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

September 12, 2024

SUBJECT Various Routes
Section 2024-916-ELE
Various Counties
Contract No. 62W79
Item No. 13, September 20, 2024 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. Revised pages x - xiv of the Table of Contents to the Special Provisions
2. Revised pages 14, 19, 210, 213, 214, & 428 of the Special Provisions

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

Very truly yours,

Jack A. Elston, P.E.
Bureau Chief, Design and Environment

MTS

| Item | Item Description | Unit | Quantity | Unit Cost | Extension |
|---|---|---|---|---|---|
| TF04 | Concrete Foundation, Type E 30-inch Diameter | FT | 60 | $ | $ |
| TF05 | Concrete Foundation, Type E 36-inch Diameter | FT | 60 | $ | $ |
| TF06 | Concrete Foundation, Type E 42-inch Diameter | FT | 60 | $ | $ |
| TF07 | Concrete Foundation, Rebuild/Modify, Type D | EA | 1 | $ | $ |
| TFB1 | Flashing Beacon, Post Mount, 1 Face | EA | 2 | $ | $ |
| TFB2 | Flashing Beacon, Solar, Post Mount, 1 Face | EA | 8 | $ | $ |
| TGS1 | Traffic Signal Additional Grounding and Electric Service Upgrade | EA | 3 | $ | $ |
| TGS2 | Electric Service Relocation | EA | 8 | $ | $ |
| TGS3 | Electric Service Installation, Ground Mounted | EA | 5 | $ | $ |
| TL01 | Inductive Loop Detector | EA | 250 | $ | $ |
| TL02 | Detector Loop | FT | 1,500 | $ | $ |
| TMA1 | Steel Mast Arm Assembly and Pole 40 ft or less | EA | 2 | $ | $ |
| TMA2 | Steel Mast Arm Assembly and Pole 42 ft to 55 ft | EA | 2 | $ | $ |
| TMA3 | Relocate or Install Existing Mast Arm Assembly and Pole from Contract Spare Parts | EA | 1 | $ | $ |

**1.3.1 EXAMINATION OF PLANS, SPECIFICATIONS, SPECIAL PROVISIONS, AND SITE OF WORK**

The prospective bidder must, before submitting his/her bid, carefully examine the proposal form, plans, specifications, special provisions and form of contract and bond. All locations to be maintained under this Contract may be inspected for the prospective bidder to become familiar with the equipment maintenance locations, all the local conditions affecting the Contract, and the detailed requirements of maintenance.

**1.3.2 PROPOSAL GUARANTY**

Refer to section F of the Invitation for Bid on the letting website.

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**1.3.3 REQUIREMENT OF CONTRACT BOND**

The successful bidder, at the time of execution of the Contract, must deposit with the Department a surety bond in the amount of twenty million dollars ($20,000,000). The form of the bond must be acceptable to the Department.

**1.3.4 INSURANCE**

The Contractor must comply with the provisions of Section 107 of the Standard Specifications for Road and Bridge Construction, legal relations, and responsibility to the public. Insurance must be in compliance with the requirements of Article 107.27 except for liability minimum amounts as modified herein.

The Contractor's insurance must be written for not less than limits of liability as follows:

Employers Liability

| | |
|---|---|
| Each Accident | $12,500,000 |

Commercial General Liability

| | |
|---|---|
| General Aggregate Limit | $12,500,000 |

Revised 9/12/2024

### 10.12.4 ROUTINE WORK REQUESTS – RR TICKETS

The Contractor must provide signal operating inspection tasks upon request (RR Tickets) such as:

- Inspect the timing operation of a signal installation at a specific time period and provide a recommendation for improving traffic flow.
- Program timing parameter changes
- Determine the phasing or operation of a signalized installation.
- Check the condition of verify the presence of equipment at a signalized location.
- Provide a copy of timing parameters in use at a signalized location.
- Provide recommendations to improve the safety or the operation of a signalized location.
- Provide a compiled list of all locations meeting specified criteria.

### 10.12.5 ROUTINE MAINTENANCE SIGNALS – RM TICKETS

The Contractor must generate maintenance tickets for (each):

- LED replacement.
- battery replacement.
- cellular conversion.
- traffic signal controller replacement and cabinet replacement.
- ~~cabinet replacement.~~
- conversion to metered service.
- Mercury tip switch replacement.

## 10.13 INVENTORY REQUIREMENTS

### 10.13.1 EMC SPARE PARTS INVENTORY

The Contractor must use the EMCMS Spare Parts Inventory entry and reporting. Refer to Article 2.15.10.

### 10.13.2 ASSET INVENTORY

The Contractor must provide a complete traffic signal equipment inventory in the EMCMS of the signalized intersections including signal equipment located inside and outside of the controller cabinet and must maintain a library of repair and operation manuals for equipment in the IDOT traffic signal inventory. The exact format and inventory items must be determined by the Traffic Signal Engineer.

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**10.16 UNINTERUPTIBLE POWER SUPPLY (UPS) BATTERY REPLACEMENT**

The Contractor must replace all UPS ~~and~~ batteries at 75 State maintained traffic signal locations each contract year. The proposed locations for battery replacement are listed herein. This list will be finalized by March 1 of each contract year with battery replacement work for all locations completed by the last day of September of each calendar year and submitted on the FTP site.

Work must include, but not be limited to, removal of existing batteries from State ROW, furnishing and installing new battery replacements, recycling of existing batteries, cleaning of battery cable connections and cleaning of UPS compartment shelves, vents, and filters. New batteries must meet the requirements listed in the District 1 Traffic Signal Special Provisions for Uninterruptible Power Supply including run time, sizing, rating, and warranty.

Existing batteries must be recycled meeting all applicable sections of US EPS and IL EPA publications along with the Code of Federal Regulations for transportation.

**10.17 CELLULAR CONVERSION**

The Contractor must replace existing dial-up service for ten (10) closed loop traffic signal systems designated by the Traffic Signal Engineer. Work must include but not be limited to installation, set-up, support and configure of the cellular communication system to work with the IDOT District 1 network. Equipment must include but not be limited to 1) a rugged cellular modem certified with Verizon Wireless designed with 2 ethernet ports and an RS232 port for connection to the traffic signal controller, 2) an external low profile antenna mounted to the traffic signal cabinet, 3) a router with 2 ethernet ports with static IP address assigned by IDOT, 4) for those traffic signals with controllers that are not ethernet compatible, additional hardware and cabling will be needed, 5) all appurtenances necessary to provide cellular communication for the closed-loop system. IDOT District 1 has installed cellular communication equipment at ninety (90) locations within the District at the time this contract was prepared. For questions regarding these locations, please contact the Traffic Signal Engineer at 847-705-4734. The necessary SIM card will be provided by the District once testing has been completed and accepted by IDOT. The locations for cellular conversion installations are intended to be designated by the Traffic Signal Engineer prior to March 1 of the Contract year. The Contractor must complete the work by the last day of September of each calendar year and submit on the FTP site.

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## 10.18 TRAFFIC SIGNAL CONTROLLER AND CABINET REPLACEMENT, AND MERCURY TIP SWITCH REPLACEMENT

### 10.18.1 NON-RAILROAD INTERCONNECTED LOCATIONS

The Contractor must remove and replace 25 existing traffic signal controllers and cabinets with new equipment as part of Routine Maintenance. Work will be as described in Section 2.0 Traffic Signal System Non-routine Pay Items General and TC01A, Full Actuated Controller in Type IV Cabinet. In addition, this item must include new inductive loop detectors and new UPS(Complete) system. The existing UPS/Battery back-up system if determined in good operating condition must be relocated to another location, unless otherwise directed by the Traffic Signal Engineer. Locations must be designated by the Traffic Signal Engineer, prior to March 1st, of the contract year. The Contractor must complete the work by the last day of September of each calendar year and submit on the FTP site.

### 10.18.2 RAILROAD INTERCONNECTED LOCATIONS

The Contractor must remove and replace 2 existing traffic signal controllers and cabinets that are interconnected to railroad warning devices with new equipment as described in Section 2, Traffic Signal System Non-Routine Pay Items General and TC02, Full Actuated Controller In Cabinet With Railroad Equipment. In addition, this item must include new inductive loop detectors and new UPS(Complete) system. Locations must be designated by the Traffic Signal Engineer prior to March 1 of the Contract year. The Contractor must complete the work by the last day of September of each calendar year and submit on the FTP site.

### 10.18.3 MERCURY TIP SWITCH LOCATIONS

The Contractor must remove 75 existing mercury tip switches from traffic signal cabinets and replace with new electro-mechanical / solid-state hybrid type relays. Removed mercury switches must be disposed of in accordance with current IEPA guidelines. Locations must be designated by the Traffic Signal Engineer prior to April 1st of the contract year. The contractor must complete the work by the last day of October of each calendar year.

## 10.19 CONFLICT MONITOR / TESTING PROGRAM

Conflict monitors and malfunction management units (MMUs) must be tested once every two years. One-half of the system must be tested by November 15th of each Contracted year. Conflict Monitors and MMUs must be split evenly into two groups for inspection, and listed as group A and group B. The required inspections will be as followed: 2025 group A; if the contract is continued, 2026 group B and 2027 Group A. The Contractor must submit the list of groups A and B in Excel spread sheet format or another approved format. In addition, the Conflict Monitor or MMU must be tested after damage is done to the cabinet such as a lightning strike, cabinet hit or knock-down, etc. The Contractor must conduct a complete bench test of all Conflict Monitors or Management Malfunction Units including at ATC cabinet locations. The testing method must be pre-approved and must include:

## TWI2 LAYER II DATALINK SWITCH

**Description**. The work must include but not be limited to installation, set-up, support and configuration of the Layer II switch to work with IDOT District One's network. Equipment must include but not be limited to:

1. Layer II Datalink switch with SFP (small form-factor pluggable) ports.
2. power supply.
3. Cat5E Cable per device to be connected.
4. Fiber jumpers. Fiber jumpers must be for single-mode, multi-mode or copper as directed by the engineer or noted on the plans.
5. DIN rail.
6. Fiber splices and terminations.
7. All appurtenances necessary to provide communication for the system. Each switch must have the number of SFP ports appropriate per location to connect all devices as noted on the plans. IDOT District One has installed Layer II switches at various locations within the District. For questions regarding these locations, please contact the Traffic Signal Engineer at 847-705-4734.

**Basis of Payment.** This work must be paid at the contract unit price each for LAYER II NETWORK SWITCH as described above, which price must be paid in full for all work as described herein and includes furnishing, installing, delivery, handling and all appurtenances necessary for a complete and operational unit as directed/approved by the Traffic Signal Engineer.

## TWI3 LAYER III NETWORK SWITCH

**Description.** The work must include but not be limited to installation, set-up, support and configuration of the Layer III switch to work with IDOT District One's network. Equipment must include but not be limited to:

1. Layer III Datalink switch with SFP (small form-factor pluggable) ports.
2. Power supply (internal or external).
3. Cat5E Cable per device to be connected.
4. Fiber jumpers. Fiber jumpers must be for single-mode, multi-mode or copper as directed by the engineer or noted on the plans.
5. Under shelf mount.
6. Fiber splices and terminations.
7. All appurtenances necessary to provide communication for the system. Each switch must have the number of SFP ports appropriate per location to connect all devices as noted on the plans. IDOT District One has installed Layer III switches at various locations within the District. For questions regarding these locations, please contact the Traffic Signal Engineer at 847-705-4734.

**Basis of Payment**. This work must be paid at the contract unit price each for LAYER III DATALINK SWITCH as described above, which price must be paid in full for all work as described herein and includes furnishing, installing, delivery, handling and all appurtenances necessary for a complete and operational unit as directed/approved by the Traffic Signal Engineer.

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