

Tips for Taking Better Photos



1. Scope

This work practice contains tips for taking better still life photos for the purpose of documenting material and equipment in various states of condition.

Camera-specific instructions are outside the scope of this practice.

Videography is outside the scope of this practice.

2. Application

This work practice is directed at any novice using a camera in the office or field. It is intended to support the activities of SCL 0015.40 and 9606.71.

Once back in the office, some image problems can easily be corrected using Adobe Photoshop; however, other image problems cannot. Section 3 identifies common image problems and how to best address them.

Standards Coordinator
John Shipek



Standards Supervisor
John Shipek



Unit Director
Darnell Cola



3. Tips for Easily Corrected Problems

These problems *can* be easily corrected in Adobe Photoshop:

3.1 Underexposure

An image that is darker than it should be is considered underexposed. Except in extreme situations, most dark images can be adequately brightened with software.

Figure 3.1. Example of Underexposure



3.2 Wide Field of View

An image that has generous borders around its primary subject is considered to have wide field of view. It is a simple task (if necessary) to crop an image with software.

Figure 3.2. Example of Wide Field of View



3.3 Poor Alignment

An image with an off-level horizon is considered out-of-alignment. Flag poles should appear vertical and horizons should appear level. It is a simple task to use software to adjust the alignment of an image. Adjusting alignment will force-crop the borders of the image.

Figure 3.3. Example of Poor Alignment



3.4 White Balance Off

An image is said to suffer from a white balance problem if an object that is supposed to be white appears tinted. This phenomenon is the result of artificial light sources fooling a camera's color sensors. The white balance of an image can be corrected using software.

Figure 3.4. Example of White Balance Off



4. Tips for Problems that Must be Corrected in the Field

These problems **cannot** be easily corrected in Adobe Photoshop and must be addressed in the field when the photograph is taken.

4.1 Overexposure

An image that is brighter than it should be is considered overexposed. Extreme overexposure is also known as blowout. Blowout cannot be corrected with software because the image information has been permanently lost.

Figure 4.1. Example of Overexposure



To correct, adjust the camera setting to underexpose. See Section 5, Bracketing: A Helpful Technique. Also, overexposure may occur if a flash is used in close settings. For more information about common camera settings and features, see Section 6.

4.2 Too Narrow Field of View

An image that has insufficient borders around its primary subjects is considered to have too narrow field of view. This situation cannot be corrected with software because the image information was never captured.

Figure 4.2. Example of Too Narrow Field of View



To correct, avoid cropping an image with the camera in the field; zoom out a little to capture more information at the borders.

4.3 Poor Focus

There are many reasons why an image can be out of focus or blurry. Most solutions involve keeping the camera steady and increasing ambient lighting.

Figure 4.3. Example of Poor Focus



To correct poor focus, try one or more of these measures:

- Use a tripod
- Increase ambient lighting
- Activate the macro setting (for close-up shots)
- Activate the VR (vibration setting) feature

Important: if unsure, check image focus in the field using the playback feature. For more information about common camera settings and features, see Section 6.

4.4 Cluttered/Complex Background

A cluttered/complex background can make it very difficult to discern the main subject. Software cannot fix this problem.

Figure 4.4. Example of Cluttered/Complex Background



To correct, use a sheet of white foam core for a background. In other settings, walk around and try different camera angles.

4.5 High (Tonal) Contrast

Tonal contrast refers to the difference in tones from the lightest tone to the darkest tone—in other words, the difference in tones from white to gray to black. A high tone image mainly includes white and black with few or no middle gray tones. While it is a simple task to increase the contrast of an image with software, it is much more difficult to reduce contrast and maintain pleasing results.

Figure 4.5. Example of High Contrast



To correct, plan outdoor photography on cloudy/hazy days. Early morning provides better lighting conditions than late afternoon.

4.6 Backlighting

One of the most common problems with taking pictures outdoors is called backlighting. Backlighting occurs when the camera is pointed towards a bright light source, typically the sun. This situation fools the camera into underexposing the subject.

To correct backlighting, adjust the camera setting to overexpose. See images 4.6a and 4.6b. See also Section 3.1, Underexposure.

The effect of backlighting can similarly occur when taking the picture of a dark object on a white background, or of a subject with their back to a window.

Figure 4.6a. Camera Exposure Set to Zero (Neither Plus nor Minus) Compensation

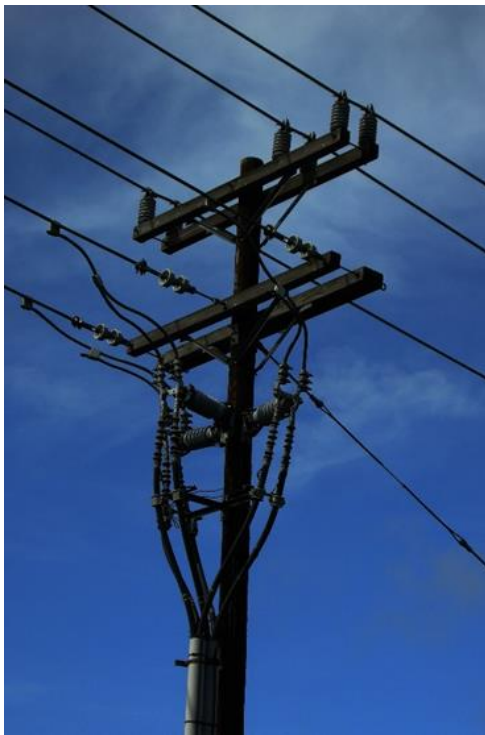


Figure 4.6b. Camera Exposure Set to Plus +2.0 Stop Compensation



For more information about common camera settings and features, see Section 6.

5. Bracketing: A Helpful Technique

Bracketing involves taking a sequence of pictures of the same scene at a range of exposure settings. There are two reasons you might want to do this:

- As a safety net to ensure that you get at least one well-exposed picture of the scene (since camera exposure meters don't always get it right first time).
- To give you a range of exposures that you can blend together later using software.

6. Common Camera Settings and Features

Camera settings and features vary in number and complexity, depending on the camera make and model. The most common camera settings and features include:

- Playback: takes a digital camera out of shooting mode and allows the user to view and edit stored images.
- Flash: provides additional light to increase exposure.
- Exposure compensation: allows you to override the camera's automatic exposure setting and compensate for high or low light situations.
- Macro mode: used for taking close-up pictures.
- Menu: allows the user to access the main menu, where most options and settings can be adjusted. The Menu button provides access to the vibration reduction (VR) activation control.

Figure 6. Nikon L840 Camera Settings and Features



7. References

SCL Work Practice 0015.40; "Treatment of Failed Material"

SCL Design Standard 9606.71; "Requirements for Failure Analysis Reports"

8. Sources

Shipek, John; SCL Standards Supervisor, originator, and subject matter expert for 0010.25 (john.shipek@seattle.gov)

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