



Challenge Image: Garage Cleanup

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In this lesson, we're going to work on a challenge image that was sent in by a Masters Academy member. It's a good example of how Photoshop can be used to help out with home projects! The image features a large garage space, and the owner would like to visualize how the space will look without all of the construction materials. In the process of "cleaning" the space, we'll use some retouching techniques that you can then use for all sorts of image.



**In this challenge image, we will use various retouching techniques to remove the construction materials from this garage-like space.**

## Set Up Document & Tools for Retouching (Timestamp 0:55)

It's always a good idea to do any retouch work on a new, empty layer. This allows you to keep that original image layer untouched. Create a new empty layer above the image layer by clicking the New Layer icon [+] at the bottom of the Layers Panel.

**Sample All Layers** When using the retouching tools (the Healing Brush, the Spot Healing Brush and the Clone Stamp Tool), there is a setting that you'll need to pay attention to if you're working on an empty layer like we are here. This is the Sample setting and it can be found in the Options Bar (above the image window) when the tool is active. If you're using the Spot Healing Brush, the setting will be the "Sample All Layers" check box, which should be turned on when working on an empty layer. If you're using the Healing Brush or the Clone Stamp Tool, the setting will be the Sample menu, which should be set to "Current & Below."

In the lesson video, we are starting with the Spot Healing Brush, so we'll make sure the "Sample All Layers" check box is turned on.



The Spot Healing Brush is active and the "Sample All Layers" check box is turned on.

## Spot Healing Brush to Remove Jacks (1:16)

The Spot Healing Brush can be used to paint over an object you'd like to remove. After you release the mouse button, Photoshop will try to fill in the area based on what's in its surroundings. This will work better in some instances than in others, depending on the image and the complexity of the area. This is a good tool to use whenever an object is surrounded by the right brightness and texture so that Photoshop knows how to fill in the area. Often times, you will need to touch up the area after using this tool.

In the challenge image, we'll try to remove the vertical jacks by painting over them with the Spot Healing Brush. We'll use a brush that is just larger than the width of the object and then paint over the entirety of the jack, including its shadow.

Note that you can change the brush size by using the Brush menu in the Options Bar or by using the left and right bracket keys on your keyboard ( [ ] ).

You can see that the tool did a decent job, with only a small smudgy area at the bottom, which will need to be corrected. To fix that, we simply painted over that area once more using the Spot Healing Brush.

We continued using the Spot Healing Brush to remove the other jacks. It did a fairly nice job, with only a few areas that will need to be corrected later.



**LEFT: We're painting over the first jack with the Spot Healing Brush. RIGHT: The tool did a good job, with only one smudge at the bottom left to retouch.**



**The Spot Healing Brush was used to paint over and remove the additional jacks.**

## Spot Healing Brush to Clean Up Additional Items (2:02)

The Spot Healing Brush can also be used to remove a good part of the yellow extension cord that's running along the ceiling. In the video, we needed to accomplish this in a few passes in order to clean up the inaccurate areas. When retouching something like this, remember to account for the shadows. If you retouch an object, you'll want to retouch its shadow as well.

There is some debris on the floor, near the center of the image, and the Spot Healing Brush can be used to remove this as well.



## Use Pen Tool to Create Guides (3:40)

Before we move on to the rest of this image, we really need to keep track of the wall, floor and ceiling edges because we need to maintain the correct direction and perspective of those lines as we retouch. The Pen Tool can be used to create a guide, showing us where those edges should be.

We'll activate the Pen Tool and click where we think the first corner should be. In the lesson video, we started in the far right corner of the floor. But we're not just going to click. We're going to click and hold the mouse button down. This will show you a preview line. Hold down the Space Bar and you can drag the mouse to move the line around. Using this technique, we'll position the cursor over the next corner (the far left corner) and we'll watch the preview line to make sure that it aligns with the bottom edge of the floor before releasing the mouse button. When we release the mouse button, the tool positions the line between the two points.



**The Pen Tool is being used to create a line that defines the edge where the wall meets the floor.**

Now we'll create a second line that defines the far vertical edge, where the two walls meet. If we were to simply click again with the Pen Tool, it would continue the line that we just created. We don't want that. We want a new independent line to define that edge. You can tell the Pen Tool to end the current line you're working on by holding down the Command key (Ctrl on Win) and clicking anywhere away from that active line. Then you can release the key and move on to create a new line. We'll use the same technique as above to create that second line and then continue to create lines for all of the edges in the room.



With the Pen Tool active, we're holding down the Command key (Ctrl on Win) to temporarily access the Direct Selection Tool and we are repositioning the point at the end of the horizontal line so that it aligns with the end of the vertical line.

### ADDITIONAL PEN TOOL TIPS:

**Adjust points** After using the Pen Tool to create lines, you may need to adjust them by moving the end points slightly. You can do this by holding down the Command key (Ctrl on Win) to temporarily access the Direct Selection Tool, which looks like a white arrow. Use that tool to click on the line you want to adjust to make it active. Then, with the key still held down, you can click and drag on the end points to adjust them.

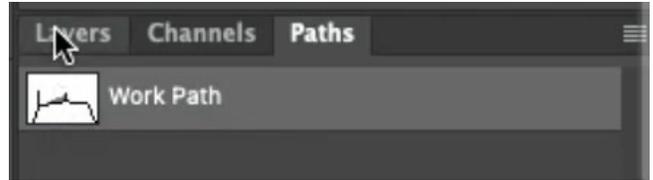
**Continue an existing line** To add on to a line that is no longer active, hover the cursor over the point from which you'd like the new line to extend and you will see the Pen Tool cursor change to show a little link icon. When that little icon appears, click on the point to make it active. Now, when you click again, somewhere else in the image, it will extend a line from that point to the place where you click.



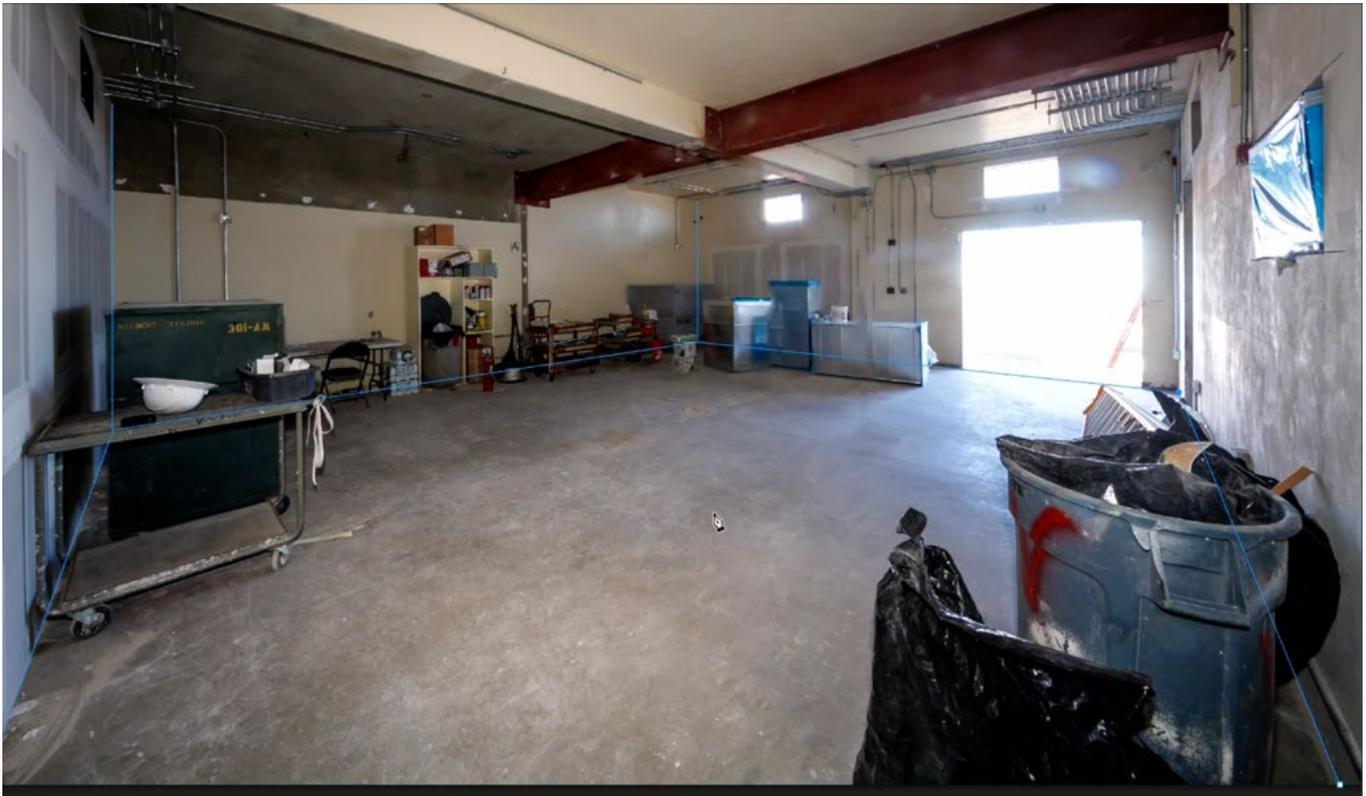
Click when you see the link icon to continue adding segments to the line.

**Deselect lines** After creating all the lines that you need, hold down the Command key (Ctrl on Win) and click somewhere in your image [away from the lines] to ensure that no lines are selected, or active.

**Paths** The lines created with the Pen Tool are called Paths and they will show up in the Paths Panel, which is usually grouped with the Layers Panel.



The lines created by the Pen Tool are called Paths, and you can see them within the Paths Panel.



Path lines were created for all of the wall edges that will require retouching.

## Clone Stamp Tool to Clean Up Wall (9:50)

The path lines we just created will remain visible on the screen as we work. They are not contained on a layer. They are instead contained in the Paths Panel. We want these lines to remain visible, as they will act as guide lines to help us retouch.

In the Layers Panel, we already have one retouching layer. This is the layer that removes the vertical jacks. We're now going to move on to a different type of retouching, and I like to do this on yet another empty layer. This just helps to keep

things separate so we can change/adjust them later if necessary. We'll create a new empty layer at the top of the layer stack.

The next retouch task we'll work on is to define the far left wall in the image. It seems obvious that the bottom, obstructed part of the wall should look just like the upper, unobstructed part of the wall. We'll activate the Clone Stamp Tool, which can be used to directly copy and paste content in an image. With this tool, Photoshop will not try to match the area to its surroundings. It will blatantly copy and paste. After activating the Clone Stamp Tool, remember that the Sample setting (in the Options Bar) must be set to "Current & Below" in order for the tool to work on an empty layer.



**The Clone Stamp Tool is active and the Sample menu is set to "Current & Below."**

With the Clone Stamp Tool active, you can sample (or copy) an area by holding down the Option key (Alt on Win) and clicking on the area you'd like to copy from. Then release Option key and click and drag to paint on the area where you'd like to apply (or paste) that sampled content. A preview of what's going to be pasted will appear inside the round brush tip. In the lesson video, we started on the left seam of the wall. We sampled from an area near the top of the seam and then painted downward over the part of the seam that was obstructed by the dark green box-like item.



**The Clone Stamp Tool was used to sample from a clean part of the wall seam (left) and then paint over the green box that is obstructing the wall.**

Then we continued to paint in the area to the right of the seam to remove as much of the box as possible. The Clone Stamp Tool is moving the sample area to align with the area where the cursor is as we paint. When the sample area bumps up against an object, you will see that mess up in the area where you're painting. Simply stop at that point and re-sample. When you sample again, the tool will take a fresh look at what is currently in the image instead of what used to be in the image.

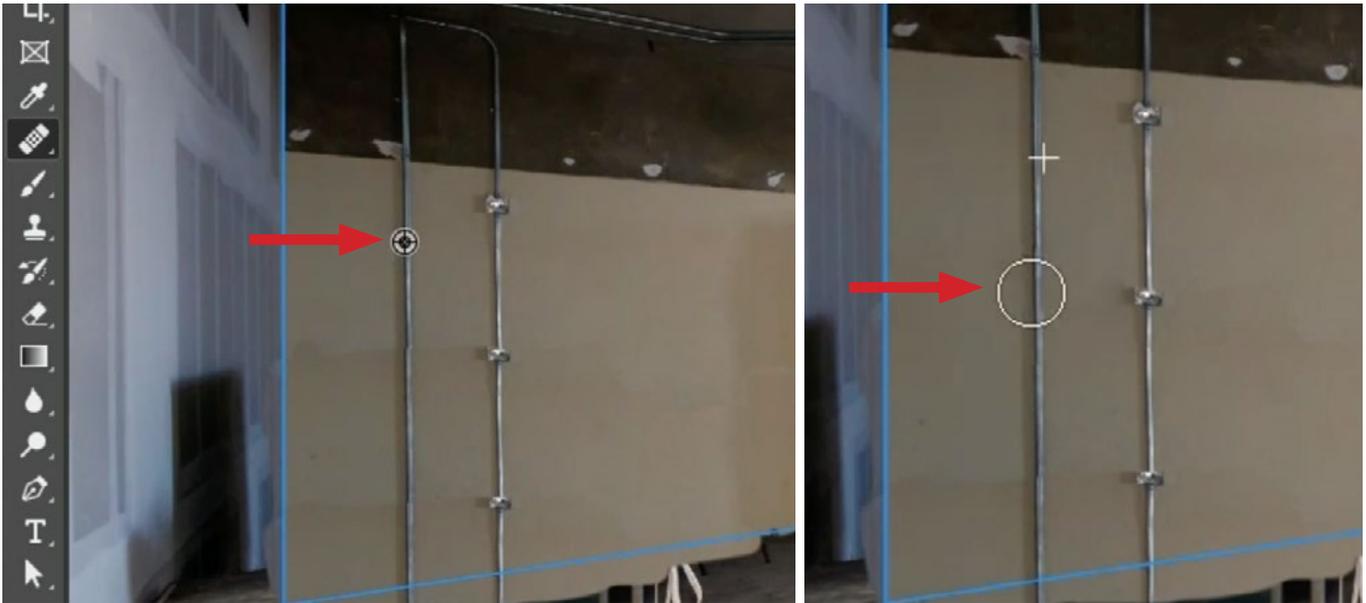


**We are continuing to paint with the Clone Stamp Tool, sampling from the upper part of the wall and painting over the lower, obstructed part.**

Note: If the path lines are obstructing your view, you can toggle their visibility by using the keyboard shortcut Command+H (Ctrl+H on Win).

The Clone Stamp Tool will inevitably create some blotchy, uneven or unaligned areas. These problems will need to be corrected with either another pass of the Clone Stamp Tool or by using one of the healing tools. For uneven areas (like the ones we encountered in the lesson video), you can use the Healing Brush Tool. The Healing Brush will try to blend the retouch area in with the surroundings.

With the Healing Brush, sample an area in the same way that you would the Clone Stamp Tool (Option+click on Mac, Alt+Click on Win). Then paint over the area you need to smooth out. In the lesson video, we had some uneven areas on the wall, so we sampled from a clean area and then painted over the blotchy area.



**LEFT:** You can see that the Clone Stamp Tool created some uneven retouch areas on the wall. The Healing Brush is being used to sample from a smooth area near the top. **RIGHT:** The Healing Brush is being used to paint in that sampled content over the blotchy areas.

We continued to retouch the right side of that wall using the same technique, starting with the Clone Stamp Tool. We sampled from an upper, clean area of the wall and then applied that content on the lower, obstructed area. Then we used the Healing Brush to smooth out the uneven areas. When thinking about the Healing Brush, it is mainly copying texture. It's getting the color and tone from the area surrounding the retouch area. Knowing this, you can sample from other areas in your image, as long as they have the same texture you're looking for. At this point in the lesson video, I was looking for a clean area of texture on the wall but couldn't find anything. I instead sampled from an area on the ceiling and applied that, using the Healing Brush, to the area of the wall that we needed to smooth out.



In the screen shot above left, we are using the Clone Stamp Tool to sample from an area near the top of the wall. In the other screen shots, we are painting in the sampled content on the lower, obstructed part of the wall.



The Healing Brush was used to sample from an area on the ceiling and is now being used to paint over the uneven areas on the wall. As we paint, you can see what area is being sampled from.

## Clean up the Floor (15:46)

Now we'll move on to retouch the floor on the left side of the image. The guide line shows us where the floor should begin, and we need to make sure that what's bumping up against that line has the proper brightness, color and texture for the floor. We'll use the Clone Stamp Tool to place floor content right along the edges and then we'll use the Healing Brush to fill in the obstructed part of the floor that we isolated.

Once again, it's a good idea to do this retouching on a new, empty layer. This is especially important here, because we might end up with overspill onto the wall. If it's on it's own layer, it will be easy to remove that overspill without affecting the clean wall area.

We'll use the Clone Stamp Tool to retouch the part of the floor that meets the guide line that defines the wall edge. We'll sample from a clean area near the wall edge and then paint in that content along the blue guide line. When doing this, you may need to sample multiple times in order to paint in clean content.



**The Spot Healing Brush is being used to create a straight line of floor content along the blue guide line.**

We'll do the same thing along the edge on the left side of the image. We'll sample from a clean area in the middle of the floor and then paint in the floor content along that edge.



**The Spot Healing Brush is being used to create a straight line of floor content along the blue guide line on the left edge of the floor.**

Now the construction materials that are obstructing that area are surrounded on all sides by floor content. This means that we can use the Healing Brush to fill in that area. We'll activate the Healing Brush and use it to sample from a large, clean area of the textured floor. Then we'll paint over the obstructions, taking care that the sample point doesn't hit anything except floor. If there are any areas that don't look quite right, we can re-sample and paint over them again.



**The Healing Brush was used to sample from a large clean area of floor and is now being used to paint over the isolated debris.**

## Clean Up Left Wall (20:02)

The wall on the left side of the frame is partially covered with construction materials, as well as the dark shadows of the materials we already removed. We need the wall to be the proper brightness, color and texture all over. We also need to make sure that the seams in the drywall are added correctly. With the Clone Stamp Tool, we just want to isolate the obstructions so that they're not touching the floor or other walls.

Once again, we'll apply this retouching on a new, empty layer. We'll activate the Clone Stamp Tool and sample from the upper part of the wall. When we paint that content onto the lower part of the wall, we need to pay attention to the preview inside the brush tip so that we are sure that the drywall seam lines are in the correct spot. We'll need to re-sample several times in order to paint over the obstructed areas with the correct texture, color and brightness.



The Clone Stamp Tool is being used to retouch the bottom edge of the wall (left) and the left edge of the debris we need to retouch (right).

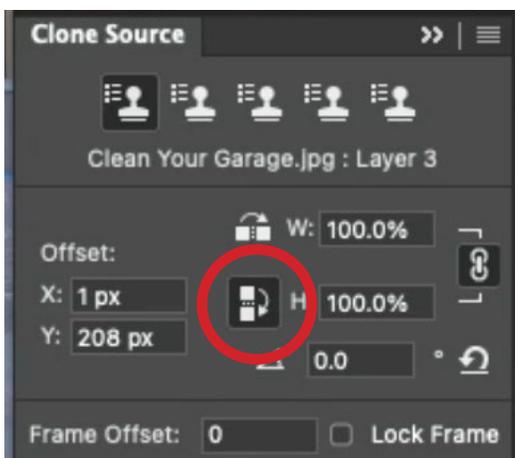
## The Clone Source Panel (22:05)

The edges of the left wall have been retouched using the Clone Stamp Tool and we need to retouch the central part of the wall. This is going to present a new challenge due to the perspective lines. We can tell that there should be a horizontal line of spackle on the wall and there IS a horizontal line of spackle that we can copy from in the upper part of the wall. However, because of the perspective in the image, that upper line is angled down, where the line we need to add should be angled up. We can achieve this using the Clone Source settings.

We'll open the Clone Source Panel by clicking on the Window menu and choosing Clone Source. This panel contains many settings that will allow you to manipulate the content you sampled with a retouching tool. This includes a button that will flip the content vertically, which is what we need to do with that angled spackle line.

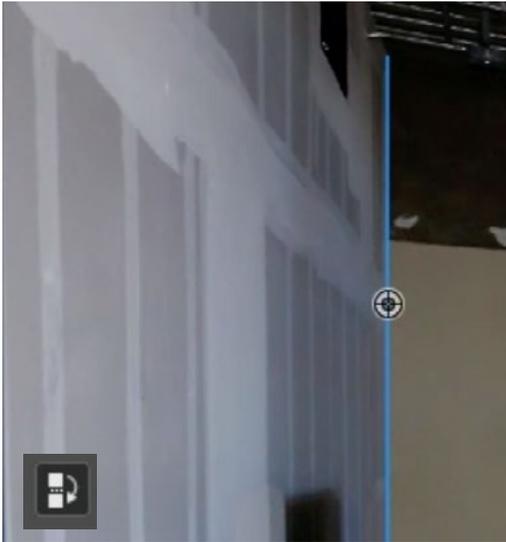


**The perspective lines make it so the top line of horizontal spackle is at a different angle from the lower line. This will create a challenge when retouching the lower line.**

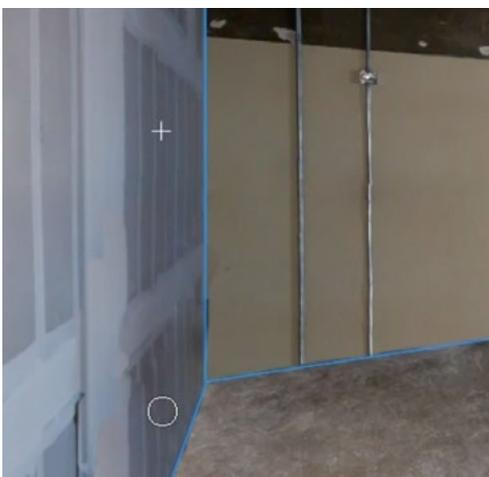
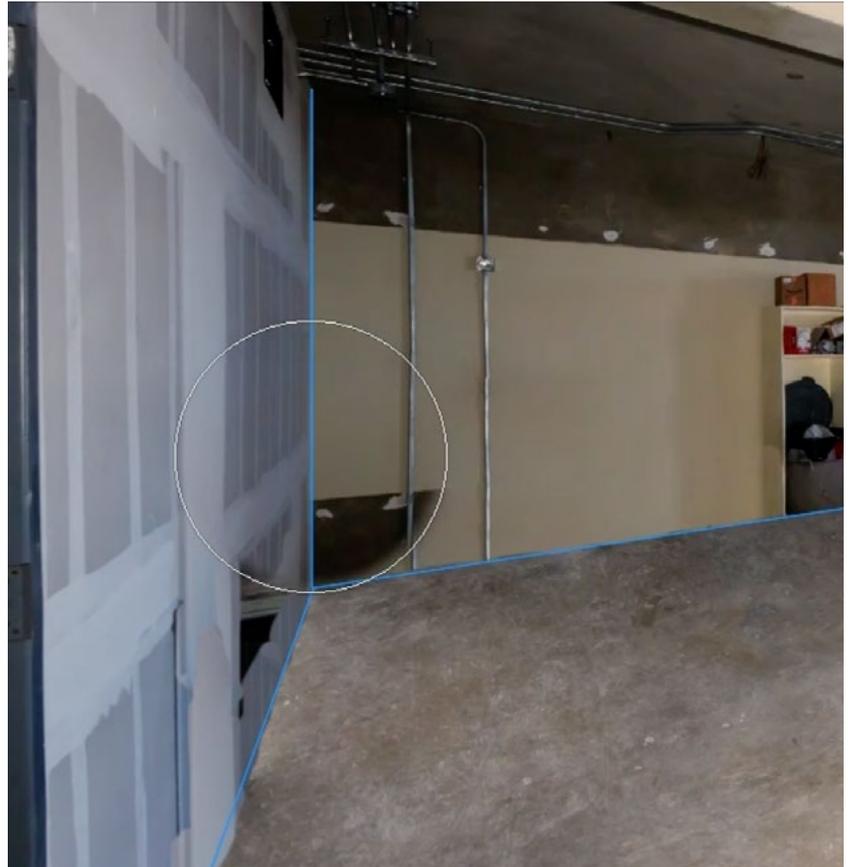


**In the Clone Source Panel, the Flip Vertical button is turned on. This will cause the tool to paint in the sampled content mirrored vertically.**

We'll activate the Clone Stamp Tool and we'll click on that Flip Vertical button. We'll then sample from the end of the upper, horizontal spackle line. When we paint in that content along the center of the wall, you will see that it paints in a flipped version of what we sampled. This causes the line to move in the correct direction, related to the perspective in the image.



**ABOVE:** The Clone Stamp Tool is being used to sample from the right end of the spackle line and the Flip Vertical setting is turned on. **RIGHT:** We made the brush tip large enough so that you can see the preview inside, which shows that the source content has been flipped.



If there is any unevenness in color or brightness, we could also switch to the Healing Brush, keeping that Flip Vertical button turned on.

**The Healing Brush is being used to smooth out any unevenness in brightness and texture.**

## Clean Up the Right Wall (24:40)

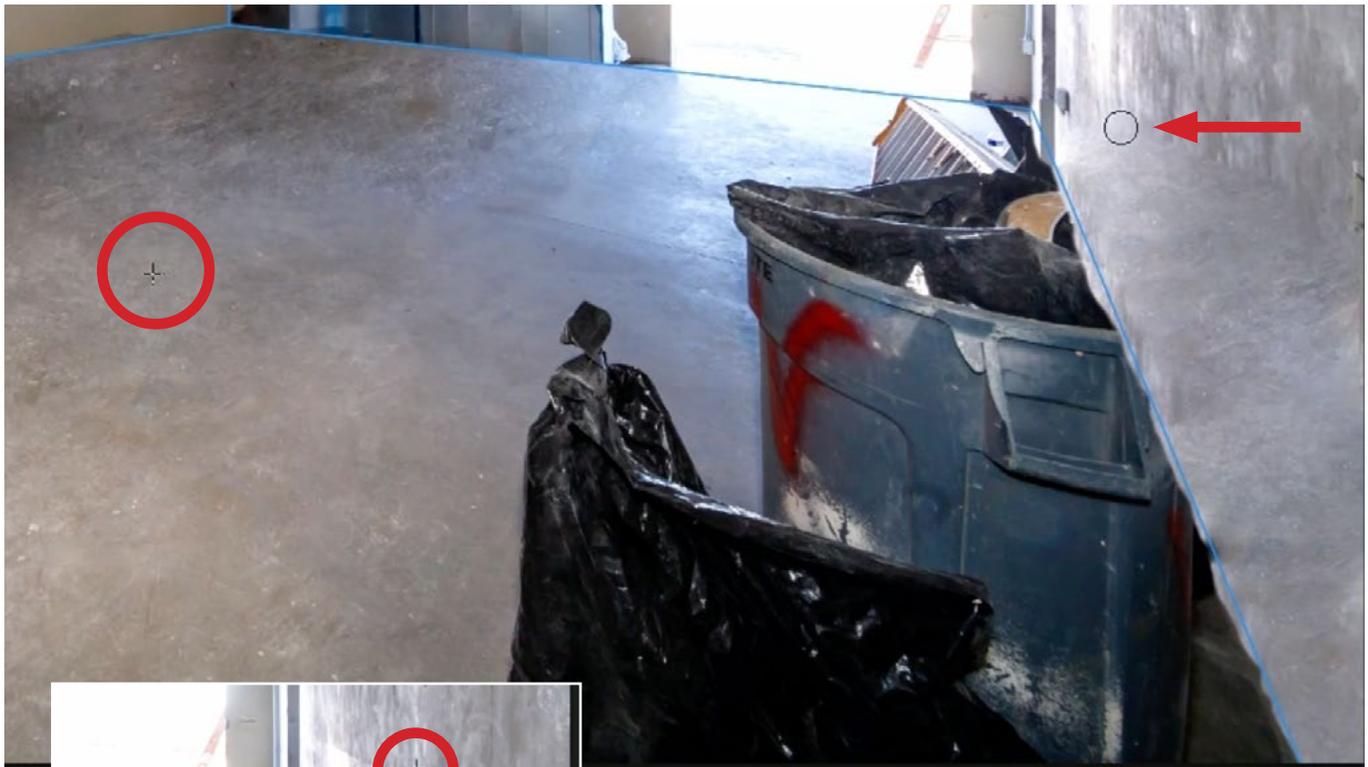
There is a trash can and more construction materials on the right wall in the image and we will need to remove those as well. Again, we need to make sure that we get the proper brightness, color and texture all the way down the blue line. We'll use the Clone Stamp Tool to sample from a clean part of the upper wall and then paint along the blue line that defines the edge of the wall that meets the floor. We may need to re-sample a couple of times in order to get the entire blue line. In the video lesson, I also applied the proper brightness to the right edge of the image frame so that the Healing Brush would work more effectively in the next step.

Looking at the area that is left to retouch, I wasn't sure if I would have a large enough sized area [on the wall] to copy from. If this happens, there are a couple of things you could do. You could use the Clone Stamp Tool to break up the re-touch area into smaller sections, or you could find another part of the image that has a similar texture to what you need.



**FAR LEFT:** The Clone Stamp Tool was used to sample part of the upper wall and then paste that content on the bottom of the wall, along the blue line. The right side of the frame was also retouched, isolating the debris within the wall. **DIRECTLY LEFT:** The Clone Stamp Tool was then used to break up the debris into smaller pieces.

In the video lesson, I actually copied from the floor and applied that texture to the area I needed to retouch on the wall. This didn't look QUITE right, but it served as a good starting point. I was then able to copy from clean areas of the wall to apply that texture in selective areas.



**ABOVE:** The Healing Brush is being used to sample the texture from the floor and apply it to the wall. **LEFT:** We are now making the wall texture look more realistic by copying the texture from the upper part of the wall and applying it to the lower part.

## Retouch Floor Area on the Right (29:30)

We'll create another new, empty layer to retouch the materials from the floor area on the right side of the frame. The same Clone Stamp technique will be used here to create a clean area of floor along the blue line.

**TIP:** We created a straight retouch line with the Clone Stamp Tool, and there is a trick for doing this. When painting in the sampled content, click once, hold down the Shift key and they click again. The tool will paint a straight line between the two points where you click. This trick works for any brush tool.

For the wall with the opening, there is a small area on the floor that needs to be retouched. We want to match the brightness and the open door is creating a much brighter area on the floor. To correctly match the brightness on the right side of the door, we can sample from the left side and click the Flip Horizontal button within the Clone Source Panel. Then, when we paint to retouch the area, the light will properly fade out on the other side of the door.



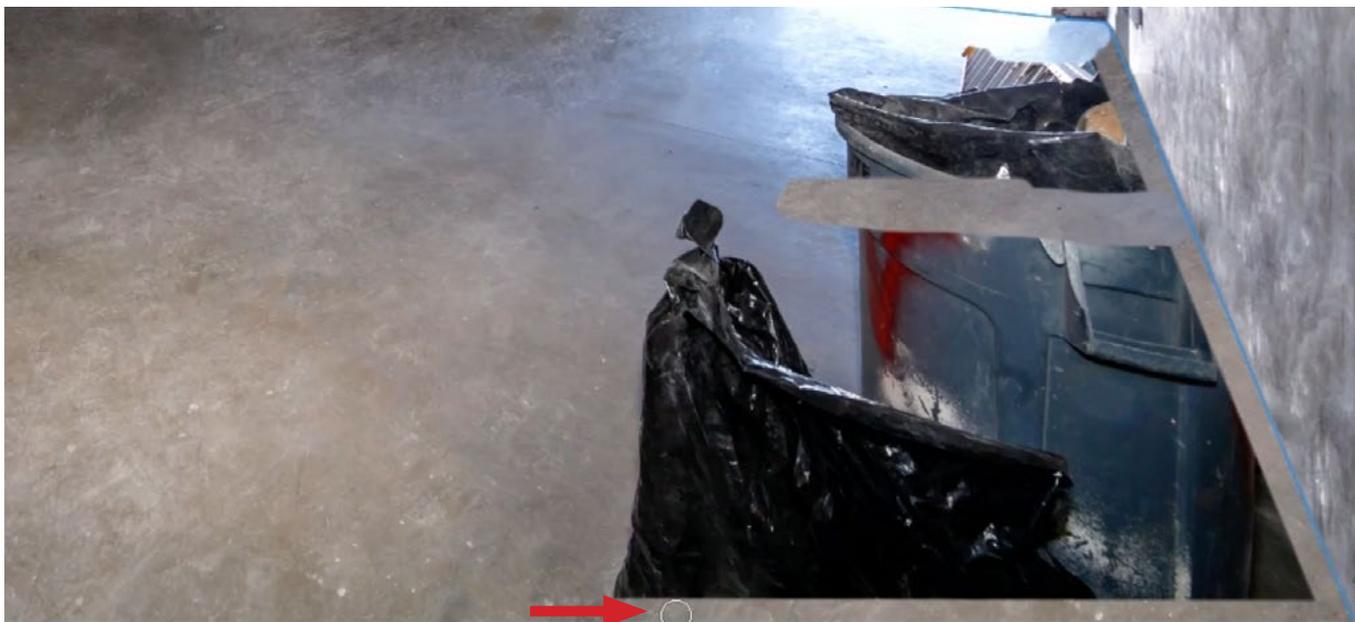
The Clone Stamp Tool was used to sample from a clean area of floor and is now applying that sampled content to the edge of the floor, along the blue line.



The Clone Stamp Tool is being used to paste in content from the left side of the door and apply it to the right. The Flip Horizontal button is turned on.

The materials left covering the floor are quite large, so we can use the Clone Stamp Tool to break it up into smaller pieces. This will make it easier for the Healing Brush to retouch later. For the Healing Brush to work most effectively, the area you want to retouch should be surrounded on all sides by the proper brightness and color. For that reason, we'll also retouch the debris where it meets the bottom edge of the frame.

Note: Remember to turn off the Flip Horizontal button if it is still turned on.



The Clone Stamp Tool is being used to ensure that the debris is surrounded on all sides by the proper brightness and color.



The Healing Brush is being used to copy the texture from the clean area on the floor and apply it to the retouch area.

## Retouch Final Wall Using Same Techniques (32:55)

There is only one wall left to retouch and that is the wall to the left of the open door. We'll use the same techniques that we have been using for the other walls, so I won't go into too much detail here. In general, this is what was done:

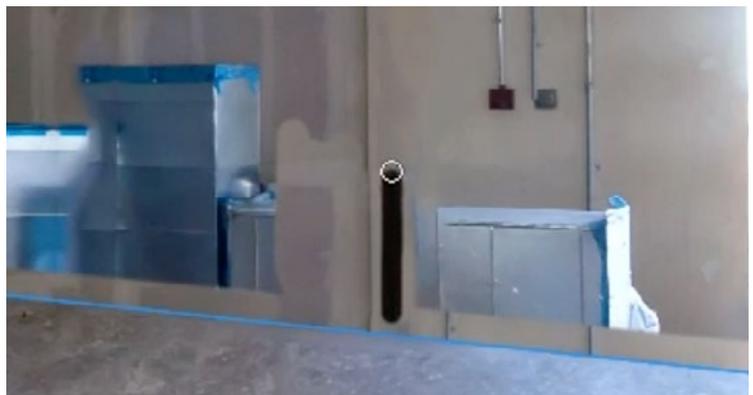
- Retouch the edges of the materials using the Clone Stamp Tool in order to get the correct color and brightness on all sides.
- Use the Clone Stamp Tool to break up the retouch area into smaller pieces.
- Use the Spot Healing Brush to clean up messy areas on the wall. This included little spots or blobs of spackle that would interfere with later retouching. Note that the Spot Healing Tool does not require you to choose a sample area. Instead, it decides on its own what to place in the area where you paint.
- Use the Healing Brush to retouch the broken up areas of materials.



**The Clone Stamp Tool is being used to retouch the edges of the materials we need to remove.**



**The Clone Stamp Tool was used to break up the materials into smaller sections.**



**The Spot Healing Brush is being used to clean up smaller messy spots on the wall.**

- We used the Healing Brush set to Flip Vertical in order to complete the rectangular pieces of drywall. We copied from the top part and painted the flipped content onto the bottom part.



The Healing Brush is being used to complete the bottom of the drywall rectangle. In the Clone Source Panel, the Flip Vertical button is turned on.

## Fine-Tune the Edges (40:00)

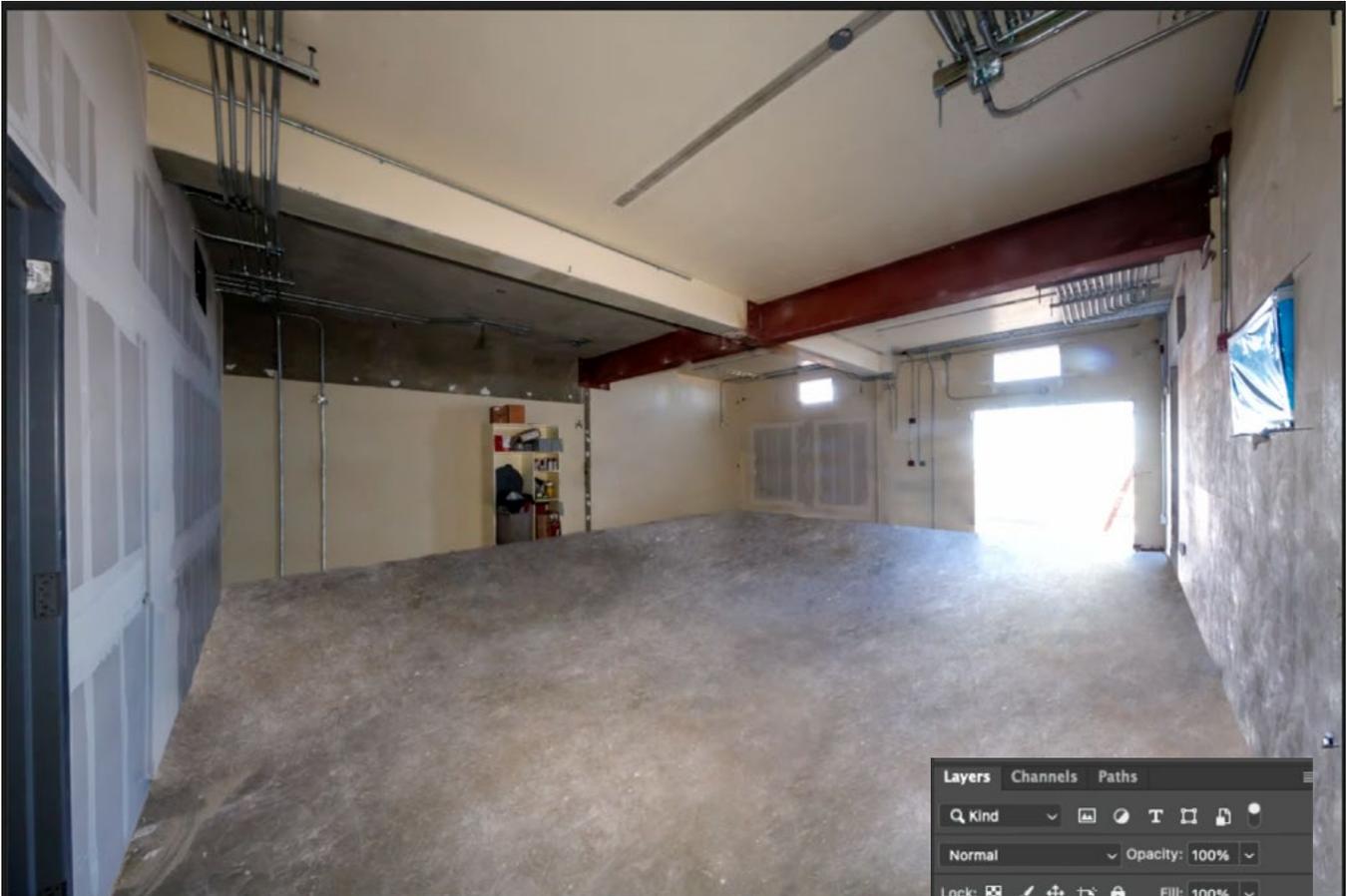
The room is looking pretty clean now. We just need to fine-tune the edges where the floor meets the walls. It will be easy to do this because each of the retouch areas was placed on its own layer. On the far left wall, the floor retouch layer extended up into the wall so we activated that layer and used the Eraser Tool to remove the excess floor that extended above the blue guide line. Remember, you can hold down the Shift key to create a perfectly straight line between brush strokes.



We are working on the layer that contains the floor retouching. The Eraser Tool is being used to remove excess floor that extended above the blue line.

If there are any areas where the floor and the wall are on the same layer, the Clone Stamp Tool can be used to clean up the edge. That happened with the left wall in the video lesson.

Finally, you can remove the blue guide lines by opening the Paths Panel and clicking somewhere outside of the work path. This will deactivate the path so that it's no longer visible.



The final result is shown above. At right, you can see all of the retouch layers that were used to remove the various areas of construction materials from the room.

