



# **SPECIFICATION WORDING RECOMMENDATIONS**

**VOLUME 6; revision B**

**ON-SITE 'LIVE' DIGITAL CAPTURE (WEB CAM) CAMERA SYSTEMS  
FOR IMMEDIATE DELIVERY TO INTERNET WEBSITES**

***P-Tn ProgressCAM / P-Tn WebWINDOW  
P-Tn ProgressCAMPics / P-Tn ProgressCAMovie***

The following terms (as written) are slogans / pending trademarks of *P-Tn, Inc.*  
***'Visual Documentation' photo -- digital -- video***  
and these should not be included in your specification wording, unless followed by "or approved equal"  
***ProgressPHOTOS ProgressSCANS RoutePHOTOS RouteSCANS VideoRECORDS  
ProgressCAM WebWINDOW ProgressCAMPics ProgressCAMovie  
PhotoWALKTHRU WebGALLERY***



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## VOLUME

# 6

## DESCRIPTION

### **ON-SITE 'LIVE' DIGITAL CAPTURE (WEB CAM) CAMERA SYSTEMS, FOR IMMEDIATE DELIVERY TO INTERNET WEBSITES**

***P-Tn ProgressCAM** On-Site 'Live' Digital Internet Camera Systems* (web cams) can be positioned at or near the project site to provide an overview of the development or construction activities. Cameras may be positioned on an adjacent building, a structure or pole on the project site itself, or physically moved from one (interior/exterior) location to another, as construction conditions change (with a ***P-Tn ProgressCAM WLS*** wireless unit). The captured images are not truly 'live' (although this feature is an option); they are typically updated on a schedule (ranging from daily, to five-minute intervals), to record the visual changes which occur during construction. A project team member may actually access and operate the web camera itself (with a ***P-Tn ProgressCAM PTZ*** pan-tilt-zoom unit), otherwise, the captured images are posted automatically to an established web page (***P-Tn WebWINDOW***) on the internet, where they can be accessed by all project participants ... using virtually any computer, anywhere in the world, at anytime. The captured digital image files are date and time coded, archived, and delivered via CD-ROM. They may also be printed (***P-Tn ProgressCAMpics***), or edited into a 'time-lapse' ***P-Tn ProgressCAMovie*** which compresses days or months of construction activities into minutes or seconds on the computer screen.

The ***P-Tn ProgressCAM*** itself is a valuable oversight tool which has great potential to reduce unnecessary and costly project-site visits, encourage on-site safety, and improve general communication related to job site activities. The image quality and functionality of web cam systems is constantly improving, but they are inherently low-resolution (compared to digital or film photography), and should NOT be utilized to replace professional quality construction progress photographs as your official project record; they provide an added layer of documentation, and "real-time" monitoring.



The following is our recommended specification wording for:

***P-Tn ProgressCAM / P-Tn WebWINDOW / P-Tn ProgressCAMpics / P-Tn ProgressCAMovie***

**'ON-SITE "LIVE" INTERNET DIGITAL IMAGE CAPTURE (web cams) FOR IMMEDIATE DELIVERY TO INTERNET WEBSITES'**

**STILL FRAME WEB CAMERA SYSTEM**

One (1) web cam (*P-Tn ProgressCAM On-Site 'Live' Digital Capture Internet Camera*) shall be positioned at the project site to capture an overview of the construction activity. This digital camera shall be secured in a fixed position and shall remain stationary throughout the construction process, from site preparation through completion of landscaping. All camera locations shall be selected or approved by the architect / engineer and/or owner. Image capture shall occur at quarter-hour intervals during daylight (or scheduled work hours) on each construction work day. An increase in the frequency of image captures may be requested during critical construction periods. Images shall bear an imprinted identification strip which will include the date and time of the digital image capture. The General Contractor shall provide 110v AC electrical power (with surge protection), and an appropriate wiring delivery system (routing / conduit) for a high speed internet connection to each camera. The contractor may also be required to construct or provide a suitable mounting base or pole to establish a useful camera vantage point from which to view the construction activities.

OPTIONAL REQUIREMENT -- Once the building is substantially enclosed, a second (still frame image capture) web camera shall be installed within the building perimeter, in order to record a representative overview of the interior construction progress. The interior camera shall be configured for low-light image capture which will adequately show the activities within the building. A wide-angle lens shall be utilized to increase the amount of viewable construction activity in interior spaces. The general contractor shall provide necessary power, and sufficient temporary interior lighting to insure visibility in these areas, during scheduled capture periods. As construction activities progress, this camera may require repositioning [a maximum of two (2) times] to new vantage points as designated by the architect / owner. The camera(s) will be promptly removed, when its vantage point is no longer useful, or upon completion of the project, as determined by the owner.

The images captured by the web camera on a regular schedule shall be sent by ftp (file transfer protocol) to an off-site web server for permanent archiving throughout the construction period. Images captured for ftp must be created in JPEG (.jpg) format with dimensions of at least 640x480 pixels; a minimal amount of compression shall be applied. These image files shall be identified by date and time of capture; from these archived images, time-lapse movies and still frame file archives will be produced.

ALTERNATE REQUIREMENT -- [This is for a still camera with 1mp image capture capability]  
Images captured by the camera for ftp must be created in JPEG (.jpg) format with dimensions of at least 1280x960 pixels; a minimum amount of compression shall be applied.

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Images from each digital camera shall also be delivered (immediately after capture) to a managed webpage (a ***P-Tn WebWINDOW***) on the internet. The address [URL] of this webpage shall be made available to the owner and architect / engineer, for subsequent release to firms and individuals whom they wish to be afforded access. This webpage shall be designed to display the updated digital image at a *minimum* size of 400 pixels in width (for horizontal images) and 300 pixels in width (for vertical images), and shall include the official project title. Any imprinted identification text on each image must be clearly legible at the established size. Operation and maintenance of the onsite digital capture camera, plus webpage hosting and maintenance, shall be monitored to insure consistent and reliable delivery and posting of the captured images. A link to this page from the websites of project participants shall be permitted.

OPTIONAL REQUIREMENT -- Access to the webpage containing the updated digital image shall be protected by a pre-established password provided to the owner's representative. Should the password be compromised during the course of construction for the project, a new password shall be established. NOTE: True password protection can significantly increase the cost for webpage hosting and maintenance; an 'unpublished' webpage, with periodic changes of the address (if so desired), is a cost-effective alternative.

#### **PAN-TILT-ZOOM WEB CAMERA**

One (1) web cam (***P-Tn ProgressCAM PTZ On-Site 'Live' Digital Capture Internet Camera***) shall be positioned at the project site to capture images of the construction activity. This digital camera shall be secured in a fixed position and shall remain stationary throughout the construction process, from site preparation through completion of landscaping. All camera locations shall be selected or approved by the architect / engineer and/or owner. The General Contractor shall provide 110v AC electrical power (with surge protection), and an appropriate wiring delivery system (routing and/or conduit) for a high speed internet connection to each camera. The contractor may also be required to construct or provide a suitable mounting base or pole to establish a useful camera vantage point from which to view the construction activities. The camera will be promptly removed, when its vantage point is no longer useful, or upon completion of the project, as determined by the owner.

The camera shall have pan-tilt-zoom functions which can be controlled by password-authorized visitors to the camera's internet web page. The camera image shall refresh automatically at a rate of one (1) frame per second, or faster. Images shall bear imprinted identification which will include the date and time of the digital image capture. A minimum of four (4) memorized preset image compositions (designated or approved by the architect / owner) shall be available through a menu, for quick selection and positioning of the camera.

In addition to viewer access as described, a still frame image capture [of one preset image composition (selected by the owner / architect / engineer)] shall occur at an appropriate agreed-upon time, once each work day, throughout construction. These daily captured images shall be sent by ftp (file transfer protocol) to an off-site web server for permanent archiving throughout the construction period. Images captured for ftp must be created in JPEG (.jpg) format with dimensions of at least 640x480 pixels; a minimal amount of compression shall be applied. These image files shall be identified by date and time of capture; from these archived images, time-lapse movies and still frame file archives will be produced.

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**FOR BOTH PAN-TILT-ZOOM AND STILL FRAME WEB CAMERA**

OPTIONAL REQUIREMENT – At the end of each three-month period of construction, a ‘time-lapse’ (.mpg or .mov) movie playback file of the digital images captured to-date shall be created. The still frame images captured for time-lapse movie production shall be edited to remove unacceptable images, and color-calibrated for improved contrast, brightness, and clarity. A title page shall be created and included at the beginning of the movie, showing the project name, location, and name of contractor, architect/engineer, and owner.

The time-lapse movie recording (***P-Tn ProgressCAMovie***) shall be delivered via hybrid or PC-formatted CD-ROM. Each CD-ROM shall bear a surface label which includes the professional photographer’s name and contact information, name of the project, and description of the contents.

OPTIONAL REQUIREMENT – Each month (or quarter), four (4) representative images of the construction project shall be selected from the movie image archive, converted to JPEG (.jpg) digital files, and prepared in a printable layout (four per 8x10 page) that includes the image and the project name, as well as the date of image capture, direction and description of view, name of contractor, architect/engineer, and owner.

The (***P-Tn ProgressCAMPics***) digital still image files shall be delivered via hybrid or PC-formatted CD-ROM, along with three (3) matching color prints of the still image layout, printed on 8-1/2x11 photographic style paper. Each CD-ROM shall bear a surface label which includes the professional photographer’s name and contact information, name of the project, and description of the contents.

[ALTERNATE REQUIREMENT -- The still images shall be emailed to a maximum of ten (10) project participants, to be designated by the owner.]

**SEE VOLUME 1 and VOLUME 1SV – SHORT VERSION;** for information regarding;  
**‘PRE-CONSTRUCTION AND POST-CONSTRUCTION ROUTE PHOTOGRAPHY’**

**SEE VOLUME 3 and VOLUME 3SV – SHORT VERSION;** for information regarding;  
**‘BUILDING CONSTRUCTION PROGRESS PHOTOS’**  
**‘AIRCRAFT [FIXED-WING OR HELICOPTER] AERIAL PROGRESS PHOTOGRAPHY’**  
**‘LOW-LEVEL / GROUND-BASED AERIAL PHOTOGRAPHY’**  
**‘PLUS FINAL ARCHITECTURAL PHOTOGRAPHY’**

See **VOLUME 4**, for information regarding;  
**‘DELIVERY OF CONSTRUCTION PHOTOGRAPHS IN DIGITAL FORM’** and  
**‘SEARCHABLE CD-ROM ARCHIVING OF CONSTRUCTION PHOTO DIGITAL FILES’**

See **VOLUME 5**, for information regarding;  
**‘PRIORITY-SCHEDULED DELIVERY OF CONSTRUCTION PHOTOGRAPHS VIA THE INTERNET’**



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**VOLUME 1 - PHOTO DOCUMENTATION OF SURFACE CONDITIONS FOR STREET AND PIPELINE PROJECTS**

*P-Tn RoutePHOTOS*  
*P-Tn RouteSCANS*

**VOLUME 1SV – SHORT VERSION of VOLUME 1**

**VOLUME 2 - AUDIO-VIDEO TAPE RECORDINGS OF PROJECT SITE SURFACE CONDITIONS --- a SHORT VERSION is available.**

*P-Tn VideoRECORDS*

**VOLUME 2SV – SHORT VERSION of VOLUME 2**

**VOLUME 3 - BUILDING CONSTRUCTION PROGRESS PHOTOS --- a SHORT VERSION is available. AIRCRAFT OR LOW-LEVEL / GROUND-BASED AERIAL PROGRESS PHOTOGRAPHY plus FINAL ARCHITECTURAL PHOTOGRAPHY**

*P-Tn ProgressPHOTOS*  
*P-Tn Aerial Progress Photography*  
*P-Tn TetherBLIMP Aerial Progress Photography*

**VOLUME 3SV – SHORT VERSION of VOLUME 3**

**VOLUME 4 - DELIVERY OF CONSTRUCTION PHOTOGRAPHS IN DIGITAL FORM plus SEARCHABLE CD-ROM ARCHIVING OF CONSTRUCTION PHOTO DIGITAL FILES**

*P-Tn ProgressSCANS*  
*P-Tn RouteSCANS*  
*P-Tn Searchable CD-ROM Archive*

**VOLUME 5 - PRIORITY-SCHEDULED DELIVERY OF CONSTRUCTION PHOTOGRAPHS VIA THE INTERNET**

*P-Tn PhotoWALKTHRU*  
*P-Tn WebGALLERY*

**VOLUME 6 - ON-SITE 'LIVE' INTERNET DIGITAL IMAGE CAPTURE, FOR IMMEDIATE DELIVERY TO INTERNET WEBSITES**

*P-Tn ProgressCAM*  
*P-Tn ProgressCAMpics*  
*P-Tn WebWINDOW*  
*P-Tn ProgressCAMovie*