

DWF Publishing Requirements for Autodesk® FMDesktop™ 2009

You can publish FMDesktop-compatible Design Web Format (DWF) files from these programs:

- Autodesk® Architectural Desktop 2007
- AutoCAD® Architecture
- Autodesk® Building Systems 2007
- AutoCAD® MEP
- Autodesk® Revit® Building 9.1
- Revit® Architecture
- Revit® MEP
- AutoCAD® based product (version 2006 or higher) with Facility Link

NOTE: AutoCAD® Architecture 2009, AutoCAD® MEP 2009, Revit® Architecture 2009, and Revit® MEP 2009 users have the option of publishing Microsoft® XPS-compatible DWF (DWFx) files, which can be used in FMDesktop products in the same ways as DWF files.

IMPORTANT: Avoid creating DWF files that contain a mix of native space objects (as available in AutoCAD Architecture and AutoCAD MEP) and space objects defined using Facility Link. When importing such drawings, unexpected results may occur.

Publishing from Autodesk Architectural Desktop 2007, Autodesk Building Systems 2007, AutoCAD Architecture 2008, or AutoCAD MEP 2008

Autodesk Architectural Desktop 2007, Autodesk Building Systems 2007, AutoCAD Architecture 2008, and AutoCAD MEP 2008 can publish DWF files that contain space objects. When you import a DWF file that contains space objects into Facility Manager, they are converted into FMDesktop space objects. Facility Manager requires that the following properties be present in order to create a valid space record in the FMDesktop database.

Property Name	Sample Value
BaseArea	100
Handle	24B9
Name	Space
Number	102

When you import a DWF file that contains blocks, MVblocks, and/or MVparts into Facility Manager, the blocks, MVblocks, and/or MVparts are converted into FMDesktop equipment objects.

For **blocks and MVblocks**, Facility Manager requires that the following properties be present in order to create a valid equipment record in the FMDesktop database.

Property Name	Sample Value
Handle	1017E

Name	COPIER01
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For **MVparts**, Facility Manager requires that the following properties be present in order to create a valid equipment record in the FMDesktop database.

Property Name	Sample Value
Handle	2A10
PartSizeName	0-2670 CFM Electric Air Curtain

IMPORTANT: The properties listed above for spaces, blocks/MVblocks, and MVparts are the minimum properties that must be included in property set definitions. You may include other automatic or manual properties, as required, for mapping purposes. However, if you include additional properties for MVparts, **do not** include the Name property because it conflicts with the PartSizeName property during the import process. For information about creating and attaching property set definitions for blocks/MVblocks and MVparts, see the online help for your AutoCAD-based product.

For information about importing DWF files into Facility Manager, including mapping DWF objects, see the Facility Manager online help or User's Guide.

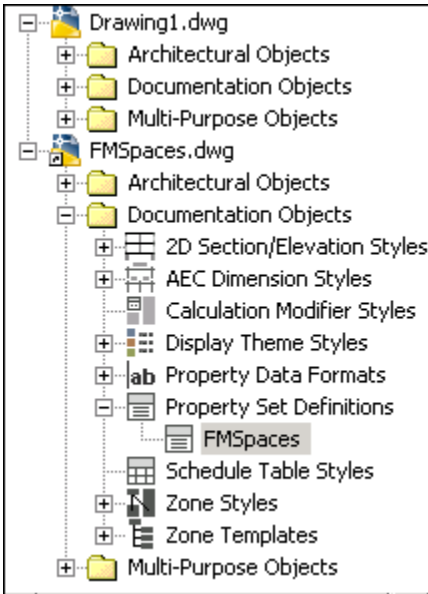
To publish an FMDesktop-compliant DWF file from AutoCAD-based 2007 and 2008 products:

1. Open the Autodesk Architectural Desktop 2007, Autodesk Building Systems 2007, AutoCAD Architecture 2008, or AutoCAD MEP 2008 drawing you want to publish as a DWF file.
2. Verify that the drawing is currently displayed the way you want the DWF to appear:
 - a. Turn layers on or off as needed. For example, if you want to publish equipment items and tags, you need to turn on the appropriate layers prior to publishing.
 - b. Turn off the hatch display component because it will conflict with the color coding and hatching of spaces in FMDesktop. For information about changing display properties, see Editing a Display Representation in the Autodesk Architectural Desktop 2007 or AutoCAD Architecture 2008 online help.
 - c. When publishing DWF files for use with FMDesktop applications it is highly recommended that the background color of the DWF files be set to white. This will ensure the best possible aesthetic consistency within reports and published websites. If the drawing background in the design application uses a color other than white, use the DWF publishing options in the design application to force the background to white during the publishing process. For more information about DWF publishing options, see the documentation for the design application.
3. Add the supplied property set definition, FMSpaces, which contains the required property data for spaces:

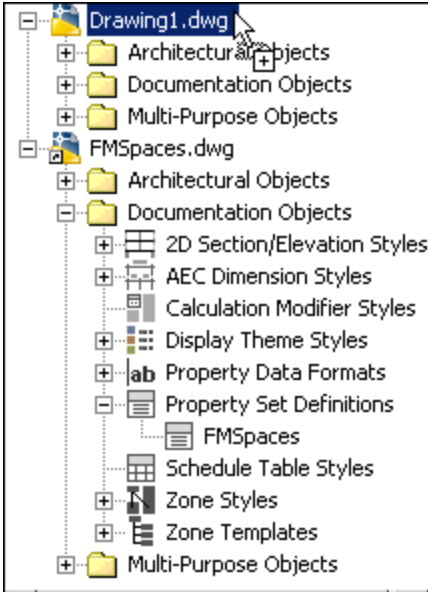
IMPORTANT: If you create your own property set definition, you must name it FMSpaces, exactly as shown here. If you use any other name or formatting, it will not be recognized by Facility Manager during the import process.

- a. In Style Manager, open the property set definition drawing (FMSpaces.dwg) from the Resources folder on the Facility Manager 2009 product CD.
- b. Expand Documentation Objects and Property Set Definitions.

Under Property Set Definitions, FMSpaces is displayed.

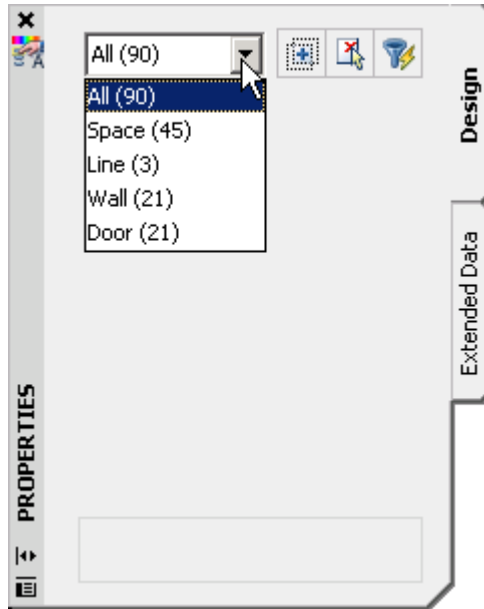


c. Select FMSpaces, and drag it into your current drawing in the tree view.

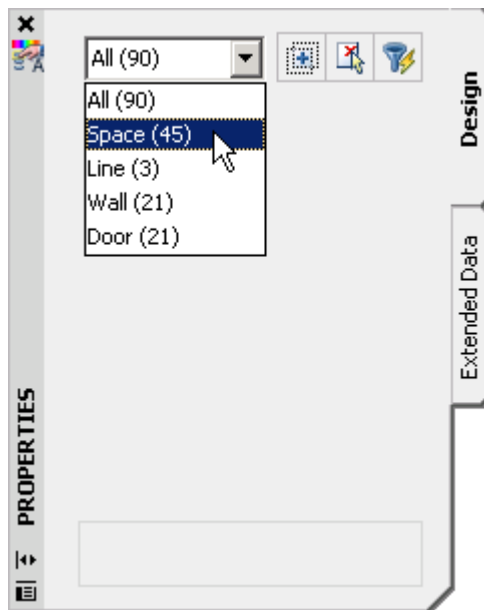


d. Click OK to close Style Manager.

- 4. Verify that the drawing contains spaces:
 - a. Click Edit menu ► Select All.
 - b. On the Properties palette, view the Object Type list.



- c. Select Space (#), where # represents the number of spaces found in the drawing.




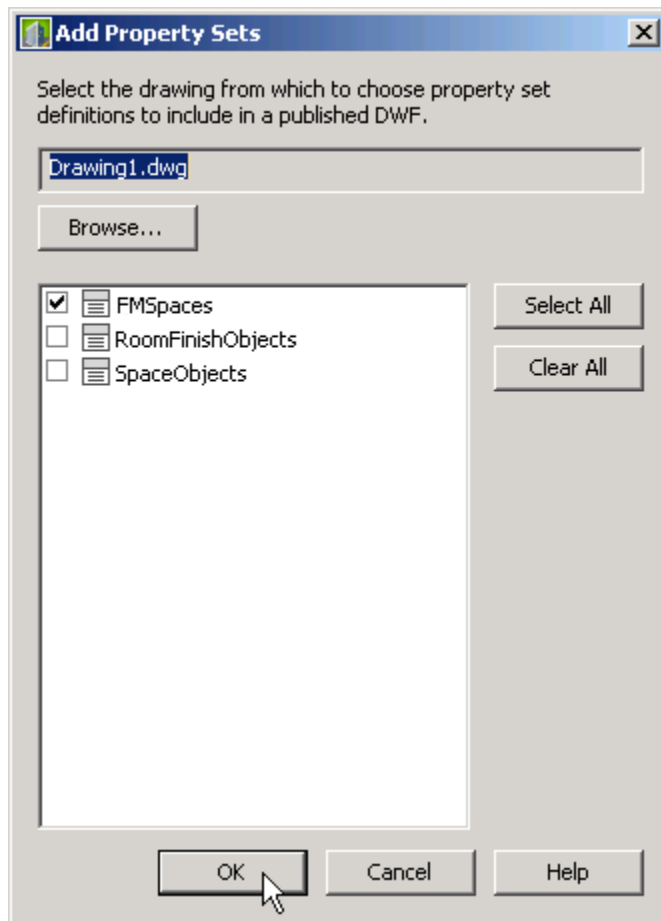
NOTE: If Space is not listed, there are no spaces in your drawing. Add spaces before publishing the drawing as a DWF file. For information about adding spaces, see the Autodesk Architectural Desktop 2007 or AutoCAD Architecture 2008 online help.

5. Attach the supplied property set definition (FMSpaces) to all spaces.

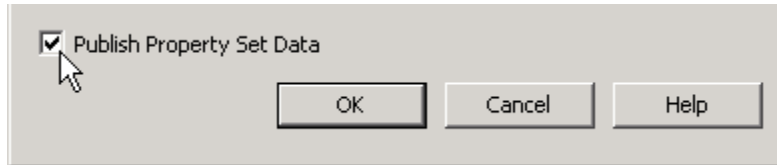
IMPORTANT: To attach the property set definition to all spaces at once **and** automatically number the spaces, verify that all spaces are selected before you add the property set definition. However, if you want to control the numbering of the spaces, you need to attach the property set definition to each space individually in the order in which you want the spaces numbered, or select all spaces individually in the order that you want the spaces numbered before attaching the property set definition.

- a. On the Properties palette, click the Extended Data tab.

- b. Click  (Add property sets).
 - c. In the Add Property Sets dialog, select FMSpaces, and click OK.
For more information about adding property set definitions, see the Autodesk Architectural Desktop 2007 or AutoCAD Architecture 2008 online help.
6. Create a Published Property List (PPL) file to specify which property set definition to use when publishing the drawing as a DWF file:
- a. Click File menu ► AEC DWF Publishing Options.
 - b. In the AEC DWF Publishing Options dialog, click New.
 - c. In the New Published Properties List dialog, browse to the location where you want to store the new PPL file. The recommended location is in the root FMDesktop directory under Program Files; for example, C:\Program Files\FMDesktop\Facility Manager 2009\.
 - d. Enter a file name, such as FMSpaces, and click Save.
 - e. In the AEC DWF Publishing Options dialog, click Add.
 - f. In the Add Property Sets dialog, select only the FMSpaces property set definition, and click OK.



- g. In the AEC DWF Publishing Options dialog, verify that Publish Property Set Data is selected in the lower-left corner of the dialog.



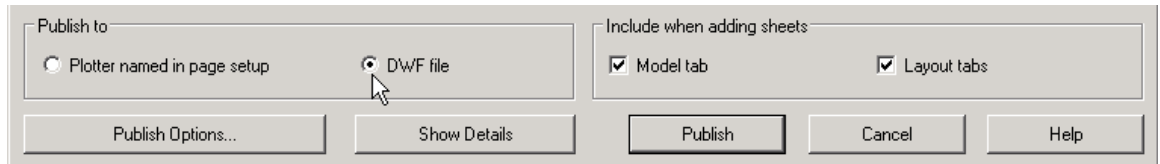
h. Click OK.

7. Publish the drawing file as a DWF file:

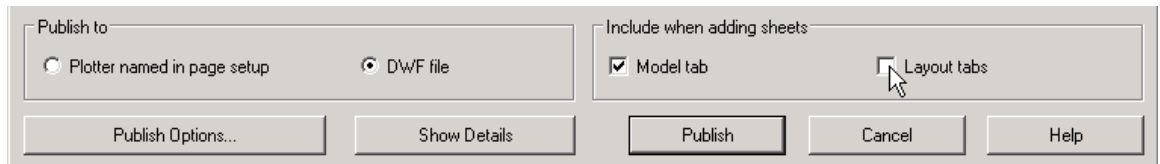
a. Click File menu ► Publish.

b. In the Publish dialog, under Sheet Name, select the sheet that represents the model view.

c. Under Publish to, verify that the DWF file option is selected.

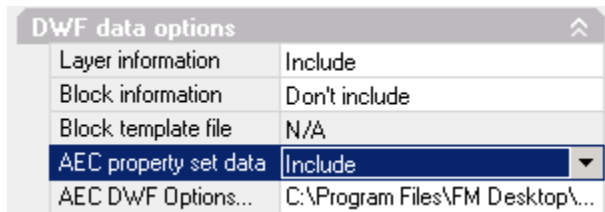


d. Under Include when adding sheets, clear Layout tabs.



e. Click the Publish Options button.

f. In the Publish Options dialog, under DWF data options, verify that Include is selected for the AEC property set data option, and click OK.



g. In the Publish dialog, click Publish.

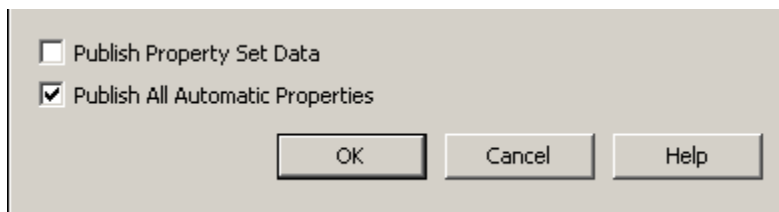
Publishing from AutoCAD Architecture 2009 or AutoCAD MEP 2009

AutoCAD Architecture 2009 and AutoCAD MEP 2009 provide a new option that makes it possible to include all automatic properties in a drawing when publishing it as a DWF or DWFx file, which eliminates the need to create property set definitions. The resulting files can be imported into Facility Manager as space plans. Using the DWF Import feature, AutoCAD Architecture space objects are recognized as FMDesktop spaces. Blocks, MVblocks, and MVparts are recognized as FMDesktop equipment items. During import, the properties that were published with the DWF/DWFx file can be mapped to property fields in FMDesktop using the DWF mapping feature. For more information, see Mapping DWF Objects in the Facility Manager online help or User's Guide.

NOTE: If you previously published a DWF file using property set definitions and you now publish the same drawing file using automatic properties, you may need to edit the DWF property mapping when you import the drawing into Facility Manager.

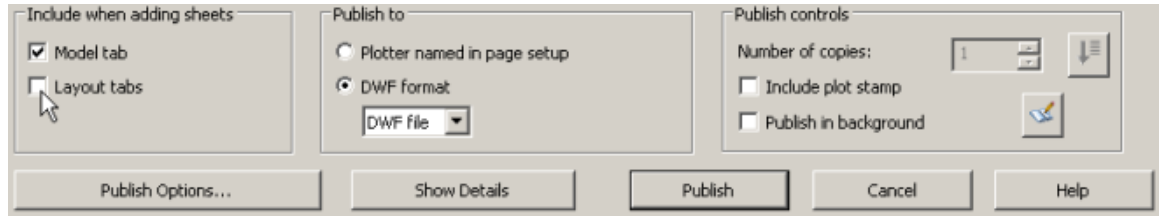
To publish an FMDesktop-compliant DWF or DWFx file from AutoCAD-based 2009 products:

1. Open the AutoCAD Architecture 2009 or AutoCAD MEP 2009 drawing you want to publish as a DWF or DWFx file.
2. Verify that the drawing is currently displayed the way you want the DWF/DWFx to appear:
 - a. Turn layers on or off as needed. For example, if you want to publish equipment items and tags, you need to turn on the appropriate layers prior to publishing.
 - b. Turn off the hatch display component because it will conflict with the color coding and hatching of spaces in FMDesktop. For information about changing display properties, see the AutoCAD Architecture 2009 online help.
 - c. When publishing DWF/DWFx files for use with FMDesktop applications it is highly recommended that the background color of the files be set to white. This will ensure the best possible aesthetic consistency within reports and published websites. If the drawing background in the design application uses a color other than white, use the DWF publishing options in the design application to force the background to white during the publishing process. For more information about DWF publishing options, see the documentation for the design application.
3. Click File menu ► AEC DWF Publishing Options.
4. In the AEC DWF Publishing Options dialog, select Publish All Automatic Properties, and click OK.

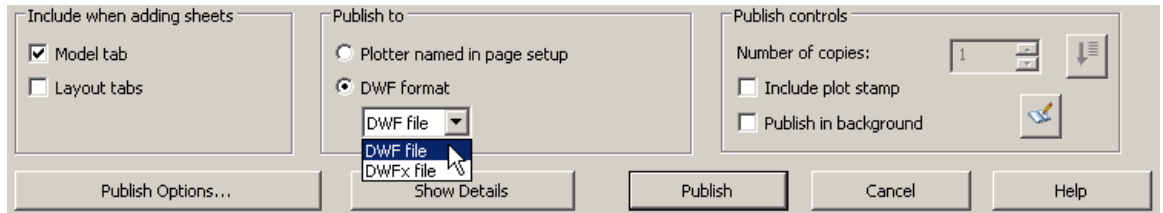


5. Click File menu ► Publish.
6. In the Publish dialog:
 - a. Under Sheet Name, select the sheet that represents the model view.

- b. Under Include when adding sheets, clear Layout tabs.



- c. Under Publish to, for DWF format, select DWF file or DWFx file.



- d. Click the Publish Options button.
- e. In the Publish Options dialog, under DWF data options, verify that Include is selected for AEC automatic properties, and click OK.

DWF data options	
Layer information	Don't include
Block information	Don't include
Block template file	N/A
AEC property set data	Don't include
AEC automatic properties	Include
AEC DWF Options...	C:\Documents and Settin...

- f. In the Publish dialog, click Publish.

Publishing from Autodesk Revit Building 9.1

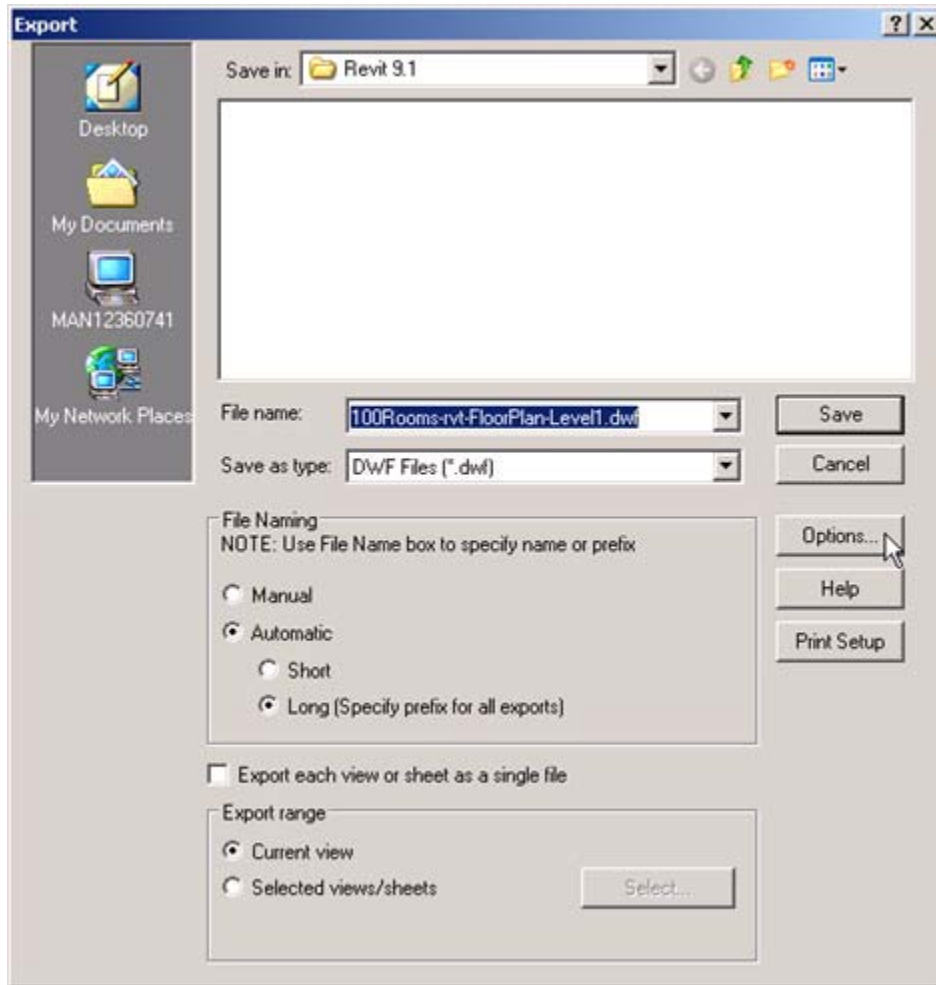
Autodesk Revit 9.1 can export DWF files that contain room and area objects. When you import a DWF file that contains Revit room and area objects into Facility Manager, these objects are converted into FMDesktop space objects. Space objects in a drawing are associated with data that can be added to the FMDesktop database. For information about importing DWF files into Facility Manager, see the Facility Manager online help.

To export an FMDesktop-compliant DWF file from Revit 9.1:

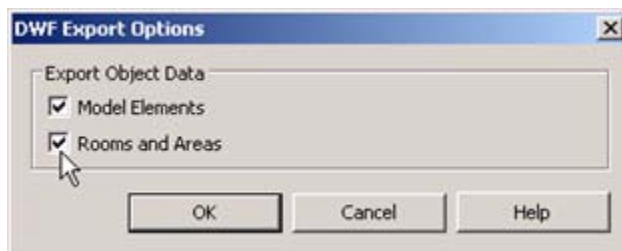
1. Click File menu > Export DWF > 2D DWF.



2. In the Export dialog, click Print Setup.
3. In the Print Setup dialog, under Paper Placement, select Center.
4. To preserve the scale of the drawing, select Zoom, and enter 100%.
5. With the scale of the view in mind, select a paper size that will accommodate the floor plan.
6. When prompted to save settings, click OK, enter a name for the settings, and click OK.
7. If exporting a space plan, in the Export dialog, click Options.



8. In the DWF Export Options dialog, select Rooms and Areas, and click OK.




9. In the Export dialog, for Save in, browse to the location in which to save the DWF file.

10. For File name, enter a name for the DWF file.

11. Under Export range, select the view(s) to export.

12. Click Save.

13. After you import the DWF file in Facility Manager, use the Drawing form to open it.

14. On the Drawing form toolbar, click the Dimension tool flyout, and click .

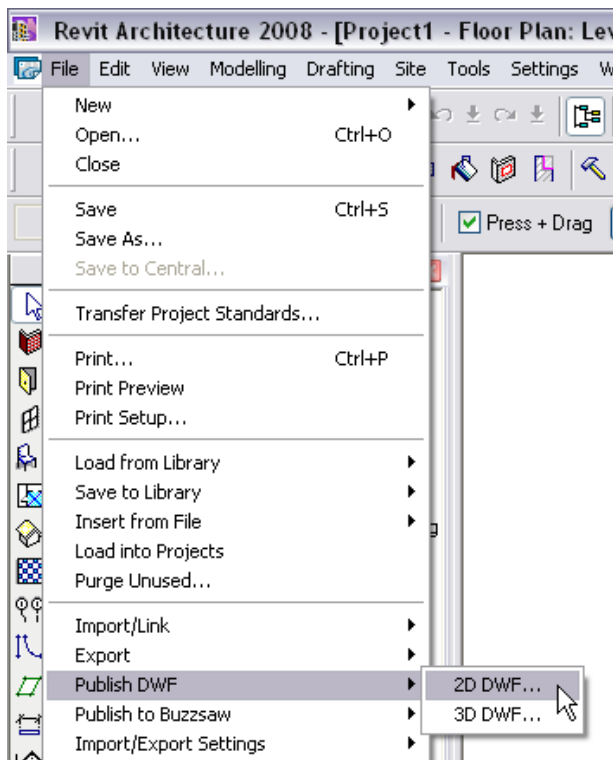
15. Set the units to match the units in the original Revit views to provide accurate dimensioning of the DWF file.

Publishing from Revit Architecture

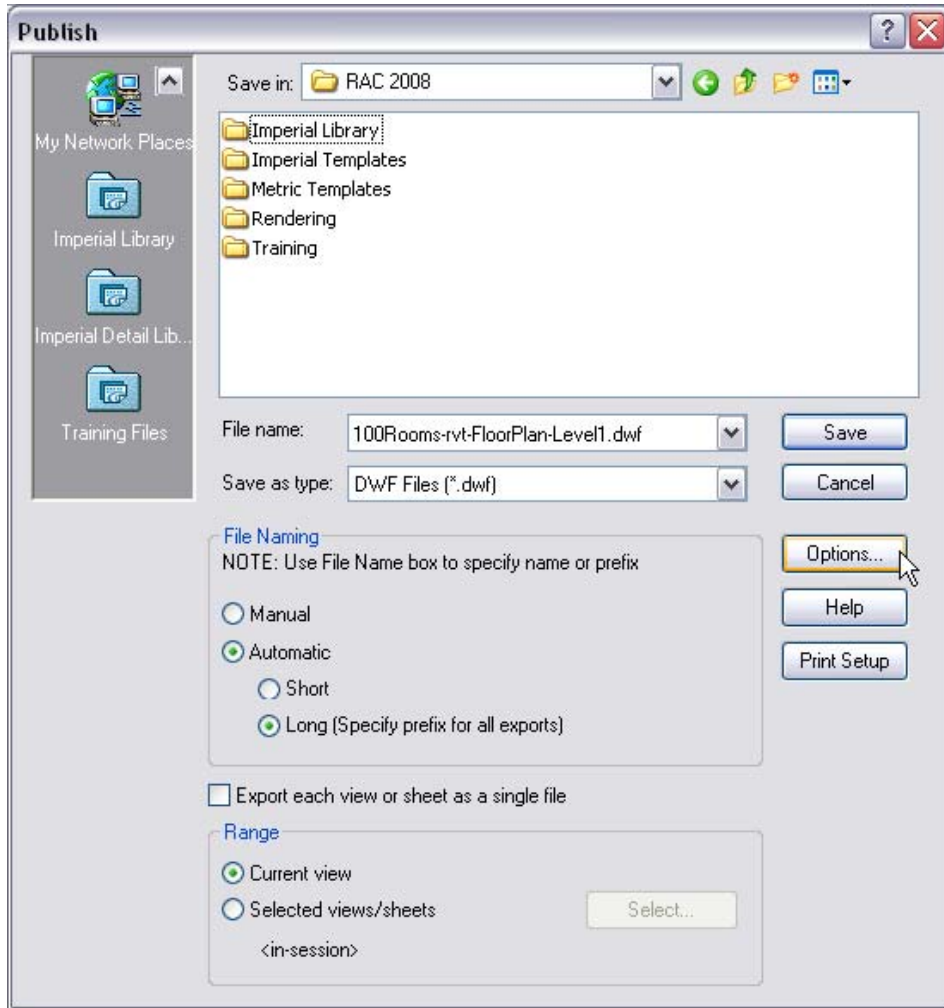
Revit Architecture can export DWF files that contain room and area objects. When you import a DWF file that contains Revit room and area objects into Facility Manager, these objects are converted into FMDesktop space objects. Space objects in a drawing are associated with data that can be added to the FMDesktop database. For information about importing DWF files into Facility Manager, see the Facility Manager online help.

To publish an FMDesktop-compliant DWF file from Revit Architecture:

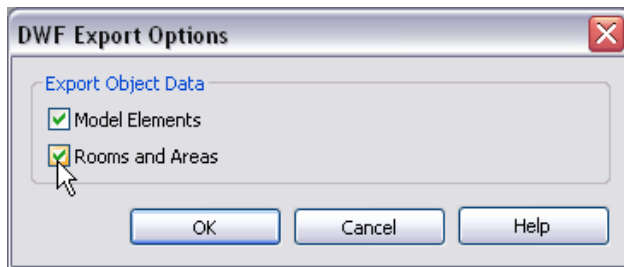
1. Click File menu ► Publish DWF ► 2D DWF.



2. In the Publish dialog, click Print Setup.
3. In the Print Setup dialog, under Paper Placement, select Center.
4. To preserve the scale of the drawing, select Zoom, and enter 100%.
5. With the scale of the view in mind, select a paper size that will accommodate the floor plan, and click OK.
6. If exporting a space plan, in the Publish dialog, click Options. (In Revit Architecture 2009, this is the Publish DWF 2D dialog.)



7. In the DWF Export Options dialog, select Rooms and Areas, and click OK. (In Revit Architecture 2009, this is the DWF Publish Options dialog.)




8. In the Publish dialog, for Save in, browse to the location in which to save the DWF file.
9. For File name (File name/prefix in Revit Architecture 2009), enter a name for the DWF file.
10. Under Range, select the view(s) to export.
11. In Revit Architecture 2009, the default file type is DWFx; however, you have the option of publishing drawings as DWF files. Both DWF and DWFx files can be used in

FMDesktop products in the same ways. To publish the drawing in the DWF file format, for Files of Type, select DWF Files (*.dwf).

12. Click Save.

13. After you import the DWF file in Facility Manager, use the Drawing form to open it.

14. On the Drawing form toolbar, click the Dimension tool flyout, and click .

15. Set the units to match the units in the original Revit views to provide accurate dimensioning of the DWF file.

Publishing from AutoCAD 2006 or Higher with Facility Link

For information about creating space plans and publishing them as DWF files, see the Facility Link online help.