



Inspection Photo Best Practice Guidelines



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The policy for photographs in inspections is listed in the 2018 Wisconsin Structures Inspection Manual section 1.4.5.1 and will not be repeated here. This document contains guidelines for how to take the photos as a supplement to section 1.4.5.1.



1.1.1.1 Labeling

Photos should be date-stamped. Most digital cameras have this function, apps are available for phones and tablets, or text can be added with computer software. PhotoDateMark is an iOS app pre-approved for WisDOT staff. Select a contrasting color for legibility. Additional information can also be placed on the photo, provided it does not obscure important details of the photo. Information should be placed in the HSIS comment box, including location of the photo, date of the photo (if not stamped), and the purpose of photo if not obvious. The phrase General or Typical can be used for pictures not of a specific defect or item.



Figure 1.1.1.1-1: Example of dated and labeled photo.

1.1.1.2 Photo Updating

Copying photos from prior inspections is discouraged, but if photos are copied:

1. Note that photo is copied from a prior inspection and give year.
2. Note that condition is unchanged, or that photo is general. If condition is not identical, take a new photo.
3. No photos more than 4 years old.
4. CS3/CS4 required photos must be current. HSIS will enforce this.

Individual photos should be uploaded to HSIS, not combined into one document. HSIS checks the requirement for photos of CS3/CS4 elements, if a multi-photo document is uploaded and all boxes indicated as required are checked, this circumvents the specific identification of required photos.



1.1.1.3 Useful Photos

In addition to the required elevation, roadway and CS3/CS4 elements, photos that also are useful are:

1. Special features, unique elements
2. Special signage
3. Approaches
4. Joints
5. Items that would be repaired, either by maintenance or future project

1.1.1.4 Photography Technique

Proper exposure and capturing of details are essential for a useful photo that will accurately convey the condition of the bridge. Some tips:

1. Avoid taking a photo into the sun. If photo must be toward sun, shield the lens from the direct sun and do not have the sun in the photo. Best photos are with sun to the side to avoid shadows of the photographer.
2. When taking photos of the underside, avoid capturing bright sky at the edge in order to maintain proper exposure. Adjust exposure if possible.



Figure 1.1.1.4-1: Example of exposure adjustment to capture details under structure, resulting in overexposed area at bottom of photo. Better framing to avoid outside area or changing direction photo is taken would improve photo.



Figure 1.1.1.4-2: Improved framing and angle of photo of similar feature to avoid bright areas and provide uniform exposure and details.



Figure 1.1.1.4-3: Bright sky at upper left and bridge elevation has resulted in dark abutment. Photo editing software may be able to correct original photo.



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1.1.1.5 Photo Composition

Photos should accurately convey the purpose of the photo. Location, feature of interest, and size and scale of objects should be readily discernable or labeled if necessary. Avoid excessive close up photos that lack context or scale. Provide a ruler or scale (preferred) in the photo, or if not available, include other objects of known size.



Figure 1.1.1.5-1: Improvised objects used as scale : Pen, notebook, roadway centerline.
Not preferred method, though better than no scale



Figure 1.1.1.5-2: Ruler used for scale



Figure 1.1.1.5-3: Good scale on photo: Leaves, riprap, trash present for scale, taken at angle that shows size of spall and offset of joint



Figure 1.1.1.5-4: Same defect zoomed in too close – no sense of scale



Figure 1.1.1.5-5: Extreme angle photo does not allow for viewing of detail, right quarter of photo is wasted on not the subject wall



Figure 1.1.1.5-6: Same wall from medium angle clearly shows extent of defect



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Figure 1.1.1.5-7: Too close and angled doesn't show extent of defect. Useful if included and labeled with one of the above photos



1.1.1.6 Maintenance Actions

Photos can be included in maintenance actions. These photos should present the overall location and extent of the repair so they are useful in planning the repair. Necessary lane closures, work zone and approximate quantities can be obtained from good photos.



Figure 1.1.1.6-1: Good maintenance photo showing damage, location, and extent of header damage in shoulder. Provide notes to support photo. For repair of asphalt paving, additional photos of extents would be useful.



Figure 1.1.1.6-2: Photo showing location of damage in context of roadway. From this, right lane and shoulder closure would be required to repair the area with the arrow. Additional closer photos also would be required. Ideally this would be taken at an angle that clearly shows position relative to lane, but traffic did not allow.

1.1.1.7 Technical Details

To save space and speed uploading when importing photos, HSIS reduces resolution of photos to approximately 0.8 megapixel, or the resolution of an older screen. The resulting pdf of the inspection can be zoomed in on to see the full resolution of the photo contained in HSIS, but much detail can be lost by this process. If a photo may require detailed study in the future, the original full resolution file can be retained outside of the HSIS system.