

SECTION 28 23 00 - VIDEO SURVEILLANCE

PART 1 - GENERAL

1.1 SUMMARY

- A. This section provides standards on the design and products to be used in facility video surveillance.

1.2 SYSTEM PERFORMANCE REQUIREMENTS

- A. The University of Colorado Denver | Anschutz Medical Campus uses CCTV systems as an integral part of its physical security system. Cameras may be placed on building roofs, at key building entries, at central interior junctions, and in areas of high value or high risk. The placement and visibility of cameras should not infer that each or any camera is monitored at all times, that a particular action or reaction may take place because of the presence of a camera, or that a camera, by itself adds to the security or safety of a particular area
 1. Closed Circuit Television (CCTV) devices whether fixed or pan, tilt, zoom (PTZ) will be placed to record access to and activity in sensitive areas; areas where cash, drugs, merchandise, and other high-value items are maintained; and where personal protection, property theft, or personal safety risks are identified. These will typically be in selected interior spaces, at primary entry portals, and selected roof locations. Low or zero light cameras will be installed where surveillance is critical even in zero light conditions.
 2. Certain grants, contracts, donors, work processes, etc. have unique security requirements attached to their funds, equipment being used, or processes in the university setting. The Security Department will respond to those with developments, as needed and requested with CCTV, physical security or other features to address contractual or grant mandates.
 3. Emergency Communications – The University has adopted the “Code Blue” emergency telephone system placed in parking, pedestrian, selected entry portals, and other areas as noted in the Master Plans for the site. If the construction of a structure, pathway, road, etc. or the combination of adjacencies among structures increases the need for additional telephone units, these should be proposed and coordinated with the Security Department and the Police Department. The Information Technology Department is responsible for this telephone system, although placement and selection is coordinated with the Security Department. Exterior poles should include support for PTZ cameras mounted on the standard “J” hook accessory.
 4. Elevators, passenger and freight, may have access control features to provide floor by floor compartmentalization during or after business hours. These may include a card reader at entry floors to open a car and interior readers to support permitted access to selected floors. Supporting features may include CCTV surveillance at elevator entry points or inside the cars to record tail-gating events, movements of property, or irregular access events.
 5. The CCTV and Security systems will terminate in the IT/Telecom room(s) core in each structure. Security will typically have one wall for its low voltage power supplies, controllers, etc. and a portion of the rack system for its UPS, etc. These rooms also support the fiber optic breakout, the structure’s telephone and network features. Security will bridge to the campus network in these areas.
 6. New Construction, Remodeling and Renovation Standards
 - a. The University has set construction and renovation standards in the areas of physical and electronic security to enhance the efficiency and effectiveness of new construction, renovation, relocation of offices and labs; and the integration of all work functions on both campuses. This document (CSI Division 28 23 00) resides with the Facilities Projects Department and is distributed to all new building design teams. As projects are developed, the security requirements are incorporated from the concept designs through to the commissioning of the structure.
- B. Personnel Security

1. Provide at each primary door entry and in all parking areas where an Emergency Telephone has been installed.

PART 2 - PRODUCTS

2.1 Closed Circuit T.V. Cameras provided by the University

A. Camera Wiring:

1. Fixed Cameras
 - a. IP based cameras require a network data drop at the camera location.
 - b. All cameras will be assigned to a unique VLAN provided by the University OIT department. Coordinate VLAN assignment with Project Manager.
- 2.
3. PTZ Cameras
 - a. IP based cameras require a network data drop at the camera location.
 - b. All cameras will be assigned to a unique VLAN provided by the University OIT department. Coordinate VLAN assignment with Project Manager.
4. Exterior Cameras (Roof Parapet Mounted)
 - a. Cameras exposed to potential lightning strikes will be required to utilized 4 strand multi-mode fiber optics data cable to transmit data.
 - b. An electrical outlet shall be provided at the roof parapet at the exterior camera location.
 - c. Fiber data drop should be located in an accessible location on the interior of the building adjacent to the exterior camera location.
 - d. Fiber data drop and electrical outlet shall be located in one enclosure.
5. Exterior Cameras (Wall/Ceiling Mounted)
 - a. Cameras exposed to potential lightning strikes will be required to utilized 4 strand multi-mode fiber optics data cable to transmit data.
 - b. Cameras exposed to potential lightning strikes will be required to provide an electrical outlet at the fiber optic data drop.
 - c. The electrical outlet and fiber data drop shall be in a single enclosure located inside the building at an accessible location near the exterior camera location. A pathway shall be provided between the enclosure and the exterior camera.
 - d. Cameras not exposed to a potential lighting strike shall be provided with a standard ethernet data drop (2 port) located at an interior accessible location near the exterior camera location. A pathway shall be provided between the data drop location and the camera.
6. Interior Cameras
 - a. Cameras shall be provided with a standard ethernet data drop (2 port) located at an interior accessible location near the camera.
7. CCTV Monitor:
 - a. Provided by the University.
8. Wiring Standard

Cable	Description
18/6	18-6C STR BC FRPVC FOIL SHD FRPVC JKT WHT CL3P
18/4	18-4C STR BC FRPVC FRPVC JKT WHT CL2P
16/2	16-2C STR BC FRPVC FRPVC JKT NEC CMP WHT
22/4	22-4C STR BC FRPVC FRPVC JKT WHT CL3P

22/2pr Shld	22-2P STR BC FRPVC IND FOIL SHD FRPVC JKT NAT 300V 60C CMP
Cat6	Network cable (refer to communications standard)
Fiber 4 strand	BX-04-070K-WLS/900-OFNP 4 STRAND BREAKOUT CABLE
	(Fiber MINIMUM RADIUS BEND 4.13 INCHES)

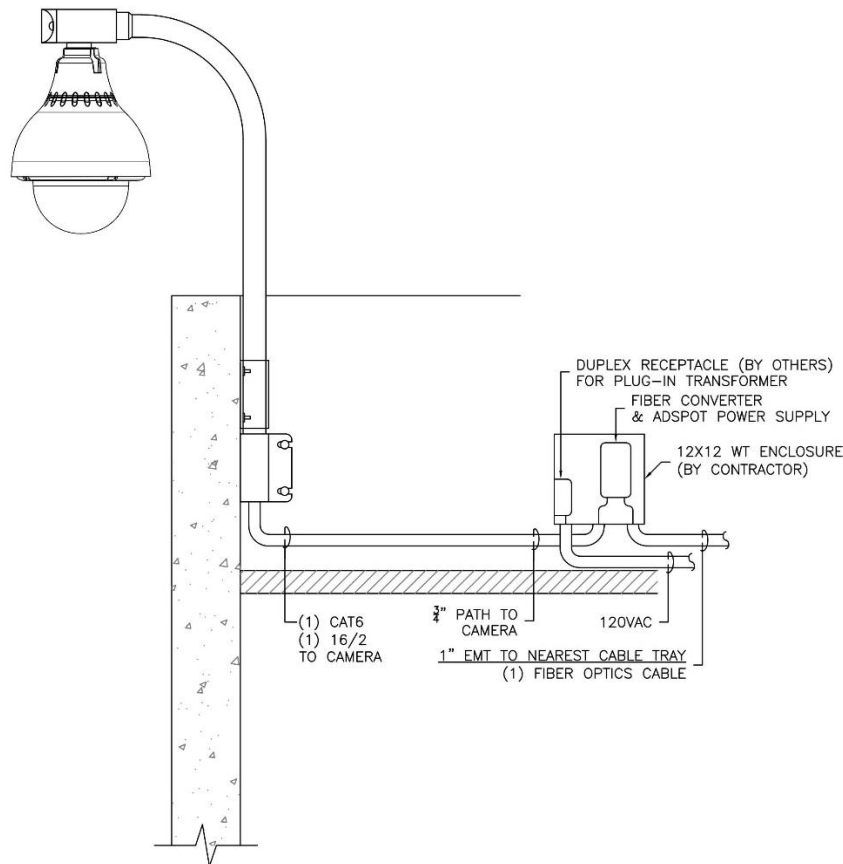
2.2 Digital Video Recording

- A. Network Video Recorders (NVR) will be used to record video.
- B. Location
 - 1. TBD by University Police Electronic Security.

PART 3 - EXECUTION

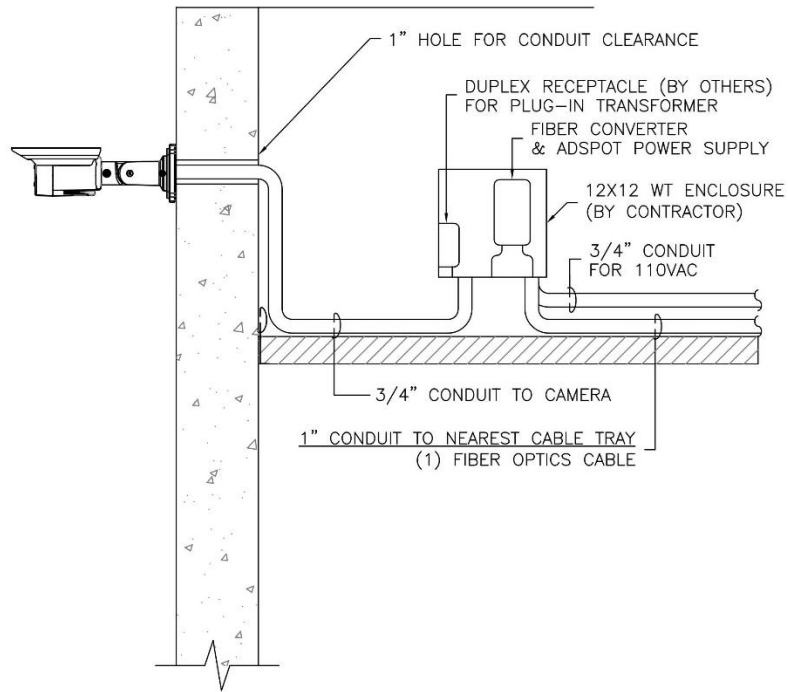
3.1 Standard details for camera install are included in this section. If the camera application does not match the standard detail, coordinate with Project Manager for alternate detail.

3.2 Parapat Mounted Roof Camera



DRAWING NOTES:
 ALL CONDUIT AND BOXES IDENTIFIED IN THESE DETAILS ARE THE RESPONSIBILITY OF OTHERS.
 ALL 120 VAC REQUIREMENTS ARE THE RESPONSIBILITY OF OTHERS.
 MOUNT ENCLOSURE ON ROOF NEAR THE CAMERA.
 FIBER OPTICS IS REQUIRED IF THE CAMERA IS EXPOSED TO POTENTIAL LIGHTNING

3.3 Wall Mounted Security Camera



DRAWING NOTES:

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ALL 120 VAC REQUIREMENTS ARE THE RESPONSIBILITY OF OTHERS.

MOUNT ENCLOSURE ON ROOF NEAR THE CAMERA, OR INSIDE IN ACCESSIBLE CEILING
FIBER OPTICS IS REQUIRED IF THE CAMERA IS EXPOSED TO POTENTIAL LIGHTNING

END OF SECTION 28 23 00