READ THIS FIRST

Notice to the Design Engineer, please refer to the Port of Seattle, Facilities and Infrastructure standards for reference before editing this specification.

This Project Spec Document may need additional modifications to suit your project. It is recommended that you proofread each section, paying attention to any “Notes” boxes such as this one--you should remove these “Notes” sections as you go. Also, do a search for all bracket characters “ [ ] “ as they are used to show you areas containing options or project specific details (you can use Microsoft Word’s Find feature {Ctrl-F} to jump to an open bracket “ [ “ character quickly). Again, these bracket characters should be removed.

It is important that every paragraph be numbered to allow for easy referencing. If you use the document’s built in styles and formatting your outline should be fine (turn on the formatting toolbar by going to View > Toolbars > Formatting). Most paragraphs will use the style “Numbered Material” and can be promoted (Shift) or demoted (Shift-Tab).

You should not have to manually enter extra spaces, carriage returns or outline characters such as A, B, C, or 1.01, 1.02; the formatting will do this for you. The entire document is 11 pt. Arial. If you paste items in, you may need to reapply the “Numbered Material” format.

1. GENERAL

## summary of work

* + 1. The extent and location of “Video Surveillance Remote Devices and Sensors” Work is shown in the Contract Documents. This Section includes general requirements for accomplishing Video Surveillance Remote Devices and Sensors Work, and Video Management System (VMS) Work as specified herein and indicated on the Drawings.
    2. System Description
       1. Video Management System

Edit subparagraphs below to suit Project.

* + - * 1. Provide a complete Network based Video Management System as shown on Drawings.
        2. Security Cameras: POS ACS system has a sole source for Axis cameras and are used in the majority of applications at SeaTac Airport. Unique applications may require the use of a camera not available from Axis and are considered for use on a case by case basis.
        3. Complete systems are defined as all cables, fiber, back boxes, IP color cameras, enclosures, digital Network Video Recorders/servers, networking equipment, software, and programming needed to achieve a complete and functional system. Also included are all required power supplies, power filtering, mounts, housings, and interfaces to equipment furnished by others.
        4. Install all field control panel equipment in new equipment racks as shown on Drawings.
        5. Provide installation of all equipment and coordinate with POS AVM ET shop for testing, adjustment, and all necessary system programming for all equipment.
        6. Provide written documentation and instructions for system as installed.
        7. Provide training to the Port in the operation, adjustment, servicing, and repair of this system.

## GOVERNING CODES, STANDARDS AND REFERENCES

* + 1. FCC Part 15 - Subpart B
    2. SMPTE 274M HDTV 1080p (1920 X 1080)
    3. MPEG-4:
       1. ISO/IEC 14496-10 AVC (H.264)
    4. IEEE 802.3af (Power over Ethernet)
    5. IEEE 802.1X (Authentication)
    6. IPv4 (RFC 791)
    7. UL (Underwriters Laboratory) 497 – Standard for Protectors for Paired-Conductor Communications Circuits
    8. UL (Underwriters Laboratory) 497B – Standard for Protectors for Data Communications and Fire-Alarm Circuits

## SUBMITTALS

* + 1. Submit materials data in accordance with of Section 01 33 00 - Submittals. Furnish manufacturers’ technical literature, standard details, product specifications, and installation instructions.
    2. Submittals shall include the following:
       1. Product Data: For each type of product indicated include construction details, material descriptions, dimensions of individual components and profiles, and finishes. Include rated capacities, operating characteristics, electrical characteristics, optical characteristics, and furnished specialties and accessories.
       2. Shop Drawings
          1. Indicate electrical characteristics and connection requirements, including system wiring diagram.
       3. Project Record Documents: Maintain a current and complete set of red-line drawings throughout the duration of the project that indicate the following installed conditions:
          1. Camera locations (exposed and concealed) dimensioned from column lines.
       4. Intake Sheet: Fill out Port of Seattle Intake Sheet for cameras installed.
       5. Test Procedures
       6. Test Reports

Edit below paragraph to indicate Aviation, or Maritime work.

* + - 1. Operation and Maintenance Manuals: Submit per Section 01 78 23.13 – [Aviation Operations and Maintenance Documentation] [Seaport Operations and Maintenance Data].
  1. COORDINATION/RELATED WORK PERFORMED BY OTHERS
     1. Contractor will install and aim cameras, power up, and verify video signal locally. Port staff will program the cameras remotely. Port Security will review camera fields of view. Contractor will then make adjustments as required by Port Security.
  2. QUALITY ASSURANCE
     1. All camera installation, configuration, setup, program and related Work shall be performed by electronic technicians thoroughly trained by the manufacturer in the installation and service of the equipment provided.
     2. All equipment provided shall be backed by a minimum of three years manufacturer warranty. Warranty shall go into effect at substantial completion of project.
     3. The specified unit shall be manufactured in accordance with ISO 9001.
     4. Perform Work in accordance with federal, state, and local standards and regulations including Occupational Safety and Health Administration (OSHA), and Washington State Labor & Industries (L&I) regulations.

1. PRODUCTS

A. If only one product is acceptable (single or sole source product), obtain an approved Competition Waiver and submit to the CPO Construction, Contract Administrator. The language shall read as: “Manufacturer Name, Product # XXXXX, No Equal.” Refer to CPO-6 Competition Waiver Policy for more information.

B. If a Competition Waiver is not approved or more than one product is acceptable, this section must list a minimum of 2 products plus the language “Or Approved Equal,” along with salient characteristics. Refer to CPO Construction’s Salient Characteristics Guidelines for more information.

### CAMERAS

* + 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
       1. Cameras:

Confirm model numbers with Aviation Maintenance Electronic Technicians for each application and list below.

* + - * 1. Axis

If Axis does not manufacture a model acceptable for the application coordinate appropriate substitute with Aviation Maintenance Electronic Technicians.

* + - * 1. No Equal
    1. Web server
       1. The camera shall contain a built-in web server making video and configuration available to multiple clients in a standard operating system and browser environment using HTTP/HTTPS, without the need for additional software.

Edit below paragraph to indicate mounting hardware pertinent to project.

* 1. MOUNTING DEVICES AND COMPONENTS
     1. Provide and integrate all necessary cameras, lenses, mounting equipment, enclosures, power supplies for each specified location to include, but not limited to:
        1. Pole mounts
        2. Corner mounts
        3. Wall brackets
        4. Goosenecks
        5. Surface mounts
        6. Pendants
        7. Camera enclosure
        8. Enclosure with heating and cooling as appropriate for interior and exterior installations.
  2. VIDEO ARCHIVING SERVER

Note for Designer: Project shall coordinate with Aviation Maintenance for storage resources required to support the project. If the project is going to install a quantity of cameras that will require additional video archiving servers, the project will fund and POS ET will procure. Delete VIDEO ARCHIVING SERVER if not needed by project.

Surge Protective Devices only required for exterior devices. Delete below paragraph if no exterior devices.

* 1. SURGE PROTECTIVE DEVICES
     1. Manufacturers:
        1. Cooper Bussman DIN Surge Protector
        2. ITW Linx SurgeGate CAT6-75
        3. Or Approved Equal
     2. Description:
        1. Compatible for use with Power over Ethernet applications.
        2. Input/Output connections – RJ45.

Ancillary Equipment Bird Spikes only required for exterior installations. Delete below paragraph if no exterior installations.

* 1. ANCILLARY EQUIPMENT
     1. Bird spikes
        1. Manufacturers:
           1. Bird-X
           2. Bird-B-Gone
           3. Or Approved Equal
        2. Description:
           1. Stainless steel construction, 5-3/4” tall x 7” spread at the top.
           2. Provide manufacturer’s recommended attachment method.

1. EXECUTION

#### INSTALLATION

* + 1. Prior to installation contractor shall coordinate walkthrough with POS AV-ET to determine exact location of Camera Back Box before installation.
    2. Work will be performed as shown on the contract drawings. Work includes installing surveillance cameras, housing, lenses, mounting equipment, back boxes, cabling, and equipment as well as removing existing equipment and replacing as shown on the Contract Drawings. The Work includes, but is not limited to, the following activities:
       1. Provide pathways per Section 27 05 28.
       2. Provide equipment enclosures per Section 26 27 16, fiber demarcation panels per Division 27, and other required equipment.
       3. Patch and repair work areas.
       4. Test, configure, and adjust all installed equipment and systems.
       5. Prepare and maintain red-line drawings and record documents during the duration of the Contract.
       6. The quality assurance, site inspection, equipment coordination and installation, testing, and warranty requirements described in this section apply to all Division 27 and Division 28 sections. Refer to specific system’s specifications for additional requirements.
    3. Install bird spikes on exterior cameras and boxes.
    4. Provide Cat-6/a compatible surge protective device for exterior cameras.
    5. Contractor will install, and do initial video test of cameras.
    6. Contractor shall notify the Port after successful initial video tests and connection of cameras to system. Port will program cameras remotely, and Port Security will then review fields of view. Contractor is responsible for re-aiming/focusing/adjusting all cameras to the satisfaction of Port Security.
  1. TESTING
     1. Provide all personnel, equipment, instrumentation, and supplies necessary to perform all testing.
     2. Coordinate with Port of Seattle AVM ET and Port representatives for witnessing of field tests.
     3. Test that surveillance cameras have power.
     4. Test that surveillance cameras have image.
     5. For fixed cameras, provide proper alignment and adjustment of lens to satisfy the Port for accurate field of view.
     6. Test that the new camera system equipment is fully functional and correctly controlled within the Video Management System (VMS).
     7. Provide report showing all equipment addresses, passwords, usernames, equipment models, locations, and firmware installed.
  2. ADJUSTING
     1. Adjust camera field of view (FOV) to satisfy the Port.
     2. Set all camera and lens parameters to manufacturer’s recommendations.
  3. FIELD QUALITY CONTROL
     1. Unapproved Materials: The Contractor, at no cost to the Port, shall remove and replace any unapproved equipment, materials, or system components with approved equipment, materials, or system components.

1. MEASUREMENT AND PAYMENT
   1. GENERAL
      1. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price bid for the Project].

End of Section

10/15/2014 New Section Added Sole Source and Salient Characteristics Note to Part 2

01/29/2015 Revised Sole Source

12/04/2018 Renamed Section, Revised section

02/25/2022 Revised with content from F&I, and for clarity