SECTION 017900 - VIDEO TRAINING PROGRAMS

This section should be used for complex systems where it is necessary to train present and future facility personnel on the proper use and maintenance of the systems. Use this section only when directed by Project Team Leader.

1. GENERAL
	* + 1. PROGRAM DESCRIPTION
				1. Professionally produce a separate training program specifically for each of the following systems:

Edit systems in 11 subparagraphs below as required by project.

Direct Digital Building Control System: Section 230923.

Perimeter Security Multiplex System: Section 281603.

Microwave Detection System: Section 281604.

Electronic Fence Alarm System: Section 281605.

Infrared Detection System: Section 281607.

Taut Wire Fence and Alarm System: Section 281608.

Fire Protective Signaling/Emergency Voice Communication System: Section 283102.

Integrated Fire Protective Signaling System: Section 283103.

Perimeter Surveillance CCTV System: Section 282301.

Underground Fuel Storage Tanks and Fuel Systems: Section 231313.

Above-Ground Fuel Storage Tanks and Fuel Systems: Section 231323.

* + - * 1. The content of each program shall allow facility personnel to become completely familiar with the operation, programming, and routine maintenance of their systems. The video training programs must be suitable for training persons totally unfamiliar with the systems.
				2. Field or Studio record the programs using 3 CCD or 3 CMOS image sensor color digital video recorder which records to a hard drive or solid state media.

Video shall be recorded and encoded in HD (1080p/i or 720p) or SD NTSC 480i with minimum bit rate of 15Mbps.

Audio shall be recorded and encoded at a minimum of two channel PCM, 48kHz, 16 bit.

Illuminate program subject(s) using 3200K lighting with umbrellas, stands and/or other suitable equipment. Equipment shall be portable when required.

Utilize a wired microphone remote from the camera (the integrated microphone shall not be used). Make Available for Use: Wired condenser microphones, a shotgun microphone, and a lavalier microphone.

Finished/completed programs shall be provided on DVDs capable of being played back in off the shelf DVD players. Bit rate of video on the finished DVD shall be a minimum of 4 Mbps. Audio shall be provided on the finished DVD as two channel PCM, 48Hz, 16 bit, as recorded.

Retail grade digital video recorders are not acceptable for any phase of the production.

* + - * 1. Record each system operation, programming, and routine maintenance on separate DVDs.

Arrange each DVD into segments (chapters) that cover major elements of the system for ease of access.

Reference any action or system components with the pertinent sections of the system reference, training, and maintenance manuals.

Include a detailed top menu with thumbnails on each DVD to allow facility personnel to select specific portions of the programs.

* + - * 1. Each training program shall be a professional quality production. Overall content, appearance and persons narrating and demonstrating for each program shall be of this standard.

Narration shall be clear and concise, in plain English.

The narration shall be from a script, and fully rehearsed. Informal dialogue is not acceptable. Coordinate contents of script with the Director’s Representative and technical experts designated by Director’s Representative.

All programs shall be free from random background noise or other distractions.

* + - * 1. Record a portion of the operation program at the site showing location and operation of installed equipment.
				2. Present the following in the operation program for each system:

Give overview of each system and explain each system feature in detail.

Show each piece of equipment and explain its function.

Demonstrate the system configuration, using one line diagrams or other graphic techniques.

Narrate the system description, explaining acronyms, technical terms, system concepts, and functions during the course of the system description narration.

Thoroughly explain and demonstrate all system operation, programming, and maintenance functions. Include warnings, where applicable, to preclude incorrect system procedures.

The operation program shall contain a specific segment showing only the information that a novice would need to know in order to operate the system on a routine day-to-day basis; alarms being received, system trouble, responses required, etc. This segment should not exceed 1/2 hours.

* + - * 1. Programming and maintenance training programs are not required to be recorded at the site as long as procedures and equipment shown are applicable to the installed system.

Use paragraph below for projects specific system(s).

* + - * 1. Present the following in the programming training program for each system:

Step by step instruction for programming all system functions, utilizing each system's own control panel keyboard.

Use paragraph below when a PC is specified to be provided.

Step by step instruction for programming all system functions, utilizing the Systems Programming Computer (Section 281650) where applicable.

Training programs shall include instructions for "Off-Loading" the system's programming onto floppy disks, and restoring system programming from the floppy disks, or other digital back-up devices or methods as recommended by system manufacturer or software provider.

Include warnings to preclude incorrect programming of the system.

* + - * 1. Present the following in the maintenance training program for each system:

Procedures required for installing items which are provided as spare parts for the system.

Preventive maintenance required for each piece of equipment for the system.

* + - * 1. Recording/Playback Format: Format of final DVD shall be similar DVD-Video, compatible with most stand-alone DVD players and compatible DVD drives.

Media can be DVD-R, or DVD-ROM.

DVDs shall be Region Free and employ no encryption or security.

* + - * 1. Add background music, graphics, fade-in/fade-outs, and other common video production techniques to promote viewer interest in the training programs.

Submit music licenses with completed program(s) or proof of royalty –free or public domain usage.

* + - * 1. Cover all aspects of each system in 3 hours unless shorter or longer time is deemed appropriate to obtain objective.
			1. SUBMITTALS

Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.

Manufacturer’s installation instructions shall be provided along with product data.

Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).

* + - * 1. Waiver of Submittals: The "Waiver of Certain Submittal Requirements" in Section 013300 does not apply to this Section.
				2. Packaging of Submittals: Submittals required by this section are to be submitted in packages as follows:

Submittals Package No. 1: Submit product data, and quality control submittals specified below at the same time as a package within 60 days of contract award.

Product Data:

Catalog sheets, specifications and installation instructions for each item specified.

Catalog sheets, specifications and installation instructions for equipment being used to create video training program.

Outline of program material for each system, including:

System overview.

System programming.

Operation of system equipment.

System maintenance.

Estimated length (time) of each segment.

Production schedule (proposed dates and locations).

Quality Control Submittals:

Video Production Company Qualifications Data:

Name, business address and telephone number of Video Production Company.

Names and addresses of 3 similar projects that the video production company has produced industrial or commercial training videos during the past 5 years.

Brochure explaining services offered.

Experience directly applicable to the required services.

List of equipment (including brand name and model) to be used for the production of the training programs.

Videographer Qualifications Data:

Name of each person who will be engaged in the production, presentation, narration, and demonstration of the video training program, and their employer’s name, business address and telephone number.

Names and addresses of 3 similar projects that each person has worked on during the past 5 years.

Submittals Package No. 2: Submit program scripts of video training programs within 60 days of receipt of approval of Submittals Package No. 1.

Audio Script: Complete written text of the narration (audio portion) of each scene of the video training program.

Audio script shall be written in a scene-by-scene format.

Number (and/or label) each scene of the written audio script (numbering and labeling must match that of video script).

Video Script: Complete written description of what will be displayed during each scene (video portion) of the video training program.

Video script shall be written in a scene-by-scene format.

Where graphics (one-line drawings, etc.) are to be displayed in the scene, submit graphics for approval.

Where a procedure for controlling a piece of equipment is being described in the corresponding audio script for the scene, the video script shall describe in detail the corresponding actions that will be shown in the video for the scene.

Number (and/or label) each scene of the written video script (numbering and labeling must match that of audio script).

Letter from the Company Field Advisor(s) for the system that is being presented in the video training program, stating that the Company Field Advisor has reviewed the video training program script for accuracy and completeness and approves all information being presented in the video training program.

Submittals Package No. 3: Submit sample portions of the recorded programs for each system as they become available so that they can be reviewed for audio and video quality, thus allowing time for correction and/or adjustments to be made prior to completion of the entire video training program. Submit the samples on DVD discs.

Submittals Package No. 4: Submit completed video training program for each system for approval.

Submit 3 copies of each video training program. Include with each copy all reference materials referred to in the video training program.

Approved video training programs (2 copies) will be forwarded to the Director's Representative for use as Contract Closeout Submittals.

Disapproved video training programs (2 copies) will be forwarded to the Contractor for correction. Re-submit 3 copies of corrected Video Training Programs for approval.

Submit music licenses with completed program(s).

Submit letter from the Company Field Advisor(s) for the system that is being presented in the video training program, stating that the Company Field Advisor has reviewed the completed video training program for accuracy and completeness and approves all information being presented in the video training program.

Submittals Package No. 5: Submit contract closeout submittals specified below at the same time as a package.

Contract Closeout Submittals: Forwarded to the Facility by Director’s Representative.

Two copies of approved video training programs and associated reference materials referred to in the video training program for each system.

Operation and maintenance data.

* + - 1. QUALITY ASSURANCE
				1. Video Production Company Qualifications: The company shall have a minimum of 3 years of experience in producing industrial or commercial video training programs and shall have produced industrial or commercial video training programs for 3 similar projects in the past 5 years.
				2. Videographer Qualifications: The persons performing the Work of this Section and their supervisor shall be personally experienced in industrial or commercial video training productions and shall have worked on industrial or commercial video training programs for 3 similar projects in the past 5 years.
1. PRODUCTS
	* + 1. VIDEO DISCS
				1. DVD discs capable of being played on off the shelf DVD players (DVD recorder not required).

Two (2) professional grade recorded DVD discs.

Professionally printed label on each disc including content and format.

* + - 1. STORAGE CASES
				1. Plastic, to individually protect each disc.

Delete article below if facility has mobile video center or if facility will be using a laptop and LCD projector.

* + - 1. MOBILE VIDEO CENTER
				1. DVD player and color monitor suitable for viewing the completed training program video DVDs:

DVD Player: 1080p up conversion, HDMI output, still frame, frame advance, and wireless remote control.

Monitor: Minimum 30 inch flat panel type, 720p minimum resolution, HDMI input, composite video input, integral speakers, and audio inputs.

Accessories: As required to interconnect and mount DVD player and monitor. (Audio and video shall be transmitted via HDMI).

Mount DVD player, monitor and accessories in a portable, lockable metal cabinet assembly which is easily moved on integral casters to desired location and only requires plugging the unit into nearest 120 V outlet with one flexible cord connection:

Quantity of video centers is usually determined by number of facilities in project. Edit quantity in paragraph below as required.

* + - * 1. Total Quantity of Mobile Video Centers Required For This Project: One.
1. EXECUTION
	* + 1. INSTALLATION
				1. Production of the on-site portion of the training program shall be conducted in a manner that shall not interfere with other on-site operations.

Use paragraph below for equipment installed exterior to building.

* + - * 1. Portion of video training program recorded on-site shall be done so during favorable weather conditions to allow for optimal viewing of the equipment being presented.

Delete paragraph below if facility has mobile video center or if facility will be using a laptop and LCD projector.

* + - * 1. Mobile Video Center: Install at the facility training location as directed.

END OF SECTION 017900