

Post-Processing and Workflow Techniques

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Determine Your Requirements

- Define “good enough” = optimum cost-benefit
 - Final image size?
 - Web?
 - 4x6 print?
20x24 print?
- Understand your time capacity
- 80-20 rule (Pareto Principle)
 - 20 percent of your activities will account for 80 percent of your results
 - 80 percent of effort is spent using 20 percent of tools

Photoshop Brush-Style Tools

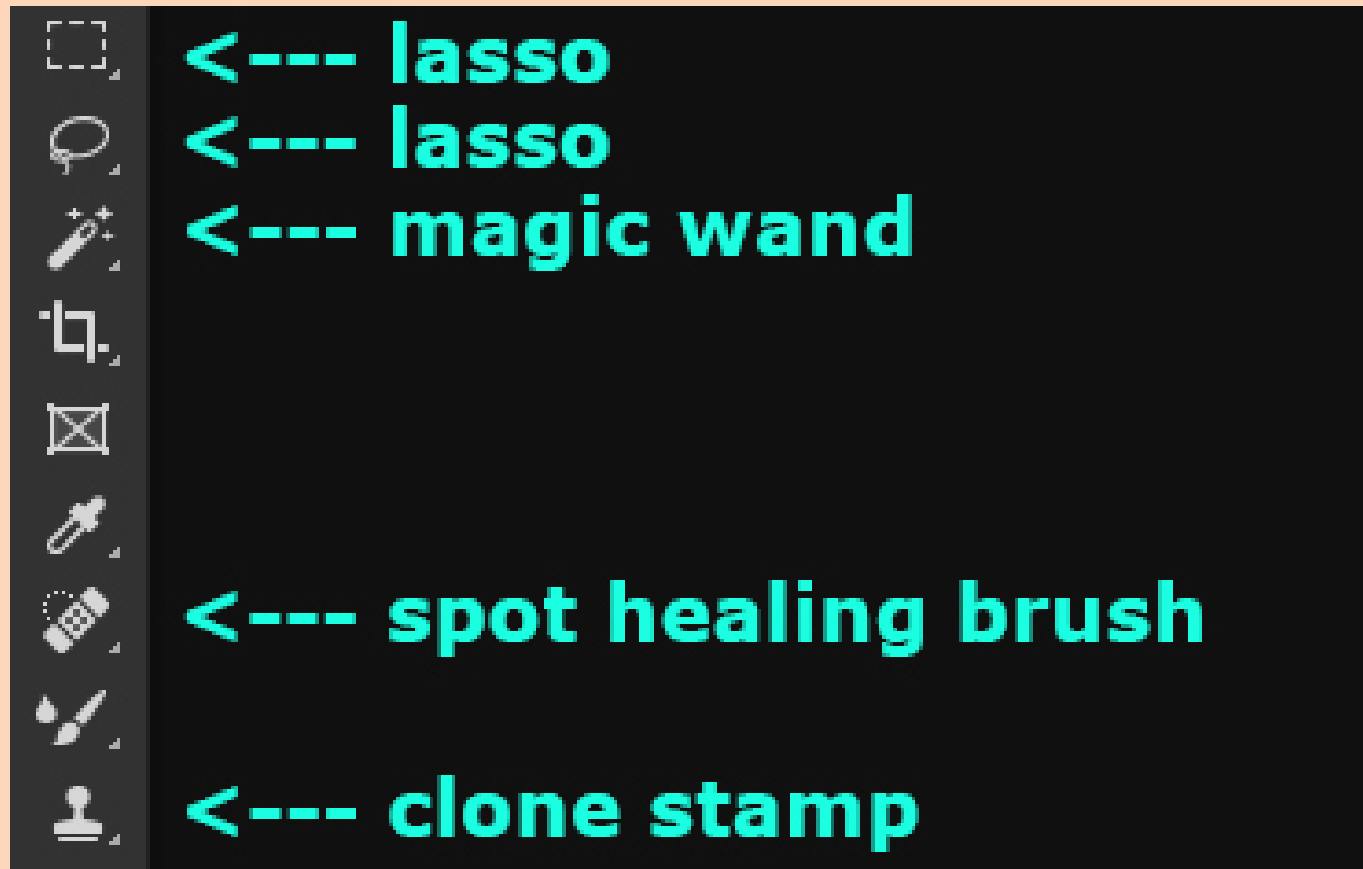
- Used frequently
 - Clone
 - Spot Healing

Photoshop Selection tools

- Used frequently
 - Lassos
 - Magic wand

- Used infrequently
 - Subject selection
 - Magnetic selection
 - Inverse
 - Color range
 - Apply mask (alpha channel)

Location of Photoshop Brush and Selection Tools



Photoshop Tools which Operate on Selections (or Entire Image)

- => Image => adjustments
- Used frequently
 - Levels
 - Curves
- Used periodically
 - Hue/ Saturation
 - Selective Color
 - New layer via copy
- Used infrequently
 - Brightness/ Contrast
 - Exposure
 - Vibrance
 - Color Balance
 - Black and White
 - Photo Filter
 - Channel Mixer
 - Color Lookup
 - Invert
 - Posterize
 - Threshold
 - Gradient Map
 - Shadows/ Highlights
 - HDR Toning
 - Variation
 - Desaturate
 - Match Color
 - Replace Color
 - Equalize

Nik collection Tools

- Used frequently
 - Nik Color Efex
 - Collection of 55 tools, slide below
 - Most tools have nothing to do with color
 - Nik Perspective Efex
 - Superior perspective correction options
 - Nik Sharpener
 - Final sharpening, particularly for prints
- Used infrequently
 - Nik Silver Efex
 - Convert to black and white
 - Nik Analog Efex
 - Simulate film from digital original
 - Nik Dfine
 - Noise reduction
 - use Noiseware instead
 - Nik Viveza
 - High intensity crayons
 - Nik HDR Efex
 - High dynamic range
 - Combines multiple images with different exposures take from one position with tripod
 - <https://shop.dxo.com/en/nik-collection-5.html>

Nik Color Efex tools

- Used frequently
 - Pro Contrast
 - Tonal Contrast
 - White Neutralizer
- Used infrequently
 - Bi-Color Filters
 - Custom Bi-Color
 - B/W Conversion (use Silver Efex)
 - Bleach Bypass
 - Brilliance/Warmth
 - Classical Soft focus
 - Colorize
 - Color Stylizer
 - Contrast Color Range
 - Contrast Only
 - Cross Balance
 - Cross Processing
 - Dark Contrast
 - Detail Extractor
 - Duplex
 - Darken/Lighten Center
 - Dynamic Skin Softener
 - Film Efex: Faded
 - Film Efex: Modern (Branded)
 - Film Efex: Nostalgic
 - Film Efex: Vintage
 - Film Grain
 - Fog
 - Foliage
 - Glamour Glow
 - Graduated Filters
 - Graduated Fog
- Used infrequently
 - Graduated Neutral Density
 - Custom Graduated
 - High Key
 - Image Borders
 - Indian Summer
 - Infrared Film
 - Ink
 - Levels & Curves
 - Low Key
 - Midnight
 - Monday Morning
 - Old Photo
 - Paper Toner
 - Pastel
 - Photo Stylizer
 - Polarization
 - Polaroid Transfer
 - Reflector Efex
 - Remove Color Cast
 - Skylight Filter
 - Solarization
 - Sunlight
 - Vignette: Blur
 - Vignette Filter
 - Vignette: Lens

Imagenomic Noiseware

- Noise suppression software tool designed to decrease or eliminate noise from digital photos or scanned images.
- <https://www.imagenomic.com/Products/Noiseware>

Objectives for an Image Preparation Workflow

- Return to any point in the edit cycle and revise the edits
- Repeatability via sequenced workflow steps
- Best possible picture quality
- Minimize labor (effort hours)
- Minimize duration (elapsed time)
- Goal is to do specific edits only once within a workflow
 - Place most labor-intensive workflow steps near the beginning
 - Place workflow steps likely to be repeated or redone (such as cropping) near the end

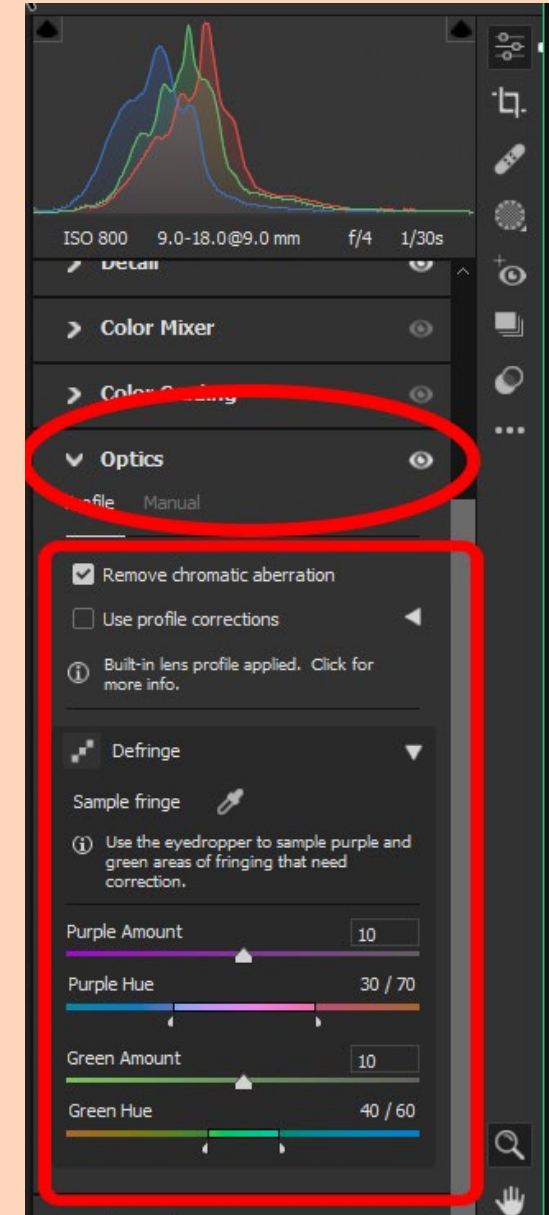
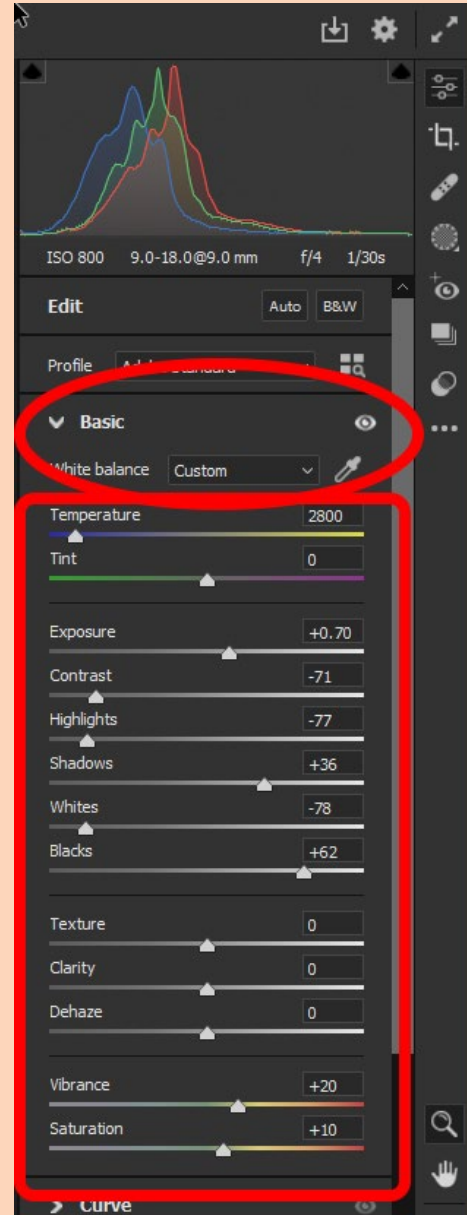
Sequenced Workflow Segments

- (0.3) Raw conversion
- (1) Remove distracting elements
- (4) Edit noise, color, local contrast, etc.
- (5.1) Perspective align before crops
- (5.2) Crop leaving all original pixels
- (5.3) Convert to final pixel size, color space, sharpen, output

(0.3) Raw Conversion

- Adobe Camera Raw
 - Use settings to keep histograms within bounds, not for appearance
 - Save as psd
- Start with removing fringing

0.3a Raw Conversion Controls



0.3b Fix fringe in raw conversion



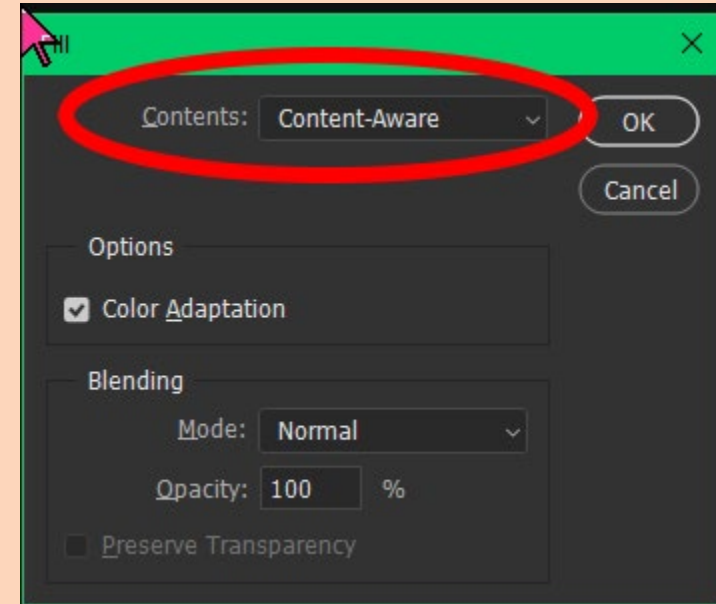
0.3c Raw Conversion Example



(1) Remove Distracting Elements

- One step tools
 - Spot healing brush
 - Clone
- Two step tools
 - Magic wand plus context sensitive delete
 - Lasso plus context sensitive delete

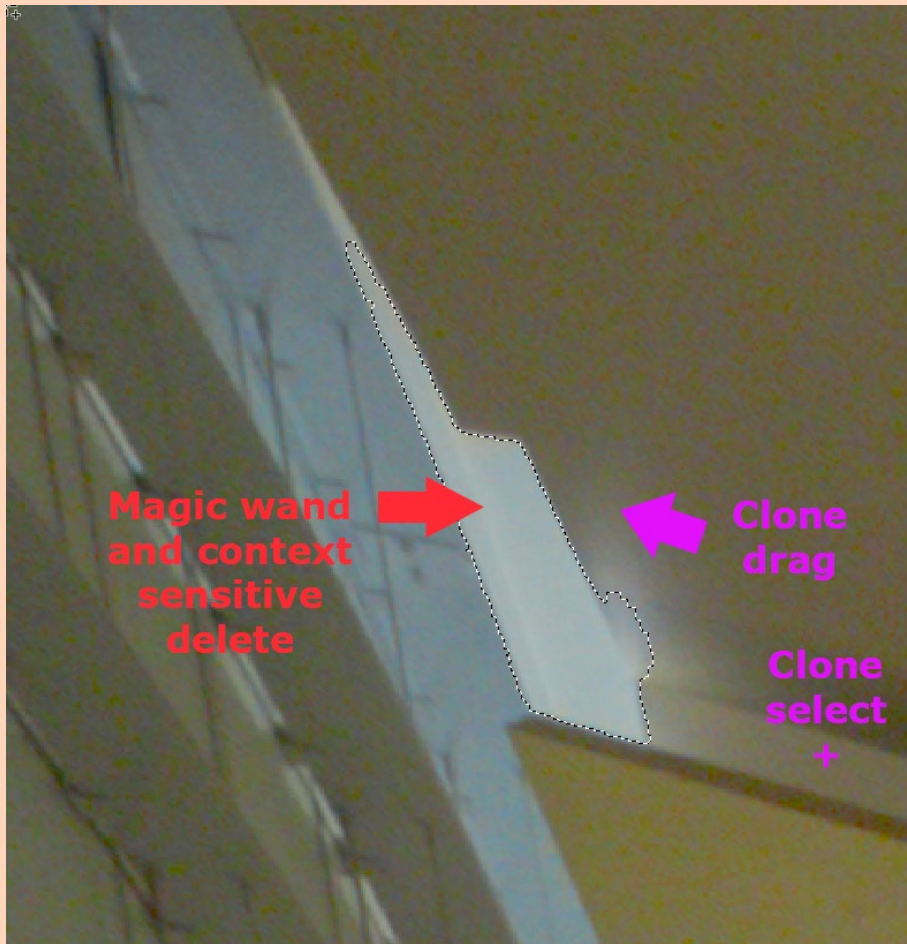
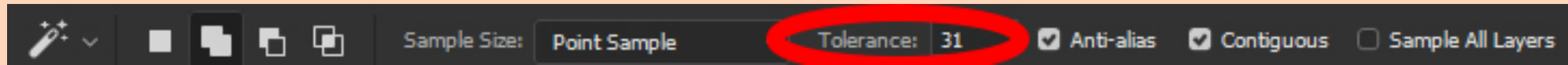
1a Lasso plus Context Sensitive Delete



1b Spot Healing Brush



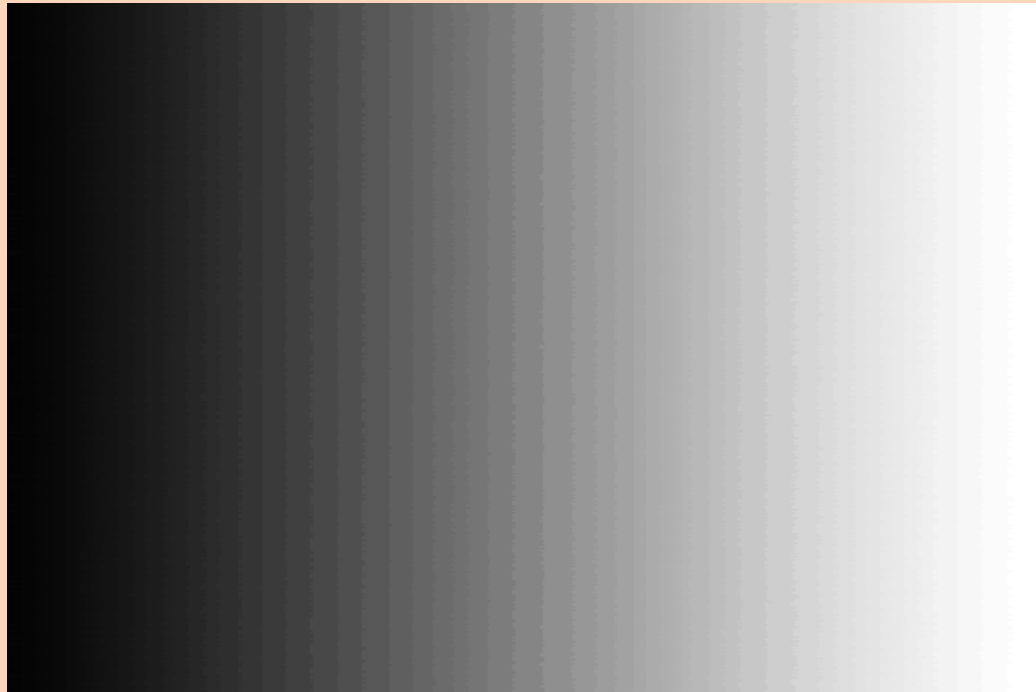
1c Magic Wand and Clone



(4) Edit noise, color, local contrast, etc.

- Covert to 16-bit to avoid banding
- Imagenomic Noiseware plug-in
- Photoshop Selective color
- DXO Nik Collection Color Efex plug-ins
 - Tonal (local) contrast
 - Pro contrast
 - White neutralizer
- Photoshop Curves as needed
- Photoshop Final levels
- Convert to 8-bit

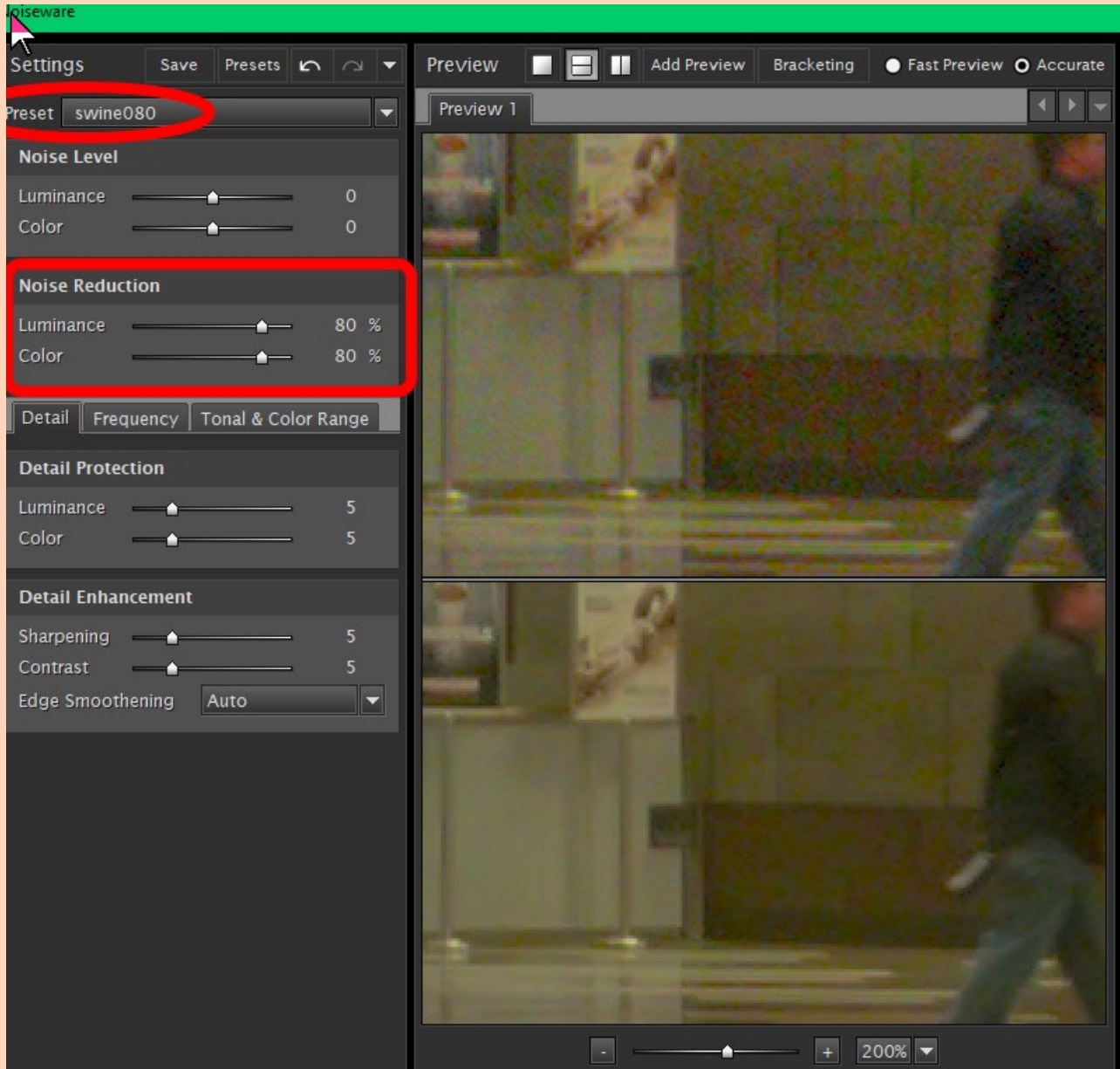
4a Use 16-Bit to Avoid Banding and/or Mottle



8-Bit = 256 colors per channel



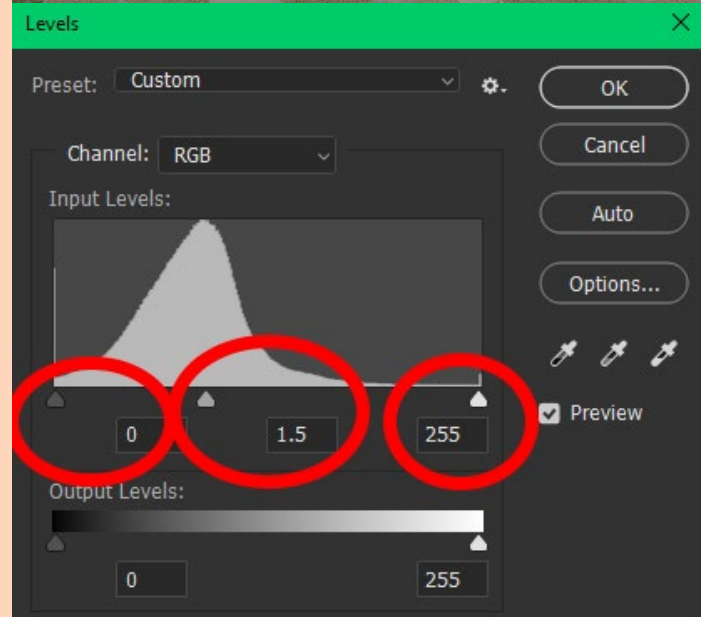
16-Bit = 65,536 colors per channel



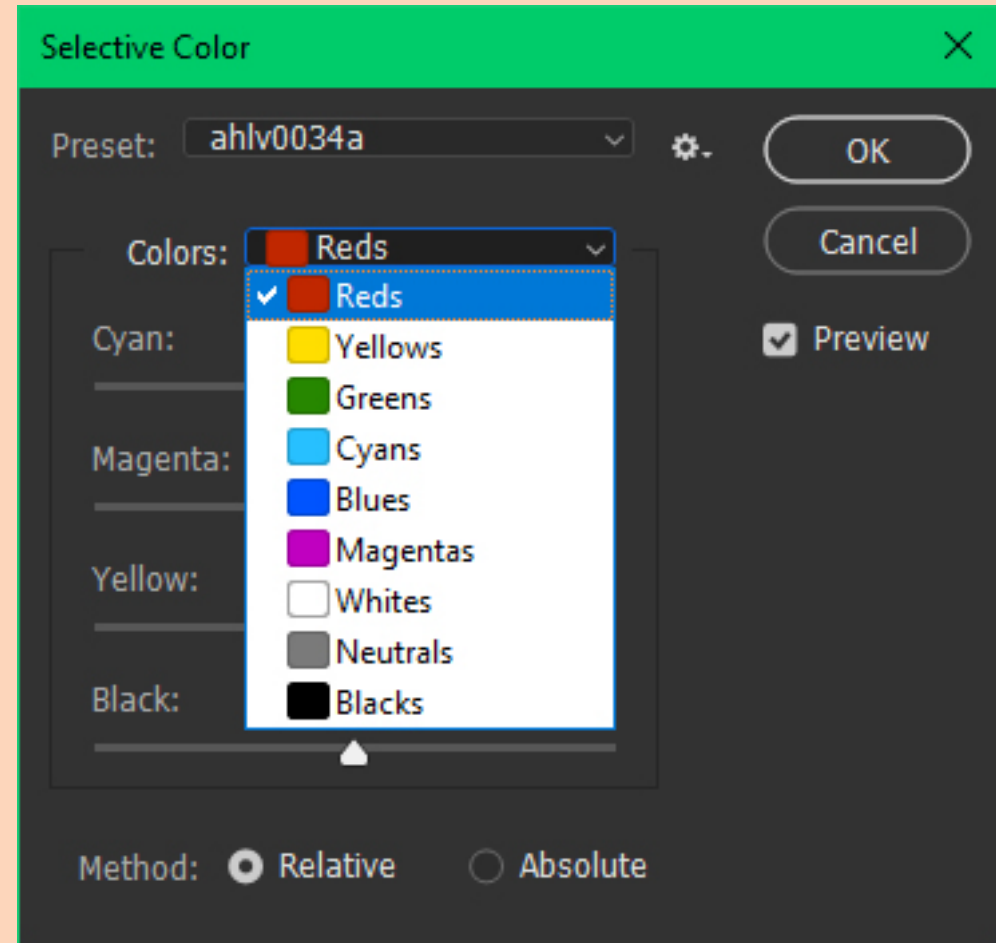
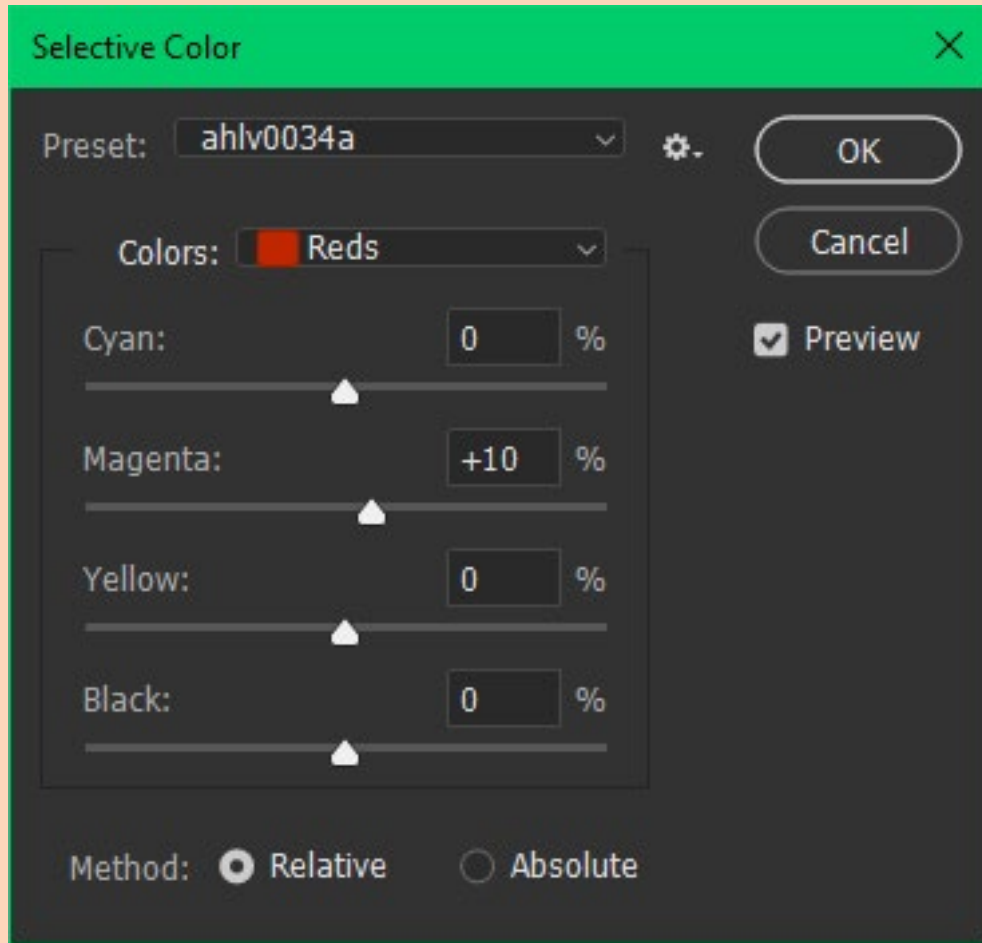
4b Noiseware



4c Levels Lighten Mid Tones 1.5

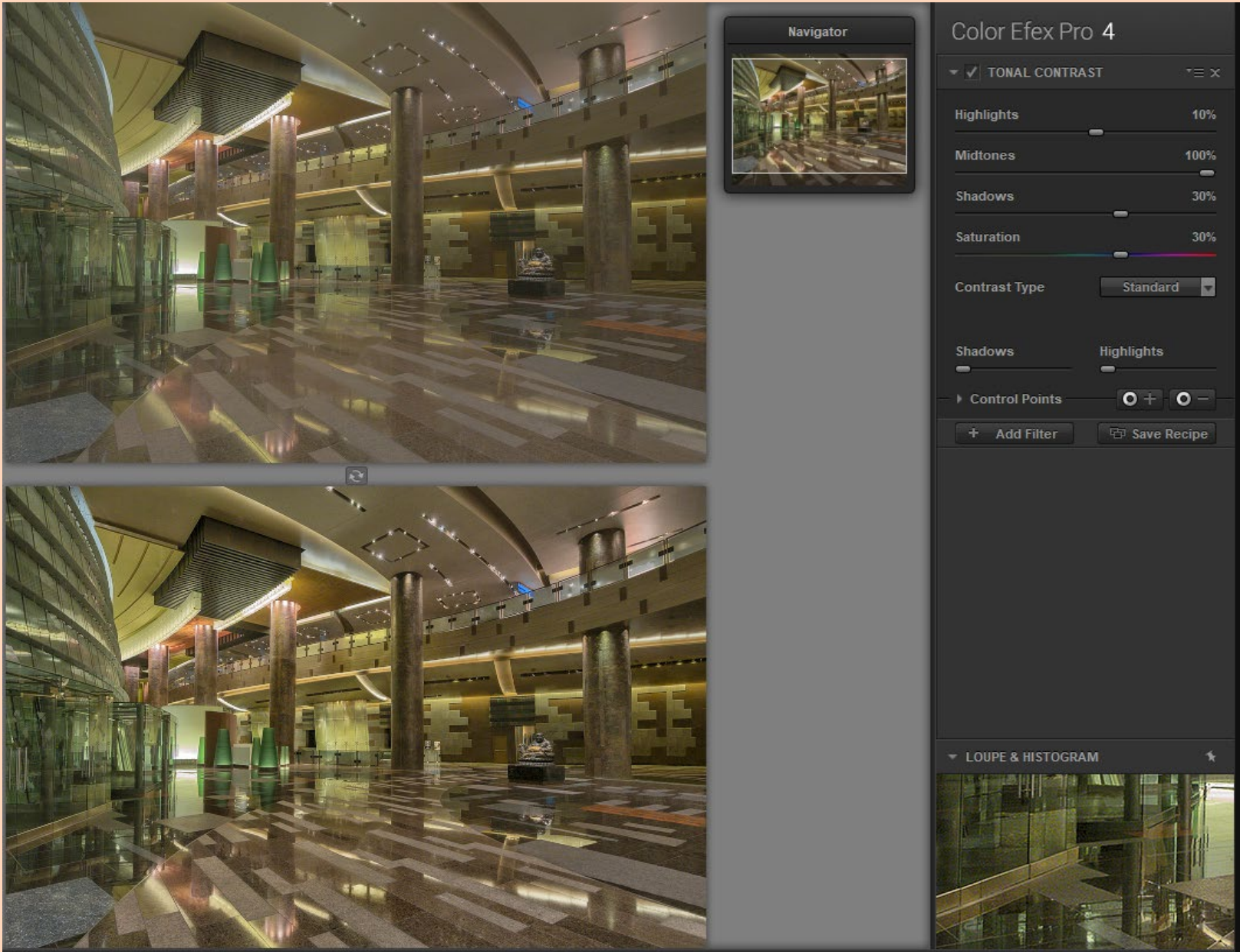


4d Selective Color

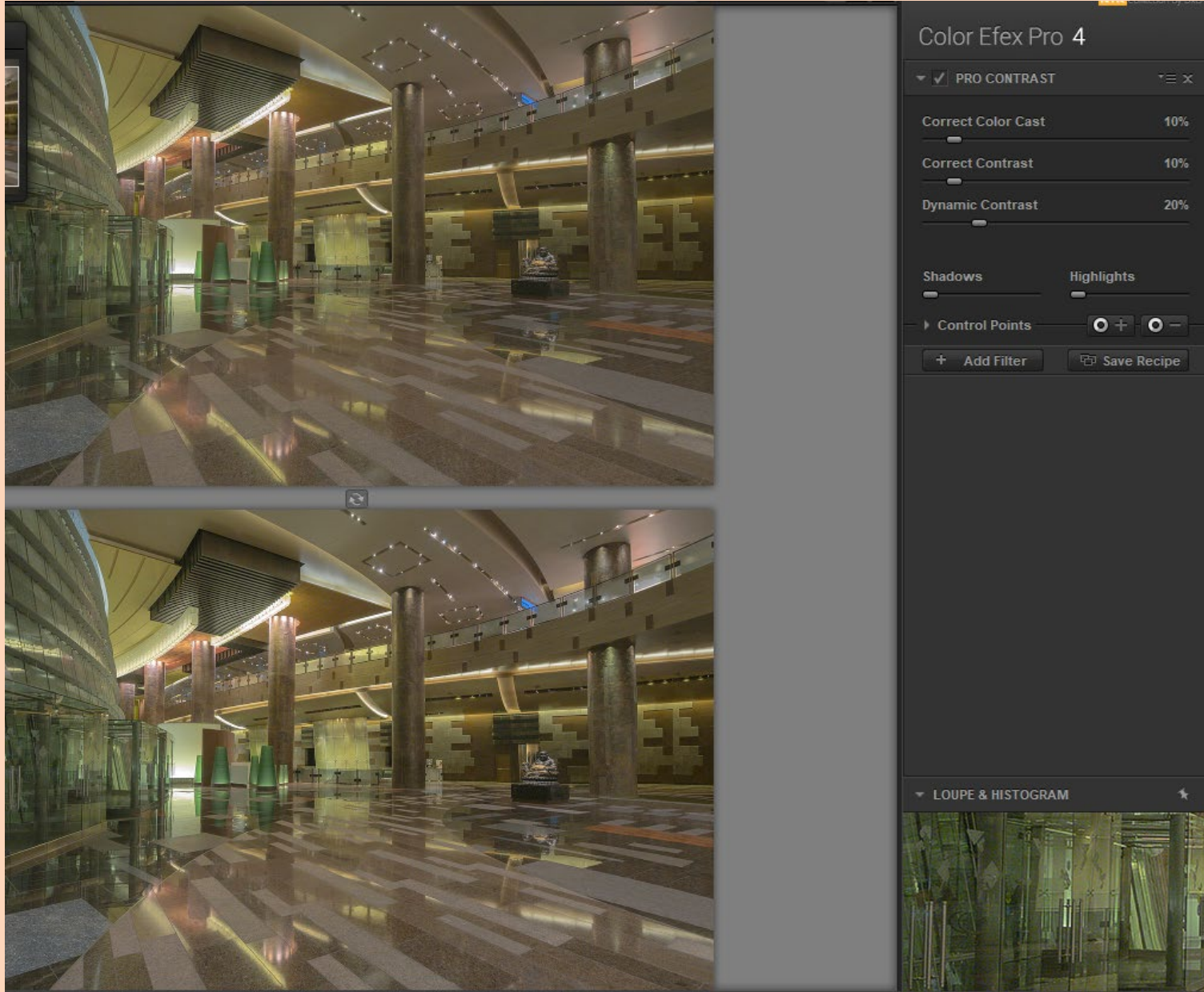


4e Selective Color

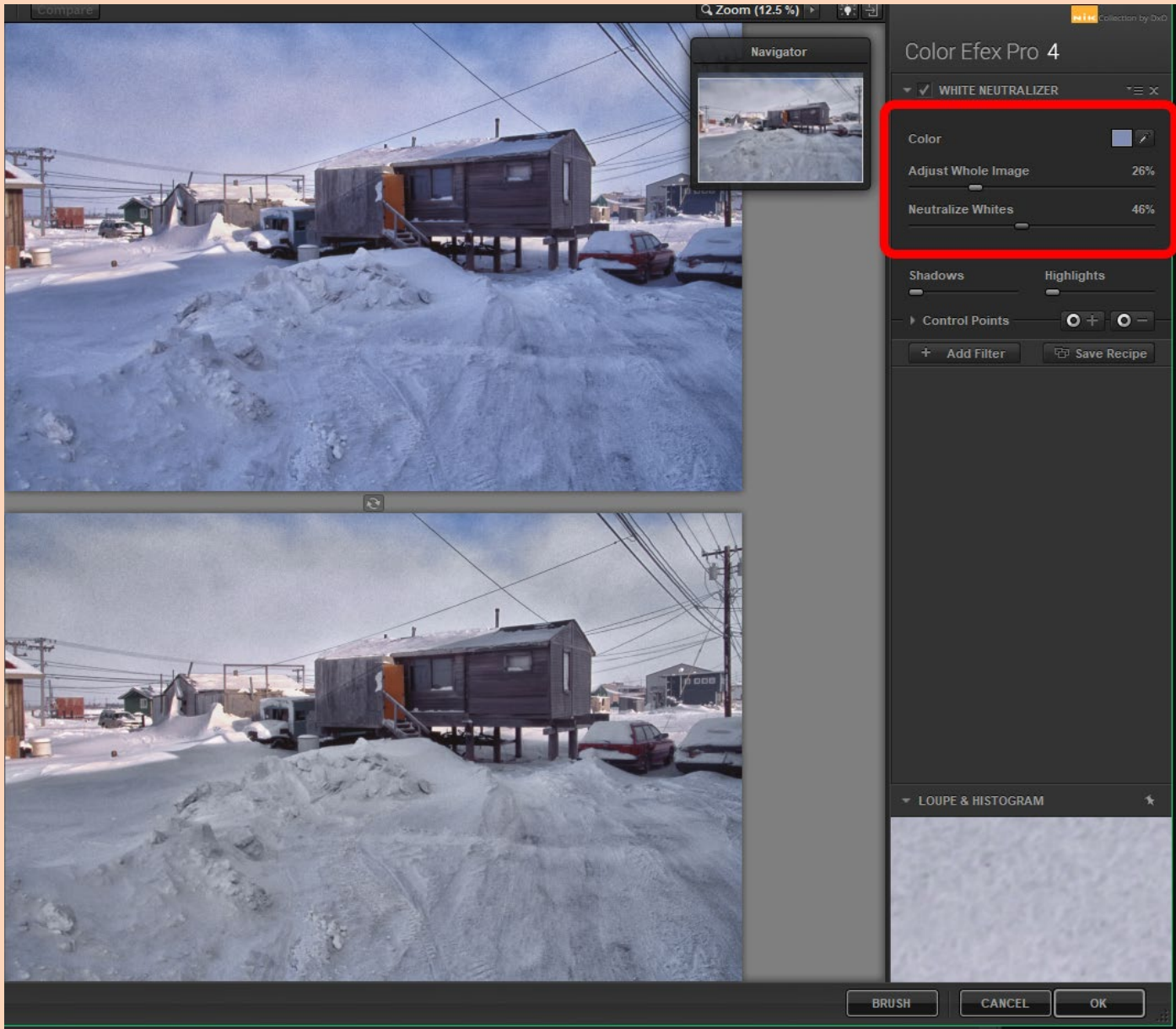




4f Nik Tonal (Local) Contrast



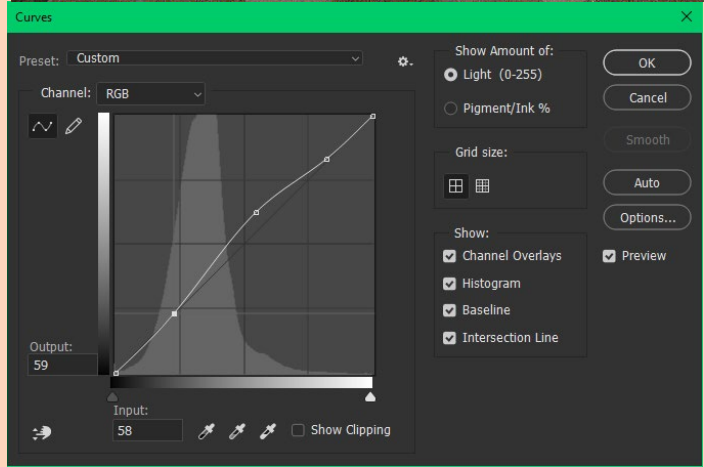
4g Nik Pro Contrast



4h Nik White Neutralizer

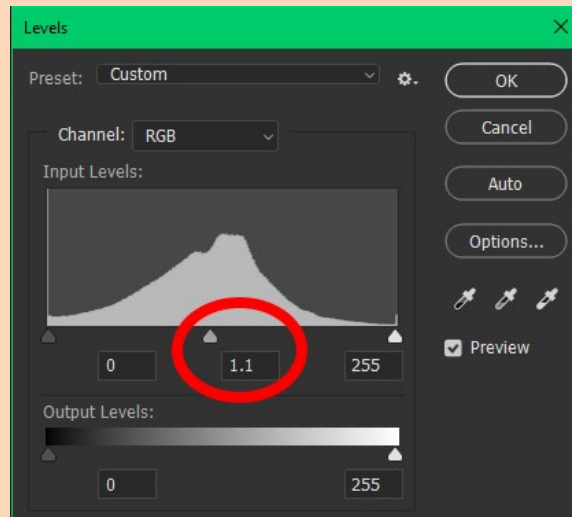


4i Curves





4j Levels Lighten Mid Tones 1.1



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(5.1) Perspective align before crops

- Photoshop => Filter => Lens Correction
 - Photoshop perspective correction can be combined with crop in crop tool. Not recommended because one backup step removed and there is often more than one crop per image

--- or ---

- DXO Nik Collection Perspective Efex

Lens Correction (58.7%)

Place mouse over control for help

OK
Cancel

Auto Correction Custom

Settings: Default Correction

Geometric Distortion
Remove Distortion 0.00

Chromatic Aberration
Fix Red/Cyan Fringe 0.00
Fix Green/Magenta Fringe 0.00
Fix Blue/Yellow Fringe 0.00

Vignette
Amount 0
darken lighten
Midpoint +50

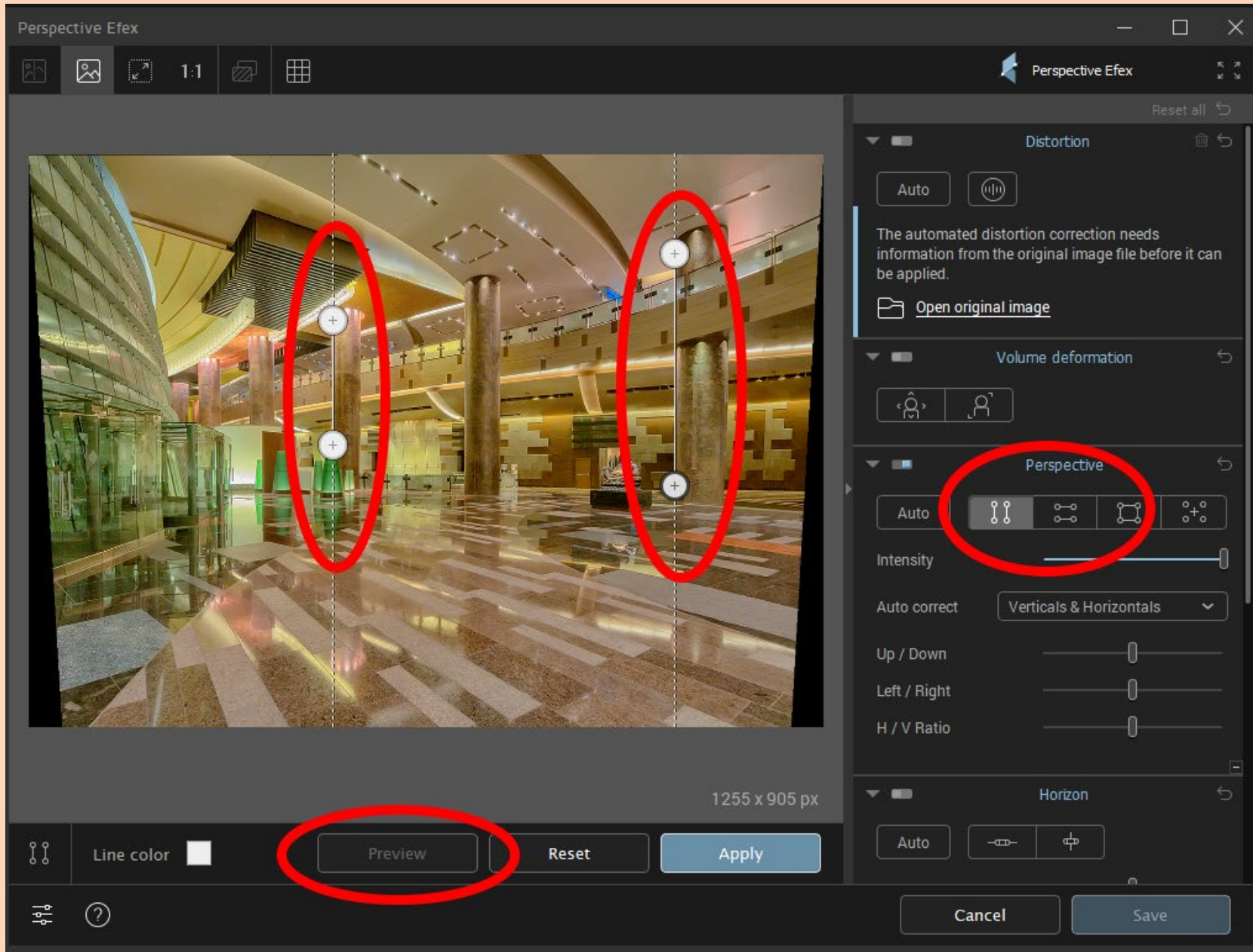
Transform
Vertical Perspective -13
Horizontal Perspective 0
Angle 0.00
Scale 100 %

58.7%

Camera Model: E-M5 (OLYMPUS IMAGING CORP.)
Lens Model: OLYMPUS M.9-18mm F4.0-5.6
Camera Settings: 9mm, f/4, 3.56m

Preview Color: ■
 Show Grid Size: 50

5.1 Photoshop => Filter => Lens Correction

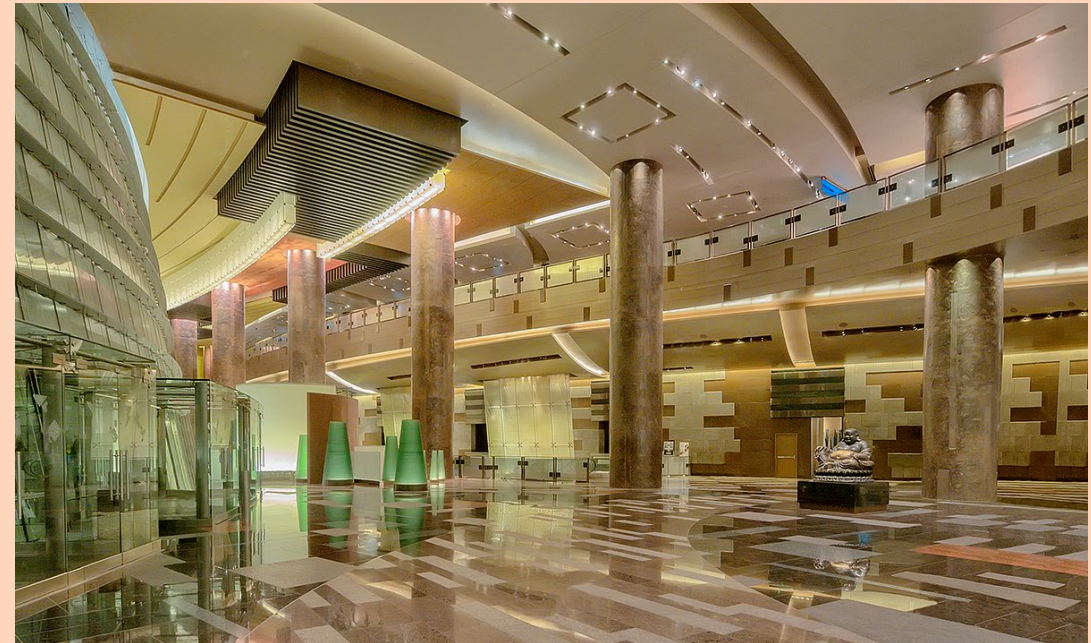


5.1 Perspective Efex

(5.2) Crop Leaving All Original Pixels

- Photoshop crop tool
- Danger Danger generally at this point do not lock aspect ratio and do not resample

5.2 Crop without Resize without Resample



(5.3) Convert to final pixel size, color space, sharpen, output

- DXO Nik collection sharpener pro
 - Sharpening for prints and digital use require different strategies
- Save as psd
- Save as jpg for lab or web

Sequence raw



Sequence raw conversion



Sequence 1-1



Sequence 1-2



Sequence 1-3



Sequence 1-4



Sequence 1-5



Sequence 1-6



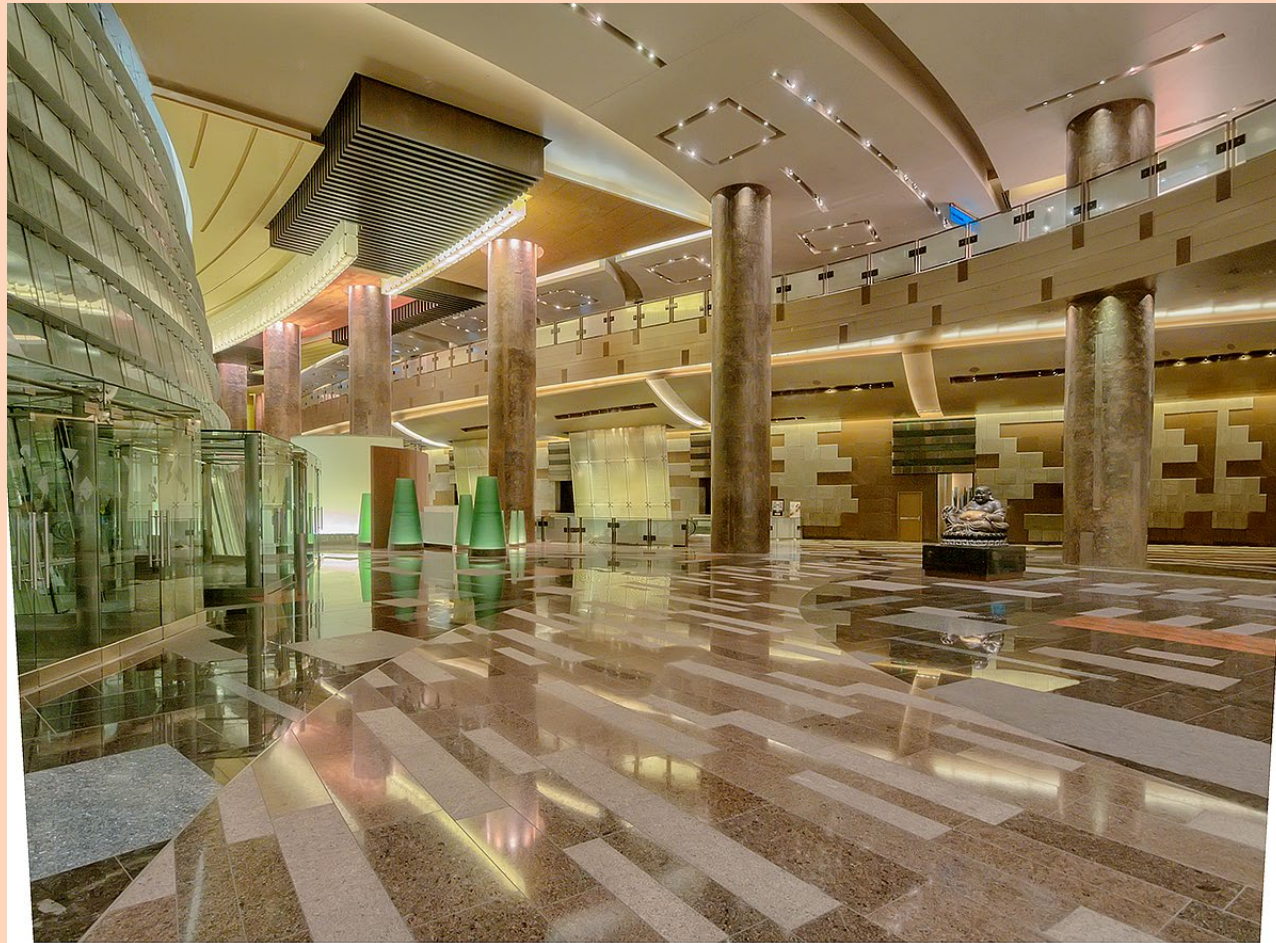
Sequence 1-7



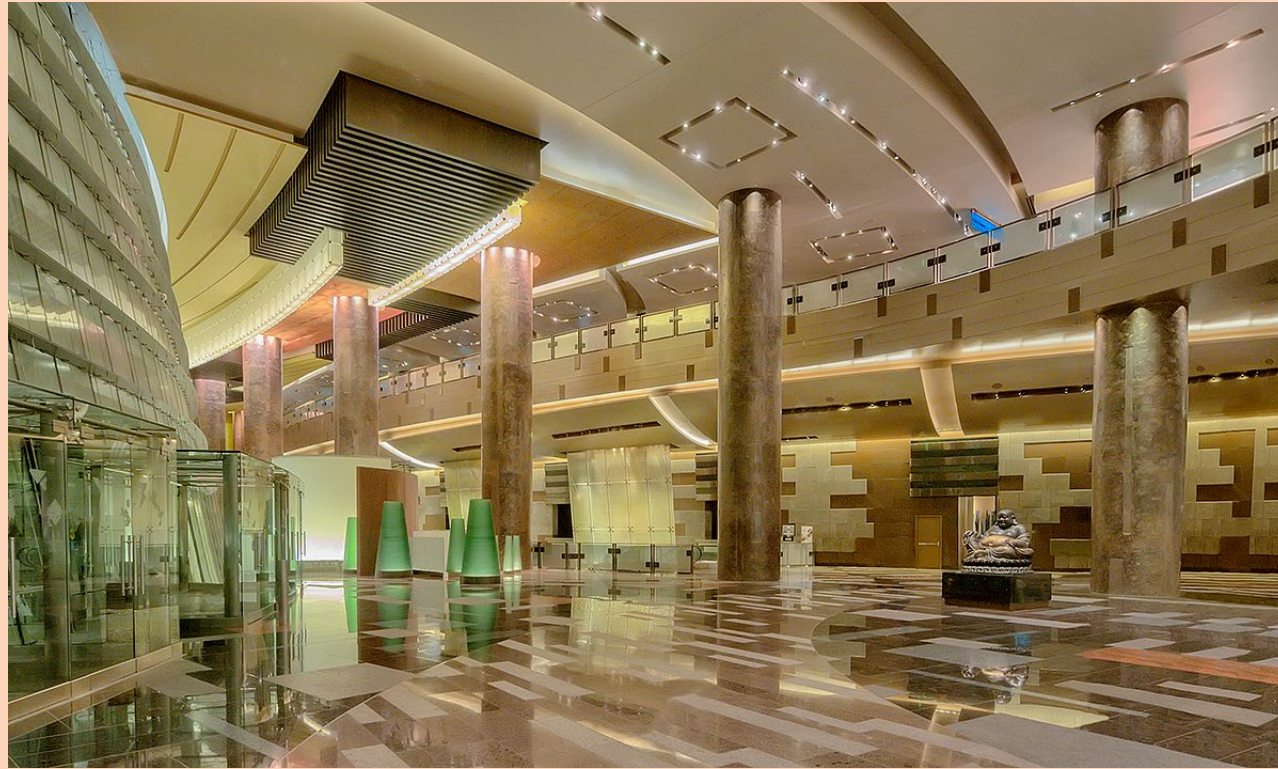
Sequence 4



Sequence 5.1



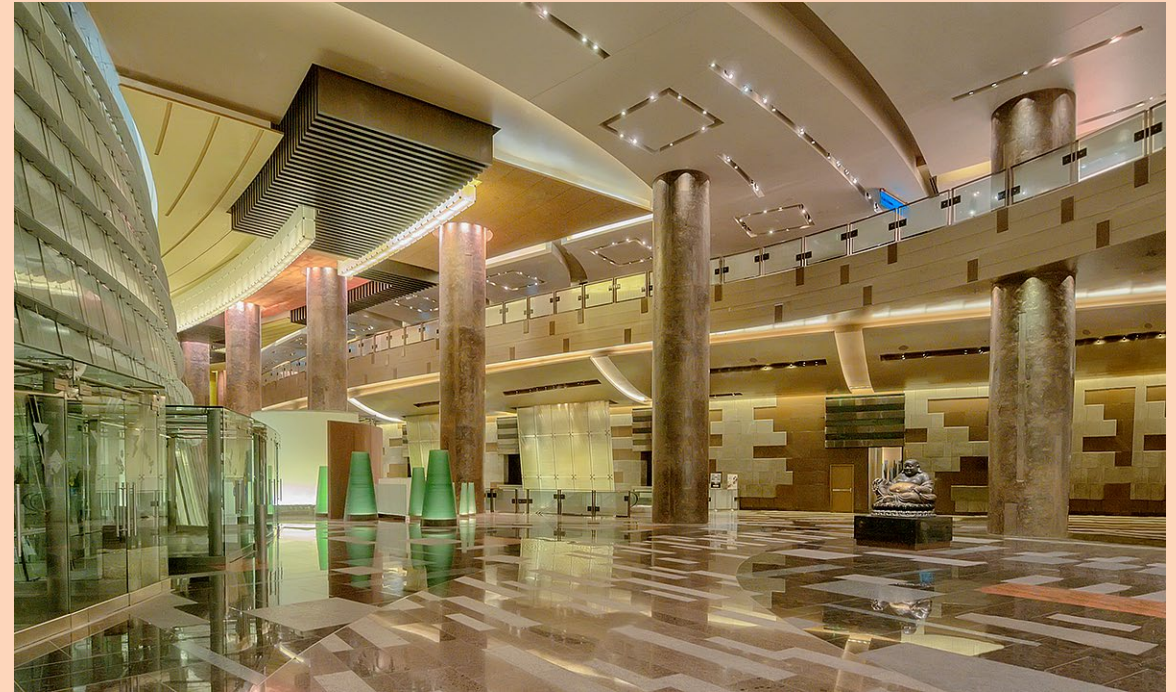
Sequence 5.2



Raw Before - After



Converted Raw Before - After



Philosophical Implications

- Digital image capture continues improve well past silver imaging from all devices
- Digital post-processing has crept into photographic illustration
- Photographs are not real
 - Photographs were never real, even in the silver era
 - Yosemite does not look as good in person as any of Ansel's photographs
- As photographers
 - Do we care?
 - How does this affect our approach?

Workflow Objective Ilties

- Quality
- Repeatability
- Predictability
- Flexibility
- Reliability
- Scalability
- Traceability
- Usability
- Modifiability
- Maintainability
- Auditability
- Ilties are trendy

Notes About Photoshop and Lightroom

Attribute	Photoshop	Lightroom
Introduced	1987	2007
Scope	Manipulation, creation, and enhancement of single images. Pixel level perfection. Fine-tuning, retouching, precise local adjustments.	Organizing and processing groups of photos. Quick access to frequently used controls.
Target user base	Creative professionals. Photographers as well as photo retouchers, fine artists, graphic designers, compositing artists, etc.	Photographers

- Full chart link in references at end

References

- Presentation pdfs

<https://www.jeffreysward.com/speaking/speaking.htm>

- Photoshop – Lightroom comparison chart

<https://www.jeffreysward.com/editorials/psvslr.htm>

- Links page for photographic resources

<https://www.jeffreysward.com/editorials/photores.htm>

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