121

April 25, 2025 Letting

Notice to Bidders, Specifications and Proposal

Contract No. 74D44
Various Counties
Section D7 ELECTRICAL REPAIRS 2025-1
Various Routes
District 7 Construction Funds

Prepared by

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Checked by

(Printed by authority of the State of Illinois)

Illinois Department of Transportation

NOTICE TO BIDDERS

1. **TIME AND PLACE OF OPENING BIDS.** Electronic bids are to be submitted to the electronic bidding system (iCX-Integrated Contractors Exchange). All bids must be submitted to the iCX system prior to 12:00 p.m. April 25, 2025 prevailing time at which time the bids will be publicly opened from the iCX SecureVault.

2. **DESCRIPTION OF WORK**. The proposed improvement is identified and advertised for bids in the Invitation for Bids as:

   Contract No. 74D44
   Various Counties
   Section D7 ELECTRICAL REPAIRS 2025-1
   Various Routes
   District 7 Construction Funds

   Repairing, replacing, servicing and maintaining electrical systems throughout District 7.

3. **INSTRUCTIONS TO BIDDERS**. (a) This Notice, the invitation for bids, proposal and letter of award shall, together with all other documents in accordance with Article 101.09 of the Standard Specifications for Road and Bridge Construction, become part of the contract. Bidders are cautioned to read and examine carefully all documents, to make all required inspections, and to inquire or seek explanation of the same prior to submission of a bid.

   (b) State law, and, if the work is to be paid wholly or in part with Federal-aid funds, Federal law requires the bidder to make various certifications as a part of the proposal and contract. By execution and submission of the proposal, the bidder makes the certification contained therein. A false or fraudulent certification shall, in addition to all other remedies provided by law, be a breach of contract and may result in termination of the contract.

4. **AWARD CRITERIA AND REJECTION OF BIDS**. This contract will be awarded to the lowest responsive and responsible bidder considering conformity with the terms and conditions established by the Department in the rules, Invitation for Bids and contract documents. The issuance of plans and proposal forms for bidding based upon a prequalification rating shall not be the sole determinant of responsibility. The Department reserves the right to determine responsibility at the time of award, to reject any or all proposals, to readvertise the proposed improvement, and to waive technicalities.

By Order of the
Illinois Department of Transportation

Gia Biagi,
Acting Secretary

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2025

This index contains a listing of SUPPLEMENTAL SPECIFICATIONS and frequently used RECURRING SPECIAL PROVISIONS.

ERRATA Standard Specifications for Road and Bridge Construction (Adopted 1-1-22) (Revised 1-1-25)

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STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction, Adopted January 1, 2022", the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways", and the "Manual of Test Procedures for Materials" in effect on the date of invitation for bids, and the "Supplemental Specifications and Recurring Special Provisions" indicated on the Check Sheet included herein, which apply to and govern the construction of Various Routes, Section D7 Electrical Repairs 2025-1, Various Counties, and in case of conflict with any part, or parts, of said Specifications, the said Special Provisions shall take precedence and shall govern.

Various Routes
Section D7 Electrical Repairs 2025-1
Various Counties
Contract No. 74D44

LOCATION OF PROJECT

This project is located within District 7 and includes the counties - Macon, Moultrie, Shelby, Fayette Coles, Cumberland, Clark, Effingham, Jasper, Crawford, Clay, Richland, Lawrence, Wayne, Edwards, and Wabash.

DESCRIPTION OF PROJECT

This project consists of maintaining the electrical highway lighting and warning systems, ITS devices, and fiber optic cable along state-maintained right-of-way. The Contractor shall provide all material, equipment, and labor necessary to perform the electrical needs that are requested at the locations described in a work order from the Department of Transportation.

COMPLETION DATE

All work on this contract shall be completed on or before June 30, 2026. Should the Contractor fail to complete all work by June 30, 2026, the Contractor shall be liable in accordance with Article 108.09 of the standard specifications.

TRAFFIC CONTROL PLAN

Traffic control shall be in accordance with the applicable sections of the Standard Specifications for Road and Bridge Construction, the applicable guidelines contained in the Illinois Manual on Uniform Traffic Control Devices for Streets and Highways, these special provisions, and any special details and highway standards contained herein and in the plans.

Special attention is called to Articles 107.09, 107.14 and 107.15 of the Standard Specifications for Road and Bridge Construction, the following highway standards and Recurring Special Provisions relating to traffic control:

Highway Standards:

701001	701006	701011	701101	701106	701201	701206	701301	701311
701400	701401	701406	701411	701421	701426	701427	701428	701456
701501	701502	701601	701602	701606	701611	701701	701801	701901

Conformance to these traffic control and protection standards and this traffic control plan will not be paid for separately, but rather the cost shall be considered included in the various contract items.

It is the intention of the Department that the various routes be kept open to traffic at all times during the construction of this contract. A single lane closure will be permitted in the immediate work areas during construction. At all other times, no lane closures are allowed.

The Contractor shall utilize the proper traffic control and protection procedures required by the applicable highway standards listed above, to properly protect its workmen and the motoring public, when work is being performed on or near the roadway.

The traffic control standard recommended is based on the Department's estimate of the nature of work, duration and equipment required to perform the repairs. Any deviation must remain in compliance with the Standard Specifications for Road and Bridge Construction, Standard Specifications for Traffic Control Items and the Manual of Uniform Traffic Control Devices, most recent edition, and prior approval by the Department is required.

APPRENTICE ELECTRICIAN

Apprentice electricians utilized as part of this contract must follow the criteria listed below:

1. All apprentice electricians shall work within the guidelines of the apprentice program.
2. Apprentice electricians may only be utilized for routine maintenance tasks included but not limited to traffic camera lens cleaning, filter cleaning and/or replacement, light post inspection and repair, and other various duties associated with routine maintenance.
3. Apprentice electricians will be allowed to respond to emergency calls to assist a journeyman electrician when needed.
4. Apprentice electricians must be directly supervised at all times by a qualified vendor representative.

5. The Department reserves the right to limit the number of apprentices used in execution of this contract.
6. The Department reserves the right to restrict work performed for this contract by apprentice electricians.

This work shall consist of an apprentice electrician's labor, tools, equipment and other incidentals necessary or convenient to the successful completion of work orders and the carrying out of all duties and obligations imposed by the contract unless already provided by the journeyman electrician.

Labor will be measured to the nearest 0.25 hour for each apprentice electrician approved for use on the applicable work order. Labor rates for apprentice electrician shall be inclusive of (but not limited to) all regular and premium time, insurance, benefits, overheard, and profit.

This work will be paid for at the contract unit price per HOUR for APPRENTICE ELECTRICIAN.

ASSIGNMENT OF WORK

Nothing in this contract shall be construed to provide the Contractor the exclusive right to service the Department's electrical facilities in District 7. The Department reserves the right to perform any and all work on these electrical devices with its own forces or to assign another contractor to work within District 7.

BORROW AREAS, USE AREAS, AND/OR WASTE AREAS

In addition to the provisions contained in Article 107.22 of the Standard Specifications, the Contractor shall submit all required documents to the District electronically. All photos shall be in color.

CONFINED SPACE ENTRY

The enclosed areas of bridge structures and pylons are confined spaces. The Contractor shall comply with all OSHA requirements relative to confined space entry. An oxygen deficient, toxic, explosive or flammable atmosphere may exist within this confined space. Atmosphere testing shall be conducted prior to entry and continuously while employees are working within a confined space. The Contractor shall inform the Department of who will serve as the rescue responder in an emergency and what system will be used to notify the responder that an emergency exists.

CONTRACTOR'S REPRESENTATIVE

The Contractor shall designate a service representative to serve as the key contact person for the Department in the execution of this contract. The service representative shall monitor the daily activities of the contract and be available to discuss and respond to any problems that may arise. The services of this person shall be included in the contract and no additional compensation shall be allowed.

CONTRACTOR REQUIREMENTS

The Contractor shall be available to respond to calls for service at all times, including Saturdays, Sundays and holidays, to correct any malfunction of equipment or effect any temporary emergency repair to damaged equipment resulting from any cause.

The Contractor shall designate at least two responsible representatives of its organization of whom the Department may issue work orders and instructions. The Contractor shall provide necessary information (names and telephone numbers) of these representatives. One of these representatives shall be available at all times.

The Contractor must occupy an office and be engaged primarily in the provision of electrical services. The business or employees of this business should be located no more than a three hour drive time from the site where services are to be rendered. Response time to an emergency call shall be no more than three and one-half hours. Response time begins with the receipt of the call from the Department.

When the Contractor dispatches only one person to perform the work, that person will be an International Brotherhood of Electrical Workers journeyman, tradesman or equivalent. When the job requires more than one person, an apprentice or aid may accompany the journeyman.

The Contractor shall report the existence of any defective equipment, controls, and/or accessories which may require replacement or repairing. This information shall be given to the Department's representative and shall include the location of the defective item and the impact on the project.

The Contractor will be required to perform the specified work with his/her own workforce. Subcontracting of work will not be allowed without prior approval from the Department. The Contractor must provide justification for subcontracting work when requesting approval. In the event subcontracting of work is approved, the Contractor will submit actual invoices and receipts or bills from the sub-contractor documenting the cost for labor, materials, supplies and components.

CONTRACTOR RESPONSIBILITY

When repairing a damaged highway lighting standard, the Contractor shall reinstall any existing pole identification signs which were attached to the standard. If these signs were damaged to the extent they cannot be reused, the Contractor shall immediately notify the Department so that replacement sign can be installed. This requirement shall be considered included with this contract and no additional compensation shall be allowed.

The Contractor shall be solely responsible for any damage to existing structures or to the right-of-way resulting from the operation of his equipment or employees while making repairs. The Contractor shall, at his/her own expense, restore any damage to a condition equal to that existing before the damage was done as directed by the Engineer.

CONTROL OF WORK

The Department will conduct frequent inspections of the respective systems and installations to determine if the servicing is being performed by the Contractor promptly and satisfactory, and in the manner specified in the contract.

DETECTOR LOOP LEAD-IN CABLE IN CONDUIT, CONOGA-30003

Description: This work consists of furnishing and installing loop detector lead-in cables or interconnect cables of the number of pairs specified in the conduit in accordance with the requirements of the Standard Specifications, Section 886 and the following exceptions or additions:

Materials: The traffic count detector loop lead-in cable shall be Canoga 30003 or equivalent.

Installation: Each end of the cable shall be identified with wire markers as directed by the Engineer. The drain wire of each pair shall be grounded to chassis ground in the cabinet only for interference suppression.

The electrical values of the cable shall be metered by the Contractor, in the presence of the Engineer, after they are spliced to the detector loop. Acceptance of the cable as metered shall be determined by the Engineer.

Basis for Payment: This work will be paid for at the contract unit price per FOOT for ELECTRIC CABLE IN CONDUIT, CONOGA-30003.

DETECTOR LOOP, TYPE I

Description: This item shall consist of furnishing, installing and testing 6' X 8' rectangular detector loops at the locations shown on the plans. The detector loops shall be installed in accordance with all details shown on the plans and applicable portions of Section 886 of the Standard Specifications. All saw cutting, detector loop installation, joint sealing, lead-ins, and testing necessary to complete the installation shall conform to the following requirements:

Materials: The cable used for detector loop shall be #14-7 strand XHHW XLP-600V, encased in orange Detecta-duct tubing as manufactured by Kris-Tech Wire Company, Inc or an approved equivalent. All loop wire shall be UL listed. Lead-ins shall be Conoga-30003 cable or an approved equivalent from the handhole to the cabinet. The jacket shall be made of high-density polyethylene.

At ambient air temperatures above 50° F, joint sealer having a minimum tensile strength of 100 P.I.E. when tested. ASTM Method D638-58T shall be used. The sealer shall have sufficient strength and resiliency to withstand stresses caused by vibrations and pavement expansion and contraction due to temperature changes. Adhesion of the sealer to PCC shall be at least equal to the tensile strength of the concrete. The joint sealer shall have a maximum cure time of 30 minutes. Curing shall be defined as the capability of withstanding normal traffic loads without degradation. The sealer shall meet or exceed the specifications of OZ GEDNEY DOZSeal 230 filling compound.

If the ambient air temperature is below 50° F, a hard asphalt-base filling and insulating compound having a high softening point and a high pouring temperature shall be used. The filling compound shall have a softening point of not less than 235° F, a summer pouring temperature of 375° F, and a winter pouring temperature of 425° F.

Installation Details: The Engineer shall be contacted regarding proposed changes in loop locations necessitated by badly deteriorated pavement. The Engineer may relocate such loops. Detector loops may not be installed before permanent striping is completed on a newly resurfaced section of road.

Slots in the pavement shall be cut with a concrete sawing machine in accordance with the applicable portions of Section 420.05 of the Standard Specifications. The slot must be clean, dry, and oil-free. Wire shall be inserted in the pavement slot with a blunt tool which will not damage the insulation. Loops shall not be dry cut. Loops shall not be installed at an outside temperature below 50° F unless directed by Engineer.

All excess joint sealer shall be removed so that the level of the sealer in the sawcut is at the same level as the adjoining pavement.

Plastic sleeving shall be used to insulate the wire where loop wire crosses cracks and joints in the pavement. The sleeving shall be properly sealed with electrical tape to prevent joint sealer from entering sleeves. Sleeving shall extend a minimum of 8 inches each side of joint.

Detector loops shall be centered in all traffic lanes unless designated otherwise on the plans or by the Engineer. Traffic lanes shall be referred to by number, and loop wire shall be color-coded and labeled accordingly. Lane #1 shall be the southbound (westernmost) or westbound

(northernmost) outside lane. Subsequent lanes are to be coded sequentially towards the opposite outside shoulder. A chart which shows the coding for each installation shall be included in each cabinet. Core holes will not be allowed at corners of loops. Saw cuts for all detector loops and lead-ins shall not be greater than 2 3/4 inches in depth.

All detector loops shall contain four turns of #14 wire. Detector loops shall not be connected in series with other loops. Each detector loop shall have its own lead-in cable to the cabinet when said detector loop is over 150 feet from the cabinet. The loop lead-in shall be a Canoga 30003 cable or equivalent. Loop and lead-in wires shall be free from kinks or any insulation abrasions. Lead-ins shall be twisted in such a manner to prevent mechanical movement between the individual cables. Lead-in cable shall be brought into a cabinet or handhole at the time the detector loop is placed in the pavement.

Where lead-in runs are less than 150 feet, the loop wire shall be utilized as lead-in to the point of termination without splices, being twisted five turns per foot. The loop wire will be paid for as lead-in from the handhole to the point of termination in the cabinet.

Loop lead-ins placed in handholes shall be coiled, taped, and secured to the upper portion of the handhole to protect against water damage. The excess coiled wire should not exceed 6' in length. Any other method of installation will require prior written approval of the Engineer. Each loop lead-in shall be color coded and tagged at each angled drilled hole, handhole, and junction box through which it passes and at the termination point in the cabinet.

An angled hole shall be drilled at least 12 inches in from the edge of pavement through which the 1 1/4-inch PVC conduit containing the loop lead-in cable shall be installed (see plan detail).

The loop shall be spliced to the lead-in wire with a barrel sleeve, crimped and soldered. Adhesive-lined heat shrink tubing shall be used to provide waterproof protection for the splice. The soldered connection shall be made with a soldering iron or soldering gun. No other method will be acceptable, i.e. the use of a torch to solder will not be acceptable. The heat shrink tubing shall be shrunk with a heat gun. No other method will be acceptable, i.e. the use of a torch will not be acceptable. No burrs shall be left on the wire when soldering is finished. Cold solder joints will not be acceptable.

The traffic count detector loop color code shall be as follows:

LOOP #1	GRAY
LOOP #2	ORANGE
LOOP #3	PURPLE
LOOP #4	BLUE
LOOP #5	GREEN
LOOP #6	YELLOW
LOOP #7	BROWN
LOOP #8	WHITE

At locations where there are more than eight loops, loops number 9 through number 16 shall repeat the same color code, but all loops shall additionally be marked to identify the lane.

In addition to color codes each loop shall be identified with a written label attached to the loop wire, or lead-in wire. The tags shall be Panduit #MP250W175-C or equivalent. All wires and cables

shall be identified in each handhole or cabinet the cable passes through, or terminates in. The labels shall be attached to the cable by use of two cable ties.

Protection of Work: Electrical work, equipment and appurtenances shall be protected from damage during construction until final acceptance. Electrical duct openings shall be capped or sealed to prevent the entrance of water and dirt. Wiring shall be protected from mechanical injury.

Standards of Installation: Electrical work shall be completed in a neat and workmanlike manner in accordance with the best practices of the trade. Unless otherwise indicated, materials and equipment shall be new and installed in accordance with the manufacturer's recommendations.

Except as specified elsewhere herein, materials and equipment shall be in conformance with the requirements of Section 106 of the Standard Specifications.

Testing: Detector loops shall be tested immediately upon installation at each automated traffic recording station and again at the time of final acceptance inspection in the presence of the Engineer. Items which fail to test satisfactorily shall be repaired or replaced before final acceptance.

An electronic test instrument capable of measuring large values of electrical resistance, such as a megger, shall be used to measure the resistance of the detector loop and its lead-in. The resistance of the loop and its lead-in shall be a minimum of 100 megohms above ground under any conditions of weather or moisture. The resistance tests and all electronic tests shall be performed in the presence of the Engineer any number of times as specified by the Engineer. The loop and loop lead-in shall have an inductance between 100 microhenries and 350 microhenries. The continuity test of the loop and loop lead-in shall not indicate a resistance greater than 2 ohms. The Contractor shall conduct all testing in the presence of the Engineer and all readings will be recorded by the Engineer. Testing shall be done with an approved loop tester.

Method of Measurement: The detector loop measurement shall be the length of sawcut in the pavement which contains loop wire. The actual length of wire used in the sawcut shall not be considered in any measurement.

Basis for Payment: This item will be paid at the contract unit price per FOOT for DETECTOR LOOP, TYPE I.

IDOT INSTALLATION INSTRUCTIONS FOR THE ROADTRAX BL TRAFFIC SENSORS (OR APPROVED EQUIVALENT)

Equipment Required. The sensors should be supplied with sufficient lengths of lead-in cable to avoid splicing. NO SPLICES are allowed in the cable. The lead-in cable length should not exceed 300 feet without consulting the manufacturer. Installation brackets are included when the sensors are shipped from the manufacturer. If splicing is required, only similar grades of RG-58 cable should be used. Splices must be soldered and an approved splice kit used to waterproof the splice.

Personnel from the Illinois Department of Transportation Data Management Lab must be present to supervise installation of the axle sensors.

The following tools and accessories are required for sensor installation:

- A heavy duty (at least 35 horsepower) self-propelled concrete cutting saw equipped with a 3/4" diamond blade. If a blade of this width is not available, multiple blades can be used to form a dado.
- A water supply for blade cooling and slot washing.
- A ½-inch electric or air hammer drill, ½-inch masonry bit, hand sledge hammer and one inch chisel.
- Air compressor with hose and nozzle for cleaning and drying the slot and to power any air tools used.
- Straight edge, chalk line, minimum 1/8" diameter cord or rope for laying out the lines, upside-down pavement fluorescent spray paint, wax crayon, measuring tape to mark locations of saw cuts to be made for sensor(s) and lead-in wire.
- 1/2 inch variable speed drill, industrial grade mixing paddles (one for mixing sensor grout & hardener and one for mixing loop sealant & hardener. Do not cross contaminate sensor grout and loop sealant by using the same mixing paddles.
- Wire strippers, knife type blade strippers, pliers and diagonal cutters.
- Disk grinder or heavy-duty sander to remove high spots of epoxy after installation and curing.
- Wire brush to remove any remaining debris from the sawed slot and to rough up the sides of the slot after the saw cuts are completed.
- Broom to keep work area clear of debris.
- Clean rags and isopropyl alcohol to clean and prime concrete surface of the sawed slots.
- Plumbers putty or duct seal to form dams at the end of the sensor slot to contain the resin (grout).
- PU 200 Resin (or approved equal) for encapsulating the sensors (one can for every 6 feet of sensor)
- Two-part cold mix loop sealant for encapsulating the loop and lead wire(s). Hot tar is not acceptable.
- Duct tape (2" minimum width) to protect the pavement edge from excess resin end loop sealant along edges of sawed slots during installation of sensors and lead wire.
- Putty Knives (3" to 4") to remove excess epoxy or work epoxy around sensor and small point trowel for putting resin (grout) into the slot if necessary.
- The Contractor must provide a generator suitable for any power tools since AC power is not available at most traffic count stations.
- 100-foot fish tape.
- Heavy duty extension cord.
- Chemical proof rubber work gloves, heavy duty work gloves, dust filter mask and goggles & safety glasses for eye protection.
- Trenching equipment as required to bury conduit.
- Cleaning materials for hands and equipment.
- All necessary instructions.
- All necessary safety data (MSDS, etc)

ELECTRONIC MAIL AND FACSIMILE MACHINE

The Contractor shall have electronic mail receiving and sending capabilities and a facsimile (fax) machine available. The Department will utilize these communication media to reduce errors in communications and to send/receive work orders, receive daily contract work activity sheets, various drawings and estimate sheets as needed. This requirement shall be included in the contract and no additional compensation shall be allowed.

EXPENSES

Unless otherwise agreed upon and stated herein, this Contract does not allow for reimbursement of any expense incurred by Contractor, including but not limited to telephone or other communications device, postage, copying, travel, transportation, lodging, food and per diem.

JOURNEYMAN ELECTRICIAN

This work shall consist of a journeyman electrician's labor, tools, equipment and other incidentals necessary or convenient to the successful completion of work orders and the carrying out of all duties and obligations imposed by the contract. Also, the journeyman electrician shall be required to carry a cellular telephone to facilitate communications with work crews and to verify operation conditions of essential ITS facilities. The Department reserves the rights to use the cellular telephone to contact the journeyman electrician for his or her location and to request a report on the status of a work order.

This work will be measured to the nearest 0.25 hour for each journeyman electrician approved for use on the applicable work order. Labor rates for journeyman electrician shall be inclusive of (but not limited to) all regular and premium time, insurance, benefits, overheard, and profit.

This work will be paid for at the contract unit price per HOUR for JOURNEYMAN ELECTRICIAN.

KNOCKDOWN DOCUMENTATION

The Contractor shall provide the Department with photographs of all onsite knockdown debris to document the damage for third party claims. The photographs shall be digital images and should have the number of views necessary to properly detail the motorist causing damage. Three or more photographs are required for adequate documentation. Identifying information should be included in the photographs as much as possible.

This requirement shall be considered included with this contract and no additional compensation shall be allowed.

LABOR (LABORER)

This unit shall be eligible for payment only when labor is performed onsite at appropriate work location. Labor will be measured to the nearest 0.25 hour for each person other than journeyman electrician or apprentice electrician (normally a laborer) approved for use on the applicable work order on items other than routine work items. Labor rates shall be inclusive of (but not limited to) all regular and premium time, insurance, benefits, overhead, and profit.

The laborer shall furnish all labor, tools, equipment and other incidentals necessary or convenient to the successful completion of work orders and the carrying out of all duties and obligations imposed by the contract. Also, the laborer shall be required to carry a cellular telephone to facilitate communications with work crews. The Department reserves the rights to use the cellular telephone to contact the laborer for his or her location and to request a report on the status of a work order.

If the Department authorizes the Contractor to utilize labor that does not have a contract unit price and is not considered incidental to the contract, payment shall be made in accordance with Article 109.04(b) of the Standard Specifications.

This work will be paid for at the contract unit price per HOUR for LABOR.

LABOR, TOOLS, AND EQUIPMENT

The Contractor shall furnish all labor, tools, equipment, and other incidentals necessary or convenient to successfully complete the work orders and carry out all duties and obligations imposed by the contract.

All Contractor work crews shall be equipped with a cellular telephone to facilitate communications with work crews and to verify operating conditions of key electrical facilities. Only the crew leader will be required to be equipped with a cellular telephone. The Contractor shall provide the Department with the cellular telephone number being used in the execution of each work order. The Department reserves the rights to use the cellular telephone to contact a Contractor's work crew for their location and to request a report on the status of a work order. No additional compensation for cellular telephone expenses will be allowed.

Only labor onsite at work locations shall be eligible for payment. Labor rates for journeyman electrician, apprentice electrician and labor (laborer) shall be inclusive of (but not limited to) all regular and premium time, insurance, benefits, overhead, and profit. The Department will specify if the journeyman electrician and/or apprentice electrician pay items will be utilized on each individual work order.

Overtime work during nights, weekends, and holidays will be performed by the Contractor only at the direction of the Department.

The time allowed for the truck pay items included in this contract shall be the actual time the truck is onsite at the work location (while work is underway). Truck rates include (but not limited to) the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs, overhaul and maintenance of any kind, depreciation, storage, overhead, profits, insurance, and all incidentals.

Arrowboard (trailer mounted) shall meet the requirements of Articles 701.15(i) and 1106.02. The time allowed for arrowboard (trailer mounted) shall be the actual time the arrow board is in use at the work location. Attenuator, crash (truck mounted) shall meet the requirements of Articles 701.15(h) and 1106.02. The time allowed for the attenuator, crash (trailer mounted) shall be the actual time the attenuator is in use at the work location.

Individual pieces of equipment not listed in the "Equipment Watch Rental Rate Blue Book" and having a replacement value of $2500.00 or less shall be considered to be tools or small equipment and no payment will be made for their use on this contract.

The Contractor should utilize the appropriate equipment to complete the repair as authorized by the Department. If the Contractor chooses to use equipment that in the opinion of the Department is above and beyond what is required, the Contractor shall be compensated at the appropriate amount as determined by the Department of what was necessary to complete the work order.

Method of Measurement: Labor will be measured to the nearest 0.25 hour for each journeyman electrician or apprentice electrician approved for use on the applicable work order.

Truck usage will be measured to the nearest 0.25 hour for each pick-up truck, bucket truck (length less than 35 feet), or (bucket truck (length 35 feet to 65 feet) approved for use on the applicable work order. Arrow board usage will be measured to the nearest 0.25 hour for each arrowboard (trailer mounted) approved for use on the applicable work order. Truck mounted attenuator usage will be measured to the nearest 0.25 hour for each attenuator, crash (truck mounted) approved for use on the applicable work order.

Basis of Payment: Labor will be paid for at the contract unit price per HOUR for JOURNEYMAN ELECTRICIAN, APPRENTICE ELECTRICIAN or LABOR (LABORER).

Truck usage will be paid for at the contract unit price per HOUR for PICK-UP TRUCK, BUCKET TRUCK (LENGTH LESS THAN 35 FEET), or (BUCKET TRUCK (LENGTH 35 FEET TO 65 FEET). Arrowboard usage will be paid for at the contract unit price per HOUR for ARROWBOARD (TRAILER MOUNTED). Truck mounted attenuator usage will be paid for at the contract unit price per HOUR for ATTENUATOR, CRASH (TRUCK MOUNTED), and shall include the cost of the truck driver.

LED CONVERSION COST INCENTIVE

When work orders are submitted to replace existing HPS luminaires with LED Luminaires there is eligibility for cost incentives from the energy provider. The Contractor shall contact the electric provider and complete the required paperwork and application for these incentives as part of the contract and submit it to the utility provider. The reimbursement of the Contractor receives from the energy provider shall be deducted from the invoice submitted to the Department for that work order. Documentation of the cost incentive reimbursement shall be provided with the invoices submitted to the Department for that work order.

NUMBERING SYSTEM

The Contractor shall maintain the Department's highway lighting numbering systems on all knockdowns. These numbers are to be used on all reports, correspondence and billing invoices.

PARTS AND MATERIALS

Parts and materials supplied by the Contractor, which have a retail value under $25.00 per unit, shall be considered included in the contract and no additional compensation is allowed.

If parts and materials are required to complete a work order and are not already considered incidental within an existing contract pay item, then the Contractor shall receive the actual cost for parts and materials supplied (including transportation charges paid by the Contractor). To this actual cost, a maximum of 15% will be added for invoice amounts up to $2,500, 10% for invoice amounts from $2,500 to $5,000 and 5% for invoice amounts greater than $5,000. The cost of all parts and materials shall be itemized on the invoice for each work order. The actual billing invoices from the suppliers of items greater than $25.00 for any single unit must be submitted as documentation of parts and materials costs.

When such parts and materials are furnished by the Contractor, the material shall be of the best grade of its respective kind, for the intended purpose. The Contractor is expected to make a good faith effort to purchase the parts and materials supplied by them at the lowest possible price. The transportation of the parts and materials to the location on the work order by the Contractor shall be considered included with the contract and no additional compensation shall be paid (except for when a special piece of equipment is required to properly transport the item(s)). All materials provided by the Contractor shall be new, unless otherwise stipulated, and in accordance with the standards specified.

The Department may request the Contractor in writing to order parts and materials, not to be installed by the contractor. These parts and materials will be used by the Department in the repair and/or maintenance completed by the Department work force.

Parts and materials may be furnished by the Department when available and practical, unless otherwise specified by this contract. The transportation of department supplied parts and materials to the location on the work order by the Contractor shall be considered included with the contract and no additional compensation shall be paid (except for when a special piece of equipment is required to properly transport the items). The Department, at its discretion, may expedite the repair of an installation; the Department reserves the right to deliver parts, materials, and equipment directly to the Contractor's shop or to the job site.

PAYMENT TERMS AND CONDITIONS

By submitting an invoice, Contractor certifies that the supplies or services provided meet all requirements of the Contract, and the amount billed and expenses incurred are as allowed in the Contract. Invoices for services performed and expenses incurred through June 30 of any year must be submitted to the State no later than July 31 of that year; otherwise, Contractor may have to seek payment through the Illinois Court of Claims (30 ILCS 105/25). All invoices are subject to statutory offset (30 ILCS 210).

Payments, including late payment charges, will be paid in accordance with the State "Prompt Payment Act" (30 ILCS 540) and rules (74 III. Adm. Code 900) when applicable. Payments delayed at the beginning of the State's fiscal year (July and August payments) because of the appropriation process shall not be considered a breach.

PENALTY DURING PEAK HOURS

If the Contractor fails to have all lanes of traffic open during the peak hour for traffic or conducts operations that will impede the flow of traffic during peak hours, a monetary penalty shall be assessed to the Contractor. The penalty shall be $500 for each 15-minute period or a portion thereof during peak hours.

PIEZO AXLE SENSORS, CLASS-II

Description: This item consists of installing one class II piezo axle sensor (AMP model no. 0-1004673-0 BLC sensor class II or approved equivalent), in each lane indicated on the plans.

The use of global resin epoxy or an approved equivalent is necessary for proper bonding. A minimum of 30 days cure time for new asphalt is required before the epoxy is used for bonding. Piezo axle sensors may not be installed before permanent striping is completed on a newly resurfaced section of road. Installation of an automated traffic recorder must be completed no later than 60 days after installation is begun.

Material: The class II axle sensors, necessary RG58C/U transmission cable and global epoxy or approved equivalent for encapsulating sensors shall be furnished by the Contractor. ROADTRAX BLC Traffic Sensors manufactured by AMP Incorporated or an approved equivalent shall be installed at this location. The axle sensor shall be flexible along its longitudinal axis to allow the sensor to easily conform to the profile of the lane in which it is being installed. Class II axle sensors shall be manufactured with suitable lengths of RG58C/U transmission cable for continuous run from axle sensor through the handhole to the cabinet. Splicing of transmission cable to axle sensor shall not be permitted unless approved in advance and supervised by Mr. Rich Marx of the Illinois Department of Transportation.

Installation: Installation shall be in accordance with the attached instructions. The Engineer should be advised at least three days prior to installation. Contact Mr. Rich Marx of the Illinois

Department of Transportation, telephone (217) 782-2065, to arrange a time and date for the installation.

Heated loop sealers shall not be used to seal the RG58C/U transmission cable in the pavement sawcut. Sealex or equivalent loop sealant shall be used.

Testing: Piezo axle sensors shall be tested immediately upon installation and again at the time of final acceptance inspection in the presence of the Engineer. The tests shall be performed utilizing an oscilloscope to ensure acceptable clean signals of proper amplitude and polarity. Sensors that fail to test satisfactorily shall be repaired or replaced before final acceptance.

Basis for Payment: This work will be paid for at the contract unit price per FOOT for PIEZO AXLE SENSOR, CLASS II, measured along the sawcut in the pavement containing the axle sensor. The lead-in measured from the end of the axle sensor to the dive hole shall be paid for as Detector Loop Type 1. The lead-in from the dive hole to the cabinet shall be considered incidental since it is provided with the sensor.

POSSIBLE SOURCES FOR ITEMS – PERMANENT ATR

Material	Possible Source	Contact	Telephone Number	Location
Loop Detector wire encased in Orange Detecta-Duct Tubing	Kris-Tech Wire Company	Sales	(315) 339-5288	Rome, NY
Conoga 30003 2-pair shielded wire suitable for direct burial	3M Traffic Products Division	Sales	(612) 733-1110	Minneapolis, MI
RL-200 Polyurethane resin	International Road Dynamics Inc.	Scott Sherwood	(815) 675-1430	Spring Grove, IL
60J Solar Panel	Ameresco Solar	Sales	(855)-437-6527	OakBrook , IL
Class-II Peizo Sensor	Measurement Specialties Inc.	Don Halverson	(610) 650-1580	Valley Forge, PA
Class-II Peizo Sensor	International Road Dynamics	Scott Sherwood	(815) 675-1430	Spring Grove, IL
Sun Xtender Battery 12v 104ah Part # PVX-1040T	Concord Battery Corp.	Sales	(626) 813-1234	West Covina, CA
Sun Xtender Battery 12v 34ah Part # PVX-340T	Concord Battery Corp.	Sales	(626) 813-1234	West Covina, CA
SunSaver 10L solar charger Part # SS-10L-12V	Sunwize Power & Battery	Sales	(800)-817-6527	San Jose, CA
Precast Composite Concrete Handhole	Handhole.com	Sales	(800)-332-8114	Cedar Rapids, IA
Solar Panel Bracket Part # 007985	Sunwize Power & Battery	Sales	(800)-817-6527	San Jose, CA
RV 50 Wireless Modem & Antenna	CDS Office	Ron Clark	(217)-541-3410	Springfield, IL

PROSECUTION OF WORK

The Contractor shall begin the work to be performed under the contract on the date of contract execution or July 1, 2024, whichever is later.

QUANTITIES

The quantities specified in this contract indicate the estimated amount of work required for the duration of this contract. This is merely an estimate to allow contractors to establish unit prices and permit the Department to determine the low bidder. It shall be understood that the unit prices of this contract shall prevail throughout the period of this contract regardless of the quantity.

RESPONSE TIMES

The Department will define the expected response times at the time of issuing the work order based on the following:

- LEVEL 1 – Emergency Service Calls – Work crew/staff shall be at the location on the work order within three hours of notification during normal work hours and within 3.5 hours of notification after normal work hours. Normal work hours, for the purposes of this contract shall be hours during which the Contractor is not required to pay overtime labor rates.
- LEVEL 2 – Priority Non-Emergency Service Calls – Respond within 24 hours of issuance and complete work within five days.
- LEVEL 3 – Routine Work Items – Complete work within 15 days of the date work order was issued.

It shall be the Contractor's responsibility to promptly notify the Department, if for any reason, the Contractor cannot meet either the response time established at the issuance of the work order, or the response times established herein. If the emergency response time exceeds the allotted hours, the Department has the option of contacting another Contractor.

FAILURE TO MEET RESPONSE TIME

Should the Contractor fail to respond and/or complete a work order on time, or such extended time as may have been allowed by the Department, a monetary deduction will be applied to monies due or that may become due to the Contractor. The value of the monetary deduction will be as follows:

For LEVEL 1 (Emergency Service Calls):

Work Order Amount	Monetary Deduction for Each 15 Minutes*
From $0 to $500	$25
From $501 to $1000	$50
From $1001 and over	$100

* After applicable response time expires

For LEVEL 2 (Priority Non-Emergency Service Calls) and LEVEL 3 (Routine Work Items): $75.00 per day per work order

For the purpose of calculating the LEVEL 2 and LEVEL 3 monetary deduction, a day shall be any (or portion of) excluding the following:

(a) When adverse weather at the field work site prevents work on the controlling item of a work order.
(b) When job conditions at the field work site due to recent weather conditions prevent work on the controlling item of a work order.
(c) When work on the controlling item has been suspended by an act or omission by the Department or Engineer.

SCHEDULE OF WORK

Any work performed on state premises shall be done during the hours designated by the State and performed in a manner that does not interfere with the State and its personnel.

SOLAR POWER SYSTEM

Description: The solar power system shall consist of the solar panel (collector) all necessary mounting hardware, post, SunSaver 10L solar charge controller, and Life line SunXtender battery Model No. PVX-1040T or approved equivalent with bolt terminals. This battery shall be a 12-volt, 105 ampere hour absorbed electrolyte type battery. It shall have a completely sealed valve regulated construction. The battery shall be provided with an attached handle for carrying.

The systems must be of the following capacity: All continuous vehicle ATRs shall be equipped with 60-watt solar panel or larger. The system's capacity should enable it to operate the equipment for 30 consecutive days of heavily overcast weather without the power level of the battery dropping to a point at which it would no longer power or operate the equipment.

Material: The solar panel and all necessary mounting hardware shall be constructed of maintenance free materials which will not require painting. The solar panel surface shall be mounted at an angle of 65° referenced to the south horizon for maximum efficiency in this geographic region. Mounting height shall be a minimum of 9 feet above ground on a pressure-treated 4-inch x 6-inch post. Mounting in any other fashion will be as specified by the Engineer. A pullbox shall be installed in the conduit on the wood post approximately 3 feet above grade level to facilitate splicing the power wires to the solar panel.

Basis for Payment: This work will be paid for at the contract unit price per EACH for SOLAR POWER ASSEMBLY mounted on a new post which shall be payment in full for furnishing the post, the charge controller, the battery, and the conduit with electric cable attached to the post.

STATUS OF UTILITIES TO BE ADJUSTED

NO UTILITIES TO BE ADJUSTED

The above represents the best information of the Department and is only included for the convenience of the bidder. The applicable provisions of Sections 102 and 103, and Articles 105.07 and 107.20 of the Standard Specifications for Road and Bridge Construction shall apply.

If any utility adjustment or removal has not been completed when required by the Contractor's operation, the Contractor should notify the Engineer in writing. A request for an extension of time will be considered to the extent the Contractor's operations were affected.

Utility adjustments or relocations should not be required by this project. The **Illinois Underground Utility Facilities Damage Prevention Act** requires persons excavating to contact the one call system (J.U.L.I.E. 800-892-0123 or 811) before digging.

SUPERVISION OF WORK FORCE

The Contractor shall provide adequate supervision to his work force to ensure that workers and materials are utilized in an efficient manner. This is to include, but not limited to, ensuring knowledgeable and experienced workers are matched to related servicing tasks, the proper type of service vehicle is sent for each work order, and service vehicles are equipped with the parts, materials, and equipment required to complete the work order. No additional allowance will be made for general superintendence of the work force used on this contract.

TAX

Contractor shall not bill for any taxes unless accompanied by proof the State is subject to the tax. If necessary, Contractor may request the applicable agency’s Illinois tax exemption number and federal tax exemption information.

TERMINATION FOR CAUSE

The State may terminate this contract, in whole or in part, immediately upon notice to the Contractor if it is determined that the actions, or failure to act, of the Contractor, its agents, employees or subcontractors have caused or reasonably could cause jeopardy to health, safety or property. If Contractor fails to perform to the State’s satisfaction any material requirement of this contract or is in violation of a material provision of this contract, the State shall provide written notice to the Contractor requesting that the breach or noncompliance be remedied within the period of time specified in the State’s written notice. If the breach or noncompliance is not remedied by that date, the State may either immediately terminate the contract without additional written notice or enforce the terms and conditions of the contract. In either event, the State may seek any available legal or equitable remedies and damages.

TERMINATION FOR CONVENIENCE

Following 30 days written notice, the State may terminate this contract in whole or in part without the payment of any penalty or incurring any further obligation to the Contractor. Following any such termination for convenience, the Contractor shall be entitled to compensation upon submission of invoices and proof of claim for services provided under the contract up to and including the date of termination.

TEST EQUIPMENT

The Contractor shall provide all their own testing instruments, as required, to service the facilities of the Department. The Contractor shall use the established procedures as defined by the manufacturer or standard practice to determine the integrity of the equipment. The Department shall be provided with the testing procedures used upon request.

All required test equipment shall be included in the contract and no additional compensation will be allowed.

TRAFFIC COUNTER – TIRTL

This work consists of furnishing and installing structural components and traffic counter system components at a location to be determined as directed by the Engineer and as herein specified.

The traffic counter system is installed on break-away wide flange beam steel sign supports and foundations. The installed components will complete the traffic counter system as herein specified. All hardware, bolts, pipes and conduits necessary to install the components will be provided by IDOT.

The components to be furnished under this item are as follows:

Data collection system w/cables
Wireless modem w/cables and 5’ antenna cable
Dual band cellular/PCS antenna
TIRTL traffic counter
TIRTL cabinets
Solar panels 60W. Two each with mounts
Solar charge regulators – two each
Batteries
Battery box
Antenna and modem cables

Components to be furnished under this item shall conform to the following manufacturer’s specification or approved equivalent:

TIRTL ver. 2 Traffic Counter with Cellular Antenna and cable,and external modem cable
TIRTL Cabinets w/ir lenses (15” x 27” x 16”) - Quantity 2
External Battery cabinet (16.5” x 16” x 11.5”) BBA1M w/ #2 Police Lock
Sierra Wireless RV-50 Mobile 4G XTLE Gateway EVDO-Verizon
Panorama Low Profile Antenna LGAM-BC3G-3SG-26-3SP
SunSaver Solar Controller SS-10L-12V – Quantity 2
SunExtender PVX340T12 Volt 34 AH absorbed electrolyte battery
SunExtender PVX-1040T 12 Volt 104 AH absorbed electrolyte battery
60 Watt Solar Panel (#60J) – Quantity 2
Solar Panel Bracket (007985) – Quantity 2

The number of components necessary to complete each installation is shown on the plans.

All components shall be sent to the Data Management Lab to be tested, configured, and installed by IDOT personnel.

The wide flange beam break-away sign supports will be paid for separately and included in the cost for Structural Steel Sign Support – Breakaway, as specified in Section 727 of the Standard Specifications.

The Office of Planning and Programming Data Management Lab **MUST** be contacted two weeks prior to ANY work being done to ensure proper post placement. If this is not done, any installation discrepancies determined by the Office of Planning and Programming Data Management Lab must be rectified prior to the equipment installation.

Full manufacturer’s specifications of the components to be furnished under this item shall be approved in writing prior to ordering of components. Warranty information shall be provided to the Engineer at the time of delivery of components.

Contact Information for the Office of Planning and Programming Data Management Lab:

Mr. Rich Marx
126 E. Ash Street
Springfield, IL
Phone 217 782-2065
Richard.marx@illinois.gov

Furnishing of the components necessary to complete the traffic counter – TIRTL system will be paid for at the contract unit price per EACH for TRAFFIC COUNTER (TIRTL) and shall include all components necessary to complete each installation as herein specified.

Method of Installation

1. Mark the position of the sensor slots to be cut perpendicular to the traffic flow. Cable runs on the pavement should also be clearly marked using wax crayons or line and fluorescent pavement paint.

2. Cut a slot 3/4” wide (±1/16 “) and 7/8" deep (± 1/8"). The slot should be 6” longer than the sensor. The lead out should be centered on the slot.
3. The slot must be cut in one pass using one 3/4" wide diamond blade or two 3/8" blades may be ganged together. The slot should be wet cut to minimize damage to the roadway surface.
4. Cut the cable slots to the edge of the roadway.
5. Clear away debris and wash the slots thoroughly. Use air supply to dry. The slots and surrounding surface must be completely clean and dry before any adhesive is poured.
6. Apply two layers of 2" duct tape on the pavement along the perimeter of the slot.
7. Position the sensor on the duct tape next to the slot. Ensure that the sensor is straight and flat. Place the clips on the sensor, about every 8”.
8. Place the sensor in the slot, with the brass element about ¼” below the road surface, and the top of the brackets about 1/8” below the road surface. Ensure the ends of the sensors are pushed down sufficiently.
9. Block the ends of the slot using plumber’s putty or duct seal. Ensure that there are adequate ‘dams’ at both ends so that the encapsulation material (P5G Resin or approved equal) does not flow out. On the passive cable end, dam should be about 3 ½" past the end of the lead attachment area.
    a. Ensure that you are wearing rubber gloves suitable for this type of application. The sealant should not come in contact with the skin.
10. Mix the grout according to the manufacturer’s instructions. Be sure to pre-mix the resin before combining the two parts since the filled materials tend to settle. Fill the slot full of the encapsulation material. Using a trowel, distribute the encapsulation material along the sensor. Remove the tape on the sides of the slot as soon as the adhesive starts to cure.
11. Carefully remove the plumber’s putty or duct seal used to form the dams at both ends of the sensor.
12. Route the lead in cable through the slot cut for it and cover with loop sealant. Hot tar must not be used since the temperature is difficult to control, and it can burn the cable. Scatter clean dry sand to prevent sticking.

    Note: The lead-in cable slot shall run to the edge of pavement.
13. When the encapsulation material is fully cured (see manufacturers recommended cure time), grind the top of the encapsulation material flush with the road using an angle grinder. The profile should be flat or with a slight ‘mound’, provided that there is no concave portion to the curve.
14. Remove all work-related debris from the site. When the encapsulation material is fully cured, lanes may be opened to traffic.
15. Follow the manufacturers recommended cure time.

TRAFFIC SIGNS

When repairing a damaged flashing beacon or highway lighting standard, the Contractor shall reinstall any traffic signs that were attached to the standard. If these signs are damaged to the extent they cannot be reused, the Contractor shall immediately notify the Department so that replacement signs can be installed.

TRAVEL EXPENSE

The Contractor shall not be reimbursed for travel expenses, including "port to port" charges, incurred in fulfilling obligations under this contract. All such charges are to be included and paid for as part of the unit costs contained herein.

TRENCH AND BACKFILL FOR ELECTRICAL WORK

Description: This work shall consist of constructing and backfilling a trench for the accommodation of raceways, unit duct, and cables.

Materials: Materials shall be according to the following.

Item	Article/Section
(a) Fine Aggregate	1003.04
(b) Underground Cable Marking Tape	1066.05

CONSTRUCTION REQUIREMENTS

Trench: Trenching shall be as follows.

Trenches shall have a minimum depth of 2 ft or as otherwise indicated on the plans and shall not exceed 1 ft in width without prior approval of the Engineer. The trenches shall be constructed to permit easy installation of cable or unit duct without twisting kinks, or sharp bends. The bottom of the trench shall be built up with suitable compacted backfill material so the raceway, unit duct or cable will have a smooth bed.

If the trench depth is less than 1 ft because of rock or concrete, the Contractor shall cut a groove in the obstructing material, so the trench is 1 ft deep. The unit duct shall be laid in this groove and covered to grade with class SI concrete. Where the trench depth exceeds 1 ft but less than 2 ft because of rock, the bottom shall be made smooth and free of short radius dips by filling low sections with fine aggregate.

Where separate circuit runs are to be installed parallel with each other, one common trench shall be used.

At the locations where a trench crosses other existing cable systems, the trench shall be hand dug 6.5 ft to either side of the crossing.

The Contractor shall be responsible for damage incurred in any area of the project such as medians, pavement, shoulders, backslopes, driveways, and sidewalks and shall restore them to their original condition as directed by the Engineer.

Except where trenching is specifically indicated on the plans, the Contractor shall have the option to plow coilable nonmetallic conduit and unit duct or cable by lay-in plow-feeding. The installation depth shall be 2 ft below the finished grade or as shown on the plans.

The coilable nonmetallic conduit, duct, or cable shall be round and free of kinks when fed into the plow. When more than one coilable nonmetallic conduit, duct, or cable is placed into a single plowed cavity, they shall be free of twists. Before final wire and cable connections are made, the Contractor shall demonstrate that all conductors within the coilable nonmetallic conduit or duct are free to move.

Where another circuit is plowed in parallel to the first, the distance between the two shall be not less than 1 ft nor more than 2 ft.

Backfill: Backfill material shall be free of brick, rock, or any material that could damage the cable, duct, or conduit.

Backfill material for trenches in the subgrade of the proposed improvement, and for trenches outside of the subgrade where the inner edge of the trench is within 2 ft of the edge of the proposed pavement, curb, gutter, curb and gutter, stabilized shoulder, or sidewalk shall be fine aggregate, gradation FA 6.

Backfill shall be deposited in uniform lifts not exceeding 6 in. thick loose measure.

The material in each lift shall be mechanically compacted by tamping with power tools approved by the Engineer in such a manner as not to disturb, kink, or crush the cables, conductor, duct, or conduit.

Disposal of surplus material shall be according to Article 202.03.

Cable Marking Tape: Underground cable marking tape shall be installed a minimum of 6 in. and not more than 1 ft below finished grade for all underground cable and raceway runs. Underground cable marking tape with a reinforced metallic detection strip shall be used when specified.

Splicing of the underground cable marking tape shall be accomplished with metal clips to maintain electrical continuity along the entire length of the tape. In addition to metal clips, all splices must be wrapped with a waterproof adhesive tape to prevent corrosion of the metal core.

Method of Measurement: Trench and backfill, and trench and backfill in subgrade will be measured for payment in feet along the centerline of the trench.

Measurement will not be made for conduit which is pushed. Where separate circuit runs are placed in a common trench or plowed cavity, the trench will only be measured once for payment.

Cable marking tape will not be measured for payment.

Excavation in rock will be measured for payment according to Article 502.12

Basis of Payment: Trench and backfill will be included in the cost of Concrete Foundation, Type-D.

Excavation in rock will be paid for according to Article 502.13.

UNDERGROUND FACILITIES

The Contractor's attention is directed to the possible presence of state-owned underground electrical cable within the limits of the proposed improvement. The Contractor shall request the Illinois Department of Transportation in Effingham (217-342-3951) to locate the underground facilities, providing a minimum of 72 hours notice. The Illinois Department of Transportation IS NOT a member of the Joint Utility Locating Information for Excavators (JULIE) System.

Any damage to the underground facilities, caused by the Contractor resulting from his failure to contact the Illinois Department of Transportation as specified above or from negligent operation, shall be repaired to the satisfaction of the Department at the Contractor's expense, including temporary repairs which may be required to keep the facility operational while material is being obtained to make permanent repairs. Splicing of electric cable will not be allowed. Electric cable shall be replaced from pole to pole or controller.

WAIVER OF LIEN

The Department may, at its discretion, require waivers of lien for materials or authorized subcontracted work prior to payment for any goods or services.

WARRANTIES FOR SUPPLIES AND SERVICES

Contractor warrants that the supplies furnished under this contract will conform to the State’s manufacturing standards, specifications, drawing, samples or descriptions furnished by the State, including but not limited to all specifications attached as exhibits hereto; will be merchantable, of good quality and workmanship, free from defects for a period of 12 months or longer if specified in writing, and fit and sufficient for the intended use; will comply with all federal and state laws, regulations and ordinances pertaining to the manufacturing, packing, labeling, sale and delivery of the supplies; will be of good title and be free and clear of all liens and encumbrances; and will not infringe any patent, copyright or other intellectual property rights of any third party. Contractor agrees to reimburse the State for any losses, costs, damages or expenses, including without limitations, reasonable attorney’s fees and expenses, arising from failure of the supplies to meet such warranties.

Contractor shall ensure that all manufacturers’ warranties are transferred to the State and shall provide a copy of the warranty. These warranties shall be in addition to all other warranties (express, implied, or statutory) and shall survive the State’s payment, acceptance, inspection or failure to inspect the supplies.

WORK DURING PEAK HOURS

Contractor will be permitted to work on any day from dawn to dusk unless work requires a lane restriction in a high-volume area in which work may be restricted to non-rush hours.

The Contractor shall have all lanes of traffic open during peak hours in the appropriate direction. The Contractor will not be allowed to conduct any type of operation in the open lanes or any type of operation that would impede the flow of traffic during peak hours.

Peak hours, if applicable, will be shown on the work order and will be determined by the Engineer.

WORK ORDERS

No work of any kind is to be performed by the Contractor, unless a work order authorizing the work has been issued by the Engineer. Requests for emergency service calls may be initiated, by the Department, with a telephone call, faxed message, or email and followed by a written work order authorizing the work. The work order shall show the date and time issuance, type of facility, location and a description of the service required, or the problem reported and pay item(s). The work order will indicate a department district contact and telephone number for the Contractor to contract with any questions regarding the work order.

If at the time of service being performed, additional work of a minor nature (not to exceed $500) appears to be needed, the Contractor shall proceed with that work. If it appears that the additional work could result in a substantial addition or change to the current work order, the Contractor shall contact the Department’s district contact before proceeding with the additional work.

The date and time the Contractor’s work crew arrives at the location on the work order and the date and time the requested work is completed shall be noted on the Contractor’s billing invoice submitted to the Department for payment. If the work is not completed on the first trip, the Contractor shall record on the invoice the arrival and departure dates and times for all subsequent work crews until the work order is completed.

The Contractor shall advise the Department’s district contact upon arrival and departure of the site of all service calls and provide the status of work. The Contractor will be provided with an afterhours telephone number for the Department’s district contact.

WORK ORDER, ELECTRICAL MAINTENANCE

<table>
<tr><td colspan="3"> 

Division of Highways/District 7
400 West Wabash
Effingham, IL 62401
Telephone: 217-342-3951</td><td colspan="3">Electrical Maintenance
Work Order ____</td></tr>
<tr><td>Contractor</td><td></td><td>Date/Time Issued</td><td></td><td>Contractor Invoice No.</td><td></td></tr>
<tr><td colspan="6"></td></tr>
<tr><td>County/City</td><td></td><td>Route</td><td></td><td>Date/Time Completed</td><td></td></tr>
<tr><td colspan="6"></td></tr>
<tr><td>General Location</td><td colspan="2"></td><td>Date Submitted for Payment</td><td colspan="2"></td></tr>
<tr><td colspan="6">Work To Be Performed</td></tr>
<tr><td colspan="6">Special Instructions

* Please be reminded to follow the appropriate IDOT Traffic Control Standards when performing this work.</td></tr>
<tr><td colspan="3">Is work performed as a result of an accident? ☐Yes ☐No</td><td colspan="3">Accident Reference Number</td></tr>
<tr><td colspan="2"></td><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td colspan="2">Work Authorized By Date</td><td colspan="2">Invoice Reviewed By Date</td><td colspan="2">Supervisor Authorization Date</td></tr>
</table>

AUTOMATED FLAGGER ASSISTANCE DEVICES (BDE)

Effective: January 1, 2008 Revised: April 1, 2023

Description. This work shall consist of furnishing and operating automated flagger assistance devices (AFADs) as part of the work zone traffic control and protection for two-lane highways where two-way traffic is maintained over one lane of pavement in segments where no sideroads or entrances require deployment of additional flaggers. Use of these devices shall be at the option of the Contractor.

Equipment. AFADs shall be the STOP/SLOW or Red/Yellow Lens type mounted on a trailer or moveable cart meeting the requirements of the MUTCD and NCHRP 350 or MASH 2016, Category 4.

General. AFADs shall be placed at each end of the traffic control, where a flagger is shown on the plans. The AFAD shall be setup within five degrees of vertical.

Flagger symbol signs as shown on the plans shall be replaced with “BE PREPARED TO STOP” signs when the AFAD is in operation.

Personal communication devices shall not be used to operate the AFAD.

Flagging Requirements. Flaggers and flagging requirements shall be according to Article 701.13 of the Standard Specifications and the following.

Each AFAD shall be operated by a flagger trained to operate the specific AFAD to be deployed. A minimum of two flaggers shall be on site at all times during operation. Each flagger shall be positioned outside the lane of traffic and near each AFAD’s location.

Flagging equipment required for traditional flagging shall be available near each AFAD location in the event of AFAD equipment malfunction/failure.

For nighttime flagging, the AFAD and flagger shall be illuminated according to Article 701.13 of the Standard Specifications.

When not in use, AFADs will be considered non-operating equipment and shall be stored according to Article 701.11 of the Standard Specifications.

Basis of Payment. This work will not be paid for separately but shall be considered as included in the cost of the various traffic control items included in the contract.

CEMENT, FINELY DIVIDED MINERALS, ADMIXTURES; CONCRETE, AND MORTAR (BDE)

Effective: January 1, 2025

Revise the first paragraph of Article 285.05 of the Standard Specifications to read:

"**285.05 Fabric Formed Concrete Revetment Mat.** The grout shall consist of a mixture of cement, fine aggregate, and water so proportioned and mixed as to provide a pumpable slurry. Fly ash or ground granulated blast furnace (GGBF) slag, and concrete admixtures may be used at the option of the Contractor. The grout shall have an air content of not less than 6.0 percent nor more than 9.0 percent of the volume of the grout. The mix shall obtain a compressive strength of 2500 psi (17,000 kPa) at 28 days according to Article 1020.09."

Revise Article 302.02 of the Standard Specifications to read:

"**302.02 Materials.** Materials shall be according to the following.

	Item	Article/Section
(a)	Cement	1001
(b)	Water	1002
(c)	Hydrated Lime	1012.01
(d)	By-Product, Hydrated Lime	1012.02
(e)	By-Product, Non-Hydrated Lime	1012.03
(f)	Lime Slurry	1012.04
(g)	Fly Ash	1010
(h)	Soil for Soil Modification (Note 1)	1009.01
(i)	Bituminous Materials (Note 2)	1032

Note 1. This soil requirement only applies when modifying with lime (slurry or dry).

Note 2. The bituminous materials used for curing shall be emulsified asphalt RS-2, CRS-2, HFE 90, or HFE 150; rapid curing liquid asphalt RC-70; or medium curing liquid asphalt MC-70 or MC-250."

Revise Article 312.07(c) of the Standard Specifications to read:

"(c) Cement ..... 1001"

Add Article 312.07(i) of the Standard Specifications to read:

"(i) Ground Granulated Blast Furnace (GGBF) Slag ..... 1010"

Revise the first paragraph of Article 312.09 of the Standard Specifications to read:

"**312.09 Proportioning and Mix Design.** At least 60 days prior to start of placing CAM II, the Contractor shall submit samples of materials to be used in the work for proportioning and testing. The mixture shall contain a minimum of 200 lb (120 kg) of cement per cubic yard (cubic meter). Cement may be replaced with fly ash or ground granulated blast furnace (GGBF) slag according to Article 1020.05(c)(1) or 1020.05(c)(2), respectively, however the minimum cement content in

the mixture shall be 170 lbs/cu yd (101 kg/cu m). Blends of coarse and fine aggregates will be permitted, provided the volume of fine aggregate does not exceed the volume of coarse aggregate. The Engineer will determine the proportions of materials for the mixture according to the "Portland Cement Concrete Level III Technician Course" manual. However, the Contractor may substitute their own mix design. Article 1020.05(a) shall apply, and a Level III PCC Technician shall develop the mix design."

Revise Article 352.02 of the Standard Specifications to read:

"**352.02 Materials.** Materials shall be according to the following.

Item	Article/Section
(a) Cement (Note 1)	1001
(b) Soil for Soil-Cement Base Course	1009.03
(c) Water	1002
(d) Bituminous Materials (Note 2)	1032

Note 1. Bulk cement may be used for the traveling mixing plant method if the equipment for handling, weighing, and spreading the cement is approved by the Engineer.

Note 2. The bituminous materials used for curing shall be emulsified asphalt RS-2, CRS-2, HFE 90, or HFE 150; rapid curing liquid asphalt RC-70; or medium curing liquid asphalt MC-70 or MC-250."

Revise Article 404.02 of the Standard Specifications to read:

"**404.02 Materials.** Materials shall be according to the following.

Item	Article/Section
(a) Cement	1001
(b) Water	1002
(c) Fine Aggregate	1003.08
(d) Bituminous Material (Tack Coat)	1032.06
(e) Emulsified Asphalts (Note 1) (Note 2)	1032.06
(f) Fiber Modified Joint Sealer	1050.05
(g) Additives (Note 3)	

Note 1. When used for slurry seal, the emulsified asphalt shall be CQS-1h according to Article 1032.06(b).

Note 2. When used for micro-surfacing, the emulsified asphalt shall be CQS-1hP according to Article 1032.06(e).

Note 3. Additives may be added to the emulsion mix or any of the component materials to provide the control of the quick-traffic properties. They shall be included as part of the mix design and be compatible with the other components of the mix.

Revise the last sentence of the fourth paragraph of Article 404.08 of the Standard Specifications to read:

"When approved by the Engineer, the sealant may be dusted with fine sand, cement, or mineral filler to prevent tracking."

Revise Note 2 of Article 516.02 of the Standard Specifications to read:

"Note 2. The sand-cement grout mix shall be according to Section 1020 and shall be a 1:1 blend of sand and cement comprised of a Type I, IL, or II cement at 185 lb/cu yd (110 kg/cu m). The maximum water cement ratio shall be sufficient to provide a flowable mixture with a typical slump of 10 in. (250 mm)."

Revise Note 2 of Article 543.02 of the Standard Specifications to read:

"Note 2. The grout mixture shall be 6.50 hundredweight/cu yd (385 kg/cu m) of cement plus fine aggregate and water. Fly ash or ground granulated blast furnace (GGBF) slag may replace a maximum of 5.25 hundredweight/cu yd (310 kg/cu m) of the cement. The water/cement ratio, according to Article 1020.06, shall not exceed 0.60. An air-entraining admixture shall be used to produce an air content, according to Article 1020.08, of not less than 6.0 percent nor more than 9.0 percent of the volume of the grout. The Contractor shall have the option to use a water-reducing or high range water-reducing admixture."

Revise Article 583.01 of the Standard Specifications to read:

"**583.01 Description.** This work shall consist of placing cement mortar along precast, prestressed concrete bridge deck beams as required for fairing out any unevenness between adjacent deck beams prior to placing of waterproofing membrane and surfacing."

Revise Article 583.02(a) of the Standard Specifications to read:

"(a) Cement .....1001"

Revise the first paragraph of Article 583.03 of the Standard Specifications to read:

" **583.03 General.** This work shall only be performed when the air temperature is 45 °F (7 °C) and rising. The mixture for cement mortar shall consist of three parts sand to one part cement by volume. The amount of water shall be no more than that necessary to produce a workable, plastic mortar."

Revise Note 2/ in Article 1003.01(b) of the Standard Specifications to read:

"2/ Applies only to sand. Sand exceeding the colorimetric test standard of 11 (Illinois Modified AASHTO T 21) will be checked for mortar making properties according to Illinois Modified ASTM C 87 and shall develop a compressive strength at the age of 14 days when using Type I, IL, or II cement of not less than 95 percent of the comparable standard.

Revise the second sentence of Article 1003.02(e)(1) of the Standard Specifications to read:

"The test will be performed with Type I, IL, or II portland cement having a total equivalent alkali content ($Na_2O + 0.658K_2O$) of 0.90 percent or greater."

Revise the first sentence of the second paragraph of Article 1003.02(e)(3) of the Standard Specifications to read:

"The ASTM C 1293 test shall be performed with Type I, IL, or II portland cement having a total equivalent alkali content ($Na_2O + 0.658K_2O$) of 0.80 percent or greater."

Revise the second sentence of Article 1004.02(g)(1) of the Standard Specifications to read:

"The test will be performed with Type I, IL, or II portland cement having a total equivalent alkali content ($Na_2O + 0.658K_2O$) of 0.90 percent or greater."

Revise Article 1017.01 of the Standard Specifications to read:

"**1017.01 Requirements.** The mortar shall be high-strength according to ASTM C 387 and shall have a minimum 80.0 percent relative dynamic modulus of elasticity when tested by the Department according to Illinois Modified AASHTO T 161 or AASHTO T 161 when tested by an independent lab. The high-strength mortar shall have a water-soluble chloride ion content of less than 0.40 lb/cu yd (0.24 kg/cu m). The test shall be performed according to ASTM C 1218, and the high-strength mortar shall have an age of 28 to 42 days at the time of test. The ASTM C 1218 test shall be performed by an independent lab a minimum of once every five years, and the test results shall be provided to the Department. Mixing of the high-strength mortar shall be according to the manufacturer's specifications. The Department will maintain a qualified product list."

Revise the fourth sentence of Article 1018.01 of the Standard Specifications to read:

"The ASTM C 1218 test shall be performed by an independent lab a minimum of once every five years, and the test results shall be provided to the Department."

Revise Article 1019.02 of the Standard Specifications to read:

"**1019.02 Materials.** Materials shall be according to the following.

Item	Article/Section
(a) Cement	1001
(b) Water	1002
(c) Fine Aggregate for Controlled Low-Strength Material (CLSM)	1003.06
(d) Fly Ash	1010
(e) Ground Granulated Blast Furnace (GGBF) Slag	1010
(f) Admixtures (Note 1)	

Note 1. The air-entraining admixture may be in powder or liquid form. Prior to approval, a CLSM air-entraining admixture will be evaluated by the Department. The admixture shall be able to meet the air content requirements of Mix 2. The Department will maintain a qualified product list."

Revise Article 1019.05 of the Standard Specifications to read:

"**1019.05 Department Mix Design.** The Department mix design shall be Mix 1, 2, or 3 and shall be proportioned to yield approximately one cubic yard (cubic meter).

Mix 1	
Cement	50 lb (30 kg)
Fly Ash – Class C or F, and/or GGBF Slag	125 lb (74 kg)
Fine Aggregate – Saturated Surface Dry	2900 lb (1720 kg)
Water	50-65 gal (248-322 L)
Air Content	No air is entrained

Mix 2	
Cement	125 lb (74 kg)
Fine Aggregate – Saturated Surface Dry	2500 lb (1483 kg)
Water	35-50 gal (173-248 L)
Air Content	15-25 %

Mix 3	
Cement	40 lb (24 kg)
Fly Ash – Class C or F, and/or GGBF Slag	125 lb (74 kg)
Fine Aggregate – Saturated Surface Dry	2500 lb (1483 kg)
Water	35-50 gal (179-248 L)
Air Content	15-25 %”

Revise Article 1020.04, Table 1, Note (8) of the Standard Specifications to read:

“(8) In addition to the Type III portland cement, 100 lb/cu yd of ground granulated blast-furnace slag and 50 lb/cu yd of microsilica (silica fume) shall be used. For an air temperature greater than 85 ºF, the Type III portland cement may be replaced with Type I, IL, or II portland cement.”

Revise Article 1020.04, Table 1 (Metric), Note (8) of the Standard Specifications to read:

“(8) In addition to the Type III portland cement, 60 kg/cu m of ground granulated blast-furnace slag and 30 kg/cu m of microsilica (silica fume) shall be used. For an air temperature greater than 30 ºC, the Type III portland cement may be replaced with Type I, IL, or II portland cement.”

Revise the second paragraph of Article 1020.05(a) of the Standard Specifications to read:

“For a mix design using a portland-pozzolan cement, portland blast-furnace slag cement, portland-limestone cement, or replacing portland cement with finely divided minerals per Articles 1020.05(c) and 1020.05(d), the Contractor may submit a mix design with a minimum portland cement content less than 400 lbs/cu yd (237 kg/cu m), but not less than 375 lbs/cu yd (222 kg/cu m), if the mix design is shown to have a minimum relative dynamic modulus of elasticity of 80 percent determined according to AASHTO T 161. Testing shall be performed by an independent laboratory accredited by AASHTO re:source for Portland Cement Concrete.”

Revise the first sentence of the first paragraph of Article 1020.05(b) of the Standard Specifications to read:

"Corrosion inhibitors and concrete admixtures shall be according to the qualified product lists."

Delete the fourth and fifth sentences of the second paragraph of Article 1020.05(b) of the Standard Specifications.

Revise the third sentence of the second paragraph of Article 1020.05(b)(5) of the Standard Specifications to read:

"The qualified product lists of concrete admixtures shall not apply."

Revise second paragraph of Article 1020.05(b)(10) of the Standard Specifications to read:

"When calcium nitrite is used, it shall be added at the rate of 4 gal/cu yd (20 L/cu m) and shall be added to the mix immediately after all compatible admixtures have been introduced to the batch. Other corrosion inhibitors shall be added per the manufacturer's specifications."

Delete the third paragraph of Article 1020.05(b)(10) of the Standard Specifications.

Revise Article 1020.15(b)(1)c. of the Standard Specifications to read:

"c. The minimum portland cement content in the mixture shall be 375 lbs/cu yd (222 kg/cu m). When the total of organic processing additions, inorganic processing additions, and limestone addition exceed 5.0 percent in the cement, the minimum portland cement content in the mixture shall be 400 lbs/cu yd (237 kg/cu m). For a drilled shaft, foundation, footing, or substructure, the minimum portland cement may be reduced to as low as 330 lbs/cu yd (196 kg/cu m) if the concrete has adequate freeze/thaw durability. The Contractor shall provide freeze/thaw test results according to AASHTO T 161, and the relative dynamic modulus of elasticity of the mix design shall be a minimum of 80 percent. Testing shall be performed by an independent laboratory accredited by AASHTO re:source for Portland Cement Concrete. Freeze/thaw testing will not be required for concrete that will not be exposed to freezing and thawing conditions as determined by the Engineer."

Revise Article 1021.01 of the Standard Specifications to read:

"**1021.01 General.** Admixtures shall be furnished in liquid or powder form ready for use. The admixtures shall be delivered in the manufacturer's original containers, bulk tank trucks or such containers or tanks as are acceptable to the Engineer. Delivery shall be accompanied by a ticket which clearly identifies the manufacturer, the date of manufacture, and trade name of the material. Containers shall be readily identifiable as to manufacturer, the date of manufacture, and trade name of the material they contain.

Concrete admixtures shall be on one of the Department's qualified product lists. Unless otherwise noted, admixtures shall have successfully completed and remain current with the AASHTO Product Eval and Audit Concrete Admixture (CADD) testing program. For admixture submittals to the Department; the product brand name, manufacturer name, admixture type or types, an electronic link to the product's technical data sheet, and the NTPEP testing number which contains an electronic link to all test data shall be provided. In addition, a letter shall be

submitted certifying that no changes have been made in the formulation of the material since the most current round of tests conducted by AASHTO Product Eval and Audit. After 28 days of testing by AASHTO Product Eval and Audit, air-entraining admixtures may be provisionally approved and used on Departmental projects. For all other admixtures, unless otherwise noted, the time period after which provisionally approved status may be earned is 6 months.

The manufacturer shall include the following in the submittal to the AASHTO Product Eval and Audit CADD testing program: the manufacturing range for specific gravity, the midpoint and manufacturing range for residue by oven drying, and manufacturing range of pH. The submittal shall also include an infrared spectrophotometer trace no more than five years old.

For air-entraining admixtures according to Article 1021.02, the specific gravity allowable manufacturing range established by the manufacturer shall be according to AASHTO M 194. For residue by oven drying and pH, the allowable manufacturing range and test methods shall be according to AASHTO M 194.

For admixtures according to Articles 1021.03, 1021.04, 1021.05, 1021.06, 1021.07, and 1021.08, the pH allowable manufacturing range established by the manufacturer shall be according to ASTM E 70. For specific gravity and residue by oven drying, the allowable manufacturing range and test methods shall be according to AASHTO M 194.

All admixtures, except chloride-based accelerators, shall contain a maximum of 0.3 percent chloride by weight (mass) as determined by an appropriate test method. To verify the test result, the Department will use Illinois Modified AASHTO T 260, Procedure A, Method 1.

Prior to final approval of an admixture, the Engineer reserves the right to request a sample for testing. The test and reference concrete mixtures tested by the Engineer will contain a cement content of 5.65 cwt/cu yd (335 kg/cu m). For freeze-thaw testing, the Department will perform the test according to Illinois Modified AASHTO T 161. The flexural strength test will be performed according to AASHTO T 177. If the Engineer decides to test the admixture, the manufacturer shall submit AASHTO T 197 water content and set time test results on the standard cement used by the Department. The manufacturer may select their lab or an independent lab to perform this testing. The laboratory is not required to be accredited by AASHTO.

Random field samples may be taken by the Department to verify an admixture meets specification. A split sample will be provided to the manufacturer if requested. Admixtures that do not meet specification requirements or an allowable manufacturing range established by the manufacturer shall be replaced with new material."

Revise Article 1021.03 of the Standard Specifications to read:

"**1021.03 Retarding and Water-Reducing Admixtures.** The admixture shall be according to the following.

(a) Retarding admixtures shall be according to AASHTO M 194, Type B (retarding) or Type D (water-reducing and retarding).

(b) Water-reducing admixtures shall be according to AASHTO M 194, Type A.

(c) High range water-reducing admixtures shall be according to AASHTO M 194, Type F (high range water-reducing) or Type G (high range water-reducing and retarding)."

Revise Article 1021.05 of the Standard Specifications to read:

"**1021.05 Self-Consolidating Admixtures.** Self-consolidating admixture systems shall consist of either a high range water-reducing admixture only or a high range water-reducing admixture combined with a separate viscosity modifying admixture. The one or two component admixture system shall be capable of producing a concrete that can flow around reinforcement and consolidate under its own weight without additional effort and without segregation.

High range water-reducing admixtures shall be according to AASHTO M 194, Type F.

Viscosity modifying admixtures shall be according to AASHTO M 194, Type S (specific performance)."

Revise Article 1021.06 of the Standard Specifications to read:

"**1021.06 Rheology-Controlling Admixture.** Rheology-controlling admixtures shall be capable of producing a concrete mixture with a lower yield stress that will consolidate easier for slipform applications used by the Contractor. Rheology-controlling admixtures shall be according to AASHTO M 194, Type S (specific performance)."

Revise Article 1021.07 of the Standard Specifications to read:

"**1021.07 Corrosion Inhibitor.** The corrosion inhibitor shall be according to one of the following.

(a) Calcium Nitrite. Corrosion inhibitors shall contain a minimum 30 percent calcium nitrite by weight (mass) of solution and shall comply with either the requirements of AASHTO M 194, Type C (accelerating) or the requirements of ASTM C 1582. The corrosion inhibiting performance requirements of ASTM C 1582 shall not apply.

(b) Other Materials. The corrosion inhibitor shall be according to ASTM C 1582.

For submittals requiring testing according to ASTM M 194, Type C (accelerating), the admixture shall meet the requirements of the AASHTO Product Eval and Audit CADD testing program according to Article 1021.01.

For submittals requiring testing according to ASTM C 1582, a report prepared by an independent laboratory accredited by AASHTO re:source for portland cement concrete shall be provided. The report shall show the results of physical tests conducted no more than five years prior to the time of submittal, according to applicable specifications. However, ASTM G 109 test information specified in ASTM C 1582 is not required to be from an independent accredited lab. All other information in ASTM C 1582 shall be from an independent accredited lab. Test data and other information required to be submitted to AASHTO Product Eval and Audit according to Article 1021.01, shall instead be submitted directly to the Department."

Add Article 1021.08 of the Standard Specifications as follows:

"**1021.08 Other Specific Performance Admixtures.** Other specific performance admixtures shall, at a minimum, be according to AASHTO M 194, Type S (specific performance). The

Department also reserves the right to require other testing, as determined by the Engineer, to show evidence of specific performance characteristics.

Initial testing according to AASHTO M 194 may be conducted under the AASHTO Product Eval and Audit CADD testing program according to Article 1021.01, or by an independent laboratory accredited by AASHTO re:source for Portland Cement Concrete. In either case, test data and other information required to be submitted to AASHTO Product Eval and Audit according to Article 1021.01, shall also be submitted directly to the Department. The independent accredited lab report shall show the results of physical tests conducted no more than five years prior to the time of submittal, according to applicable specifications."

Revise Article 1024.01 of the Standard Specifications to read:

"**1024.01 Requirements for Grout.** The grout shall be proportioned by dry volume, thoroughly mixed, and shall have a minimum temperature of 50 °F (10 °C). Water shall not exceed the minimum needed for placement and finishing.

Materials for the grout shall be according to the following.

Item	Article/Section
(a) Cement	1001
(b) Water	1002
(c) Fine Aggregate	1003.02
(d) Fly Ash	1010
(e) Ground Granulated Blast Furnace (GGBF) Slag	1010
(f) Concrete Admixtures	1021"

Revise Note 1 of Article 1024.02 of the Standard Specifications to read:

"Note 1. Nonshrink grout shall be according to Illinois Modified ASTM C 1107.

The nonshrink grout shall have a water-soluble chloride ion content of less than 0.40 lb/cu yd (0.24 kg/cu m). The test shall be performed according to ASTM C 1218, and the grout shall have an age of 28 to 42 days at the time of test. The ASTM C 1218 test shall be performed by an independent lab a minimum of once every five years, and the test results shall be provided to the Department. Mixing of the nonshrink grout shall be according to the manufacturer's specifications. The Department will maintain a qualified product list."

Revise Article 1029.02 of the Standard Specifications to read:

" **1029.02 Materials.** Materials shall be according to the following.

Item	Article/Section
(a) Cement	1001
(b) Fly Ash	1010
(c) Ground Granulated Blast Furnace (GGBF) Slag	1010
(d) Water	1002
(e) Fine Aggregate	1003
(f) Concrete Admixtures	1021
(g) Foaming Agent (Note 1)	

Note 1. The manufacturer shall submit infrared spectrophotometer trace and test results indicating the foaming agent meets the requirements of ASTM C 869 in order to be on the Department's qualified product list. Submitted data/results shall not be more than five years old."

Revise the second paragraph of Article 1103.03(a)(4) the Standard Specifications to read:

"The dispenser system shall provide a visual indication that the liquid admixture is actually entering the batch, such as via a transparent or translucent section of tubing or by independent check with an integrated secondary metering device. If approved by the Engineer, an alternate indicator may be used for admixtures dosed at rates of 25 oz/cwt (1630 mL/100 kg) or greater, such as accelerating admixtures, corrosion inhibitors, and viscosity modifying admixtures."

Revise the first two sections of Check Sheet #11 of the Supplemental Specifications and Recurring Special Provisions to read:

"Description. This work shall consist of filling voids beneath rigid and composite pavements with cement grout.

Materials. Materials shall be according to the following Articles of Division 1000 - Materials of the Standard Specifications:

Item	Article/Section
(a) Cement	1001
(b) Water	1002
(c) Fly Ash	1010
(d) Ground Granulated Blast Furnace (GGBF) Slag	1010
(e) Admixtures	1021
(f) Packaged Rapid Hardening Mortar or Concrete	1018"

Revise the third paragraph of Materials Note 2 of Check Sheet #28 of the Supplemental Specifications and Recurring Special Provisions to read:

"The Department will maintain a qualified product list of synthetic fibers, which will include the minimum required dosage rate. For the minimum required fiber dosage rate based on the Illinois Modified ASTM C 1609 test, a report prepared by an independent laboratory accredited by AASHTO re:source for Portland Cement Concrete shall be provided. The report shall show results of tests conducted no more than five years prior to the time of submittal."

COMPENSABLE DELAY COSTS (BDE)

Effective: June 2, 2017 Revised: April 1, 2019

Revise Article 107.40(b) of the Standard Specifications to read:

"(b) Compensation. Compensation will not be allowed for delays, inconveniences, or damages sustained by the Contractor from conflicts with facilities not meeting the above definition; or if a conflict with a utility in an unanticipated location does not cause a shutdown of the work or a documentable reduction in the rate of progress exceeding the limits set herein. The provisions of Article 104.03 notwithstanding, compensation for delays caused by a utility in an unanticipated location will be paid according to the provisions of this Article governing minor and major delays or reduced rate of production which are defined as follows.

(1) Minor Delay. A minor delay occurs when the work in conflict with the utility in an unanticipated location is completely stopped for more than two hours, but not to exceed two weeks.

(2) Major Delay. A major delay occurs when the work in conflict with the utility in an unanticipated location is completely stopped for more than two weeks.

(3) Reduced Rate of Production Delay. A reduced rate of production delay occurs when the rate of production on the work in conflict with the utility in an unanticipated location decreases by more than 25 percent and lasts longer than seven calendar days."

Revise Article 107.40(c) of the Standard Specifications to read:

"(c) Payment. Payment for Minor, Major, and Reduced Rate of Production Delays will be made as follows.

(1) Minor Delay. Labor idled which cannot be used on other work will be paid for according to Article 109.04(b)(1) and (2) for the time between start of the delay and the minimum remaining hours in the work shift required by the prevailing practice in the area.

Equipment idled which cannot be used on other work, and which is authorized to standby on the project site by the Engineer, will be paid for according to Article 109.04(b)(4).

(2) Major Delay. Labor will be the same as for a minor delay.

Equipment will be the same as for a minor delay, except Contractor-owned equipment will be limited to two weeks plus the cost of move-out to either the Contractor's yard or another job and the cost to re-mobilize, whichever is less. Rental equipment may be paid for longer than two weeks provided the Contractor presents adequate support to the Department (including lease agreement) to show retaining equipment on the job is the most economical course to follow and in the public interest.

(3) Reduced Rate of Production Delay. The Contractor will be compensated for the reduced productivity for labor and equipment time in excess of the 25 percent threshold for that portion of the delay in excess of seven calendar days. Determination of compensation will be in accordance with Article 104.02, except labor and material additives will not be permitted.

Payment for escalated material costs, escalated labor costs, extended project overhead, and extended traffic control will be determined according to Article 109.13."

Revise Article 108.04(b) of the Standard Specifications to read:

"(b) No working day will be charged under the following conditions.

(1) When adverse weather prevents work on the controlling item.

(2) When job conditions due to recent weather prevent work on the controlling item.

(3) When conduct or lack of conduct by the Department or its consultants, representatives, officers, agents, or employees; delay by the Department in making the site available; or delay in furnishing any items required to be furnished to the Contractor by the Department prevents work on the controlling item.

(4) When delays caused by utility or railroad adjustments prevent work on the controlling item.

(5) When strikes, lock-outs, extraordinary delays in transportation, or inability to procure critical materials prevent work on the controlling item, as long as these delays are not due to any fault of the Contractor.

(6) When any condition over which the Contractor has no control prevents work on the controlling item."

Revise Article 109.09(f) of the Standard Specifications to read:

"(f) Basis of Payment. After resolution of a claim in favor of the Contractor, any adjustment in time required for the work will be made according to Section 108. Any adjustment in the costs to be paid will be made for direct labor, direct materials, direct equipment, direct jobsite overhead, direct offsite overhead, and other direct costs allowed by the resolution. Adjustments in costs will not be made for interest charges, loss of anticipated profit, undocumented loss of efficiency, home office overhead and unabsorbed overhead other than as allowed by Article 109.13, lost opportunity, preparation of claim expenses and other consequential indirect costs regardless of method of calculation.

The above Basis of Payment is an essential element of the contract and the claim cost recovery of the Contractor shall be so limited."

Add the following to Section 109 of the Standard Specifications.

"**109.13 Payment for Contract Delay.** Compensation for escalated material costs, escalated labor costs, extended project overhead, and extended traffic control will be allowed when such costs result from a delay meeting the criteria in the following table.

Contract Type	Cause of Delay	Length of Delay
Working Days	Article 108.04(b)(3) or Article 108.04(b)(4)	No working days have been charged for two consecutive weeks.
Completion Date	Article 108.08(b)(1) or Article 108.08(b)(7)	The Contractor has been granted a minimum two week extension of contract time, according to Article 108.08.

Payment for each of the various costs will be according to the following.

(a) Escalated Material and/or Labor Costs. When the delay causes work, which would have otherwise been completed, to be done after material and/or labor costs have increased, such increases will be paid. Payment for escalated material costs will be limited to the increased costs substantiated by documentation furnished by the Contractor. Payment for escalated labor costs will be limited to those items in Article 109.04(b)(1) and (2), except the 35 percent and 10 percent additives will not be permitted.

(b) Extended Project Overhead. For the duration of the delay, payment for extended project overhead will be paid as follows.

(1) Direct Jobsite and Offsite Overhead. Payment for documented direct jobsite overhead and documented direct offsite overhead, including onsite supervisory and administrative personnel, will be allowed according to the following table.

Original Contract Amount	Supervisory and Administrative Personnel
Up to $5,000,000	One Project Superintendent
Over $ 5,000,000 - up to $25,000,000	One Project Manager, One Project Superintendent or Engineer, and One Clerk
Over $25,000,000 - up to $50,000,000	One Project Manager, One Project Superintendent, One Engineer, and One Clerk
Over $50,000,000	One Project Manager, Two Project Superintendents, One Engineer, and One Clerk

(2) Home Office and Unabsorbed Overhead. Payment for home office and unabsorbed overhead will be calculated as 8 percent of the total delay cost.

(c) Extended Traffic Control. Traffic control required for an extended period of time due to the delay will be paid for according to Article 109.04.

When an extended traffic control adjustment is paid under this provision, an adjusted unit price as provided for in Article 701.20(a) for increase or decrease in the value of work by more than ten percent will not be paid.

Upon payment for a contract delay under this provision, the Contractor shall assign subrogation rights to the Department for the Department's efforts of recovery from any other party for monies paid by the Department as a result of any claim under this provision. The Contractor shall fully cooperate with the Department in its efforts to recover from another party any money paid to the Contractor for delay damages under this provision."

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)

Effective: September 1, 2000 Revised: January 2, 2025

1. OVERVIEW AND GENERAL OBLIGATION. The Department of Transportation, as a recipient of federal financial assistance, is required to take all necessary and reasonable steps to ensure nondiscrimination in the award and administration of contracts. Consequently, the federal regulatory provisions of 49 CFR Part 26 apply to this contract concerning the utilization of disadvantaged business enterprises. For the purposes of this Special Provision, a disadvantaged business enterprise (DBE) means a business certified in accordance with the requirements of 49 CFR Part 26 and listed in the Illinois Unified Certification Program (IL UCP) DBE Directory. Award of the contract is conditioned on meeting the requirements of 49 CFR Part 26, and failure by the Contractor to carry out the requirements of Part 26 is a material breach of the contract and may result in the termination of the contract or such other remedies as the Department deems appropriate.

2. CONTRACTOR ASSURANCE. All assurances set forth in FHWA 1273 are hereby incorporated by reference and will be physically attached to the final contract and all subcontracts.

3. CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR. The Department has determined the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies and that, in the absence of unlawful discrimination and in an arena of fair and open competition, DBE companies can be expected to perform **0.00 %** of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will only award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work in accordance with the requirements of 49 CFR 26.53 and SBE Memorandum No. 24-02.

4. IDENTIFICATION OF CERTIFIED DBE. Information about certified DBE Contractors can be found in the Illinois UCP Directory. Bidders can obtain additional information and assistance with identifying DBE-certified companies at the Department's website or by contacting the Department's Bureau of Small Business Enterprises at (217) 785-4611.

5. BIDDING PROCEDURES. Compliance with this Special Provision and SBE Policy Memorandum 24-02 is a material bidding requirement. The following shall be included with the bid.

   (a) DBE Utilization Plan (form SBE 2026) documenting enough DBE participation has been obtained to meet the goal, or a good faith effort has been made to meet the goal even though the efforts did not succeed in obtaining enough DBE participation to meet the goal.

(b) Applicable DBE Participation Statement (form SBE 2023, 2024, and/or 2025) for each DBE firm the bidder has committed to perform the work to achieve the contract goal.

The required forms and documentation shall be submitted as a single .pdf file using the "Integrated Contractor Exchange (iCX)" application within the Department's "EBids System".

The Department will not accept a bid if it does not meet the bidding procedures set forth herein and the bid will be declared non-responsive. A bidder declared non-responsive for failure to meet the bidding procedures will not give rise to an administrative reconsideration. In the event the bid is declared non-responsive, the Department may elect to cause the forfeiture of the penal sum of the bidder's proposal guaranty and may deny authorization to bid the project if re-advertised for bids.

6. UTILZATION PLAN EVALUATION. The contract will not be awarded until the Utilization Plan is approved. All information submitted by the bidder must be complete, accurate, and adequately document the bidder has committed to DBE participation sufficient to meet the goal, or that the bidder has made good faith efforts to do so, in the event the bidder cannot meet the goal, in order for the Department to commit to the performance of the contract by the bidder.

   The Utilization Plan will be approved by the Department if the Utilization Plan documents sufficient commercially useful DBE work to meet the contract goal or the Department determines, based upon the documentation submitted, that the bidder has made a good faith effort to meet the contract goal pursuant to 49 CFR Part 26, Appendix A and the requirements of SBE 2026.

   If the Department determines that a good faith effort has not been made, the Department will notify the responsible company official designated in the Utilization Plan of that determination in accordance with SBE Policy Memorandum 24-02.

7. CALCULATING DBE PARTICIPATION. The Utilization Plan values represent work the bidder commits to have performed by the specified DBEs and paid for upon satisfactory completion. The Department is only able to count toward the achievement of the overall goal and the contract goal the value of payments made for the work actually performed by DBE firms. In addition, a DBE must perform a commercially useful function on the contract to be counted. A commercially useful function is generally performed when the DBE is responsible for the work and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. The Department and Contractor are governed by the provisions of 49 CFR Part 26.55(c) on questions of commercially useful functions as it affects the work. Specific guidelines for counting goal credit are provided in 49 CFR Part 26.55. In evaluating Utilization Plans for award the Department will count goal credit as set forth in Part 26 and in accordance with SBE Policy Memorandum 24-02.

8. CONTRACT COMPLIANCE. The Contractor must utilize the specific DBEs listed to perform the work and supply the materials for which each DBE is listed in the Contractor's approved Utilization Plan, unless the Contractor obtains the Department's written consent to terminate the DBE or any portion of its work. The DBE Utilization Plan approved by SBE is a condition-of-award, and any deviation to that Utilization Plan, the work set forth therein to be performed by DBE firms, or the DBE firms specified to perform that work, must be approved, in writing, by the Department in accordance with federal regulatory requirements. Deviation

from the DBE Utilization Plan condition-of-award without such written approval is a violation of the contract and may result in termination of the contract or such other remedy the Department deems appropriate. The following administrative procedures and remedies govern the compliance by the Contractor with the contractual obligations established by the Utilization Plan.

(a) NOTICE OF DBE PERFORMANCE. The Contractor shall provide the Engineer with at least three days advance notice of when all DBE firms are expected to perform the work committed under the Contractor's Utilization Plan.

(b) SUBCONTRACT. If awarded the contract, the Contractor is required to enter into written subcontracts with all DBE firms indicated in the approved Utilization Plan and must provide copies of fully executed DBE subcontracts to the Department upon request. Subcontractors shall ensure that all lower tier subcontracts or agreements with DBEs to supply labor or materials be performed in accordance with this Special Provision.

(c) PAYMENT TO DBE FIRMS. The Department is prohibited by federal regulations from crediting the participation of a DBE included in the Utilization Plan toward either the contract goal or the Department's overall goal until the amount to be applied toward the goal has been paid to the DBE. The Contractor shall document and report all payments for work performed by DBE certified firms in accordance with Article 109.11 of the Standard Specifications. All records of payment for work performed by DBE certified firms shall be made available to the Department upon request.

(d) FINAL PAYMENT. After the performance of the final item of work or trucking, or delivery of material by a DBE and final payment to the DBE by the Contractor, but not later than 30 calendar days after payment has been made by the Department to the Contractor for such work or material, the Contractor shall submit a DBE Payment Agreement (form SBE 2115) to the Engineer. If the Contractor does not have the full amount of work indicated in the Utilization Plan performed by the DBE companies indicated in the Utilization Plan and after good faith efforts are reviewed, the Department may deduct from contract payments to the Contractor the amount of the goal not achieved as liquidated and ascertained damages.

(g) ENFORCEMENT. The Department reserves the right to withhold payment to the Contractor to enforce the provisions of this Special Provision. Final payment shall not be made on the contract until such time as the Contractor submits sufficient documentation demonstrating achievement of the goal in accordance with this Special Provision or after liquidated damages have been determined and collected.

ILLINOIS WORKS APPRENTICESHIP INITIATIVE – STATE FUNDED CONTRACTS (BDE)

Effective: June 2, 2021 Revised: April 2, 2024

Illinois Works Jobs Program Act (30 ILCS 559/20-1 et seq.). For contracts having an awarded contract value of $500,000 or more, the Contractor shall comply with the Illinois Works Apprenticeship Initiative (30 ILCS 559/20-20 to 20-25) and all applicable administrative rules. The goal of the Illinois Apprenticeship Works Initiative is that apprentices will perform either 10% of the total labor hours actually worked in each prevailing wage classification or 10% of the estimated labor hours in each prevailing wage classification, whichever is less. Of this goal, at least 50% of the labor hours of each prevailing wage classification performed by apprentices shall be performed by graduates of the Illinois Works Pre-Apprenticeship Program, the Illinois Climate Works Pre-Apprenticeship Program, or the Highway Construction Careers Training Program.

The Contractor may seek from the Department of Commerce and Economic Opportunity (DCEO) a waiver or reduction of this goal in certain circumstances pursuant to 30 ILCS 559/20-20(b). The Contractor shall ensure compliance during the term of the contract and will be required to report on and certify its compliance. An apprentice use plan, apprentice hours, and a compliance certification shall be submitted to the Engineer on forms provided by the Department and/or DCEO.

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (BDE)

Effective: January 1, 2024 Revised: April 1, 2024

Revise the first paragraph of Article 669.04 of the Standard Specifications to read:

"**669.04 Regulated Substances Monitoring.** Regulated substances monitoring includes environmental observation and field screening during regulated substances management activities. The excavated soil and groundwater within the work areas shall be managed as either uncontaminated soil, hazardous waste, special waste, or non-special waste.

As part of the regulated substances monitoring, the monitoring personnel shall perform and document the applicable duties listed on form BDE 2732 "Regulated Substances Monitoring Daily Record (RSMDR)"."

Revise the first two sentences of the nineteenth paragraph of Article 669.05 of the Standard Specifications to read:

"The Contractor shall coordinate waste disposal approvals with the disposal facility and provide the specific analytical testing requirements of that facility. The Contractor shall make all arrangements for collection, transportation, and analysis of landfill acceptance testing."

Revise the last paragraph of Article 669.05 of the Standard Specifications to read:

"The Contractor shall select a permitted landfill facility or CCDD/USFO facility meeting the requirements of 35 Ill. Admin. Code Parts 810-814 or Part 1100, respectively. The Department

will review and approve or reject the facility proposed by the Contractor based upon information provided in BDE 2730. The Contractor shall verify whether the selected facility is compliant with those applicable standards as mandated by their permit and whether the facility is presently, has previously been, or has never been, on the United States Environmental Protection Agency (U.S. EPA) National Priorities List or the Resource Conservation and Recovery Act (RCRA) List of Violating Facilities. The use of a Contractor selected facility shall in no manner delay the construction schedule or alter the Contractor's responsibilities as set forth."

Revise the first paragraph of Article 669.07 of the Standard Specifications to read:

"**669.07 Temporary Staging.** Soil classified according to Articles 669.05(a)(2), (b)(1), or (c) may be temporarily staged at the Contractor's option. All other soil classified according to Articles 669.05(a)(1), (a)(3), (a)(4), (a)(5), (a)(6), or (b)(2) shall be managed and disposed of without temporary staging to the greatest extent practicable. If circumstances beyond the Contractor's control require temporary staging of these latter materials, the Contractor shall request approval from the Engineer in writing.

Topsoil for re-use as final cover which has been field screened and found not to exhibit PID readings over daily background readings as documented on the BDE 2732, visual staining or odors, and is classified according to Articles 669.05(a)(2), (a)(3), (a)(4), (b)(1), or (c) may be temporarily staged at the Contractor's option."

Add the following paragraph after the sixth paragraph of Article 669.11 of the Standard Specifications.

"The sampling and testing of effluent water derived from dewatering discharges for priority pollutants volatile organic compounds (VOCs), priority pollutants semi-volatile organic compounds (SVOCs), or priority pollutants metals, will be paid for at the contract unit price per each for VOCS GROUNDWATER ANALYSIS using EPA Method 8260B, SVOCS GROUNDWATER ANALYSIS using EPA Method 8270C, or RCRA METALS GROUNDWATER ANALYSIS using EPA Methods 6010B and 7471A. This price shall include transporting the sample from the job site to the laboratory."

Revise the first sentence of the eight paragraph of Article 669.11 of the Standard Specifications to read:

"Payment for temporary staging of soil classified according to Articles 669.05(a)(1), (a)(3), (a)(4), (a)(5), (a)(6), or (b)(2) to be managed and disposed of, if required and approved by the Engineer, will be paid according to Article 109.04."

SHORT TERM AND TEMPORARY PAVEMENT MARKINGS (BDE)

Effective: April 1, 2024 Revised: April 2, 2024

Revise Article 701.02(d) of the Standard Specifications to read:

"(d) Pavement Marking Tapes (Note 3) .....1095.06"

Add the following Note to the end of Article 701.02 of the Standard Specifications:

"Note 3. White or yellow pavement marking tape that is to remain in place longer than 14 days shall be Type IV tape."

Revise Article 703.02(c) of the Standard Specifications to read:

"(c) Pavement Marking Tapes (Note 1) .....1095.06"

Add the following Note to the end of Article 703.02 of the Standard Specifications:

"Note 1. White or yellow pavement marking tape that is to remain in place longer than 14 days shall be Type IV tape."

Revise Article 1095.06 of the Standard Specifications to read:

"**1095.06 Pavement Marking Tapes.** Type I white or yellow marking tape shall consist of glass spheres embedded into a binder on a foil backing that is precoated with a pressure sensitive adhesive. The spheres shall be of uniform gradation and distributed evenly over the surface of the tape.

Type IV tape shall consist of white or yellow tape with wet reflective media incorporated to provide immediate and continuing retroreflection in wet and dry conditions. The wet retroreflective media shall be bonded to a durable polyurethane surface. The patterned surface shall have approximately 40 ± 10 percent of the surface area raised and presenting a near vertical face to traffic from any direction. The channels between the raised areas shall be substantially free of exposed reflective elements or particles.

Blackout tape shall consist of a matte black, non-reflective, patterned surface that is precoated with a pressure sensitive adhesive.

(a) Color. The white and yellow markings shall meet the following requirements for daylight reflectance and color, when tested, using a color spectrophotometer with 45 degrees circumferential/zero degree geometry, illuminant D65, and two degree observer angle. The color instrument shall measure the visible spectrum from 380 to 720 nm with a wavelength measurement interval and spectral bandpass of 10 nm.

Color	Daylight Reflectance %Y
White	65 min.
Yellow *	36 - 59

*Shall match Aerospace Material Specification Standard 595 33538 (Orange Yellow) and the chromaticity limits as follows.

x	0.490	0.475	0.485	0.530
y	0.470	0.438	0.425	0.456

(b) Retroreflectivity. The white and yellow markings shall be retroreflective. Reflective values measured in accordance with the photometric testing procedure of ASTM D 4061 shall not be less than those listed in the table below. The coefficient of retroreflected luminance, R_L, shall be expressed as average millicandelas/footcandle/sq ft (millicandelas/lux/sq m), measured on a 3.0 x 0.5 ft (900 mm x 150 mm) panel at 86 degree entrance angle.

Coefficient of Retroreflected Luminance, R_L, Dry					
Type I			Type IV		
Observation Angle	White	Yellow	Observation Angle	White	Yellow
0.2°	2700	2400	0.2°	1300	1200
0.5°	2250	2000	0.5°	1100	1000

Wet retroreflectance shall be measured for Type IV under wet conditions according to ASTM E 2177 and meet the following.

Wet Retroreflectance, Initial R_L	
Color	R_L 1.05/88.76
White	300
Yellow	200

(c) Skid Resistance. The surface of Type IV and blackout markings shall provide a minimum skid resistance of 45 BPN when tested according to ASTM E 303.

(d) Application. The pavement marking tape shall have a precoated pressure sensitive adhesive and shall require no activation procedures. Test pieces of the tape shall be applied according to the manufacturer's instructions and tested according to ASTM D 1000, Method A, except that a stiff, short bristle roller brush and heavy hand pressure will be substituted for the weighted rubber roller in applying the test pieces to the metal test panel. Material tested as directed above shall show a minimum adhesion value of 750 g/in. (30 g/mm) width at the temperatures specified in ASTM D 1000. The adhesive shall be resistant to oils, acids, solvents, and water, and shall not leave objectionable stains or residue after removal. The material shall be flexible and conformable to the texture of the pavement.

(e) Durability. Type IV and blackout tape shall be capable of performing for the duration of a normal construction season and shall then be capable of being removed intact or in large sections at pavement temperatures above 40 °F (4 °C) either manually or with a roll-up device without the use of sandblasting, solvents, or grinding. The Contractor shall provide a manufacturer’s certification that the material meets the requirements for being removed after the following minimum traffic exposure based on transverse test decks with rolling traffic.

(1) Time in place - 400 days
(2) ADT per lane - 9,000 (28 percent trucks)
(3) Axle hits - 10,000,000 minimum

Samples of the material applied to standard specimen plates will be measured for thickness and tested for durability in accordance with ASTM D 4060, using a CS-17 wheel and 1000-gram load, and shall meet the following criteria showing no significant change in color after being tested for the number of cycles indicated.

Test	Type I	Type IV	Blackout
Minimum Initial Thickness, mils (mm)	20 (0.51)	65 (1.65) 1/ 20 (0.51) 2/	65 (1.65) 1/ 20 (0.51) 2/
Durability (cycles)	5,000	1,500	1,500

1/ Measured at the thickest point of the patterned surface.

2/ Measured at the thinnest point of the patterned surface.

The pavement marking tape, when applied according to the manufacturer's recommended procedures, shall be weather resistant and shall show no appreciable fading, lifting, or shrinkage during the useful life of the marking. The tape, as applied, shall be of good appearance, free of cracks, and edges shall be true, straight, and unbroken.

(f) Sampling and Inspection.

(1) Sample. Prior to approval and use of Type IV pavement marking tape, the manufacturer shall submit a notarized certification from an independent laboratory, together with the results of all tests, stating that the material meets the requirements as set forth herein. The independent laboratory test report shall state the lot tested, the manufacturer’s name, and the date of manufacture.

After initial approval by the Department, samples and certification by the manufacturer shall be submitted for each subsequent batch of Type IV tape used. The manufacturer shall submit a certification stating that the material meets the requirements as set forth herein and is essentially identical to the material sent for qualification. The certification shall state the lot tested, the manufacturer’s name, and the date of manufacture.

(2) Inspection. The Contractor shall provide a manufacturer’s certification to the Engineer stating the material meets all requirements of this specification. All material samples for acceptance tests shall be taken or witnessed by a representative of the Bureau of Materials and shall be submitted to the Engineer of Materials, 126 East Ash Street, Springfield, Illinois 62704-4766 at least 30 days in advance of the pavement marking operations.”

SPEED DISPLAY TRAILER (BDE)

Effective: April 2, 2014 Revised: January 1, 2022

Revise the last paragraph of Article 701.11 of the Standard Specifications to read:

"When not being utilized to inform and direct traffic, sign trailers, speed display trailers, arrow boards, and portable changeable message boards shall be treated as nonoperating equipment."

Add the following to Article 701.15 of the Standard Specifications:

"(m) Speed Display Trailer. A speed display trailer is used to enhance safety of the traveling public and workers in work zones by alerting drivers of their speed, thus deterring them from driving above the posted work zone speed limit."

Add the following to Article 701.20 of the Standard Specifications:

"(k) When speed display trailers are shown on the Standard, this work will not be paid for separately but shall be considered as included in the cost of the Standard.

For all other speed display trailers, this work will be paid for at the contract unit price per calendar month or fraction thereof for each trailer as SPEED DISPLAY TRAILER."

Add the following to Article 1106.02 of the Standard Specifications:

"(o) Speed Display Trailer. The speed display trailer shall consist of a LED speed indicator display with self-contained, one-direction radar mounted on an orange see-through trailer. The height of the display and radar shall be such that it will function and be visible when located behind concrete barrier.

The speed measurement shall be by radar and provide a minimum detection distance of 1000 ft (300 m). The radar shall have an accuracy of ±1 mile per hour.

The speed indicator display shall face approaching traffic and shall have a sign legend of "YOUR SPEED" immediately above or below the speed display. The sign letters shall be between 5 and 8 in. (125 and 200 mm) in height. The digital speed display shall show two digits (00 to 99) in mph. The color of the changeable message legend shall be a yellow legend on a black background. The minimum height of the numerals shall be 18 in. (450 mm), and the nominal legibility distance shall be at least 750 ft (250 m).

The speed indicator display shall be equipped with a violation alert that flashes the displayed detected speed when the work zone posted speed limit is exceeded. The speed indicator shall have a maximum speed cutoff. On roadway facilities with a normal posted speed limit greater than or equal to 45 mph, the detected speeds of vehicles traveling more than 25 mph over the work zone speed limit shall not be displayed. On facilities with normal posted speed limit of less than 45 mph, the detected speeds of vehicles traveling more than 15 mph over the work zone speeds limit shall not be displayed. On any roadway facility if detected speeds are less than 25 mph, they shall not be displayed. The display shall include automatic dimming for nighttime operation.

The speed indicator measurement and display functions shall be equipped with the power supply capable of providing 24 hours of uninterrupted service."

STEEL COST ADJUSTMENT (BDE)

Effective: April 2, 2004 Revised: January 1, 2022

Description. Steel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in steel prices when optioned by the Contractor. The bidder shall indicate with their bid whether or not this special provision will be part of the contract. Failure to indicate "Yes" for any item of work will make that item of steel exempt from steel cost adjustment.

Types of Steel Products. An adjustment will be made for fluctuations in the cost of steel used in the manufacture of the following items:

Metal Piling (excluding temporary sheet piling)
Structural Steel
Reinforcing Steel

Other steel materials such as dowel bars, tie bars, welded reinforcement, guardrail, steel traffic signal and light poles, towers and mast arms, metal railings (excluding wire fence), and frames and grates will be subject to a steel cost adjustment when the pay items they are used in have a contract value of $10,000 or greater.

The adjustments shall apply to the above items when they are part of the original proposed construction, or added as extra work and paid for by agreed unit prices. The adjustments shall not apply when the item is added as extra work and paid for at a lump sum price or by force account.

Documentation. Sufficient documentation shall be furnished to the Engineer to verify the following:

(a) The dates and quantity of steel, in lb (kg), shipped from the mill to the fabricator.

(b) The quantity of steel, in lb (kg), incorporated into the various items of work covered by this special provision. The Department reserves the right to verify submitted quantities.

Method of Adjustment. Steel cost adjustments will be computed as follows:

$SCA = Q \times D$

Where: SCA = steel cost adjustment, in dollars
Q = quantity of steel incorporated into the work, in lb (kg)
D = price factor, in dollars per lb (kg)

$D = MPI_M - MPI_L$

Where: MPI_M = The Materials Cost Index for steel as published by the Engineering News-Record for the month the steel is shipped from the mill. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

MPI_L = The Materials Cost Index for steel as published by the Engineering News-Record for the month prior to the letting for work paid for at the contract price; or for the month the agreed unit price letter is submitted by the Contractor for extra work paid for by agreed unit price,. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

The unit weights (masses) of steel that will be used to calculate the steel cost adjustment for the various items are shown in the attached table.

No steel cost adjustment will be made for any products manufactured from steel having a mill shipping date prior to the letting date.

If the Contractor fails to provide the required documentation, the method of adjustment will be calculated as described above; however, the MPI_M will be based on the date the steel arrives at the job site. In this case, an adjustment will only be made when there is a decrease in steel costs.

Basis of Payment. Steel cost adjustments may be positive or negative but will only be made when there is a difference between the MPI_L and MPI_M in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(MPI_L - MPI_M) \div MPI_L\} \times 100$$

Steel cost adjustments will be calculated by the Engineer and will be paid or deducted when all other contract requirements for the items of work are satisfied. Adjustments will only be made for fluctuations in the cost of the steel as described herein. No adjustment will be made for changes in the cost of manufacturing, fabrication, shipping, storage, etc.

The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Attachment

Item	Unit Mass (Weight)
Metal Piling (excluding temporary sheet piling)	
Furnishing Metal Pile Shells 12 in. (305 mm), 0.179 in. (3.80 mm) wall thickness)	23 lb/ft (34 kg/m)
Furnishing Metal Pile Shells 12 in. (305 mm), 0.250 in. (6.35 mm) wall thickness)	32 lb/ft (48 kg/m)
Furnishing Metal Pile Shells 14 in. (356 mm), 0.250 in. (6.35 mm) wall thickness)	37 lb/ft (55 kg/m)
Other piling	See plans
Structural Steel	See plans for weights (masses)
Reinforcing Steel	See plans for weights (masses)
Dowel Bars and Tie Bars	6 lb (3 kg) each
Welded Reinforcement	63 lb/100 sq ft (310 kg/sq m)
Guardrail	
Steel Plate Beam Guardrail, Type A w/steel posts	20 lb/ft (30 kg/m)
Steel Plate Beam Guardrail, Type B w/steel posts	30 lb/ft (45 kg/m)
Steel Plate Beam Guardrail, Types A and B w/wood posts	8 lb/ft (12 kg/m)
Steel Plate Beam Guardrail, Type 2	305 lb (140 kg) each
Steel Plate Beam Guardrail, Type 6	1260 lb (570 kg) each
Traffic Barrier Terminal, Type 1 Special (Tangent)	730 lb (330 kg) each
Traffic Barrier Terminal, Type 1 Special (Flared)	410 lb (185 kg) each
Steel Traffic Signal and Light Poles, Towers and Mast Arms	
Traffic Signal Post	11 lb/ft (16 kg/m)
Light Pole, Tenon Mount and Twin Mount, 30 - 40 ft (9 – 12 m)	14 lb/ft (21 kg/m)
Light Pole, Tenon Mount and Twin Mount, 45 - 55 ft (13.5 – 16.5 m)	21 lb/ft (31 kg/m)
Light Pole w/Mast Arm, 30 - 50 ft (9 – 15.2 m)	13 lb/ft (19 kg/m)
Light Pole w/Mast Arm, 55 - 60 ft (16.5 – 18 m)	19 lb/ft (28 kg/m)
Light Tower w/Luminaire Mount, 80 - 110 ft (24 – 33.5 m)	31 lb/ft (46 kg/m)
Light Tower w/Luminaire Mount, 120 - 140 ft (36.5 – 42.5 m)	65 lb/ft (97 kg/m)
Light Tower w/Luminaire Mount, 150 - 160 ft (45.5 – 48.5 m)	80 lb/ft (119 kg/m)
Metal Railings (excluding wire fence)	
Steel Railing, Type SM	64 lb/ft (95 kg/m)
Steel Railing, Type S-1	39 lb/ft (58 kg/m)
Steel Railing, Type T-1	53 lb/ft (79 kg/m)
Steel Bridge Rail	52 lb/ft (77 kg/m)
Frames and Grates	
Frame	250 lb (115 kg)
Lids and Grates	150 lb (70 kg)

SUBCONTRACTOR AND DBE PAYMENT REPORTING (BDE)

Effective: April 2, 2018

Add the following to Section 109 of the Standard Specifications.

"**109.14 Subcontractor and Disadvantaged Business Enterprise Payment Reporting.** The Contractor shall report all payments made to the following parties:

(a) first tier subcontractors;

(b) lower tier subcontractors affecting disadvantaged business enterprise (DBE) goal credit;

(c) material suppliers or trucking firms that are part of the Contractor's submitted DBE utilization plan.

The report shall be made through the Department's on-line subcontractor payment reporting system within 21 days of making the payment."

SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)

Effective: November 2, 2017 Revised: April 1, 2019

Replace the second paragraph of Article 109.12 of the Standard Specifications with the following:

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

Value of Subcontract Reported on Form BC 260A	Mobilization Percentage
Less than $10,000	25%
$10,000 to less than $20,000	20%
$20,000 to less than $40,000	18%
$40,000 to less than $60,000	16%
$60,000 to less than $80,000	14%
$80,000 to less than $100,000	12%
$100,000 to less than $250,000	10%
$250,000 to less than $500,000	9%
$500,000 to $750,000	8%
Over $750,000	7%"

SUBMISSION OF BIDDERS LIST INFORMATION (BDE)

Effective: January 2, 2025 Revised: March 2, 2025

In accordance with 49 CFR 26.11(c) all DBE and non-DBEs who bid as prime contractors and subcontractors shall provide bidders list information, including all DBE and non-DBE firms from whom the bidder has received a quote or bid to work as a subcontractor, whether or not the bidder has relied upon that bid in placing its bid as the prime contractor.

The bidders list information shall be submitted with the bid using the link provided within the "Integrated Contractor Exchange (iCX)" application of the Department's "EBids System".

SUBMISSION OF PAYROLL RECORDS (BDE)

Effective: April 1, 2021 Revised: November 2, 2023

FEDERAL AID CONTRACTS. Revise the following section of Check Sheet #1 of the Recurring Special Provisions to read:

"STATEMENTS AND PAYROLLS

The payroll records shall include the worker's name, social security number, last known address, telephone number, email address, classification(s) of work actually performed, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe

benefits or cash equivalents thereof), daily and weekly number of hours actually worked in total, deductions made, and actual wages paid.

The Contractor and each subcontractor shall submit certified payroll records to the Department each week from the start to the completion of their respective work, except that full social security numbers, last known addresses, telephone numbers, and email addresses shall not be included on weekly submittals. Instead, the payrolls need only include an identification number for each employee (e.g., the last four digits of the employee's social security number). The submittals shall be made using LCPtracker Pro software. The software is web-based and can be accessed at https://lcptracker.com/. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate option ("No Work", "Suspended", or "Complete") selected."

STATE CONTRACTS. Revise Item 3 of Section IV of Check Sheet #5 of the Recurring Special Provisions to read:

"3. Submission of Payroll Records. The Contractor and each subcontractor shall, no later than the 15th day of each calendar month, file a certified payroll for the immediately preceding month to the Illinois Department of Labor (IDOL) through the Illinois Prevailing Wage Portal in compliance with the State Prevailing Wage Act (820 ILCS 130). The portal can be found on the IDOL website at https://www2.illinois.gov/idol/Laws-Rules/CONMED/Pages/Prevailing-Wage-Portal.aspx. Payrolls shall be submitted in the format prescribed by the IDOL.

In addition to filing certified payroll(s) with the IDOL, the Contractor and each subcontractor shall certify and submit payroll records to the Department each week from the start to the completion of their respective work, except that full social security numbers shall not be included on weekly submittals. Instead, the payrolls shall include an identification number for each employee (e.g., the last four digits of the employee's social security number). In addition, starting and ending times of work each day may be omitted from the payroll records submitted. The submittals shall be made using LCPtracker Pro software. The software is web-based and can be accessed at https://lcptracker.com/. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate option ("No Work", "Suspended", or "Complete") selected."

SURVEYING SERVICES (BDE)

Effective: April 1, 2025

Delete the fourth paragraph of Article 667.04 of the Standard Specifications.

Delete Section 668 of the Standard Specifications.

VEHICLE AND EQUIPMENT WARNING LIGHTS (BDE)

Effective: November 1, 2021 Revised: November 1, 2022

Add the following paragraph after the first paragraph of Article 701.08 of the Standard Specifications:

"The Contractor shall equip all vehicles and equipment with high-intensity oscillating, rotating, or flashing, amber or amber-and-white, warning lights which are visible from all directions. In accordance with 625 ILCS 5/12-215, the lights may only be in operation while the vehicle or equipment is engaged in construction operations."

WEEKLY DBE TRUCKING REPORTS (BDE)

Effective: June 2, 2012 Revised: January 2, 2025

The following applies to all Disadvantaged Business Enterprise (DBE) trucks on the project, whether they are utilized for DBE goal credit or not.

The Contractor shall notify the Engineer at least three days prior to DBE trucking activity.

The Contractor shall submit a weekly report of DBE trucks hired by the Contractor or subcontractors (i.e. not owned by the Contractor or subcontractors) to the Engineer on Department form "SBE 723" within ten business days following the reporting period. The reporting period shall be Sunday through Saturday for each week reportable trucking activities occur.

Any costs associated with providing weekly DBE trucking reports shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed.

WORK ZONE TRAFFIC CONTROL DEVICES (BDE)

Effective: March 2, 2020 Revised: January 1, 2025

Add the following to Article 701.03 of the Standard Specifications:

"(q) Temporary Sign Supports .....1106.02"

Revise the third paragraph of Article 701.14 of the Standard Specifications to read:

"For temporary sign supports, the Contractor shall provide a FHWA eligibility letter for each device used on the contract. The letter shall provide information for the set-up and use of the device as well as a detailed drawing of the device. The signs shall be supported within 20 degrees

of vertical. Weights used to stabilize signs shall be attached to the sign support per the manufacturer's specifications."

Revise the first paragraph of Article 701.15 of the Standard Specifications to read:

" **701.15 Traffic Control Devices.** For devices that must meet crashworthiness standards, the Contractor shall provide a manufacturer's self-certification or a FHWA eligibility letter for each Category 1 device and a FHWA eligibility letter for each Category 2 and Category 3 device used on the contract. The self-certification or letter shall provide information for the set-up and use of the device as well as a detailed drawing of the device."

Revise the first six paragraphs of Article 1106.02 of the Standard Specifications to read:

" **1106.02 Devices.** Work zone traffic control devices and combinations of devices shall meet crashworthiness standards for their respective categories. The categories are as follows.

Category 1 includes small, lightweight, channelizing and delineating devices that have been in common use for many years and are known to be crashworthy by crash testing of similar devices or years of demonstrable safe performance. These include cones, tubular markers, plastic drums, and delineators, with no attachments (e.g. lights). Category 1 devices shall be MASH compliant.

Category 2 includes devices that are not expected to produce significant vehicular velocity change but may otherwise be hazardous. These include vertical panels with lights, barricades, temporary sign supports, and Category 1 devices with attachments (e.g. drums with lights). Category 2 devices shall be MASH compliant.

Category 3 includes devices that are expected to cause significant velocity changes or other potentially harmful reactions to impacting vehicles. These include crash cushions (impact attenuators), truck mounted attenuators, and other devices not meeting the definitions of Category 1 or 2. Category 3 devices manufactured after December 31, 2019 shall be MASH compliant. Category 3 devices manufactured on or before December 31, 2019, and compliant with NCHRP 350, may be used on contracts let before December 31, 2029. Category 3 devices shall be crash tested for Test Level 3 or the test level specified.

Category 4 includes portable or trailer-mounted devices such as sign supports, speed feedback displays, arrow boards, changeable message signs, temporary traffic signals, and area lighting supports. It is preferable for Category 4 devices manufactured after December 31, 2019 to be MASH-16 compliant; however, there are currently no crash tested devices in this category, so it remains exempt from the NCHRP 350 or MASH compliance requirement.

For each type of device, when no more than one MASH compliant is available, an NCHRP 350 compliant device may be used, even if manufactured after December 31, 2019."

Revise Articles 1106.02(g), 1106.02(k), and 1106.02(l) to read:

"(g) Truck Mounted/Trailer Mounted Attenuators. The attenuator shall be approved for use at Test Level 3. Test Level 2 may be used for normal posted speeds less than or equal to 45 mph.

(k) Temporary Water Filled Barrier. The water filled barrier shall be a lightweight plastic shell designed to accept water ballast and be on the Department's qualified product list.

Shop drawings shall be furnished by the manufacturer and shall indicate the deflection of the barrier as determined by acceptance testing; the configuration of the barrier in that test; and the vehicle weight, velocity, and angle of impact of the deflection test. The Engineer shall be provided one copy of the shop drawings.

(l) Movable Traffic Barrier. The movable traffic barrier shall be on the Department's qualified product list.

Shop drawings shall be furnished by the manufacturer and shall indicate the deflection of the barrier as determined by acceptance testing; the configuration of the barrier in that test; and the vehicle weight, velocity, and angle of impact of the deflection test. The Engineer shall be provided one copy of the shop drawings. The barrier shall be capable of being moved on and off the roadway on a daily basis."

REVISIONS TO THE ILLINOIS PREVAILING WAGE RATES

The Prevailing rates of wages are included in the Contract proposals which are subject to Check Sheet #5 of the Supplemental Specifications and Recurring Special Provisions. The rates have been ascertained and certified by the Illinois Department of Labor for the locality in which the work is to be performed and for each craft or type of work or mechanic needed to execute the work of the Contract. As required by Prevailing Wage Act (820 ILCS 130/0.01, et seq.) and Check Sheet #5 of the Contract, not less than the rates of wages ascertained by the Illinois Department of Labor and as revised during the performance of a Contract shall be paid to all laborers, workers and mechanics performing work under the Contract. Post the scale of wages in a prominent and easily accessible place at the site of work.

If the Illinois Department of Labor revises the prevailing rates of wages to be paid as listed in the specification of rates, the contractor shall post the revised rates of wages and shall pay not less than the revised rates of wages. Current wage rate information shall be obtained by visiting the Illinois Department of Labor web site at http://www.state.il.us/agency/idol/ or by calling 312-793-2814. It is the responsibility of the contractor to review the rates applicable to the work of the contract at regular intervals in order to insure the timely payment of current rates. Provision of this information to the contractor by means of the Illinois Department of Labor web site satisfies the notification of revisions by the Department to the contractor pursuant to the Act, and the contractor agrees that no additional notice is required. The contractor shall notify each of its subcontractors of the revised rates of wages.