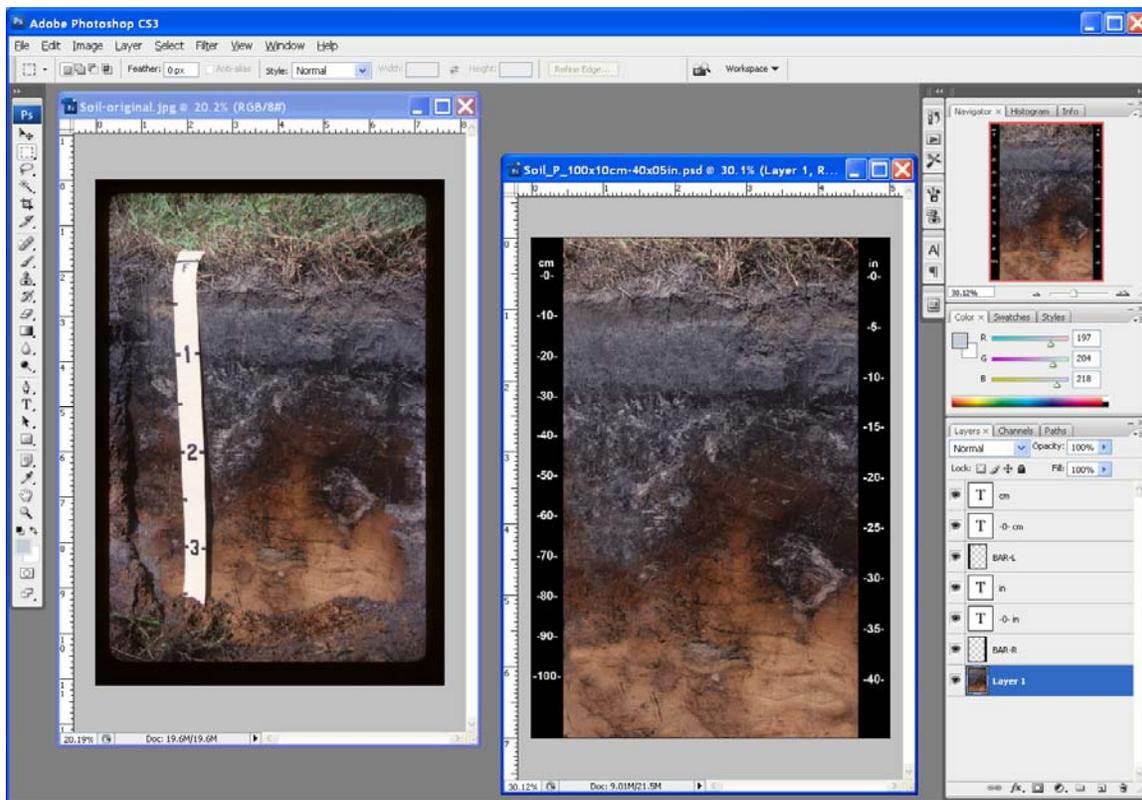


Scaling Soil Profile Publication Images

A step-by-step process to convert scanned slides or digital images photographed with a tape to a formatted increment scale using Adobe Photoshop.

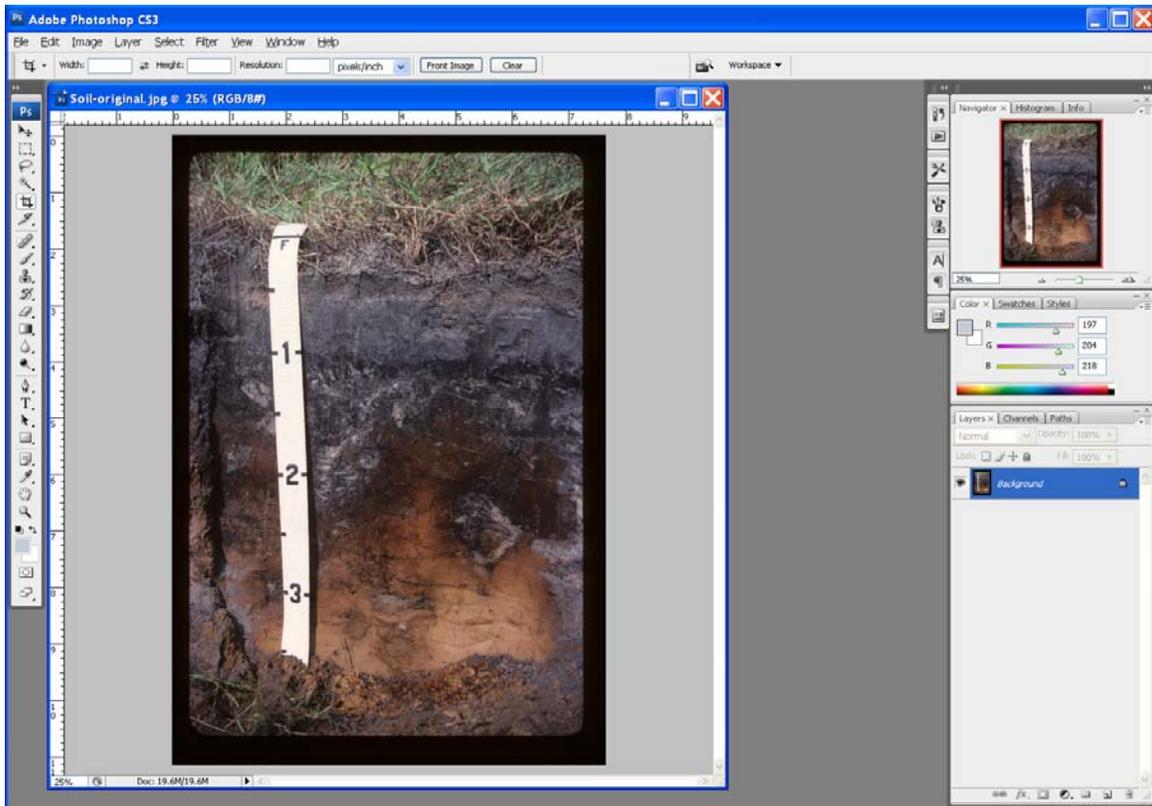


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November 2009

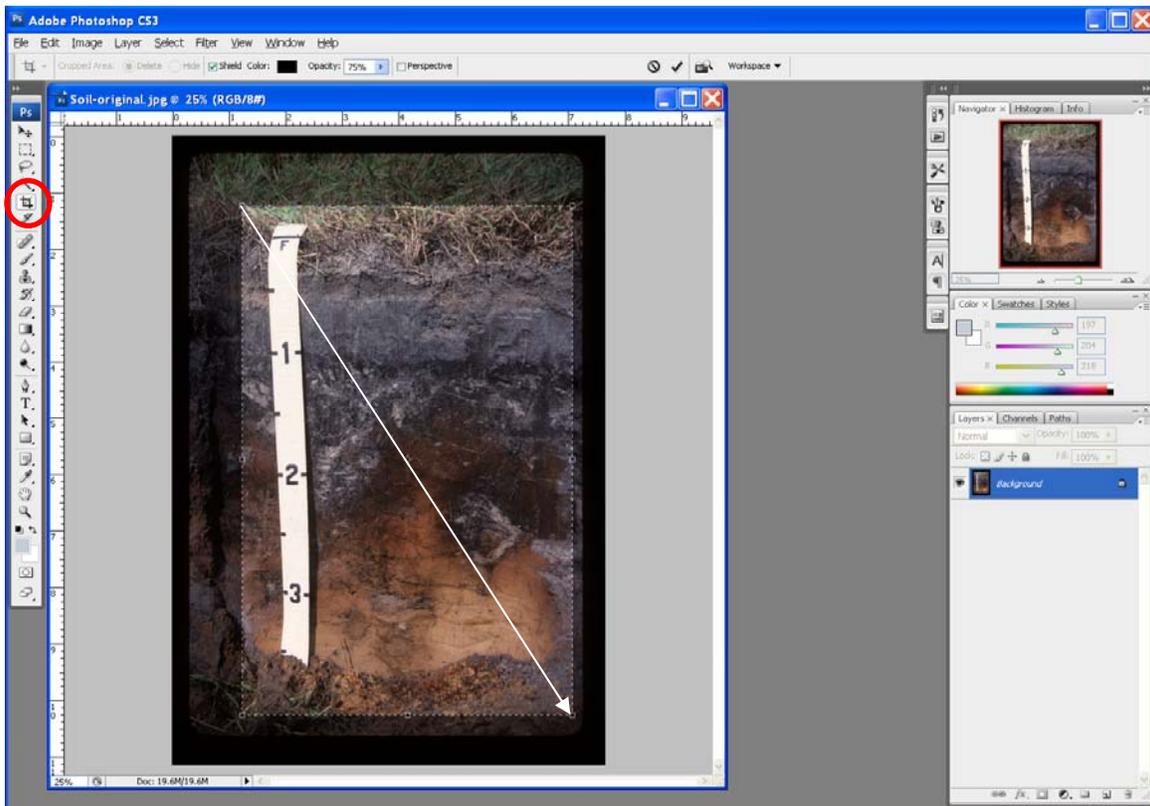
Illustrations and instructions were developed using Adobe Photoshop CS3. Older versions of Photoshop work similarly; however some items will be slightly different.

Launch Photoshop and open the image to be edited. It is best to work on a copy of the original file. This way, if the file is altered beyond repair, you can always recopy and start over.



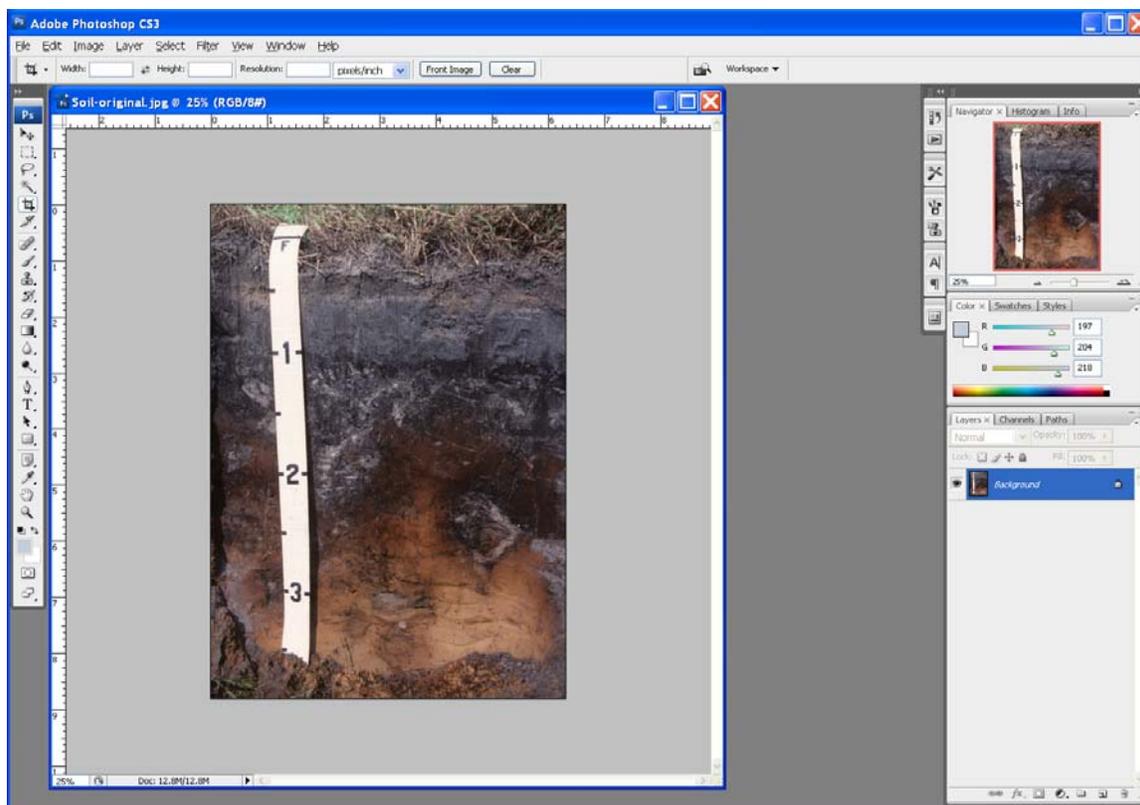
Notes:

Reformat the image to maximize profile exposure and eliminate any unnecessary border area. This can be done using the  “crop” tool. Reposition the tool cursor in the desired location in the upper left corner of the image. Drag and drop the tool cursor to the appropriate location in the lower right corner. The profile should have about 3 to 6 inches of clearance above the soil surface. Try to be consistent with this spacing from profile to profile.



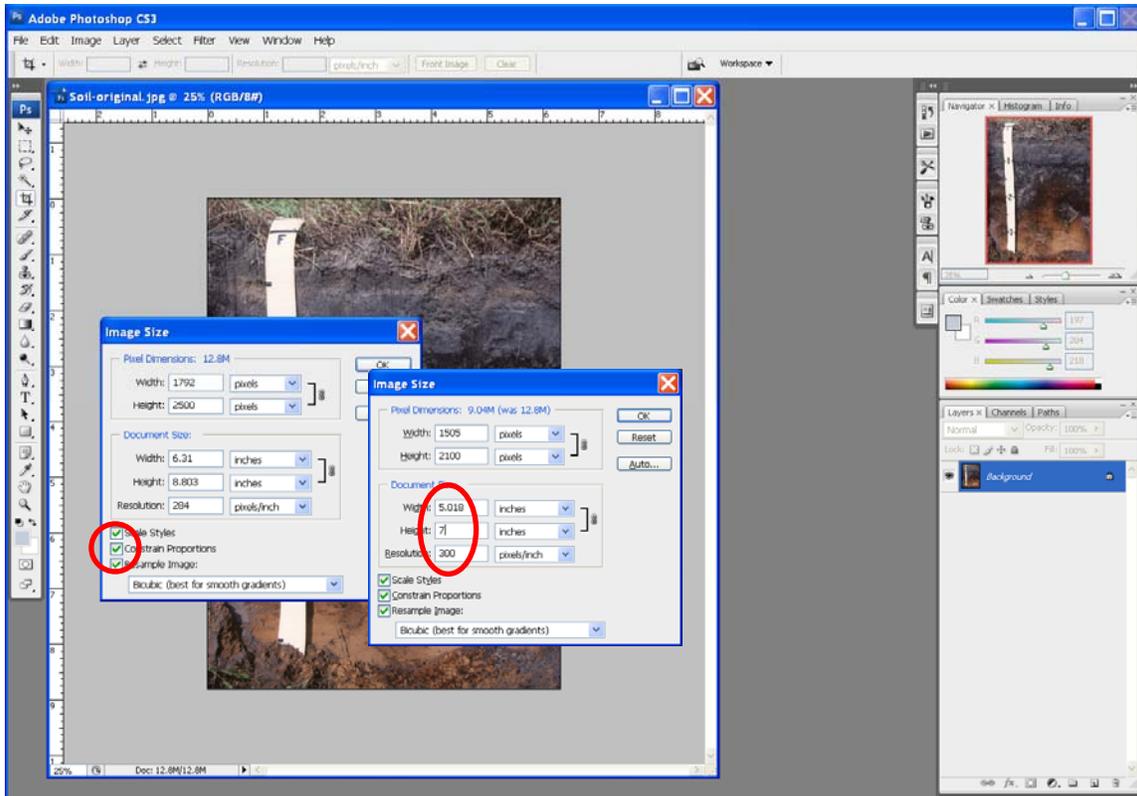
Notes:

Press enter. The file will automatically be re-configured.



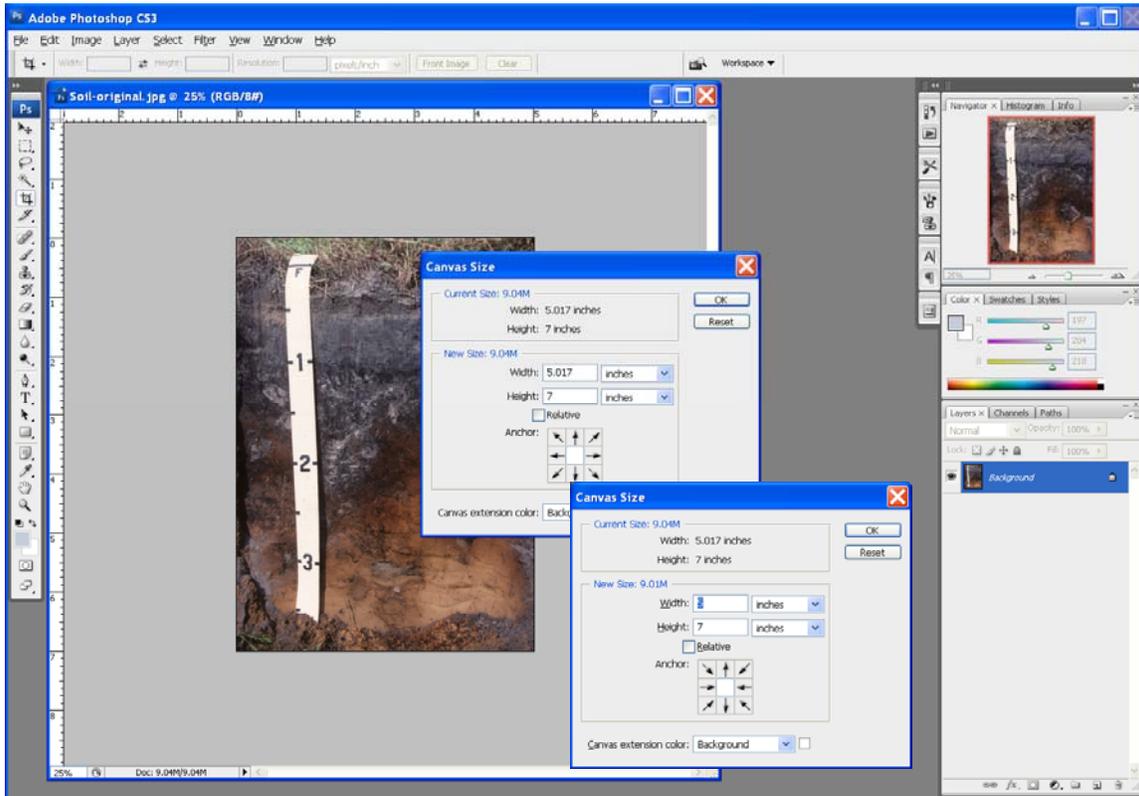
Notes:

Check the image size. [Image/Image Size]. If cropped, the dimensions will need to be adjusted. With "Constrain Proportions" checked, change the width or height to the minimal desired dimension (5 inches in width or 7 inches in height). Each dimension must equal or exceed the minimum size requirement. NOTE: Resolution must be set at 300 ppi for the template to work properly.

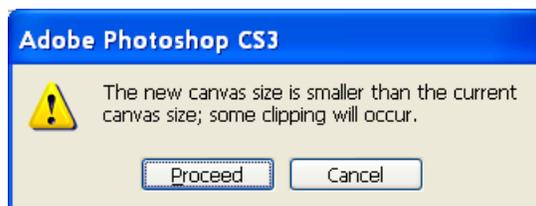


Notes:

The dimensions are reset to a 5x7 format by adjusting the canvas size. [Image/Canvas Size]. In this example, canvas width has been reduced from 5.017 inches to 5 inches. The image height was not changed. Note the image width was narrowed from side-to-side without distorting the image.

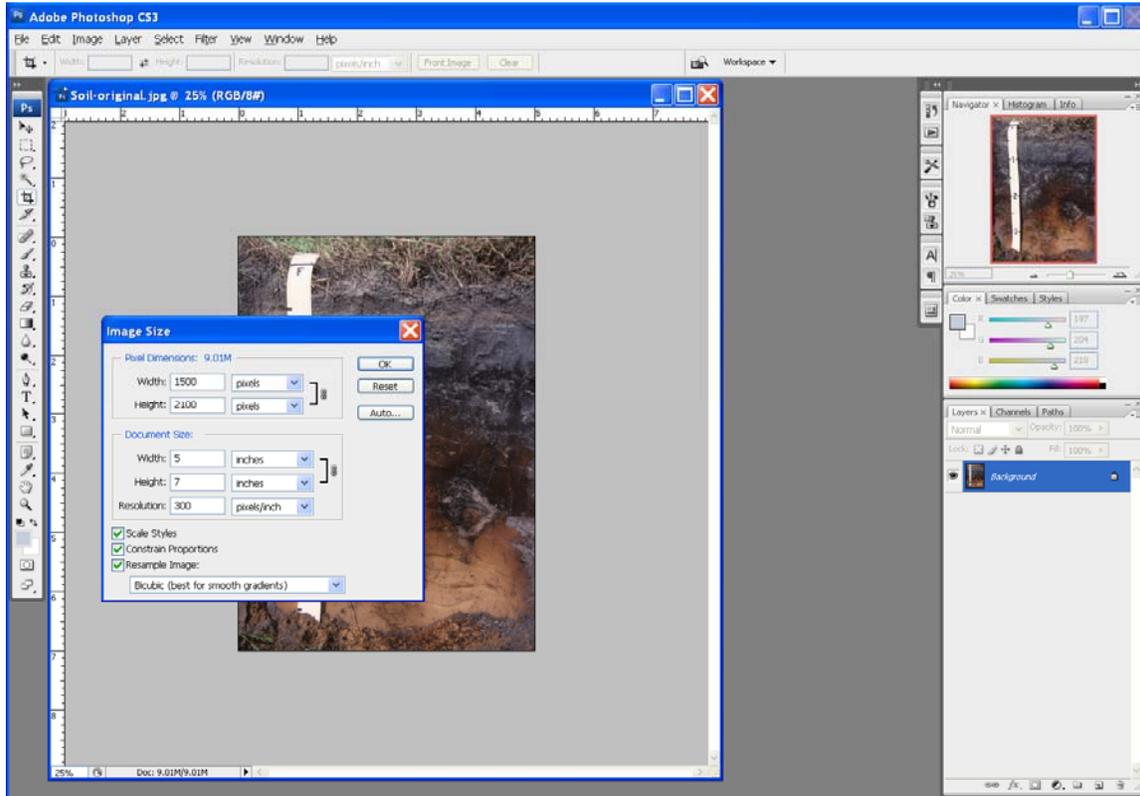


When you click OK, you will be notified by a warning message the new canvas size is smaller and some clipping will occur. Click "Proceed".



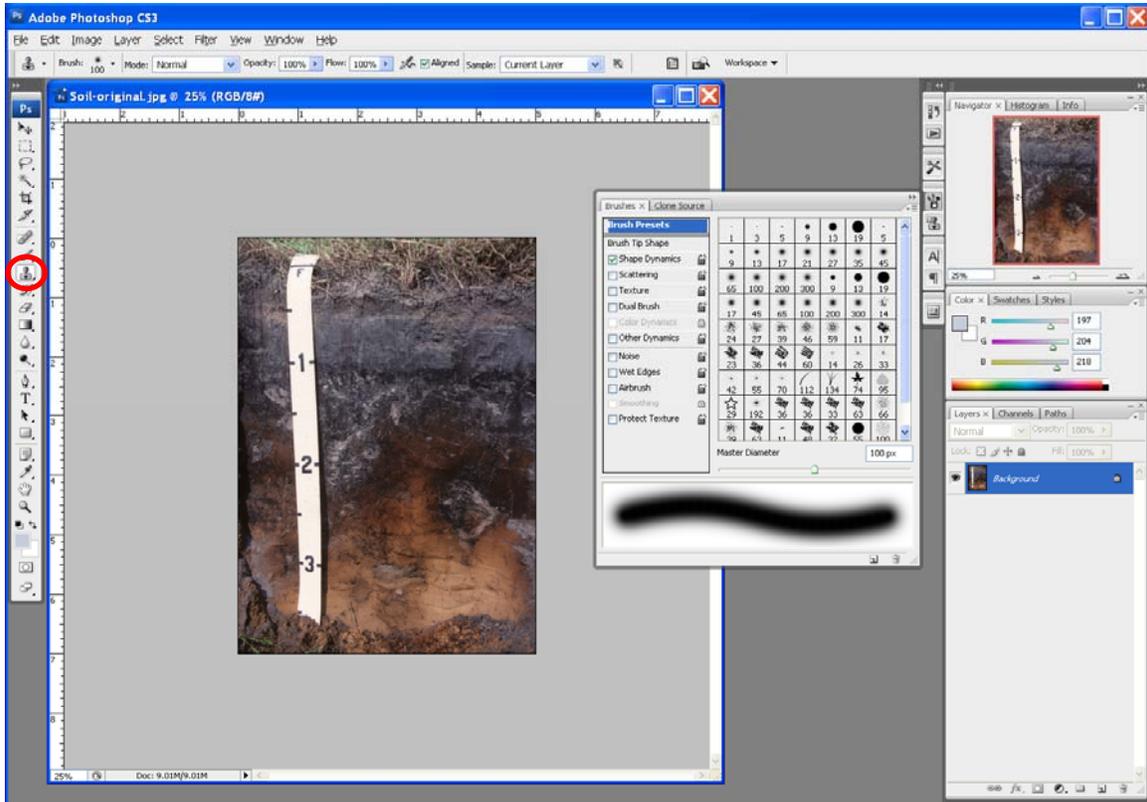
Notes:

A re-check of the image size [Image/Image Size], should indicate the file is now 5x7 at a resolution of 300 pixels/inch (ppi) or a file resolution of 1500x2100.



Notes:

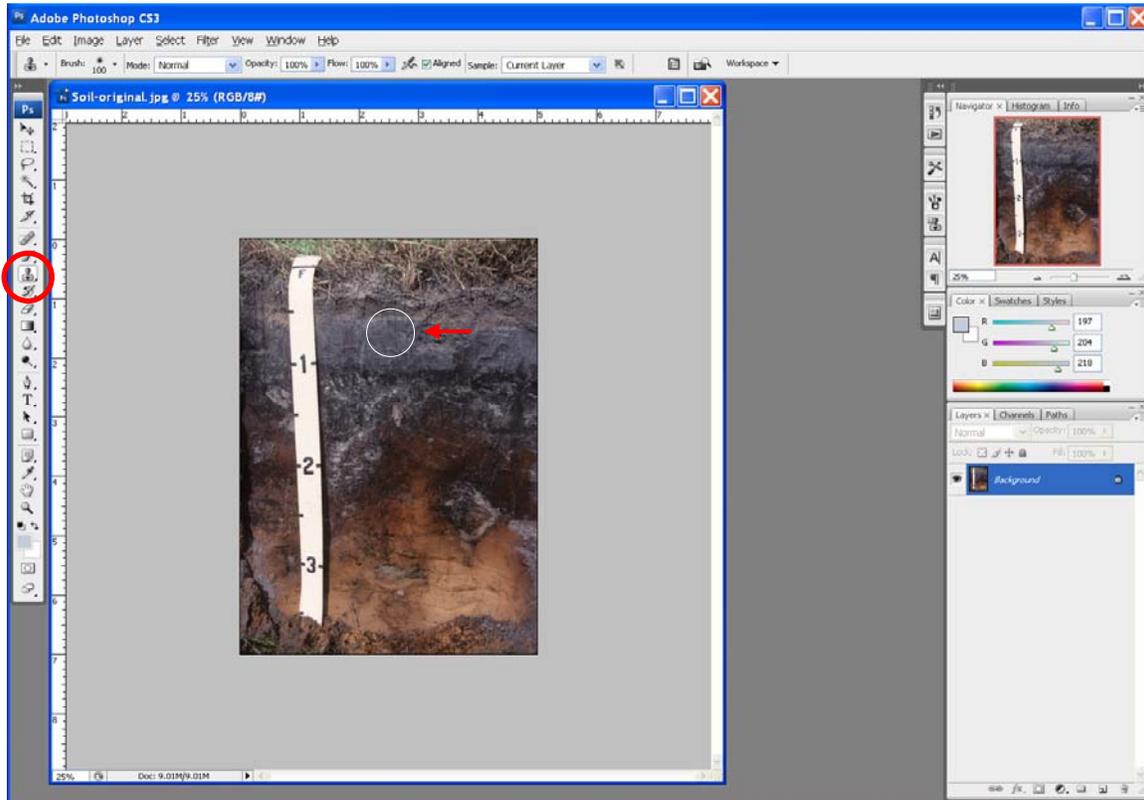
With image sizing complete, you are now ready to edit. If the tape or other scaling tool could not be removed by cropping, the “Clone Stamp Tool”  may be used to cover-over the tape or remove undesirable objects. This is best completed by someone knowledgeable of the soil and skilled with cloning techniques.



To select the proper cloning brush, click on “Window/Brushes”. A good starting point is first “100” tool listed. This tool covers about 100 pixels at a pass and has a feathered edge.

Notes:

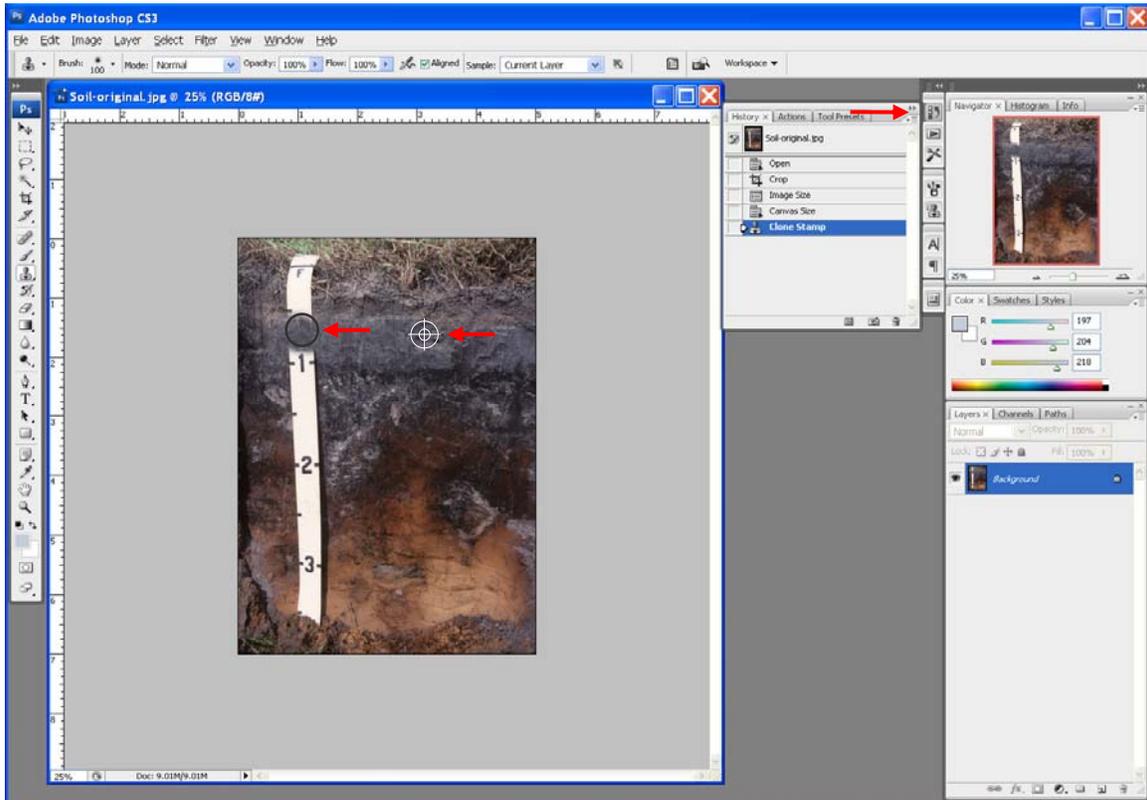
With the clone stamp tool activated, move the tool cursor onto the image. Use Alt+left-click to identify the area to be cloned. Move the tool cursor to the area on the image to be covered or removed.



Notes:

The  indicates the area being replaced.
The  indicates the area being cloned.

With the left mouse button depressed, begin cloning.

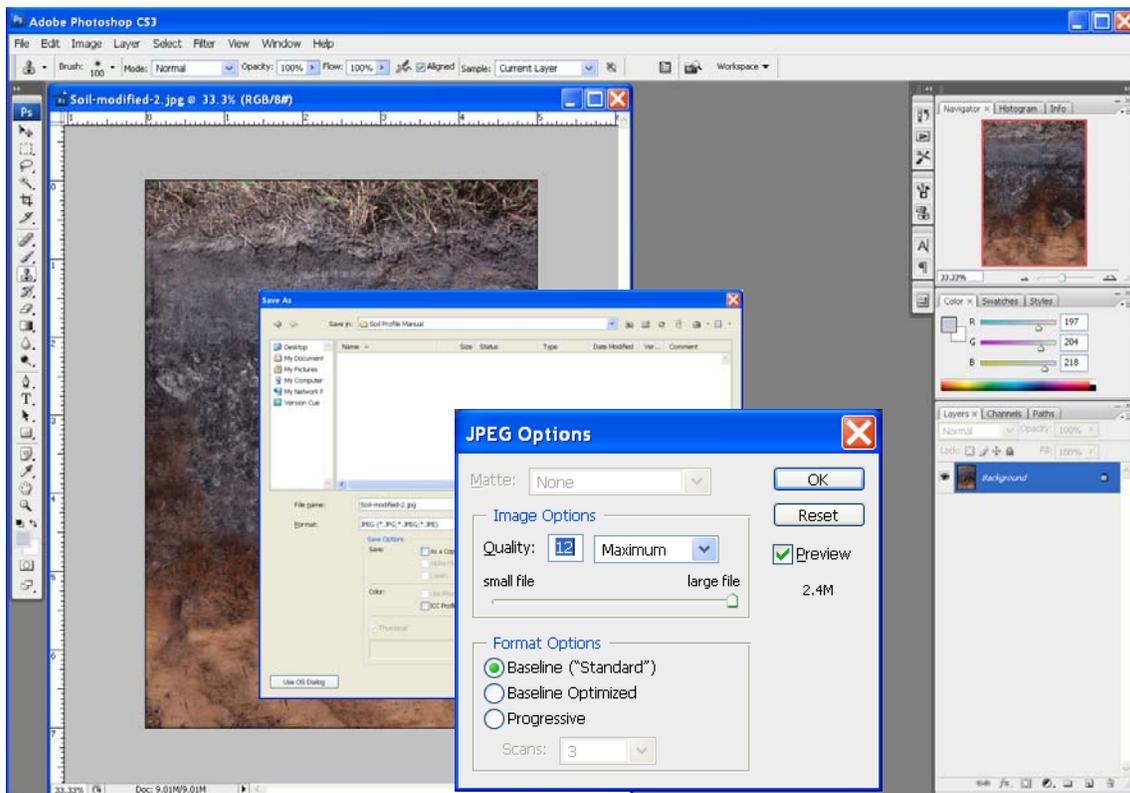


Practice using the tool with its many adjustments, but remember, before making too many changes, you may wish to save as: modification1, modification2, etc.

The “history” view will allow you to go back as far as necessary to undo any cloning sequence.

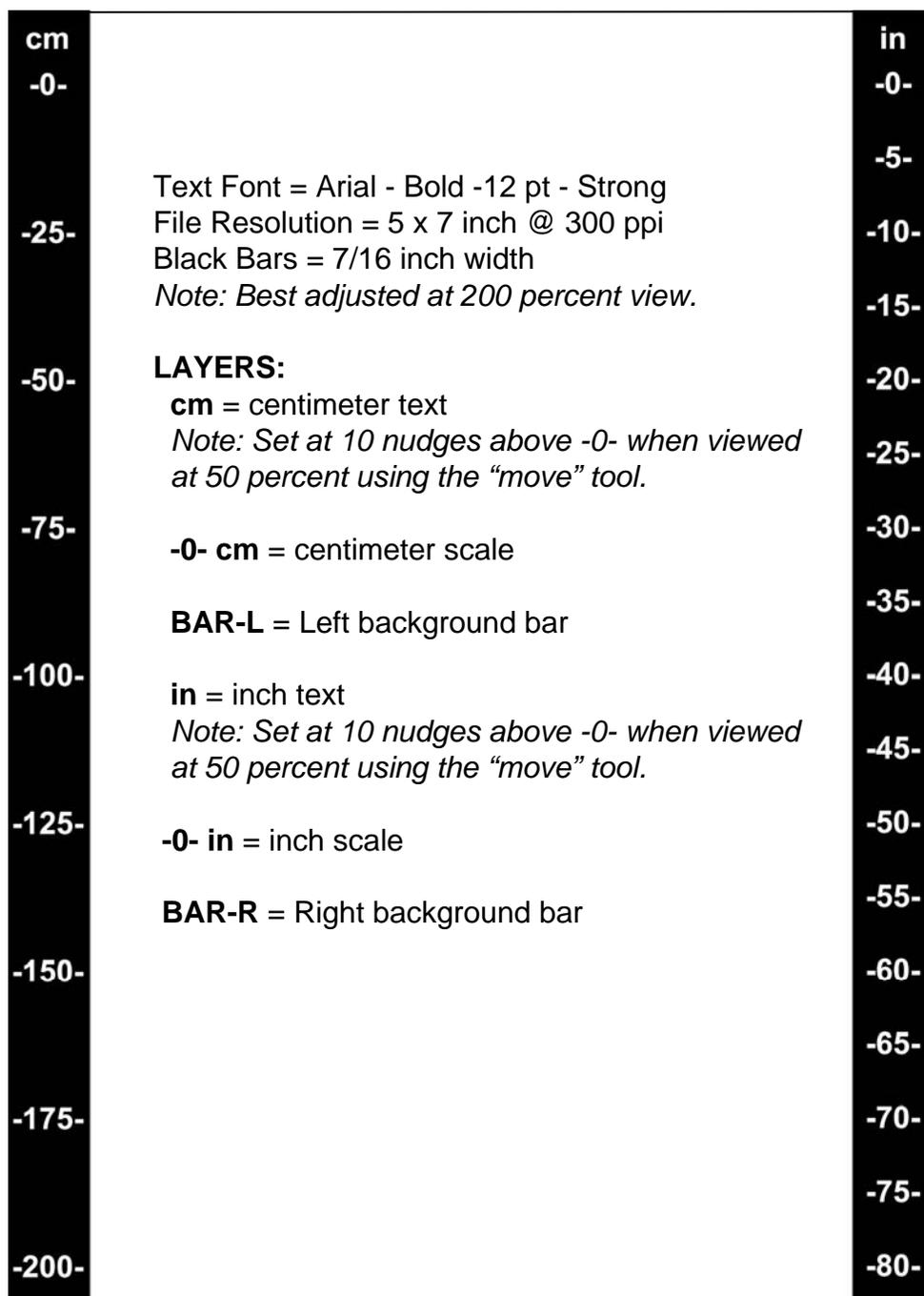
Notes:

Once editing and reformatting is complete, save the file in a ‘jpg” format. The quality setting should be set to “12” to maximum file size and minimize the degree of compression. For format option, use Baseline (Standard).

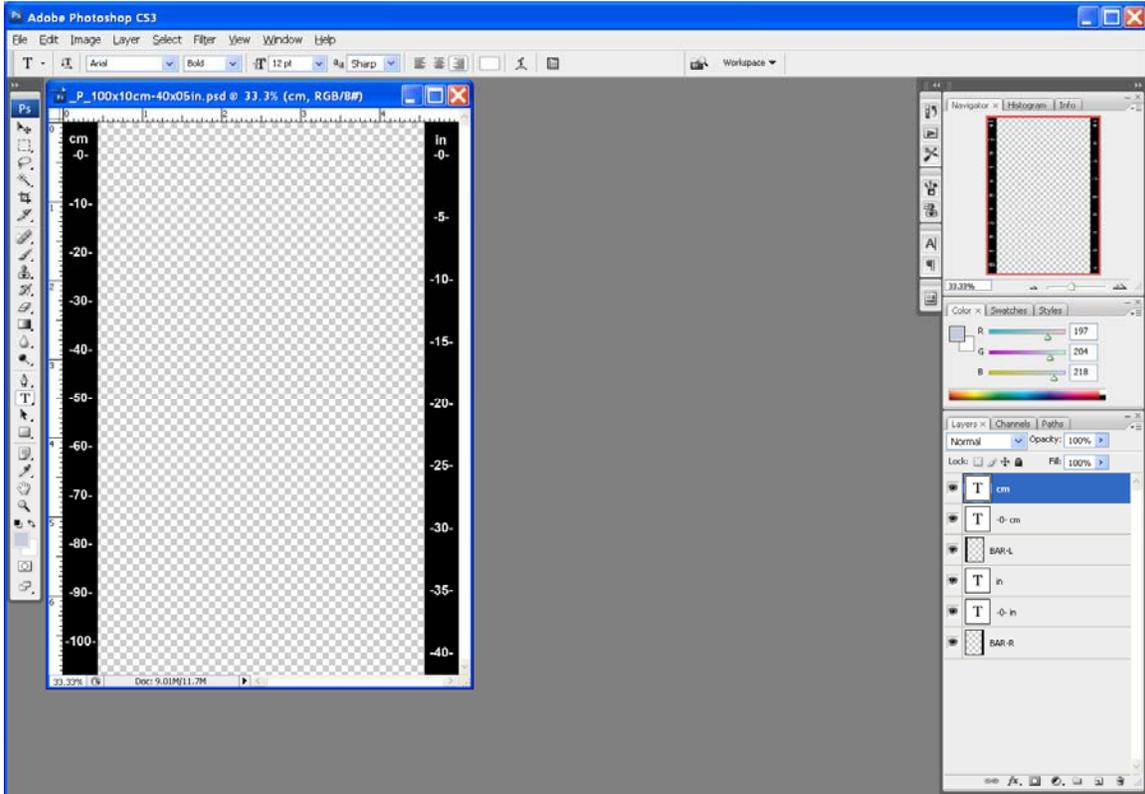


Notes:

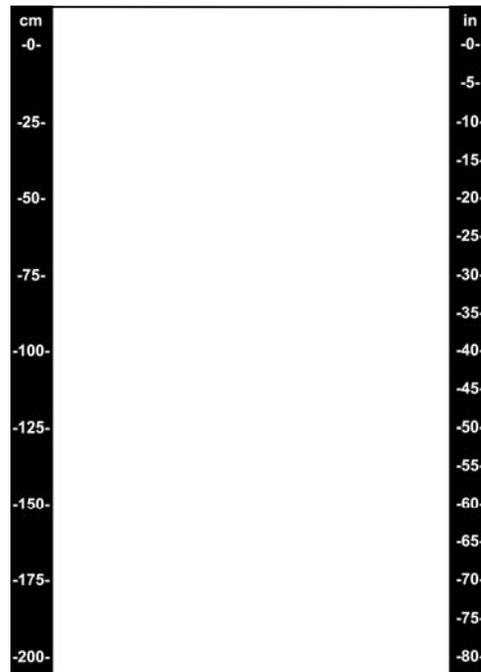
You are now ready to mount the image in a pre-formatted template. Templates are formatted as follows:



Example template.



Once formatted, the image may be reduced in size up to about 50 percent (5x7 inch single-column format to a 2.5x3.5 inch double-column format) without losing legibility.



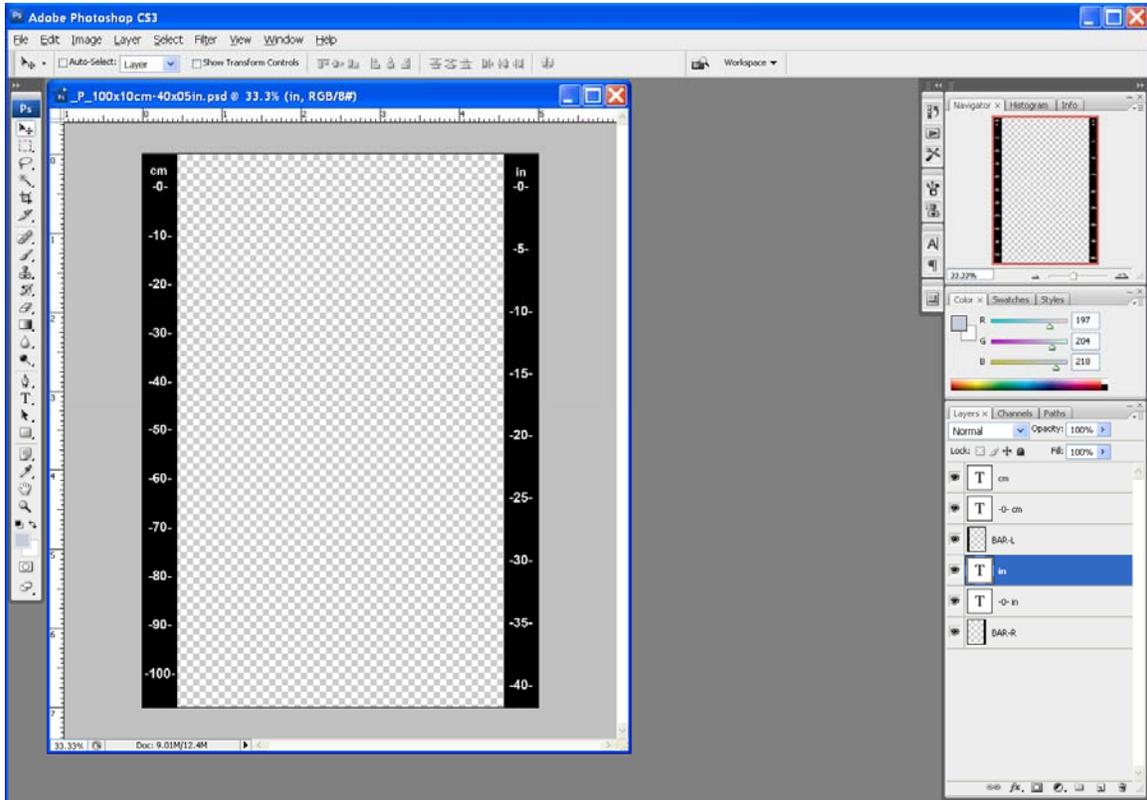
Templates are named as follows:

L = Landscape format; P = portrait format

Depth (100 cm) and increment (5, 10, 25 cm, etc.) - English units (inch).

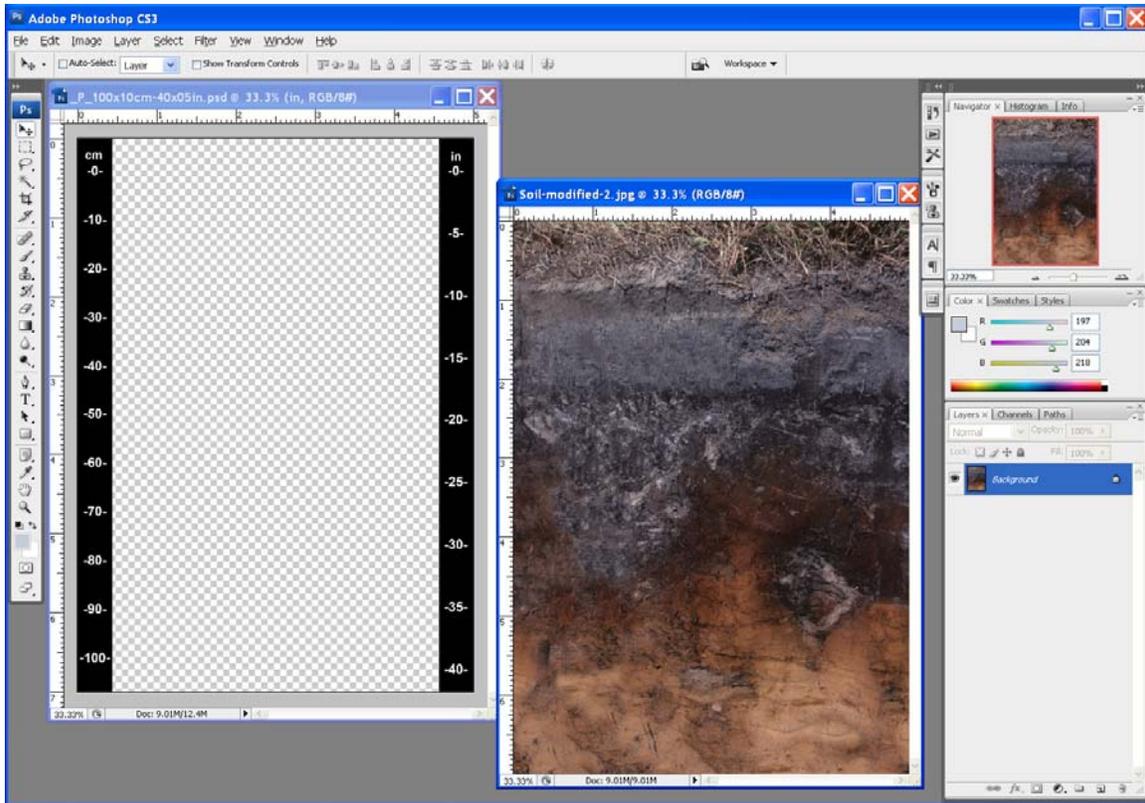
Name ▲	Size	Type	Date Modified
Ps_L_050x10cm-20x05in.psd	571 KB	Adobe Photoshop Image	10/1/2008 12:12 PM
Ps_L_100x10cm-40x10in.psd	721 KB	Adobe Photoshop Image	10/1/2008 12:29 PM
Ps_L_150x10cm-60x10in.psd	676 KB	Adobe Photoshop Image	10/1/2008 11:35 AM
Ps_L_200x25cm-80x10in.psd	750 KB	Adobe Photoshop Image	10/1/2008 11:23 AM
Ps_LX_25mmx01in.psd	445 KB	Adobe Photoshop Image	10/1/2008 11:19 AM
Ps_P_030x05cm-12x02in.psd	609 KB	Adobe Photoshop Image	10/1/2008 12:27 PM
Ps_P_050x10cm-20x05in.psd	757 KB	Adobe Photoshop Image	10/1/2008 12:26 PM
Ps_P_070x10cm-30x05in.psd	783 KB	Adobe Photoshop Image	10/1/2008 12:25 PM
Ps_P_075x25cm-30x05in.psd	763 KB	Adobe Photoshop Image	10/1/2008 12:24 PM
Ps_P_100x10cm-40x05in.psd	802 KB	Adobe Photoshop Image	10/1/2008 12:23 PM
Ps_P_100x25cm-40x10in.psd	781 KB	Adobe Photoshop Image	10/1/2008 12:19 PM
Ps_P_150x25cm-60x05in.psd	855 KB	Adobe Photoshop Image	10/1/2008 12:17 PM
Ps_P_200x10cm-80x05in.psd	997 KB	Adobe Photoshop Image	10/1/2008 12:31 PM
Ps_P_200x25cm-80x10in.psd	920 KB	Adobe Photoshop Image	10/1/2008 1:31 PM
Ps_P_400x25cm-156x12in.psd	1,202 KB	Adobe Photoshop Image	10/1/2008 11:16 AM

Load an appropriate template for the depth of the soil profile. Several templates have been provided for a range of soil depths.



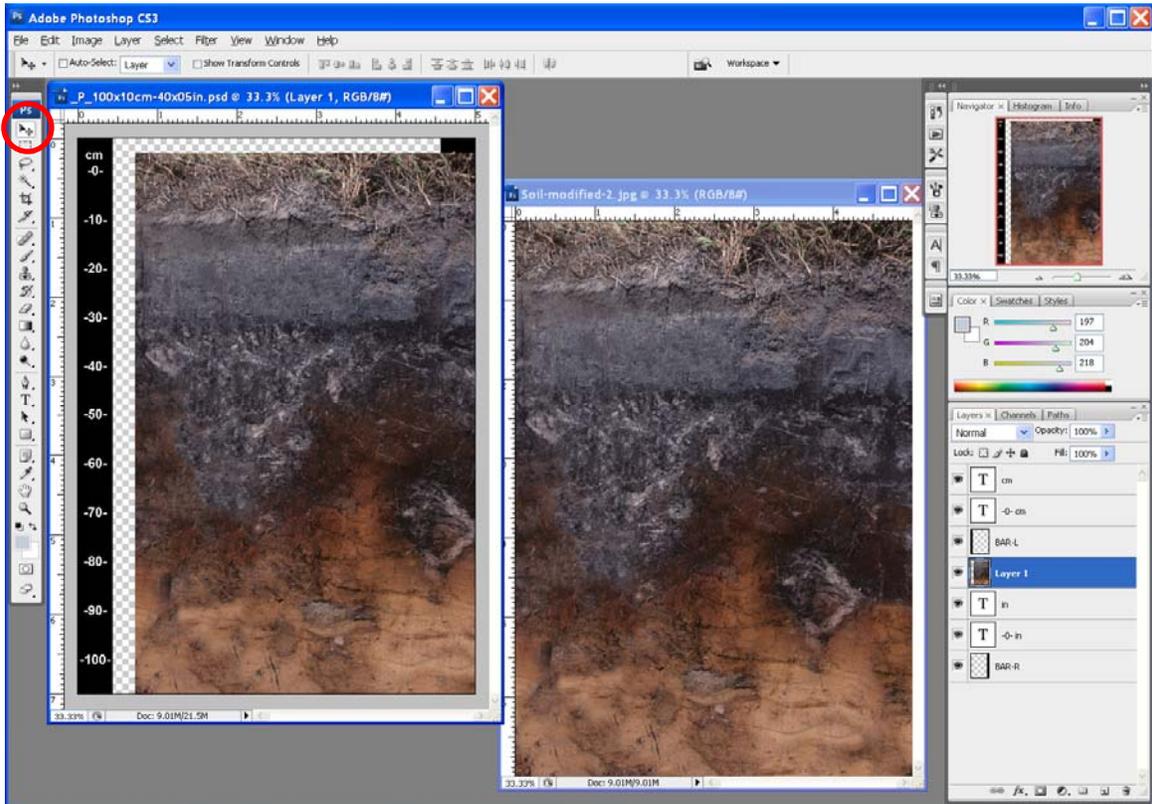
Notes:

Open the latest version of the modified soil profile.



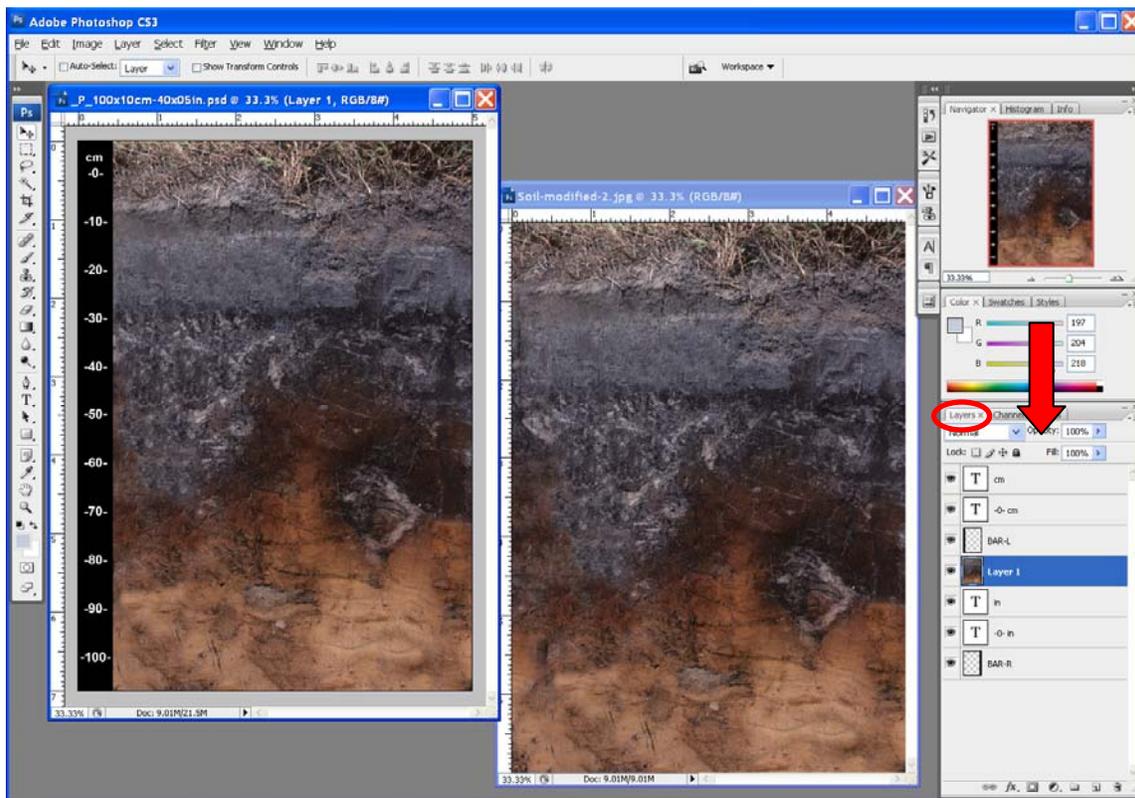
Notes:

Click on the soil file to activate. With the “pick tool”,  left+click on the soil file and drag and drop the image onto the template. Reposition the image in the template. This can be done with the arrow keys or the pick tool.



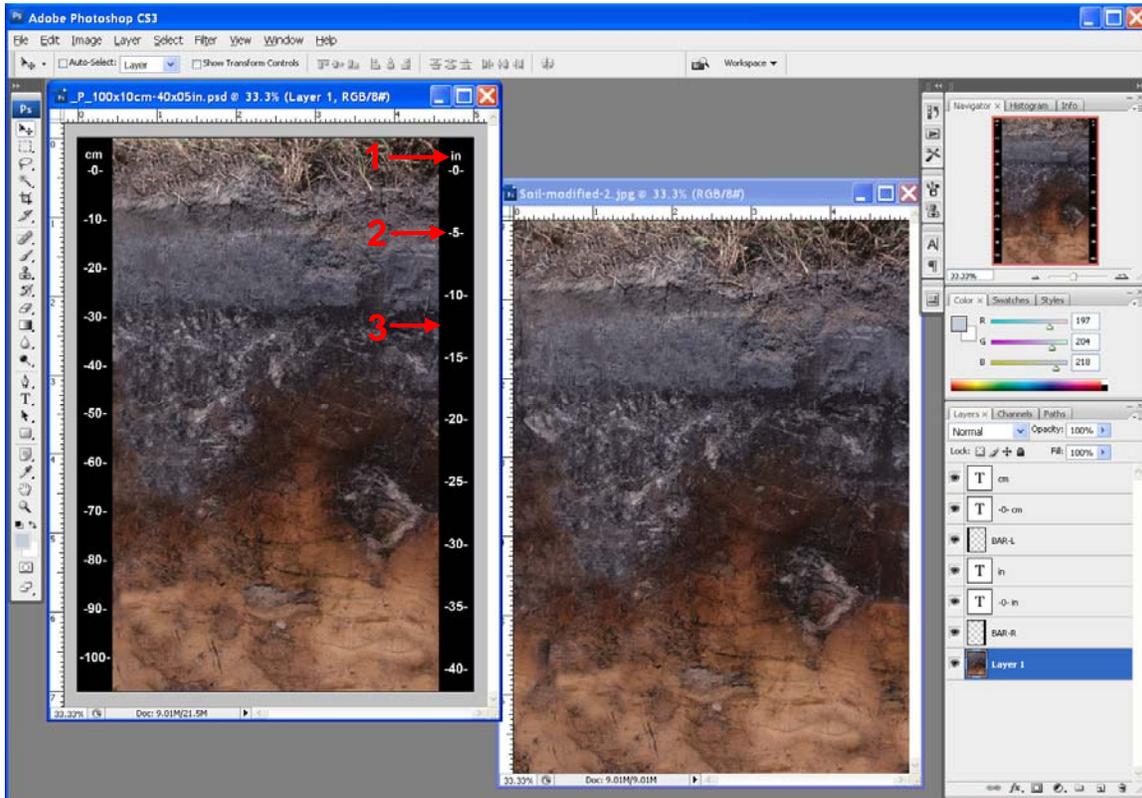
Notes:

Note the “Layers” identified with the template. Drag and drop the soil layer (Layer 1) to the bottom. This will move the other layers to the front of the file.



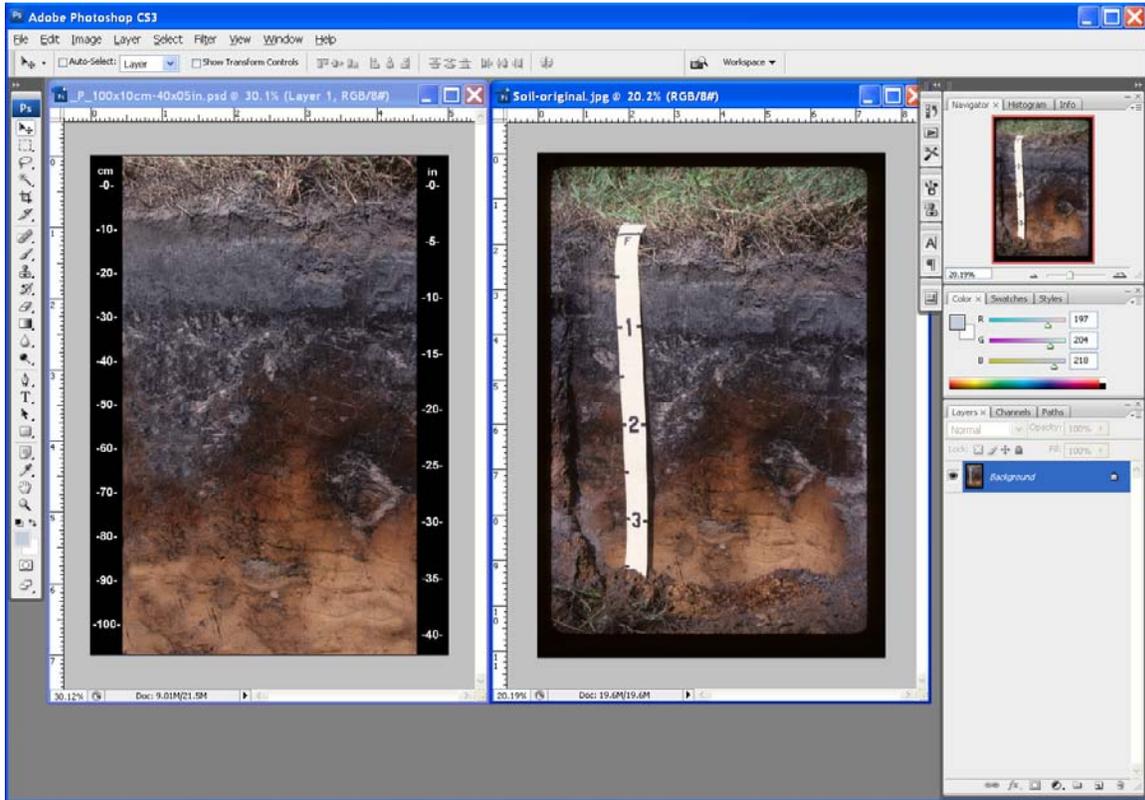
Notes:

Once the layers are in proper sequence, the unit of measurement indicator [1], scale [2], and the black background bar [3] will appear. You are now ready to edit the scale (s).



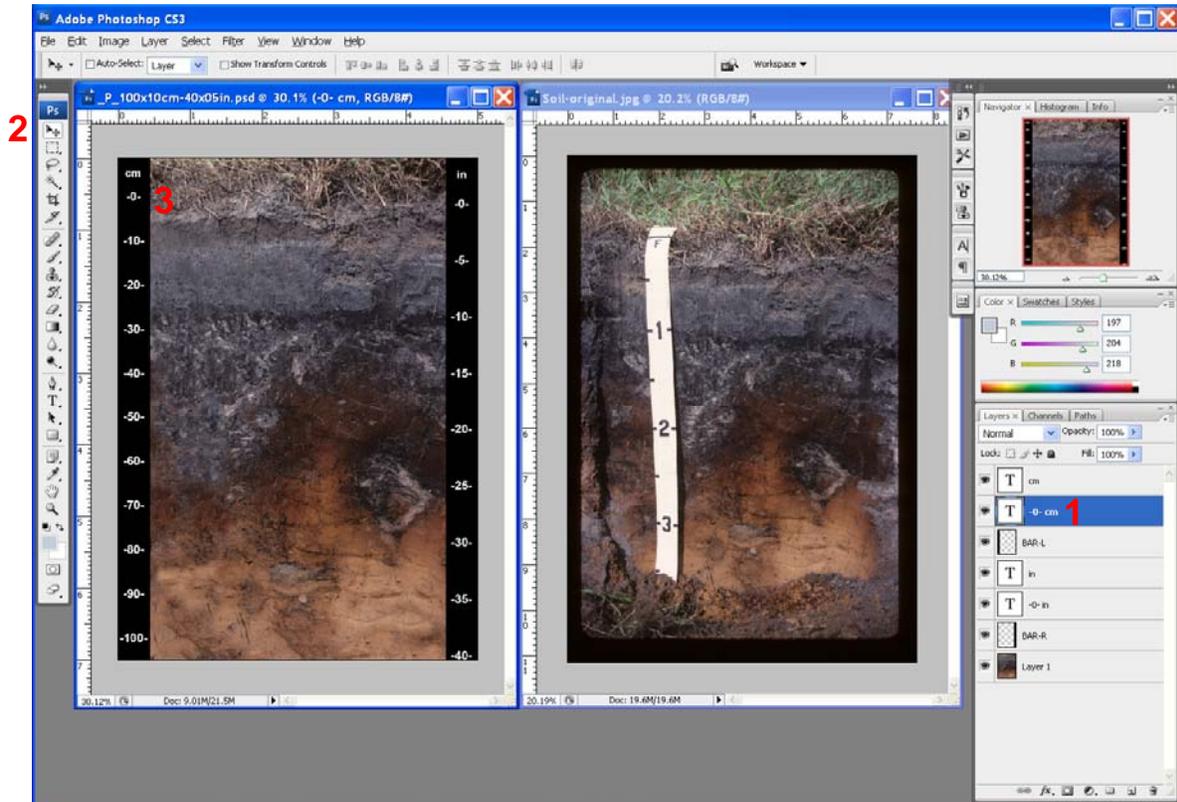
Notes:

Close the modified file and open the original soil file to use as a reference for re-scaling.



Notes:

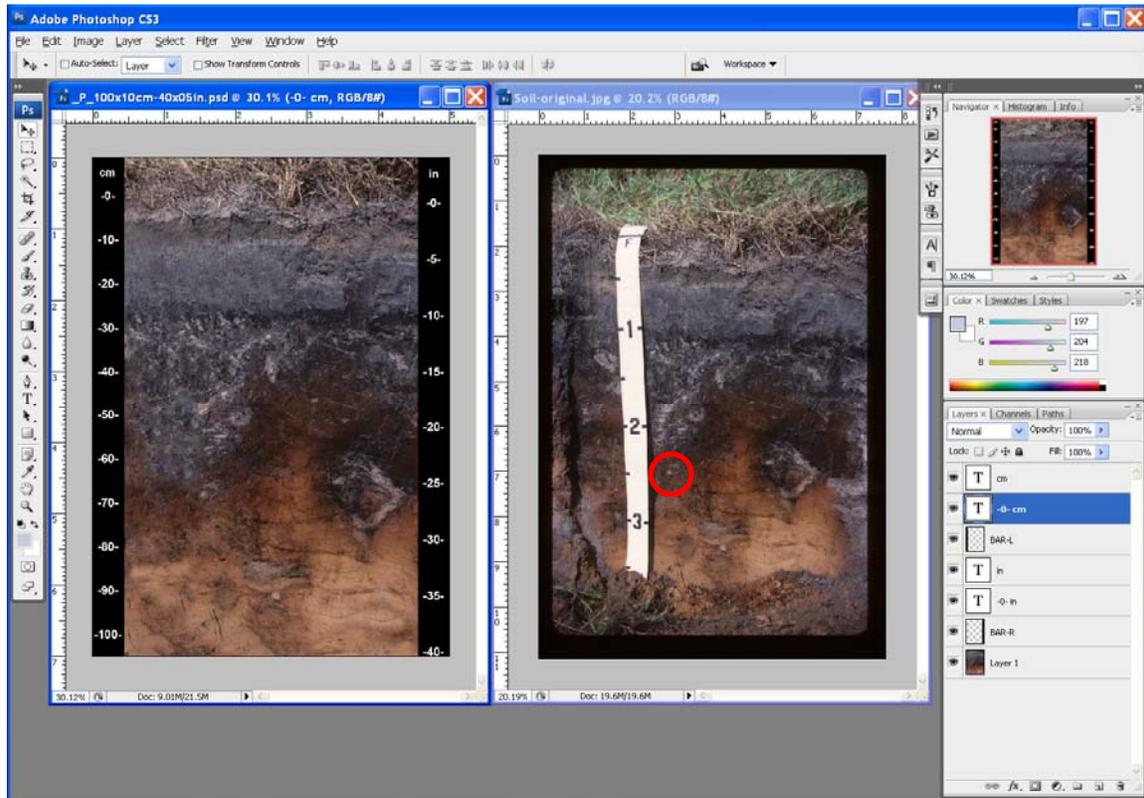
Click on the soil profile template to activate. Click on the scale layer [1]. Activate the pick tool [2]. Use the tool to reposition the scale so that “-0-” for the cm scale is on the soil surface [3]. Repeat the process for the inch scale.



If the scale becomes miss-aligned, use the arrow keys to nudge the scale into place. With the layer active [1], click on the pick tool and use the arrow keys to move the layer.

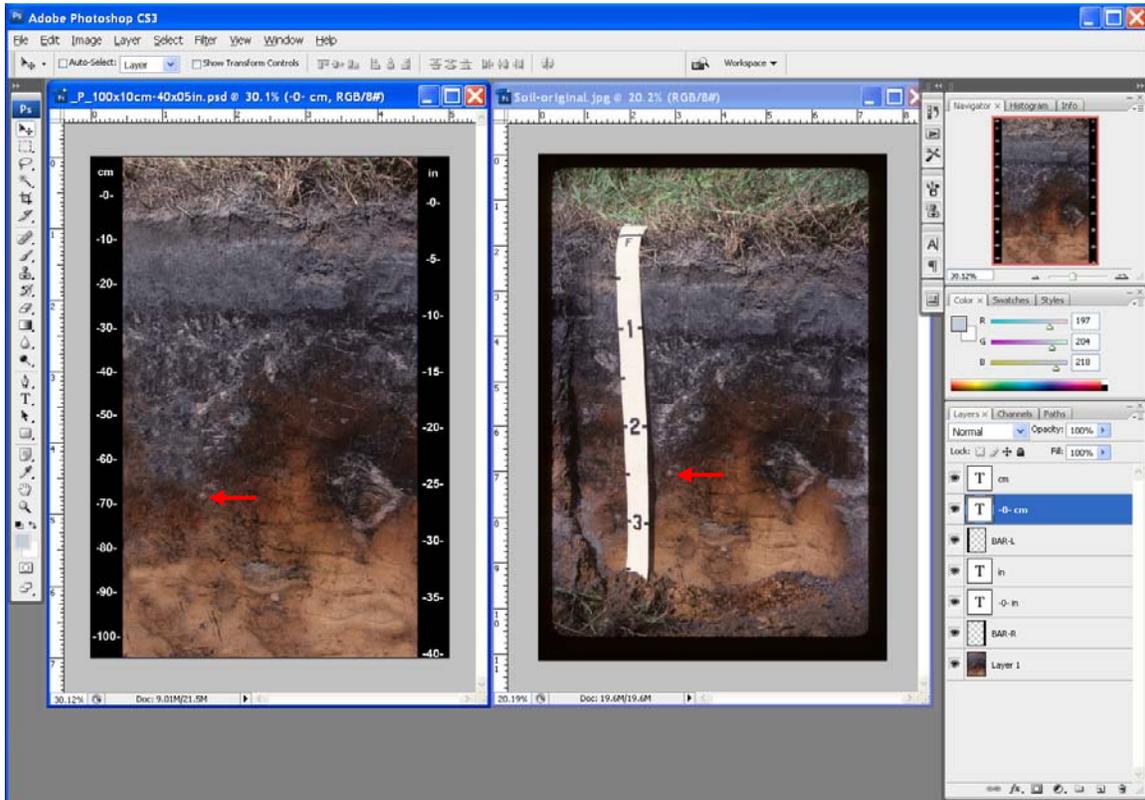
Notes:

In this example, the scale will require editing. Visually locate a point near the center of the image that can be used as a reference. Using a point at the center of the image will keep the scale in a more proportionate location.



Notes:

The point indicated by the red arrow is about 2.5 feet (75 cm/30 inches) from the surface in the original soil profile. However, the same point is located about 68 cm/27 inches below the adjusted surface in the template. The scale will require adjustment.



Notes:

To recalibrate the scale—

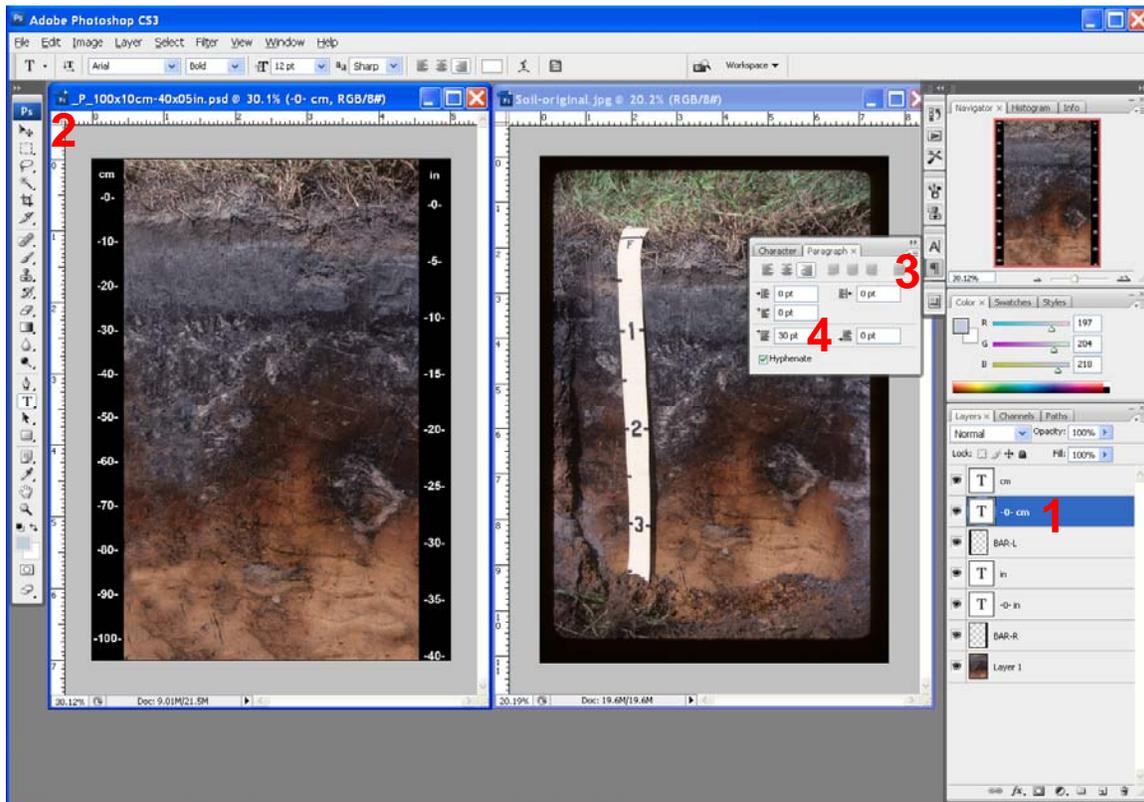
[1] Click on the scale layer

[2] Activate the “Pick” tool

[3] Activate the “Paragraph” palette

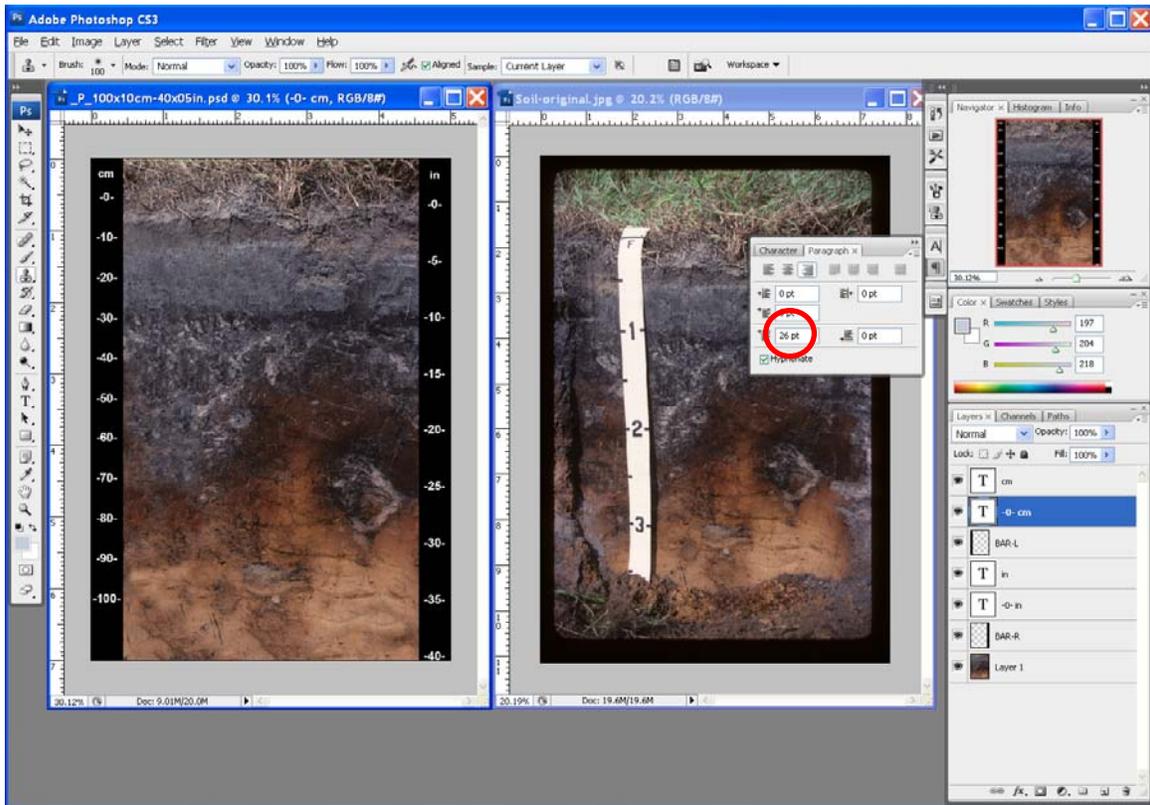
[4] Reset the pt setting and click on the scale in the template. It will automatically reposition.

Continue changing the setting until the scale is correctly positioned.



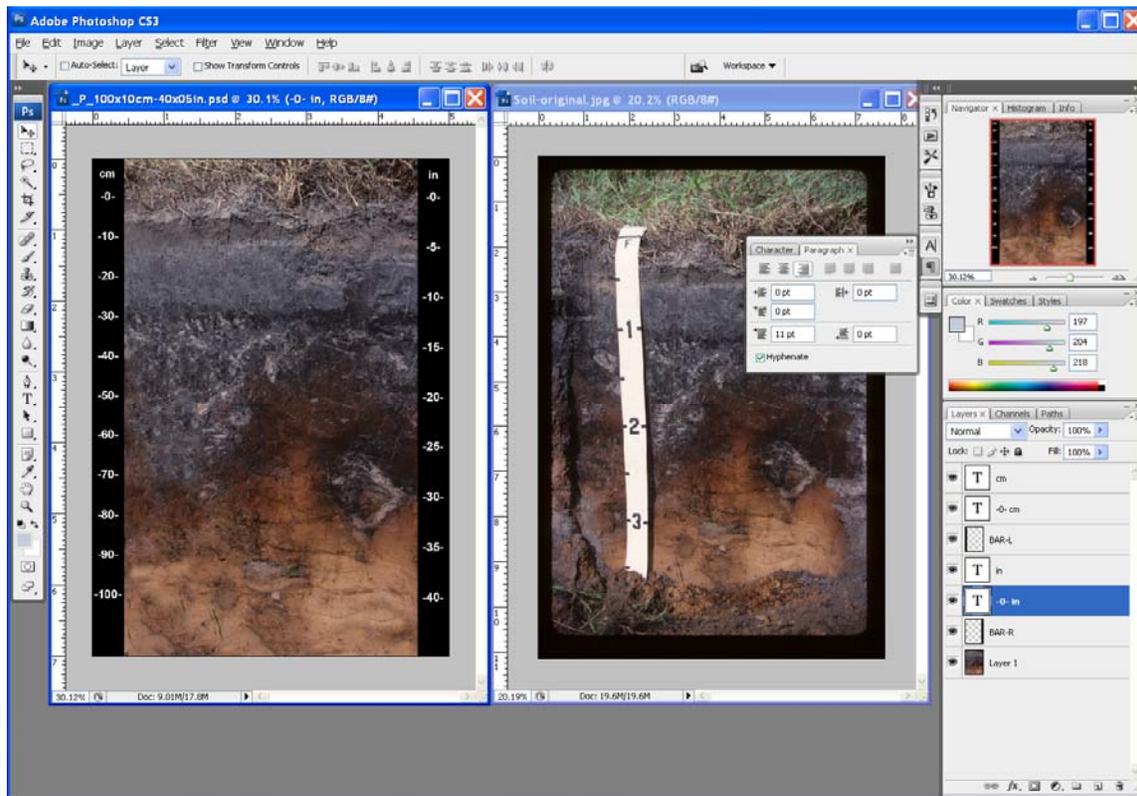
Notes:

Adjusting the paragraph spacing for the centimeter scale (-0- cm) to 26 pt aligns the reference point to about 75 cm/30 inches.



Notes:

The process is repeated for the inch scale. This adjustment required setting the spacing at 11 pt. For subtle changes, the numbers can be adjusted by as little as one-hundredth of an inch.



Close the original file window

Notes:

Once the scales are in place, the “cm” and “in” indicators are reset.

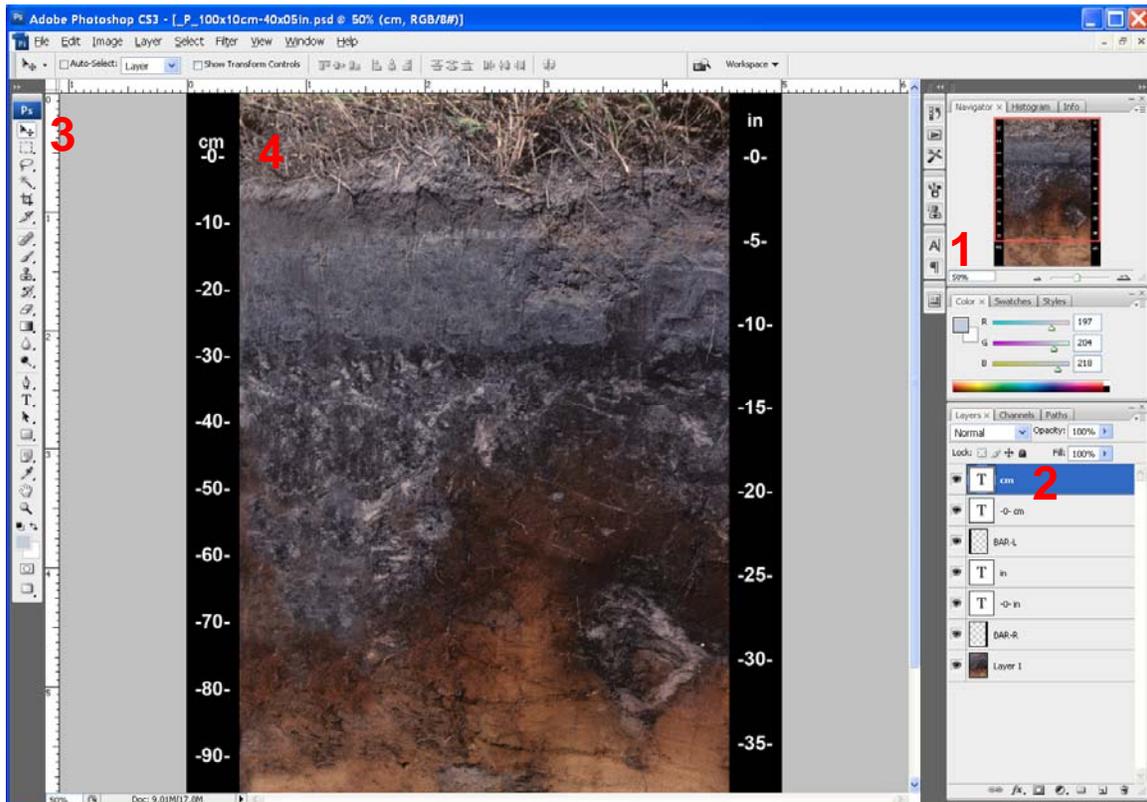
With the window set at full view:

[1] Set the image view to 50%.

[2] Activate the (cm) layer.

[3] Activate the pick tool

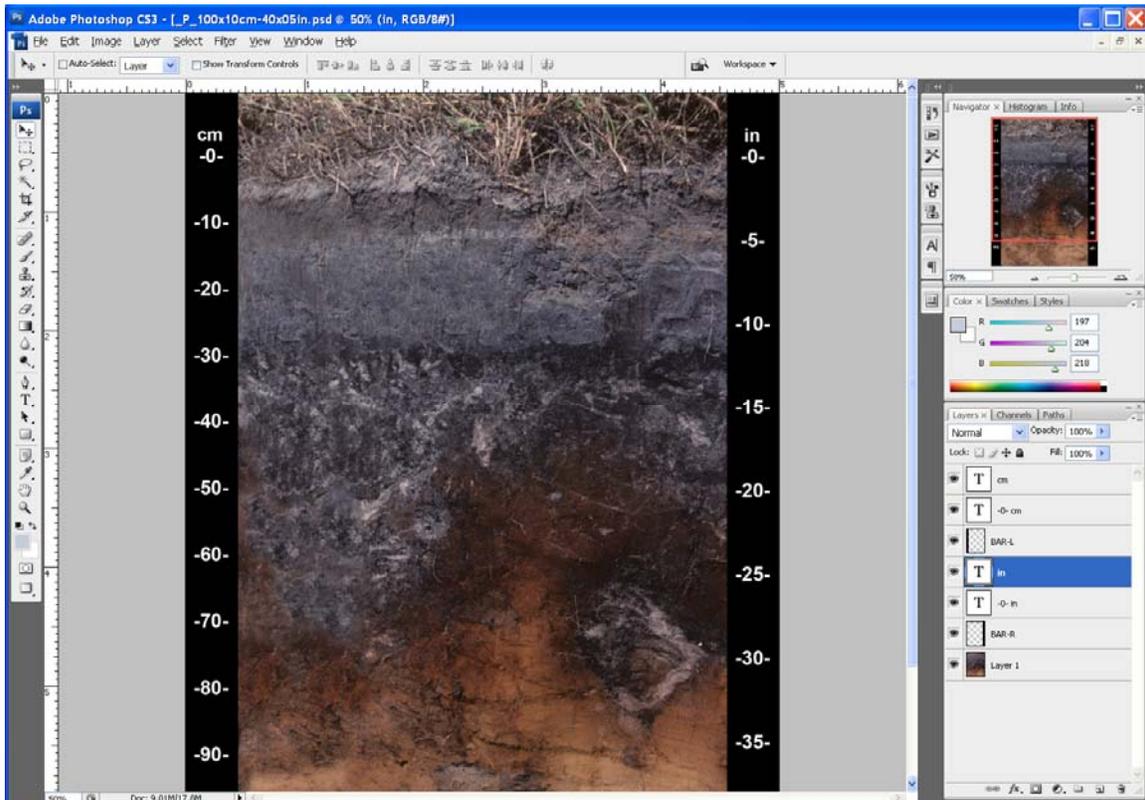
[4] Using the arrow keys reposition the scale indicator as to set it directly above the “-0-” mark.



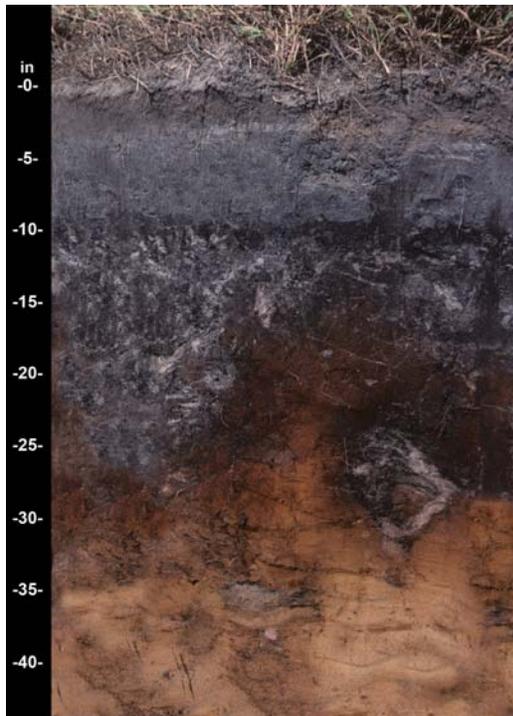
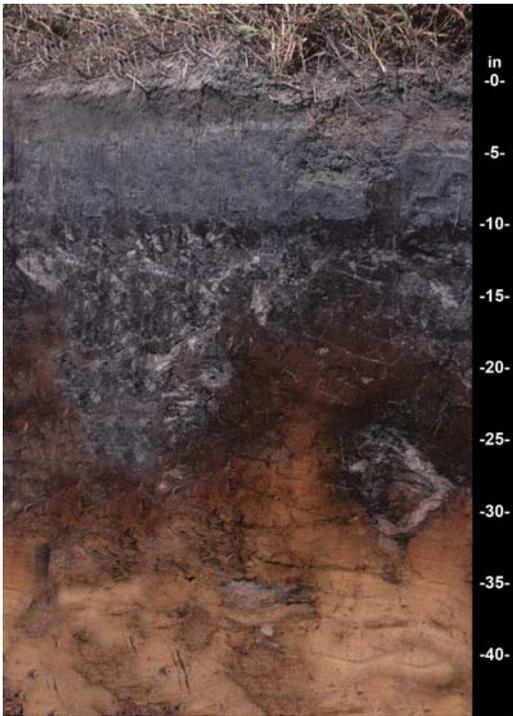
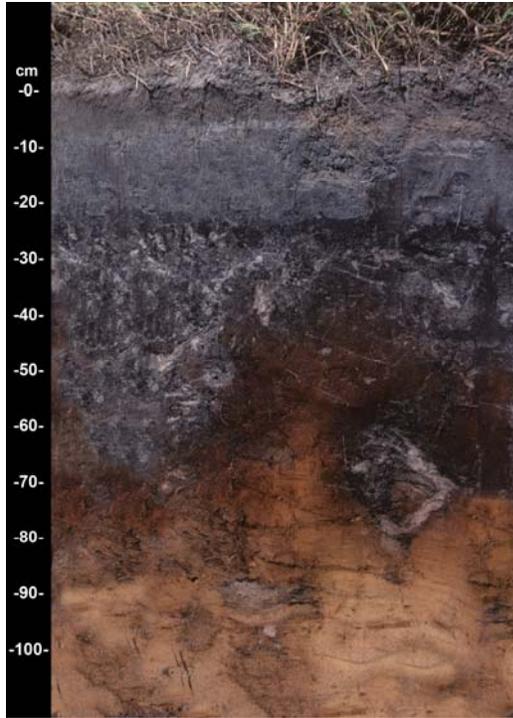
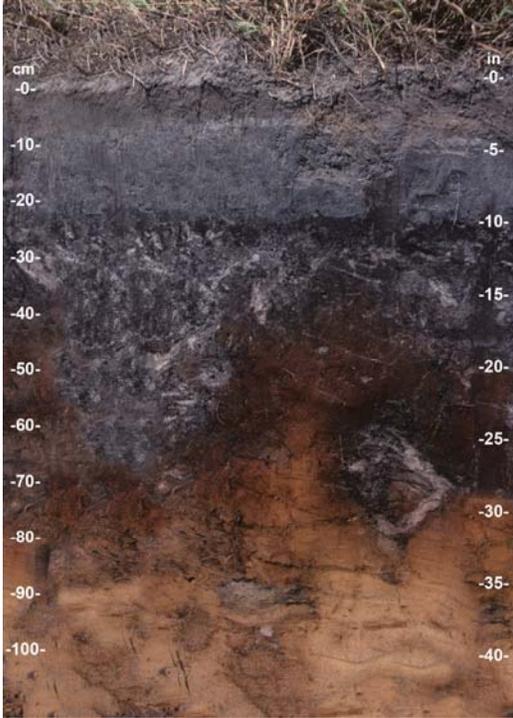
Notes:

- [5] Using the arrow up key, nudge the “cm” indicator upward 10 clicks
- [6] Repeat the process the “in” indicator.

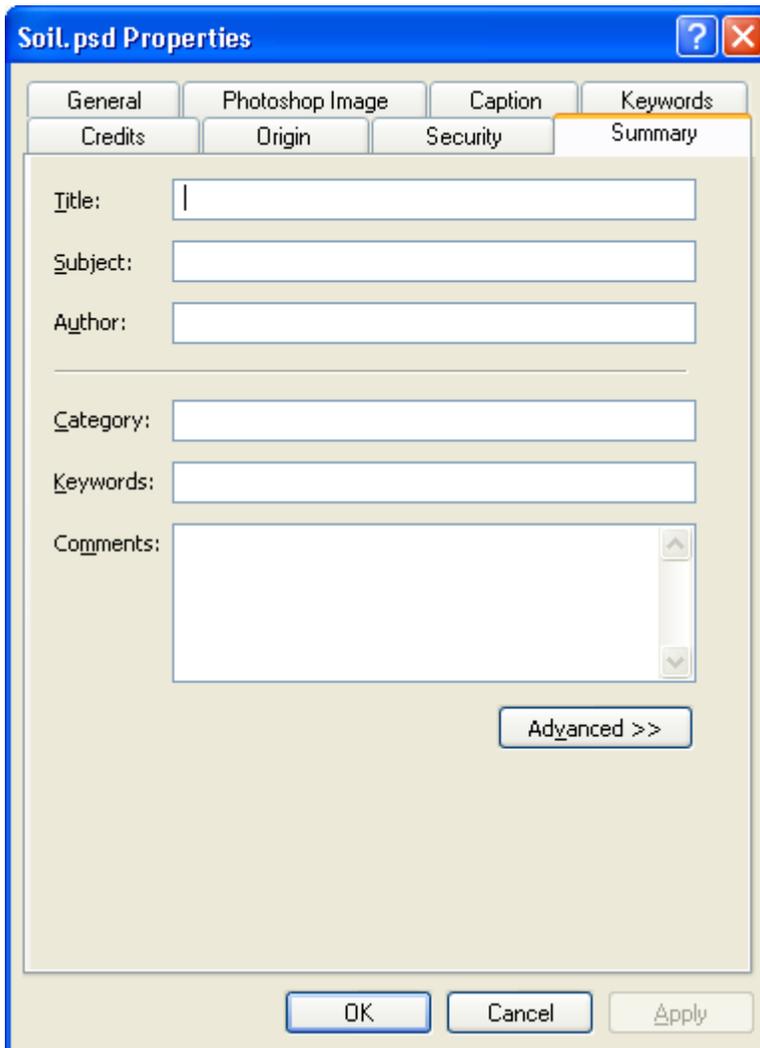
The scales and their indicators are correctly positioned.



The stored layers (or objects within a layer) of the .psd (Photoshop) file may be simply re-positioned to create a variety of additional formats.



Once the editing is complete, in windows explorer, right-click on the file name and open the properties file. Click on the “summary” tab.



Complete basic information about the file. Press “Apply” and “OK”.

Soil.psd Properties [?] [X]

General Photoshop Image Caption Keywords
Credits Origin Security Summary

Title: Soil Name

Subject: Soil Profile

Author: Your Name or Photographer's Name

Category:

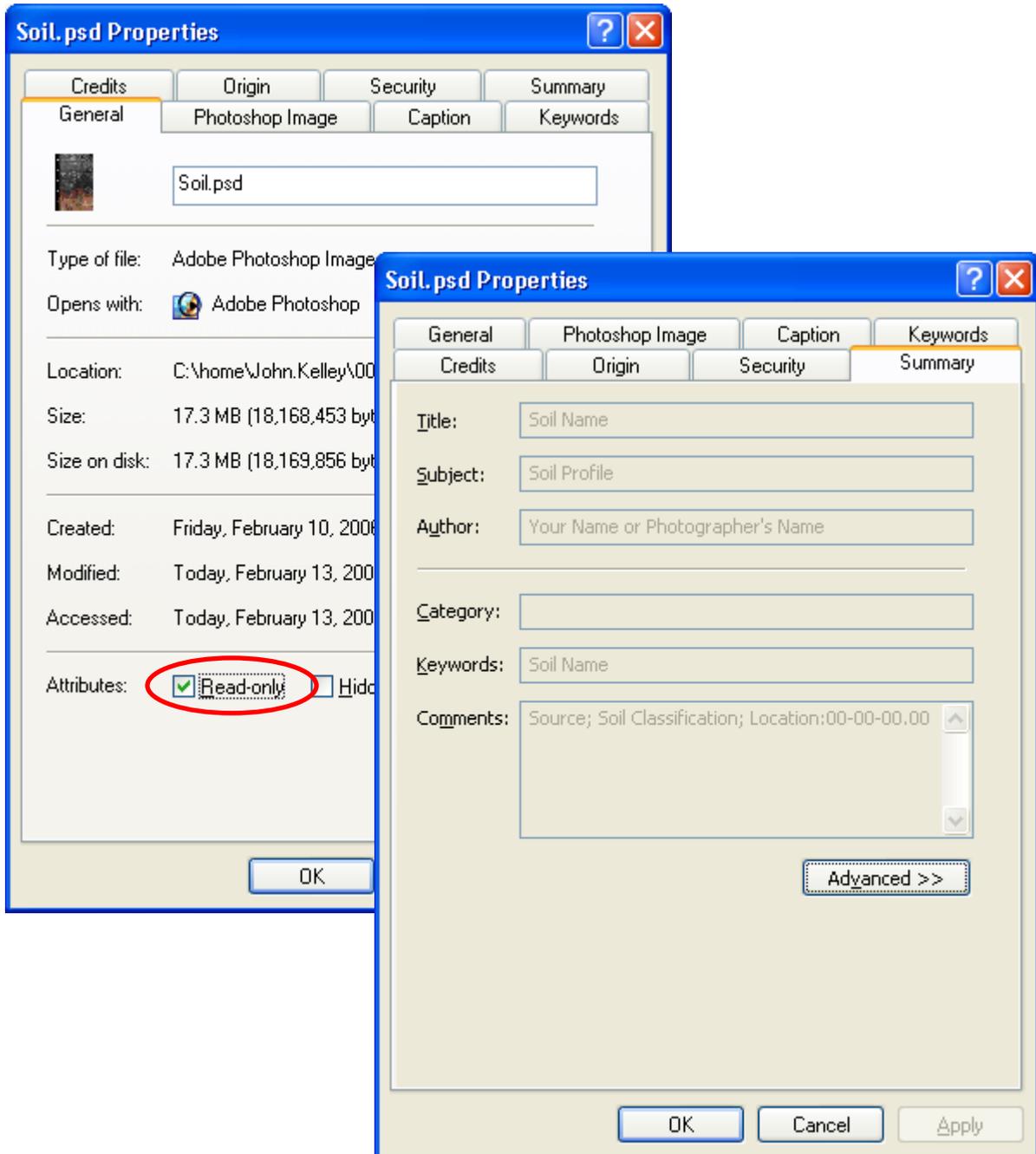
Keywords: Soil Name

Comments: Source; Soil Classification; Location:00-00-00.00

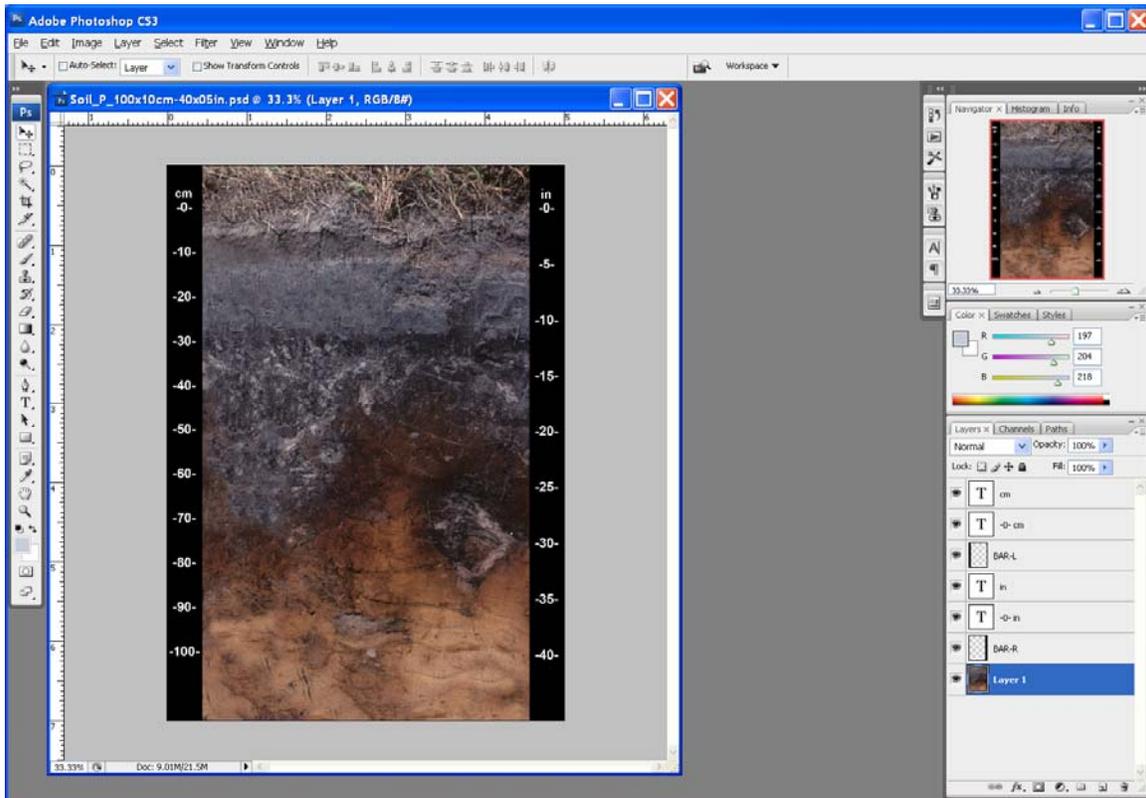
Advanced >>

OK Cancel Apply

Right-click on the file name and change attributes to “Read-only”. If the file is not stored as “read-only”, the summary information will be lost if the file is modified at a future date. Once the “read only” option has been assigned, the summary information may be available, but can not be edited until the “Read-only” box has been unchecked.



CONGRATULATIONS! You have now created a scaled soil profile image. Rename the file and save in a “.psd” format. Be careful not to save the file as to overwrite the original template. Saving the file in a pdf format will keep the layers active for future modification. Also save the file as a “jpg” formatted file.



If the file is saved in a format other than “psd” the layers will be merged into the background and cannot be edited. If the file is saved in the “jpg” format, make sure to set the quality setting to “12”.

Helpful Hint: Copy and store the templates in another folder as backups.

Notes:

General Formatting Concepts:

The original image file can be in any dimension and reformatted to one appropriate for use in the a printed report, electronic document, or for posting on the web. The 5x7 @ 300 ppi setting was used in this document to encourage uniformity and is consistent with USDA publication standards. Generally, images to be used in print form should be captured at a resolution of 300 ppi; for CD products 150 ppi, and for web applications 72 ppi. Not resampled to a higher resolution.

It is best to capture the image at the highest possible resolution and downsize as needed for a particular application. For example, coping and downsizing a 300 ppi image to 72 ppi will yield the same visual quality if viewed on a computer screen because PC screens project at 72 ppi. However, coping and upsizing a 72 ppi image to 300 ppi for print will yield a significant reduction in visual quality of the print product as compared to the same image captured at 300 ppi.

General Editing Concepts:

Once editing has begun, changes may not be reversible. Always keep a copy of the original image and create subsequent modification versions.

Exhibit due diligence and good judgment when altering an image for publication. It is assumed by the reader the image is true and representative. Any improvement that could be obtained by repositioning the camera or taking extra time to prepare the site may be an appropriate alteration. Examples include, removing a power-line from a landscape, removing extraneous materials around a soil pit, or roots from a soil profile. However, images should not be published as one soil and with slight modifications, re-published as another.

Final Thoughts:

Learning to edit and format images is a time-consuming process. It may take several hours of training or simple trial-and-error to reach a comfortable level of proficiency. Be patient, the end result is worth the effort. GOOD LUCK and please call as you have questions.