Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

April 8, 2010

SUBJECT: FAP Route 646/673 (IL 40/116)
Project HD-000S (805)
Section (101, 103)TS-1;(102, 126)TS-3ETC
Peoria & Tazewell County
Contract No. 68970
Item No. 133, April 23, 2010 Letting
Addendum A

NOTICE TO PROSPECTIVE BIDDERS:

Attached is an addendum to the plans or proposal. This addendum involves revised and/or added material.

1. Replaced the Schedule of Prices.
2. Revised sheets 1 and 3 of the Fold-up Plans.
3. Added sheet 23A to the Fold-up Plans.
4. Revised page i of the Table of Contents to the Special Provisions.
5. Revised pages 14 - 16 and 39 of the Special Provisions.
6. Added pages 40 - 46 to the Special Provisions.

Prime contractors must utilize the enclosed material when preparing their bid and must include any Schedule of Prices changes in their bidding proposal.

Bidders using computer-generated bids are cautioned to reflect any and all Schedule of Prices changes, if involved, into their computer programs.

Very truly yours,

Scott E. Stitt, P.E.
Acting Engineer of Design and Environment

By: Ted B. Walschleger, P. E.
Engineer of Project Management

cc: Joseph E. Crowe, Region 3, District 4; Mike Renner; R. E. Anderson; Estimates

TBW:DB:jc

# ILLINOIS DEPARTMENT OF TRANSPORTATION
## SCHEDULE OF PRICES

CONTRACT NUMBER - 68970

State Job # - C-94-064-10
PPS NBR - ITS
County Name - PEORIA- TAZEWELL-
Code - 143 - 179 -
District - 4 - 4 -
Section Number - (101,103)TS-1;(102,126)TS-3ETC

Project Number
HD-000S/805/

Route
FAP 646
FAP 673

* Revised: April 8, 2010

| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| * X0323909 | DATA NETWORK PORT ADP | EACH | 32.000 | | | | |
| * X0326267 | VIDEO SERVER | EACH | 32.000 | | | | |
| * X0326905 | CCTV DOME CAM IP BASE | EACH | 2.000 | | | | |
| * X0326906 | CCTV DM CAM IP BAS MO | EACH | 2.000 | | | | |
| X8710024 | FOCC62.5/125 MM12SM24 | FOOT | 41,466.500 | | | | |
| * X8710050 | FO ETN DROP REPEAT SW | EACH | 50.000 | | | | |
| 67100100 | MOBILIZATION | L SUM | 1.000 | | | | |
| 70102632 | TR CONT & PROT 701602 | L SUM | 1.000 | | | | |
| 70102635 | TR CONT & PROT 701701 | L SUM | 1.000 | | | | |
| 81012600 | CON T 2 PVC | FOOT | 25,933.000 | | | | |
| 81018500 | CON P 2 GALVS | FOOT | 40.000 | | | | |
| 81021330 | CON P 2 PVC | FOOT | 3,116.000 | | | | |
| 81400700 | HANDHOLE PCC | EACH | 56.000 | | | | |
| 81400705 | HANDHOLE PCC SPL | EACH | 5.000 | | | | |
| 81900200 | TR & BKFIL F ELECT WK | FOOT | 25,933.000 | | | | |

**ILLINOIS DEPARTMENT OF TRANSPORTATION**
**SCHEDULE OF PRICES**
**CONTRACT NUMBER - 68970**

**State Job # -** C-94-064-10
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**County Name -** PEORIA- TAZEWELL-
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**Project Number**
HD-000S/805/

**Route**
FAP 646
FAP 673

*** Revised: April 8, 2010**

| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| 87900200 | DRILL EX HANDHOLE | EACH | 16.000 | | | | |

DESIGN ENGR.: ERIC HOWALD 309-671-4481 PROJECT ENGR.: RANDY LANINGA 309-671-4477

# STATE OF ILLINOIS
# DEPARTMENT OF TRANSPORTATION
# DIVISION OF HIGHWAYS
# FAP 646 (IL 40)
# FAP 673 (IL 116)
# SECTION (101,103)TS-1;(102,126)TS-3ETC
# C-94-064-10
# PROJECT NO: HD-0005(805)

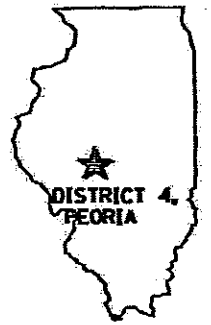
PEORIA AND TAZEWELL COUNTY

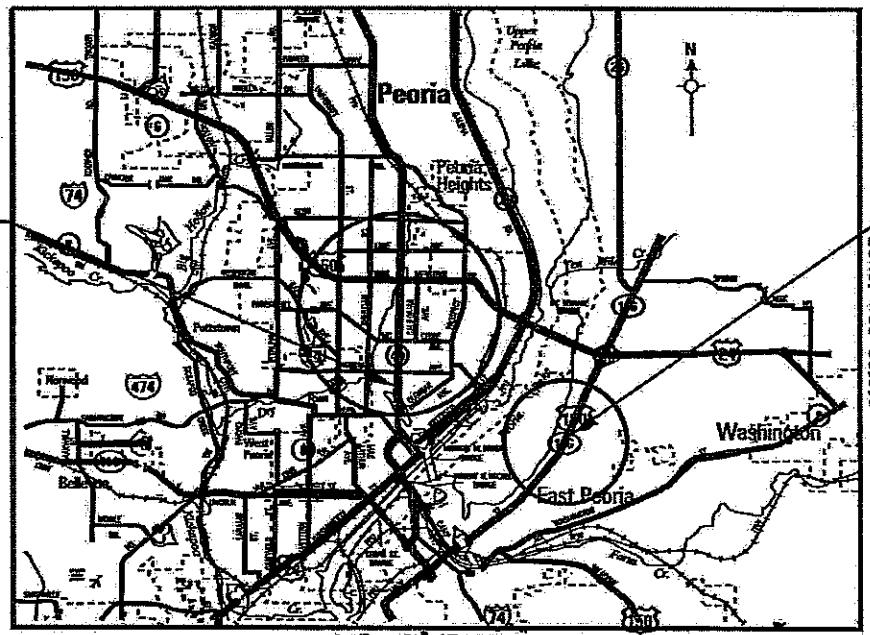

D-94-034-10

INDEX OF SHEETS



1 23A. CCTV DOME CAMERA INSTALLATION DETAIL




STANDARDS

701001-02
701006-03
701101-02
701106-02
701602-04
701701-06
701901-01

LOCATION OF IMPROVEMENT

IL 40 (KNOXVILLE AVE.) FROM GLEN AVE. TO RAVINSWOOD/ RICHMAR IN THE CITY OF PEORIA, IN PEORIA COUNTY; IL 116 (MAIN ST.) FROM BLACKJACK BLVD TO CENTENNIAL DR. IN THE CITY OF EAST PEORIA, IN TAZEWELL COUNTY

CONTRACT NO. 68970
CATALOG NO. 034407-00D

DESCRIPTION OF WORK

THIS PROJECT CONSISTS OF INSTALLING CONDUIT, CONCRETE HANDHOLES, AND FIBER OPTIC CABLE TO EXTEND THE ITS NETWORK COMMUNICATION BACKBONE AND PERFORMING ALL COLLATERAL WORK REQUIRED TO COMPLETE THE IMPROVEMENTS.

1 REVISED 4-7-10

J.U.L.I.E. 1-800-892-0123
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Dec 11, 20 10

DEPUTY DIRECTOR OF HIGHWAYS REGION ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

Rev.

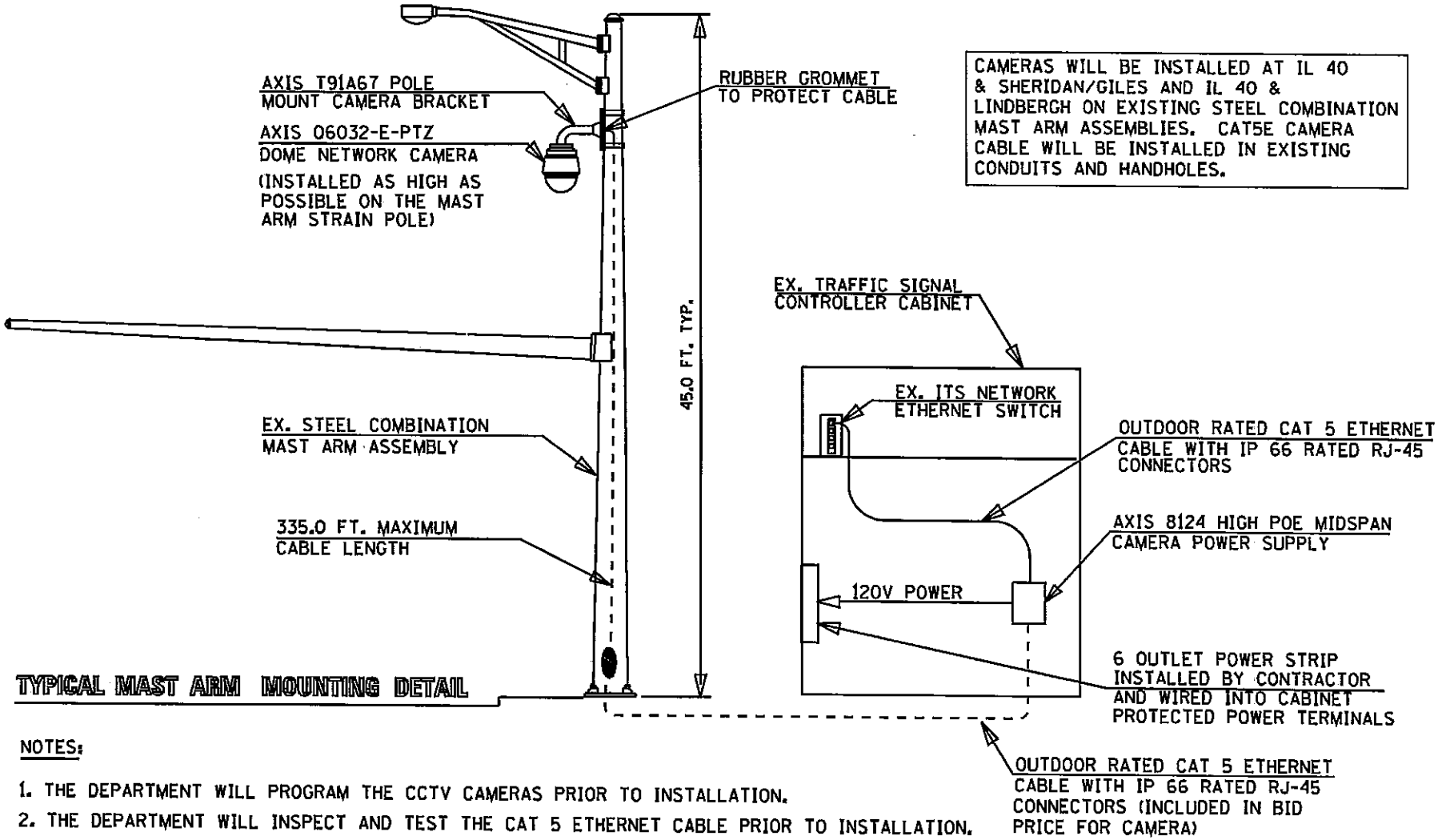
| ROUTE | | SECTION | COUNTY | SHEET | |
|---|---|---|---|---|---|
| MKD. | DESIG. | | | TOTAL | NO. |
| IL 40<br>IL 116 | FAP 646<br>FAP 673 | (101, 103)TS-1;<br>(102, 126)TS-3;<br>(Y)TS | PEORIA<br>TAZEWELL | 23 | 3 |

# SUMMARY OF QUANTITIES

| CODE NUMBER | ITEM DESCRIPTION | UNIT | TOTAL | PEORIA COUNTY<br>CONST. TYPE CODE<br>ITS-Y035<br>ITS FIBER AND CONDUIT<br>100% FEDERAL<br>URBAN | TAZEWELL COUNTY<br>CONST. TYPE CODE<br>ITS-Y035<br>ITS FIBER AND CONDUIT<br>100% FEDERAL<br>URBAN |
|---|---|---|---|---|---|
| 67100100 | MOBILIZATION | L SUM | 1.0 | 0.7 | 0.3 |
| 70102632 | TRAFFIC CONTROL AND PROTECTION, STANDARD 701602 | L SUM | 1.0 | 0.7 | 0.3 |
| 70102635 | TRAFFIC CONTROL AND PROTECTION, STANDARD 701701 | L SUM | 1.0 | 0.7 | 0.3 |
| 81012600 | CONDUIT IN TRENCH, 2" DIA., PVC | FOOT | 25933.0 | 15393.0 | 10540.0 |
| 81018500 | CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL | FOOT | 40.0 | 40.0 | |
| 81021330 | CONDUIT PUSHED, 2" DIA., PVC | FOOT | 3116.0 | 2296.0 | 820.0 |
| 81400700 | HANDHOLE, PORTLAND CEMENT CONCRETE | EACH | 56.0 | 35.0 | 21.0 |
| 81400705 | HANDHOLE, PORTLAND CEMENT CONCRETE (SPECIAL) | EACH | 5.0 | 2.0 | 3.0 |
| 81900200 | TRENCH AND BACKFILL FOR ELECTRICAL WORK | FOOT | 25933.0 | 15393.0 | 10540.0 |
| 87900200 | DRILL EXISTING HANDHOLE | EACH | 16.0 | 12.0 | 4.0 |
| X0323909 | DATA NETWORK PORT ADAPTER | EACH | 32.0 | 27.0 | 5.0 |
| X0326267 | VIDEO SERVER | EACH | 32.0 | 27.0 | 5.0 |
| X8710050 | FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH | EACH | 50.0 | 35.0 | 15.0 |
| X8710024 | FIBER OPTIC CABLE IN CONDUIT, 62.5/125, MM12F SM24F | FOOT | 41466.5 | 26548.0 | 14918.5 |
| X0326905 | CLOSED-CIRCUIT TELEVISION DOME CAMERA, IP BASED | EACH | 2 | 2 | |
| X0326906 | CLOSED-CIRCUIT TELEVISION DOME CAMERA, IP BASED (MATERIAL ONLY) | EACH | 2 | 2 | |

1 REVISED 4-7-10

SUMMARY OF QUANTITIES




CAMERAS WILL BE INSTALLED AT IL 40 & SHERIDAN/GILES AND IL 40 & LINDBERGH ON EXISTING STEEL COMBINATION MAST ARM ASSEMBLIES. CAT5E CAMERA CABLE WILL BE INSTALLED IN EXISTING CONDUITS AND HANDHOLES.

**TYPICAL MAST ARM MOUNTING DETAIL**

NOTES:

1. THE DEPARTMENT WILL PROGRAM THE CCTV CAMERAS PRIOR TO INSTALLATION.
2. THE DEPARTMENT WILL INSPECT AND TEST THE CAT 5 ETHERNET CABLE PRIOR TO INSTALLATION.
3. THE DEPARTMENT WILL CONNECT THE PROPOSED CCTV CAMERAS TO THE ITS NETWORK AND INTEGRATE THEM INTO THE EXISTING ITS VIDEO SUBSYSTEM.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL A POWER STRIP WITH INTEGRAL SURGE SUPPRESSION IN EACH TRAFFIC SIGNAL CABINET FOR CAMERA POWER. THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR THE CCTV DOME CAMERA.

1 SHEET ADDED 4-7-10

| STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | CCTV DOME CAMERA (IP BASED) INSTALLATION DETAIL | ROUTES | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|---|
| | SCALE: NONE | FAP 646 (IL 40) FAP 673 (IL 116) | (101, 103) TS-1, (102, 126) TS-3, (Y) TS | PEORIA TAZEWELL | 23 | 23A |
| | STA. _____ TO STA. _____ | | | CONTRACT NO. 68970 | | |

PLOT SCALE = $SCALE$
PLOT DATE = $DATE$ USER NAME = $USER$

# TABLE OF CONTENTS



Revised 04/08/2010

The following items shall also be included with each data network port adapter:

- Power Supply – Qty. 1 (Aaxeon Model DR-45, 45 Watt, 12 Volt DC, Industrial Din-Rail Power Supply or Approved Equal)

- Power Strip – Qty. 1

  The power strip shall have a minimum of six outlets and integral surge suppression that meets or exceeds the following minimum specifications:

  - Let Through Voltage: <85 Volts
  - Operating Voltage: 120VAC, 50/60H
  - UL Suppressed Voltage Rating: 330V
  - Energy Rating: 320J
  - Peak Current NM/CM: 13k Amps NM, 13k Amps CM
  - EMI/RFI Noise Filtration: >25-60dB

Basis of Payment: This work will be paid for at the contract unit price per each for FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH which price shall be payment in full for all labor, materials, and equipment required to provide the fiber optic Ethernet drop and repeat switch and associated equipment and deliver it to the Department.

**DATA NETWORK PORT ADAPTER**

The Contractor shall furnish a data network port adapter complete with the accessories specified below and deliver it to the Department.

The fiber optic drop and repeat switch shall meet or exceed the following minimum specifications:

Approved Models: MOXA Model N-Port 5210-T (2 Port RS-232 Serial Device Server, Extended Operating Temperature) or approved equal.

| | |
|---|---|
| LAN: | • Ethernet: 10/100 Mbps, RJ45, IEEE 802.3<br>• Protection: Built-in 1.5 KV magnetic isolation<br>• Number of Ports 1<br>• Connector(s) 8-pin RJ45 |
| Serial Interface: | • Interface: RS-232<br>• Number of Ports: 2<br>• Port Type: 8-Pin RJ45<br>• Signals: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND<br>• Serial Line Protection: 15 KV ESD for all signals<br>• Power Line Protection: 4 KV Burst (EFT), 2 KV Surge (Power) |

Revised 04/08/2010

Serial Communication Parameters:

- Parity: None, Even, Odd, Space, Mark
- Data Bits: 5, 6, 7, 8
- Stop Bit: 1, 1.5, 2
- Flow Control: RTS/CTS, XON/XOFF, DTR/DSR
- Transmission Speed: 110 bps to 230.4 Kbps (Bi-Directional Data Transmission)

Software Features:

- Protocols: ICMP, IP, TCP, UDP, DHCP, BOOTP, Telnet, DNS, SNMP, HTTP, SMTP, SNTP
- Real COM/TTY Drivers:Windows 95/98/ME/NT/2000/XP/2003 Real COM drivers
- Configuration: Web Browser, Serial/Telnet Console, or Windows Utility
- The data network port adaptor shall include software that can be installed on a workstation to provide access to all adapters through the use of software selectable and assignable virtual communication ports (minimum of 128 ports) on the host computer.

Electrical:

- 120 VAC (internal or external power supply) and self-setting over-current protection shall be included
- Input Voltage 12 to 48 VDC
- Power Consumption 305 mA @ 12 V max.
- Power Line Protection 1 KV burst (EN61000-4-4: EFT/B), 0.5 KV surge (EN61000-4-5)

Physical Characteristics:

- Enclosure Aluminum (1 mm), providing IP30 protection
- Weight 320 g
- Dimensions Without ears: 67 x 100.4 x 22 mm (2.64 x 3.95 x 0.87 in)
- With ears: 90 x 100.4 x 22 mm (3.54 x 3.95 x 0.87 in)

Environmental:

- Operating Temperature: -40 to 167 degrees F
- Operating Humidity 5 to 95% RH
- Storage Temperature -20 to 85°C (-4 to 185°F)

Other:

- Both local and remote configuration and software upgrade capability
- Password protection for security

Basis of Payment: This work will be paid for at the contract unit price each for DATA NETWORK PORT ADAPTER, which shall be payment in full for all labor, materials, and equipment required to furnish the equipment described above and deliver it to the Department.

Revised 04/08/2010

**VIDEO SERVER**

The Contractor shall furnish a video server complete with the accessories specified below and deliver it to the Department.

The video server shall meet or exceed the following minimum specifications:

Approved Models: Axis Communications Model Q7404 (4-Port H.264 video encoder) or approved equal.

| | |
|---|---|
| Video Compression: | • H.264 (MPEG-4 Part 10/AVC)<br>• Motion JPEG |
| Resolutions: | • NTSC: 720x480 to 176x120<br>• PAL: 720x576 to 176x144 |
| Frame rate: | • H.264 Frame rate: 30/25 (NTSC/PAL) fps in all resolutions<br>• Motion JPEG Frame rate: 30/25 (NTSC/PAL) fps in all resolutions |
| Video streaming: | • Multiple, individually configurable streams per channel in H.264 and/or Motion JPEG: 3 simultaneous streams in max. resolution<br>• at 30/25 fps from each channel; more streams if identical or limited in frame rate/resolution<br>• Controllable frame rate and bandwidth<br>• VBR/CBR H.264 |

Revised 04/08/2010

**SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)**
Effective: April 2, 2005

To account for the preparatory work and operations necessary for the movement of subcontractor personnel, equipment, supplies, and incidentals to the project site and for all other work or operations that must be performed or costs incurred when beginning work approved for subcontracting in accordance with Article 108.01 of the Standard Specifications, the Contractor shall make a mobilization payment to each subcontractor.

This mobilization payment shall be made at least 14 days prior to the subcontractor starting work. The amount paid shall be equal to 3 percent of the amount of the subcontract reported on form BC 260A submitted for the approval of the subcontractor's work.

This provision shall be incorporated directly or by reference into each subcontract approved by the Department.

**WORKING DAYS (BDE)**
Effective: January 1, 2002

The Contractor shall complete the work within **90** working days.

Revised 04/08/2010

**SYSTEM IMPLEMENTATION, EQUIPMENT INTEGRATION AND SUPPORT FOR CCTV CAMERAS**

The Contractor shall install the CCTV cameras at the locations indicated on the plans.

All furnished components shall be subject to a 30 day burn-in period. The system along with all of its components shall be fully and functionally operational before any acceptance testing will be initiated. After the system has been accepted by the Engineer, the system shall begin a thirty-day "burn-in" period immediately after the successful completion of the acceptance test. During the "burn-in" period, all components shall perform continuously, without any interruption of operation, for a period of thirty days. In the event that there are operational problems during the burn-in period, the burn-in period shall reset back to day one.

After the successful completion of the burn-in period, the system will have completed final acceptance.

The Department will program the cameras and integrate them into the existing ITS video subsystem. The proposed cameras will connected into the existing ITS network switch in each traffic signal cabinet.

The Department will program and test the cameras and CAT5E camera Ethernet cable prior to installation.

The Contractor shall be responsible for installing the proposed CCTV cameras on the existing mast arm structures in accordance with the plans, specifications, and manufacturers recommended practices.

This work will not be paid for separately, but shall be included in the contract bid price.

**CLOSED-CIRCUIT TELEVISION DOME CAMERA, IP BASED**

Description. This work shall consist of furnishing and installing an integrated Closed-Circuit Television (CCTV) Dome Camera Assembly with integrated video encoder, camera brackets, and all other items required for installation and operation. This assembly shall contain all components identified in the Materials Section and shall be configured as indicated on the plan sheets.

The cameras will be installed at the intersections of IL 40 (Knoxville) & Sheridan/Giles and IL 40 (Knoxville) & Lindbergh on the existing steel combination mast arm assemblies. The CAT5E camera cable will be installed in the existing conduits and handholes.

Materials.

The CCTV camera shall be an Axis Model Q6032-E Dome Camera Assembly for integration into the existing ITS system.

The Contractor shall provide all materials required to install the proposed camera on the existing combination mast arm assembly at the locations shown on the plan sheets.

Added 04/08/2010

The Contractor shall submit catalog cut sheets to the Department for all items (mounting brackets, hardware, etc.) that will be utilized for review prior to commencing work.

The camera shall meet or exceed the following specifications:

Camera

| | |
|---|---|
| Video: | 60 Hz (NTSC), 50 Hz (PAL) |
| Image Sensor | ¼" ExView HAD Progressive Scan CCD |
| Lens: | 3.4 – 119 mm, F1.4 – 4.2, autofocus, automatic day/night, horizontal angle of view: 1.7° - 55.8° |
| Minimum Illumination: | Color: 0.5 lux at 30 IRE, B/W: 0.008 lux at 30 IRE |
| Shutter Time (NTSC): | 1/30 000 s – 0.5 s, PAL: 1/30 000 s – 1.5 s |
| Pan/Tilt/Zoom: | E-flip, 100 preset positions<br>Pan: 360° endless, 0.05 – 450°/s<br>Tilt: 220°, 0.05 – 450°/s<br>Zoom: 35x optical zoom and 12x digital zoom, total 420x zoom<br>Guard tour<br>Control queue |

Video

| | |
|---|---|
| Video: | H.264 (MPEG-4 Part 10/AVC), Motion JPEG |
| Resolutions: | NTSC: 704x480 to 176x120, PAL: 704x576 to 176x144 |
| Frame rate (H.264): | Up to 30/25 (NTSC/PAL) fps in all resolutions |
| Frame rate (M-JPEG): | Up to 30/25 (NTSC/PAL) fps in all resolutions |
| Video streaming: | Multi-stream H.264 and Motion JPEG: 3 simultaneous, individually configured streams in max. resolution at 30/25 (NTSC/PAL) fps; more streams if identical or limited in frame rate/resolution; Controllable frame rate and bandwidth; VBR/CBR H.264 |
| Image setting: | Wide Dynamic Range (WDR), Electronic Image Stabilization (EIS), manual shutter time, compression, color, brightness, contrast, sharpness, rotation, aspect ratio correction, Text and image overlay, privacy mask, image freeze on PTZ |

Network

| | |
|---|---|
| Security: | Password protection, IP address filtering, HTTPS* encryption, IEEE 802.1X* network access control, digest authentication, user access log |

Added 04/08/2010

| | |
|---|---|
| Protocols: | IPv4/v6, HTTP, HTTPS*, QoS Layer 3 DiffServ, FTP, SMTP, Bonjour,UPnP, SNMPv1/v2c/v3 (MIB-II), DNS, DynDNS, NTP, RTSP, RTP,TCP, UDP, IGMP, RTCP, ICMP, DHCP, ARP, SOCKS |

System Integration

| | |
|---|---|
| Application Programming Interface: | Open API for software integration, including VAPIX® from Axis Communications available at www.axis.com |
| Intelligent video: | Video motion detection, auto-tracking |
| Alarm triggers: | Intelligent video, PTZ position |
| Alarm events: | File upload via FTP, HTTP and email, Notification via email, HTTP and TCP PTZ position, Local storage |
| Video buffer: | 56 MB pre- and post-alarm |

General

| | |
|---|---|
| Casing: | IP66-rated, metal casing (aluminum), acrylic (PMMA) clear dome cover pre-mounted to casing, sunshield (polycarbonate) |
| Processors and Memory: | ARTPEC-3, 128 MB RAM, 128 MB Flash |
| Power Camera: | High Power over Ethernet, max. 50 W, Midspan (included): AXIS T8124 High Power over Ethernet, Midspan 1-port 100-240 V AC, max. 60 W |
| Connectors: | RJ-45 for 10BASE-T/100BASE-TX, IP66-rated RJ-45 connector kit included |
| Local storage: | SD/SDHC memory card slot (Card is not included) |
| Operating Conditions: | Camera unit: -40 °C to 50 °C (-40 °F to 122 °F), Arctic Temperature Control enables camera start-up at temperatures as low as -40 °C (-40 °F) |
| Approvals: | EN 55022 Class B, EN 55024, EN 61000-3-2, EN 61000-3-3, EN61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class B, VCCI Class B, C-tick AS/NZS CISPR22, ICES-003 Class B, EN 60950-1, Midspan: EN 60950-1, GS, UL, cUL, CE |
| Weight: | 3.5 kg (7.7 lb.) |

Added 04/08/2010

Included Accessories: AXIS T8124 High PoE Midspan 1-port, IP66-rated RJ-45 connector kit, clear and smoked dome cover, sunshield, Installation Guide, CD with User's Manual, recording software, installation and management tools, Windows decoder 1-user license

Environmental Enclosure/Housing

The environmental enclosure shall be designed to physically protect the integrated camera from the outdoor environment and moisture via a sealed enclosure. If the option exists in the standard product line of the manufacturer, the assembly shall be supplied with an integral sun shield. The enclosure shall be fully water and weather resistant with a NEMA 4 rating or better.

The camera dome shall be constructed of distortion free acrylic or equivalent material that must not degrade from environmental conditions. The environmental housing shall include a camera-mounting bracket. In addition, the environmental housing shall include a heater, blower, and power surge protector. An integral fitting compatible with a standard 1-1/2 in (38.1 mm) NPT pipe, suitable for outdoor pendant mounting shall also be provided.

The enclosure shall be equipped with a heater controlled by a thermostat. The heater shall turn on when the temperature within the enclosure falls below 40° F (4.4°C). The heater shall turn off when the temperature exceeds 60°F (15.6°C). The heater will minimize internal fogging of the dome faceplate when the assembly is operated in cold weather.

In addition, a fan shall be provided as part of the enclosure. The fan will provide airflow to ensure effective heating and to minimize condensation.

The enclosure shall be equipped with a hermetically sealed, weatherproof connector, located near the top for external interface with power, video, and control feeds.

CCTV Dome Camera Mounting Supports

The Contractor shall furnish and install an Axis Pole Mount Bracket T91A67 (Part Number 5017-671) for camera installation on traffic signal mast arms and CCTV camera poles.

Mounting supports shall be configured as shown on the camera support detail plans and as approved by the Engineer. Mount shall be of aluminum construction with enamel or polyester powder coat finish. Braces, supports, and hardware shall be stainless steel. Wind load rating shall be designed for sustained gusts up to 90 mph (145 km/hr), with a 30% gust factor. Load rating shall be designed to support up to 75 lb (334 N). For roof or structural post/light pole mounting, mount shall have the ability to swivel inward for servicing. The mounting flange shall use standard 1-1/2 inch (38.1 mm) NPT pipe thread.

Connecting Cables and Power Supply

The Contractor shall provide outdoor rated, CAT 5E cable. One cable shall be installed from the proposed equipment cabinet to the proposed camera mounting location (on an existing steel combination mast arm assembly).

Added 04/08/2010

The High POE midspan camera power supply (included with camera) shall be installed in the proposed equipment cabinet.

The cable shall be rated for outdoor use and conform to the following specifications:

- Outdoor CMX Rated Jacket (climate/oil resistant jacket)
- UV Resistant Outer Jacket Material (PVC-UV, UV Stabilized)
- Outer Jacket Ripcord
- Designed For Outdoor Above- Ground or Conduit Duct applications
- Cat5E rated to 350MHz (great for 10/100 or even 1000mbps Gigabit Ethernet)
- Meets TIA/EIA 568b.2 Standard
- UTP, Unshielded Twist Pair
- 4 Pairs, 8 Conductors
- 24AWG, Solid Core Copper
- UL 444 ANSI TIA/EIA-568.2 ISO/IEC 11801
- RoHS Compliant

The Contractor shall purchase pre-terminated cable assemblies and utilize them whenever possible to minimize potential cable and connector problems. The pre-assembled cable assemblies shall be rated for outdoor use and be terminated with IP66 rated RJ-45 connectors.

In the event that a pre-assembled cable is not used, the Contractor shall terminate each end of the cable with an IP66 rated RJ-45 connector or utilizing connector kits furnished with the CCTV dome camera. The Contractor shall terminate the cable assembly in an environmentally controlled area and test the cable and connectors prior to installing the cable in the field.

The maximum cable length is limited to 335 feet.

The Department will inspect and test each cable assembly.

The Contractor shall submit catalog cut sheets to the Department for review prior to commencing work.

This work will not be paid for separately, but shall be included in the bid price for the CCTV camera.

Construction Requirements.

General

The Contractor shall prepare a shop drawing detailing the complete CCTV Dome Camera Assembly and installation of all components to be supplied for approval of the Engineer. Particular emphasis shall be given to the cabling and the interconnection of all of the components.

The Contractor shall install the CCTV dome camera assembly at the locations indicated in the Plans.

Added 04/08/2010

Programming and Testing

The Department will program and test each camera prior to installation. The Department will connect the proposed CCTV camera to the existing ITS network Ethernet switch and integrate the camera into the existing ITS video subsystem.

The Contractor shall be responsible for installing the proposed CCTV cameras on the proposed camera poles and bridge structure in accordance with the plans, specifications, and manufacturers recommended practices.

Method of Measurement. The closed circuit television dome camera bid item will be measured for payment by the actual number of CCTV dome camera assemblies furnished, installed, tested, and accepted.

Basis of Payment. Payment will be made at the contract unit price for each CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED including all equipment, material, testing, documentation, and labor detailed in the contract documents for this bid item.

**CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED (MATERIAL ONLY)**

The Contractor shall furnish one complete CCTV camera assembly with housing, mounting bracket kit, and accessories (power supplies, etc) and deliver it to the Department.

The camera shall conform to the specifications listed under the pay item for CLOSED CIRCUIT TELEVISION DOME CAMERA.

The Contractor shall also furnish the following items and deliver them to the Department:

- Axis T8124 High POE-Midspan Accessory – Qty. 2

  The power supply shall conform to the following specifications:

  General

  | | |
  |---|---|
  | Device Type: | Power injector – External |

  Power Device

  | | |
  |---|---|
  | Input Voltage: | AC 100-240 V |
  | Output connector(s): | RJ-45 |
  | Power Provided: | 60 Watt |

  Expansion / Connectivity

  | | |
  |---|---|
  | Interfaces: | 1 x Network - RJ-45 |

Added 04/08/2010

Miscellaneous

Compliant Standards: CE, GS, UL

Basis of Payment: This work will be paid for at the contract unit price per each for CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED (MATERIAL ONLY) which price shall be payment in full for all labor, materials, and equipment required to provide the equipment specified above and deliver it to the Department.

Added 04/08/2010