ProjectDox®

Electronic Plan Solutions

MARK - Marking up in ProjectDox® - Viewer Tool 7.1

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1 About this Guide

This guide provides an overview of the ProjectDox Viewer Tool using Internet Explorer as the main web browser, as well as exercises for the most commonly used features. The guide is designed for users who are viewing in ProjectDox, files that were processed and cached through the ProjectDox Server. The ProjectDox Viewer Tool allows users to view, zoom, pan, rotate, measure, and annotate documents and images quickly and easily.

2 User Interface

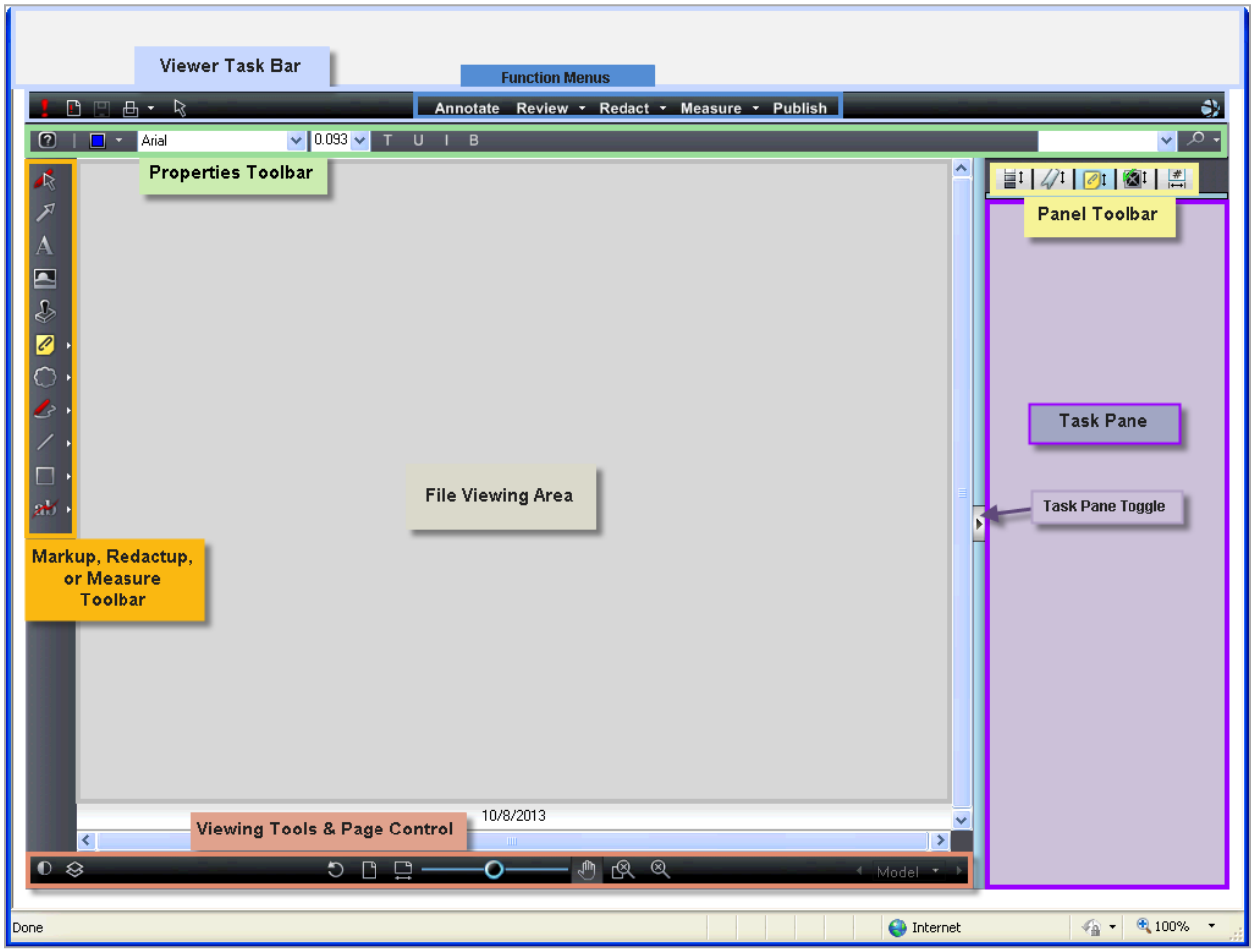
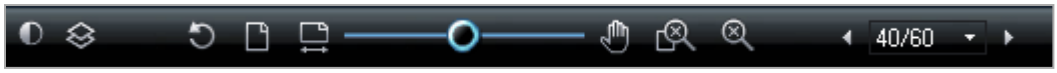
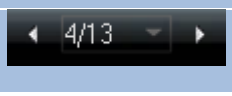


Figure 2-1. Viewer Toolbars

3 Viewing Tools and Page Control Toolbar



The Viewing Tools and Page Control toolbar contains tools to control how images display.

	**Background.** Use this button to change the background color of file types with "transparent" background colors, such as monochrome raster and vector file types (color raster files are not affected) to black, white, or gray. **Monochrome:** Also available from the color menu. Turning on Monochrome changes all lines of a color vector image to a single color (the default is black) while leaving markup entities in color for quick identification. **Raster Background**: This option allows setting a transparent background or custom color for raster images only.
	**Set Visible Layers.** Turn image layers (e.g., layers of a DWG file) on or off to minimize clutter in the view window or to focus on a particular area or part.
	**Rotate.** The Rotate button allows you to rotate the image in 90 degree counterclockwise increments.
	**Fit All.** Returns the zoom level to 100% so the full image displays in the Viewer window.
	**Fit Width.** Ideal for 8.5" X 11" office documents, Zoom Width changes the zoom level so that the entire width of the image appears in the window. You can read rows of text without having to scroll right and left to see the entire line.
	**Zoom Slider.** You can move the slider ball from left to right to increase or decrease magnification. Move left to decrease, right to increase. The ball snaps back to center on release.
	**Pan/Zoom.** When zoomed in on an image, use the Pan tool to maneuver around the image.
	**Magnifier.** Use the Magnifier to summon a magnified view window on your image. The magnification can be adjusted and a toggle tool is available to allow you to switch between eye glass  , bird's eye  , and docking  behavior.
	**Zoom Window.** Use the Zoom Window tool to zoom in, zoom out, (by holding down the right mouse button and moving the mouse up and down) or zoom to an area by dragging a box around the desired display area.
	**Page Control.** Use page control to navigate through the pages of your documents. You can select a specific page from the drop-down list.

4 Training Exercises

The ProjectDox Viewer tool contains a variety of tools and features to assist in review and marking up of electronic plans and documents. The following sections provide exercises to familiarize you with some of the more common tools used when reviewing plans and can be used as a resource reference.

5 How to Set File Background Color

The **Background Color and Color Settings** tool  sets the background color for vector file types and monochrome raster file types (color raster files are not affected). The background can be set to black, white, or gray, or default.

The default background color depends on the file type:

File Type	Default Background
Drawing (.dwf, .dwg, .dgn)	Black
All other file types	White

Use the following steps to set the background color for a .dwg file

1) Open **1st Floor Architectural.dwg** in the Viewer tool.

2) Click the **Background Color and Color Settings** tool  , then select from the menu to set the background color. The choices are Black, White, Gray, and Default; the current setting is indicated by the black dot.

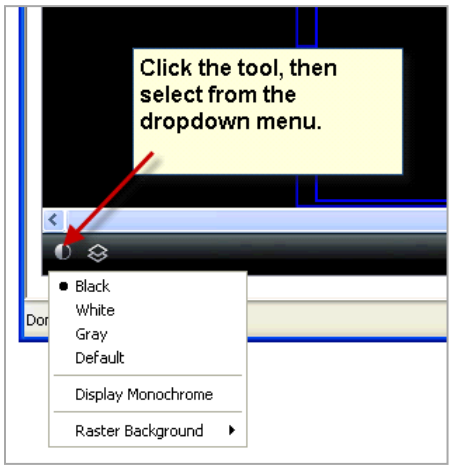


Figure 5-1. Background Color Settings Menu

3) Test the results of selecting each of the choices.

Your PC will maintain a setting for vector-based drawings, and a separate setting for all other file types. When you set the background color, the PC remembers your choice for that kind of file until you change it again.

The menu also includes a toggle for displaying the file in color or monochrome. A checkmark by the menu item **Display Monochrome** indicates just that; with no checkmark, the viewer displays the file in color.

4) Test the results of toggling the **Display Monochrome** menu item.

The menu item **Raster Background** will have no effect on this vector-based drawing.

5) (Optional) Open one of the .tif files from the drawings folder and experiment with the effect of the **Raster Background** submenu on the display.

6 How to Turn Layers On and Off

When layers are present in a file (PDF, DWG, etc.), the Show Layers tool will display. Using this tool, image layers can be turned on or off to show specific aspects of the file. In this exercise, you will learn how to remove, restore and hide various layers of the file.

1) Open **1st Floor Architectural.dwg** in the Viewer tool.
2) Click **Show Layers**  and move the **Set Visible Layers** dialog to the side of the drawing.
3) Clear the check box(s) next to the following layers and notice the changes to the file:
   a) 2FIN
   b) Equipment
   c) Interior Walls
4) Click **Restore Defaults** to undo any changes you have made.
5) Click **Hide all**.
6) Select the checkboxes for :
   a) Partitions
   b) FACH
7) Click **Restore Defaults** to undo any changes you have made.

8) Close the dialog box.

7 How to Use the Search and Measure Count Features

The Measure Count tool allows you to easily count items in a drawing - such as fixtures in a floor plan, screws on a design, etc. A marker is placed on the counted item to serve as a placeholder, and when used with the search feature can be a powerful and time saving tool. In this exercise, you will search a drawing file for all the Photoelectric Smoke Detectors, which are indicated by the letter “P” in the file.

1) Select and view the file **FP-1.dwg**.
2) Enter the letter “P’ into the search window 

3) Click the Find  icon to locate the first instance of “P”
   - Highlighted in blue
4) Select Measure 

to enable the Measure toolbar on the left hand side of the Viewer.
5) Select the Measure Count  icon.
6) Click near the first instance of “P”
7) Repeat the process of alternating between clicking the Find  icon and clicking near each found instance of “P” in the file until there are no new instances.
   - Notice that the measure count keeps track of the number of items found and their location.
   - To remove the last count checkmark applied click the  icon.
   - To remove all count checkmarks select the  icon.

The search tool does not distinguish between instances of “P” that denote smoke detectors, and those that have other functions. It simply searches for each occurrence of “P.” This is true of any search terms.

8 How to Use the Search and Measure Features

The Search feature allows text contained in a document or drawing to be searched. You can search using parameters such as Match Case, Find Whole Word Only, wildcards and even macros allowing for quicker recognition of aspects within a file.

The Measure feature provides a set of tools that can be used for drawing and images files. When using the measurement tool you should first set a standard measurement scale or calibrate a baseline distance to use as a scale by selecting the Measure drop-down, then Settings.... The dialog allows you to select the scale factor to use, and precision units for measurement value display results when using the measurement tools (distance, area, angle, xy value, and perimeter). The measurement tool uses an interval of 0 to 360 degrees for all angular measurements.

In the following exercises, you will use the **Search** feature to locate specific values in the "Brookwood Plat.dwg" file and use the **Measure** tool to determine size, distance etc.

1) Select the file **Brookwood Plat.dwg** from the thumbnail view.

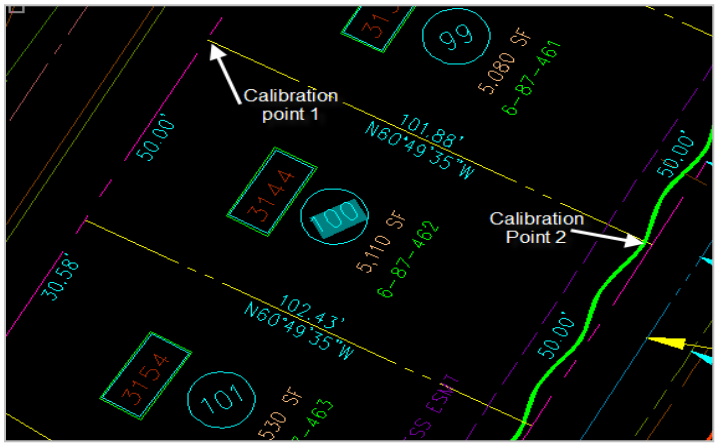


Figure 8-1. Brookwood Plat.dwg Lot 100

2) Locate lot 100 in this file by typing 100 into the Search  dialog box in the top right of the Viewer tool.

3) Click the **Measure** drop-down 

and select **Settings...**.

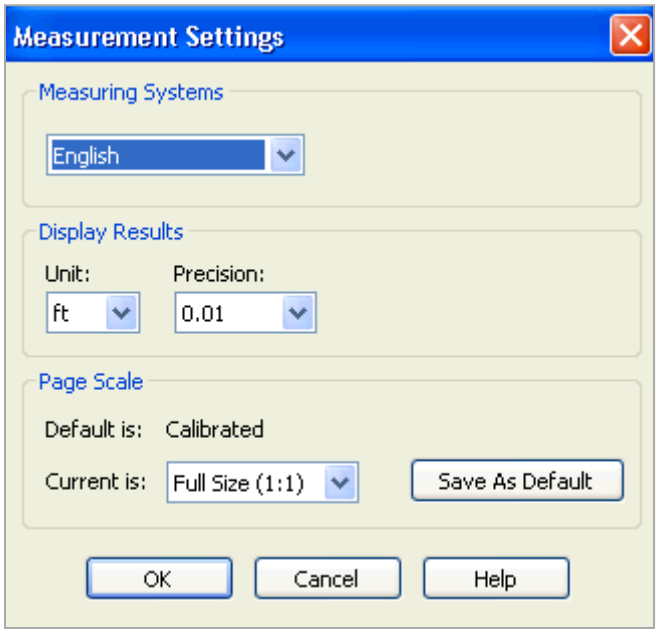


Figure 8-2. Measurement Settings

4) Make the following selections and click **OK** to complete.
   a) Measuring System = English
   b) Unit = ft
   c) Precision = 0.01

5) Click the **Measure** drop-down 

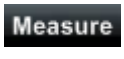
and select **Calibrate...**

6) The Measurements fields and Snap checkbox will appear in the **Properties** toolbar. Place a checkmark to use the **Snap** feature. Snap is only available for CAD-Like formats.

7) Left-click on the first point, then the last point (just pass the green line) as the distance to use as the baseline as seen in the following screen.

8) Enter the value **101.88**

9) Click **OK**

10) Click 

to activate the **Measure** toolbar to the left hand side of the viewing area and select  to measure a single line.

11) Using the line measurement verify the measurements for each of the four sides of Section 100. The measurements should match what has been entered on the file.

Now let's measure another section of the file and find its square footage using another measurement feature called **Measure Polygon**.

12) Click **Measure Polygon** and measure section 99 to find the square footage.

13) Left click a corner of section 99, move to the next section point, and left click on each corner of the area to be measured. Double click the last corner to release and calculate the distance and square footage.

Figure 8-3. Measure Area

14) The calculations will display in the Properties toolbar: last segment distance, perimeter and area. For this example, the square footage or area will match the area/square footage indicated on the drawing file (5,080 SF).

9 How to Use the Measure Tool and Graphic File Scale (Calibration)

The Measure tool can be calibrated to the graphic scale provided by the architect in the file. This exercise will familiarize you with steps to set the measurement settings and calibrate the file to use the information provided in the graphic scale to perform measurements on the file.

1) Select the file **Brookwood Plat.pdf** and view it in a separate window.

2) Locate lot 100 using the **Zoom Window** in the **Viewing Tools** toolbar.

- Notice the search feature is disabled because no indexing was done for file when converted to PDF.

3) Click the **Measure** drop-down 

, select **Settings…** and make the following selections clicking the **OK** button to complete.
   - Measuring System = English
   - Unit = ft
   - Precision = 0.01
4) Locate the graphic scale at the bottom of the page by right clicking the mouse and selecting **Fit All** from the menu or use the Fit All icon  in the **Viewing Tools** toolbar.
5) Click the Measure drop-down 

and click **Calibrate….**
6) Select the **Snap** feature.
7) Click 

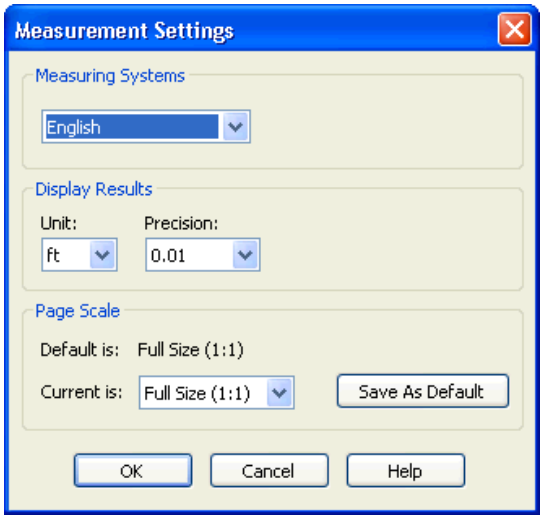
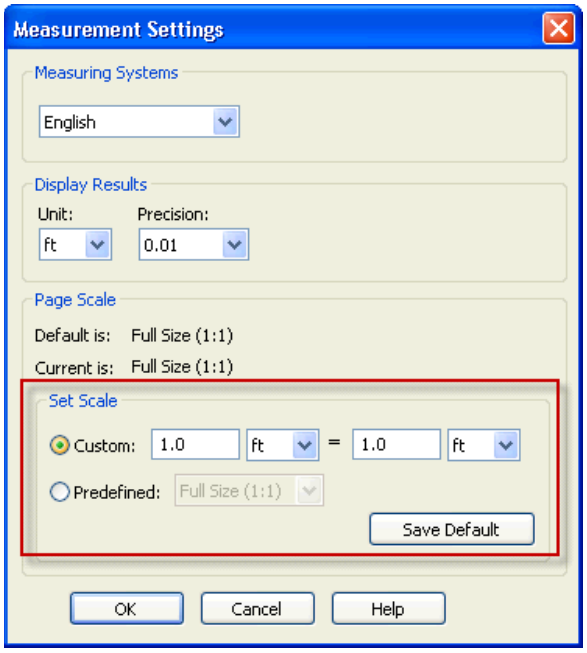
.
8) Choose your first point on the scale as 0 and the second point 120.
9) Type in the distance in the dialog box to be 120 to match the scale and click **OK.**
10) Verify the measurements for each of the four sides of Section 100.
    - Measurements of PDF files are typically 1/100th of an inch off the original measurement due to file conversion. This is has been deemed an acceptable degree of accuracy.
11) Click  **Measure Polygon** and measure for the square footage of section 99
12) Left click a corner of section 99, move to the next section point, and left click on each corner except the last. On the last corner, double-click to release and calculate the distance and square footage.
13) The calculations will display in the Properties toolbar: last segment distance, perimeter and area.

10 How to Use the Page Scale

Using the Page Scale is an alternative to calibration – and the settings for the current document are stored across ProjectDox sessions.

10.1 Measurement Settings: ProjectDox pre-8.2 vs. 8.2 or Later

Beginning with ProjectDox version 8.2, the Measurement Settings tool can be used to set a Custom scale. The following table compares some major characteristics of the two versions.

Pre- ProjectDox 8.2	ProjectDox 8.2 and Later
	
• Select Predefined scale using “Current is:” drop-down	• Select Predefined scale or define Custom scale • The custom mode allows you to set the document scale values (typically indicated on the drawing sheet) that are not already in the predefined list. • A custom scale set applies to the current file. • Each file can have a different custom scale.

Pre- ProjectDox 8.2	ProjectDox 8.2 and Later
• Out-of-box default scale factor 1:1	• Out-of-box default scale factor 1:1

Section 9.4 contains additional notes for both versions

10.2 Using a Predefined Scale

In this exercise, you will set the measurement settings to the scale provided on a drawing, and verify several measurements.

1) Select and view the file **A2-2 2nd floor Proposed Addition 100380704.pdf**.
2) Note the Scale indication of 1/8" = 1'-0" at the bottom of the drawing, as shown in the screen shot below.

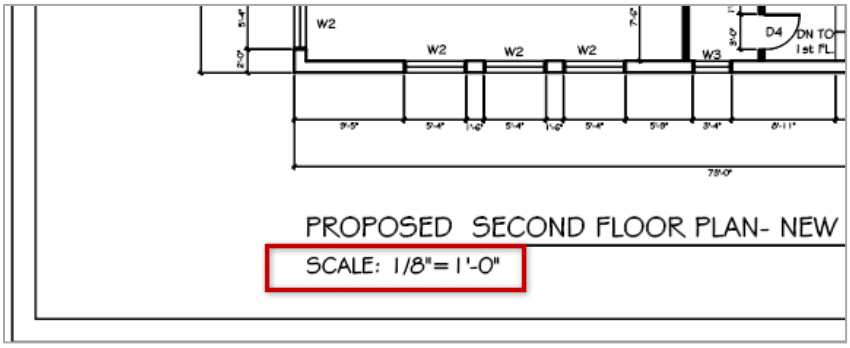


Figure 10-1. Page scale on Drawing

3) Click the **Measure** dropdown, and select **Settings...**
4) This step is described separately for each version.
   - **Pre-8.2**: In the **Settings** dialog, **Page Scale** section, click **Current is:** and select **1/8"=1'-0"** as shown in Figure 10-2. (Set Unit to feet and Precision to 0.01; you can divide measurements by 12 to get feet and inches.) Click **OK**.

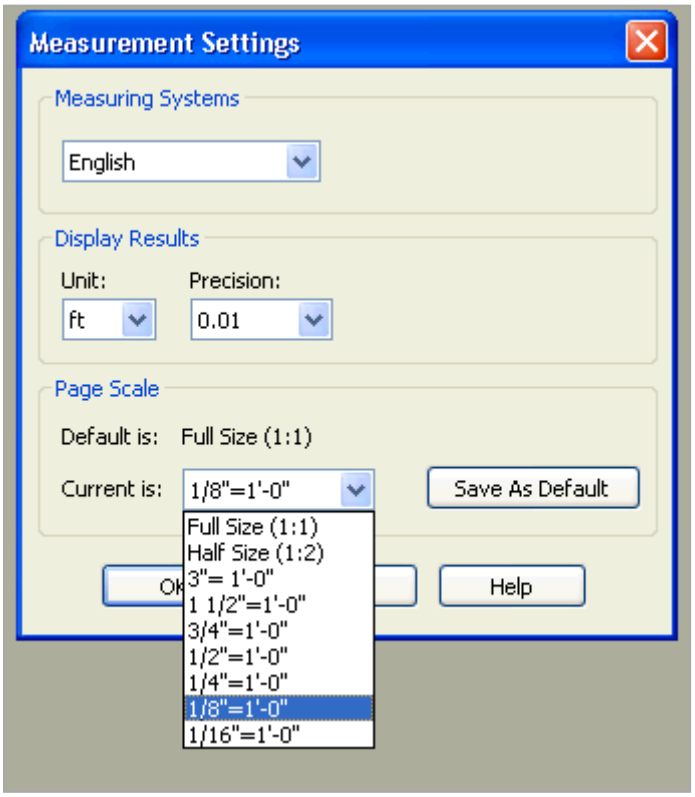


Figure 10-2. Selecting Page Scale (Pre-8.2)

- **8.2 and later**: In the **Measurement Settings** dialog, in the **Set Scale** section, click the **Predefined** drop-down and select **1/8"=1'-0"** as shown in Figure 10-3**.** (Set Unit to feet and Precision to 0.01) Click **OK**.

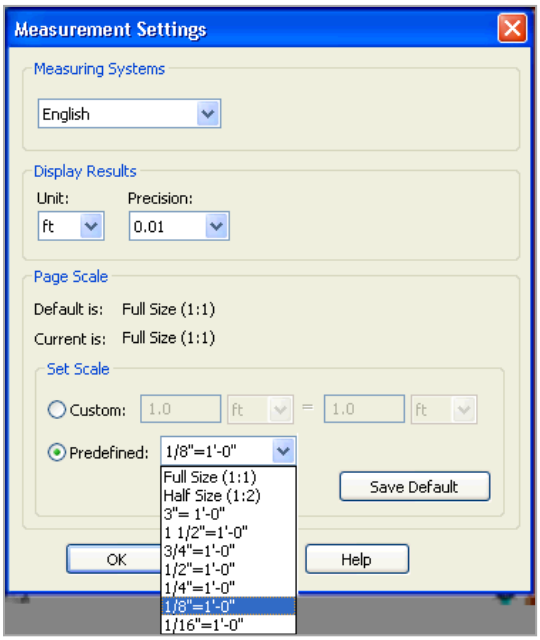


Figure 10-3. Set to Predefined Scale (8.2 and Later)

5) Zoom in to magnify the Office 1 area.

6) Click **Measure**.

7) Click the **Measure Line** tool.

8) Left click on each end of a line segment, comparing the displayed measurement in the tool with the stated distance on the drawing, as shown below.

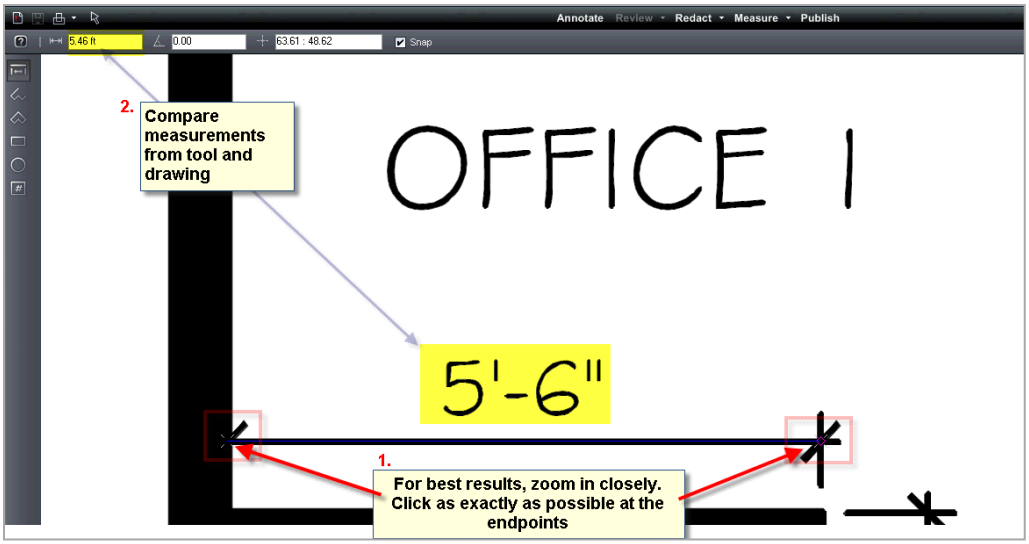


Figure 10-4. Scale-based Measurement

9) Repeat the previous step for 2 or 3 other measurements in the drawing.

10.3 (ProjectDox 8.2 or Later) Setting a Custom Scale

1) Select and view the file **FP-1.dwg**.
2) Zoom in to the bottom right-hand corner of the drawing, near the compass points, to locate the indicated scale. Note the Scale indication of 3/16" = 1'-0"

Figure 10-5. Scale Indication for FP-1.dwg

3) Click the **Measure** dropdown, and select **Settings...**
4) The **Measurement Settings** dialog will appear as shown in Figure 10-6.

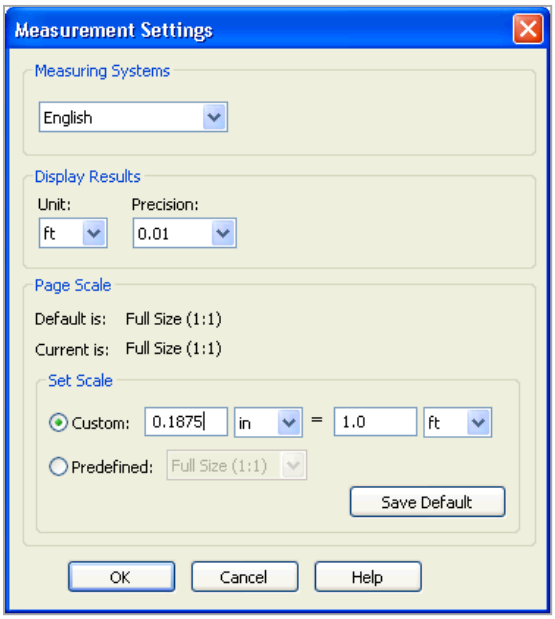


Figure 10-6. Setting Custom Scale

5) In the **Measurement Settings** dialog, do the following:
   a) Set Unit to ft and Precision to 0.01
   b) Click **Custom**
   c) Type **0.1875** (the decimal equivalent of 3/16) in the field next to **Custom**
   d) Select **in** (inches) in the next drop-down
   e) In the field to the right of the = sign, enter **1.0**
   f) Select **ft** from the next drop-down
   g) Click **OK**

6) Measure the lobby doorway as shown in Figure 10-7. The **Properties** bar should show **3.0 ft**

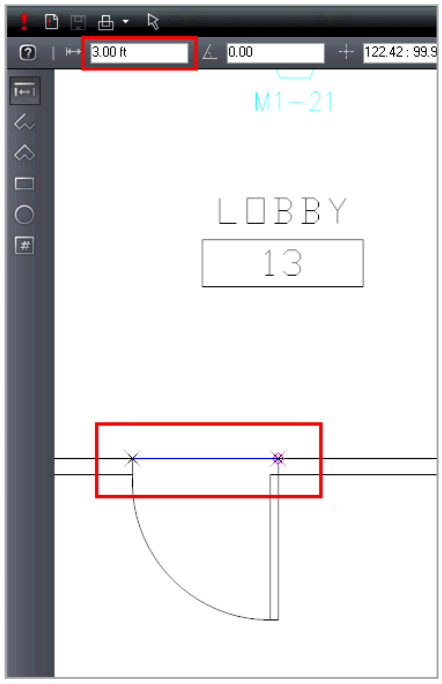


Figure 10-7. Lobby Doorway

7) Measure the area of the Stage. Your results for the circumference and area should match Figure 10-8.

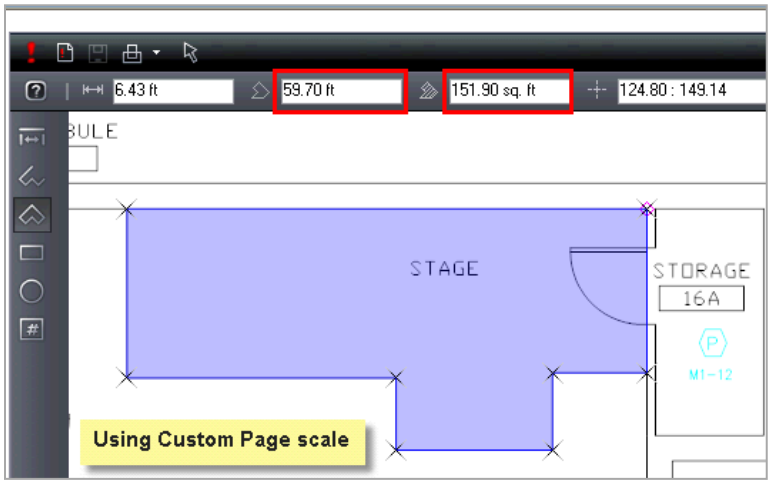


Figure 10-8. Stage Area Measurement (Page Scale)

8) (Optional) Calibrate the doorway to 3.0 feet, then measure the Stage again. The measurements, as shown in Figure 10-9, will agree with those taken using the Page Scale method.

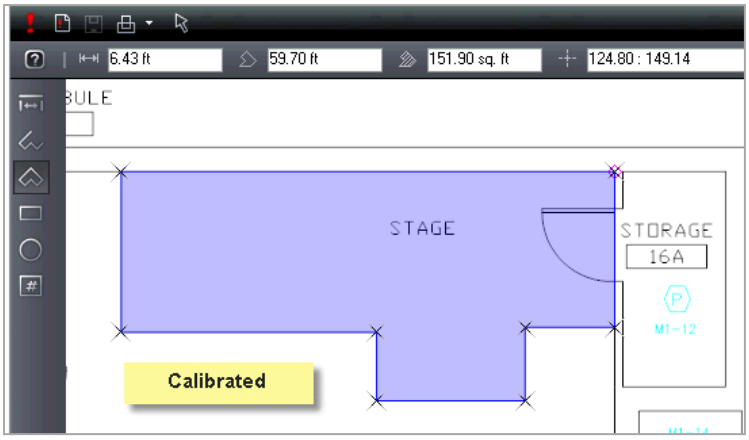


Figure 10-9. Stage Area Measurement (Calibrated)

10.4 Additional Information about Page Scale

- You can select a different scale factor to use for each drawing, or, if your organization uses a standardized scale, you can set the default drawing scale to use for all drawings in the current and future ProjectDox sessions.

Setting a default Scale is not recommended during the training session, unless you know your organization's standardized scale.

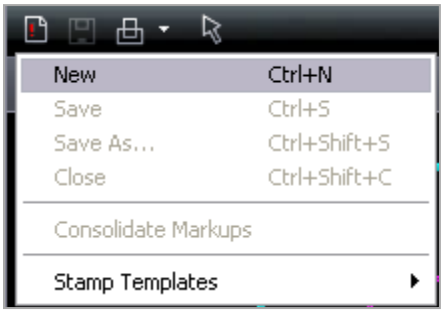
- To set the default to use for all sessions, choose your Scale factor from the Predefined drop down or enter a Custom scale and click Save as Default. It is then applied to all pages of the document, all documents within a session and across session until it is changed. The default value can be overridden per page. If calibration has been performed, then the Predefined option is selected and the drop down box displays "Calibrated".
- If a custom scale hasn't been previously set for this page, the units of the scale are the same as the currently selected Measuring System. If a custom has previously been set, the measuring system (in/ft/yd/mi versus mm/cm/m/km) does not change when the display Measuring System is changed.

- The edit boxes for custom scale accept all characters; however, validation is done when scale is computed by clicking Save, Default, or OK. Only digits 0 – 9, comma, and point symbols are allowed as valid values.

11 How to Create Markups

Markups allow you to annotate a file without altering the file itself. All markup entities are saved in a markup file, which is associated and overlaid on the drawing. The drawing itself remains unchanged. A new layer is automatically created for each saved markup file. Other users may be granted permission to view the author's markups, but cannot edit them. In this exercise, you will add several markups to the file regarding a wheel chair access issue. At the end of this exercise, your markup should look similar to Figure 11-2.

1) Open the file **plan layout1.dwg** in the ProjectDox Viewer tool by clicking the thumbnail image or the hyperlink in ProjectDox.
2) Use one of two ways to access the **Markup / Annotation** toolbar:
   - Click Annotate in the Viewer task bar.
   - Click **Markup** and **New** to access the Markup toolbar



3) With the **Markup** toolbar displayed, use the **Zoom Window** tool to get a close up of the area highlighted in blue in the following screen shot.

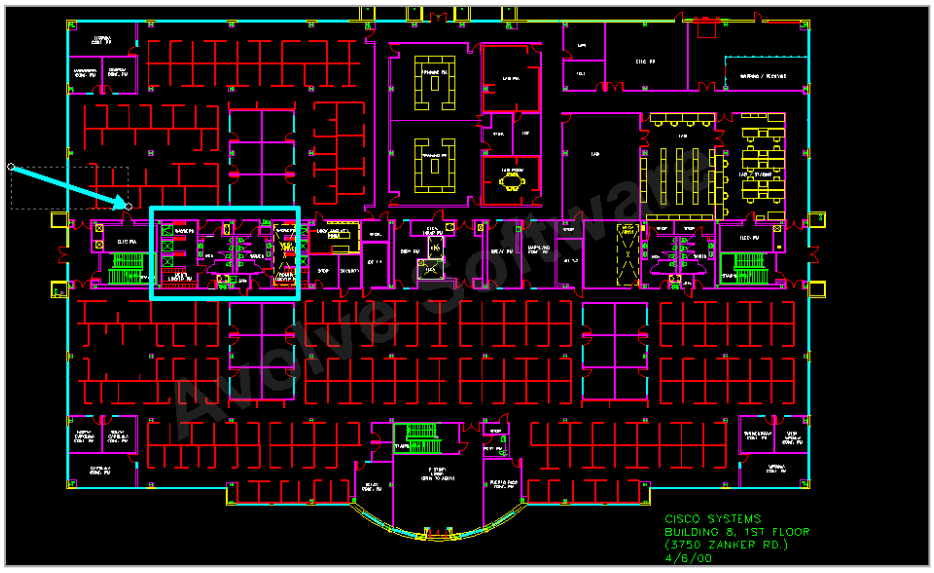


Figure 11-1. Plan Layout1.dwg Area to Zoom

4) Add an Oval/Circle as seen in Figure 11-2. by locating the **Rectangle** tool and clicking the arrow to display the additional tools.  . Click the oval/circle tool.

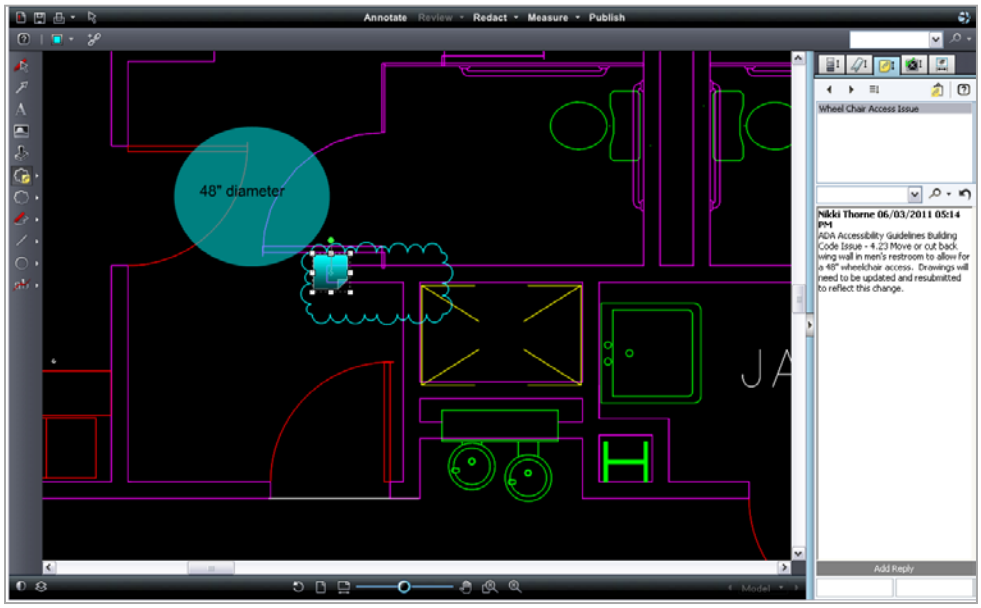


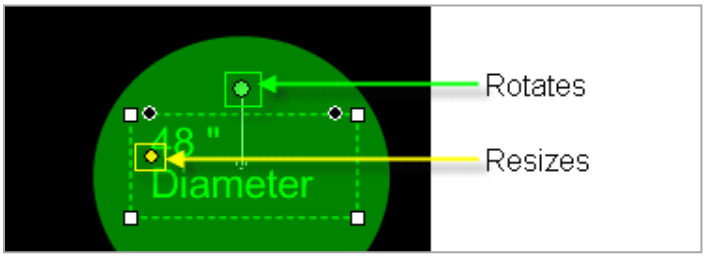
Figure 11-2. Wheel Chair Access Issue

5) To change the color of the markup, locate the **Properties** toolbar 

in the upper left hand corner of the window, click the color tool  and select a color from the displayed palette.

6) Choose “Highlight” from dropdown list in the **Properties** toolbar to make the markup transparent, allowing the objects behind the markup to be seen.


7) Add the text **48” Diameter** to the circle by clicking the Text  icon and creating a box in the center of the circle as seen below.



a) Adjust the size using the **Properties** toolbar or by using the yellow diamond as seen in the following screen shot. Click on the diamond and drag with the mouse to resize.

b) To rotate the text box use the green circle as seen in the following screen shot. Click and drag with the mouse to rotate.

8) Add a Changemark and cloud to the file (as seen in Figure 11-2.) by clicking the arrow to the right of the Changemark  icon, and selecting the Changemark cloud  icon.

a) Click the left mouse button and hold as you place the cursor (cursor is replica of the icon selected) on the start point for the cloud location.

b) Drag the mouse to create the cloud around the desired object

c) Release the left mouse button to set the cloud in place and have the Changemark dialog box appear.

- The Changemark box will be in edit mode allowing you to re-position the Changemark as needed.

9) A dialog will display. Add the following text:

a) Name the Changemark “Wheel Chair Access Issue”.

b) In the subject area add the following text: ADA Accessibility Guidelines Building Code Issue - 4.23 Move or cut back wing wall in men's restroom to allow for a 48" wheelchair access. Drawings will need to be updated and resubmitted to reflect this change.

c) Click **Ok** to close the Changemark.

10) Click the **Save Markup** icon and enter a unique markup name.

- Alternatively, you may click the Markup icon and select to **"Save"** the Markup Layer using a unique name. *Example: BLD*

Markup layer names must be unique for the file. Duplicate markup names for a file can result in unexpected errors when viewing.

11) Exit the drawing file by clicking the **Red X** in the upper right corner, or by clicking the **Save Markup** Icon and **Close**.

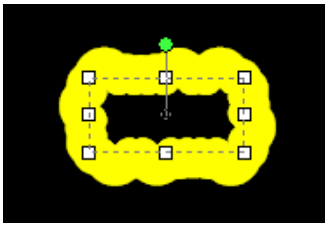
12) Return to the folder view in ProjectDox, refresh the folder panel (right click in the panel and click refresh), and note the additional icon for **plan layout1.dwg**.

12 How to Move and Resize Markups

1) To move an existing markup, first click the **Select Markup** icon .

2) Locate the desired markup and click on it.

- The markup is selected and editable when the image is outlined with the dotted area as seen below. The cursor will display four directional arrows in this mode.



3) To move the markup image, left-click the image (not on the square endpoints or midpoints), drag it to the desired location, and release the mouse button to set the markup in the new location

4) A markup can be resized after placement (if it is still selected), or later by clicking on the **Select Markup**  icon and then clicking on the markup.The markup itself will display several features for resizing or rotating it. Examples of each are shown below.

5) Black Left to Right Resize Circles

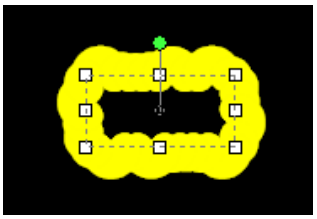
Select either black circle to resize the markup left to right.

a) Left click and hold the mouse button for either circles found on both ends of the markup dragging forward or backward until the desired length is achieved.

b) Release the left mouse button to set the markup.

c) The black resize dotes are available on specific markups such as arrows, and text boxes.

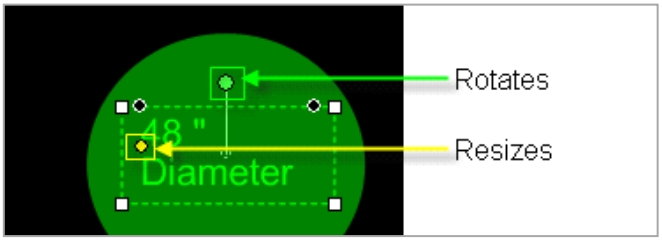
6) Green Rotation Circle



a) Left click green circle on a markup and drag the mouse clockwise or counterclockwise to rotate the markup.

b) Release the left mouse button to set the markup.

7) Yellow Resize Diamond



a) Left click and hold the mouse button on the yellow diamond of a markup.
b) Drag the mouse up to enlarge the markup, or down to shrink the markup.
c) Release the left mouse button to set the markup.

13 How to Select Multiple Markups

With the Select Markup tool active you can use either of the following methods to select multiple markups:

- Hold down the <Ctrl> key while clicking the markup entities on the file.
- Click and drag to draw a bounding box around the group of entities that you wish to select. Holding down the <Ctrl> key is not necessary, but the entities you want included must be entirely contained within the selection box boundaries. Any entities that are hanging over the box's edges will not be included.

14 How to Copy Markups

There are several methods for copying markups – the purpose and results are described below:

Quick copy

1) Select one or more markups using the previously described methods.
2) Hold down the <Ctrl> key, then click and drag the selected entities.
3) The originals remain in place, while a copy is created and placed wherever you release the mouse button.

Using the Right-click Menu

1) Select one or more markups using the previously described methods.
2) Right-click and select **Copy** from the menu.
3) Actions available at this point:
   - Right-click again and select **Paste** to paste the markups into the same page, or into pages of any other Viewer session window that you have open.

- Use the Copy Markups to All Pages feature to copy the selected markups to a specified range of pages.

Edit text entities and Changemarks cannot be copied.

4) Close the window and discard the changes.

15 How to Delete Markups

You can delete one or more selected markups by using the Delete key, or by right-clicking and selecting Delete from the menu pane. This exercise describes the first method:

1) Click the **Select Markup** Icon 
2) Select one or more markups to be deleted.
3) Press the **Delete** key to delete the selected markup entities.

16 Modify Multiple Markups Simultaneously

You can modify more than one markup at a time:

1) Select multiple markups using the previously described methods
2) Use the same methods and features to modify the markups: resize, change color, rotate, etc.
   - Some changes will affect selected entities individually; other changes will affect the group

17 How to Review Existing Markup Layers in ProjectDox

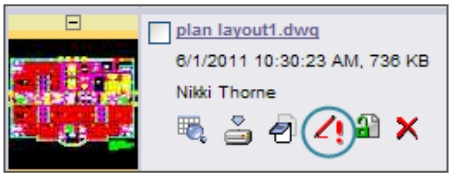
Existing markup layers can be accessed for review by using either of the following methods:

- from the file view in ProjectDox by clicking the Markup Icon, or
- in the Viewer tool by clicking 

in the Main toolbar.

To open an existing markup from the file view:

1) Click the Markups icon on the **plan layout1.dwg** file to view the markups



2) Click the **View** checkbox next to your markup(s) and click the **View/Edit button.**
3) The Viewer tool will display a navigation pane to the right listing any Changemarks on the file.
   - The **Review Changemark Navigation** pane only displays when at least one Changemark Note is applied to the file.
   - Click "Wheel Chair Access Issue".

To review an existing Markup layer from inside the ProjectDox Viewer tool:

1) Open the file from the File View in ProjectDox (click the thumbnail or filename link to open in the Viewer).
2) Click Review from the Viewer taskbar.
3) The markup layer will be displayed.
   - If Changemark Notes were applied to the file, the **Review Changemarks** Panel will display to the right of the viewing area.

18 How to Review Existing Changemarks

You or subsequent reviewers can view a list of all the Changemarks associated with an image through the Review Changemarks window. The window should automatically open to the right if Changemarks are present for the file. If the window does not auto-populate, follow steps 1-2 below.

1) Click Review to open the **Markup Open for Review** dialog.

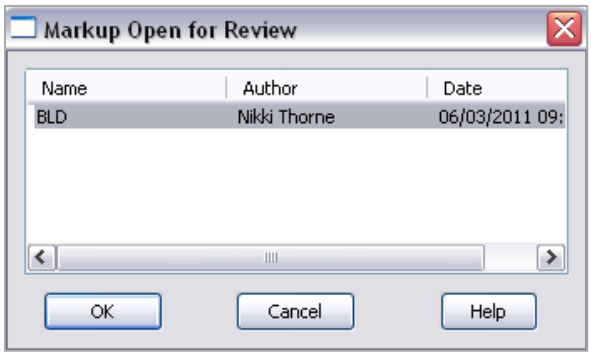


Figure 18-1. Markup Open for Review Dialog

2) Select the markup layer and click **OK** to open the Changemark and the **Review Changemarks** panel to the right of the viewing area.
   - Existing Changemarks can be reviewed by title, author, or date by clicking the appropriate tab. You can add a search filter if desired. (Click **All** to return all Changemarks to the list.)
   - Clicking the  in the **Panel** toolbar  will display the Review Changemarks panel.
3) From the resulting list, click on a Changemark that you wish to view. The Changemark's text displays in the panel's lower frame.
4) You can navigate through the Changemarks by using the **Next** and **Previous** arrow buttons  , by clicking the Changemark name in the panel, or by selecting the  drop-down and choosing appropriate selection.
   - The Changemarks entities appear in the Viewer tool at the same magnification level as when the author created them. To view the Changemark, the **Review Changemark** panel must be opened. To edit the Changemark, you must be the author, have the markup opened in edit (not review), and click the individual Changemarks you want to edit.
   - You can extract information from one or all Changemarks contained in a document through the Copy Changemarks dialog. Click  to access this dialog.
   - Any URL's added to the Changemark will show in the body of the Changemark and open a new browser window to view the destination.

19 How to Edit an Existing Markup Layer

This exercise will demonstrate how to edit a markup layer that has been previously saved and closed. A file can be edited and saved using the Save Markup icon as often as required without having to close the file. Once the file is closed, access to edit the file to edit is through the Markup Layers Panel in the file view of ProjectDox:

1) Click the Markup  icon
2) Click the “Edit” radio button and click the “View/Edit” button
3) Select the Wheel Chair Access Issue from the navigation pane
4) Click the **Select Markup**  icon to enable the feature.
5) Double click the “Wheel Chair Access Issue” Changemark Note.
6) Add the following text:

   Reference attached web link for more building code information regarding wheelchair access to public restrooms.
7) Click Ok
8) Click the **Hyperlink** icon  from the **Properties** toolbar.
9) Enter the below URL into the dialog box and click the Ok button.

   http://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-ada-standards/ada-standards/chapter-4-accessible-routes
10) Click the Save Markup  icon to save your changes.

You can add hyperlinks to any markup by using the **Select Markup** icon and clicking the **Hyperlink** icon.

20 Adding Markups

In this exercise, you will continue to practice creating markups on the plan layout1.dwg file. In this example, a door has been improperly placed and needs to be relocated. You will be adding a changemark arrow, with the result looking like Figure 20-2.

1) Open the file **plan layout1.dwg** in the Viewer tool by clicking the thumbnail image or the hyperlink in ProjectDox.

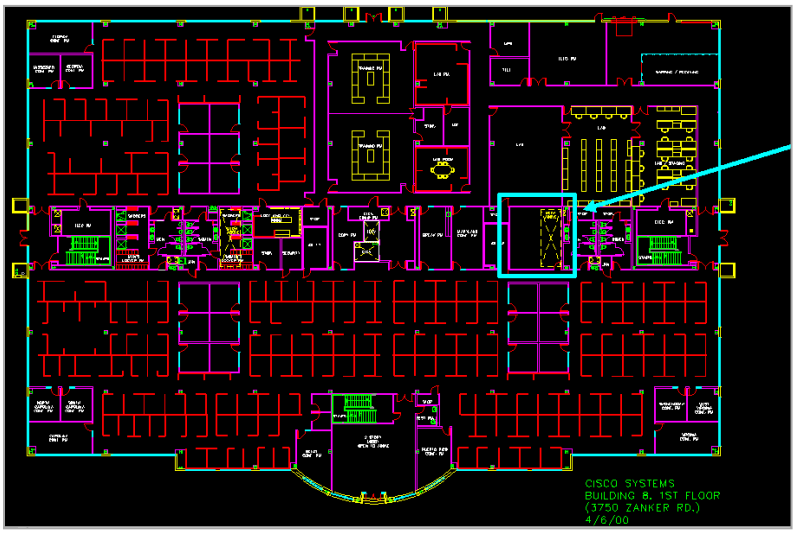


Figure 20-1. Plan Layout1.dwg Door Clearance Area

2) Use the "***Zoom Window***"  to magnify the highlighted area in blue in Figure 20-1. .

3) Click **Annotate** and then the combination **Changemark Arrow** feature from the Markup toolbar to apply a markup as seen in Figure 20-2. .

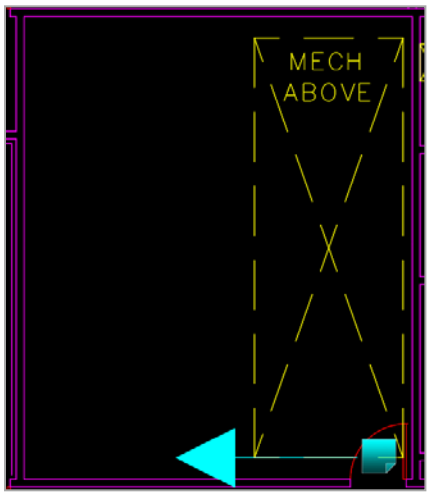


Figure 20-2. Door Clearance Changemark

4) Place the cursor at the selection point (the arrowhead is created first), left click and drag across the file to create the arrow.

- Releasing the mouse button will set the arrow and display the Changemark Note.

5) Type into the Changemark Note:
   - Title = “Door Relocation Issue”.
   - Body of Note = Check mechanical equipment above to make sure there is no conflict with the door opening into this room. Relocate the door to clear mechanical above. Resubmit drawing if changes are required.
   - Click the **Ok** button to close the Changemark.

6) To edit the arrow placement, size, color etc. click the **Select Markup** Icon  and click the arrow markup.

7) Select the color of the markup and adjust the width of the arrow lines using the **Properties** toolbar. 

   - Notice that the **Properties** toolbar selections vary depending on the tool selected.

8) Use the **Properties** toolbar to adjust the color, size of the arrow or to adjust the type of line (solid, dot, dash, dash-dot).

Any number of markups can be added to a single markup layer. You will add another issue to this file related to egress.

9) Locate the area indicated in Figure 20-3. by the yellow rectangle and arrow in the upper left corner (the Florida Conference Room).

Figure 20-3. Florida Conference Room

10) Click the **Line** tool, select the polyline tool  and trace the path from the Florida Room to the first available exit (as show in Figure 20-4.).

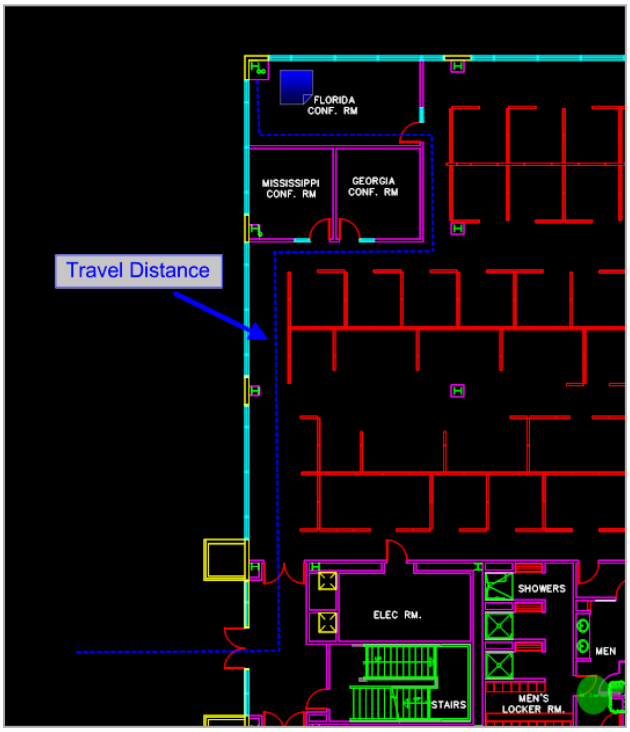


Figure 20-4. Verify Egress

11) From the **Properties** toolbar, select the dot style and the desired width for the line (Figure 20-4.) 

12) Optional. Measure the Egress route.

13) Click **Measure** drop-down, select **Settings...** and make the following selections, clicking **OK** to complete:

    a) Measuring System = English

    b) Unit = ft

    c) Precision = 0.01

14) Calibrate. This drawing has no given measurements, so you can calibrate based on the assumption that a standard doorway is 3 ft. wide. Zoom in on a doorway, and follow the same calibration steps as previously.

15) Turn off the Snap feature, by clearing the checkbox in the Properties toolbar.

16) Use the **Polyline Measurement** tool to measure the egress route you marked for the Florida conference room. When you complete the measurement, highlight the field

with the measurement, and copy to the clipboard. You can paste the measurement into the changemark you'll create in the following steps.

17) Select the Changemark icon  and drag and drop the Changemark onto the file. Add the following text:
   - Title: Verify Egress Distance
   - Body: Exits shall be so located on each story such that the maximum length of exit access travel, measured from the most remote point within a story to the entrance to an exit along the natural and unobstructed path of egress travel, shall not exceed the distances given in Table 1016.1.
   - Optional: Include a sentence stating that "The egress route shown in the markup is" and paste contents of the clipboard.

18) Click the **Save Markup**  icon.
   - The markup layer should retain the original naming convention provided. If prompted to enter a new markup name when closing the file you have not properly edited the existing markup layer.

19) Exit the drawing file by clicking the **R*ed X***  in the upper right corner.

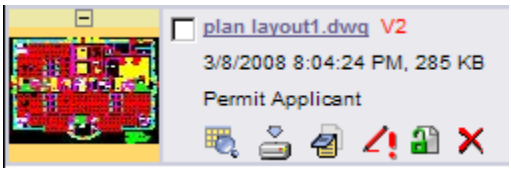
21 How to Compare File Versions

ProjectDox allows you to perform a graphical comparison of two file versions or two files in the same folder using the Compare tool. The ***Compare toolbar*** appears at bottom of viewing window.

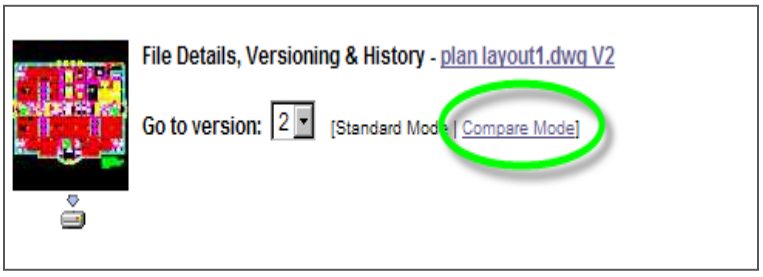
The toolbar contains several controls for different viewing options. The number of controls displayed may vary with the option chosen. In this exercise, you will upload another version of the **plan layout1.dwg** file and perform a compare of the two versions.

If the instructor has already uploaded the newer version of the file, then skip to step 7 of the following procedure.

1) Navigate to the instructors folder/project and download the latest (revised) version of the **plan layout1.dwg** saving it to your desktop
2) Navigate to your project/folder where the current **plan layout1.dwg v1** resides
3) Click the **Upload** button
4) Browse to the desktop and select **plan layout1.dwg**
5) Click the **Upload Now** button
6) Notice that the file is selected as a candidate for versioning (the project must have versioning enabled) as indicated by the blue highlight. Once published, the file will show as v2.



7) Select the **History** icon for the **plan layout1.dwg v2** file.
8) Select Compare Mode



9) Select *Version 1* and *Version 2* checkboxes and click the **Compare** button.
10) The selected files will display in ***Side-by-Side*** view as in Figure 21-1.

Figure 21-1. Plan Layout1.dwg Versions Side-by-side Comparison

11) Use the **Compare** toolbar to view the file in the following modes:
    a) Overlay
    b) Overlay Compare and use of Transparency Slider
    c) Side by Side
    d) Additions – indicated in green
    e) Deletions – indicated in red
    f) Unchanged – indicated by gray

22 How to Compare Markup File Versions

The compare file version opens overlaid on the open file. The open file displays in red (deleted geometry), and the compare file displays in green (added geometry). Geometry that has not changed (common between both revisions) is gray. Use the Transparency slider to change transparency for clearer visibility of the file differences - right to dim red (deleted) and left to dim (added) green areas.

1) Using the same files as above select from the **Compare** toolbar: **Open File (only)**
2) This will open the earlier version of the two selected files (Version 1).
    - In **Side- by- Side** mode the file to the left is always the earlier of the two versions being compared.

3) Click Review and select a markup layer from the M**arkup Open for Review** dialog.
4) The ***Changemark Review Window*** will appear to the right, if not already present. Click "*Wheel Chair Access Issue"*.
   - If the Changemark was created while zoomed in on the area of the file the magnification will remain intact while being reviewed.
5) Click **Side-by-Side** .
   - Any area of the files can be compared using this feature.
6) From the **Compare** Toolbar, click **Overlay Differences** . Use the Transparency Slider to view the original markup and deletions versus additions to the file.

Note that requested changes have been made - along with another change not requested by the reviewers: the wall on the far right of the plan was relocated.

23 How to Compare Text Files

1) Select the History icon for the **Plan Review Tenant Build Out.v2** file.
2) Select Compare Mode
3) Select *Version 1* and *Version 2* checkboxes and click **Compare**.

4) Select **Text Mode**  . The display will be similar to Figure 23-1.

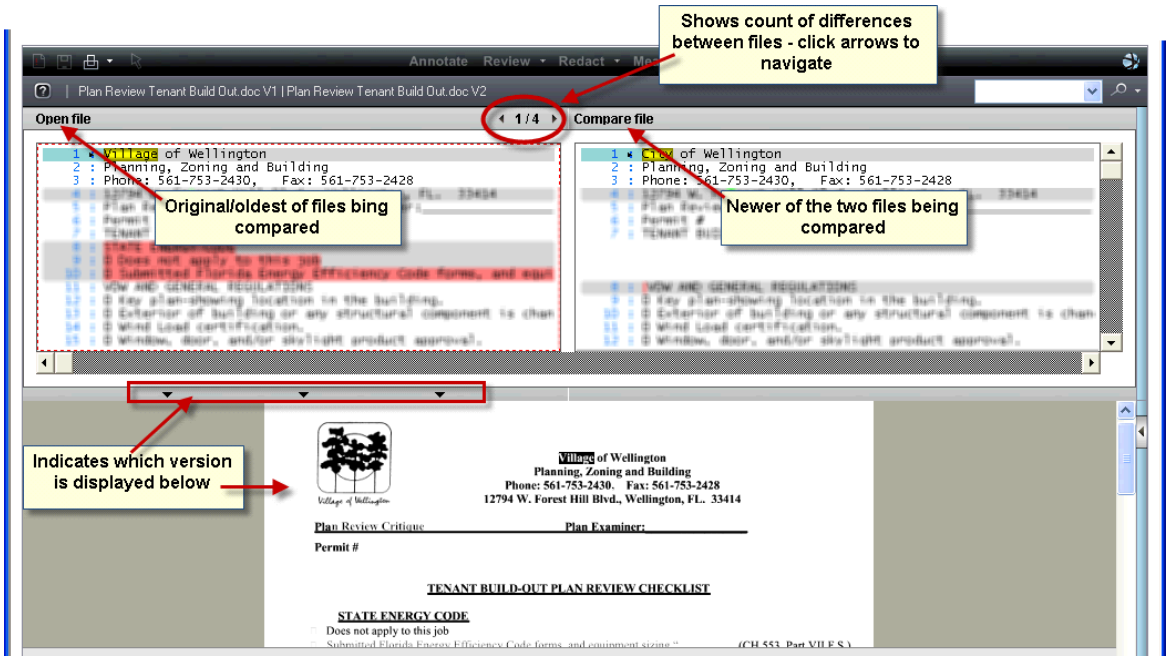


Figure 23-1. Text Compare Tool

- Differences will be displayed as:
  - Yellow = change in text between the two documents
  - Red = deletion made from the open document
  - Green = addition made to the compare document
  - No changes between the documents will display a message
- Clicking in the open or compare mode windows changes the view of the file displayed to that selection.
- The tool may automatically insert blank lines to keep the lines in the same relative vicinity. The lines are inserted only for ease of comparison when viewing in the tool – no lines are actually added to the file.

24 How to Compare Separate Files

ProjectDox allows for the selection of two file versions with different names in the thumbnails list to be opened and compared. This can be done with single or multi-page files.

The Viewer tool does not allow two pages of the same multi-page file to be compared against each other. Comparing pages from a multi-page file would require another set of drawing files to be uploaded under a different name.

Below, you will compare two PDF files and use the various tools available in Compare Mode.

1) Select the **0406 A-2.1.4a.pdf** and **0406 A-2.1.4.pdf** from the thumbnail list and select the **Compare** icon.
2) ProjectDox launches in **Compare mode**, with **Side by Side** as the default view.
3) Experiment with the other features in the **Compare** toolbar including **Overlay, Overlay Compare, Additions, Deletions** and **Unchanged** to see their effect on the files.

25 How to Add an Image Stamp

Use this markup tool to insert external raster images (JPG or PNG) into your current markup layer. Once selected, images can be resized and positioned where you want them. The feature will retain a default location of your image stamp and retain the last 10 images used.

1) Download from the main training folder the file **final.jpg** and save to your desktop.
2) Navigate to your folder/project and select the **plan layout1.dwg v2** from the folder view.
3) Select 

4) Select the **Image** icon 
5) Upon selection one of two actions may take place:
   a) If you have configured your profile with an image file (.png, .jpg) located on your PC, ProjectDox will show this image file as a default in the gray bar (**final.png**) in Figure 25-1..

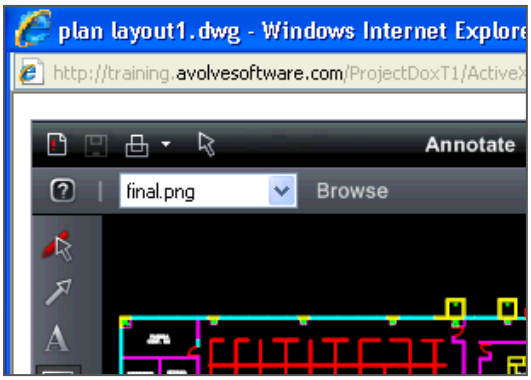


Figure 25-1. Default Image File Selection

b) If the profile has not been configured, a **Select Image File** dialog will display for you to navigate your PC or a shared drive to select an image file to be used. Browse to the desktop, select the **final.png** file and click **Open**.

6) Place the raster image on the bottom left of the drawing as seen in Figure 25-2.. You can set the raster image by one of the following methods:

a) In the **Viewer**, left-click to set the first corner point of the image, drag the mouse to where you want to set the second point, and release.

b) In the **Viewer**, left-click on the point where you want to center the raster image. The image is inserted into the document matching your orientation and is calculated to its natural size, relative to the document or drawing size.

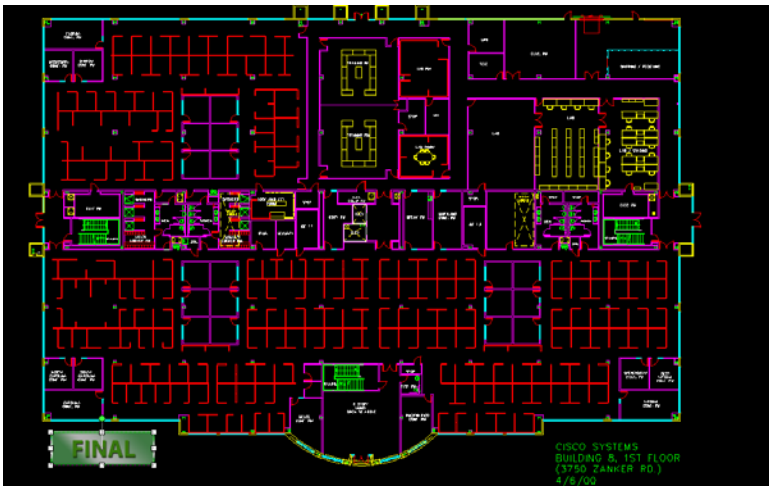


Figure 25-2. Image Stamp Placed

7) Save the markup by clicking **Save Markup** and adding *"your department name" and APP (BLD APP)*.

26 Placekeepers

Placekeepers provide a simple way to temporarily save and traverse a list of view states. They are session based place markers and do not persist from session to session.

The three **Placekeepers** commands can be accessed from the Marks-> command of the right mouse button menu.

- **Add Placekeeper** - This command saves the current view state to the end of the list of saved Placekeepers . A new Placekeeper can be set whenever there is a change in zoom level, rotation, page number, or compare view mode. (A new Placekeepers cannot be added for a pan location change.) A maximum of 1000 Placekeepers can be added. You can use the hotkey <Ctrl> + <K> to add a Placekeeper of the current view state.
- **Go To Placekeepers** - This command toggles through the list of saved Placekeepers . You can also use the hotkey ,Ctrl> + <Alt> + <K> to navigate through the Placekeepers .
- **Remove Added Placekeepers** - This command clears the list of saved Placekeepers . Placekeepers only exist during the viewing of a single file. When the file is closed, all saved Placekeepers are cleared. Currently, Placekeepers lists cannot be persisted in Brava! Enterprise .

27 How to Use Measurement Count Takeoffs

Measure takeoff allows users to make multiple measurements or counts on a document, save them to a markup layer and/or export to a file. This can be useful when working with drawing files, and you need to estimate totals of needed categories such as total area of carpet, total area of tile. It can also be used to total the number of smoke detectors. When the Takeoff feature is enabled, the Measurement Panel will display to the right of the viewing area and display the created categories and totals.

This exercise will introduce how to create takeoff categories, and how to use the feature in conjunction with the measurement count feature.

1) Open the file **FP-1.dwg** for viewing.
2) From the 

drop-down, select **Takeoff**. The **ProjectDox Task** pane displays the **Measure Takeoff** panel. and
3) In the Measure Takeoff panel (on the right), click **New** to add a category.
4) The Takeoff Category dialog displays (), and the **Measure Takeoff** toolbar displays on the left side of the Viewer window.

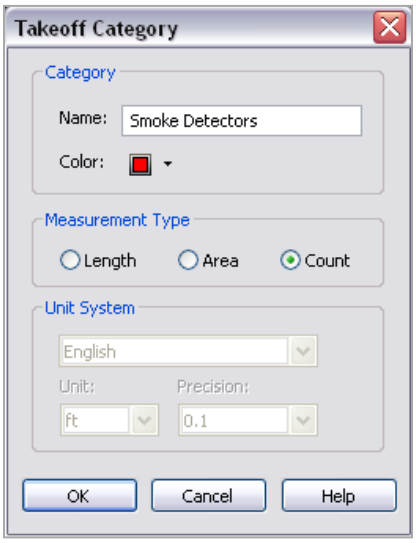


Figure 27-1. Takeoff Category Dialog

- A category is used to group together multiple measurements of the same type.

5) In the Category section, type “Smoke Detectors”
   a) Select Red for the color
   b) Measurement Type = Count

It is critical to select the correct measurement type at the time you create a category: that setting cannot be changed after creation.

   c) Click OK
6) Create another category called “Duct Detectors”
   a) Select Yellow for the color
   b) Measurement Type = Count
   c) Click OK.
7) Click “Smoke Detectors” from the Category Panel.
8) Click the **Measure Count** icon 
9) Click the mouse next to each smoke detector until all smoke detectors are found.
10) Click the “Duct Detectors” category from the Category Panel.
11) Click the mouse next to each duct detector until all duct detectors are found.

Note that the smoke detectors show as red checkmarks and the duct detectors in yellow, as configured in the categories.

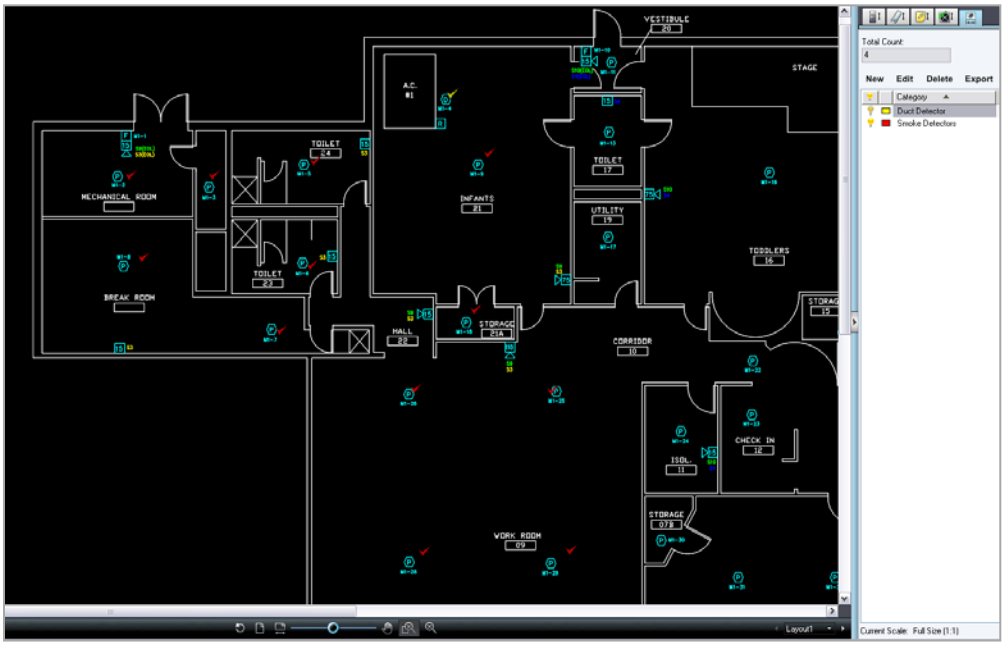


Figure 27-2. FP-1.dwg with Categories

This exercise assumes that the plan requires additional smoke detectors to be compliant. In the next steps, you will add a Changemark and save the takeoffs to a markup layer.

12) Click **Annotate** to open the **Markup** toolbar. From the **Changemark** menu, select **Changemark Note** .

13) Drag the **Changemark Note** onto the file next to one of the check smoke detectors and release.

14) Enter a title and description similar to the below for the **Changemark Note** dialog.
    a) Title = Additional Smoke Detectors
    b) Body= Building code requires 5 additional smoke detectors to be located on the plan.
    c) Click **OK**
    d) Click Save Markup.

28 How to Use Measure Takeoffs

This exercise demonstrates how to use the takeoffs to accumulate totals and create a markup layer with those totals. It will also demonstrate the use of the "Show Leader" feature, which automatically displays an area measurement in the Viewer, and the use of negative area measurement.

1) Open a drawing file for which you would like to accumulate measurements. The file **FP-1.dwg** from the previous exercise is a good candidate.
2) Using the **Measure** menu, select **Settings...** and make the following selections, clicking **OK** to complete:
3) Measuring System = English
4) Unit = ft
5) Precision = 0.01
6) Calibrate. This drawing has no given measurements, so you can calibrate based on the assumption that a standard doorway is 3 ft. wide. Zoom in on a doorway, and follow the same calibration steps as previously.
7) From the 

drop-down, select **Takeoff**. The ProjectDox Task Pane displays the Measure Takeoff Panel and the measure **Takeoff** toolbar displays on the left side of the Viewer window.
8) In the **Takeoff panel**, click **New** to create a new category.

It is critical to select the correct measurement type at the time you create a category: that setting cannot be changed after creation.

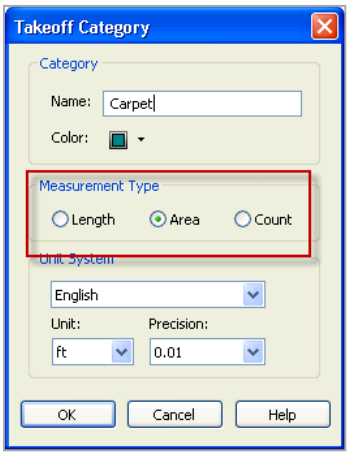


Figure 28-1. Takeoff Category – Measurement Types

a) Type “Carpet” for the category name
b) Select a color
c) Use ***Area*** for the Measurement type
d) Verify Unit System Settings.
e) Click **OK**

9) Choose two rooms to measure for Carpet, one of them being the Toddler’s room.

10) To place your measurements, select the category **Carpet**.

- The appropriate measurement tools become available in the measurement takeoff toolbar, allowing you to place one or multiple entities.
- The measurement information for each entity you create is added to the currently selected category results.
- The accumulated results display at the top of the panel.
- The entities on the drawing will be color coded according to which category they belong to.

11) Select the **Show Leader** checkbox to add a text box (with category color border) to each individual measurement result on the entities you place. You can move the position of the text box as follows:

a) Click **Select Markup** 
b) Click the entity, then pressing on the text box and dragging it to a new location.
c) Release the mouse button to set the new text box location.

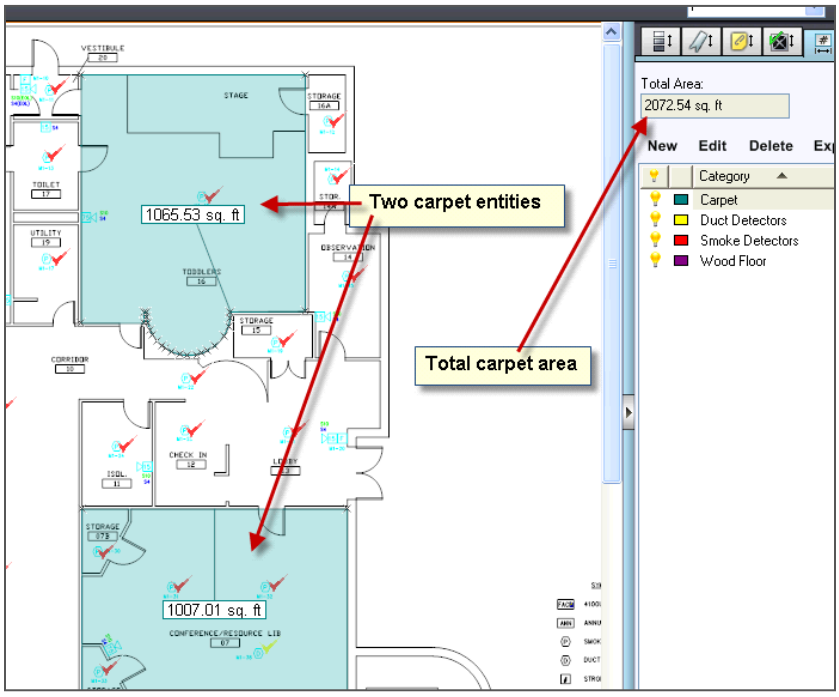
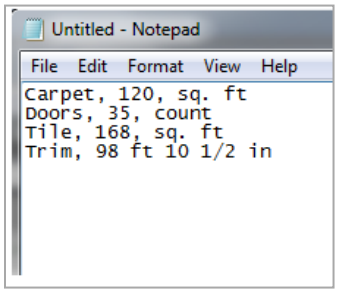


Figure 28-2. Categories, Takeoffs, and Leaders

12) Once you have defined your categories and placed all your measurements, you can **Export** the results to the Clipboard (for cut and paste into other applications, such as Excel), or export to a CSV file and save it on your computer.



28.1 Negative Area

Selecting this checkbox allows a negative entity to be applied to a category. As long as the check box is selected, any entity you place on the drawing will subtract from the accumulated results for that category. The measurement entities text box displays a negative number if Show Leader is selected. A Negative area is typically drawn inside a larger positive area to exclude a certain section from the total.

NOTE: If an entity is active (selected) at the time you select the **Negative Area** checkbox that entity's measurement will convert to negative.

In this exercise, you will subtract the stage floor area from the total area of the Toddler's room, following the steps in Figure 28-3..

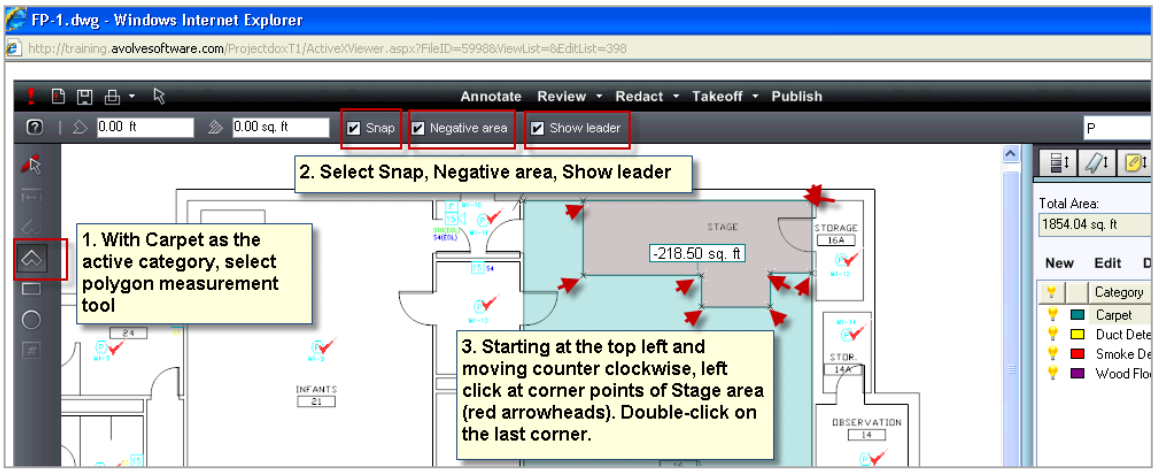


Figure 28-3. Negative Area Measurement

The result will be a negative number in the leader for the Stage measurement, and a corresponding reduction in the Total Area for the category Carpet. (Your numbers probably will be different than the example, but the "math" should work.

No intelligence is applied to decide if a negative area is logical (overlaps another "positive" area takeoff). If you choose to designate an area as negative, its value is subtracted from the cumulative total.

28.2 How to Delete a Measurement

1) Click the **Measure Select** button.
2) Click on the entity you wish to delete, and press <Delete> on your keyboard.
3) The measurement value for that entity is subtracted from the accumulated results.
4) Several entities can be selected at once by holding down the <Ctrl> key while clicking on the individual entities you wish to delete.

28.3 How to Resize a Measurement

1) Click **Select Markup** 

2) Select the measurement on the file, resize handles appear on the entity that can be clicked and dragged to a new location.
3) You cannot move the entity, but you can reshape if needed.
4) Close the file. As with any markup layer, when you close the file you will be asked if you want to save the current markup layer.
   - If you select Yes, the category list, along with all of the current measurement entities, will be saved and can be opened for edit or review.

29 How to Use the Strikeout Feature

This tool can only be used on text documents and files that have indexed text information – otherwise the tool will be disabled.

1) Select Plan Review Tenant Build Out.doc from the folder view.
2) From the **Viewer** taskbar, select **Annotate**.
3) From the **Markup** toolbar, select the **Strikeout** Icon  .
4) Click, drag, and release the mouse to highlight the desired area to strikeout as seen in Figure 29-1..

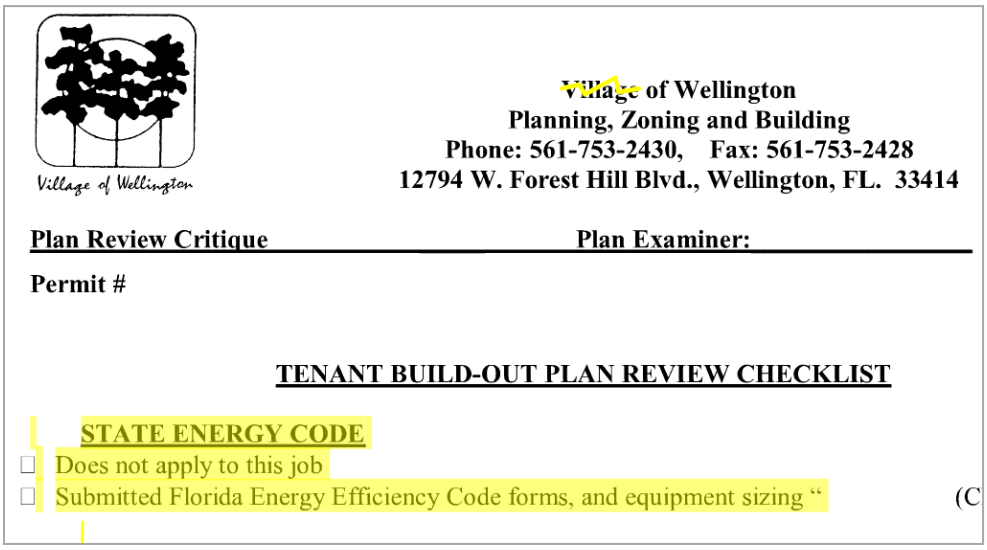


Figure 29-1. Strikeout Feature

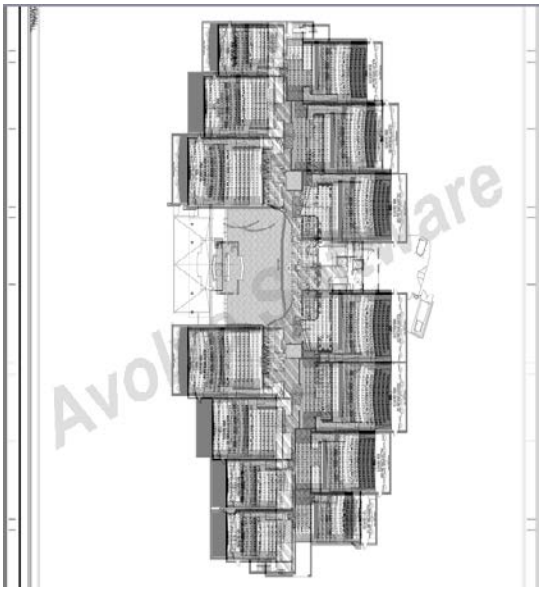
5) Releasing the mouse button will show the strikeout over the text.
6) Save the Markup as "your department name" (BLD).
7) Close the file using the **Red X**  .

8) Optional. Open the file **plan layout1.dwg**, and experiment with the strikeout tool's behavior in a drawing file.

30 How to Set Alignment Points

The ***Set Alignment Point tool*** assists you with comparing two versions of a file that are of different scales, different world page sizes, or even two completely different files (for example when a major version of a file has multiple sections saved as separate files). The alignment tool allows you to define a single identical location on each file that is used as a common alignment section when the two files are overlaid.

1) Select the files **A-11.01 1-15-07.TIF** and **A-11.02 1-15-07.TIF** and click the *Compare* button. The resulting misalignment will resemble the screen shots in Figure 30-1..



These are examples of the above files in overlay. Notice that the edges of the two building are not perfectly aligned. The cause in this case is the difference in the scales used to create the two drawings. The problem can also occur when comparing two different file types such as TIFF and PDF etc.

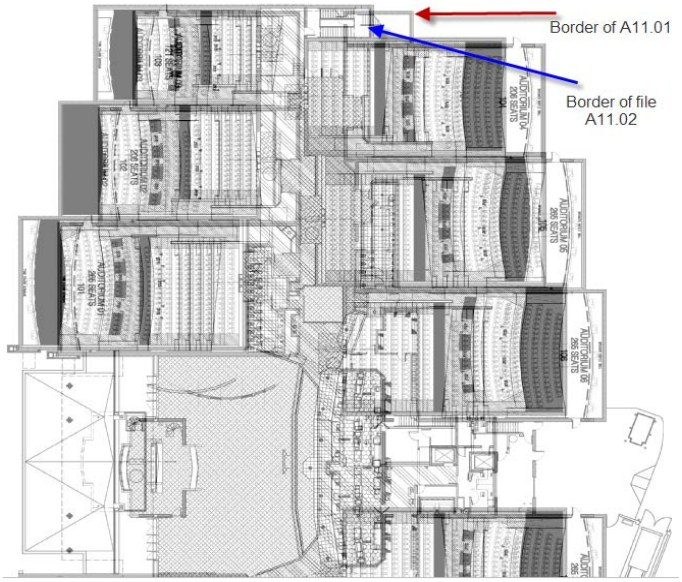


Figure 30-1. Screen Shots of Misaligned Files

2) Select ***Open File (Only)*** from the **Compare** Toolbar to view the first file you opened. By default, the Open File (Only) feature opens the earlier version.

3) Use the ***Zoom Window*** tool to select and magnify the area of Figure 30-2. that includes Point 1 and Point 2.

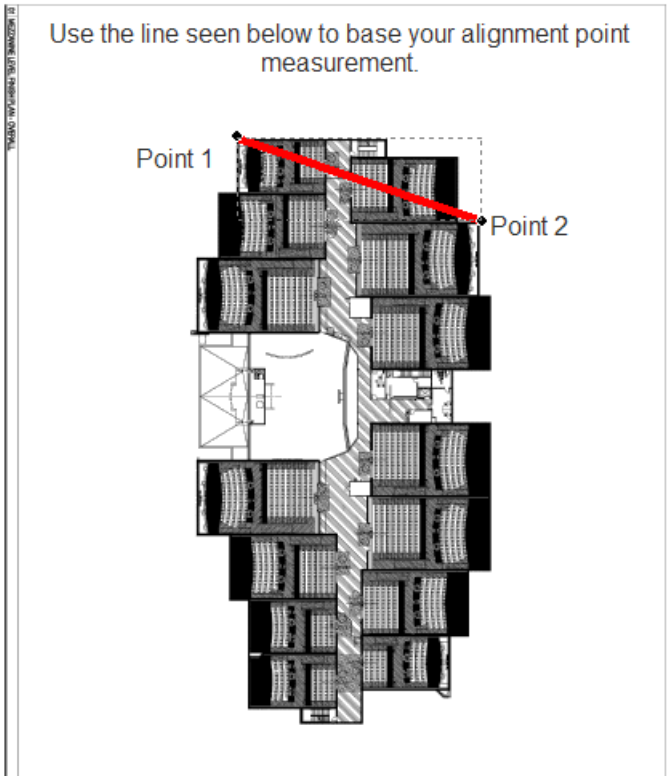


Figure 30-2. Setting Alignment Points

NOTE: When using the alignment feature, it is better to use **diagonal** points, rather than straight points, for alignment. When diagonal points are used, if the file has been shifted, it will self-repair.

4) Click on the ***Set Alignment Points*** button.

- The cursor changes to a measurement selection tool, and will allow you to precisely select two picking points on the image.
- Left click on the start point, and hold down the left mouse button down to magnify the point of contact for the image. You can move the point while the button is down. This assists with placement of the alignment point, as seen in Figure 30-3.

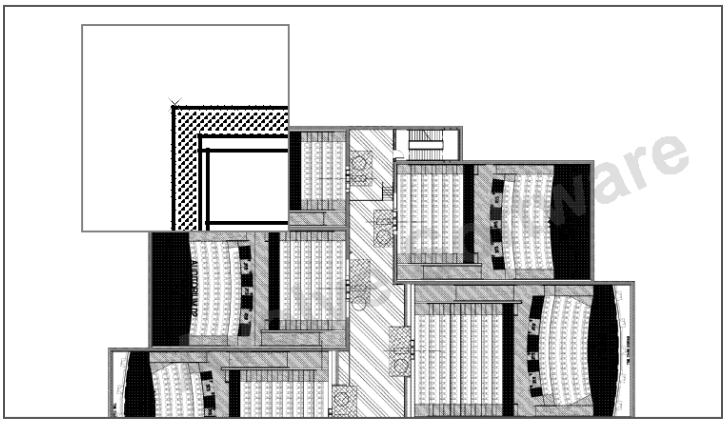


Figure 30-3. Set Alignment Tool (with magnification)

5) Release the left mouse button to set the first point.
6) Move the mouse across the top of the document (a blue line will display) and left click to select the end point (again holding down the left mouse button to magnify the point of contact for the image).
7) Release the left mouse button to set the remaining point.

You have set the alignment points on the first file.

8) From the **Compare** toolbar select **Compare File (Only)** to view the second document you opened for comparison.
9) Select the exact same points of the section that you chose to use in the first document.
10) After setting the second point, the *Clear Alignment Points* icon  will display in the **Compare** Toolbar.
11) Select the ***Overlay*** option
    - If you select any of the compare features from the drop down list (Overlay, for example), the points placed in the first file are pinned to the points placed in the second file. When alignment is active, both documents display at exactly the same scale (see Figure 30-4.)

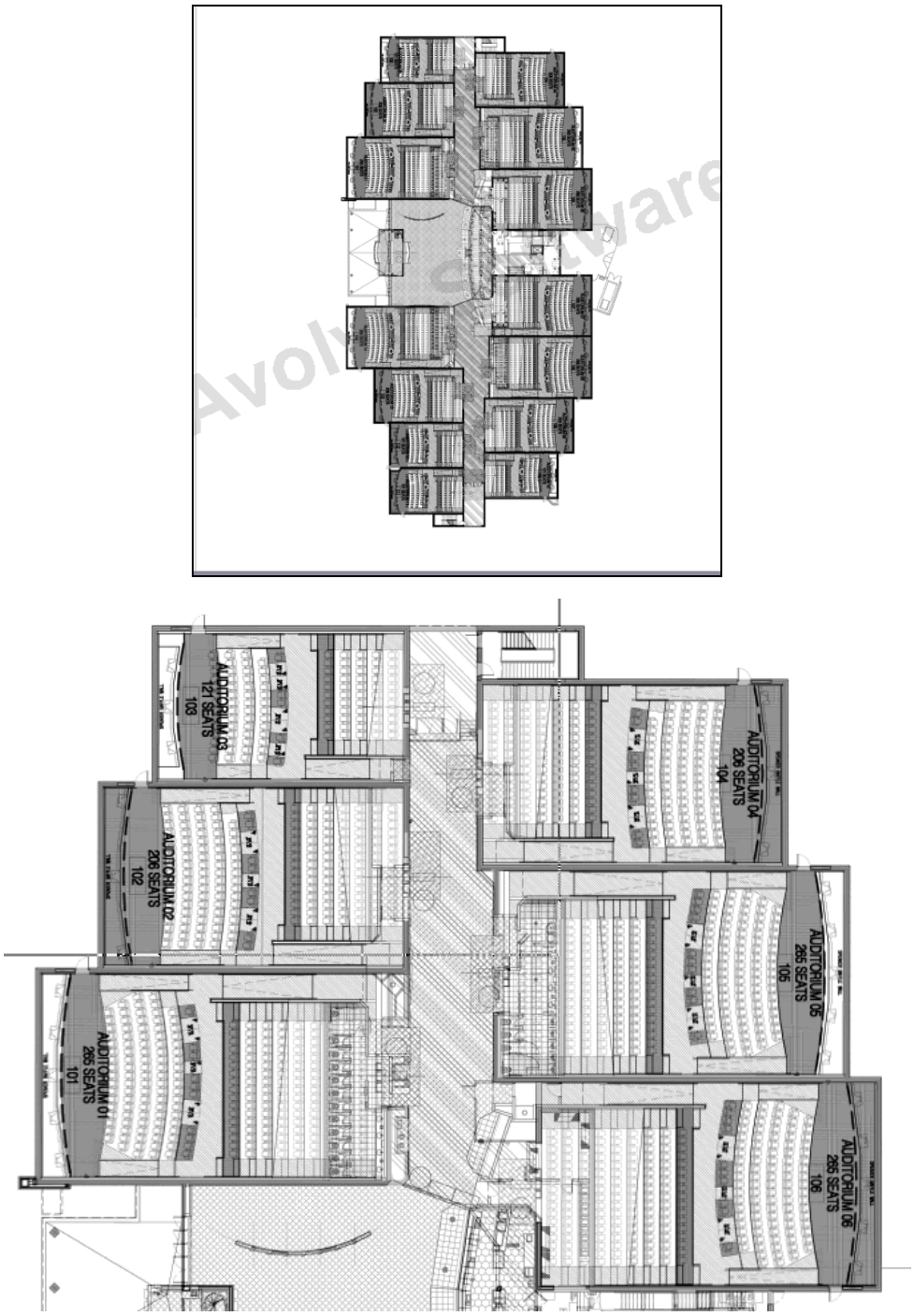


Figure 30-4. Example Result of Set Alignment Points

12) Once the alignment points have been configured, you can click ***Clear Alignment Points***  at any time to remove your alignment points.

NOTE: It is important to set the alignment points on both files in the same order left-to-right or right-to-left - otherwise the files will not align properly. One symptom is the appearance of being flipped over, or upside-down. If this happens, clear the alignment points, and repeat the procedure for setting alignment points, taking care to follow the instruction in the first sentence of this note.

31 How to Use the Nudge Feature

This feature is especially useful for comparing two TIFF images that contain the same text but have different line spacing.

1) From the **Compare** toolbar, select **Overlay**.

You can use either of two methods to nudge the compare file and thus align the files more precisely.

2) Select the Nudge Alignment icon  to nudge the file by a single increment, OR
3) Use the HOT KEYS to move several increments at a time.
   - CTRL + Left arrow = nudge position left
   - CTRL + Right arrow = nudge position right
   - CTRL + Up arrow = nudge position up
   - CTRL + Down arrow = nudge position down

32 How to Extract Changemarks

From the Changemarks Panel, you can access the Copy Changemarks dialog to copy the selected Changemark, or all Changemark information contained in a document to the Clipboard. This function captures the Changemark title, comment (text description), attached hyperlink (as text), and image (WMF bits) to the Clipboard. The resulting RTF stream may include both a textual and visual summary of the Changemarks, and can be pasted into another application, such as Microsoft Word.

1) Select the file **plan layout1.dwg v1**
2) Click the **History** Icon

3) In the resulting window, select *version 1* from the dropdown

4) Click the **Markups** Icon select to **View** all Markups and click the **View/Edit** button.

5) From the *Changemarks Panel*, click the Copy Changemarks icon.

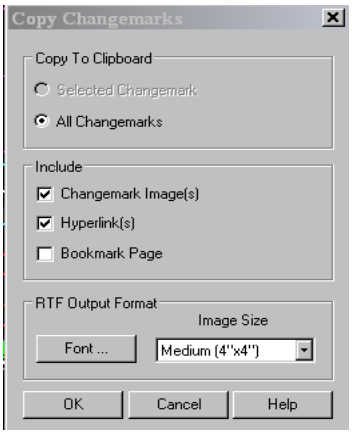


Figure 32-1. Copy Changemarks Dialog

6) In the ***Copy Changemarks*** dialog, select:
- All Changemarks
- Changemark Image(s)
- Hyperlink(s)
- Font: Medium 4x4

7) Click **Ok**

8) The captured information is now ready to be pasted into Microsoft Word. Open a blank Word document, right-click in the document and select **Paste**. Figure 32-2. shows an example of the result.

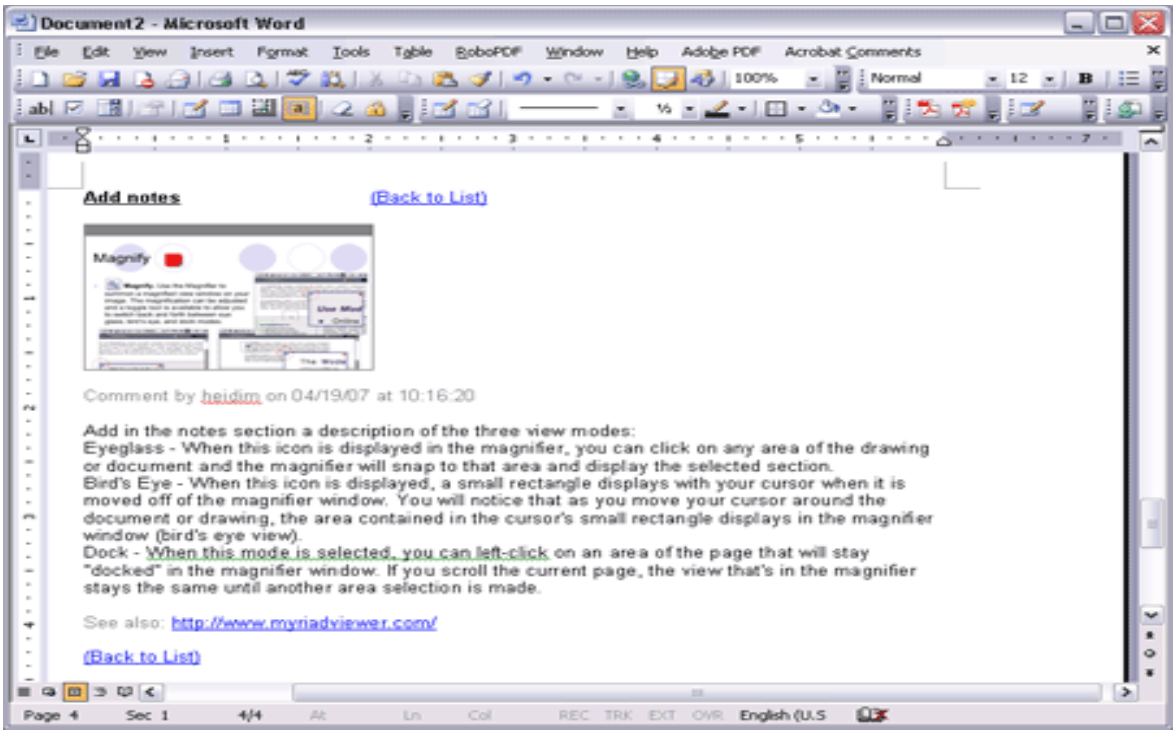


Figure 32-2. Changemark Information Pasted into Word

33 How to Publish Markups

You can publish markups from any file format, and output to TIFF or PDF format. This means that when the publishing action completes, the markups (as well as the currently set banners and watermarks) are included in the output file.

1) Click **View History** for the **plan layout1.dwg v2** file from the ProjectDox folder view.
2) From the **Go to version** dropdown select "1"; then click the View Markups icon as shown in Figure 33-1.

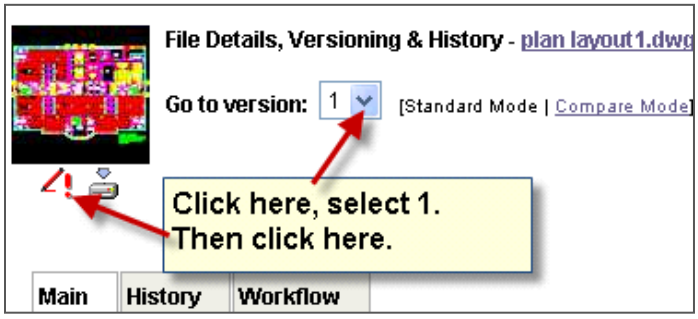


Figure 33-1. Selecting Version and Markups from History

3) Click the **View** checkbox for the markup you saved previously and click **View/Edit**.
4) The drawing with markups will display in the Viewer.
5) Click Publish and select **Publish to PDF**.
6) The **PDF Publish Options** dialog will display allowing selection of features for the published file.

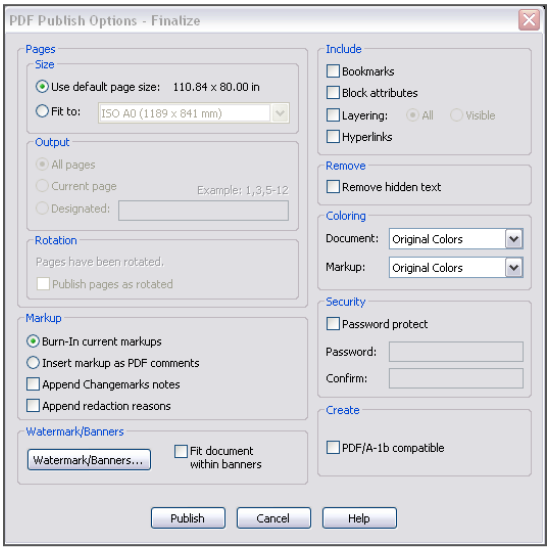


Figure 33-2. PDF Publish Options

7) Select **Burn-in Current Markups** and click **Publish**.
8) In the **Publish Option** dialog click **Save to File** and **OK**.
9) In the **Save PDF** dialog box, navigate to the desktop and click **Save**.
10) Close the window displaying the markup, using the ***Red X*** .
    - When a user opens a file that has been published with markups, both the markups and document are automatically visible. The user can view the text associated with a changemark by hovering over it with with the mouse.
11) As needed, close the dialogs for selecting markups to view/edit, and file history.
12) Open the PDF file from the desktop to see the markups. An example is shown in Figure 33-3..

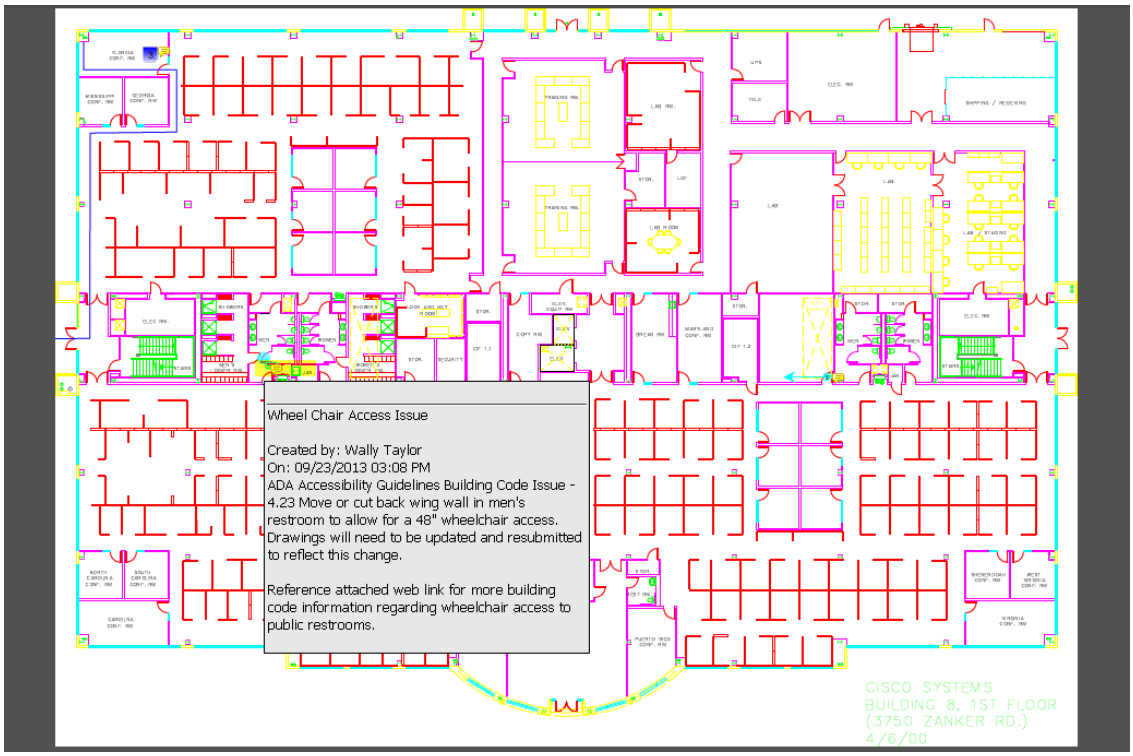


Figure 33-3. Markups Published as PDF

34 How to Print a File

If allowed by your administrator, you can access the Print menu. To print the open image with the default printer settings, click  (hotkey + < P>).The Print dialog box contains standard print options, such as choosing a printer, giving a range of pages to print, etc. You can also select to print to scale options, view Print Preview, and set Banner and Watermark options. An option is available to print Changemarks information as an appended page.

1) If **Print Region** is selected from the **Print** menu, press the mouse on a starting point of the Viewer Tool and draw a rectangle on the area of the document that you would like to print. The Print dialog appears when you release the mouse. Click  on the toolbar and select **Print** from the submenu**.** The application will pull in your system's default printer.
2) Click the **Print Changemark Information** checkbox
3) Select the **Automatically Rotate for Best Fit** checkbox if you want ProjectDox to determine if rotating the image by 90 degrees will allow more of the image to fit on the printed page.

- Some older printers, and the PDF Distiller and Writer, may not properly invert print outs - and many file types print reversed (black background and white foreground). To correct the print out (white background with black foreground); enable the **Optimize for PDF/PostScript Printing** option in the Print Options dialog. When selected, this causes a bitmap of the current image to be sent to the printer, resulting in accurate print outs from the problematic printer or print driver. Note that enabling this option results in a slower print time and a larger print spool file. This option is persistent per printer.

4) Observe the **Print Preview** area of the Print dialog, to verify the area you wish to print is contained in the printable area of the page (indicated by the dashed blue line).
   - If the print preview image does not display what you expect, study the textual output in the print preview panel. It displays the image's dimensions, the current scaling (e.g. "Fit to page," "1/50," etc.), the scaled output size (the image's dimensions multiplied by the scaling), the paper size dimensions, and the printable area size. Pay particular attention to the scaled output size compared to the printable area size; these are depicted, respectively, as the red and blue dashed lines in the preview image. Adjust the paper size (**Printer Setup** button) or scaling (**Scale** tab) as necessary to obtain the desired output.
5) Click **Print** to print the file if your computer has access to a printer.

35 How to Add and Edit Watermarks/Banners

You can add, edit, or clear print banners or the watermark if they have not already been defined by the ProjectDox Administrator. Banners are strings of information (date, time, page number, user name, etc.) assigned to a location on the document header and footer. A watermark is a semi-transparent character string that stretches from the lower left corner to the upper right corner of the printed or on screen document. These settings are useful for displaying a document's classification to the Viewer Tool (e.g., proprietary, draft, etc.). In this exercise, you will add both a banner and watermark to the plan layout1.dwg file.

1) Click  and select **Banners/Watermarks** (the button is also available from the Print Dialog).
2) Click to expand **Watermark**
3) Click on <blank> located below the **Watermark** heading and type “DRAFT” into the space.
   - Click **Font** to change the font by selecting a font name, style and size from the Font dialog box.

Note: Any change in font style and name selection will be applied to all defined watermark and banner settings for the current document (you cannot define multiple fonts or styles per document). The Watermark font size is not affected by your font size selection. The Screen Banner is not affected by any Font setting.

4) Click **Ok**
5) Click **Print** 
6) Notice the Print Preview Area
7) Click **Watermark/Banners...**
8) Expand the **Screen Watermark** and type "DRAFT II" over the <blank> area.
   - These settings are useful for displaying a document's classification to the Viewer Tool (e.g., proprietary, draft, etc.) and the values can differ from the values entered in the Watermark and banner location lines.
   - The On screen banner fonts are not affected by choices made in the Font dialog box.
9) Click **Ok**.
10) The screen now shows "DRAFT II" and the printable document displays "DRAFT". You may need to move the dialog box to the side to see the watermark, which may also be very faint.
11) Click **Watermark/Banners...**
12) Select the **Screen Banner** and type *%*.
    - Typing % into the field will result in a list of system tags that can be used to display information in the banner, watermark, etc.
    - Selecting an item from the list will automatically include the preceding %
13) Click **Date.**
14) Click **Apply** and note the banner added to the file in the Print Preview Area.
15) Click **Top Left and** type *%Date, %Login, and %TotalPages* into three separate fields under this heading.
16) Click **Ok.**
17) Click **Print**  .If your computer has access to a printer you can click **Print** to print a hard copy - or you can look in the Print Preview can see text in the corner.

18) The result is seen in Figure 35-1. in a banner on the top left, where the variables are replaced with values from the system.

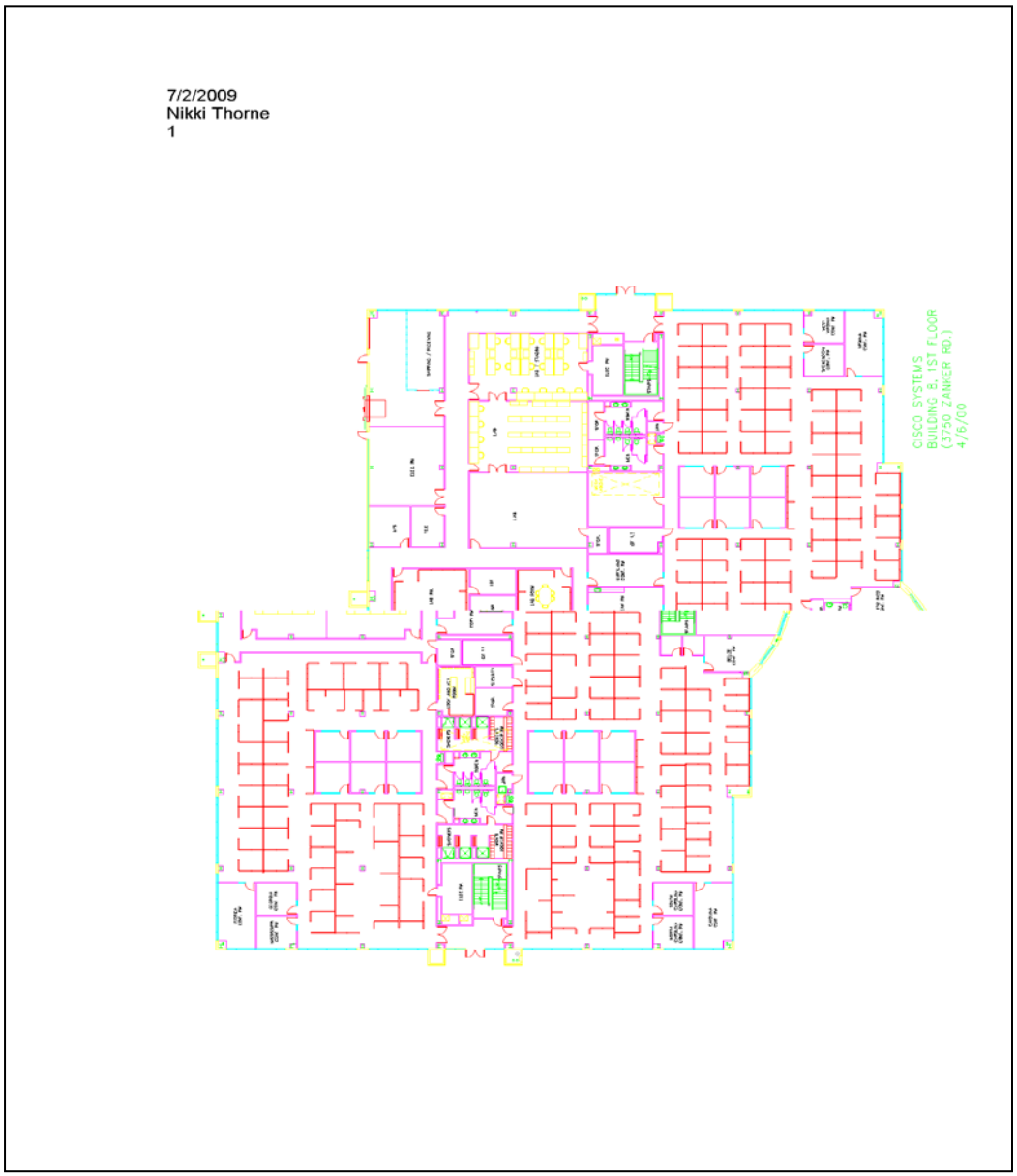


Figure 35-1. Print Example with Banners

36 Toolbars

The following guide provides an overview of additional controls available in the viewer application.

37 Viewer Task Bar

This toolbar, located at the top of the Viewer, contains icons for executing markup commands, saving markups, printing pages and regions, object selection, and the Functions menu.

	**Markup.** Access commands regarding markup files, such as creating a new markup file, opening a markup file for edit or review, saving a markup file, consolidating markups, as well as accessing a stamp template submenu.
	**Save Markup** – Available when a markup is open for edit, use this button as a quick way to save the current markup file to the markup directory.
	**Print.** Accesses the Print menu. The **Print** dialog box contains standard print options, such as choosing a printer, giving a range of pages to print, etc. You can also select to print to scale options, view Print Preview, and set Banner and Watermark options. An option is available to print Changemarks information and/or redaction reasons as an appended page. If **Print Region** is selected from the Print menu, press the mouse on a starting point of the viewer and draw a rectangle on the area of the document that you would like to print. The Print dialog appears when you release the mouse.
	**Select.** Use the Select tool to select text in a document to copy (if allowed), select an intelligent object, and to activate Changemarks.
	**Download**. If allowed by your administrator, you can download the current (original) document to your local machine and open it in its native environment. Used in Net-It Central installations only.
	**Find.** You can search the text on documents and images with the search tool. Wildcards, macros, and regular expression search strings are accepted. You can search up, down, find whole word, match case, and turn on term-hit highlighting.

38 Functions Menu

39 Markup Toolbar

The Markup toolbar contains tools for adding markup entities and Changemarks (annotations) to the current file. The Markup toolbar is displayed on the left side of the viewer when you either:

- Click 

from the functions menu.

- Click  and select **New**.

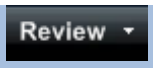
Additional markup tools are available by clicking on any arrow that exists to the right of the currently displayed tool.

	**Select Markup.** Use to select and edit markup attributes, resize, reshape, rotate, copy, or move entity.
	**Arrow Pointer.** Use to add arrows to your images. The arrow head is set at the first selection point.
	**Text.** Use the Text tool to insert text directly on the image (rather than in a note). Use the Markup Properties tools to change the font name, size, etc.
	**Changemarks.** The Changemarks tool allows markup authors to type or copy/paste in detailed text in a scrolling window. Authors can also add hyperlinks to point the user to additional information. Reviewers simply need to double-click on the markup entity while in select mode  to review the text, or automatically scroll through each Changemarks contained in the Changemarks list by clicking a Next button. See Also "Changemarks Panel". **Changemarks combination tools:** These tools are available purely for convenience. With one single click, you can add a Changemarks combined with a *Highlight*  , *Text Highlight*  , *Cloud*  , or *Arrow*  . Once added, the two entities behave totally independent of each other.
	**Insert Image.** Use this markup tool to insert external raster images (JPG, BMP, or PNG) into your current markup layer. Once selected, images can be resized and positioned where you want them. You can set multiple instances of this same image entity or use the Browse button in the Properties bar to choose another raster image to insert. The properties bar also contains a list of 10 most recently used images which can be individually selected and inserted.
	**Add Markup Stamp.** If Stamp Templates have been authored and saved, the markup stamp button is available on the Markup Toolbar. When clicked, a list of available markup stamps is shown that can be added to the current markup layer. The stamp template is a group of markup entities that have been defined as a single unit and all elements of the template are resized and moved as a single entity and cannot be edited otherwise. Color, content, and other elements are defined by the author when a stamp template is created and saved. When a stamp is inserted, if a dynamic text field exists (such as %Page, %Date, %dbstring(value), etc.), the field is resolved and results are populated in the stamp.

	**Cloud and Polyclouds.** Add cloud or polycloud shapes on your images.
	**Highlight.** Creates highlight entities by drawing a rectangle. Unlike the filled shape entity, highlights do not have the option of being filled or hollow.
	**Sketch and PolySketch.** Use this tool to draw freehand shapes and lines on your image. Polysketch can be filled or unfilled.
	**Crossout, Scratchout, Arc, and Line Tools.** Use any of these tools to add linear shapes on your documents and images. The mouse cursor will change to reflect the tool selected. Line width and style can be selected in the Properties toolbar, with additional arrow end styles available for the Line Arrow tool.
	**Rectangle, Rounded Rectangle, Ellipse, and Polygon shapes.** Shapes can be used as highlights or hides, and can be filled or hollow as determined by your selection in the Shape Properties drop-down list. Use the Hides shapes to cover or “hide” areas of the image. Hides shapes are automatically the same color as the background color. The mouse cursor will change to reflect the tool selected.
	**Edit Text.** You can highlight, strikeout, strikethrough, and underline selectable text contained in a drawing or document. Simply drag a box around the text area you want to include to select and mark it.

40 Review Tools

The Review button allows quick access to open and close markup files for the purpose of review.

	**Review.** The Viewer can open markup files for review. Though an image file can have only one editable markup associated with it, there can be multiple overlaid or read-only markups attached. Markups opened for review cannot be edited, but one or more overlaid markup layers can be permanently published with the current file, along with any newly created markup layers, as a new markup. Clicking **Review** opens a file explorer window where you may select an associated markup file, or files, to open for review. When markup files are overlaid for review, clicking on the review drop-down **arrow** displays a list of currently open markups that you may close for review (Close Review). Selecting Review Changemarks opens up the Changemarks panel where you may cycle through any Changemarks contained in the markup file.

41 Redact Function

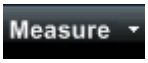
The Redact toolbar contains tools for redaction purposes. The Redact toolbar is displayed on the left side of the viewer when you click 

.

	**Redact Area** This markup entity allows you to place a rectangular cover over an area of a sensitive or confidential document to block only certain portions from being viewed, searched, or copied.
	**Redact Text.** This tool allows you to manually place a blockout entity over a section of selectable text. Unlike the Redact Area tool, image areas are not included in the selection. Use the Redact Text tool to directly select text to redact or redact all like instances of a selected word.
	**Allow Area Tool**. This tool allows you to cut away areas of an unpublished redactup rectangle that you would like to reveal and make visible. The allow area rectangle, when drawn over a redaction area, cancels the redaction in that area only.
	**Redact Privacy Information**. Use the Redact Privacy Information tool to quickly find and redact sensitive information commonly found in documents and forms including Social Security numbers, Phone numbers, Email addresses, Date of birth, and names. Exception lists can be specified.
	**Find & Redact.** This tool lets you run a command that finds and redacts multiple instances of a common word or phrase simultaneously.
	**Redact Using Scripts.** This tool allows you to run a command to find and redact a predefined list of phrases or redaction scripts in one action. See the Viewer online help for the required scripts and lists format. You may use redaction wildcards and macros to search for and redact text strings and number combinations. See the online help for using the available tags and macros that can be used with the Find & Redact, and Redact Using Scripts tools. Allow Area tool as a reverse redaction tool, in other words, "redact everything on this page except specified areas." With all of the above tools, the redactions are not finalized until the document is published.
	**Redact Page**. This tool allows you to redact an entire page or specified pages. You can select to redact all pages, only the currently displayed page, or a range of pages (type in the start and end page numbers). Essentially, this tool can be used in conjunction with the Allow Area tool as a reverse redaction tool, in other words, "redact everything on this page except specified areas." With all of the above tools, the redactions are not finalized until the document is published.

Find & Redact From / To. Similar to Find & Redact, this tool allows you to specify a range of text to redact by entering a start and end search pattern. You can choose whether or not to include the end string in the redaction.

42 Measure Toolbar

The Measure toolbar contains tools for measurement purposes. The Measure toolbar is displayed on the left side of the viewer when you click 

in the functions menu.

Measure. Access commands for measurement and calibration. You can measure lines, polygons, circles, and rectangles, use the measure count feature, and access the measurement settings dialog.

Measurement Properties. Depending on the measurement tool selected from the menu (line, polyline, polygon, rectangle, circle, or count), various properties for that measurement display in the **Properties** toolbar, including:

Distance *Angle* *X,Y Coordinates*

Perimeter *Area (poly)*

Height Area (rectangle)

Radius *Circumference* *Area (circle)*

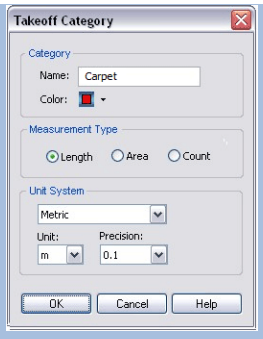
Count

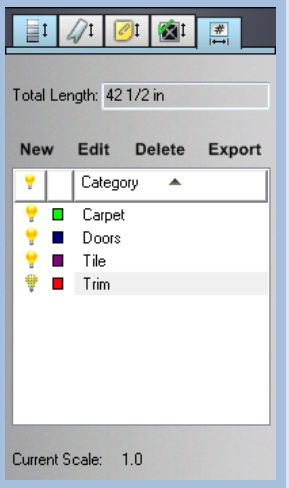
Clear All and **Undo Last** . Clears all or only the last count marker placed on an image.

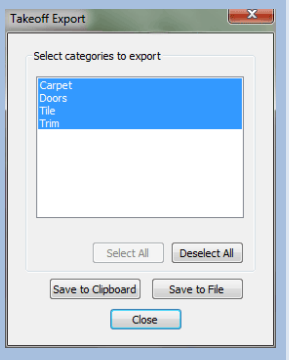
If **Show Leader** is selected, a text box (with category color border) will display each individual measurement result on the entities you place.

The **Negative Area** check box allows you to place a negative entity for that category. As long as the check box is selected, any entity you place on the drawing will subtract from the accumulated results. The measurement entities text box displays a negative number if Show Leader is selected.

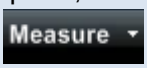
You can select the **Snap** check box if you would like your measurement points to snap to the nearest picking point or to the midpoint of segments and circles. Note that only CAD type formats support snap. The setting has no effect on raster images and text documents.







Measure Takeoff

To access the Measure Takeoff panel, click  in the **Panel** toolbar, or click the **Measure** drop-down  and select **Takeoff**.

You can create categories of different types (length, area, and count) and accumulate total measurement values for each category defined. Select **New** to define a new category through the *Takeoff Category* dialog. You can **Edit** or **Delete** a selected category if you are the author.

You can assign a different color  for each category and the measurements placed on the document will display with that color.

The list of categories can be sorted by name (click Category in the top column). Click the ascending/descending arrow to arrange the list accordingly.

Once the categories are defined, highlight a category and use the available (dependent on type) Redact tools to place multiple measurements on the document. As you place each measurement entity, accumulated totals display at the top of the **Takeoff** panel.

Takeoff information can be exported to a file or to the Clipboard through the *Takeoff Export* dialog.

To hide a category, click the hide icon  to toggle between visible and hidden. To toggle all categories from visible/hidden state, click the  icon located in the column heading. Hidden category information will still remain available for export.

Category and takeoff information is saved as a markup layer to the current file and can be reviewed as any other markup file.

43 Publish Menu

The Publish menu contains tools for republishing documents. The Publish menu is displayed when you click Publish.

	Save and Publish Publish Select **Save Current View as JPG** from the submenu to save the current view displayed in the viewing window as a JPG file. This feature captures the image window as a screen capture and will include all visible elements (e.g., markup entities, magnifier window, measurement indications, etc.). Note that redactions are NOT finalized in the captured image. Select **Publish to PDF,** or **TIFF** from the submenu to publish the current file (with any open markups) to PDF, or TIFF format. A variety of publishing options can be selected from the dialog. When redactup entities are present in the open markup, publishing to PDF, or TIFF finalizes the redaction in the output file.

44 ProjectDox Compare Toolbar

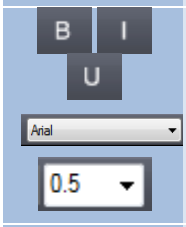
	**Overlay**: Use this button to overlay both versions on top of each other. Both files display at their original colors. Use the slider to change the transparency of each file - left to dim the compare version, right to dim the open version.
	**Overlay Differences:** With this button, the compare file version opens overlaid on the open file. The open file displays in red (deleted geometry), and the compare file displays in green (added geometry). Geometry that has not changed (common between both revisions) is gray.
	**Side-By-Side:** Both versions are displayed in a split-screen image. Move the slider to view transparent differences overlaid in each version.

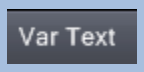
	**Text Comparison:** While a graphical comparison is useful for viewing differences in CAD drawings (as overlaid images), this method has limitations when it comes to comparing the actual text contained in a document file. Use the Text Comparison mode to view the (non WYSIWYG) text content comparison of the open and compare documents. The document is shown in split screen mode, with the open and compare files displayed in two windows as lines of text, and the WYSIWYG view of the Compare or Open file shown beneath. Text differences between the two documents are highlighted in yellow, red, or green. Red indicates something that was deleted out of the open document. Green indicates something that was added to the compare document. Yellow indicates something that has changed between the two documents. A merged report can be exported to PDF using the Text Compare Report button. 
	**Open File (Only):** Only the file that was first opened is displayed (normal colors). The **Set alignment points for comparison** tool is available in this mode. All Annotate, Review, Measure, and Publish features are supported in this compare mode only.
	**Compare File (Only):** Only the file that was opened for compare is displayed (normal colors). The **Set alignment points for comparison** tool is available in this mode. Measure and Publish features are supported in this compare mode.
	**Additions:** Only added areas (areas present in the compare version, but not in the open version) are displayed in green.
	**Deletions:** Only deleted areas (areas present in the open version, but not in the compare version) are displayed in red.
	**Unchanged:** Only areas that are present in both the compare version and open version are displayed in gray.
	**Nudge Alignment:** This button is available when using the Overlay, Overlay Differences, Side by Side, Additions, Deletions, and Unchanged viewing modes. You can use the Nudge Alignment commands to nudge and re-scale a compare image or drawing to an open drawing, allowing you to interactively make small adjustments to align the files more precisely. This feature is especially useful for comparing two TIFF images that contain the same text but have different line spacing. Click the Nudge Alignment button and select a direction to nudge the compare file by one increment.

	**Set/Clear Alignment Points**. The **Set Alignment Points** tool allows you to compare two versions of a file that are of different scales, or world page sizes. Use the tool to select two points on each version that define a single identical location that is used as a common alignment section when the two files are overlaid. **Clear alignment** clears any currently set points.
	**Transparency Slider:** This tool is available for Overlay, Overlay Differences, and Side-by-side modes to adjust the transparency amount of the two documents. In overlay mode, move the slider to the left to dim the Compare version (additions), move the slider to the right to dim the Open version (deletions). In Overlay Differences mode, move slider to right to dim red (deleted) areas, left to dim green (added) areas. In Side-by-side mode, center the slider to view the changes side-by-side, overlaid at 25% transparency. Move the slider all the way to the left to view 50% transparency, or all the way to the right for 0% transparency (no overlay).
	**Text Compare Report:** Use this button to generate a merged text compare report and output the results to PDF.

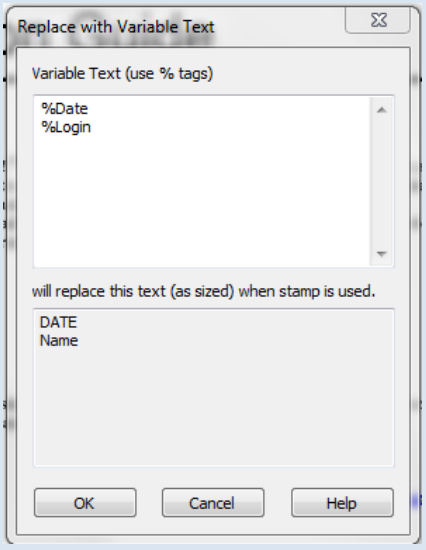
45 Properties Toolbar

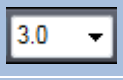
This toolbar contains tools to modify the properties of Markups and Measurements. The properties bar is located directly below the main toolbar.

	**ProjectDox Viewer Help.** Launch the on-line Help file to access detailed information about using Viewer features.
	**Text Properties.** Use the Bold, Italic, and Underline buttons to modify the style of your markup text. Use the font style and size drop-down boxes to change the markup font style and size. Changing the size of the markup text box on the image will dynamically update the size in the font size selection box.
	**Markup Text Background.** Use this feature to select a background type for your markup text box. Available choices from the drop-down menu are *Transparent*, *Match Display Background*, and *<Color>*. Use **Select Background Color** to choose the markup text background color from the *Color Chooser* dialog.



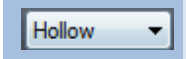
Tokens. Available when creating a stamp template, use this button to replace markup text with token variables. The token expressions will be resolved when a user inserts or double clicks on a stamp containing token variables. If the token used is a *%prompt()*, the user will be prompted with a text entry field where he can type in the requested information.





Line Width. Change the width of markup lines using the Line Width tool.

Line Style. Choose the style of line used for any of the Sketch, arrow, shape, edit text, or line tools. Choices include solid, dotted, dashed, or dash-dot.



Shape Properties – Fill Type. Select Solid, Hollow, Highlight, or Background Fill as attributes for a Rectangle, Ellipse, or Polygon shape. Choosing solid or highlight fills the shapes with the currently selected markup color.

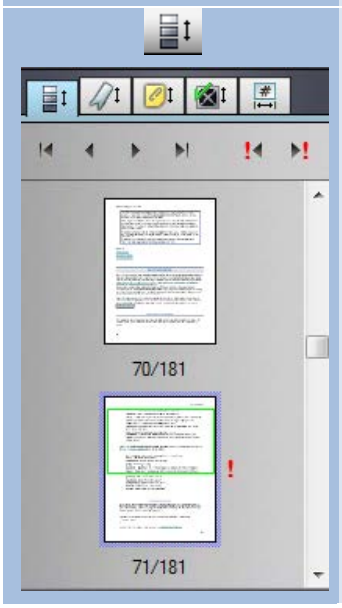
Arrow End Styles. Choose the start and end arrow styles to use with the Line Arrow tool.

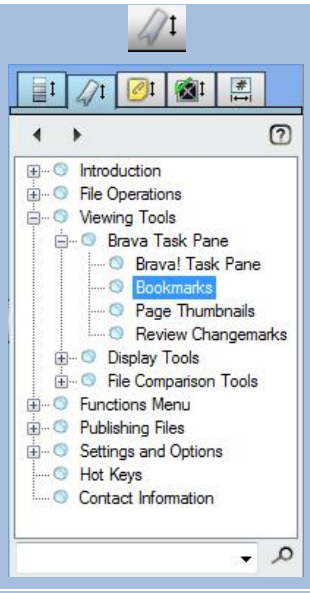
Color. Change the color of any markup entity using the 16 predefined markup colors, or you can choose **More**... to use the custom *Color Chooser* dialog.

	**Hyperlink.** Add a hyperlink to any markup entity when this icon is available. Hyperlinks can be launched by clicking on a markup entity containing a hyperlink with the Select tool  .

46 ProjectDox Viewer Tool Task Pane

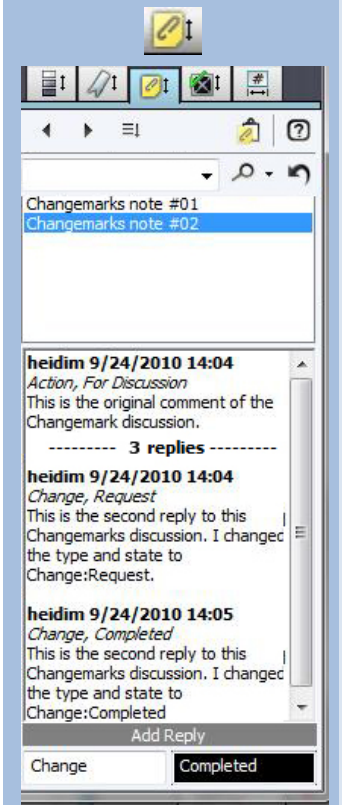
The **Task** pane can be toggled open and closed by clicking on the Pane Arrow  on the right side of the Viewer window.

	**Pane Arrow**. This icon, located on the right side of the viewing window, expands or collapses the task pane when clicked.
	**Page Thumbnails Panel** The Page Thumbnails Tab opens a scrollable thumbnail navigation panel on the right side of the viewing area. When clicked, the pages of the currently opened file appear in the panel as small clickable thumbnail images. First/Previous/Next/Last buttons are provided for quick page navigation. If a markup file is open, an exclamation point ! appears to indicate the pages that contain markups. You can use the next/previous markup page arrows to navigate through only those pages containing markups. The thumbnails panel can be resized, and thumbnail image size can be reduced or increased (to page extents) through the right mouse button menu. Markup entities display on the Thumbnails panel images.



Bookmarks Panel

The bookmark panel lists the internal bookmarks contained in the document being viewed. In this panel you can expand or collapse the bookmark trees by clicking the +/- signs. Click a bookmark to go to that location in the document. Use the search field to search for bookmark titles. Use the next and previous arrows to navigate through bookmarks



Changemark Panel

(See Changemark from the Markup Toolbar)

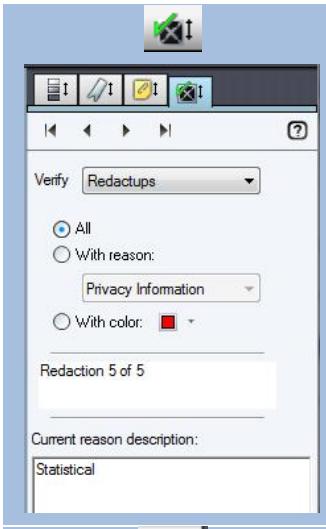
Next and **Previous** arrows are provided to navigate through the Changemarks list. The list can be sorted by the categories provided in the *Sort* drop down list 

The Changemark list window also contains buttons to **search**  the content, title, or author information of a Changemarks.

Use the **Show All** button  to undo any filters applied and show all Changemarks contained in the document.

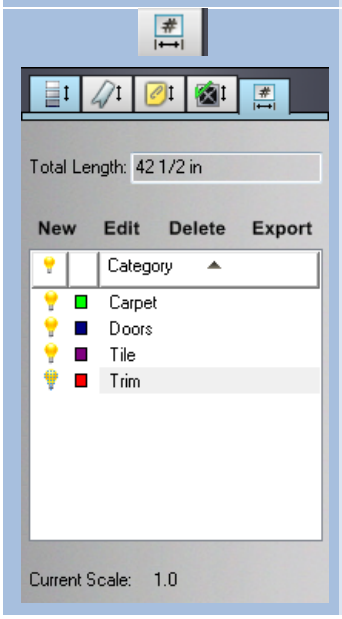
Use the **Extract Changemark text** button  to copy the selected Changemark notes, or all Changemark information contained in a document to the Clipboard. This function captures the Changemark title, comment (text description), attached hyperlink (as text), and image (WMF bits) to the Clipboard. The resulting RTF stream can be pasted into another application, such as Microsoft Word.

Changemarks Discussion: Users reviewing Changemark notes can click **Add Reply** to reply to a selected Changemark note. The type and state can be updated and the current type and state of the last reply is what displays at the bottom of the Changemark panel. All of the Changemark note replies are shown in the Changemark window along with their author, date and time, and note content. Only reviewers with markup edit permissions can reply to Changemark notes.



Verify Redactions Panel

Once you have redacted a document (see  Redaction tools) you can optionally run the Verify tool to manually check and adjust the accuracy of each redacted area that has been set on the document before you finalize the redaction through publishing Publish.



Measure Takeoff Panel

To access the Measure Takeoff panel click this tab, or from the **Measure** drop-down Measure, select **Takeoff**.

The takeoff panel lets you create categories and accumulate measurements and export the information to a (markup) file or to the Clipboard. You can total length, area, and counts by placing multiple measurement entities on the drawing for each category defined.

47 HOT KEYS

Below is a list of Viewer tool actions with corresponding keyboard shortcuts.

Feature	Keyboard Control
Help About	<Ctrl> + <A>
Toggle through Bookmarks	<Ctrl> + <B>
Add a bookmark	<Ctrl> + <Alt> + <B>

Feature	Keyboard Control
Copy to Clipboard	<Ctrl> + <C>
All	<Ctrl> + <E>
Mirror (Flip)	<Ctrl> + <F>
Print Region	<Ctrl> + <G>
Help Contents	<Ctrl> + <H>
Show Layers	<Ctrl> + <L>
Open Markup	<Ctrl> + <M>
New Markup	<Ctrl> + <N>
Print	<Ctrl> + <P>
Save Markup	<Ctrl> + <S>
Thumbnail Panel	<Ctrl> + <T>
Paste	<Ctrl> + <V>
Fit Width	<Ctrl> + <W>
Delete	<Ctrl> + <X>
Redo	<Ctrl> + <Y>
Undo	<Ctrl> + <Z>
Change mouse tool to pan	<Ctrl> + <Shift> + <A>
Burn in Markup	<Ctrl> + <Shift> + <B>
Close Markup	<Ctrl> + <Shift> + <C>
Publish to PDF	<Ctrl> + <shift> + <D>
Save View as JPG	<Ctrl> + <shift> + <J>
Publish to CSF	<Ctrl> + <shift> + <K>
Close Review	<Ctrl> + <Shift> + <R>
Save as Markup	<Ctrl> + <Shift> + <S>
Publish to TIFF	<Ctrl> + <Shift> + <T>

Feature	Keyboard Control
Change mouse tool to zoom window	<Ctrl> + <Shift> + <X>
Change mouse tool to magnifier	<Ctrl> + <Shift> + <Z>
Rotate 90 Degrees	<Ctrl> + <Space>
Rotate 90 degrees counter-clockwise	<Ctrl> + <Shift> + <Space>
Find	<F3>
Zoom In Zoom Out	<+> <->
Move to Previous Page	<Page Up>
Moves to Next Page	<Page Down>
Go to First Page	<Ctrl> + <Home>
Go To Last Page	<Ctrl> + <End>
Next Markup Page	<Ctrl> + <Page Down>
Previous Markup Page	<Ctrl> + <Page Up>
Last Page	<End>
First Page	<Home>

The following hotkeys can be used in Compare mode to nudge the overlaid "older version"	
1. Nudge Left	<Ctrl> + <Left arrow>
2. Nudge Right	<Ctrl> + <Right arrow>
3. Nudge position up	<Ctrl> + <Up arrow>
4. Nudge position down	<Ctrl> + <Down arrow>
5. Nudge scale up	<Ctrl> + <+>
6. Nudge scale down	<Ctrl> + < - >

48 Supplemental Material and Exercises

The following sections provide additional learning resources and exercises for this course. The exercises may or may not be performed as part of the classroom activities. Your instructor will

consider setup issues, classroom timing and instructional needs to determine if any exercises are appropriate for your class. These can be conducted independently of class at any time.

49 How to Consolidate Markups

You can copy all open markup entities into one new consolidated markup file. To do this:

1) Open a file in the Viewer that has multiple markup files. The files may have different owners..
2) Click . 

3) Select the markup files you wish to consolidate. You must open at least two markups files to use this feature.
4) Click  and select **Consolidate Markups**
5) A new markup file is created for edit, and all of the markup entities in the markups selected for consolidation are copied to this new markup file. All markup files that were opened for review are closed after the command is executed. The entities in the consolidated file retain their original author information and ownership does not change by default. You will be able to edit only those entities you own.

NOTE: If any markup entities exist that have been published to the file (burned in), they are not included in the consolidated markup.

6) Save the current consolidated markup. The consolidate command cannot be undone, however, you can close the markup opened for edit and choose not to save the consolidation.
   - The original files markup files are untouched. They, as well as the consolidated file can be edited by their respective owners.

50 Measure Magnification Tool

Calibrate and Measure with the Magnification Tool

- For certain formats (BMP, PRT, PDF, TIF, and CMG) when using the Set Alignment Points tool and you select a point on the image, a magnification window automatically pops up under your mouse cursor. This zoom window allows you more accurate placement of the selection point for measuring, counting, and aligning.

- As long as the left mouse button is held down, you can adjust the position of the point under the magnifier. When you release the left mouse button, the point is committed and the magnifier goes away so that you can drag your measure tool to the next point location.
- If you release the left mouse button while it is outside the magnifier rectangle, you are indicating that you want to cancel the attempt to place the point.
- The magnification level used depends on the file type. If it is entirely raster, then the magnification level is 1 source pixel per screen pixel. Otherwise the magnification level is 1 drawing inch = 1 screen inch.
- If the current view is already zoomed in beyond the above magnification levels (100% zoom or greater), the magnifier does not display.
- The magnification tool used in measure does not contain all of the features of the Brava magnifier tool located on the viewing toolbar.

Using the Auto-Zoom Window:

- When selecting picking points for calibration, measurement type, and measurement count, an Auto-Zoom window will appear when the drawing/document is zoomed out. This allows for exact placement of your start and end points for precision accuracy.
- An Auto-Zoom window appears when you pick a point by depressing the left mouse button.
- The Auto-Zoom window remains open until you let up on the left mouse button.
- You can place the measurement point more accurately while the Auto-Zoom window is active.
- While in Auto-Zoom mode, you can move the mouse wheel up and down or press the +/- keys on the numeric keyboard to zoom in and out.
- If the area inside the Auto-Zoom window does not include the spot you intended, you can abort the placement of the point. Abort by moving your mouse outside the Auto-Zoom window and then release the left mouse button.
- The Auto-Zoom window shows you the drawing at a 1 to 1 ratio with the screen, meaning, 1 inch of drawing is drawn at 1 inch of your monitor.
- If you are zoomed in to the image far enough that the 1 to 1 ratio is the same (100% or closer) between the current view and the Auto-Zoom window view, then the Auto-Zoom window does not appear.

51 How to Create a Stamp Template

One or more markup elements can be combined to create a stamp template. Users who are granted the necessary permission can apply stamp templates to plans and documents. A stamp template may include image files, signature files, and dynamic tokens to achieve the desired result. In this exercise, you will create a stamp template to be used in the final approval of a set of plans.

See the Administrator Manuals for more information about creating stamps and stamp templates.

1) Open **Plan layout1.dwg**
2) Click the **Markup** Icon → **Stamp Templates** →**New**
3) Select **Image** and choose an image file (FinalApproval.png)
   - Recommend background of the image file be transparent
4) Drag the image file to the upper right corner as seen below in Figure 51-1.

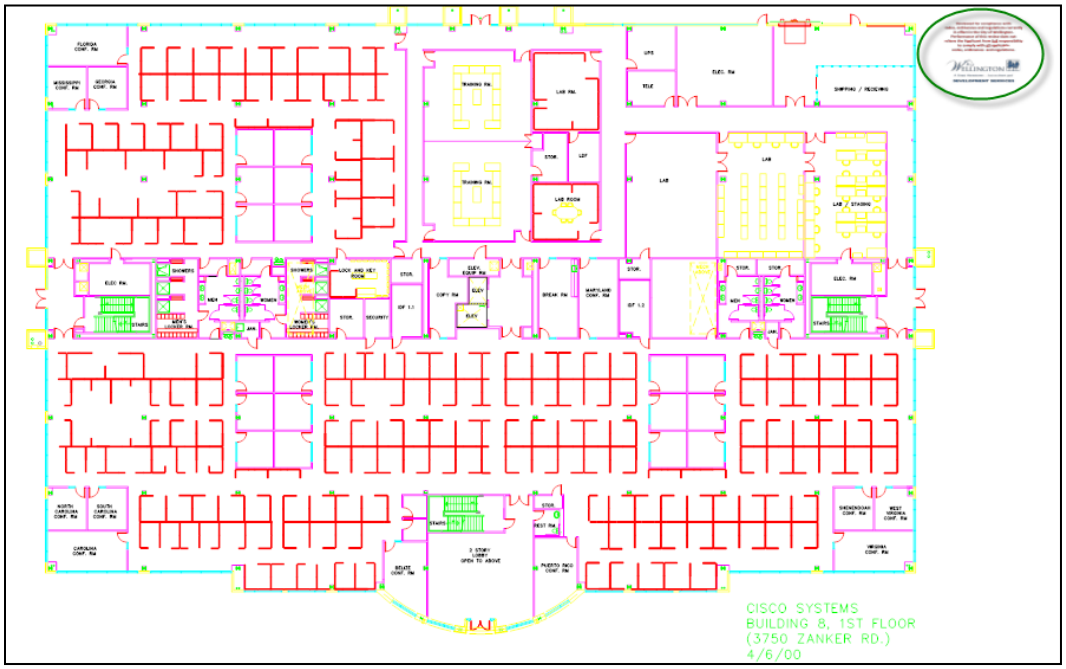


Figure 51-1. Building a Stamp Template – Inserting Image File

5) Using the **Zoom** tool, zoom in on the image file
6) Select the **Text Box** tool and add two tokens to the image file (as shown in Figure 51-2) to create a dynamic stamp template.
   - %ProjectName

- %Date

Figure 51-2. Building a Stamp Template - Adding Dynamic Tokens

7) Click **Markup** → **Stamp Templates** →**Save As** "FinalApproval"

NOTE: ProjectDox does not recalculate the stamp size based on the page size of the file. A 2X2 stamp on the stamp template will be the same size whether on a 24 X 36 or an 8 ½ X 11.

The Batch Stamp process will calculate the position indicated by the stamp template and stamp the files based on the page size of the file. For example, in our template we have placed the stamp in white space between the drawing and the edge of the file. When applied using the batch stamp process this stamp will be applied in the far right corner. If you want to maintain the position in the Stamp Template, you must add an offset to the Stamp Template. An offset or registration mark can assist in maintaining the desired position. The offset is a tiny mark applied to the page. When the template is processed, ProjectDox reads the offset as the beginning of the stamp and will place that mark at the upper right corner allowing the actual stamp to retain its position.

52 How to Offset a Stamp Template

1) Click **Markup** → **Stamp Templates** →**Open**
2) Select "Final Approval"
   - The stamp will display in the upper right based on your template

3) Zoom into the stamp area and place a registration mark in the bottom right corner.
   - See above paragraph for description of an offset/registration mark.
   - The greater the zoom the less the offset will be seen when the plan is printed
4) Click **Markup** and **Save** the changes.

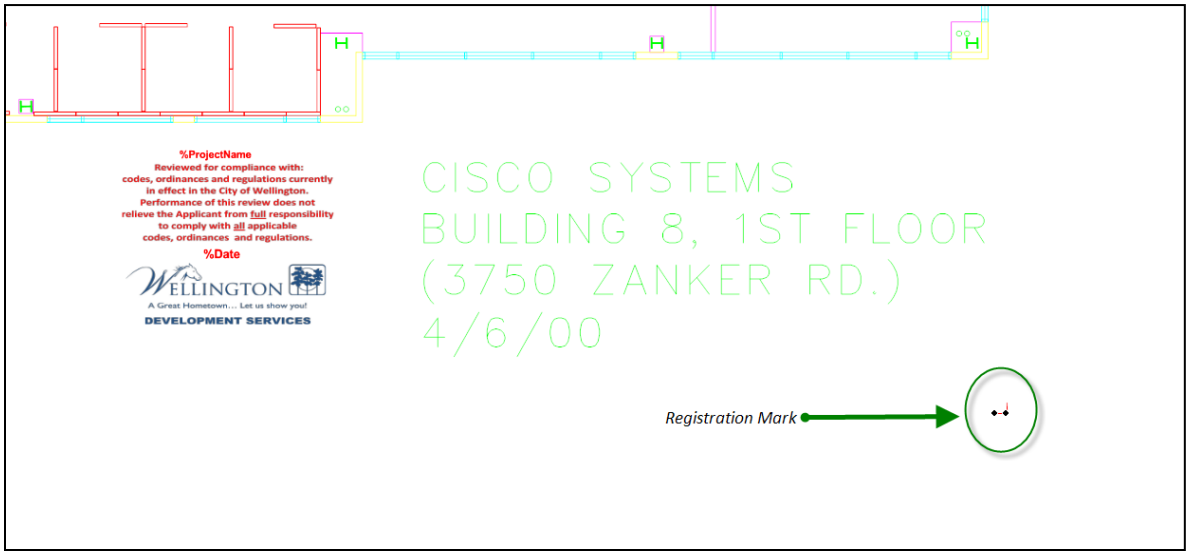


Figure 52-1. Registration Marks

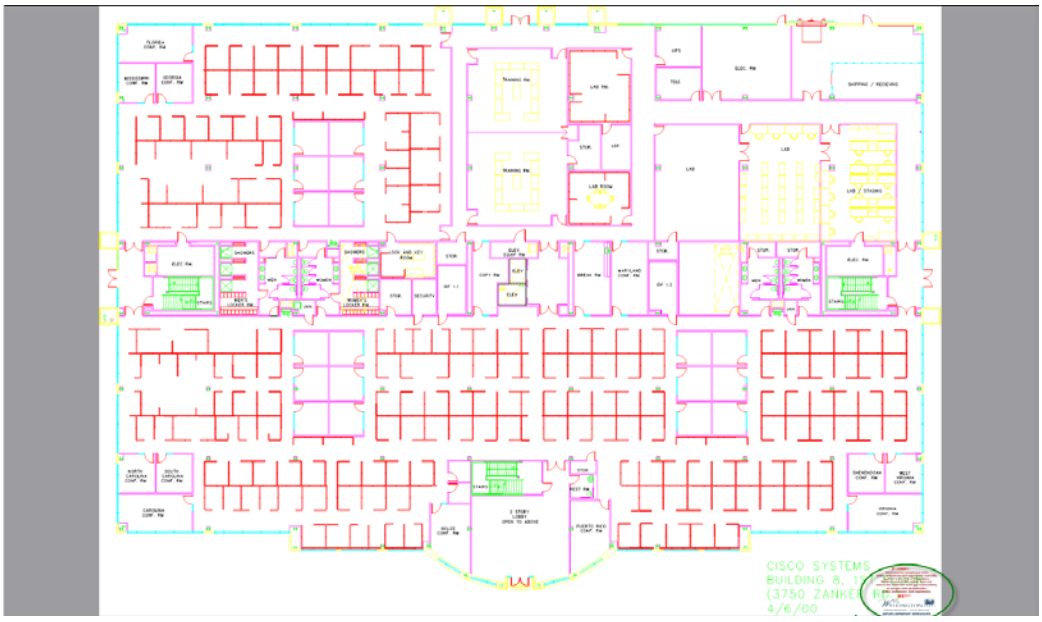


Figure 52-2. Example - Stamp Placement with No Registration Mark

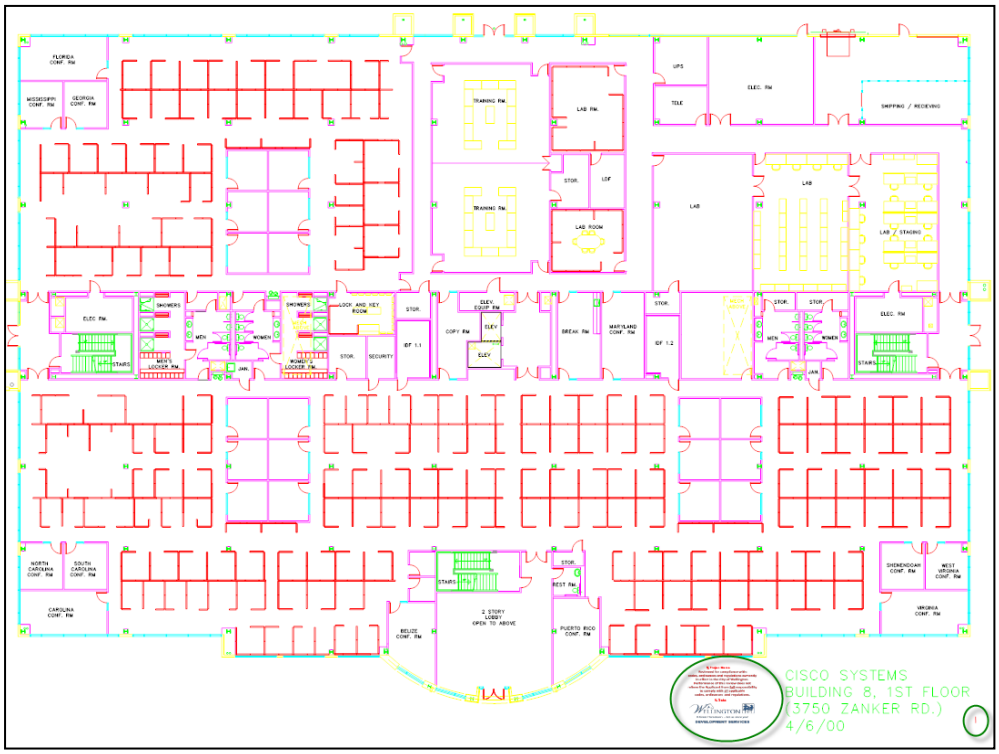


Figure 52-3. Example - Stamp Placement with Registration Mark

53 How to Add a Markup Stamp

The permission to add a dynamic stamp and/or stamp template to a document is granted by a System Administrator. If you are granted this permission, the Stamp Icon is enabled in the Markup Toolbar - provided at least one Stamp Template exists.

1) Select **Markup Stamp** 
2) Select the Stamp Template to apply by clicking the name.
   - Stamping permissions gives a user access to create and use any Stamp Templates in the site.
3) Drag the cursor onto the file to the desired location.
4) Left click and drag the stamp template into place on the file.

The stamp template is treated as a group of elements and is resized and moved as a single entity.

54 How to Create a Batch Stamp Template

Batch Stamp Templates create a standard format for applying stamps to documents and plans. The ability to use the Batch Stamp Template feature is enabled for users by the System Administrator. Users granted this permission have the ability to use and create Batch Stamp Templates as well as Stamp Templates. For more information on Batch Stamp Templates, see the Administrator and/or User Training Guides.

In this exercise you will create a Batch Stamp Template and use your previously created Final Approval Stamp Template to apply to the plans and/or documents.

1) Select a file and click **Batch Stamp** Icon  to enable the Batch Stamp Feature from within a project.
   - System Administrators can configure Batch Stamp Templates from the Admin→Batch Stamp Templates area.
2) Select the **Advanced** tab from the **Batch Stamp** Dialog
   a) Type a Template Name: Instructor Example
   b) Select the Output Type = PDF
   c) Type the name of the destination folder or place a checkmark next to the name in the folder tree displayed = Approved Plans and Documents.
   d) Burn in Markups = YES
   e) Where to place Stamp = Bottom Right
   f) Pages to Stamp = First
   g) Select Stamp = FinalApproval
   h) Select the Save Template button.

Templates create consistency in the stamping process and allow future users to use the Basic Tab to select the Batch Stamp Template and Process the selected files making the process efficient and quick.

55 How to Use the Redaction Tool

Let's create another markup on the plan layout1.dwg file, using the *Blockout for Redaction* tool. In this exercise, you want to block out from view the address of the Cisco building. The ProjectDox Viewer Tool software allows users to designate a markup file containing blockout entities (rectangular solid covers) to be published to a document (as PDF or TIFF) as a "redaction". This means that the blockout entities associated with the published document can never be edited or removed by the end-user: the text and images beneath the blockout cannot be viewed, copied, or searched. The blockout entities are used to conceal sensitive information for legal, financial, and security reasons.

The Blockout for redaction markup entity allows you to place a rectangular cover over an area of a sensitive or confidential document to block only certain portions from being viewed, searched, or copied. To complete the redaction, the file must be published to PDF or TIFF format.

1) Open **plan layout1.dwg** file
2) Select Redact to display the **Redact Toolbar** to the left of the viewing area
3) Select **Redact Area** (first icon) 
4) Navigate to the bottom right of the **plan layout1.dwg file** (can also use Search tool to Search for "Cisco Systems").
5) Hold the left mouse button down and highlight the text *" 3750 Zanker Rd"*
6) In the *Tool Properties* Toolbar enter the Reason for the redaction as "**Sensitive Information**"

   a) Adding a reason allows for a report to be provided of the redactions and their reasons.

7) Select the **Markup Save**  icon to save the changes.

NOTE: The Redact Area feature only blocks information when its markup file has been published to a PDF file. If the markup with the blockout entities is saved and reloaded, areas covered by the blockout entity can be seen, searched, and copied. Also, note that redaction capabilities physically remove text and blanks out raster image information. Vector information and associated block attributes are not removed from the file. Vector information under the redaction blockouts is covered, however, and is not visible in the published file.