Photography for
Accident Reconstruction, Product Liability, and Testing

Seminar Outline

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Day One

-1- Introduction: Think Light
- -a- Light: Quantity, Quality, Direction
- -b- Fundamentals make the difference

-2- Exposure (aperture, shutter speed, ISO)
- -a- Aperture: depth of field (DOF); backgrounds/foregrounds
- -b- Shutter speed: freeze or blur moving subjects; eliminate camera shake
- -c- ISO: reduce noise while keeping reasonable shutter speed
- -d- Digital noise
- -e- Reciprocity: how they all interact
- -f- Histograms: using in-camera
- -g- Highlight warnings
- -h- Exposure modes: Manual, Aperture Priority, Shutter Priority, Program, Auto

-3- Camera Menu Settings (how and why to set)

-4- Camera Fundamentals - Part One
- -a- DSLR vs. mirrorless
- -b- Formatting memory cards
- -c- Eyepiece and shutter button
- -d- Camera LCD displays
- -e- Manual focus vs. autofocus
- -f- Using Live View for focus and composition
- -g- Vibration Reduction/Image Stabilization
- -h- Camera resolution and file formats
- -i- Raw vs. JPEG
- -j- Color temperature and white balance
- -k- Sensor sizes (full frame vs. crop sensor vs. compact cameras)
  - -1- Normal lens for full frame vs. crop sensor
- -l- Lens choice factors
  - -1- focal length and angle of view
  - -2- focal length vs. camera position
- -m- Perspective (most misunderstood and most important)
- -n- Depth of Field (aperture and focus point)

Day Two

-5- Gear (what works and why)
- -a- Remote releases
- -b- Tripods (best way to improve your photography)
- -c- Tripod heads
- -d- Filters
  - -1- UV (clear protection)
  - -2- Polarizer (vitally important)
  - -3- Neutral density
- -e- Useful accessories

-6- Flash (an essential tool)
- -a- Flash power and distance
- -b- Manual vs. TTL
- -c- Flash exposure compensation (FEC)
- -d- Fill flash vs. full flash
- -e- Tilting and rotating flash head
- -f- Flash sync speed, recycling time, and duration
- -g- Flash vs. ambient light
- -h- Reflectors
- -i- On vs. off-camera flash
- -j- Multiple
- -k- Pop-up flashes
- -l- Studio lighting setups (indoors, outdoors, on-site)

-7- Close-up and Macro Photography
- -a- Reproduction ratio vs. magnification
- -b- Macro flashes
- -c- Macro and other specialty lenses
- -d- Macro accessories and supports
- -e- Securing loose pieces
- -f- Using scales

-8- Night Photography
- -a- Show details or accurately render?
- -b- Gear needed: tripod, flash, flashlight
- -c- Noise reduction in-camera and in post-production
- -d- Light painting with flash and with flashlight
- -e- Raw vs. JPEG
- -f- Capturing ambient light
- -g- Monitor calibration and camera settings

Day Three

-9- Techniques, Applications, and Workflow
- -a- Depth of Field and Focus
- -b- Polarizer uses
- -c- Fill flash
- -d- Proper use of scales
- -e- Composition and details
- -f- Unrelated vehicles and people in photos
- -g- Documenting vehicle damage
- -h- Test facilities and testing: vehicle testing, chem lab, product liability, facility documentation

-10- Post-Processing
- -a- Post-processing workflow
- -b- PDFs are *not* photographs
- -c- File naming
- -d- Metadata: IPTC and Exif
- -e- Monitor calibration
- -f- Raw workflow
- -g- Color space
- -h- Creating a Master File
- -i- Image and printer resolutions
- -j- Adjusting received and made photographs
- -k- Creating panoramic images
- -l- Focus stacking
- -m- Using stack median to eliminate traffic or people
- -n- Photo manipulation good and bad