

LESSON 07

Contract Drawings

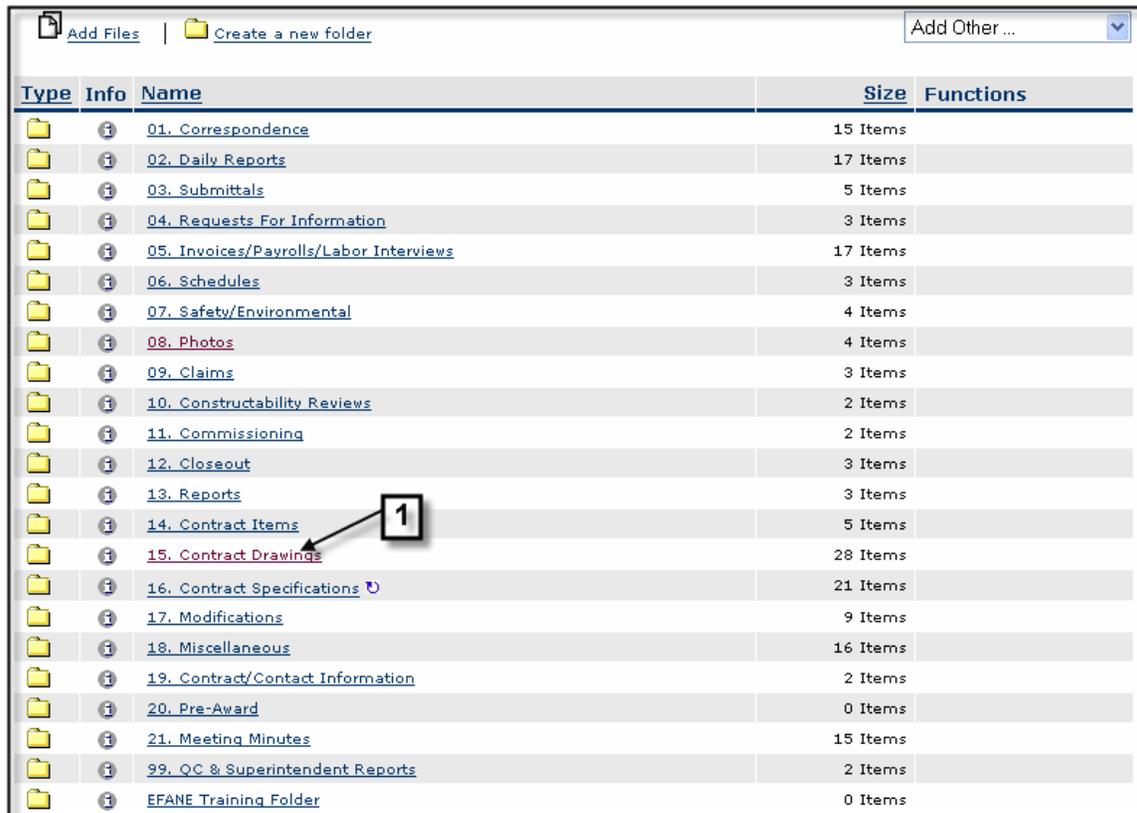
Objectives

This lesson will provide the user with an overview of the Contract Drawings folder and overview of how to use the Brava!TM Program. Brava!TM is the “Markup” program that PrimeContract uses for displaying and redlining AutoCAD drawings. At the completion of this lesson the participant will be able to:

- View contract drawings
- Hide redline layers
- Open redline layers
- Create redline layers
- Save redline layers

Contract Drawings

- As a demonstration, we will explore the Contract Drawings Folder.
- Navigate to the “!NAVFAC Internal Training Project 1”.
- Scroll down to the folders list and click on Folder #15 (Contract Drawings).

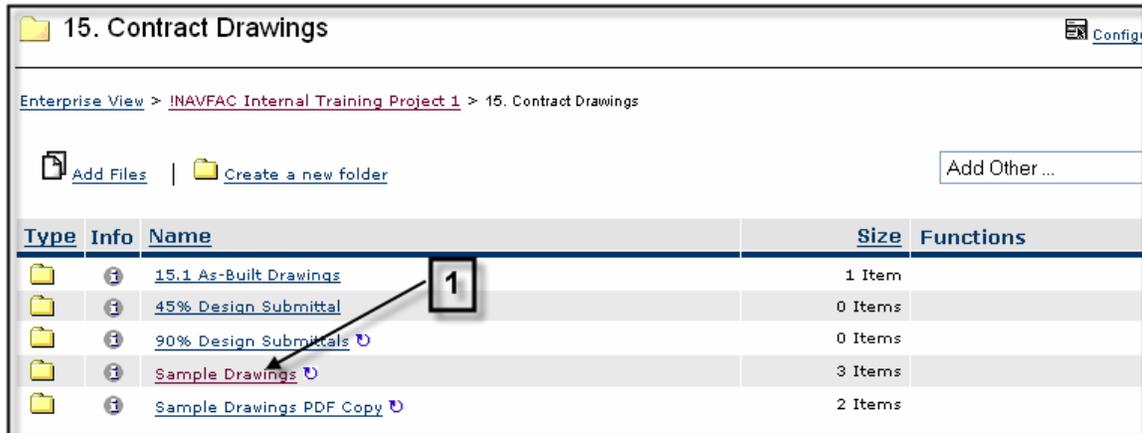


The screenshot shows a file explorer window with a table of folders. The table has columns for Type, Info, Name, Size, and Functions. The folder '15. Contract Drawings' is highlighted in red, and a red arrow points to it from a box containing the number '1'.

Type	Info	Name	Size	Functions
Folder	i	01. Correspondence	15 Items	
Folder	i	02. Daily Reports	17 Items	
Folder	i	03. Submittals	5 Items	
Folder	i	04. Requests For Information	3 Items	
Folder	i	05. Invoices/Payrolls/Labor Interviews	17 Items	
Folder	i	06. Schedules	3 Items	
Folder	i	07. Safety/Environmental	4 Items	
Folder	i	08. Photos	4 Items	
Folder	i	09. Claims	3 Items	
Folder	i	10. Constructability Reviews	2 Items	
Folder	i	11. Commissioning	2 Items	
Folder	i	12. Closeout	3 Items	
Folder	i	13. Reports	3 Items	
Folder	i	14. Contract Items	5 Items	
Folder	i	15. Contract Drawings	28 Items	
Folder	i	16. Contract Specifications	21 Items	
Folder	i	17. Modifications	9 Items	
Folder	i	18. Miscellaneous	16 Items	
Folder	i	19. Contract/Contact Information	2 Items	
Folder	i	20. Pre-Award	0 Items	
Folder	i	21. Meeting Minutes	15 Items	
Folder	i	99. QC & Superintendent Reports	2 Items	
Folder	i	EFANE Training Folder	0 Items	

Contract Drawings (Contd...)

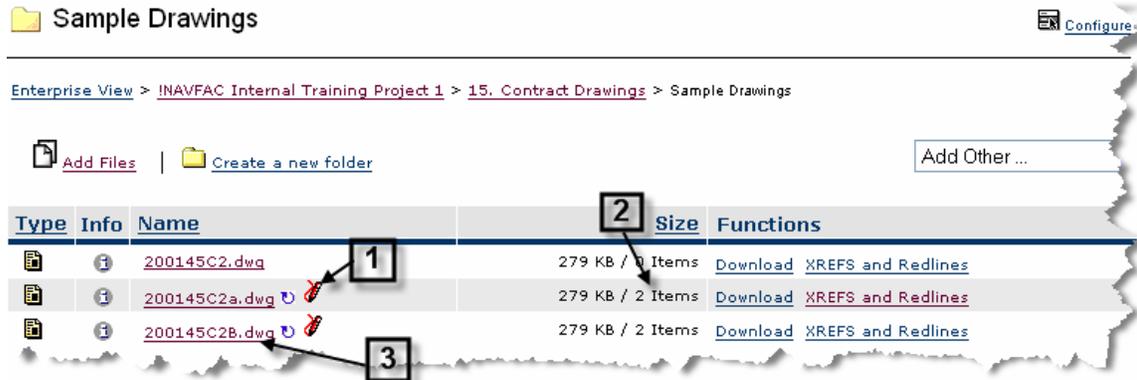
- The “Contract Drawings” window will appear.



- All As-Built drawings will be stored in the 15.1 As-Built Drawings folder.
- Create separate folders of 45 %, 90 % and Final design drawings.
- To view a drawing, click on Sample Drawings. [1]

Contract Drawings (Contd...)

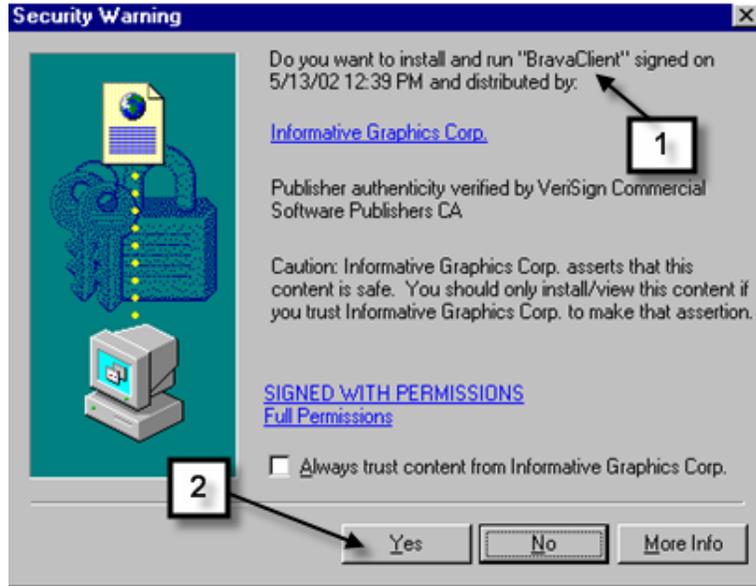
- The following window will appear.



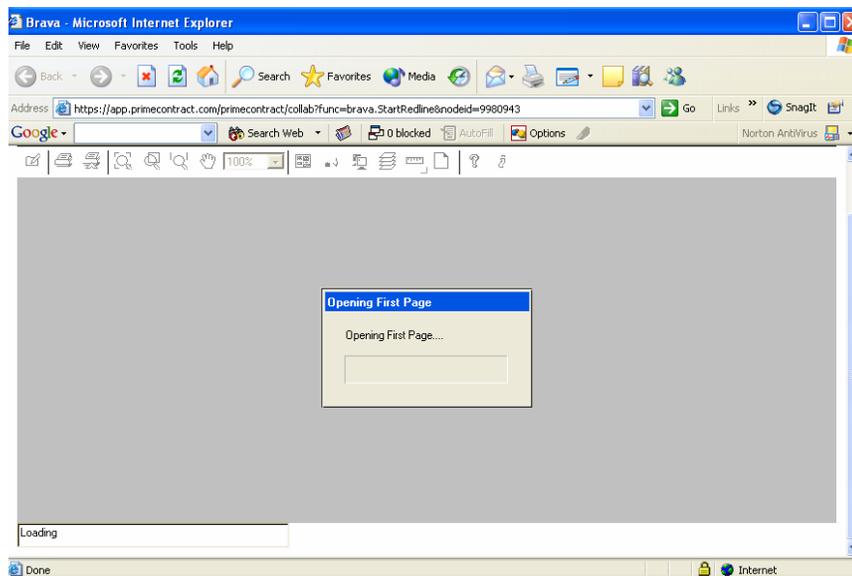
- A red pencil next to the title of the drawing indicates that the drawing has been redlined. [1]
- Number of marking are shown next to the file size. [2]
- The user doesn't need AutoCAD program to view drawings.
- Click on 200145C2B.dwg drawing. [3]

Contract Drawings (Contd...)

- The first time you view a drawing, you may see the following window.



- You need the “BRAVAClient [1] to view drawings. Click on Yes to install the “BRAVAClient”. [2]
- Then the following window will appear.



Markup Drawings

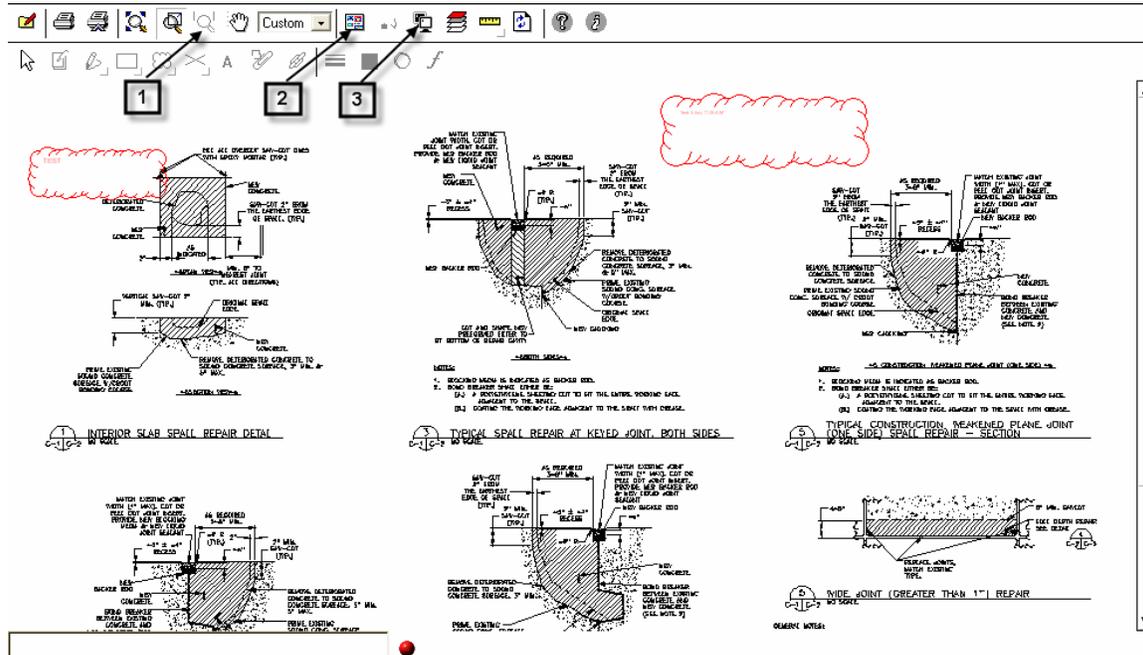
- Within PrimeContract, a drawing tool called Brava![™] is used. This program is used for displaying and redlining AutoCAD drawings.
- We will demonstrate how Brava![™] should be used for project collaboration.
- As a demonstration, we will view a redlined drawing. Then we will demonstrate how to markup that drawing.
- The drawings that can be redlined are identified by “XREFS and Redlines”. [1]

Type	Info	Name	Size	Functions
		200145C2.dwg	279 KB / 0 Items	Download XREFS and Redlines
		200145C2a.dwg 	279 KB / 2 Items	Download XREFS and Redlines
		200145C2B.dwg 	279 KB / 1 Item	Download XREFS and Redlines

- Click on [200145C2b.dwg](#) [do this, if you have closed the Brava Viewer].

Markup Drawings (Contd...)

- Brava!™ will open the AutoCAD drawing.



- Click  to widen the drawings [fill up the screen]. [1]

- Click  to change drawing color. [2]

- Click  to change background color. [3]

Markup Drawings (Contd...)

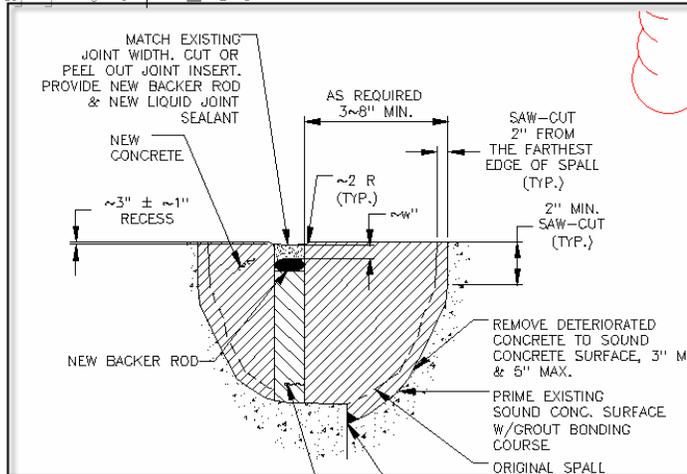
- From the toolbar, the user has the option to print, zoom, pan, rotate, and enable/disable visible layers on the drawing.



- We will now demonstrate the “Zoom” command.
- To zoom in, click on the  icon. [1]
- The mouse guided arrow will now turn into a “+” symbol.
- To zoom in on an object, the user must encapsulate the object with the zoom command. [1]
- Click the mouse guided “+” symbol toward the upper left portion of the object and **HOLD DOWN** the left mouse button. **DO NOT LET GO!**
- Drag the mouse to the lower right side of the object. While performing the mouse drag, a rectangle will appear around the desired object.
- When satisfied with the area created by the rectangle, release the left mouse button.
- The area encapsulated will magnify.

Markup Drawings (Contd...)

- View of Zoomed area.

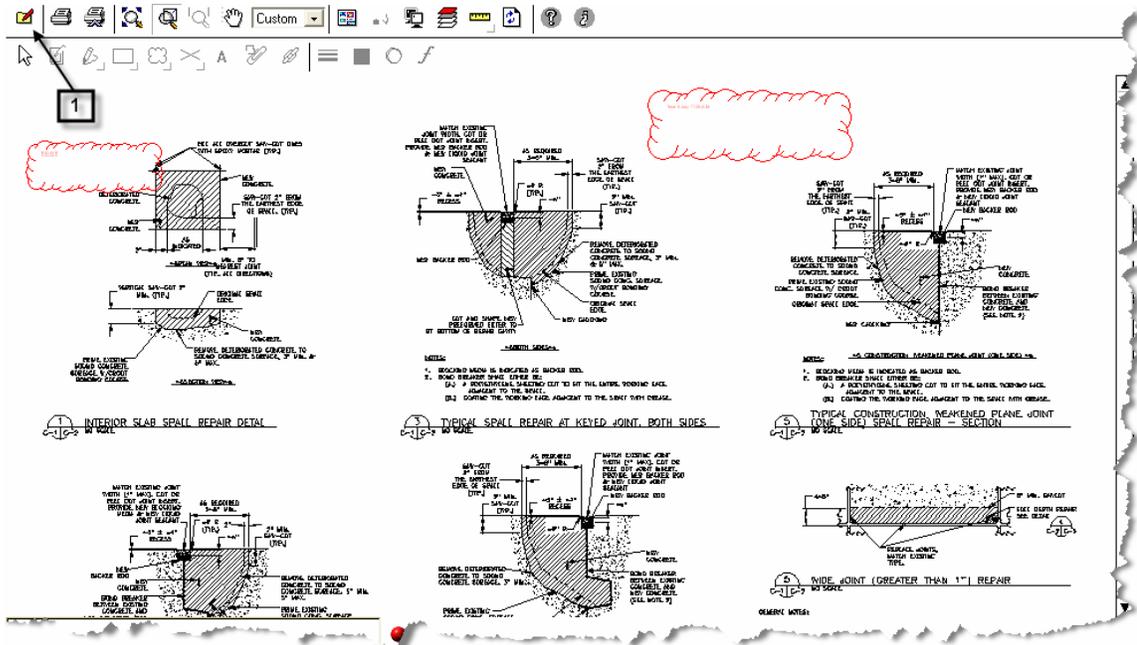


- To Zoom out and view the entire drawing, click on the  icon.

[1] or Zoom Width  .[2]

Markup Drawings (Contd...)

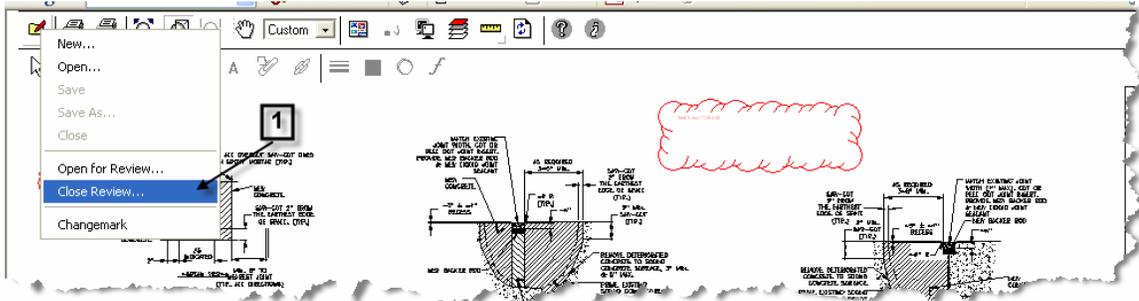
- View of Zoom Width.



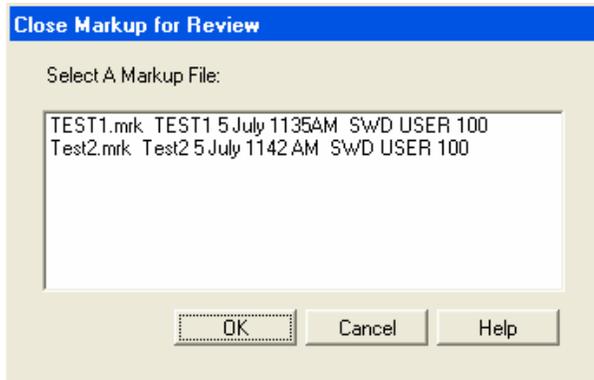
- The user has the option to view all, some, or none of the redlines on the drawing.
- While the user can choose to hide these redlines, the redlines will **NEVER** be deleted.
- To hide a redline layer, click on the  icon.[1]

Markup Drawings (Contd...)

- The following menu will appear.
- To hide a redline layer, click on Close Review.... [1]



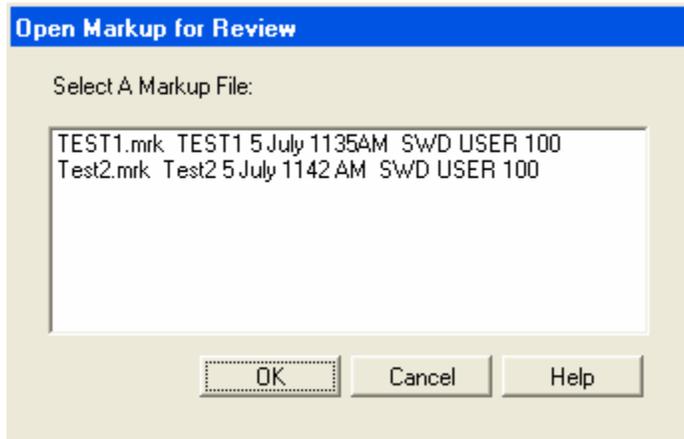
- The following window will appear listing all redline layers.



- This drawing has two redline layers.
- To hide the layer or redline, click on the title of the redline.
- To hide multiple redlines, hold down the Ctrl key and click on each title to be hidden.
- When finished, click on OK.
- For this demonstration, we will hide both redlines.

Markup Drawings (Contd...)

- The following window will appear.



- To display a layer, click on the layer.
- To display multiple layers, hold down the Ctrl key and click on each layer to be displayed.
- Click on OK when finished.
- For this demonstration, we will only open one layer.

Create Redline Layers

- We will now demonstrate how to create a redline layer.
- Close Brava Viewer. Your instructor will tell you which drawings you will be marking up. Open that drawing [told by your instructor] . This is cleaner copy of the same drawings we worked on before.

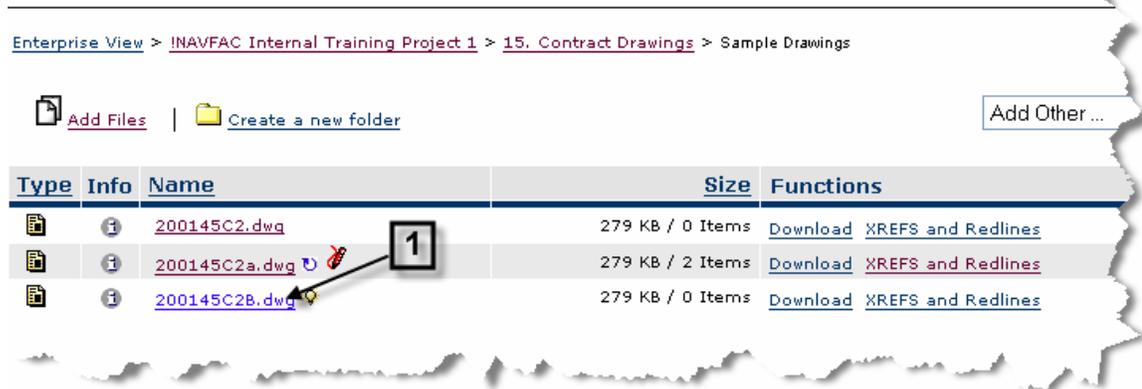
Sample Drawings

Enterprise View > [INAVFAC Internal Training Project 1](#) > [15. Contract Drawings](#) > Sample Drawings

[Add Files](#) | [Create a new folder](#) [Add Other ...](#)

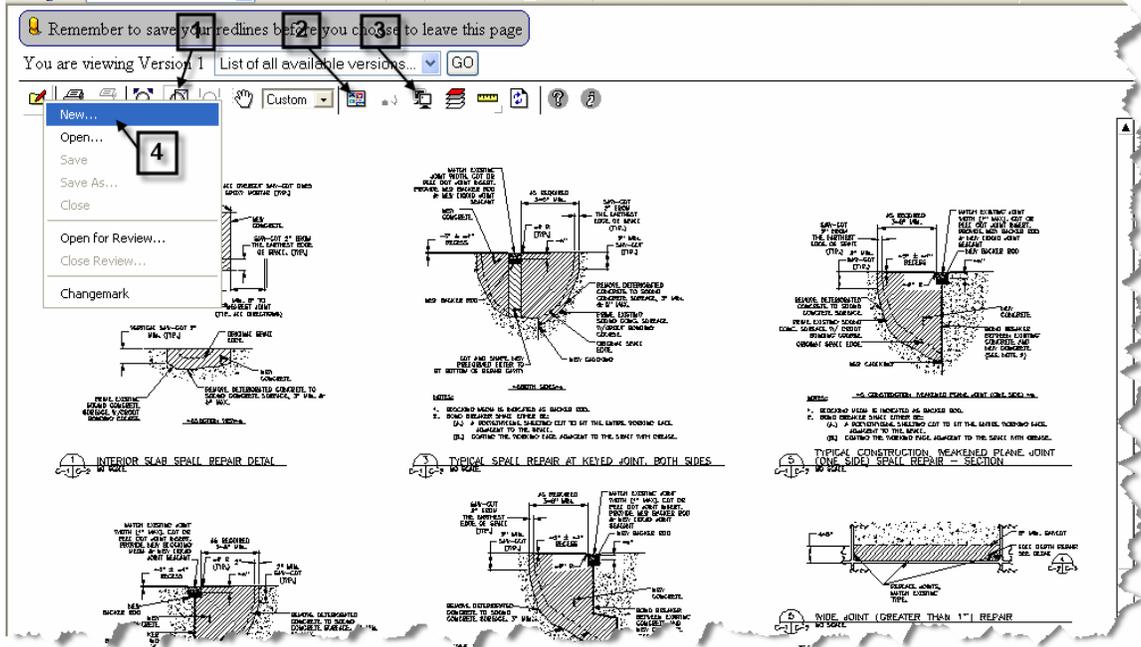
Type	Info	Name	Size	Functions
		200145C2.dwg	279 KB / 0 Items	Download XREFS and Redlines
		200145C2a.dwg 	279 KB / 2 Items	Download XREFS and Redlines
		200145C2B.dwg 	279 KB / 0 Items	Download XREFS and Redlines

1



Create Redline Layers (Contd...)

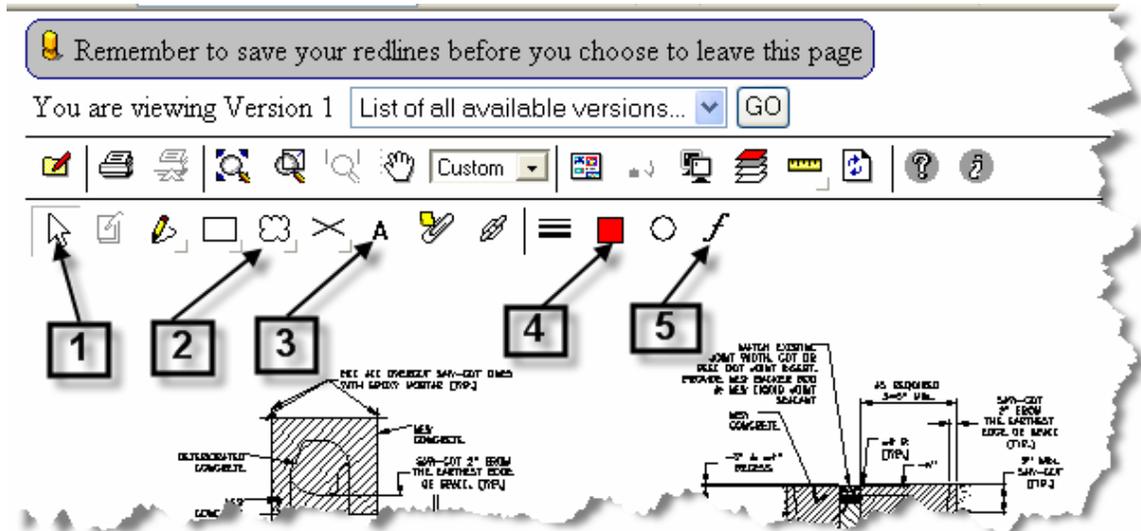
- View of the new copy of the drawing.



- Set to Zoom Width [1].
- Set the Color [2].
- Set the Background color [3].
- Click on the  icon at the top-left corner of the drawing. Click on New [4].

Create Redline Layers (Contd...)

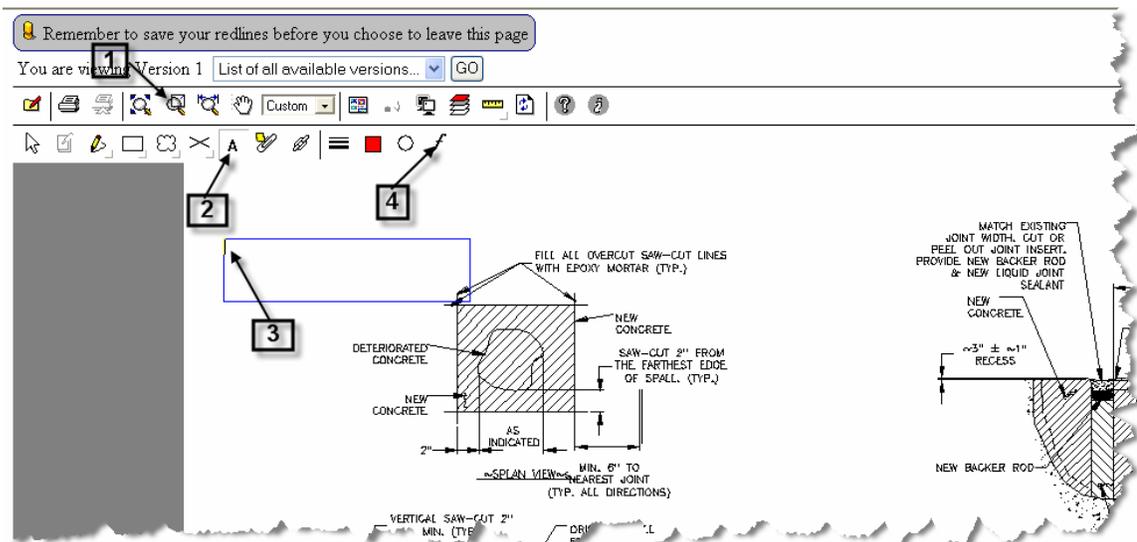
- A new tool bar will appear along with the markup authors name at the bottom of the drawing.



- We will work the following icons:
 - Selector [1]
 - Cloud [2]
 - Text [3]
 - Font Color [4]
 - Font Size [5]

Create Redline Layers (Contd...)

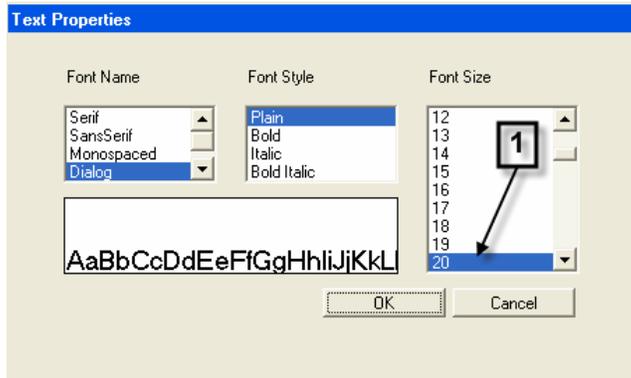
- The drawing is now ready to be redlined.
- As a demonstration, we will create a redline by writing a message on the drawing.
- First, Zoom in on an object. If this is not done, the text will be too small to see. [1]



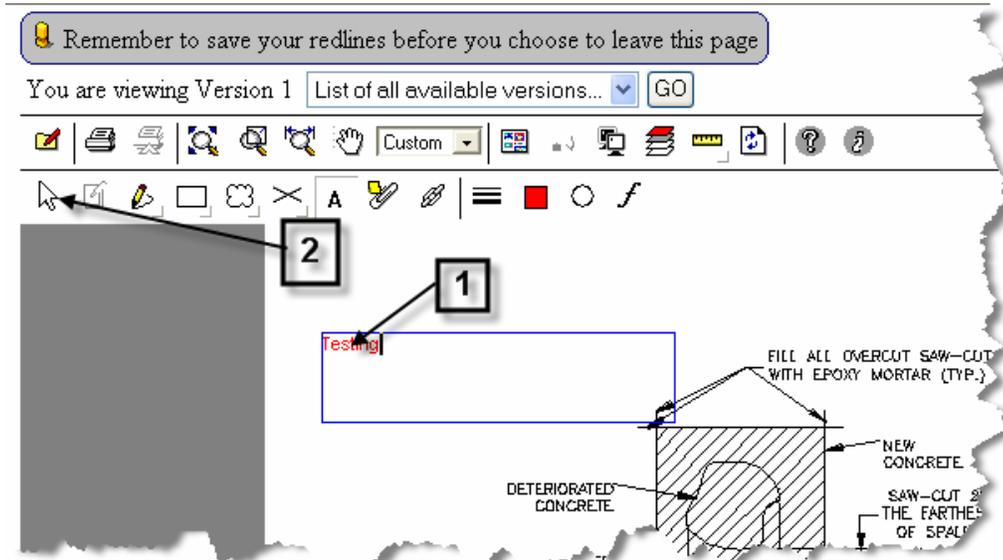
- Next click on the  icon from the new toolbar to write text. [2]
- To select the location on the drawing to create the text, click on that location with the mouse.
- The mouse guided arrow will now turn into a + symbol.
- Click the mouse guided + symbol toward the upper left portion of the object and **HOLD DOWN** the left mouse button. **DO NOT LET GO!**
- When satisfied with the area created by the rectangle, release the left mouse button.

Create Redline Layers (Contd...)

- To adjust the font size of the text, click on the  icon.
- The following window will appear.



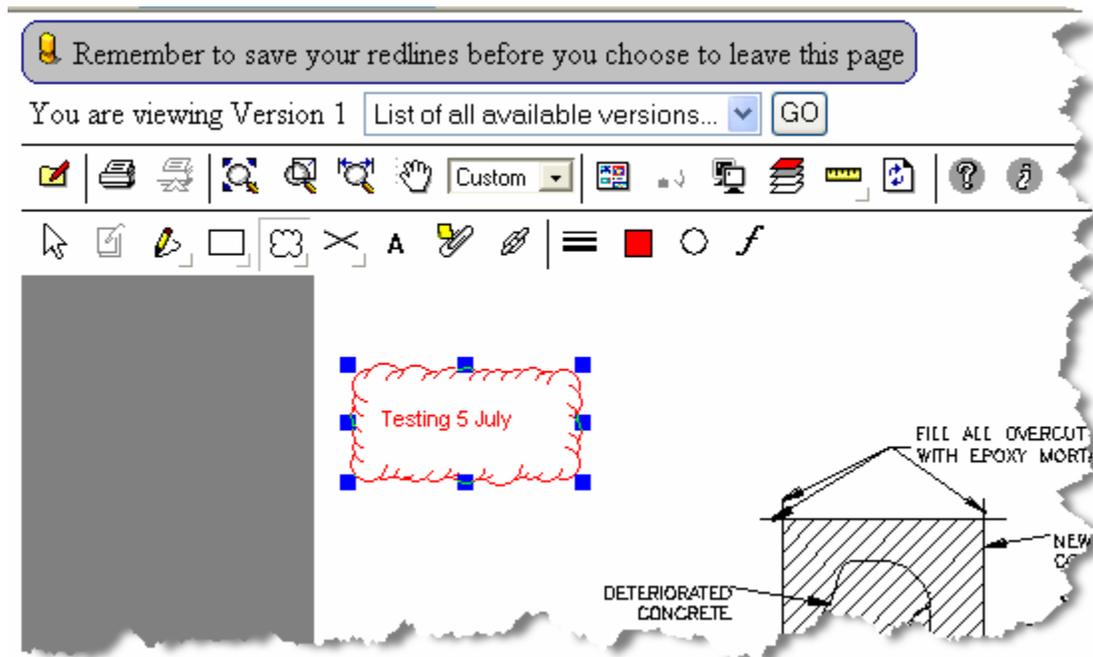
- For this demonstration, select font size 20.
- Click OK.
- Begin typing the text. [1]



- When finished, click on the [select]  icon from the drawing toolbar. [2]

Redline Layers (Contd...)

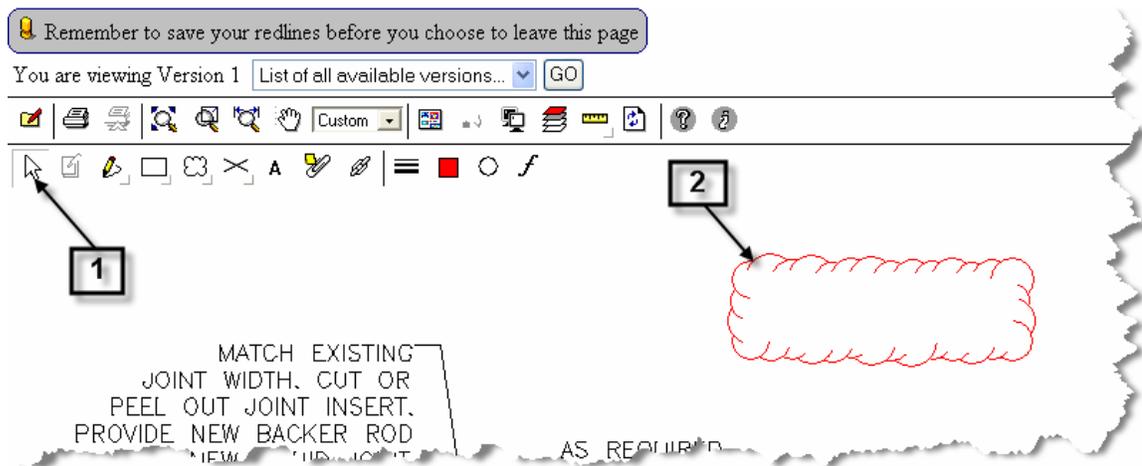
- We will now create a “bubble” to encapsulate an object.
- Click on the  icon.
- Following the same process as used to Zoom In on an object (Click and drag).
- A rectangle will appear while dragging the mouse.
- After the user releases the mouse button, the cloud will appear.



Redline Layers (Contd...)

Moving or deleting a cloud

- First Click on the selector icon. [1]
- Click on the object [2]. Now you can move the object.
- To delete the object, click on the object and hit the delete key from the keyboard.

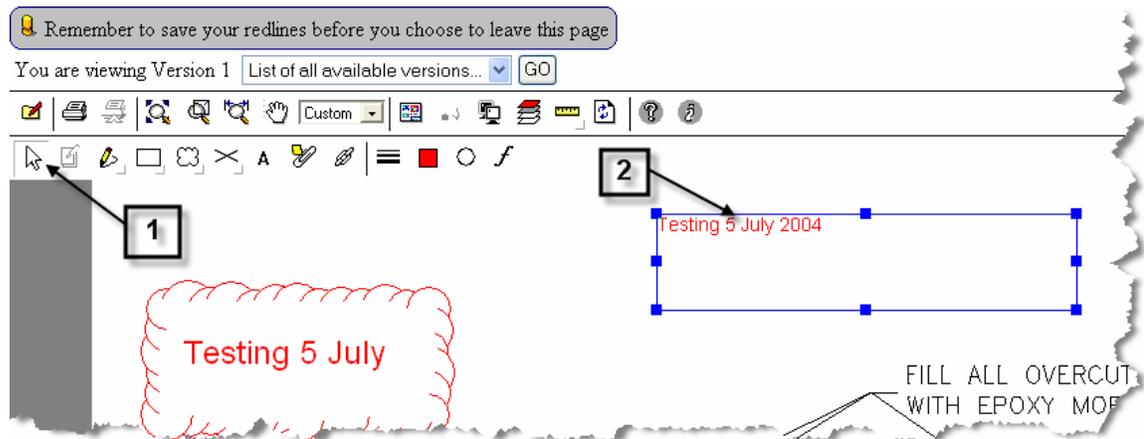


- If you have saved the layout, then you can't move or delete the object.

Redline Layers (Contd...)

Editing a Text

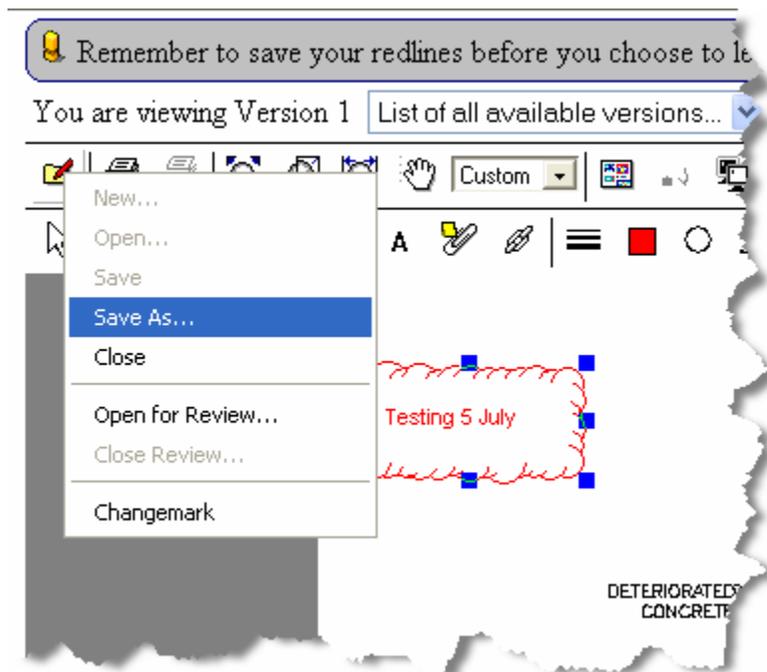
- First, click on the select icon. [1]
- Click once on the text object. [2]
- Then click twice in the text box. You will see the cursor. Move the cursor and make changes.



- To delete a text, click on the select icon. [1]
- Click once on the text object [2].
- Hit the delete key from the keyboard.

Create Redline Layers (Contd...)

- We will now save the redline layer.
- Click on the  icon.
- The following menu will appear.



- Click on Save As...

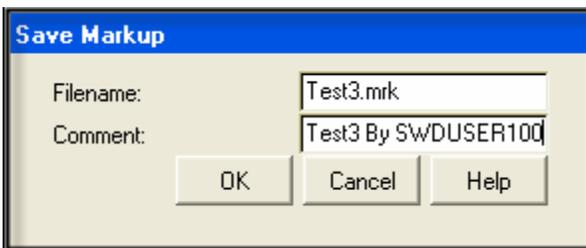
Create Redline Layers (Contd...)

- The following window will appear.



The screenshot shows a dialog box titled "Save Markup". It has two input fields: "Filename:" and "Comment:". The "Filename:" field contains the text ".mrk". The "Comment:" field is empty. At the bottom of the dialog, there are three buttons: "OK", "Cancel", and "Help".

- **The .mrk in the Filename MUST BE at the end of the Filename.**
- Click just to the left of “.mrk” and type in a descriptive title.
- You can not leave spaces. Use only letters and numbers. No special characters.

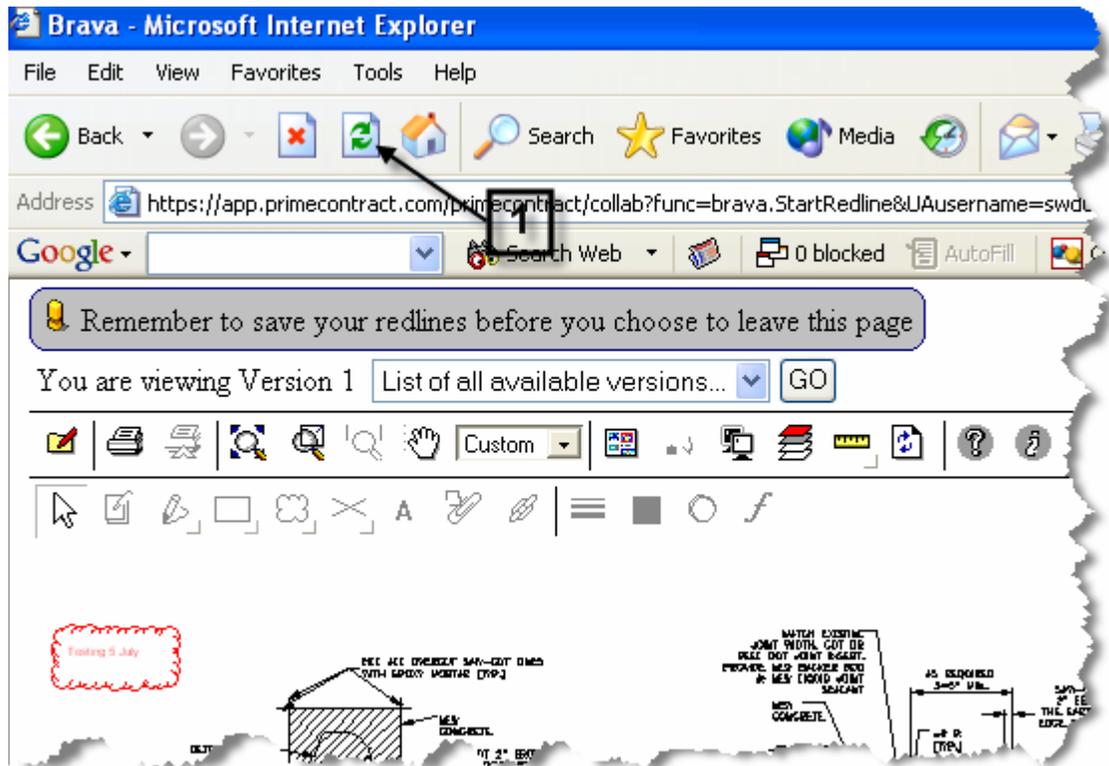


The screenshot shows the same "Save Markup" dialog box. The "Filename:" field now contains "Test3.mrk". The "Comment:" field contains the text "Test3 By SWDUSER100". The "OK", "Cancel", and "Help" buttons remain at the bottom.

- Fill in an appropriate comment. This Filename, comment, and the creators name will now indicate this redline layer.
- **Layers can NOT be deleted by anybody. They are permanent.**
- When finished, click on OK.

Create Redline Layers (Contd...)

- Click on the Refresh  icon. You can see your marking.



- Any user who is viewing the drawings needs to refresh their screen to see the markup that you made. This is an excellent tool for collaboration.
- Additional instruction can be found by clicking on the help icon. [1]

