



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

February 24, 2025

SUBJECT FAP Route 307 (IL 64(North Ave))
Project CMAQ/NHPP-2JSY(870)
Section 2020-263-SUR,SW&TS
DuPage County
Contract No. 62N33
Item No. 161, March 7th, 2025 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 the Schedule of Prices
2. Revised pages 3-11, 97 & 185-189 of the Special Provisions
3. Revised sheets 3, 16, 18, 19, 21, 22, 24-27, 30-35, 154, 157, 193, 282, 285, 344, 345, 353, 361-375, 384, 387, 402, 438-441, 447-461, 470, 473, & 475 of the Plans.

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,

A handwritten signature in black ink, appearing to read 'Jack A. Elston'.

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

MTS

Stage 1

STAGE / LOCATION	TYPE	DESCRIPTION	RESPONSIBLE AGENCY	DURATION OF TIME

Stage 1: _____ Days Total Installation

No Conflicts To Be Resolved

The following contact information is what was used during the preparation of the plans as provided by the Agency/Company responsible for resolution of the conflict.

Agency/Company Responsible to Resolve Conflict	Name of contact	Phone	E-mail address

UTILITIES TO BE WATCHED AND PROTECTED

The areas of concern noted below have been identified by following the suggested staging plan included for the contract. The information provided is not a comprehensive list of all remaining utilities, but those which during coordination were identified as ones which might require the Department's contractor to take into consideration when making the determination of the means and methods that would be required to construct the proposed improvement. In some instances, the contractor will be responsible to notify the owner in advance of the work to take place so necessary staffing on the owner's part can be secured.

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Stage 1

LOCATION	TYPE	DESCRIPTION	OWNER
STA 1218+00 to STA 1865+00	Existing Gas Main	Existing facilities within the limits to be protected from damage by contractor. A Nicor working within 25' of the pipeline, please contact and coordinate all field activities with Hensley Gooden (hgooden@southernco.com) at 630-514-7737 or William Bell (wbell@southernco.com) at 312-965-5068.	Nicor
STA 1784+00 to STA 1866+00	Existing Electrical Lines	Existing facilities within the limits to be protected from damage by contractor. If excavation will be performed near poles or large equipment will be used near existing overhead lines, facility protection may be required. If facility protection is required, please call 1-800-334-7661 to create a ticket for line and/or pole protection as soon as possible.	Com Ed
STA 1003+00 to STA 1838+00	Existing Telephone Line	Existing AT&T facilities within the limits of construction to be protected from damage by the contractor.	AT&T
STA 1268+00 to STA 1484+00	Existing Facilities	Existing Facilities within the limits of construction to be protected from damage by the contractor	Village of Carol Stream
STA 1465+00 to STA 1612+00	Existing Facilities	Existing Facilities within the limits of construction to be protected from damage by the contractor	Village of Glendale Heights

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LOCATION	TYPE	DESCRIPTION	OWNER
STA 1728+00 to STA 1747+00	Existing Facilities	Existing Facilities within the limits of construction to be protected from damage by the contractor	Village of Addison
STA 1634+00 to STA 1707+00	Existing Facilities	Existing Facilities within the limits of construction to be protected from damage by the contractor	Village of Lombard
STA 1551+78 to STA 1555+16	Red Light Camera	Existing Red Light Cameras within the limits of construction to be protected from damage by the contractor. We only have Red Light Cameras at North Av & I159 and North Ave & Glen Ellyn Rd. More than likely we will just have to temporarily suspend the cameras if/when the contractor takes maintenance of the intersections for the project.	RedSpeed
STA 1200+00 to STA 1837+00	Existing Facilities	Existing Facilities to be protected from damage by the contractor.	DuPage Water Commission
STA 1818+50 to STA 1825+00	Existing Facilities	Existing Facilities to be protected from damage by the contractor. Contractor to be in regular communication with WSPL when any work is within 25' of any pipeline. WSPL will be on site for any work between 10' and 25' of any pipeline. WSPL will have a representative on site continuously for any work with-in 10'. Utilities crossing WSPL lines must attempt for 24" of separation with sand as backfill. The large light pole bases, before augered, will need sides of our lines exposed, if deemed necessary	West Shore Pipe Line

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LOCATION	TYPE	DESCRIPTION	OWNER
STA 1818+50 to STA 1825+00	Existing Facilities	<p>Existing Facilities to be protected from damage by the contractor.</p> <p>General Construction: Prior to work within twenty-five feet (25') of any BP utilities, the contractor and engineer shall coordinate with BP for review and approval of the proposed equipment ground pressure loading. BP shall be provided a minimum of ten (10) working days of notice to review provided documentation. Please contact the BP Damage Prevention Specialist for this project, Marcus Jamerson, (312) 231-2609, marcus.jamerson@bp.com BP requests that permanent structures and foreign lines maintain as much horizontal separation as possible from the pipeline. A BP representative must be on site during signal foundation installation, pipeline potholing, and all utility line installations that cross the BP pipeline.</p> <p>Traffic Signal Foundations: Any excavation within two feet (2') of the BP pipeline shall be done by hand, or by other non-mechanical means as approved by BP personnel who are on-site and can review the work. The BP pipeline must be spotted immediately adjacent to the proposed traffic signal foundation prior to installation. No blind augering will be permitted. The BP pipeline must be exposed and monitored by a BP representative on site for the entirety of the augering installation.</p> <p>Electrical Conduit Installation: Electrical lines/conduits should be installed with a minimum of two feet (2') of edge-to-edge vertical separation when crossing the BP pipeline. All utility lines/conduits should cross the pipeline at as close to 90° as is feasible, and no crossing less than 30° should be permitted.</p>	BP

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		<p>The pipeline must be spotted prior to any boring that will cross the pipeline. No blind boring will be permitted. Parallel excavation is required on either side of the pipeline (5'-10' away) to verify the pilot entrance and exit points of the bore and to ensure that the bore is maintaining the appropriate depth at the pipeline crossing.</p> <p>Fiber Conduit Installation: Fiber lines/conduits should be installed with a minimum of three feet (3') of edge-to-edge vertical separation when crossing the BP pipeline. All utility lines/conduits should cross the pipeline at as close to 90° as is feasible, and no crossing less than 30° should be permitted. The pipeline must be spotted prior to any boring that will cross the pipeline. No blind boring will be permitted. Parallel excavation is required on either side of the pipeline (5'-10' away) to verify the pilot entrance and exit points of the bore and to ensure that the bore is maintaining the appropriate depth at the pipeline crossing.</p>	
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The following contact information is what was used during the preparation of the plans as provided by the owner of the facility.

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Agency/Company Responsible to Resolve Conflict	Name of contact	Phone	E-mail address
AT&T – LNS/Teleport Communications America	Tamara Booker (New Plans) & Tim Lapointe	(614) 208-8689	th3913@att.com tl0695@att.com
ComEd	Tyreeta Young	(312) 933-0550	Tyreeta.Young@ComEd.com
Nicor	Ray Larke	(630) 473-3526	rlarke@entrustsol.com
Village of Carol Stream	Jonothan Pawlowski	(630) 868- 2266	jpawlowski@carolstream.org
Village of Glendale Heights	James Patton	(630) 260-6040	james_patton@glendaleheights.org
Village of Addison	Rick Federighi	(630) 620-202	RFederighi@addison-il.org
Village of Lombard	John Beissel	(847) 946-2163	beisselj@villageoflombard.org
RedSpeed	Jose Chavez	(630) 936-9129	Jose.Chavez@redspeed-usa.com
Lumen (CenturyLink/ Level 3)	Kimberly Singleton Ben Pacocha Ryan Burgeson	(847) 954-8250 (224) 242-4823	Kimberly.Singleton@centurylink.com ben.pacocha@lumen.com relocations@lumen.com ryan.burgeson@centurylink.com NationalRelo@centurylink.com relocations@centurylink.com relocations@brightspeed.com
Buckeye	Bill O'Malley	(847) 878-3428	womalley@buckeye.com
West Shore Pipeline	Bill O'Malley	(847) 878-3428	womalley@buckeye.com
BP	Marcus Jamerson	(312) 231-2609	marcus.jamerson@bp.com
BP	Liz Perse-Underhill	(303) 788-9130	Lpesce-underhill@entrustsol.com

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The above represents the best information available to the Department and is included for the convenience of the bidder. The days required for conflict resolution should be considered in the bid as this information has also been factored into the timeline identified for the project when setting the completion date. The applicable portions of the Standard Specifications for Road and Bridge Construction shall apply.

Estimated duration of time provided above for the first conflicts identified will begin on the date of the executed contract regardless of the status of the utility relocations. The responsible agencies will be working toward resolving subsequent conflicts in conjunction with contractor activities in the number of days noted.

The estimated relocation duration must be part of the progress schedule submitted by the contractor. A utility kickoff meeting will be scheduled between the Department, the Department's contractor and the utility companies when necessary. The Department's contractor is responsible for contacting J.U.L.I.E. prior to all excavation work.

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Arterial **one lane** closures not shown in the staging plans will not be permitted during **peak traffic volume hours**.

Peak traffic volume hours for one lane closures are defined as weekdays (Monday through Friday) from **6:00 AM to 8:30 AM and 4:30 PM to 6:00 PM**.

*Arterial **two lane** closures in the same direction of travel not shown in the staging plans will not be permitted during **peak traffic volume hours**.*

Peak traffic volume hours for one lane closures are defined as weekdays (Monday through Friday) from **5:00 AM to 9:00 PM**.

Private vehicles shall not be parked in the work zone. Contractor's equipment and/or vehicles shall not be parked on the shoulders or in the median during non-working hours. The parking of equipment and/or vehicles on State right-of-way will only be permitted at locations approved by the Engineer in accordance with Articles 701.08 and 701.11 of the Standard Specifications.

Should the Contractor fail to completely open and keep open all the traffic lanes to traffic in accordance with the limitations specified above, the Contractor shall be liable to the Department for the amount of:

One lane or ramp blocked = \$1,000

Two lanes blocked = \$2,500

Not as a penalty but as liquidated and ascertained damages for each and every 15 minute interval or a portion thereof that a lane is blocked outside the allowable time limitations. Such damages may be deducted by the Department from any monies due the Contractor. These damages shall apply during the contract time and during any extensions of the contract time.

KEEPING ARTERIAL ROADWAYS OPEN TO TRAFFIC (WITH 15 MIN FULL STOPS)

Effective: January 22, 2003

Revised: August 10, 2017

The Contractor shall provide the necessary traffic control devices to warn the public and to delineate the work zone as required in these Special Provisions, the Standard Specifications, the State Standards, and the District Details.

Arterial lane closures shall be in accordance with the Standard Specifications, Highway Standards, District Details, and the direction of the Engineer. The Contractor shall request and gain approval from the Engineer seventy-two (72) hours in advance of all long-term (24 hrs. or longer) lane closures.

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Basis of Payment.

This work shall be paid for at the contract unit price per each for TERMINAL SERVER. The unit price shall include all equipment; materials; licenses, programming; testing and documentation; and labor required to add a traffic signal controller to the centralized system.

LAYER II DATALINK SWITCH

Description.

This work shall consist of furnishing and installing a Layer II Ethernet switch and all transceivers required to transmit data from one traffic signal, ITS, or network node cabinet to another traffic signal, ITS, or network node cabinet containing a Layer II or Layer III Ethernet switch.

Materials.

The Layer II switch shall be environmentally hardened with a minimum of (2) 1Gbps SFP ports and (8) 1Gbps copper RJ45 ports. Two SFP ports shall be populated with environmentally hardened optical modules capable of transmitting the designed distance on single-mode and / or multi-mode fiber optic cable as defined in the plans. An environmentally hardened power supply with input of 120 VAC and sufficient wattage for the switch shall be provided.

The switch shall conform to the following minimum specifications:

- Forwarding Bandwidth 3.8Gbps
- Switching Bandwidth 7.6Gbps
- Forwarding rate: 5.66Mpps with 64-byte packets (Line-rate at all packet sizes)
- Egress buffer: 2 MB
- Unicast MAC addresses: 8000
- Internet Group Management Protocol (IGMP) multicast groups: 255
- Virtual LANs (VLANs): 256
- IPv4 MAC security ACEs: 384 (default Ternary Content-Addressable Memory [TCAM] template)
- Bidirectional, 128 NAT translation entries
- IPv4 routing: 2000 routes, IPv6 routing: 1750 routes
- Layer 2 switching: IEEE 802.1, 802.3, 802.3at, 802.3af standard (see Table 8), VTPv2, NTP, UDLD, CDP, LLDP, Unicast MAC filter, Resilient Ethernet Protocol (REP), Media Redundancy Protocol (MRP) Ring (IEC 62439-2)
- Security: SCP, SSH, SNMPv3, TACACS+, RADIUS Server/Client, MAC Address Notification, BPDU Guard, SPAN session
- Multicast: IGMPv1, v2, v3 Snooping, IGMP filtering, IGMP Querier
- Safety certifications:
 - UL/CSA 60950-1
 - EN 60950-1
 - CB to IEC 60950-1 (with country deviations)
 - NOM to NOM-019-SCF1 (through partners and distributors)
 - CE Marking

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- Hazard location:
 - ANSI/ISA 12.12.01 (Class1, Div2 A-D)
 - EN 60079-0, -15 ATEX Certificate (Class 1, Zone2 A-D)
- EMC emissions and immunity compliance:
 - FCC 47 CFR Part 15 Class A
 - EN 55022A Class A
 - VCCI Class A
 - RoHS compliance
 - AS/NZS CISPR 22 Class A, AS/NZS CISPR 24
 - CISPR11 Class A, CISPR22 Class A
 - ICES 003 Class A
 - CE Marking
 - IEC/EN/EN61000-4-2 (Electro Static Discharge), 15kV air/8kV contact
 - IEC/EN 61000-4-3 (Radiated Immunity, 10 and 20 V/m)
 - IEC/EN 61000-4-4 (Fast Transients - 4kV power line, 4kV data line)
 - IEC/EN 61000-4-5 (Surge 2 kV/1 kV)
 - IEC/EN 61000-4-6 (Conducted Immunity, 10 V/emf)
 - IEC/EN 61000-4-8 (Power Frequency Magnetic Field Immunity)
 - IEC/EN 61000-4-9 (Pulse Magnetic Field Immunity)
 - IEC/EN 61000-4-10 (Oscillatory Magnetic Field Immunity)
 - IEC/EN 61000-4-11 (AC power Voltage Immunity)
 - IEC/EN 61000-4-29 (Voltage Dips Immunity)
 - IEC/EN 61000-6-1 (Immunity for Light Industrial Environments)
 - IEC/EN 61000-6-2 (Immunity for Industrial Environments)
 - IEC/EN 61000-6-4 Class A
 - EN 61326
- Shock and vibration:
 - IEC 60068-2-27 (Operational Shock: 30G 11ms, half sine)
 - IEC 60068-2-27 (Non-Operational Shock 55-70G, trapezoidal)
 - IEC 60068-2-6, IEC 60068-2-64, EN 61373 (Operational Vibration)
 - IEC 60068-2-6, IEC 60068-2-64, EN 61373 (Non-operational Vibration)
- Industry standards:
 - UL508
 - CSA C22.2 No. 142
 - EN 61131-2 (EMC/EMI, environmental, mechanical)
 - Substation KEMA (IEEE 1613, IEC 61850-3)
 - EN50121-3-2
 - EN50121-4
 - NEMA TS-2 (EMC, environmental, mechanical)
 - ABB Industrial IT certification
 - IP30
 - ODVA Industrial Ethernet/IP support
- Corrosive testing:
 - ISO-12944-6
 - IEC-60068-2-60

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- Humidity:
 - IEC 60068-2-52 (salt fog mist, test Kb) marine environments
 - IEC 60068 -2-3
 - IEC 60068-2-30
 - Relative humidity: 5% to 95% non-condensing
- Operating temperature:
 - -40C to +70C (vented enclosure - 40 LFM Air Flow)
 - -40C to +60C (sealed enclosure – 0 LFM Air Flow)
 - -34C to +75C (fan or blower-equipped enclosure – 200 LFM Air Flow)
 - -40C to +85C (IEC 60068-2-2 Environmental Type Testing – 16 hours)
- Operational altitude: Up to 15,000 ft
- Storage temperature:
 - -40 C to +85 C (storage temperature)
 - IEC 60068-2-14
- Storage altitude: Up to 15,000 ft
- Mean time between failure: 374,052 hours (42.7 years)
- Warranty: Five-year

The Cisco IE-3100-8T2C-E Industrial Ethernet Switch is compliant with this specification. Other manufacturers that comply with this specification are allowed.

The Contractor shall verify the transmission distance required to establish all fiber optic connections to the Layer II Ethernet switch and submit to Engineer for approval prior to ordering fiber optic transceivers.

Construction Requirements

The Layer II switch and its power supply shall be mounted to either a standard DIN rail or an equipment mounting channel in the cabinet. The power supply shall be hard-wired to the cabinet power, not plugged into one of the traffic signal cabinet power outlets.

Configuration Design Document.

A configuration design document shall be submitted within 60 days after contract award. It shall be prepared by a designer with a minimum of CCNP certification – and shall include proof of currently active CCNP credentials. The document shall contain actual configuration files for each switch to be delivered under this contract.

The Layer II switch shall be configured to be compatible with the IDOT D1 field network design. High level guidance (IP Scheme / VLANs / routing protocols, etc.) will be provided by IDOT but the integration, functionality and compatibility with the existing network are the responsibility of the contractor.

The configuration design document shall meet the acceptance of the IDOT engineer. Contractor to coordinate with IDOT Electric Maintenance Contractor and Network engineer for proper set up and IP configuration.

Basis of Payment.

This work will be paid for at the contract unit price per each for LAYER II DATALINK SWITCH, the price of which shall include all equipment, materials, and labor required to furnish, configure and install the switch, including all necessary connectors, cables, fiber optic jumpers, hardware, software, and other peripheral equipment required to place the switch in operation to the satisfaction of the Traffic Engineer.

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LAYER III NETWORK SWITCH

Effective: November 1, 2023

Description.

This work shall consist of furnishing and installing a Layer III Ethernet switch and all transceivers required to transmit data from one traffic signal, ITS, or network node cabinet to another traffic signal, ITS, or network node cabinet containing a Layer II or Layer III Ethernet switch.

Materials.

The Layer III switch shall be environmentally hardened with a minimum of 16 1Gbps SFP ports and 12 1Gbps copper RJ45 ports. All SFP ports shown on the plans shall be populated with environmentally hardened optical modules capable of transmitting the appropriate distance as shown on the plans on single-mode fiber optic cable. An environmentally hardened power supply with input of 120 VAC and sufficient wattage for the switch shall be provided.

The switch shall conform to the following minimum specifications:

- Forwarding bandwidth: 28 Gbps (line rate/non-blocking)
- Switching bandwidth: 56 Gbps(Switching bandwidth is full-duplex capacity)
- Forwarding rate: 41.67 mpps with 64 byte packets (line rate for all ports and packet sizes)
- Number of queues: 4 egress
- Unicast MAC addresses: 16,000
- IGMP multicast groups: 1000
- Number of VLANs: 1000
- IPv4 MAC security ACEs: 1000 with default TCAM template
- NAT translation: Bidirectional, 128 unique subnet NAT translation entries, which can expand to tens of thousands of translated entries if designed
- Warranty: Five-year
- Layer 2 switching: IEEE 802.1, 802.3, 802.3at, 802.3af standard, VTPv2, NTP, UDLD, CDP, LLDP, Unicast Mac filter, Flexlink, VTPv3, EtherChannel, Voice VLAN, QinQ tunneling
- Security: SCP, SSH, SNMPv3, TACACS+, RADIUS Server/Client, MAC Address Notification, BPDU Guard, Port-Security, Private VLAN, DHCP Snooping, Dynamic ARP Inspection, IP Source Guard, 802.1x, Guest VLAN, MAC Authentication Bypass, 802.1x Multi-Domain Authentication, Storm Control, Trust Boundary, Cisco TrustSec@security, FIPS 140-2, ACT2, Secure Boot, Full flexible Netflow1
- Layer 2 multicast: IGMPv1, v2, v3 Snooping, IGMP filtering, IGMP Querier
- Quality of Service (QoS): Ingress Policing, Rate-Limit, Egress Queueing/shaping, AutoQoS, Modular QoS CLI (MQC)
- Layer 2 IPv6: IPv6 Host support, HTTP over IPv6, SNMP over IPv6
- Layer 3 routing: IPv4 Static Routing
- Layer 2 switching with 1:1 static Network Address Translation (NAT)
- Utility: IEEE 1588v2 PTP Power Profile, dying gasp, GOOSE messaging, SCADA protocol classification, MODBUS TCP/IP Memory Maps, utility SmartPort macro, BFD, Ethernet OAM, IEEE 802.3ah, CFM (IEEE 802.1ag)

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- Redundancy:
 - Redundancy Ethernet Protocol ring (REP)
 - Parallel Redundancy Protocol (PRP)
 - High Availability Seamless Redundancy (HSR), PTP over HSR
 - Media Redundancy Protocol (MRP) ring, MRP Auto Manager (MAM)
- IP multicast: PIM Sparse Mode (PIM-SM), PIM Dense Mode (PIM-DM), and PIM sparse-dense mode
- IP unicast routing protocols: OSPF, EIGRP, BGPv4, IS-IS, RIPv2, Policy-Based Routing (PBR), HSRP
- IPv6 routing: RIPng, OSPFv6, and EIGRPv6 support
- Security: IEEE 802.1AE MACsec (including PSK based MKA support), Cisco TrustSec®, SGT inline tagging and SGACL, Full flexible Netflow

The Cisco IE-4010-16S12P Industrial Ethernet Switch is compliant with this specification. Other manufacturers that comply with this specification are allowed.

The Layer III switch and its power supply shall be mounted to either a standard DIN rail or an equipment mounting channel in the cabinet. The power supply shall be hard-wired to the cabinet power, not plugged into one of the traffic signal cabinet power outlets.

The Contractor shall verify the transmission distance required to establish all fiber optic connections to the Layer III Ethernet switch and submit to Engineer for approval prior to ordering fiber optic transceivers.

Configuration Design Document.

A configuration design document shall be submitted within 60 days after contract award. It shall be prepared by a designer with a minimum of CCNP certification – and shall include proof of currently active CCNP credentials. The document shall contain actual configuration files for each switch to be delivered under this contract.

The Layer III switch shall be configured to be compatible with the IDOT D1 field network design. High level guidance (IP Scheme / VLANs / routing protocols, etc.) will be provided by IDOT but the integration, functionality and compatibility with the existing network are the responsibility of the contractor.

The configuration design document shall meet the acceptance of the IDOT engineer. Contractor to coordinate with IDOT Electric Maintenance Contractor and Network engineer for proper set up and IP configuration.

Basis of Payment.

This work will be paid for at the contract unit price per each for LAYER III NETWORK SWITCH, the price of which shall include all equipment, materials, and labor required to furnish, configure and install the switch, including all necessary connectors, cables, fiber optic jumpers, hardware, software, and other peripheral equipment required to place the switch in operation to the satisfaction of the Traffic Engineer.

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