

AMT18 Upgrade QuickStart Guide

Eric Bobrow – August 15, 2014

MasterTemplate for ArchiCAD 18 (AMT18) has been prepared with the following key principles:

1. Incorporate all of the new ArchiCAD 18 features including improved rendering and revision management.
2. Continue forward all of the time-saving features and file structure from previous versions of MasterTemplate.
3. Upgrade the project workflow with useful new ideas and content, and rework and adjust the template to improve performance.
4. Provide maximum compatibility with standard Graphisoft templates, libraries and other resources.

In ArchiCAD 18, Graphisoft introduced two major new technology innovations: Cinerender visualization using the Cinema 4D rendering engine, and Revision Management tools to optimize the tracking and reporting of changes, revisions and issue sets.

These two major improvements were integrated into AMT18 in a way that ensures that projects built with MasterTemplate are able to take full advantage of these technologies. Migration of projects based on the standard Graphisoft templates is straightforward and can be accomplished with a minimum of effort.

Upgrading projects and customized templates made in earlier versions of MasterTemplate to ArchiCAD 18 may be done simply (without upgrading the surfaces for use with Cinerender) or in a more elaborate process (to gain full compatibility with the new rendering technology).

NOTE: If you're just starting to use MasterTemplate, you don't need to read this document.

Instead, follow the directions given in the member area in the Quick Tutorials videos and the MasterTemplate Training videos to get started. You'll create a copy of the "stock" template files so that you can customize them for your firm, and add your company information to the title blocks in the layout masters.

At that point, you can start a real project and get going, and customize the template more later if you need to.

If you have been using MasterTemplate and are upgrading to ArchiCAD 18, then this document will introduce you to the new or changed features, and give you guidance for how to migrate your project files and your customized template.

MIGRATING YOUR "LIGHTLY CUSTOMIZED" MASTERTEMPLATE INTO ARCHICAD 18

If the changes you have made to your customized version of MasterTemplate are not extensive (for example, you have simply changed the title block and added or changed some of the layout book sheets and/or schedules) then I suggest that you do NOT migrate your template forward.

Instead it will be easier and cleaner to work with a fresh copy of AMT18 and repeat the customization following these steps:

- In ArchiCAD 18, open up AMT18 and save a copy as a new template (TPL file) with your company name (e.g. Smith Architects MasterTemplate.tpl).
- In a separate instance of ArchiCAD 18, open up your previous template (allow ArchiCAD to migrate the libraries automatically), then go through and copy the changes from the old file to the new one.

This will work very simply as long as the elements you are copying are 2D only (e.g. your title block or layout masters) or simply duplicate Layout Book or View Map changes.

However, if you want to bring in any 3D elements from your previous template, this may cause extraneous attributes (building materials, surfaces, etc.) to be imported that will need to be cleaned up. Read through the section on migrating projects into ArchiCAD 18 to understand better how to approach this process.

If you have custom interactive schedules or indexes, go to the Scheme Settings then Export each new or customized schedule as an XML text file, then in the new template use the Import button to bring it in. Find where these schedules are located on your layout sheets and relink the standard AMT schedule to your custom version, or place a new schedule onto the sheet.

MIGRATING A "HEAVILY CUSTOMIZED" MASTERTEMPLATE FOR USE WITH ARCHICAD 18

If your template is highly customized, it may be inconvenient to rebuild the standard AMT18 file to match your custom version. In this case, you may prefer to migrate your older template into ArchiCAD 18 following the steps outlined below for projects.

Note that the development of MasterTemplate 18 became rather complex for the U.S. version due to changes in the Attribute system in ArchiCAD 18. Graphisoft changed the entire naming system for the major Attributes (Surfaces, Building Materials, Fills and Composites) by removing CSI prefixes (e.g. "07 | " at the beginning of the attribute name). MasterTemplate 18 USA version was reworked to use the new naming system for all Attributes to provide maximum compatibility.

Due to the intricate interactions between all of the attributes, this required extended study and careful efforts to get an optimized result.

In the Migration Instructions below, several variations are presented, starting with a simple method that provides basic functionality in ArchiCAD 18, and then adding in further optional steps for additional functionality and compatibility.

If you are simply moving a project forward into AC18, you may opt for a simple, quick migration. If you are migrating your current template (that is too heavily customized to start over) then you should follow the additional steps to get maximum compatibility with AC18 features.

MIGRATING ARCHICAD 17 PROJECTS INTO ARCHICAD 18

IMPORTANT:

- Before you start the project migration, save a backup copy of your existing PLN in ArchiCAD 17 format (use the Duplicate or Copy function in your operating system).
- It's important to keep this file for a while in case you have any questions or problems in AC18. Later you can delete it after you verify that everything is working properly.
- These instructions apply to ArchiCAD 17 projects. If your project or template is in an earlier version of ArchiCAD, additional steps are required due to the major changes introduced with Building Materials in ArchiCAD 17. These are explained at the end of this document.

Simple Migration into ArchiCAD 18

To work on an existing ArchiCAD 17 project in ArchiCAD 18, it can be very simple:

1. Start up ArchiCAD 18, and open the PLN file.
In the opening dialog, accept the suggestion in the Migration Assistant dialog to Migrate Libraries.
2. If other dialogs come up, respond as appropriate; if necessary, help ArchiCAD find the AMT Libraries folder or other libraries in use. If you have added certain add-ons into ArchiCAD 17 that are in use in the file (such as Accessories or other Goodies) you may ignore the warning messages for now, but will likely want to load these add-ons to ArchiCAD 18 in order to access these components or tools.
3. The file should open and display properly, and you may save it. ArchiCAD will warn you that it will be in the new ArchiCAD 18 file format, and that the PLN will not be able to be opened in the earlier ArchiCAD. Click OK, and save in ArchiCAD 18 format.
4. Continue your work as before, now using ArchiCAD 18 and the ArchiCAD 18 Library.

The limitations of this method are:

- You won't have the new Cinerender surfaces, so you won't get the highest quality renderings. The surfaces will be based on the older Lightworks textures and settings. You'll be able to render, but not with improved quality.
- You won't have the Revision Manager integrated into the layouts. To take advantage of the new Revision management system, manually place the Revision object onto the layout masters you are using in this project, and create or import the Indexes used for summarizing and reporting revisions on the title sheet.
- You won't have the other improvements made in AMT18.

Due to these limitations, for best results when migrating templates (and projects that warrant the effort) I suggest that you continue with some or all of the additional steps below.

Integration of Cinerender Surfaces

To work in ArchiCAD 18 and get the full benefit of the Cinerender technology, after the simple migration (above) follow these steps:

1. Open Attribute Manager (Options menu > Element Attributes > Attribute Manager).
2. Switch to Surfaces in the upper section (it has a paintbrush icon). In the lower right, click the Open button and navigate to select MasterTemplate 18.
3. Click on one of the Surfaces on the right side, then the Select All button to select all of them.
4. Click the "By Index" button to copy and overwrite the Surfaces within your project with the new Cinerender-based surfaces. Click OK and confirm the changes.

Your project or template should now be set to use the new Cinerender-based surfaces so you can create high quality renderings with the new technology.

Technical notes:

1) If you have created your own Surfaces (beyond what was included in AMT17) then you will need to be careful not to overwrite these in steps 4 through 6.

Your new surfaces may be at the end of the list (when sorted by Index number) so this may not be an issue. However, it is important to proceed carefully so you don't lose these additions.

In step 4, you may deselect any surfaces that have a conflicting index value (by Command-clicking or CTRL-clicking each one to deselect it individually) before running step 5. Then you may select these conflicting surfaces on the right side and use the Append button to place them at the end of your new list.

After you become familiar with the Cinerender surface dialog, you may rework your custom surfaces to use higher resolution files and/or adjust the settings to get the best possible representation of your surfaces.

2) The following surfaces in AMT17 were moved to a new position at the end of the list to provide maximum compatibility with the Graphisoft standard attributes.

- 12 | Carpet Tile 18” Grey [Index 54]
- 04 | CStone 04 [Index 112]
- 04 | CStone 06 [Index 114]

If you are using any of these surfaces in your project, then do the following expanded version of the steps above to avoid losing these surfaces:

1. Open Attribute Manager (Options menu > Element Attributes > Attribute Manager).
2. Switch to Surfaces in the upper section (it has a paintbrush icon).
3. In the lower right, click the Open button and navigate to select MasterTemplate 18.
4. Click on one of the Surfaces on the right side, then the Select All button to select all of them.
 - a. Deselect whichever surfaces you are using (indexes 54, 112 and/or 114) from the right side
 - b. Deselect the matching one(s) at the end of the list (indexes 191, 192 and/or 193)
5. Click the "By Index" button to copy and overwrite the selected Surfaces within your project with the new Cinerender-based surfaces.
 - a. On the left side, select each one that you are using (indexes 54, 112 and/or 114) and edit the name by removing the prefix (e.g. "12 | ") to match the corresponding one at the end of the list (indexes 191, 192 and/or 193 on the right side).
 - b. Select the one(s) on the right side as needed (indexes 191, 192 and/or 193) and use the "By Name" button to overwrite the matching one on the left side (that you renamed to match in step 9-a).
 - c. On the right side, select any standard Surfaces that were bypassed in step 5-a, and use the "Append" button to copy them to the end of your active Surfaces list so you have access to them if you need them later.
6. Click OK and confirm the changes.

Adding ArchiCAD 18 Revision Management Tools Into Your Project

The new revision management system is powerful, flexible and generally easy to learn and use. It is recommended for larger projects, and may be used for projects of any size.

Adding the revision management tools to your project is straightforward, since they work as an “overlay” on top of your model and drawings, and are reported using a new library part placed on the layout masters and summarized using special Indexes that may be added to the title sheet.

1. Open up AMT18 and navigate to the Layout Book and open up the Masters folder.
2. For each master layout, select and copy the Revision History 18 object. You'll find this in the lower right with heading “BY | REVISIONS | DATE”.
3. Return to your project, open up the matching Master layout and delete the linework in this section, then paste in the object.

You will now have the Revision History automatically displayed on all layouts.

You may add the summary reporting of changes and issue sets to your title sheet using special Project Indexes. To import the new indexes, in AMT18 navigate to the Project Map > Project Indexes. Select each of the following and double-click to open them up:

1. Change List
2. Issue History 1
3. Issue History 2

For each of these Indexes, click the Index Settings... button in the upper right, then click the Export... button to save the index as an XML text file wherever it is convenient.

In your project or template file, navigate to the Project Map > Project Indexes folder, and open up any of the existing Indexes. Click the Index Settings... button and use the Import... button to bring in each of the XML files you saved. These will show up in the Index list, and may then be placed onto Layouts as desired.

Adding Other AMT18 Enhancements to Your Project

There have been a number of tweaks and enhancements added into AMT18 that you may find useful. These are divided into two general categories:

- settings changes to improve performance
- new content to add features

It is up to you whether to bring in these enhancements into an existing project. It may not be worth the effort if the project is fairly far along in the timeline. However, if the project is early in development, feel free to go ahead and integrate these changes.

If you are migrating a heavily customized template, then these updates and revisions are worth considering, since they may improve performance on all projects you create from this point forward.

SETTINGS CHANGES IN AMT18

- Layer Settings - revisions to various layer combinations for improved consistency
- Renovation Settings - Addition of a new Renovation Filter and tweaks to existing ones; minor adjustments to certain View Settings
- Building Materials - a few small tweaks (plywood fill follows the wall orientation; soft insulation fills the skin depth properly)

Layer Settings Revisions

To integrate the Layer Settings revisions into your migrated project or template, open up Attribute Manager. Switch to the Layer Combinations tab, then on the right side, click the Open button and browse for and select AMT18. Select all of the Layer Combinations on the right side, and use the By Index button to overwrite the Layer Combinations on the left side with the revised layer settings. Click OK to confirm.

If you have created your own additional layers, check that they retain their proper settings for these layer combinations. Open up the Layer Settings dialog (Command-L or CTRL-L) and select each of these custom layers one by one on the right hand side. Look at the layer combinations on the left side, and verify or adjust their settings for visibility, locking, solid/wireframe and intersection priority values.

Renovation Settings Revisions

The Renovation settings were revised slightly to improve performance, reduce confusion, and increase consistency.

PRINCIPLES

To integrate these improvements, it helps to understand the key principles and rationale of the system:

- All Model / Design Views are set up for the 06 Show All renovation filter. This means that when you are working in the early stages of a project, you may set elements to any status (Existing, Demo or New) and see them all onscreen.
- In general, all Construction Document Views are set to 05 Planned Status so they show Existing and New elements and hide the Demo elements. This works nicely for simple new-build projects (everything can be set to Existing OR New and in either case it will work well) and also for remodel or renovation projects (the construction documents show the intended, final result of the construction process).
- An exception is made for Views in the RENOVATION folder, which contain clone folders designated specifically for representing EXISTING, NEW & DEMO, or DEMOLITION Plans and/or Elevations. These use appropriate Renovation Filters.

CHANGES

1) Previously, the Renovation Filter 05 Planned Status was set to Hide Dimension Markers for Existing Elements.

This is often desirable for remodel projects, so that existing doors and windows are not labeled on the plan, while new ones are shown with markers. However, it caused confusion in the case of a simple new-build project, since elements (including walls, doors and windows) are often set as Existing in this type of project, and the door and window markers were hidden.

To resolve this confusion (which caused occasional tech support calls and emails), I have changed the Renovation Filter 05 Planned Status to NOT hide the dimension markers for existing elements, so that all windows and doors can show markers.

NOTE - IF YOU ARE WORKING ON A REMODEL:

Change this setting back (only affecting the currently open project) to hide the dimension markers for existing doors and windows.

2) Renovation Filter > 06 Show All has been revised to not use overrides, so all of the elements appear in their natural settings. This is used in the Model / Design Views for early project development.

3) A new Renovation Filter was added: 07 Show All (with overrides). This filter shows all types of elements (Existing, Demo, and New) with an override to change the pen and fill color and line styles etc. for Demo and New elements.

4) The RENOVATION > NEW & DEMO PLANS clone folder is now set to 07 Show All (with overrides) so that it may be used for hybrid plans (simple projects with a small amount of demolition that can be represented easily with a single set of drawings).

Since there is no way to export and import Renovation Filter settings, the best way to integrate these revisions into a migrated project or template is to open up the Renovation Palette > Renovation Filter Options dialog in AMT18 and in your project/template and compare and adjust as needed.

Building Material Revisions

In AMT17, building materials were imported directly from Graphisoft's template to provide maximum compatibility. A few additional materials were added, as noted in previous documentation.

Several users noted an issue with certain building material fills not orienting properly in section drawings. I traced this back to the Graphisoft template, where they were set incorrectly.

In the Graphisoft U.S. template (both for ArchiCAD 17 and 18), Insulation Blanket is set to use Insulation 01 fill with Fill Orientation > Project Origin. This prevents it from filling the skin properly, so in AMT18 this has been changed to Fit to Skin.

Similarly, Plywood was set for Plywood - 1/8" Ply fill with Fill Orientation > Project Origin. This has been adjusted in AMT18 to Element Origin so the fill will rotate with the composite nicely.

To integrate this into your migrated project or template, open the Options menu > Element Attributes > Building Materials, and revise the settings for Insulation Blanket and Plywood materials as described above.

NEW CONTENT IN AMT18

Two worksheets were added with new content:

KITCHEN & BATH CABINETS WORKSHEET

This is an interactive legend with frequently used cabinet objects, set up for eye-dropping to lay out a kitchen or bath more quickly.

It is fully customizable in two distinct ways:

- you may change the actual cabinet styles to use your preferred surfaces, dimensions, door and knob styles
- you can add to this to make it more complete and useful for your work

TYPICAL NOTES & LABELS WORKSHEET

This worksheet has common notes and labels for use in a variety of contexts in your project: on plans, sections, elevations and other drawings.

The notes were provided by two of our clients, and were compiled for their projects. They are included to show a graphic example of what is possible.

You may eye-drop a label in this worksheet, then click to place a similar label with the same text into any viewpoint in your project file. You may also copy one or more notes, then paste these into a relevant viewpoint and move them around into the appropriate positions.

You may find some of these annotations directly applicable to your designs. However it is suggested that you replace some or all of these notes and labels with ones collected from your own previous projects.

You can have another project open and go on a “hunt” for typical notes and labels in each viewpoint, copy them, then switch to the template file and paste them in.

After you have gone through several of the views, and collected as much as you feel is worthwhile, you may then spend time in the TYPICAL NOTES & LABELS worksheet and organize them in a manner that makes it easy to find what you need.

INTEGRATION OF THE TWO NEW WORKSHEETS

To add each of these worksheets into a migrated project or template, right-click in the Project Map on the Worksheet folder, and choose New Independent Worksheet. Copy the elements from AMT18 and paste into your project or template.

INTERACTIVE LEGENDS AND FAVORITES (HOTLINKED FILES)

Several changes were made in AMT18 to the Interactive Legends for compatibility, performance and enhancement:

1. The Legends elements were updated to use the ArchiCAD 18 Library.
2. Some new elements were added to the Profiled Walls section.
3. The ID of Legend elements was changed to remove the “Z” prefix, reorganizing prefixes around functional categories.

Unfortunately, integration of these changes into an existing project or template is somewhat problematic.

- **WARNING:** Due to the changes in Attribute naming, it is NOT advisable to use the AMT 18 Legends with migrated projects.
- If you relink the hotlinks that pointed to the AMT17 Interactive Legends and Favorites to the new AMT18 versions in a migrated project, you will end up with a huge number of redundant attributes such as building materials, composites, fills, etc.

It is recommended for migrated projects that you continue to use the AMT17 Interactive Legends and Favorites files. You may keep the hotlink to the original AMT17 files, or change the hotlink to copies made for use in ArchiCAD 18.

Either way, as long as you have done a Library Migration (as offered by ArchiCAD 18 when you open up the AC17 project) you will actually be using the AC18 Library when you eye-drop a legend element, with the rare exception of certain legacy parts that are nicely supported in the standard Migration Library.

2) If you copy the AMT17 Legends and Favorites files for use with AC18, it is technically possible to copy and paste in the new elements in the Profiled Walls section from the AMT18 Interactive Legends.

However, this will bring in a number of additional, redundant building materials, composites, surfaces and fills which can be cleaned up manually.

It's up to you: if you see these new parts as being very useful, then go ahead; if you won't be using them, then do not paste them in since they will clutter up your attribute management.

3) The ID of legend elements in AMT18 was changed to simplify eye-dropping elements to place into your actual project file. In MasterTemplate through version 17, the ID started with the letter “Z” to avoid having the legend elements show up in schedules (criteria was set for all schedules to exclude elements with this prefix).

However, an improved method was discovered to get the same benefit: using the master prefix option in the Hotlink Module Settings. By adding “Z” as a prefix to the Hotlink, all of the legend elements are still excluded from the schedules since they have an ID starting with “Z”, however the elements that are placed directly into your model file will NOT have the Z prefix and will show up in the schedules automatically. This saves a step, and avoids confusion and tech support calls and emails (e.g. “why are my doors not appearing in the door schedule?”).

If you are migrating a project or template from AMT17, integrating this revised feature is unfortunately rather time-consuming. To accomplish it, I had to go through all of the elements in the Interactive Legends, one by one or in groups, and manually change their ID to remove the Z prefix.

CONCLUSION:

It’s simplest for migrated projects and templates to use the Legends from the original version with the help of Migration Libraries.

To get the cleanest, most compatible template for use in ArchiCAD, I recommend in many cases starting your customized template process over with AMT18. Use it as a clean base, then rework it to suit your needs.

It is not an ideal situation, but this has always been the choice with MasterTemplate upgrades:

- start over and customize the stock template again OR
- migrate your existing template, and manually rework it for compatibility with the new ArchiCAD and to incorporate new features from the updated MasterTemplate.

MASTER SCRIPT COMPONENTS

In MasterTemplate 17, we licensed the use of several Master Script components, including Total Zone, Auto Note and a few other small parts.

I did not renew the license for these tools in AMT18, in part because Graphisoft has dramatically improved its standard Zone stamps.

If you own MasterTemplate 17, you may keep using AMT Total Zone (our slightly customized version of Total Zone) and the other files. To use them in AMT18 or later versions, simply copy the Master Script Components folder from the AMT Libraries folder in AMT17 to the AMT Libraries folder in AMT18, then reload the libraries using Library Manager.

To use AMT Total Zone in your template or project, open up the Options menu > Element Attributes > Zone Categories and for each category choose this zone stamp.

You'll see the display of the zone stamp change on the plan as soon as you confirm your change.

SPECIAL NOTE REGARDING MIGRATING FROM EARLIER VERSIONS THAN ARCHICAD 17

In ArchiCAD 17, Graphisoft introduced the concept of Building Materials, a super attribute that allows the automatic generation of more detailed section drawings as well as facilitating energy analysis using the built-in EcoDesigner tools.

Building Materials are “super-attributes” in that they refer to other attributes such as Fills (for representation in section) and Surfaces (to control the appearance in 3D views and renderings). Composites used to refer to Fills for each Skin, and now reference a Building Material for each Skin.

This reworking of the attribute system increases the complexity of migrating older projects into ArchiCAD 17 or later versions. ArchiCAD will read the project file nicely, and does a fairly good job automatically of reproducing the earlier appearance of the geometry in plan, section, elevation and 3D views.

However, for projects that are in early stages, and for template files, it is important to integrate in the new system of Building Materials in a more sophisticated fashion to be able to get the benefits of the clean, detailed section drawings offered by ArchiCAD 17 and later versions.

For more information on how to manage this migration, please see the documentation by Graphisoft in the ArchiCAD Reference Manual.

You may also find it useful to watch some of the video tutorials I have created; some are found on my YouTube channel, and additional ones are available for members of my Best Practices Course in the section on AC17 New Features.

Due to the complexity in this migration process (to ensure a comprehensive and coherent set of building materials) I recommend in most cases to customize the stock MasterTemplate (17 or 18 or later) rather than trying to migrate and update your existing custom template.