



*Florida Department of Transportation*

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GOVERNOR

605 Suwannee Street  
Tallahassee, FL 32399-0450

KEVIN J. THIBAUT, P.E.  
SECRETARY

July 31, 2019

Khoa Nguyen  
Director, Office of Technical Services  
Federal Highway Administration  
3500 Financial Plaza, Suite 400  
Tallahassee, Florida 32312

Re: State Specifications Office  
Section: **682**  
Proposed Specification: **6820102 Video Equipment.**

Dear Mr. Nguyen:

We are submitting, for your approval, two copies of the above referenced Supplemental Specification.

The changes are proposed by Derek Vollmer of the State Traffic Engineering Research Lab (TERL) to allow ONVIF or NTCIP, since SunGuide supports both. Clarify multicast streams from RTSP.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via email to [stefanie.maxwell@dot.state.fl.us](mailto:stefanie.maxwell@dot.state.fl.us).

If you have any questions relating to this specification change, please call me at 414-4140.

Sincerely,

Signature on file

Stefanie D. Maxwell, P.E.  
Manager, Program Management Office

SM/dt

Attachment

cc: Florida Transportation Builders' Assoc.  
State Construction Engineer

**VIDEO EQUIPMENT.**  
**(REV 5-17-19)**

SUBARTICLE 682-1.2.5 is deleted and the following substituted:

**682-1.2.5 Communication:** ~~Analog~~ CCTV cameras must support the National Transportation Communications for ITS Protocol (NTCIP) 1205 v1.08. The camera must communicate with other devices using Telecommunications Industry Association/Electronic Industries Alliance (TIA/EIA)-232 or TIA-422 at a rate of 9600 bps, transmission control protocol (TCP)/IP, or user datagram protocol (UDP)/IP. All CCTV cameras must support the communication links shown in the Plans and provide for remote firmware upgrades via the communication interface.

IP cameras must ~~also~~ support either NTCIP- 1205v01.08 or the Open Network Video Interface Forum (ONVIF) Core, Streaming, and Media Service specifications.

The camera must implement all objects, operations, and commands required by SR-682-1.2.1-01, Supplemental CCTV Camera NTCIP and ONVIF Requirements, as published on the Department's State Traffic Engineering and Operations Office website at the following URL:

[http://www.fdot.gov/traffic/Traf\\_Sys/Product-Specifications.shtm](http://www.fdot.gov/traffic/Traf_Sys/Product-Specifications.shtm).

SUBARTICLE 682-1.2.9.1 is deleted and the following substituted:

**682-1.2.9.1 Video Encoding:** The camera must utilize the Moving Picture Experts Group's MPEG4 part 10 (H.264) video compression technology in accordance with the ISO and IEC requirements detailed in the ISO/IEC 14496-10:2009 Standard.

Cameras must ~~provide~~establish unicast and multicast ~~operation~~sessions using the real-time streaming protocol (RTSP) and provide for a 99.999% error-free operation. The encoded video must transmit using programmable bit rates and the camera supports, at a minimum, a fixed bit rate mode.

SUBARTICLE 682-1.2.9.4 is deleted and the following substituted:

**682-1.2.9.4 Network Interface:** The camera's local area network (LAN) connection must support the requirements detailed in the IEEE 802.3 Standard for 10/100 Ethernet connections. The camera must have a minimum of one 10/100 Base-TX connection Ethernet port.

Unshielded twisted pair/shielded twisted pair network cables must be compliant with the TIA-568 Standard. The network communication must conform to TCP, UDP, Version 4 of the IP, ~~real-time streaming protocol (RTSP)~~, and Version 2 of the internet group multicast protocol (IGMP), at a minimum. The camera must be able to be controlled via NTCIP using either TCP/IP or UDP/IP.

SUBARTICLE 682-1.3 is deleted and the following substituted:

**682-1.3 Installation Requirements:** Install the CCTV camera on a pole in accordance with Standard Plans, Indexes 641-020, 649-020, and 659-020, and as shown in the Plans.

Furnish and install the power supplies, local control equipment, and any other camera-related field electronic equipment and transient voltage surge suppressors within a pole- or base-mounted lockable cabinet. The cabinet must ~~protect the electrical and electronic devices from rain, dust, dirt, and other harmful elements of nature~~ **be listed on the APL.**

Furnish and install all power, video, and data cables necessary to provide connection points for camera video and PTZ control signals within the cabinet. Furnish and install any and all ancillary equipment required to provide a complete and fully operational CCTV camera. Verify that all wiring meets National Electric Code (NEC) requirements where applicable.

Route the data and video cables from the pole or support structure to the camera inside the mounting hardware and protect from exposure to the outside environment.

Coat the exterior of the dome-type enclosure's lower half with a clear, rain repellent product prior to final acceptance.

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