
Section 00000
SECURITY ACCESS AND SURVEILLANCE

**HONEYWELL VIDEO SYSTEMS HIGH-RESOLUTION COLOR DOME
CAMERA**

PART 1 – GENERAL

The intent of this document is to specify the minimum criteria for the design, supply, installation, and commissioning of the High-Resolution Color Dome Camera.

1.01 SUMMARY

- A. The high-resolution color dome camera shall have a low light sensitivity of 1.5 lux and a minimum 470 TV lines of resolution.

1.02 REFERENCES

- A. Conformity for Europe (CE)
- B. Federal Communications Commission (FCC)
- C. National Television System Committee (NTSC)
- D. Phase Alternation by Line (PAL)

1.03 DEFINITIONS

- A. No Substitutes: The exact make and model number identified in this specification shall be provided without exception.
- B. Or Equal: Any item may be substituted for the specified item provided that in every technical sense, the substituted item provides the same or better capability and functionality.
- C. Or Approved Equal: A substitute for the specified item may be offered for approval by the Owner. The proposed substitution must, in every technical sense, provide the same or better capability and functionality as the specified item. Such requests for approval shall be submitted in accordance with the provisions of PART 1.05 – SUBMITTALS, and must be obtained within the time frames outlined.

1.04 SYSTEM DESCRIPTION

- 1. The high-resolution color dome camera shall have a low light sensitivity of 1.5 lux and a minimum 470 TV lines of resolution. The

camera shall be quick and easy to install, and offer the flexibility of mounting on a wall or ceiling.

1.05 SUBMITTALS

- A. General: Submittals shall be made in accordance with the Conditions of the Contract and Submittal Procedures Section.
- B. Shop Drawings and Schematics: Shall depict the High-Resolution Color Dome Camera in final proposed “as built” configuration. The following must be provided:
 - 1. Connection diagrams for interfacing equipment.
 - 2. List of connected equipment.
 - 3. Locations for all major equipment components to be installed under this specification.
- C. Product Data: The following shall be provided:
 - 1. Technical data sheets.
 - 2. A complete set of instruction manuals.
- D. Quality Assurance Submittals: The following shall be submitted:
 - 1. Checkout Report: The Contractor shall provide the Owner with a checkout report for each High-Resolution Color Dome Camera. The report shall include:
 - a. A complete list of every device.
 - b. The date it was tested, and by whom.
 - c. If retested, the date it was retested, and by whom.
 - d. The final test report shall indicate that every device was tested successfully.
 - 2. Manufacturer’s Instructions: The Contractor shall deliver **TBD** sets of System Operation and Maintenance Manuals (if available) to the Owner.
 - 3. Notice of Completion: When the final acceptance has been satisfactorily completed, the Owner shall issue a notice of completion to the Contractor.

1.06 QUALITY ASSURANCE

- A. Manufacturer’s Qualifications: The High-Resolution Color Dome Camera manufacturer shall be the world’s largest and most experienced

manufacturer of electronic security systems, with over seventy years of experience in the security industry. The manufacturer shall provide 24/7 technical assistance and support via a toll-free telephone number at no extra charge.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. General: Delivery, storage, and handling of the High-Resolution Color Dome Camera shall be in accordance with the manufacturer's recommendations.
- B. Ordering: The manufacturer's ordering instructions and lead-time requirements must be followed in order to avoid installation delays.
- C. Delivery: The High-Resolution Color Dome Camera shall be delivered in the manufacturer's original, unopened, undamaged container with identification labels intact.
- D. Storage and Protection: The High-Resolution Color Dome Camera shall be stored and protected from exposure to harmful weather conditions and at the environmental conditions recommended by the manufacturer.

1.08 PROJECT CONDITIONS

1.09 SEQUENCING

1.10 SCHEDULING

1.11 WARRANTY

- A. General: The warranty period shall be a minimum of thirty-six (36) months from the manufacture date code under normal use and service, with the CCD warranted for a minimum of sixty (60) months.

1.12 MAINTENANCE

- A. Preventative Maintenance Agreement During Warranty: As a separate price item, the Contractor shall provide preventative maintenance during the warranty period. Maintenance shall include, but not be limited to:
 - 1. Labor and materials, at no additional cost, to repair the High-Resolution Color Dome Camera.
 - 2. Labor and materials, at no additional cost, to provide test and adjustments to the High-Resolution Color Dome Camera.
 - 3. Regular inspections.

B. Preventative Maintenance Agreement: As a separate price item, the Contractor shall provide a complete Maintenance Agreement for a period of **TBD** months after the conclusion of the warranty period. The Maintenance Agreement shall include, but not be limited to:

1. Labor and materials, at no additional cost, to repair the High-Resolution Color Dome Camera.
2. Labor and materials, at no additional cost, to provide test and adjustments to the High-Resolution Color Dome Camera.
3. Regular inspections.

1.13 TRAINING

- A. Operator training shall be conducted for a minimum of **TBD** sessions, with a minimum session length of **TBD** hours at the customer’s site.
- B. Training shall include, but not be limited to, the High-Resolution Color Dome Camera operation and diagnostics.

PART 2 – PRODUCTS

2.01 MANUFACTURED UNITS

A. Model Number/Description Table

HD3VC4HR	1/3” High-Resolution Color Dome Camera, 12VDC/24VAC, NTSC
HD3VC4HRX	1/3” High-Resolution Color Dome Camera, 12VDC/24VAC, PAL

2.02 SYSTEM PERFORMANCE

- A. The High-Resolution Color Dome Camera shall include, as a minimum, the following features/functions/specifications:
 1. The High-Resolution Color Dome Camera must be protected by the most extensive support services in the industry, including Customer Service, Pre-Sales Applications Assistance, After-Sales Technical Assistance, access to Technical Online Support, and Online Training using web conferencing.
 2. The High-Resolution Color Dome Camera and its components shall be thoroughly tested before shipping from the manufacturer’s facility.
 3. The High-Resolution Color Dome Camera shall be compact and lightweight in design; with a tinted bubble diameter of no more than 3.55” (90mm).

4. The High-Resolution Color Dome Camera must be quick and easy to install, with the flexibility of mounting on a wall or ceiling. The unit must include a knock out tab on the camera base to facilitate mounting to a hard surface. The camera must rotate 360° and tilt 90° for maximum angle selection.
5. The High-Resolution Color Dome Camera shall incorporate a 1/3-inch interline transfer CCD with a minimum of 470 TV lines of resolution utilizing an effective pixel count of no less than 768 (H) x 494 (V) NTSC, 752 (H) x 582 (V) PAL.
6. The High-Resolution Color Dome Camera shall provide excellent color performance in low light, down to 1.5 lux @ f1.2.
7. The High-Resolution Color Dome Camera shall feature a 1/3" 4mm-9mm varifocal lens, allowing the installer to choose the precise field of view. The lens shall utilize zoom and focus locking screws to ensure that the desired settings are not inadvertently changed. The lens must also incorporate a direct drive auto iris to ensure optimal picture quality in changing lighting conditions. The camera must also include an adjustable DC iris level potentiometer.
8. The High-Resolution Color Dome Camera shall have an internal amplifier that applies gain to the signal from the CCD. The amplifier must operate when there is insufficient light in the scene to produce an acceptable video output level, and must only apply as much gain as is necessary. The installer must have the ability to turn the AGC on or off.
9. The High-Resolution Color Dome Camera shall include a switching 12VDC/24VAC power supply. The camera must incorporate Polarity Reversal Protection (PRP) to prevent damage or failure to the power supply during installation.
10. The High-Resolution Color Dome Camera must have the ability to synchronize the video output to the AC power input so that all cameras on the system may be synchronized to the same point on the AC supply. In order to sync cameras on different phases, a phase adjustment potentiometer shall be provided. The camera must also include internal synchronization capabilities.
11. The power consumption of the High-Resolution Color Dome Camera shall be less than 2.8 watts.
12. When strong light enters the scene background, such as from a window, the High-Resolution Color Dome Camera shall provide

digital backlight compensation to automatically adjust the video level to preserve visibility in important sections of the image.

13. The High-Resolution Color Dome Camera shall have a signal to noise ratio of 50 dB with the AGC off.
14. The High-Resolution Color Dome Camera shall incorporate auto-tracing white balance to constantly monitor the light and adjust its color over a wide color temperature range of 2,700°K to 9,100°K.
15. To allow the image to be viewed properly on a standard monitor, the High-Resolution Color Dome Camera's default gamma value must be 0.45.
16. The High-Resolution Color Dome Camera shall be a Honeywell Video Systems HD3VC4HR(X) or equivalent.

2.03 MECHANICAL SPECIFICATIONS

A. The High-Resolution Color Dome Camera must have the following mechanical specifications:

1. Unit Dimensions (HxD).....3.15" x 4.33"
(80mm x 110mm)
2. Tinted Bubble Diameter.....3.55" (90mm)
3. Unit Weight.....0.40lbs. (182 g)

2.04 ELECTRICAL POWER REQUIREMENTS

A. The High-Resolution Color Dome Camera must have the following electrical specifications:

1. Voltage.....12VDC/24VAC
2. Power Consumption.....<2.8 watts

2.05 ENVIRONMENTAL CONDITIONS

A. The High-Resolution Color Dome Camera shall be designed to meet the following environmental conditions:

1. Operating Temperature23° to 113° F (-5° to 45° C)
2. Operating Humidity0% to 80% relative, non condensing
3. EmissionsFCC: Part 15, Class B
Canada ICES-003
CE: EN55022, Class B
4. Immunity.....CE: EN50130-4

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Submission of a proposal confirms that the contract documents and site conditions are accepted without qualifications unless exceptions are specifically noted.
- B. The site shall be visited on a regular basis to appraise ongoing progress of other trades and contractors, make allowances for all ongoing work, and coordinate the requirements of this contract in a timely manner.
- C. The High-Resolution Color Dome Camera must be inspected before installation, and shall be free of any cosmetic defects or damage.

3.02 PREPARATION

- A. Prior to installation, the High-Resolution Color Dome Camera shall be configured and tested in accordance with the manufacturer's instructions.

3.03 INSTALLATION

- A. The High-Resolution Color Dome Camera must be installed, programmed, and tested in accordance with the manufacturer's instructions.
 - 1. In order to ensure a complete, High-Resolution Color Dome Camera, for bidding purposes, where information is not available from the Owner upon request, the worst-case condition shall be assumed.
 - 2. Interfaces shall be coordinated with the Owner's representative, where appropriate.
 - 3. All necessary backboxes, racks, connectors, supports, conduit, cable, and wire must be furnished and installed to provide a complete and reliable High-Resolution Color Dome Camera installation. Exact location of all boxes, conduit, and wiring runs shall be presented to the Owner for approval in advance of any installation.
 - 4. All conduit, cable, and wire shall be installed parallel and square with building lines, including raised floor areas. Conduit fill shall not exceed forty percent (40%). All wires shall be gathered and tied up to create an orderly installation.

3.04 TESTING AND CERTIFICATION

- A. The Contractor shall demonstrate the functionality of the High-Resolution Color Dome Camera upon completion of installation, documenting the result of all tests and providing these results to the Owner. The High-Resolution Color Dome Camera shall be tested in accordance with the following:
1. The Contractor shall conduct a complete inspection and test of all installed High-Resolution Color Dome Camera equipment. This includes testing and verifying operation with connected equipment.
 2. The Contractor shall provide staff to test all devices and all operational features of the system for witness by the Owner's representative and the Authority Having jurisdiction. All testing must be witnessed by the Owner's representative, prior to acceptance.
 3. The testing and certification shall take place as follows:
 - a. The High-Resolution Color Dome Camera shall be tested in conjunction with the manufacturer's representative.
 - b. All deficiencies noted in the above test shall be corrected.
 - c. Test results shall be submitted to the consultant or Owner's representative.
 - d. The test and correction of any deficiencies shall be witnessed by the owner's representative, and note.
 - e. The Owner's representative shall accept the system.
 - f. The system test shall be witnessed by the Authority Having Jurisdiction. Any deficiencies noted during the testing must be corrected.
 4. A letter of certification shall be provided to indicate that the tests have been performed, and all devices are operational.

END OF SECTION

Brief Specification

The High-Resolution Color Dome Camera shall be compact and lightweight in design, with a tinted bubble diameter of no more than 3.55" (90mm). The High-Resolution Color Dome Camera must be quick and easy to install, with the flexibility of mounting on a wall or ceiling. The unit must include a knock out tab on the base to facilitate mounting to a hard surface. The camera must rotate 360° and tilt 90° for maximum angle selection. The High-Resolution Color Dome Camera shall incorporate a 1/3-inch interline transfer CCD with a minimum of 470 TV lines of resolution utilizing an effective pixel count of no less than 768 (H) x 494 (V) NTSC, 752 (H) x 582 (V) PAL, and shall provide excellent color performance in low light down to 1.5 lux @ f1.2. The High-Resolution Color Dome Camera shall feature a 1/3" 4mm-9mm varifocal lens, allowing the installer to choose the precise field of view. The lens shall utilize zoom and focus locking screws to ensure that the desired settings are not inadvertently changed. The lens must also incorporate a direct drive auto iris to ensure optimal picture quality in changing lighting conditions. The camera must include an adjustable DC iris level potentiometer. The High-Resolution Color Dome Camera shall have an internal amplifier that applies gain to the signal from the CCD. The amplifier must operate when there is insufficient light in the scene to produce an acceptable video output level, and must only apply as much gain as is necessary. The installer must have the ability to turn the AGC on or off. The High-Resolution Color Dome Camera shall include a switching 12VDC/24VAC power supply. The camera must incorporate Polarity Reversal Protection (PRP) to prevent damage or failure to the power supply during installation. The High-Resolution Color Dome Camera must have the ability to synchronize the video output to the AC power input so that all cameras on the system may be synchronized to the same point on the AC supply. In order to sync cameras on different phases, phase adjustment shall be provided. The camera must also include internal synchronization capabilities. The power consumption of the High-Resolution Color Dome Camera shall be less than 2.8 watts. When strong light enters the scene background, such as from a window, the High-Resolution Color Dome Camera shall provide digital backlight compensation to automatically adjust the video level to preserve visibility in important sections of the image. The High-Resolution Color Dome Camera shall have a signal to noise ratio of 50 dB with the AGC off, and shall incorporate auto-tracing white balance to constantly monitor the light and adjust its color over a wide color temperature range of 2,700°K to 9,100°K. To allow the image to be viewed properly on a standard monitor, the High-Resolution Color Dome Camera's default gamma value must be 0.45. The High-Resolution Color Dome Camera shall be a Honeywell Video Systems HD3VC4HR(X) or equivalent.