezing objects selected in the current Viewport.

ADT Toolbar Access

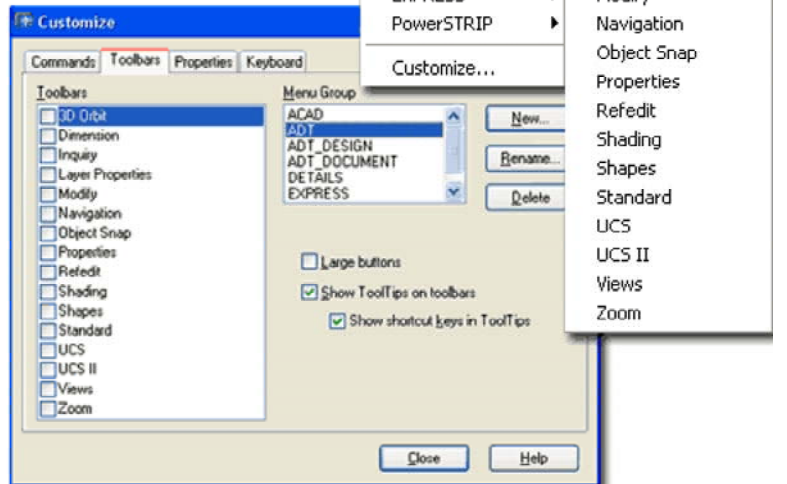
Activating Toolbars in ADT can be accomplished through several different techniques. Illustrated to the right I show two methods that provide access to all toolbars no matter what menu they may be a part of. Of these two methods, my personal favorite is to **right-click over any unused space** adjacent to existing docked toolbars. You can usually find unused toolbar space along the top of ADT under the pull-down menus and/or along the sides if you have toolbars docked there. If you right-click over a particular button on a toolbar you will only get access to the toolbars within that same menu.

The other method for acquiring access to all of the toolbars in ADT is to use the **Customize** menu option/command. The Customize dialog can be invoked from the Tools pull-down menu or by typing Customize on the command line. On the Customize dialog box, select the Toolbars tab where you can select Menu Groups to list under the Toolbars category. This is also, by the way, where you can create New Toolbars with your own toolbuttons.



TOOLBAR ACCESS

RIGHT-CLICK OVER GRAY AREA ADJACENT TO OTHER TOOLBARS FOR FULL LIST OR ACTIVATE THE CUSTOMIZE DIALOG BOX



ADT Right-click pop-up Menu Layout

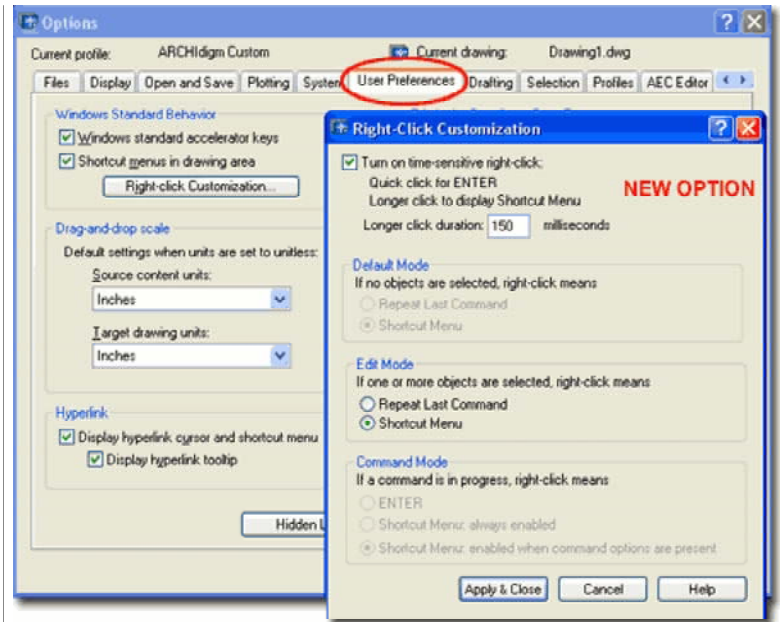


Object Specific Pop-Up menus are absolutely crucial for successful use of ADT 4 and therefore you cannot get away with a trick I have seen so many users do: deactivate the right-click and set it back to old AutoCAD R12 "Enter" mode. In Architectural Desktop you can find the **Right-click Customization** dialog on the **User Preferences** tab of the **Options dialog box** - illustrated to the right.

For those users who really must have the old "Enter" mode back, AutoCAD 2004 and ADT 4 now offer a special timed feature that allows you to have two separate right-click responses depending on the duration of the depression of the right-click button. This

option listed as "**Turn on time-sensitive right-click**", is rather fantastic and though I stopped using the right-click as "Enter" a long time ago, I have suddenly rediscovered it because now I have the best of both options.

Of this list of options, make sure to keep the **Edit Mode** set to "**Shortcut Menu**" and you should find the process of using your mouse in ADT at its optimum.



Illustrated to the left is the object-specific pop-up menu that is activated via Right-click after a Wall Object has been selected. Notice the huge list of options; these are not things that you will want to miss out on.

ADT Properties Palette

Menu **Window > Properties Palettes**



Mouse **Double-pick on object**

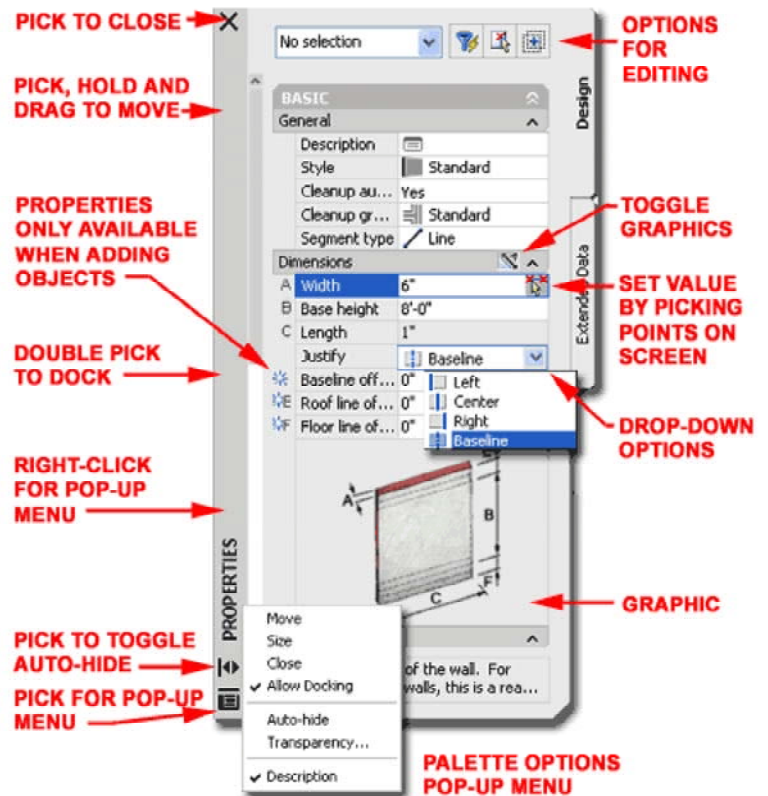
Keyboard **Properties** or **[Ctrl+1]** or **PR**

Related **PropertiesClose** or **[Ctrl+1]**

The **Properties Palette** is arguable the most important tool now in ADT and that is why you will find it popping up a great deal when working in this program. Instead of having different dialog boxes for Creating and Editing objects, users now get this palette to interact with for creating or editing objects. The options or "Properties" offered will vary as this Palette is used to Create or Edit objects. When Creating or Adding objects, you may notice blue star-like icons next to certain options and these indicate that they are only available as a Property when Adding the current object. This does not mean that you cannot edit the value later but that this value field will not be present when using the Properties Palette to edit the same object. Depending on the object and the value, you should be able to edit it In-Place or through another dialog box.

Note:

If the Properties Palette drives you crazy, you can use the old AutoCAD trick of typing a dash before the typed command; e.g. typing "**-walladd**" on the command line will execute this command without triggering the Properties Palette.



ADT Object Editing

Menu **N.A.**



Mouse **Select object, right-click** and look for **Edit In Place** options via cascading menus

Objects with Edit In Place options will show a **dark circle** (looks like a Grip) when selected, if you pick on this circle it will activate the Edit In Place command and query for what to edit.

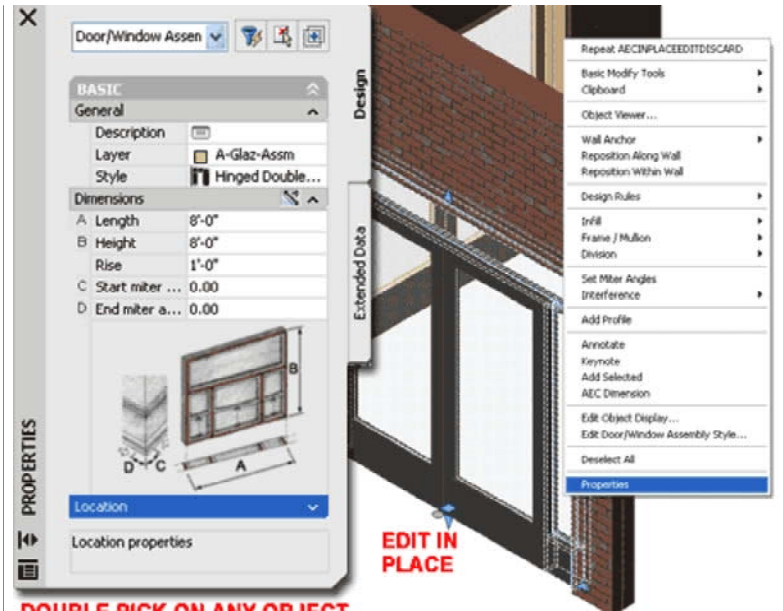
Keyboard **Varies for every object**

Related **AecInplaceEditSaveAll** and **AecInplaceEditDiscard**

One of the most significant improvements that occurred in ADT 4 was the expansion of the **Edit-in-place** methodology. For object editing there are basically two forms of the Edit-in-place or In-Place Editing: the basic form that only changes the object being edited and the more sophisticated form that temporarily releases the object from its source and allows editing that will then be saved back to the Object Style source; changing all objects of that style. This second method is similar to the Edit-in-place option for Xref's that many AutoCAD users discovered in AutoCAD 2000.

Illustrated to the right I show how most ADT objects can be edited with the Properties Palette which can be activated either by double-picking on an object or by selecting it, right-clicking and then selecting the Properties option on the object specific pop-up menu. For editing in place, you should also find numerous Grips on ADT objects that allow for changes without having to use the Properties Palette. Most objects offer Grips for Stretching, Moving and Rotating basic dimensions and heights but some objects offer a unique icon that allows for true In-Place Style Editing.

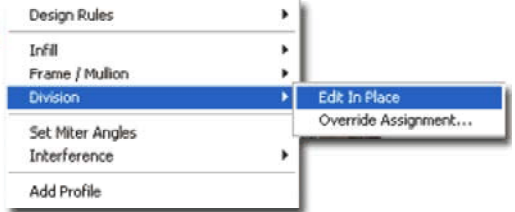
If the **gray circular icon** is not easy for you to spot, you can always look for the Edit in Place option via the object specific pop-up menu as illustrated to the right. When you Edit in Place, the In-Place Edit tool bar, illustrated above, pops up on your screen and should be used to conclude the editing session so the changes will be saved back to the source style.



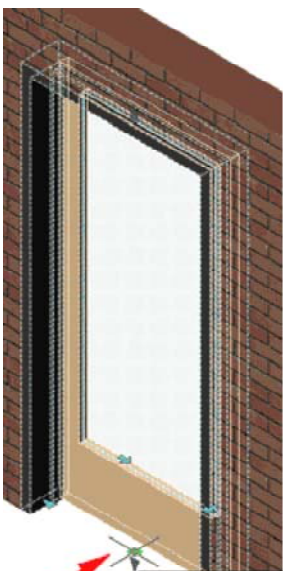
DOUBLE PICK ON ANY OBJECT TO ACTIVATE THE PROPERTIES PALETTE

PICK TO SELECT, RIGHT-CLICK TO INVOKE THE OBJECT-SPECIFIC POP-UP MENU

NOTICE EDIT IN PLACE GRIPS AND ADVANCED OPTIONS ON OBJECT-SPECIFIC MENUS.



Editing in Place and Temporary Dimensions



LOOK FOR TOOL TIPS WHEN HOVERING

Location
Press Ctrl to cycle between:
- Move along
- Move within
- Move vertically

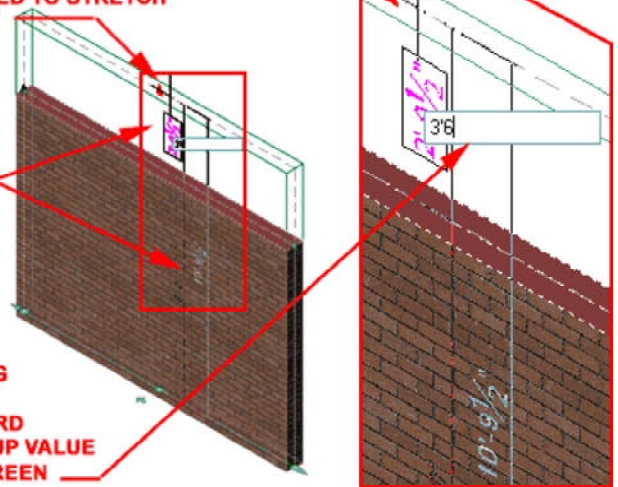
Illustrated to the right I show how many of the objects in ADT offer "**temporary dimensions**" when selected. These temporary dimensions allow you to see relative distances based on such things as Anchor points but they also offer a way to change the values. By using the **Tab key** on your keyboard, you can cycle through any and all of the temporary dimensions that you may see on an object and once you stop at one of these dimensions, you can simply type in the value that you want. When you start to **type a value**, you should see a value field box appear on your screen near the active temporary dimension and once you have specified the value that you want, you can hit the **Enter key** on your keyboard to make that value stick.

If you have trouble getting the

EDITING IN PLACE WITH GRIPS GRIP SELECTED TO STRETCH WALL HEIGHT

TEMPORARY DIMENSIONS; HIT TAB KEY TO CYCLE THROUGH EACH ONE.

START TYPING A VALUE ON THE KEYBOARD TO SEE POP-UP VALUE FIELD ON SCREEN



For some objects, you may notice a small pop-up that will explain that the use of the **Ctrl key** will toggle between unique editing options as they relate to the current object and the Grip you are currently working with. See the specific object for more details on these options in this guide.

Note:

OVER A GRIP

temporary dimensions to appear, make sure to first select a single object, wait for the Grip markers to appear, select a Grip that looks like an arrow to activate the Stretch command and this will activate the temporary dimensions illustrated to the right. This feature can be deactivated so check your Options Settings as well - see note, right.

You can control the text size and color for temporary dimensions on the **AEC Editor tab** of the **Options dialog box**; look for **Dynamic Editing**. You can also deactivate this feature should you want to.

Tool Palettes Overview

Menu **Window > Tool Palettes**

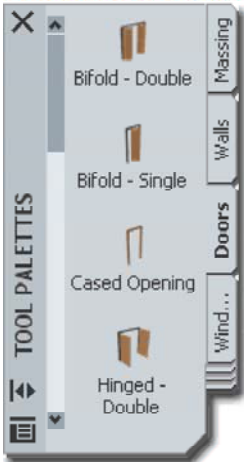


Keyboard **ToolPalettes** or **[Ctrl+3]** or **TP**

Related **ToolPalettesClose** or **[Ctrl+3]**

Links [Tool Palettes](#) - for information on Tool Properties

MAKE THE TOOLS WORK FOR YOU NOT AGAINST YOU



TOOL PALETTE SIZED DOWN THRU. THE VIEW OPTIONS DIALOG.

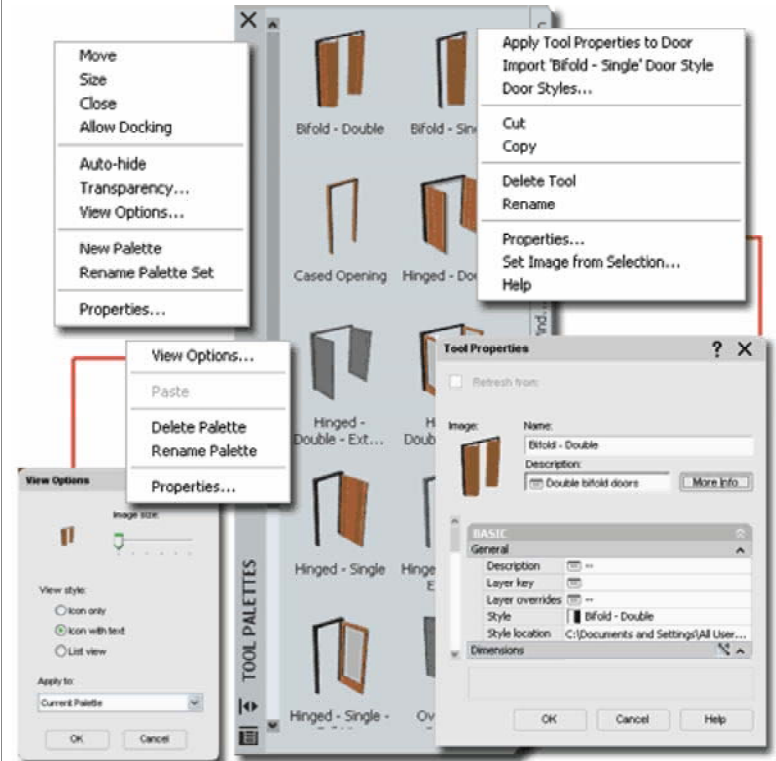
The primary drafting and design tool, though really incomplete, for ADT 4 users is the Tool Palette. Though it is referred to in the plural, there really is only one Palette with multiple tabs and once you add enough tabs to drive yourself crazy you can't create new Palettes to help organize the tabs. If the tabs outnumber the height of your screen, you can right-click over the spot where you see tabs under tabs and a pop-up menu will appear that will allow you to select any tab in the whole list.

In the "**Architectural Desktop 2004 New Features Guide**" something like 20% is dedicated

to the discussion of this and other Palette features so you may want to read that guide for the full story. In this guide, I will refer to the Tool Palettes whenever and wherever it is essential for greater productivity with ADT objects.

The default installation of ADT has the Tool Palettes set to emphasize how cool the 32 bit 3D Rendered icons look but at the cost of some valuable screen real-estate. Illustrated to the left I show how I have set my own Tool Palettes using the **View Options dialog** (right-click over the control bar as illustrated to the right).

As you can probably decipher from the illustration to the right, the right-click rules the options and features offered by the Tool Palettes interface so you should run through all of the pop-up windows and become familiar with these options and settings. Of the whole group, I think the most important for ADT users is the knowledge that there are different types of icons that offer different functions and you basically have to use the i-drop technique to bring in the right ones from the Content Browser Catalog in order to create your own; i.e., drag one in to redefine its function as you see fit.



Most of the ADT Objects that you can drag in from the Tool Palettes, actually reach out to a search path for the style source file and then bring that style into your current drawing only after you have used it. Along with this search path, unique default Properties can be set to produce results that might otherwise be repetitive and irritating. Many of these settings were found on the Defaults tab of various Object Styles dialog boxes in ADT 3 - 3.3.

Content Browser Overview

Menu **Window> Content Browser**



Keyboard **AecContentBrowser** or **[Ctrl+4]**

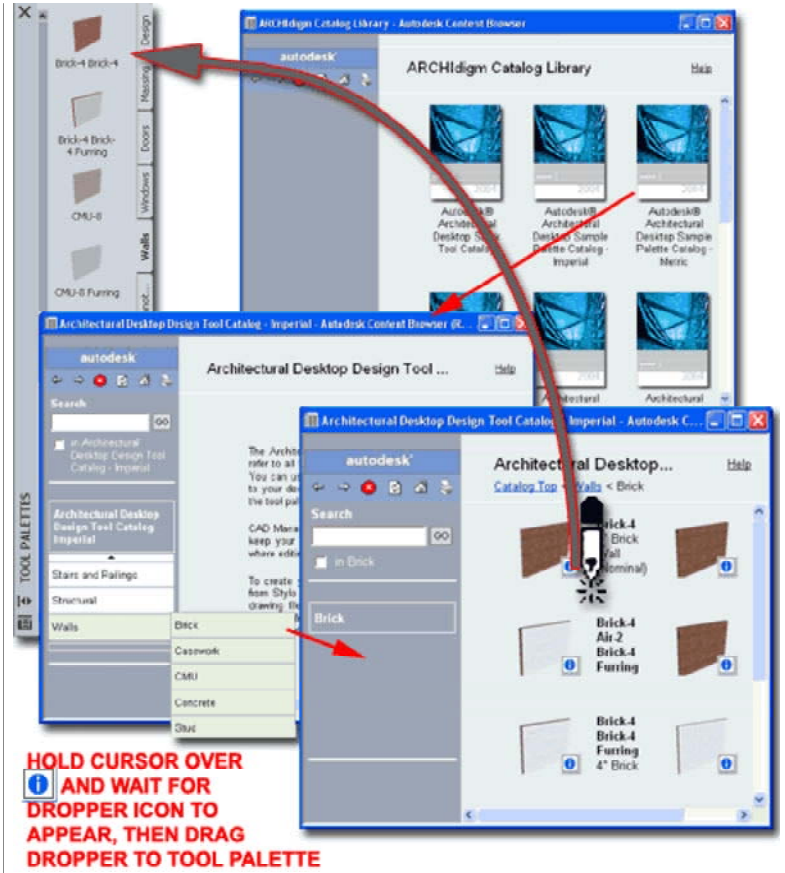
Links [Part 25 - Blocks - Profiles](#) - for the full story on special AEC Content and the DesignCenter

The **Content Browser** is basically a library tool where you can access or store Tool Palette tools. The Content Browser comes with several **Catalogs** full of numerous ADT Object Styles that are ready to be dragged right over to your Tool Palette. The system utilizes XML code to track all of the cross-pollination of icons and can be a bit slow on some systems. There is a tremendous amount of customization that can be done around this tool but managing it all is another matter - see the Architectural Desktop 4 Deployment eGuide for more information on this subject.

Illustrated to the right I show how you can navigate through the Content Browser by selecting a particular Palette **Catalog** wherein you may find numerous **Object Categories**. For the **Design Tools Catalog**, illustrated right, I show that I have cascaded from the **Walls** category to the **Brick** sub-category. Once you have accessed specific Object Tool Icons, like Brick Walls, you can drag the Icon Tool right to your Tool Palettes.

To **Copy** a Content Browser Icon Tool, **hold your cursor over the "i" letter** and **wait** for the **i-drop icon** to appear. Once the i-drop icon appears, you can drag the icon tool (by holding the left mouse button down) over to any of your Tool Palettes

You can also Copy icon tools from the Tool Palette back to the Content Browser using a similar approach but in the opposite direction.



DesignCenter Overview

Menu **Tools > Design Center**



Keyboard **AdCenter** or **[Ctrl+1]** or **ADC**

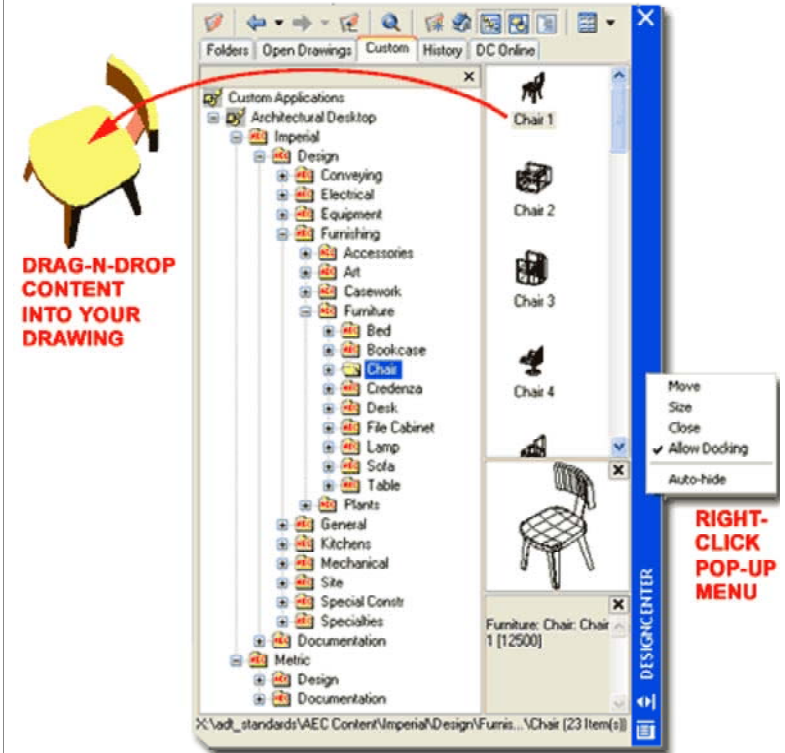
Related **AdCClose** or **[Ctrl+1]**

Links [Part 25 - Blocks - Profiles](#) - for the full story on special AEC Content and the DesignCenter

ADT uses the same **DesignCenter Palette** that you will find in AutoCAD but all of the ADT specific content is accessed via the **Custom** tab as illustrated to the right. When you drag-n-drop content into drawings from the Architectural Desktop Custom Application Folders, actions are usually triggered to perform such amazing tasks as AutoScale and AutoLayer. Some content will make inquiries for schedule data such as Door and Window Tags (found under the Documentation folder) while other content will make inquiries for object numbers, sheet numbers and spatial parameters such as Elevation and Section bubbles. When you drag in content from the other tabs, all you are doing is Inserting Blocks so do not confuse the two actions. Content for ADT is quite different because of the reactors that fire up upon insertion.

To create your own custom AEC Content read up on the [Create AEC Content Wizard](#) and all of the other related information in [Part 25 - Blocks - Profiles](#).

Note:
ADT 4 now uses the Tool Palettes to perform the tasks once limited to the DesignCenter and it is my personal belief that eventually the DesignCenter will be discontinued. You can Add DesignCenter Content to you own custom Palettes by dragging and dropping the object right on



to your palette.

Automated Display System and Viewing ADT objects from different points of reference

Menu **View > 3D Views**



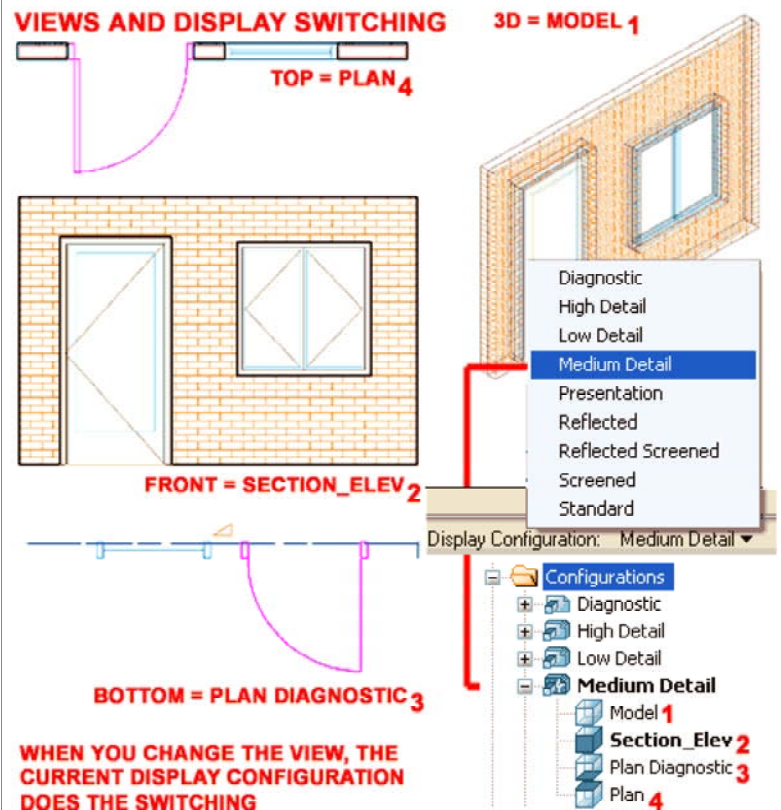
Keyboard **View**

Links [Part 1 - AEC Setup - Display](#) - for more information

The Display System in ADT continues to be one of the most difficult subjects to master in this program. Conceptually the system is very logical but controlling it is another matter. In **Part 1 - AEC Setup - Display** you will find a great deal of information on this subject and I recommend that you take it in on in digestible chunks over time. What is important to understand about this display system is that it is basically a **switching network** that manages when and how objects need to change appearance. This network has a lot of "intelligence" built into it to make it more of a background, less obtrusive, factor. When you change the **View** from **Top** to **Front**, for example, you are actually witnessing the switching network in action because the objects have gone from a **Plan Display Representation** to an **Elevation Display Representation** (in many cases it's actually a Model Display Representation but that's another story). When you change the View to any of the four Isometric angles or use the 3D Orbit tool, you are triggering the switching system once again and getting the **Model Display Representation** of all the objects (that's why they appear as 3D objects and not as 2D objects).

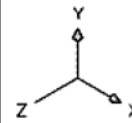
Within each of those [Display Configurations](#) that you can select from the [arrow icon on the Drawing Window Status Bar](#), there are View oriented Display Sets that automatically change for you when you change the Views Direction. Most of the Display Configurations use the same or similar Display Representation Sets but to see one that doesn't, set the **Display Configuration** to **Diagnostic** and then use the View buttons to see how your drawing looks from these views: 2D

The moral of this overview is that you can't always trust what ADT is displaying for you because there's all of this switching stuff going on behind the scenes. If you are in doubt about something, check your work in a 3D View with a Display Configuration set to High, Medium or Low Detail. If you see something there that doesn't show up somewhere else, like in a Top View, and you want it to then you'll have to start reading up on the Display System in Part 1 and break this information down step by step. I recommend that you do this in a separate drawing with something as simple as one door in one wall.



Note:

Be aware that the Direct View buttons, **Front**, **Back**, **Left**, **Right**, **Top** and **Bottom** all adjust the UCS icon to match the viewing angle and can throw you off if you are not familiar with the UCS icon and its ability to affect your drawing and editing tools. See [UCS - The most important 3D Tool](#) in the Architectural Desktop Pre-Design Guide for information on how to control this icon.



Automated Layering System

Menu **Format > Layer Management >**



Keyboard **AecLayerManager**

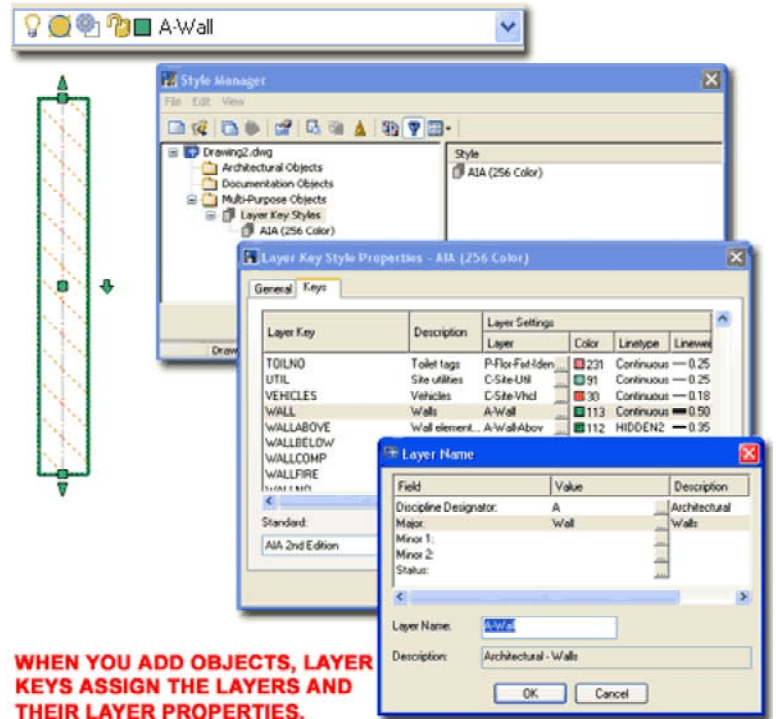
Links [Part 2 - Layer Management](#) - for more information

At last count I found 101 **Layer Keys** in ADT 4 and these Keys are all associated with specific ADT Objects. Layer Keys do not operate on non-ADT objects. This means that you can count on about 101 different object types in ADT to AutoLayer but you may still find the need to do some manual Layer Associations for such things as Lines, Arcs, Polyines, Circles, Text, Mtext, Regular AutoCAD Dimensions and so on.

Objects, like Walls, only have one Key and though you can change Component Layer Assignments (layers within object styles), the object will always be inserted or keyed to that one layer; i.e., 1 key = 1 layer name. If you want to get an object, like a Wall, to reside on another layer, you can either change it after creation (using Properties) or utilize a **Layer Key Override**.

The Layer Keys cannot be changed or renamed but the Layer Names, Colors, Linetypes and so on can be changed to match any office standard you may have. There are two tools for managing the Layer System in ADT: the **Layer Key Style** and the **Layer Standard** (this is not called a Style nor stored like one but it really is just a Style). By using or creating a custom Layer Standard, you set the ground rules for how layer names are organized and then you can apply these rules to an existing or new Layer Key Style. The Layer Key Style has a fixed list of objects but the Layer Standard can be used to set the actual Layer Names used for each object (Layer Key). Once completed and set current for a drawing file, Walls, for example, could come in on a Layer named "E-Wall" or just "Wall" and use whatever Layer Properties you may have set within the Layer Key Style.

LAYER KEYS AND OBJECTS



ADT comes with several internationally accepted layering standards including: AIA 2nd Edition, BS1192 - AUG Version 2, BS1192 - Descriptive, DIN 276 Format and STLB Format.

3 Options and AEC settings

Installation of Architectural Desktop 4 - Setup

Topic **Architectural Desktop 2004 CD**

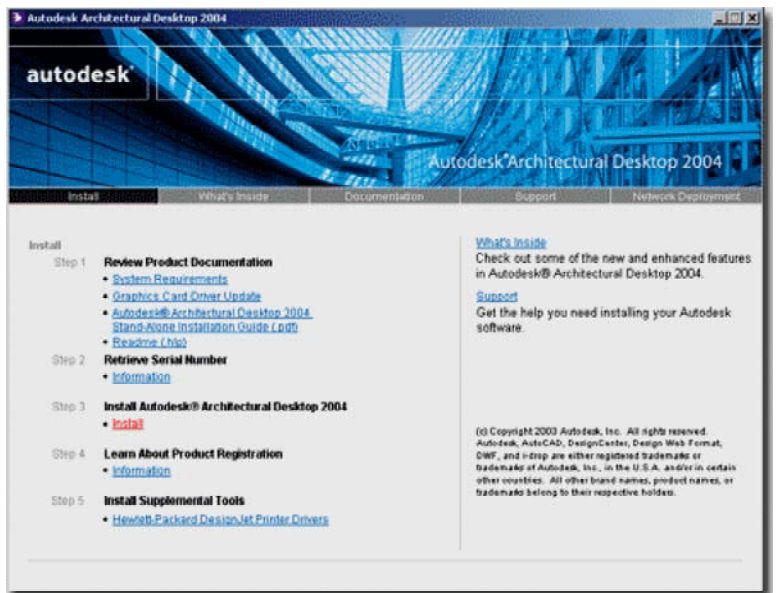


There are now two installation CD's

Links [Architectural Desktop Deployment eGuide](#) - when ready **Comment: add link when ready**

ADT 4 now comes with 2 Installation CD's labeled 1 and 2. When you insert disk 1, you should get a menu with all sorts of installation options as illustrated to the right. You can return to this menu at any time in the future to add items to your current installation, make repairs or simply to read the numerous .pdf documents offering information on anything from Network Installation Solutions to basic command use.

3-i INTRODUCTION



Architectural Desktop 2004 Installation Types

Links [Visiting the ADT Installation CD again](#) - for information on how to add content and options after you installed ADT (Deployment eGuide).

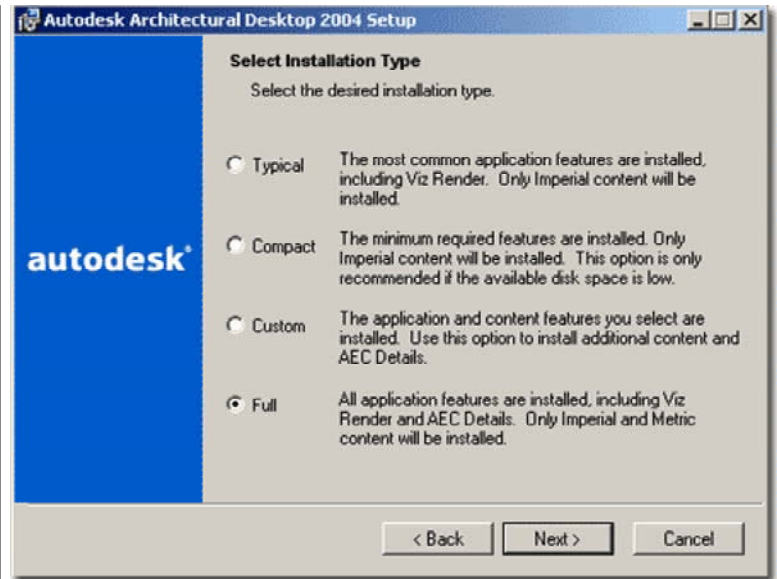
Disk Cost **Architectural Desktop 2004 Full Install** ~ = 1.014GB

As always, I recommend that you Install Architectural Desktop with either the Full or Custom option so you can maximize the potential of this product. Metric users will most likely want to use the Custom option so they can install both the Metric and **D A C H Content** at the same time rather than return to Add it later.

Some of the key items that can be installed or left out are **Metric Content**, **AEC Details** and **Viz Render**. Even if you are not a Metric user, I do recommend installing this content because there are many Metric Multi-View Blocks that are quite useful to Imperial Units users (outdoor furniture, for example). AEC Details is the latest permutation of the old Softdesk Detailer and will now run within any session of ADT. Viz Render is a new dumbed down version of Autodesk Viz and has been included to help ADT users take advantage of ADT's new Material Styles. Autodesk Viz will be discontinued and it is unclear what, if anything, will replace it. Users of Autodesk Viz will be rather disappointed when they discover that ADT 4 will not File Link to Viz 4 (at the time of this writing 05/02/03). This means that no matter what you use, you should install the Viz Render tool so you can, at least, take advantage of its superior Materials, Lighting and Rendering capabilities.

Note:

If you are not familiar with Autodesk Viz or Viz Render, then what you need to know is that this is a separate Autodesk Product that runs independently of Architectural Desktop but has the capability to Link with ADT files much like Xref's. Its primary function is to Render your work for optimum presentation output in animated, print or web formats. You can activate the Viz Render application from within Architectural Desktop by typing "**VizRender**" on the command line.



The Options dialog box

Menu **Format > Options...**

Keyboard **OP**

Links Architectural Desktop Deployment eGuide - when ready
 ready **Comment: add link when ready**

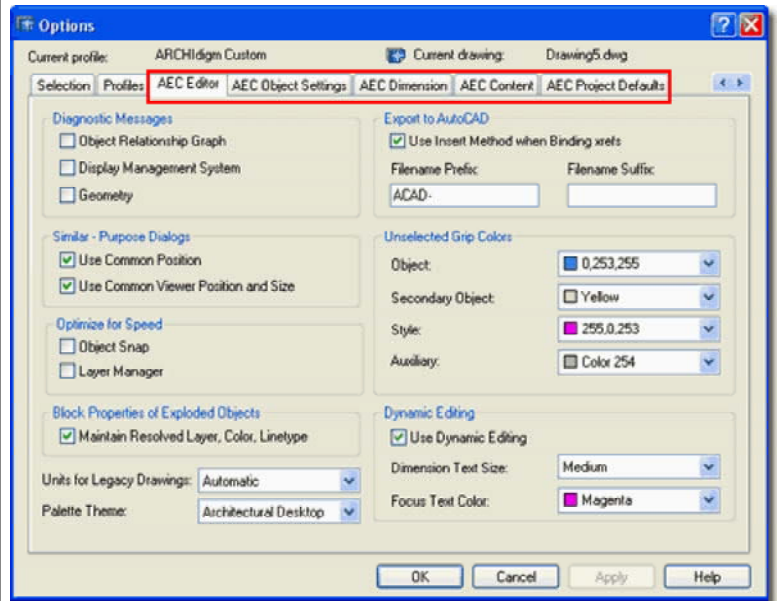
Architectural Desktop, like AutoCAD, has unique settings in the **Options dialog box**; formerly known as Preferences. Use the Arrow buttons, upper right, to tab to the right where you will find all of the AEC Options tabs that affect how ADT functions.

All of the text boxes with drawing icons represent current drawing settings and will not be set for all of Architectural Desktop; i.e, they are local and not global settings. If you save these settings in a template file though, you can use them in a more global fashion.

You should find five tabs that are specific to ADT: **AEC Editor**, **AEC Object Settings**, **AEC Dimensions**, **AEC Content** and **AEC Project Defaults**. Some of the settings on these tabs will be discussed in this guide where they relate to the objects they affect. For the full breakdown of all these settings and all of those on the other tabs, refer to the Architectural Desktop Deployment eGuide.

Note:

For users of previous releases of ADT, you may be surprised to find that familiar settings no longer exist on the AEC tabs. Important settings such as how Openings are measured are now part of the Object Properties and these can be set on an object-by-object basis or as part of the **Tool Palettes Icon Properties** (right-click over a Tool Palettes icon to access its Properties).



4 Getting Started

Architectural Desktop Projects

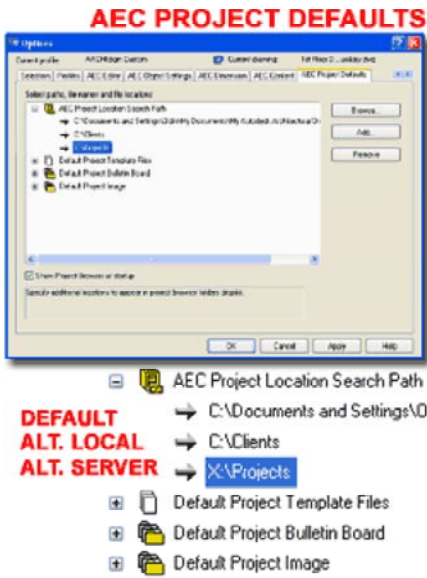
Menu **Window > Project Navigator Palette**



Keyboard **AecProjectNavigator** or **[Ctrl+5]**

AecProjectBrowser

Links [Projects](#) - for the full story on this topic - Architectural Desktop 4 Deployment eGuide



For those who have followed along with AutoCAD and ADT since the 2000 series, you will understand the humor of the **Today Window**. In ADT 4, the Today Window has been removed leaving the old "traditional startup dialog box" as the default Startup Dialog (see below, right). For those few who might actually have used the Today Window, fear not, it has evolved and migrated over to the **Project Browser Window** - illustrated to the right.

With the Project Browser and its companion, **Project Navigator**, ADT 4 offers one of its best new

features. In essence, these tools provide a type of project management system within the core program that not only helps structure folders but the objects within files and how those objects need to be assembled for final plotting sheets. The primary tool for managing all of this drawing data is the Xref and by using the Project Navigator you will soon find the use and management of Xref's so fluid that it may be the biggest change you have faced in your AutoCAD/ADT work in many years.

This whole project system is far more sophisticated than what I can describe in a few words and documenting it will become a separate topic for the Architectural Desktop Deployment eGuide.

Choosing an ADT_Template

In ADT 4 you can now start drawings based on the **Acad.dwt** or even **from scratch** because the template files used for those options have now been updated for ADT. If you use the **Browse...** button on the **Create**



Illustrated to the left is the **AEC Project Defaults** tab where you can set the Project Search Path for the Project Browser so users can use this tool to add new projects under existing or new mapped drives (or even local folders) in your office.

Default Project Location Search Path

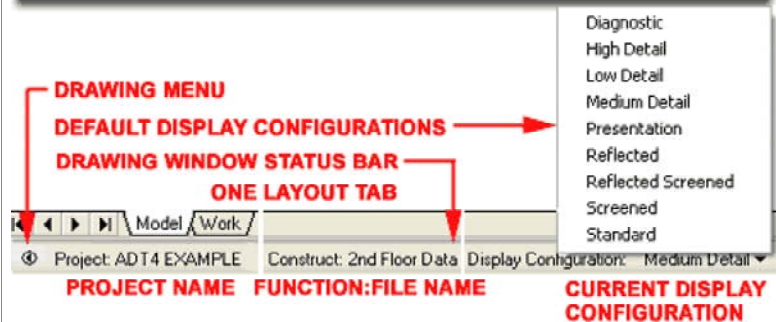
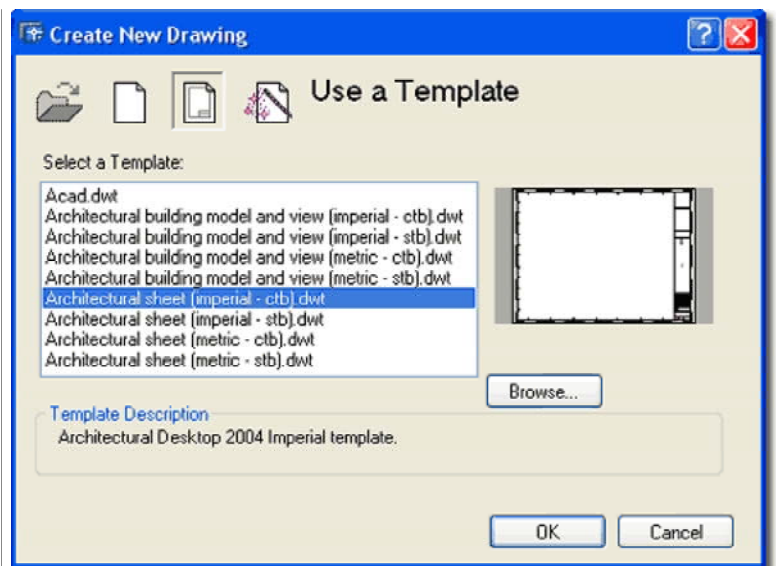
C:\Documents and Settings\[User Login Name]\My Documents\My Autodesk Architectural Desktop Projects

New Drawing dialog and select a template file that was not configured for ADT or Open an existing drawing that was not created with ADT, you will find that a lot of settings are missing. This means that template files are basically paramount to a successful implementation of ADT but don't let that limit you to the template files that come with ADT; i.e., build your own once you know what makes them special. In the Architectural Desktop Deployment eGuide you will find all of the information required to import template file settings into legacy files should that become an issue in your office.

Illustrated to the right I show the default **Imperial** and **Metric Template Files** that come with ADT 4. This list is a vast improvement on the template files of the past and I can now recommend the use of any of the four "**Architectural building model and view (...).dwt**" files. There are two for Metric and two for Imperial and the only thing you really need to consider in selecting one of them to start with is whether or not you want to use the **Color Table (.ctb)** or **Style Table (.stb)** system for pen management; these are also referred to as **Color Dependant Plot Styles** and **Named Plot Styles**, respectively. My recommendation is to use what you are currently familiar with and in most offices that is the Color Table (.ctb) system because it is the same system AutoCAD users have been using since the first release. You should know, however, that Autodesk is recommending the use of Style Tables and may make this method less of an option in the future (so the rumor mill informs me). The reason for the push on using Style Tables is so the use of the new True Color System, including Pantone colors, can be implemented without the limitations of 255 Colors.

Illustrated to the right I show the default Display Configurations from the **Architectural building model and view (...).dwt** template files and how you can now change these by picking on the arrow button in the lower right of the ADT Application on a new bar called the "Drawing Window Status Bar". This bar offers another arrow on the opposite side that activates another pop-up menu with Plot, Setup, Link and eTransmit options (among others). The middle portion of this bar will not display anything until you begin to work with the Project Management tools including the Project Browser and Navigator discussed above.

For **Layout tabs**, you should notice that these template files only offer one that has been named "**Work**". You may rename this, change the Layout Settings and do whatever else you might normally do for a Layout or you can just Delete it and create a New one. Just make sure that once you have created one or more Viewports, that you use the Display Configurations menu to set a Display active.



Keep in mind that you are not restricted to or limited by most of the default settings found in these template files; they are just default examples to help those unfamiliar with the deeper inner workings of ADT, be productive sooner.

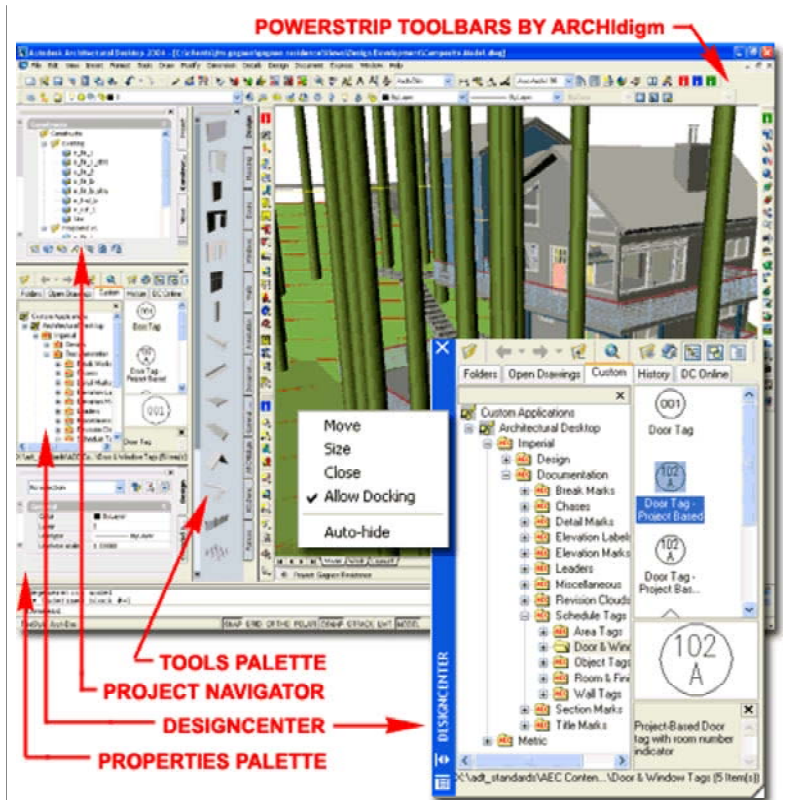
Starting a Drawing

One of the first things you will have to do in Architectural Desktop, after choosing a template file, is figure out the GUI and how to manage all of the stuff you have to work with. Illustrated to the right I show just a few of the graphic tools that you will need to interact with on a regular basis and an example of how I keep my numerous Palettes arranged. I found that docking the Palettes and turning them On and Off as needed worked for me but now it's time for you to figure out how you like to arrange them.

The Palettes and DesignCenter will remember their last position so you may want to find good locations for these tools and size them for a comfortable read. On dual monitors, you can move the Palettes and DesignCenter over to the second monitor. As discussed above, I don't advise using the Transparency option for the Palettes as it tends to put a strain on the Graphic Card's resources (unnecessarily). I also don't recommend keeping the Properties Palette up and Docked at all times since it will need to refresh constantly as you select objects on the screen.

Also illustrated to the right is ARCHIdigm's own custom menu system for using and learning ADT. This menu system is free to all subscribers, is easy to install and remains completely independent of your ADT installation so you don't have to worry about messing up your configuration. This menu uses most of the icons from Architectural Desktop 3.3 but incorporates many of the new icons in AutoCAD 2004 and Architectural Desktop 2004 - for more see [PowerSTRIP](#).

After you have selected a Template File to start your new drawing, you will need to go through a few steps for configuring this drawing for proper use. To learn about what to do next, go to [Part 1 - AEC SETUP - DISPLAY](#) and read up on the Setup information but don't worry too much about the Display information; instead, skip to Walls, Openings and so on.



For those migrating up, you can continue your work in ADT 4 but you cannot go back. ADT 3 - 3.3 files appear to come in okay in our tests so far and bring with them all that you would expect (Display Configurations and so on). We are however, adopting a policy of finishing old work on old software and starting new work on new software. As usual, we are also finding that others are not upgrading as fast as some of us are capable of so working in ADT 3 - 3.3 may last longer than preferred.