

Chapter 1: Understanding Nondestructive Editing

In This Chapter

- ✓ Preserving pixels by using safe tools
- ✓ Protecting the Background layer
- ✓ Recovering from overediting
- ✓ Copying visible layers to new ones

Change. Count on it. Change is the only constant. This chapter is all about change, as in changing your mind and not having to work hard to make a change. You read how to store all of your edits to a Photoshop file in layers, beginning by creating a backup of the Background layer. You understand how destructive tools work and how to replace them with safe ones. You use layers to store adjustments, modifications, and retouching. You discover how to rework an overedited area without having to redo the whole file. You begin to think about editing in a way that always lets you go back and . . . change your mind. Think of this chapter as revealing how to have unlimited do-overs forever!

Artist Matt Lamb says that, “a painting is finished when a dealer takes it out of [my] studio by force and hangs it in the house or office of a client.” That works for painters, sculptors, and other artists who deliver one-of-a-kind works. Imagine how life would be for them if they didn’t know when a work was done.

Now understand that as a digital photographer, your life is that of an artist whose work never has to be finished. The reason for the possibility of the neverending story is, of course, Photoshop. A properly executed work done in layers is one that can be changed as many times as whim or inspiration strikes.



Erasing the Evil Tools



The Eraser Tools — Eraser, Background Eraser, and Magic Eraser — do exactly what their names say they do. They erase pixels. That's why they are “evil.” There needs to be a big red DON'T USE symbol like the one in Figure 1-1 when they are clicked.

Okay. They aren't really evil in the horror movie or serial killer sense. They are evil because they destroy or permanently alter pixels. These kinds of methods in Photoshop are arguably fine as long as the file is open and no more than 20 steps have been done. After a pixel has been erased, for example, and 20 more changes are made on the file, the change is permanent. When a file is saved, closed, then opened again, the history is cleared and the ability to undo an edit is gone.



The default number of history steps or undos in Photoshop is 20. This setting can be changed in Photoshop's preferences.

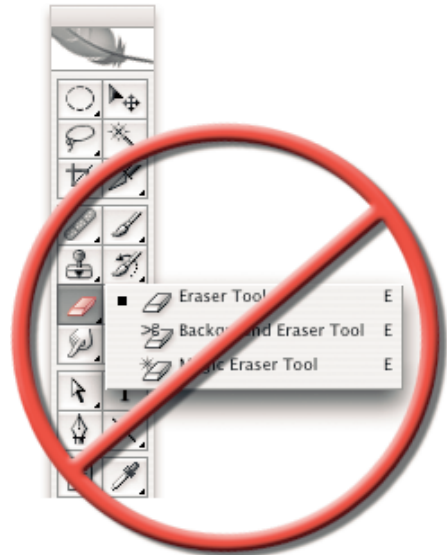


Figure 1-1: Don't use these tools.

Hiding versus Erasing

Here are quick demonstrations of what the Eraser does and how to do exactly the same thing by hiding pixels instead of erasing them.

Erasing

The mission of the project is to make the roof of the car interior blend with the corrugated tin roof so no black from the car photograph extends into the sky.



1. Download the folder for Book V, Chapter 1 from www.amesphoto.com/learning.

The code to go to the login/registration page is 4D59776. If you have already registered, type in your user name (your e-mail address) and password.

2. Navigate to the sample folder in Bridge.

3. Double-click Eraser.psd to open it in Photoshop CS2.

The file has three layers: the Background layer of a corrugated tin roof and rafter, the Eraser layer of the interior of an old, deserted car, and a duplicate Hide Pixels layer of the same old car. As you see in Figure 1-2, the layer Hide Pixels is hidden. The lack of an eye tells you that.

4. Choose the Eraser Tool from the toolbox.

5. In the Brush window in the options bar, click the triangle to open the settings.

6. Make the eraser 60 pixels in size by moving the Master Diameter slider until the window reads 60 px.

Refer to Figure 1-3.

7. Make the hardness 0% by either dragging the Hardness slider all the way to the left or typing 0 in the window.

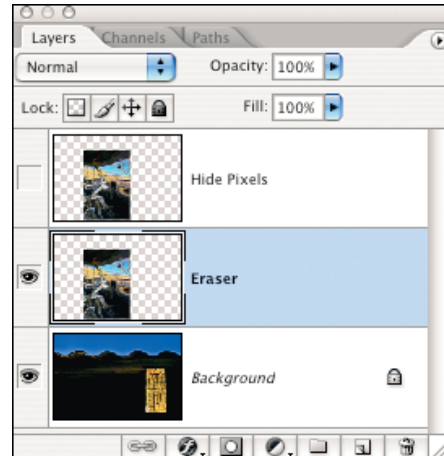


Figure 1-2: Hide Pixels is hidden.

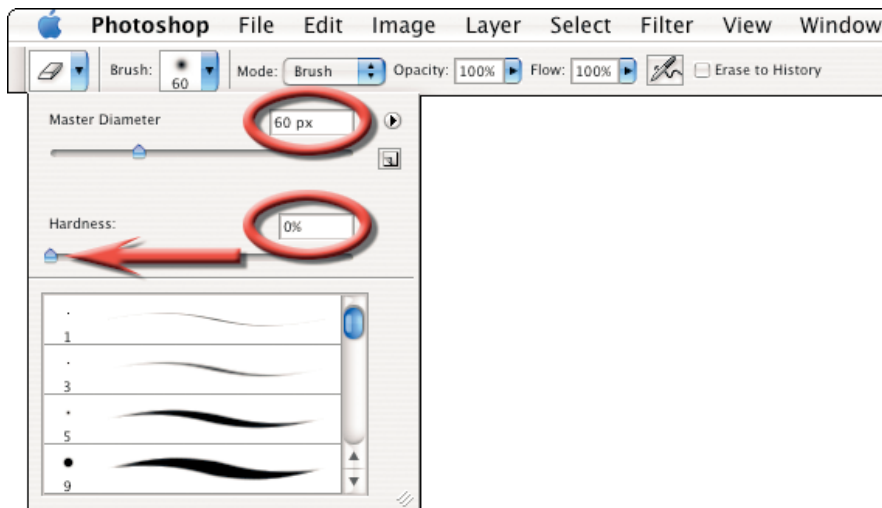


Figure 1-3: Move the slider.

8. Click anywhere in the options bar to close the Brush window.

9. Working in the Eraser layer, erase the black portion of the layer that extends into the sky.

Use one stroke of the mouse to follow the roof line. When you finish, your work looks like Figure 1-4. Compare the thumbnails in the layers Eraser and Hide Pixels. Notice that the pixels in the Eraser layer are gone.

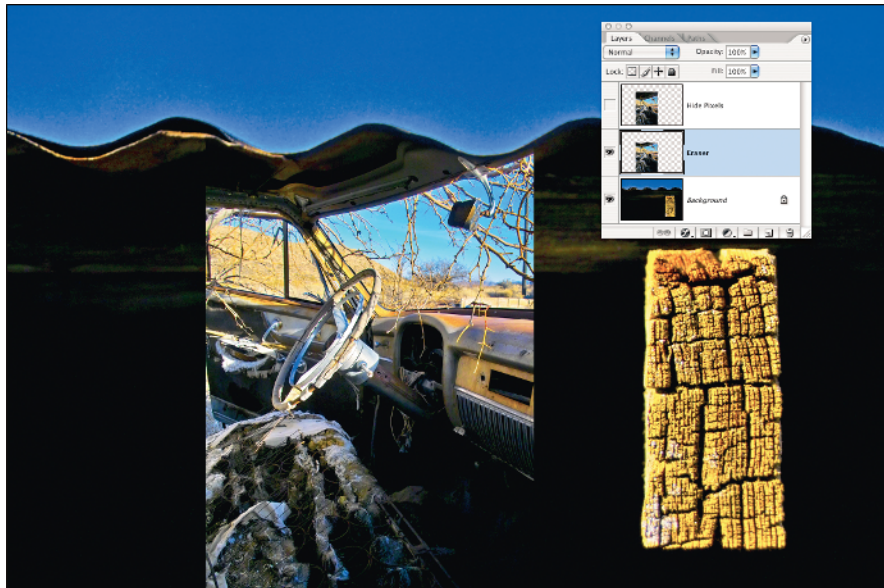


Figure 1-4: Your work will look like this.

10. Click the Background layer's eye icon to hide it.

You see only the car interior and the soft edge where the pixels were erased. See Figure 1-5.

11. **⌘+Z (Ctrl+Z) to undo the erasing.**

The erased pixels come back on the screen and in the Eraser layer's thumbnail. See Figure 1-6. If you did several strokes to erase the top of the car interior, **⌘+Option+Z (Ctrl+Alt+Z)** until all the erased pixels return.

12. **If you did the erasing with one stroke of the mouse, type ⌘+Z (Ctrl+Z) to redo the Eraser.**

If you used several strokes to do the original erasing, you have to redo each stroke. **⌘+Shift+Z (Ctrl+Shift+Z)** until your screen looks like Figure 1-5.



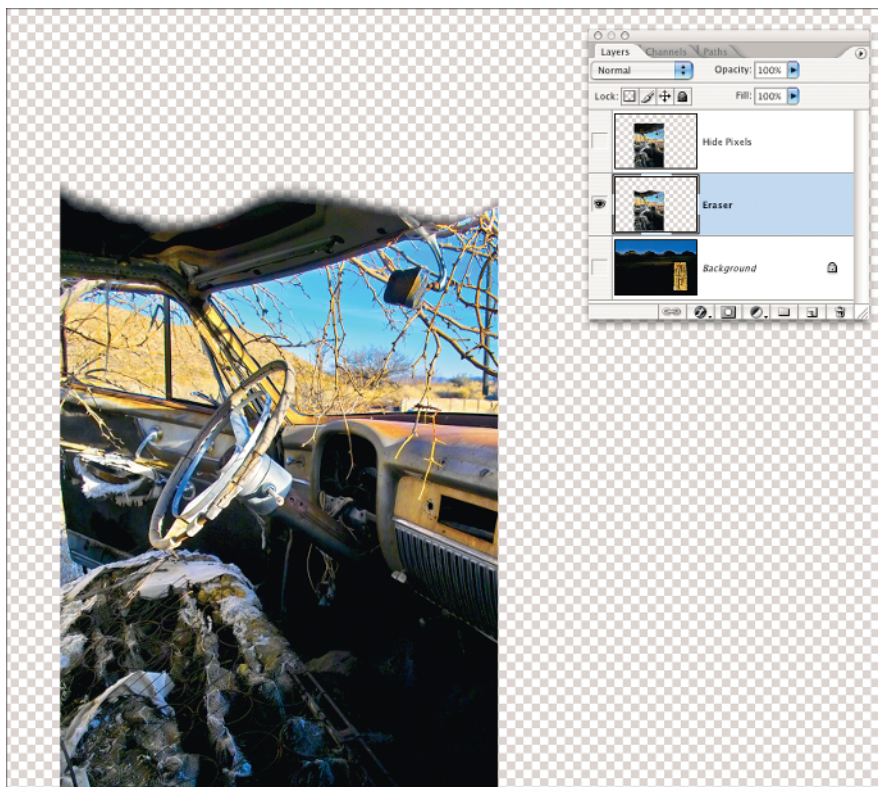


Figure 1-5: The erased edge is soft.

13. From the Photoshop menu, choose **File⇨Save**, then choose **File⇨Close**.
14. Select **File⇨Open Recent⇨Eraser.psd** or double-click **Eraser.psd** in **Bridge**.

See if you can undo the erased pixels. Typing the undo keystrokes are all for naught. Those pixels are outta here, never to return. Keep this file open and work through the following section.

Hiding

This part of the project introduces you to adding and using a layer mask to an image. Layer masks on photographs work exactly as they do on adjustment layers. (If you haven't already done the projects in Book IV, Chapter 4, you may want to do so now. Those projects help you understand layer masks and bring you up to speed for this one.)

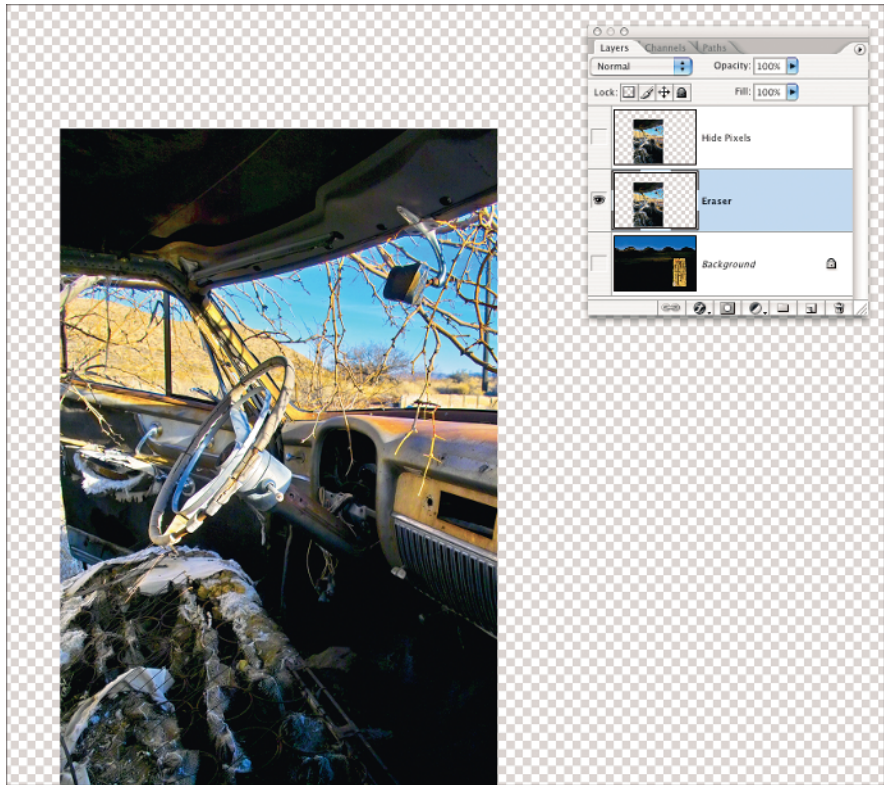


Figure 1-6: The erased pixels are back.

1. In **Eraser.psd**, click the eye icon on **Eraser** to hide the **Eraser** layer.
2. Click the eye icons on the **Background** and **Hide Pixels** layers to make them visible.
3. Click the layer thumbnail of **Hide Pixels** to activate that layer.

Your layer stack looks like Figure 1-7.

4. Click the **Add Layer Mask** icon in the **Layers** palette.

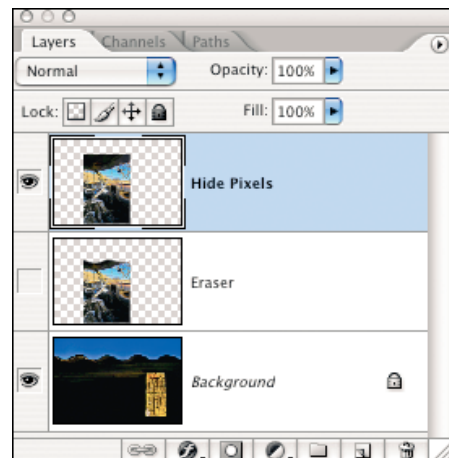


Figure 1-7: This is your layer stack.



Clicking the Add Layer Mask icon puts a reveal all layer mask on the layer Hide Pixels. The icon is circled in red in Figure 1-8. A reveal all layer mask is filled with white. A hide all layer mask is filled with black. Refer to Figure 4-1 in Book IV, Chapter 4 for the identification of the icons at the bottom of the Layers palette.

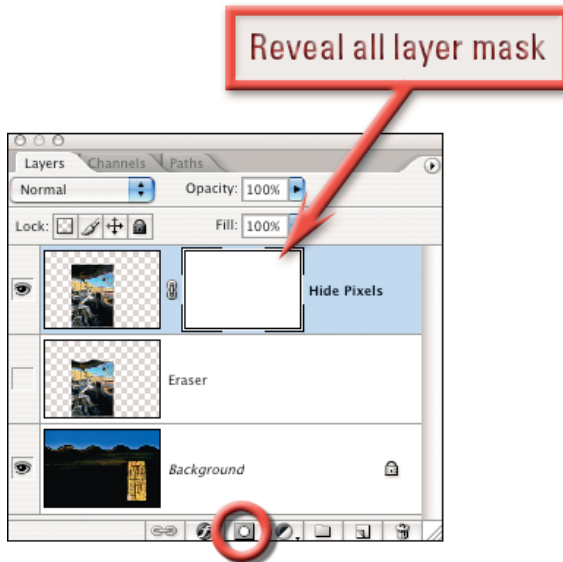


Figure 1-8: Add Layer Mask icon and reveal all layer mask.

5. Select the Brush Tool from the toolbox.
6. Move the Master Diameter slider until the window reads 60px and type 0 into the Hardness textbox. Opacity should be 100%.



When you finish you have a soft-edged, 60-pixel brush. Appendix B has keyboard shortcuts for brush size, edge hardness, and more.

7. Set the foreground color to Black.

If the toolbox colors are not white and black, click the default color's icon or type D. If white is the foreground color, click the exchange colors icon or type X. Find the icons in Figure 1-9.

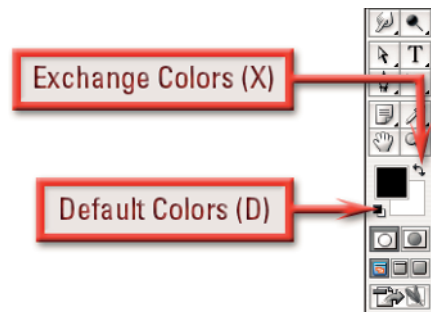


Figure 1-9: Exchange Colors and Default Colors icons.



Photoshop's painting tools use the foreground color in the toolbox. You can change the color by double-clicking in the foreground color box to open the picker or by clicking a color in the Swatches palette.

8. Paint on the layer mask with black over the parts of the car interior that are in the sky above the roofline.

When you finish, your screen and Layers palette look like Figure 1-10. Notice that an area of black is on the layer mask. The pixels are still visible on the layer thumbnail. They are hidden from the screen by the black on the layer mask.

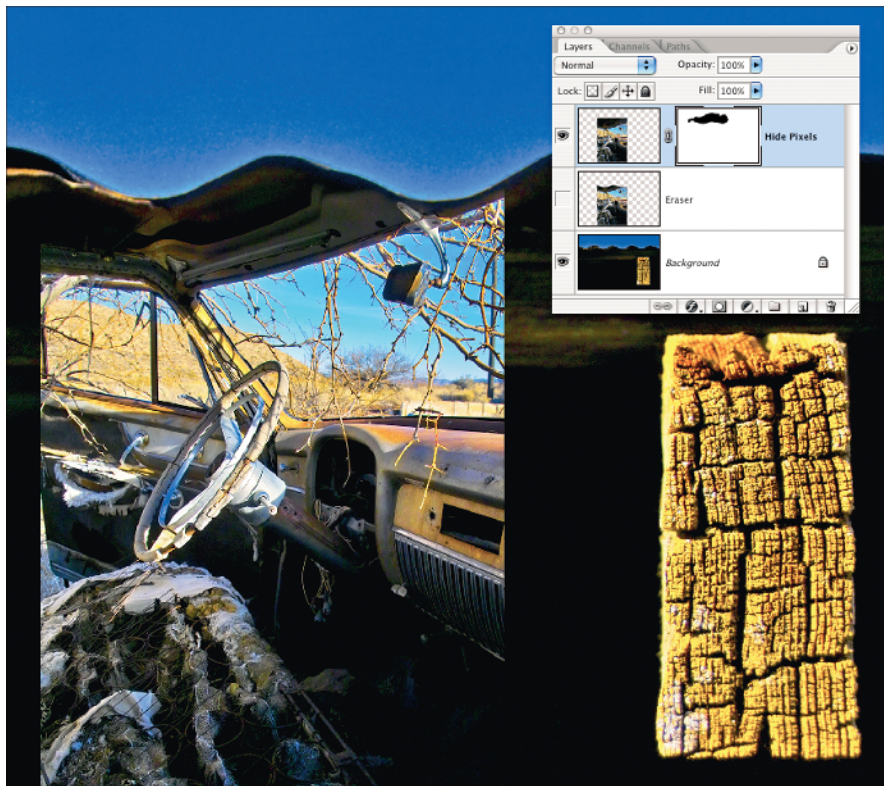


Figure 1-10: This is what your screen should look like.

9. Click the eye icon on the Background layer to hide the layer.

The Hide Pixels layer looks like the Eraser layer, as you see in Figure 1-11. The pixels are hidden by the layer mask. Bring them back.

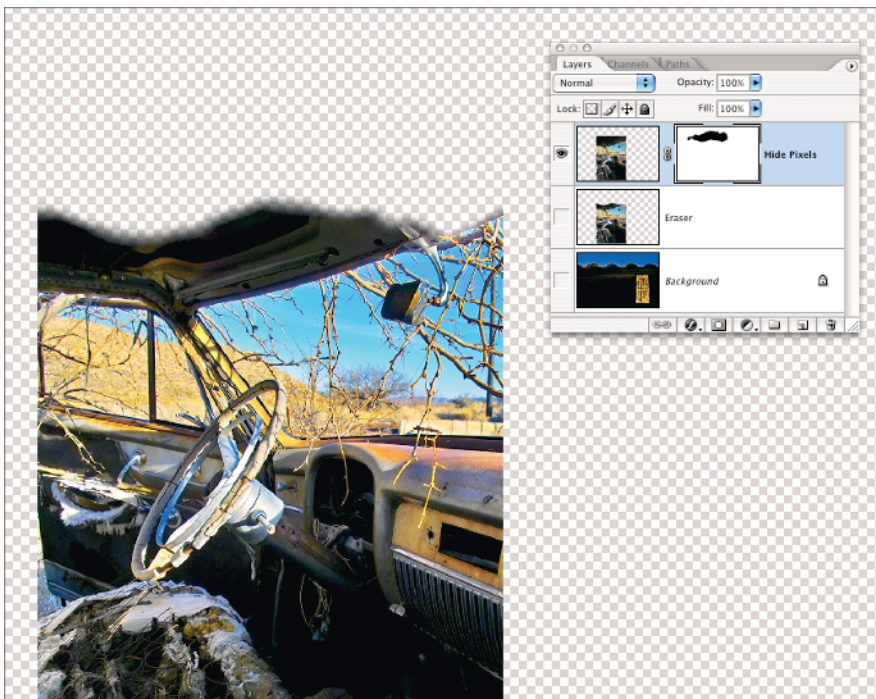


Figure 1-11: Hide Pixels and Eraser look the same.

10. Disable the layer mask by Shift+clicking inside the layer mask on the layer Hide Pixels.

A red X is displayed in the layer mask and the pixels that were hidden appear on the screen, as shown in Figure 1-12.

11. Enable the layer mask by Shift+clicking inside the layer mask.

The red X is removed and the pixels on the screen are hidden where there is black on the layer mask.

12. Choose File⇨Save and then choose File⇨Close.

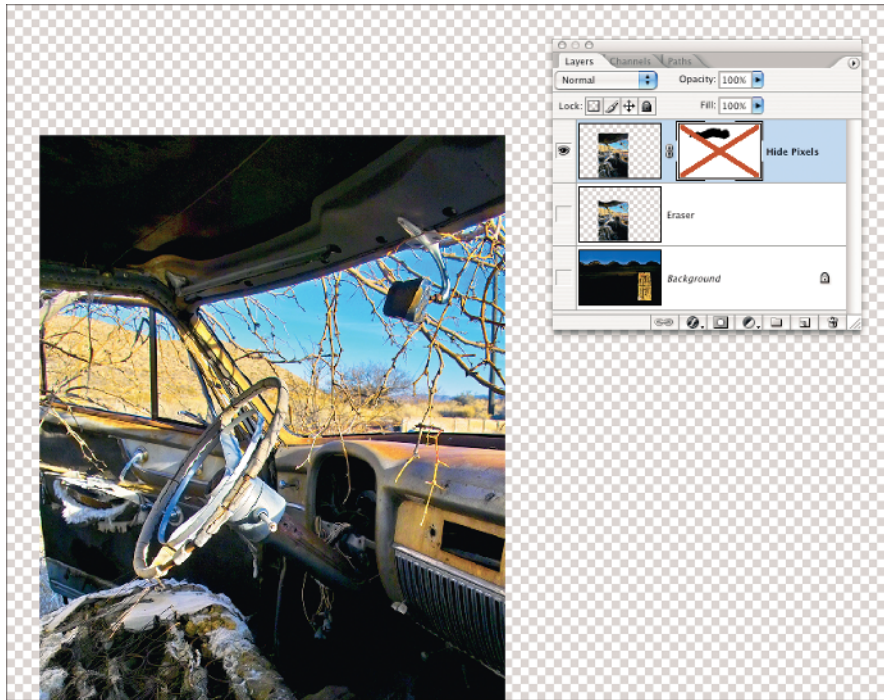


Figure 1-12: Hide Pixels is disabled.

Cashing in on unlimited undos

Here's the big difference between using a layer mask and the Eraser Tool. Put back the left half of the pixels along the roofline.



1. Reopen Eraser.psd by choosing File⇨Open Recent⇨Eraser.psd or double-click its preview in Bridge.

2. Activate the layer mask by clicking its icon on the Hide Pixels layer.

The active border appears around the Layer Mask icon, as in Figure 1-13.

3. Click the Background layer's eye icon to reveal the layer.

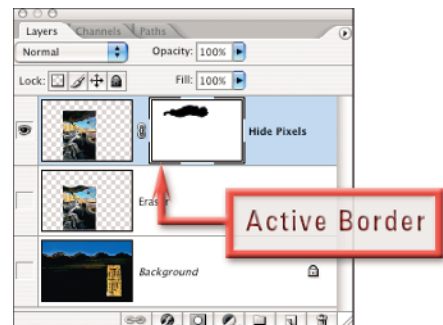


Figure 1-13: The Layer Mask icon is active.

4. Click the Exchange Colors icon (see Figure 1-9) or press X.

You made white the foreground color.

5. Paint at the upper-left edge of the interior of the car above the roofline.

The black part of the car's roof appears above the corrugated tin, as you see in Figure 1-14. Even after the file was saved and closed, the pixels are still there. And there's more. The Eraser Tool only lets you undo the whole stroke. Remember when you did $\mathbb{X}+Z$ (Ctrl+Z) to undo the Eraser? The entire stroke was undone.

Using a layer mask and painting with white allows you the control of bringing back any part of the pixels hidden by black on the mask. How? Simply paint with white.

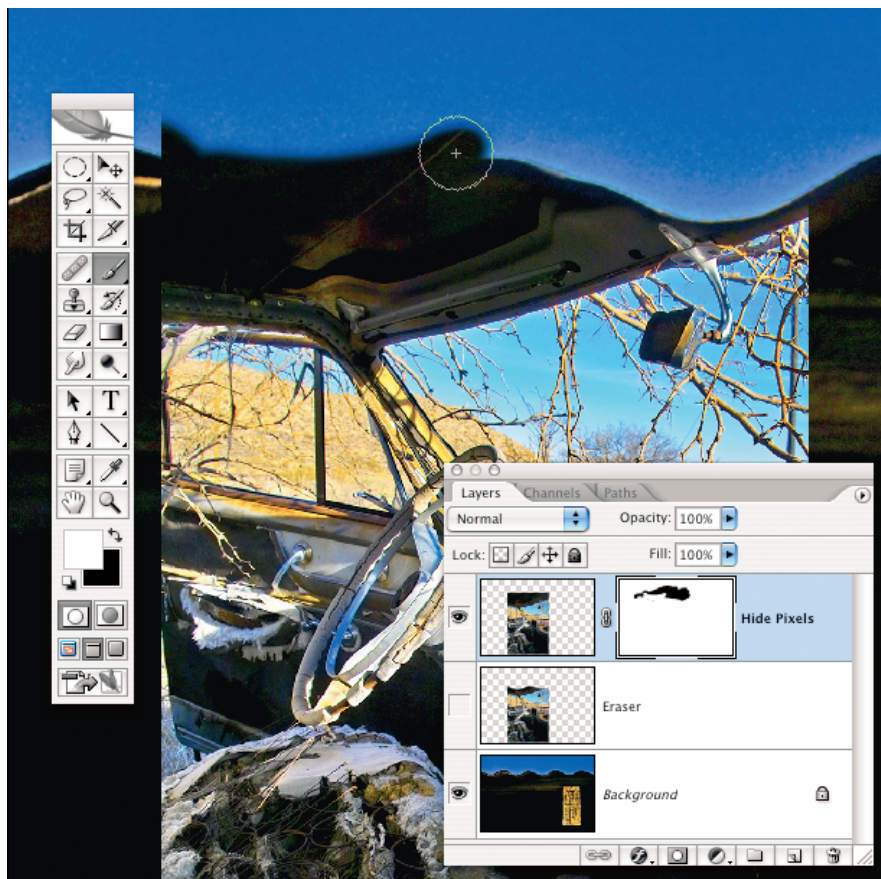


Figure 1-14: The black part appears.

Protecting the Background Layer



The first *best practice* in Photoshop is to always protect the Background layer. Make it a habit to never, ever make edits on this layer. You make a duplicate of the Background and edit that layer. This serves two purposes: First, it protects the Background layer. Second, it gives a before and after comparison of the work you have accomplished by simply clicking the duplicate layer's eye icon on and off.



Make notes of the work you want to do in Photoshop while you are making photographs. Often a few quick steps in Photoshop are all you want, as in the case of the building in Figure 1-15. I saw the leaves, the sunspot, and the crane in the viewfinder. I knew I would have to do simple fixes to give a clean view of this unique architectural angle. Figure 1-15 shows the retouching for this photograph of a building whose sides meet at an acute angle.

Backing up the background

Here's how you protect your Background layer:



1. Download the folder for **Book V, Chapter 1** from www.amesphoto.com/learning.

The code to the login/registration page is 4D59776.

If you have already registered, type in your user name (your email address) and password.

2. Open the file by double-clicking it in Bridge.
3. Select **Layer** → **New** → **Layer Via Copy** from the Photoshop menu bar to duplicate the Background layer.

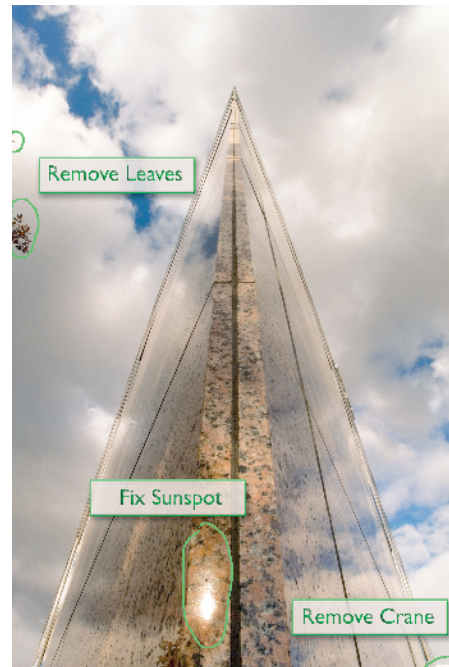


Figure 1-15: These are the things I want to fix.



More keyboard shortcuts! Woohoo! ⌘+J (Ctrl+J) makes a duplicate of the highlighted layer and places the new layer directly above the one copied. If the highlighted layer has a selection, only the selection is copied onto a new layer.

4. **Rename the Background layer duplicate by double-clicking the words Layer 1 (immediately to the right of the layer thumbnail).**
5. **Type in Retouch and press Enter.**

Your layer stack looks like Figure 1-16. All of the retouching in the next steps takes place on the layer named Retouch. Keep your file open for the next section.

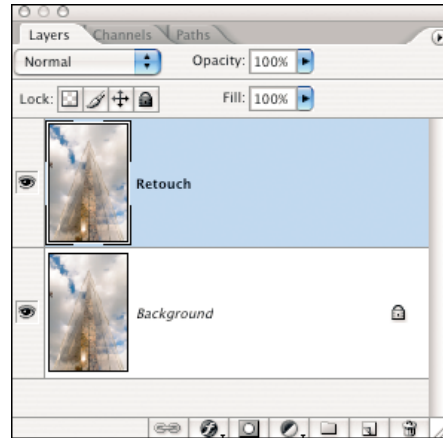


Figure 1-16: Your layer stack looks like this.

Doing the minor fixes

The healing tools copy the tone and texture of the sampled area to the area being healed. The underlying color of the healed area is maintained.

Removing the leaves

Just for fun and to give you a brief introduction to a few great retouching tools — Clone Stamp and Healing Brush and Patch Tools — finish the fixes shown in Figure 1-15.

1. **Click the Clone Stamp Tool icon shown in Figure 1-17.**

The flyout menu shows you the other tool available: Pattern Stamp.

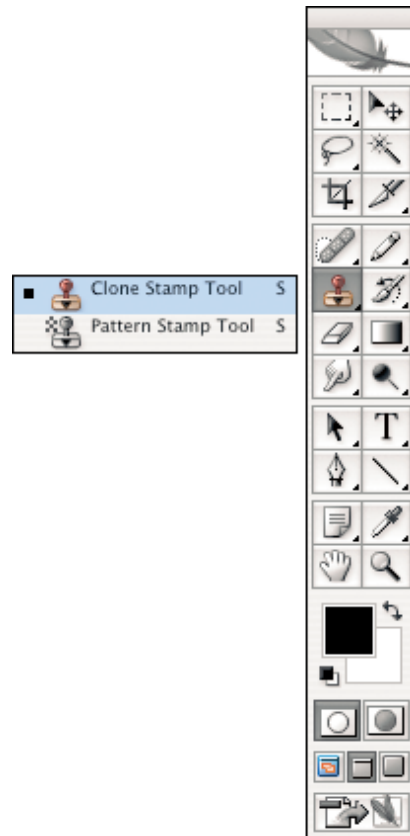


Figure 1-17: Clone Stamp is the way to go.

2. In the options bar, choose a 70-pixel, soft-edge brush.

The options bar is shown in Figure 1-18.

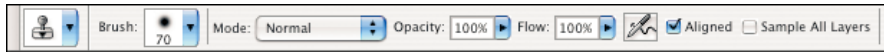


Figure 1-18: The Clone Stamp options bar.

3. Option+click (Alt+click) in the clouds to the right of the leaves, as you see in Figure 1-19.

4. Clone the blank clouds over the leaves.

The Clone Stamp Tool works just like a brush except that instead of using paint, it copies the sampled area over the leaves. Figure 1-20 shows the cloning in progress. The cloned area is very obvious. Now you use the Healing Brush to blend it together.



Figure 1-19: Sample the clouds...

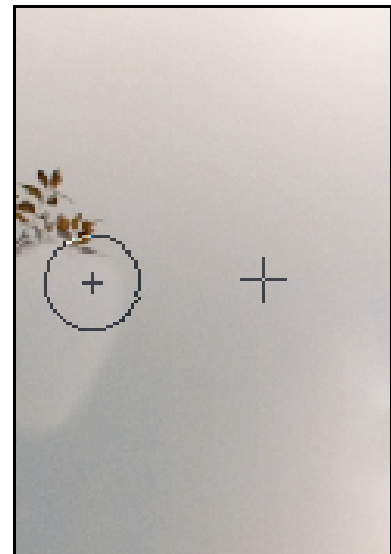


Figure 1-20: ... and clone the clouds.

5. Click and hold the Spot Healing Brush icon.

The healing tools menu appears.

6. Choose the Healing Brush.

The Spot Healing Brush is the default choice of the toolbox you see in Figure 1-21.

7. Again, Option+click (Alt+click) in the clouds shown in Figure 1-22.

This samples the area of clouds to the right and below the cloned area.

8. Heal the mismatched cloned area by painting over it with the Healing Brush.

The result while you are working looks, well, wrong! See Figure 1-23. When you release the mouse, the healing happens automatically. Ta da! The cloning is fixed. Remember to heal where you cloned over the leaves in the brighter areas of the cloud, too.

Keep your file open for more fixes.

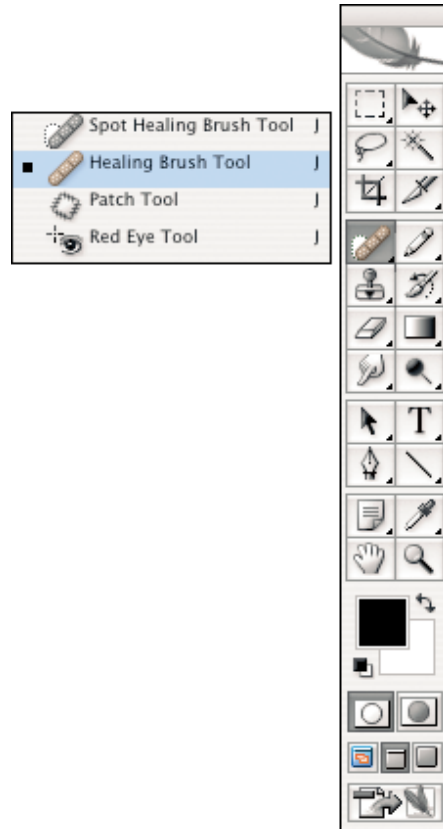


Figure 1-21: Here's the default.

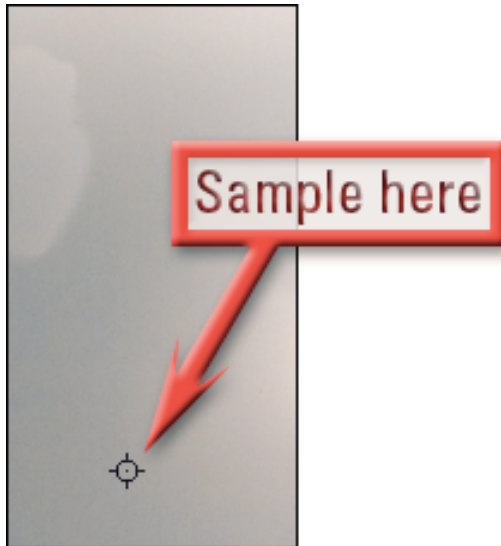


Figure 1-22: Sample the clouds . . .



Figure 1-23: . . . and the clouds are healed.

Fixing the sunspot

The sunspot is really a specular highlight. *Specular* means mirror. What you are seeing is the sun reflected in the granite . . . the mirror in this case.

- 1. Click and hold the Spot Healing Brush icon and choose the Patch Tool.**

See Figure 1-21 for the icons.

- 2. Draw a selection around the sunspot.**

Be careful to avoid the centerline or the left edge of the stone. Your selection wants to look like the one in Figure 1-24.



Figure 1-24: Avoid either edge.

3. Click inside the selection and drag it across the centerline.

Check Figure 1-25 for positioning. The area you drag the selection over replaces the original selection as you drag, giving you a real-time preview of what will be patched over the original pixels.

4. Release the mouse button to patch the selection.**5. Choose Select⇨Deselect from the menu bar or press ⌘+D (Ctrl+D).**

Notice that the pattern of the granite is duplicated in the patched area in Figure 1-26. This is a dead giveaway that Photoshop has been used.

**Fixing the fix**

The goal of great work in Photoshop is to be undetected by the viewer.

1. Get the Healing Brush from the toolbox.

See Figure 1-21.

2. Option+click (Alt+click) in an area of the stone that is free of distinguishing marks.

Now heal in the area of the repeated pattern.

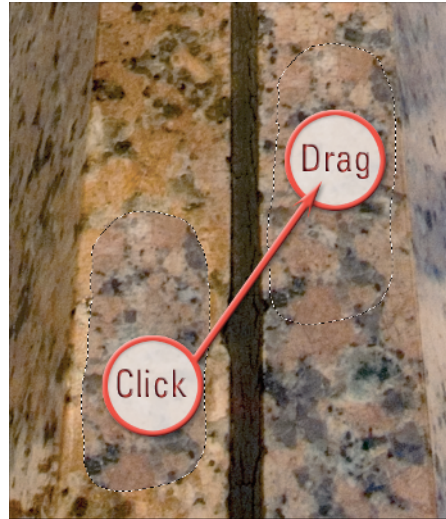


Figure 1-25: Position your sample like this.



Figure 1-26: A duplicate pattern: a dead Photoshop giveaway.

3. Brush over the obvious duplicates of pattern.

Each time you release the mouse button, Photoshop heals the area. When you are finished, your retouch is like Figure 1-27. Look Ma! No patterns! Keep going . . .

Fixing the crane

This one is easy and demonstrates a cool way to use the Healing Brush.

1. Sample on the edge of the building above the crane.

You want to sample the building's edge and the sky together, as you see in Figure 1-28. For clarity's sake, the figure shows the diameter of the brush. The sample point is the crosshairs.

2. Click the building edge next to the crane; drag down the edge of the building and over the entire area of the crane. Release the mouse.

Magic! The crane is gone in one stroke! The trick is to make certain that the sample point and beginning of the Healing Brush stroke are centered on the edge, as in Figure 1-29.

The great part about this style of using Photoshop is you get to see the work you have done and compare it to where you started. Click the eye icon on the layer Retouch so it's off.

You see your work disappear. Now click the eye icon again. All of the flaws — the leaves, sunspot, and crane — vanish. Figure 1-30 shows the result. There you have the basics. Making a copy of the background layer and always working only on that layer means you can always go back.



Figure 1-27: Healing stone.

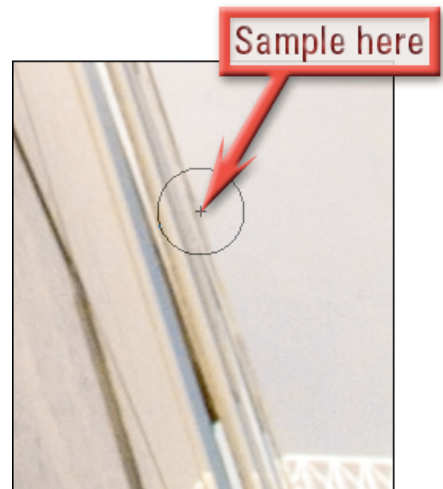


Figure 1-28: This is your sample spot.

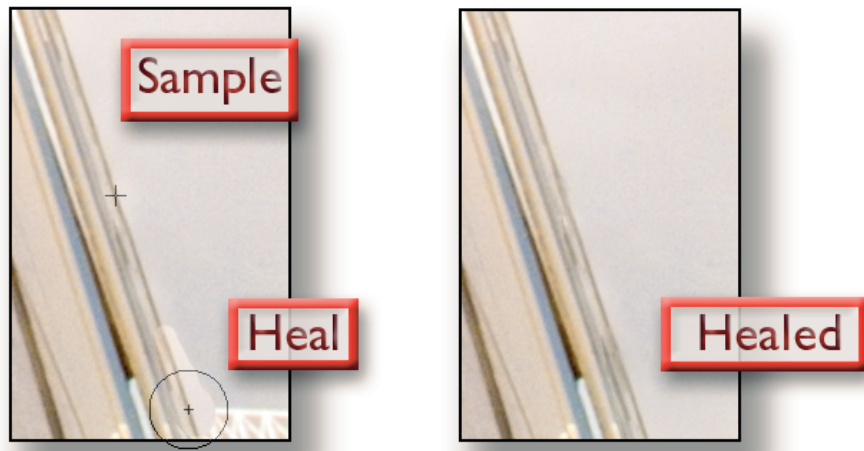


Figure 1-29: Center the Healing Brush on the edge of the building.



Figure 1-30: Before and after.

Recovering from Big Mistakes

A big mistake is when a lot of work has been done on a retouch layer and part of it isn't right. A client changes his mind and the fix he wants looks like it would require doing all of the work on the Retouch layer over again.

Here is an example: Figure 1-31 shows a retouching strategy map for this headshot of actress Tiffany Dupont. Notice that the map calls for plumping up her lip a little bit. (You read how to do this in Book V, Chapter 3, by the way.) Figure 1-32 shows the lip before, on the Background layer, and after, on the Retouch layer. You see that all the other retouching has been done, including removing hair below her chin and from across her eye. A lot of work has been already accomplished to bring the image this far.

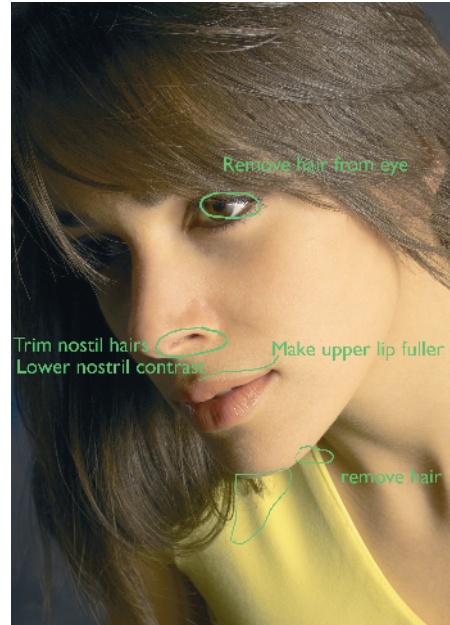


Figure 1-31: The strategy map.



Figure 1-32: Before and after.



At the point in a retouch where something drastic is to be done, duplicate the layer and rename it with the procedure.

Had this example been properly executed, Retouch would have been duplicated and renamed Liquify Lip. In this example, the work on the lip makes it look too exaggerated. So it has to be redone. Sometimes you get caught up in the heat of the work and forget to follow procedure. There was a time when this kind of do-over meant starting completely over. Here is how to recover from this boo-boo:



1. **Download the folder for Book V, Chapter 1 from www.amesphoto.com/learning.**

The code to go to the login/registration page is 4D59776. If you have already registered, type in your user name (your e-mail address) and password.

2. **Open the file *Tiffany.psd* by double-clicking it in Bridge.**
3. **Click the eye icon on the layer Strategy Map to hide the layer.**
4. **Click the Retouch eye icon on and off several times, leaving it on.**
5. **Click inside the layer thumbnail for the layer Retouch.**
6. **Select the Lasso Tool from the toolbox shown in Figure 1-33.**
7. **Draw a selection around the exaggerated lips.**

Your selection looks like Figure 1-34.



Figure 1-33:
The Lasso
Tool.

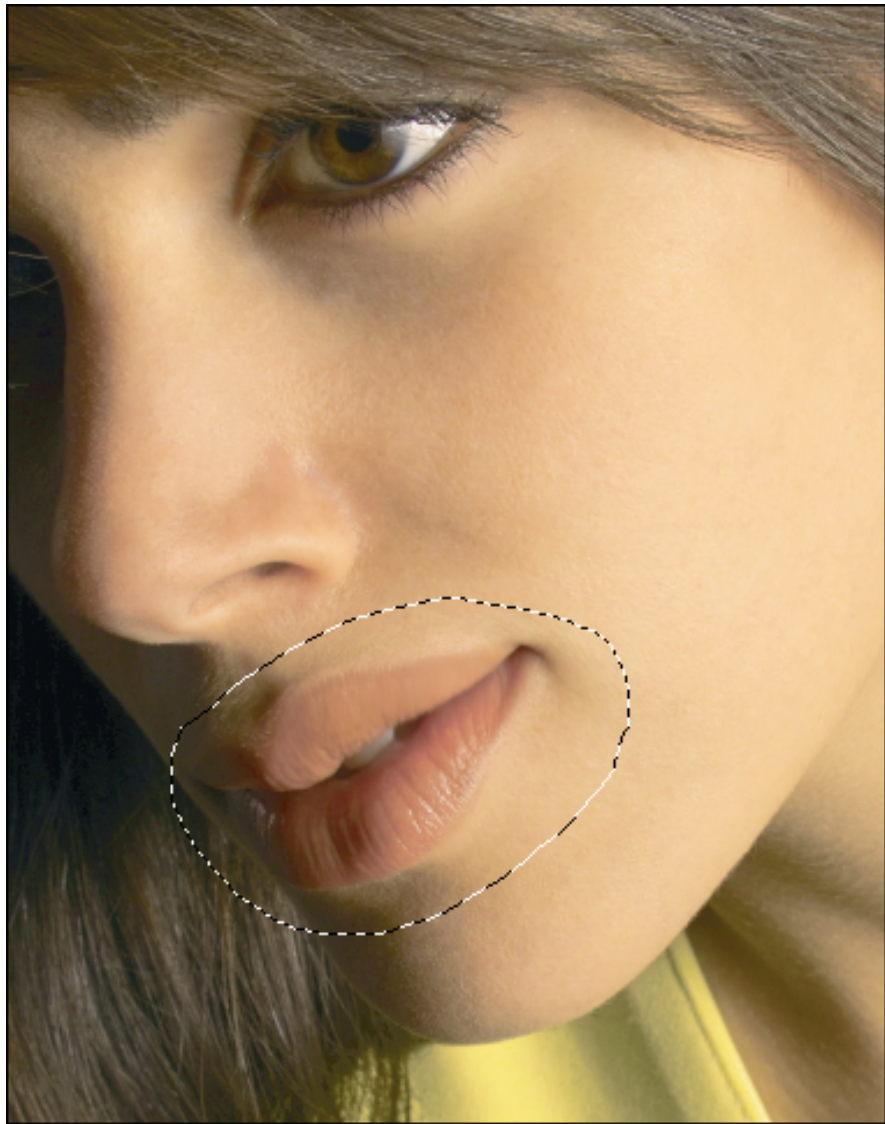


Figure 1-34: Circle the lips.

8. Click in the thumbnail of the Background layer.

Your layer stack looks like Figure 1-35. Now you make the selection into a separate layer

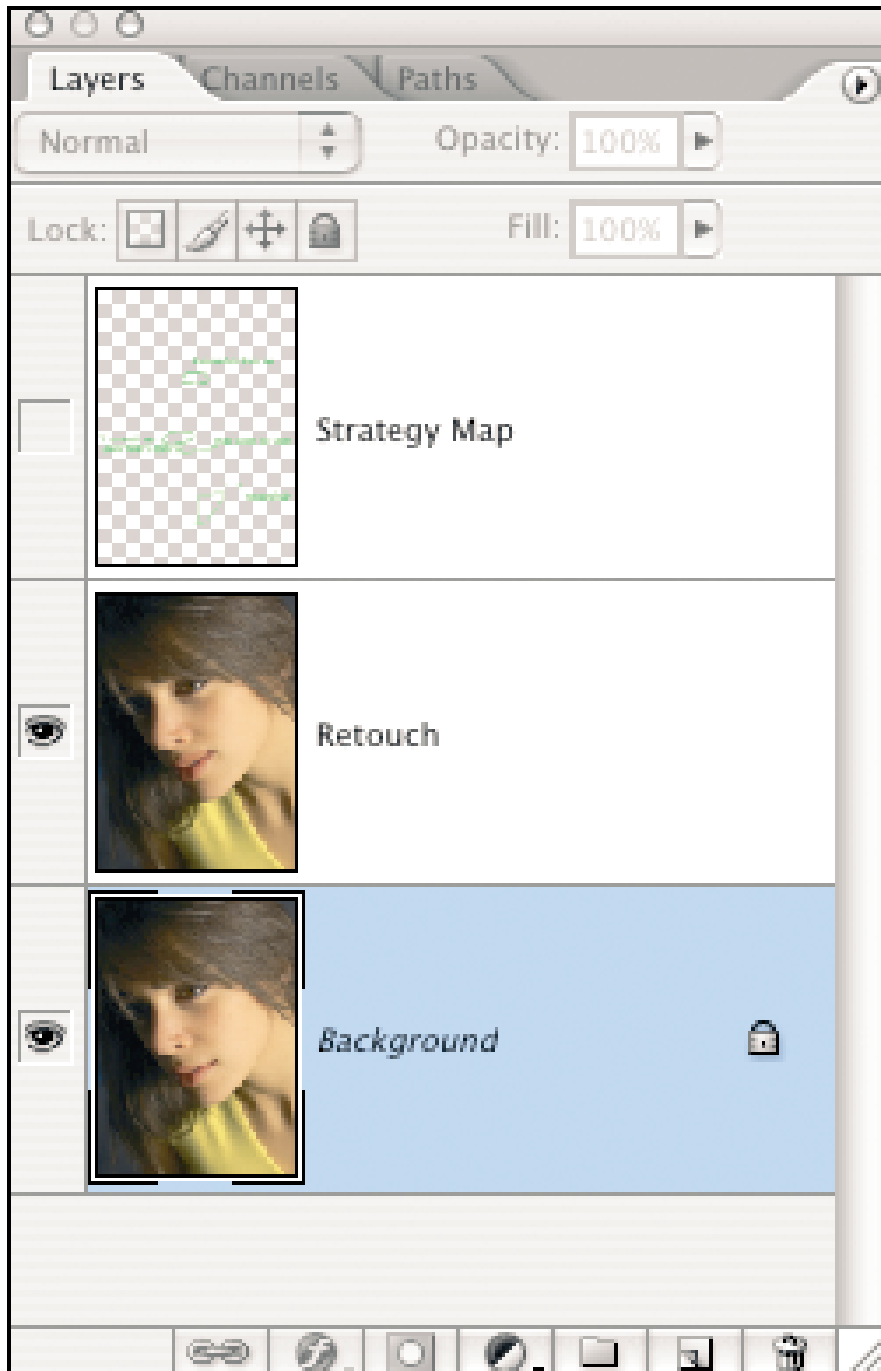


Figure 1-35: Your layer stack looks like this.

9. Choose **Layer**⇨**New**⇨**Layer Via Copy**, shown in Figure 1-36.

The selection is now a new layer named Layer 1.

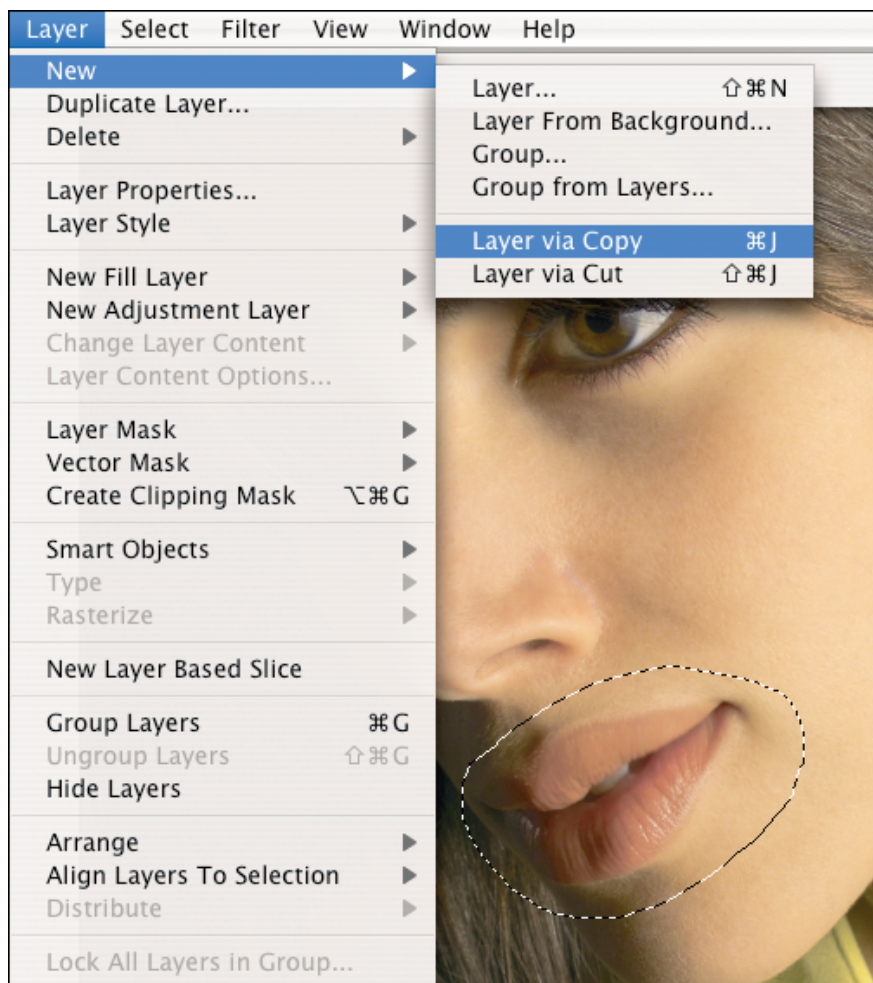


Figure 1-36: Choose Layer Via Copy.

10. Click+drag the Layer 1 thumbnail up the layer stack until it is above Retouch.

When you see a solid bold line between the layers Retouch and Strategy Map (as you see in Figure 1-37), release the mouse button. The lips from the Background layer now cover the exaggerated ones. All that's left is to merge Layer 1 with Retouch.

11. Click the flyout disclosure triangle at the top right of the Layers palette. Select Merge Down from the menu, as in Figure 1-38.
12. Use the Healing Brush on the skin above her upper lip and below her lower one.

Your layer stack is shown in Figure 1-39.

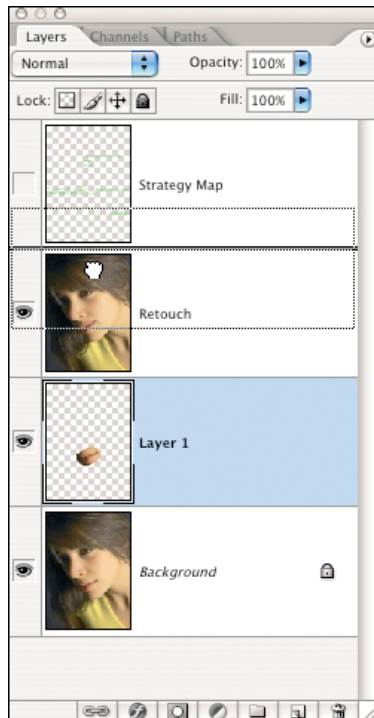


Figure 1-37: Release the mouse when you see this bold line.

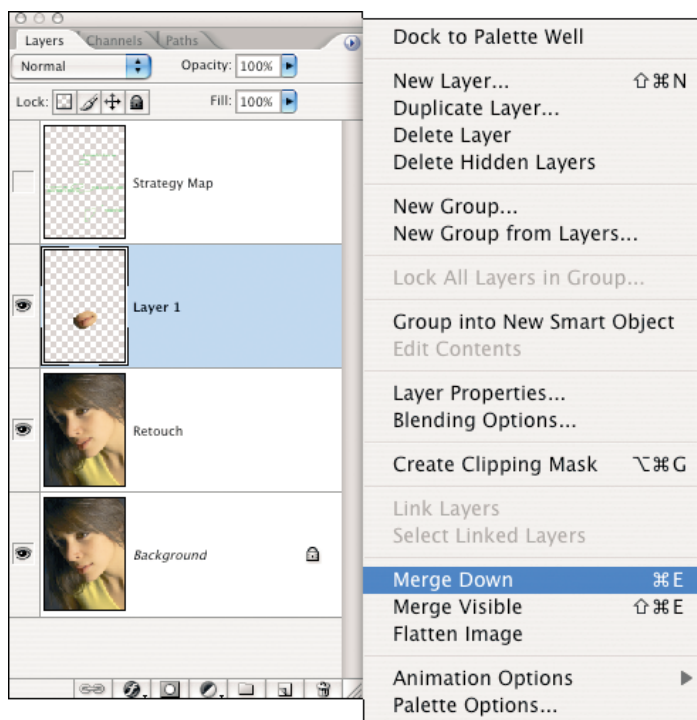


Figure 1-38: Choose Merge Down.

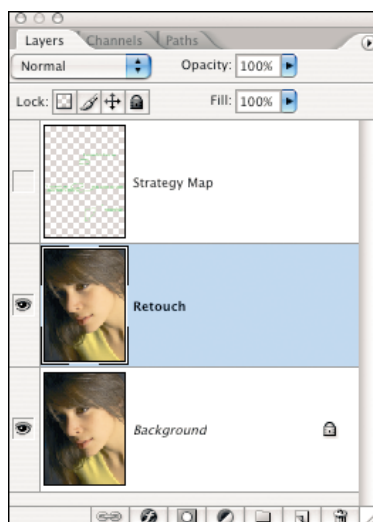


Figure 1-39: Here's your layer stack again.