

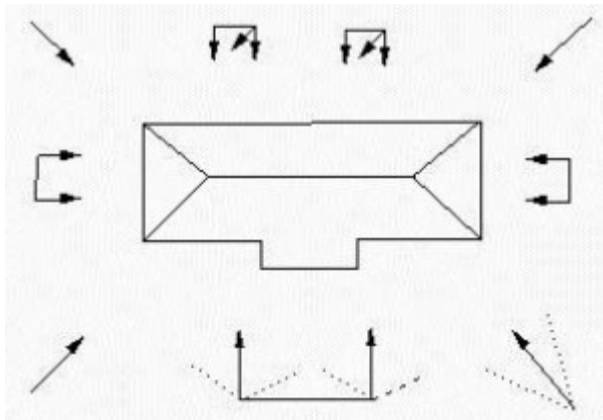
<http://gmv.cast.uark.edu> A Method Store for Advanced Survey and Modeling Technologies Mon, 01 Apr 2013 03:29:18 +0000 en-US hourly 1 <http://wordpress.org/?v=3.5.1>  
<http://gmv.cast.uark.edu/photogrammetry/hardware-photogrammetry/canon-5d-mark-ii/canon-5d-checklist/list-of-helpful-websites-and-publications-for-close-range-photogrammetry/>  
<http://gmv.cast.uark.edu/photogrammetry/hardware-photogrammetry/canon-5d-mark-ii/canon-5d-checklist/list-of-helpful-websites-and-publications-for-close-range-photogrammetry/#comments> Thu, 19 Jul 2012 15:56:04 +0000 adam <http://gmv.cast.uark.edu/?p=10756>

## General Photography and Close-Range Photogrammetry Standards and Guides

**Learn more about depth of field, bit depth, EXIF metadata, file formats, and more...**

Glossary of terms found at Digital Photography Review website (dpreview.com)  
<http://www.dpreview.com/learn/?/Glossary/>

## ADS Guides to Good Practice



Learn more about the ADS Guides to Good Practice for close-range photogrammetric documentation...  
Barnes, A; J. Cothren, K. Niven (2011) *Guides to Good Practice: Close-Range Photogrammetry*. Archaeology Data Service / Digital Antiquity: Guides to Good Practice.  
[http://guides.archaeologydataservice.ac.uk/g2gp/Photogram\\_Toc](http://guides.archaeologydataservice.ac.uk/g2gp/Photogram_Toc)

## Documenting Surfaces

An excellent guide for using close-range or aerial photogrammetry to document surfaces (e.g. rock art, trackways, surfaces prone to erosion).

Matthews, N. A. (2008) *Aerial and Close Range Photogrammetric Technology: Providing Resource Documentation, Interpretation, and Preservation*. Technical Note 428. National Operations Center, Denver, Colorado: U.S. Department of the Interior, Bureau of Land Management.  
<http://www.blm.gov/nstc/library/pdf/TN428.pdf>

## HABS/HAER/HALS

Learn more about architectural and engineering documentation for long term archival in the Heritage Documentation Programs collections in the Library of Congress.  
National Park Services: Heritage Documentation Programs (HABS/HAER/HALS)

<http://www.nps.gov/history/hdp/>

## Cultural Heritage Site Surveying

What makes a successful and useful survey of cultural heritage sites? Learn what to record, how to record it, and what performance indicators are important...

Bryan, P., B. Blake, J. Bedford, D. Barber, J. Mills, and D. Andrews (2009) *Metric Survey Specifications for Cultural Heritage*. English Heritage, Swindon.

<http://www.english-heritage.org.uk/publications/metric-survey-specification/>

## English Heritage on Photogrammetric Survey of Historic Buildings

An extensive and detailed guide for the photogrammetric survey of historic buildings...

D'Ayala, D., and P. Smars (2003) *Minimum requirements for metric use of non-metric photographic documentation*, University of Bath.

PART 1: <http://www.english-heritage.org.uk/publications/metric-use-of-non-metric-photographic-documentation/metricextraction1.pdf/>

PART 2: <http://www.english-heritage.org.uk/content/publications/publicationsNew/metric-use-of-non-metric-photographic-documentation/metricextraction2.pdf>

## Intro to Architectural Photogrammetry

A nice introduction to close-range photogrammetry and methods for architectural photogrammetry...

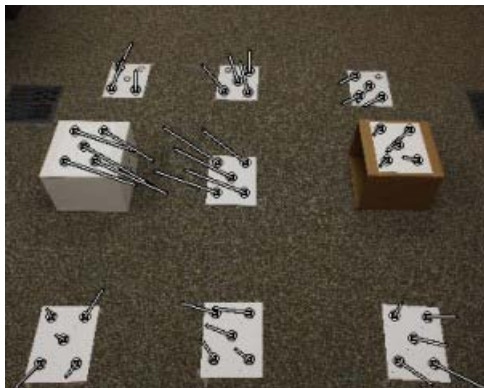
Hanke, K., and P. Grussenmeyer (2002) *Architectural Photogrammetry: Basic Theory, Procedures, Tools*. September 2002, ISPRS Commission 5 Tutorial, Corfu.

[http://www.isprs.org/commission5/tutorial02/gruss/tut\\_gruss.pdf](http://www.isprs.org/commission5/tutorial02/gruss/tut_gruss.pdf)

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<http://gmv.cast.uark.edu/photogrammetry/hardware-photogrammetry/canon-5d-mark-ii/metadata-forms-canon-5d-mark-ii/camera-calibration-documentation-for-close-range-photogrammetry/>

<http://gmv.cast.uark.edu/photogrammetry/hardware-photogrammetry/canon-5d-mark-ii/metadata-forms-canon-5d-mark-ii/camera-calibration-documentation-for-close-range-photogrammetry/#comments> Thu, 19 Jul 2012 15:37:51 +0000 adam <http://gmv.cast.uark.edu/?p=10743> [Continue reading →](#)]]>



### Camera Calibration Photo

Each camera (referring to a camera and lens combination) used in a close-range photogrammetry project should be calibrated and a calibration file should be saved with the project data. Some close-range photogrammetry software does not require this information before processing the image block; however, it will provide most of this information after processing. The tables below describe what is appropriate to document for this process. Download a printable form in PDF format [here](#) or in a spreadsheet (.xlsx) format [here](#).

For each camera/lens calibration:

Element	Description
Camera/Lens name	Name used to identify this camera/lens combination (e.g. CAST5DmkII-2_28mm).
Date of calibration	Date that the calibration was performed.
Camera calibration file name	The exact file name for the camera calibration.
Camera specifics	Specific make and model of the camera and lens used.
Array dimensions in pixels	Width and height of digital array measured in pixels.
Array dimensions in mm	Width and height of digital array measured in millimeters.
Focal length	As indicated by camera calibration.
Principal Point	As indicated by camera calibration.
Lens distortions (K1, K2, P1 and P2 parameters)	Radial and decentering distortion parameters as measured by the camera calibration.
Affine distortions	Affine distortion parameters as measured by the camera calibration (if measured).
Calibration Quality Values	Quality values such as overall RMS, maximum residual, and photo coverage (%) from the calibration process.
Calibration adjustment report	A report on the quality of the camera calibration including the correlation between exterior and interior parameters.

For each calibration image (if performing a camera calibration with a target):

Entry	Description
Image file names	File names for calibration images.
Calibration target description	Include target dimensions, creator and description.

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<http://gmv.cast.uark.edu/photogrammetry/hardware-photogrammetry/canon-5d-mark-ii/metadata-forms-canon-5d-mark-ii/image-acquisition-documentation-for-close-range-photogrammetry/>  
<http://gmv.cast.uark.edu/photogrammetry/hardware-photogrammetry/canon-5d-mark-ii/metadata-forms-canon-5d-mark-ii/image-acquisition-documentation-for-close-range-photogrammetry/#comments> Thu, 19 Jul 2012 15:27:55 +0000 adam <http://gmv.cast.uark.edu/?p=10734> [Continue reading →](#)]]>



Nikon D70

Organization and documentation during image collection in the field is especially important. The table below describes the appropriate documentation for this process. Download a printable form in PDF format [here](#) or in a spreadsheet (.xlsx) format [here](#).

For each group of images:

Entry	Description
Project name	The project name or name for the dataset.
Number of images	Total number of images.
File name for	File name and extension. Should include outline of subject and surrounding objects (if any), indicated location and orientation of each

planimetric sketch or map	image (using a "V" symbol to indicate orientation), and other special comments and/or observations.
Camera calibration file	Reference to the camera calibration file if available.
Additional notes	Any additional notes the surveyor feels applicable. Could list images containing control and/or scaling references.
For each image:	
Image file name	File name and extension.
Textural description of location and orientation	Should describe general location (e.g. north side) and camera to subject orientation (e.g. view to south).
Format conversions (if any)	List of format conversions performed on the digital images and the software used.

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<http://gmv.cast.uark.edu/gps/hardware-gps/leica-cs-15-controller/metadata-forms-leica-cs-15-controller/control-point-documentation-for-close-range-photogrammetry/>  
<http://gmv.cast.uark.edu/gps/hardware-gps/leica-cs-15-controller/metadata-forms-leica-cs-15-controller/control-point-documentation-for-close-range-photogrammetry/#comments> Thu, 19 Jul 2012 15:15:47 +0000 adam <http://gmv.cast.uark.edu/?p=10729> [Continue reading →](#)]]>



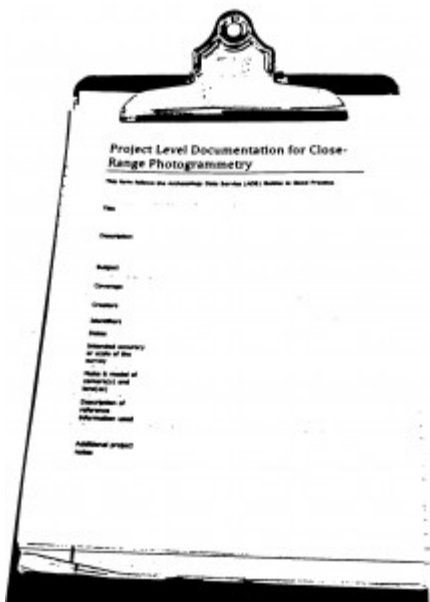
GPS Control Point Reference Photo

If external control is collected for the project, the table below describes the appropriate documentation for this process. Download a printable form in PDF format [here](#) or in a spreadsheet (.xlsx) format [here](#).

For each control point:

Entry	Description
Point ID	ID or name given to the point.
Source and datum (total station, GPS, etc. and WGS84, UTM, LRF)	Identify the source for control point collection and the datum used during data collection.
xyz coordinates	List the three-dimensional coordinates for each control point.
xyz covariance matrix or estimated error	Provide full correlation if available (from survey adjustment or GPS baseline solution), otherwise provide estimated standard deviation or variance of each coordinate.
Textual description of location	Provided a textual description for the location of each control point.
Image name with control point location indicated	Name of image with the control point location clearly indicated.
Geometric constraints on reference features or control	List any known geometric constraints for reference features or control.
Coordinate System	Name of coordinate system, datum and projection.

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<http://gmv.cast.uark.edu/photogrammetry/hardware-photogrammetry/canon-5d-mark-ii/metadata-forms-canon-5d-mark-ii/project-level-documentation-for-close-range-photogrammetry/>  
<http://gmv.cast.uark.edu/photogrammetry/hardware-photogrammetry/canon-5d-mark-ii/metadata-forms-canon-5d-mark-ii/project-level-documentation-for-close-range-photogrammetry/#comments> Thu, 19 Jul 2012 14:37:34 +0000 adam <http://gmv.cast.uark.edu/?p=10720> [Continue reading →](#)]]>



A number of guides and documentation standards for the collection and processing of close-range photogrammetric data (or in some cases for photographic documentation in general) have been published by various organizations. This form and other metadata forms on this site follow the Archaeology Data Service (ADS) Guides to Good Practice. See the list of helpful webpages and publications for a link to the ADS guides and other helpful links.

Every CRP project should contain project level documentation, including a description of the project and site, date(s) of the survey, name(s) and organization(s) of the surveyor(s), and other useful notes. The table below describes the appropriate documentation for this process and you can download a printable form in PDF format [here](#) or in a spreadsheet (.xlsx) format [here](#).

Element	Description
Title	The project name or name for the dataset.
Description	The original purpose for the survey work.
Subject	Keywords for the subject content of the dataset (qualified using e.g. the English Heritage NMR Monument Type Thesaurus or the MDA Object Type Thesaurus).
Coverage	Site location and description. The address, or coordinates for the site and a description of the site and object or structure to be surveyed. Coverage should also include any relevant period terms.
Creators	Full name and organization(s) of the surveyor(s)
Identifiers	Project or reference numbers (e.g. HABS/HAER/HALS survey number) used to identify the dataset.
Dates	Date or dates that the survey was conducted in both the field and/or lab.
Intended accuracy or scale of the survey	The originally intended accuracy or scale that the survey was to achieve.
Make & model of camera(s) and lens(es)	Detailed make and model of the camera and lens used for the survey. List the associated calibration files if applicable.
Description of	

reference information used	Describe any existing reference information available to the surveyor(s), including paper plans or digital spatial data of the site or object.
Additional project notes	Any additional project notes that the surveyor feels applicable.

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