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Letting January 17, 2025

Notice to Bidders, Specifications and Proposal

Illinois Department of Transportation

Contract No. 78483
JEFFERSON County
Section 13,13-2(N-1,TS-1);(41-3)HB2
Route FAI 57/FAI 64
Project BR-NHPP-910M(937)
District 9 Construction Funds

Prepared by	F
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. January 17, 2025 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. 78483
   JEFFERSON County
   Section 13,13-2(N-1,TS-1);(41-3)HB2
   Project BR-NHPP-910M(937)
   Route FAI 57/FAI 64
   District 9 Construction Funds

Reconstruction of the I-57/I-64 interchange and intersection modifications at various locations in Mt. Vernon.

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 re-advertise the proposed improvement, and to waive technicalities.

By Order of the
Illinois Department of Transportation

Omer Osman,
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)

SUPPLEMENTAL SPECIFICATIONS

RECURRING SPECIAL PROVISIONS

The following RECURRING SPECIAL PROVISIONS indicated by an "X" are applicable to this contract and are included by reference:

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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 "Illinois 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 the interchange of FAI Routes 57/64 (I-57/I-64), Project BR-NHPP-910M(937), Section 13, 13-2(N-1, TS-1);(41-3)HB2, Jefferson County, Contract No. 78483, and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

FAI Routes 57/64 (I-57/I-64)
Project BR-NHPP-910M(937)
Section 13, 13-2(N-1, TS-1);(41-3)HB2
Jefferson County
Contract No. 78483

LOCATION OF PROJECT

This project is located at the I-57/64 interchange with IL 15, on the west side of the Mount Vernon in Jefferson County, and includes IL 15 from Potomac Boulevard/45th Street to 44th Street for a project length of 2,912 feet.

DESCRIPTION OF PROJECT

This project consists of reconstructing the existing I-57/64 and IL 15 diamond interchange configuration to a diverging diamond interchange configuration along with the replacement of the IL 15 grade separation structure and reconstruction of the associated IL 15 approaches and ramps. Other improvements include PCC pavement on granular sub-base, PCC shoulders, concrete curb and gutter, concrete medians, sidewalk, entrances, traffic signals, inlets, manholes, storm sewer, culverts, erosion control, earthwork and grading, pavement marking, traffic signal improvements, and landscaping..

NOTIFICATION PRIOR TO STARTING WORK

Effective: December, 1985 Revised: February 10, 2017

Revise the first sentence of Article 107.09 Public Convenience and Safety to the following. "The Contractor shall notify the Engineer at least 14 days in advance of starting any construction work. For projects involving width or height restrictions or complete closures of the roadway or ramp, an additional seven days of notice (21 days total) will be required."

This additional notification is required, so the public can be notified of the pending construction.

COMPLETION DATE PLUS WORKING DAYS

This project is a completion date plus working days contract as specified in Article 108.05(b). All work shall be completed by the Contractor by November 1, 2027, plus 15 working days. Should the Contractor fail to complete all work on November 1, 2027, plus 15 working days or before or within such extended time allowed by the Department, then liquidated damages according to Article 108.09 will apply.

TRAFFIC CONTROL PLAN

Effective: 1985 Revised: April 17, 2023

The following traffic control and protection will apply to this project:

Highway Standards:

701001 This standard will be used on two way/two lane traffic for all work activities greater than 15 ft. from the edge of pavement.

701101 This standard will be used on multi-lane highways for all work activities within 24 inches and 15 ft. from the edge of pavement.

701106 This standard will be used on multi-lane highways for all work activities greater than 15 ft. from the edge of pavement.

701400 This standard will be used any time a lane is closed on the interstate. When the left lane is closed, LEFT LANE CLOSED signs shall be substituted for the RIGHT LANE CLOSED signs.

701401 This standard will be used where at any time any vehicle, equipment, worker, or their activities will encroach on the lane adjacent to the shoulder or on the shoulder within 24" of the edge of pavement on the interstate.

701402 This standard will be used any time any vehicle, equipment, worker, or their activities will encroach on the pavement or on the shoulder within 24" of the edge

of pavement for daylight operations exceeding one day and where temporary concrete barrier is utilized.

701406 This standard will be used where at any time any vehicle, equipment, worker, or their activities will encroach on the lane adjacent to the shoulder or on the shoulder within 24” of the edge of pavement for daylight operations on the interstate.

701411 This standard will be used where at any time any vehicle, equipment, worker, or their activities require a lane closure in close proximity of an exit or entrance ramp and supplements other traffic control standards for lane closures.

701421 This standard will be used any time a lane closure is required on a multilane expressway due to work encroaching on a travel lane adjacent to the shoulder or on the shoulder within 24” of the edge of pavement.

701426 This standard is used where any vehicle, equipment, worker, or their activities require stationary operations up to one hour or a continuous or intermittent moving operation where the average speed of movement is greater than 1 mph.

701428 This standard will be used for traffic control setup and removal on the interstate.

701446 This standard is used for closing two lanes of a freeway/expressway. This standard will be utilized when I-57/64 is closed during construction of the IL 15 bridge over I-57/64 and removal of the existing IL 15 bridge over I-57/64.

701451 This standard will be used for ramp closures on the interstate.

701456 This standard will be used for partial exit ramp closures on the interstate.

701502 This standard is used to close one lane of an urban, two lane/two way roadway with a bi-directional turn lane.

701602 This standard will be used for all activities involving urban lane closures on multilane, two way traffic with a bi-directional left turn lane.

701701 This standard will be used for all work activities involving a multilane urban intersection.

701801 This standard will be utilized for all sidewalk closures throughout the project limits.

701901 This standard describes all permissible traffic control devices that can be utilized with the above-mentioned traffic control standards.

During the entire construction period, the road shall be kept open to traffic as follows:

(a) All lanes of I-57/64 shall be kept open to at least two lanes in each direction at all times to the greatest extent possible.
(b) IL 15 shall be kept open to at least two lanes of traffic in each direction at all times and auxiliary turn lanes provided to the greatest extent possible.

(c) Access to all public roads and private entrances shall be maintained during all stages of the work.

(d) The road shall be kept open on the existing pavement during signing the detour routes.

TRAFFIC CONTROL AND PROTECTION, (SPECIAL)

Description. This work shall consist of coordinating, furnishing, installing, maintaining, monitoring, relocating, and removing all traffic control devices necessary for the purpose of regulating, warning, or directing traffic as shown in the plans. This work shall include payment for Standards 701401, 701402, 701406, 701411, 701421, 701446, 701451, 701456, 701502, 701602, 701701, and 701801 and all items not covered by other highway standards or other pay items. This work shall be completed in accordance with Article 107.14 and Section 701 of the Standard Specifications for Road and Bridge Construction; the plans; all applicable highway standards, the special provisions, and as specified herein. Items shall include, but are not limited to, temporary and permanent signs, drums, barricades, and all other equipment, hardware, and labor necessary to maintain the lane shifts and/or closures. The Contractor will be required to install, maintain, remove, and relocate traffic control items numerous times as shown on the plans or as directed by the Engineer. Items such as temporary pavement, concrete barrier, pavement marking, removal of pavement markings, and impact attenuators will be paid for separately.

The plan details present a plan for implementing the necessary traffic control for this work. The plans do not attempt to detail or define all construction conditions which may require additional installation of traffic control items to meet unforeseen needs. The Contractor may revise or modify the traffic control as shown in the plans to address any unforeseen needs upon written permission of the Engineer.

Existing regulatory traffic signage shall be removed or covered as needed. The Contractor shall furnish, install, and maintain all temporary signage as specified in the plans and highway standards. This work will not be paid for separately but will be governed by Article 107.25.

Method of Measurement. All traffic control and protection required by this provision will be measured for payment on a lump sum basis, including all traffic control necessary to construct the work as shown in the plans and provide for traffic control for any alterations, modifications, or additions necessary.

Basis of Payment. This work will be paid for at the contract price per lump sum for TRAFFIC CONTROL AND PROTECTION, (SPECIAL) which includes furnishing, installing, relocating, and removing all the necessary temporary signage, signage adjustments, temporary signal adjustments, Type III barricades, arrow boards, and channelizers.

ALTERNATE ROUTE SIGNING

Description. This work shall consist of coordinating, furnishing, installing, maintaining, monitoring, relocating, and removing signage for the I-57, I-64, and IL 15 alternate routes as shown on the plans.

Materials. Materials shall be according to the applicable portions of Section 701 of the Standard Specifications and as shown on the plans.

Construction Requirements. The alternate route signage for I-57 and I-64 shall be placed along EB IL 15, SB IL 37, and WB I-64; and alternative route signage for IL 15 shall be placed along SB I-57/64, NB I-57, EB I-64, and NB IL 37. Alternate route signage shall remain in place until the completion of the work.

Method of Measurement. This work will be measured for payment on a lump sum basis.

Basis of Payment. his work will be paid for at the contract unit price per LUMP SUM for ALTERNATE ROUTE SIGNING.

CONSTRUCTION PROCEDURES FOR PUBLIC EVENTS

During special public events, traffic control and lane closure restrictions shall apply. Special event dates include the following closure restrictions during these activities.

- No SB ramp closure the Tuesday before Memorial Day (Run for the Wall annual motorcycle ride).
- No ramp closure during Cedarhurst Art & Craft Fair (weekend after Labor Day) or Fall Fest (late September) activities.

CHANGEABLE MESSAGE SIGN

The Contractor shall furnish four changeable message signs for this project. The signs shall be operational 14 days prior to beginning construction and shall be located as directed by the Engineer.

It is anticipated the following locations shall have one changeable message sign each:

- NB I-57/64–just south of Veterans Memorial interchange
- SB I-57/64–just south of I-57 & I-64 tri-level interchange
- WB IL 15–just east of project limits
- EB IL 15–just west of project limits

The changeable message signs will remain for the duration of the project and can be relocated as needed as directed by the Engineer.

Basis of Payment. This work will be paid for at the contract unit price per CALENDAR DAY for each CHANGEABLE MESSAGE SIGN. Any relocation of the signs, as directed by the Engineer, during construction will not be paid for separately but shall be included in the cost of the work.

DETOUR SIGNING

Description. This work consists of coordinating, furnishing, installing, maintaining, monitoring, relocating, covering, uncovering, and removing all traffic control devices and detour signs in accordance with the plans.

Materials. The materials used shall be in accordance with Section/Article 1090, 1091, 1006.29, and 1007.05 of the Standard Specifications.

Construction Requirements. Detour signage is required for the closure of the entrance ramps from IL 15 to NB and SB I-57/64, exit ramps from SB and NB I-57/64 to IL 15, SB Potomac Boulevard to IL 15, and NB 45th Street to IL 15 as shown in the plans. The District will require a minimum notification of 21 calendar days prior to the ramp closures and roadway closures for public notice and to ensure specific routed, over-width, permitted loads are not sent to the restriction site. In their notification, the Contractor shall include the location and scheduled ramp closure start date. The Contractor is advised they will not be allowed to close the ramps and roadways without the 21-day notice, and failure to provide proper notice will delay the ramp and roadway closures. The notice of ramp and roadway closures is considered a part of the Contractor's approved work schedule; and it is the Contractor's responsibility to provide proper notice. Delays caused by failure to provide notice shall not be considered justification for extension of the working days as specified in this contract.

This item includes all labor and materials associated with the ramp and roadway closures as detailed in the plans including all labor, materials, and equipment required to furnish, pick up, erect, maintain, remove, and deliver the detour signs as detailed in the plans. This price also includes furnishing, installing, and removing the "CLOSED" placards over the interstate guide signs as shown in the plans.

The signs are to be in place and uncovered prior to any road closure. When a detour is not in use, the detour signage shall be completely covered. The signs and posts shall be removed when detours are no longer required. The Contractor shall return the area around the signs to its previous condition, which may include seeding, with no additional compensation.

The changeable message signs required prior to and during the detour signage shall be paid for separately.

Method of Measurement. This work will be measured for payment on a lump sum basis.

Basis of Payment. This work will be paid for at the contract unit price per LUMP SUM for DETOUR SIGNING.

DEWATERING

Description. The removal and installation of culverts may require intermittent dewatering of runoff trapped between the interchange roadway embankments during construction staging.

Construction Requirements. Any standing water shall be pumped or removed by an approved method to allow the Contractor to perform culvert removal and/or installation operations to the satisfaction of the Engineer. The runoff shall be pumped or directed to a suitable outlet into an adjacent infield, outfield, or roadside ditch with a positive outlet.

Basis of Payment. This work will be paid for at the contract unit price per LUMP SUM for DEWATERING.

DRAINAGE STRUCTURES DURING STAGING

Description. This work shall include all labor, equipment, and material necessary to partially construct and/or temporarily cover drainage structures for paving temporary pavement during construction staging operations.

Construction Requirements. Any drainage structure that will need to be temporarily paved over with temporary pavement shall be partially constructed or constructed without drainage castings. Any voids at the top of the drainage structures shall be covered with steel plates that can bear the weight of temporary pavement and live traffic loads. Once the temporary pavement over the top of these structures is no longer needed, the drainage structures along with their castings shall be completed per the permanent condition as detailed in the plans.

Basis of Payment. This work will not be paid for separately but shall be considered included in the cost of the drainage structure being constructed in the plans.

TRAFFIC STAGING AND CONSTRUCTION SEQUENCING

The Contractor shall provide the Engineer at least two weeks advance notice prior to mobilizing any equipment, materials, or work forces to the project site so that state and local officials will be alerted to the upcoming construction, traffic patterns, signage, etc., and notify the public of any temporary lane closures required.

The Contractor shall prepare and submit to the Engineer for review and approval a traffic staging and construction sequencing plan consistent with the concept described herein and shown on the details included in the plans to outline the sequence of construction for all the work shown in the plans. The Contractor's plan will indicate any lane closures and the location of traffic within each stage (day and night) along with any temporary barriers. Work shall not begin until the Contractor's traffic staging and construction sequencing plan is approved in writing by the Engineer.

At locations where construction operations result in a differential in elevation between the edge of pavement or edge of shoulder, traffic control shall be installed in compliance with IDOT's Work

Zone Safety Memorandum. Any channelizing devices installed along the drop-off shall be either temporary concrete barrier wall (pinned as required) or type II barricades with flashing lights. The cost to comply with these requirements shall be included in the cost of Temporary Concrete Barrier or Traffic Control and Protection, (Special).

The Contractor will schedule their work in accordance with the plans and in compliance with the Standard Specifications for keeping roads open to traffic. Any deviations proposed by the Contractor to the plans or special provisions shall be submitted in writing and approved by the Engineer prior to the Contractor making traffic control revisions. In general, the construction sequence shall be as detailed in the plans.

The Contractor shall follow the general sequence of construction outlined in the plans when preparing the traffic staging and construction sequencing plan and shall provide pedestrian and vehicular access to all properties at all times during construction to the satisfaction of the Engineer.

ROADWAY AND RAMP CLOSURES WITH DETOUR

Partial Potomac/45th Street and full interchange ramp closures with detours shall be utilized for completing connections and other staging requirements shown in the plans. This work shall consist of furnishing, maintaining, and removing all traffic control devices in accordance with this special provision.

Closure of the ramps shall be coordinated with the Engineer. The Contractor shall close the ramps using traffic control and protection standards and the details shown in the plans. District Nine's Traffic Operations Department shall be notified (618-351-5240) at least three working days (weekends and holidays do not count into these three working days) in advance of the proposed road closures.

The following are the locations and durations of closures allowable:

Partial Sideroad Closure (outbound only with ingress provided continuously). These two partial outbound temporary closures shall not be conducted at the same time.

- Potomac–21 consecutive calendar days using Potomac, Progress Drive, and North Davidson as detour.
- 45th Street-21 consecutive calendar days using 45th Street, Veterans Memorial Drive, and Davidson Avenue as detour.

Full Ramp Closures

- Ramp A: two weeks for two separate instances (IL 15 & I-57/64 connections-four weeks total)
- Ramp B: two weeks for two separate instances (IL 15 & I-57/64 connections- four weeks total)
- Ramp C: two weeks for two separate instances (IL 15 & I-57/64 connections-four weeks total)

- Ramp D: two weeks for two separate instances (IL 15 & I-57/64 connections-four weeks total)

Disincentive Plan. The Contractor shall be liable to the Department in the amount of $10,000 for each day beyond the number of partial closure days allowed in the plans and as specified herein. The Contractor shall also be liable to the Department in the amount of $10,000 for each day beyond the number of full ramp closure days allowed as specified above. There is no limit to the number or amount of charges assessed that exceed the allotted partial or full closure times.

The cost to complete the necessary traffic control and install temporary signage for the ramp closures shall be included in the cost for Traffic Control and Protection, (Special) and Detour Signing.

LANE RENTAL I-57/64 (NIGHTTIME)

Description. For the purpose of this I-57/64 lane rental specification, the work day will be divided into a 12 hour nighttime period and a 12 hour daytime period defined as follows. The nighttime period shall be from 7:00 PM to 7:00 AM (off peak periods), and the daytime period shall be from 7:00 AM to 7:00 PM (peak periods).

I-57/64 can be reduced to two lanes at all times. An additional or second lane closure will be allowed only during the nighttime period. If due to equipment failure or any other reason the Contractor is not able to open I-57/64 to two lanes of traffic in each direction (four lanes total) by 7:00 AM, the Contractor will be charged for a lane rental disincentive as described below. All lanes to be re-opened shall be subject to compliance with IDOT's drop-off policies prior to re-opening after the nighttime period closure. Lane rental disincentive charges in excess of the allotted number of nights will be deducted from the monthly progress payments.

Lane Rental (Nighttime Period). A lane rental closure will be considered when all three mainline interstate through lanes in each direction (six I-57/64 interstate lanes) are closed beneath the existing or proposed bridge. The Contractor will be assessed one lane rental night for each six-lane nighttime closure or obstruction during the nighttime (off peak period).

A total of nine nighttime (off peak period) six-lane total intestate closures will be allowed for the Contractor to complete all work requiring lane closures on I-57/64. The following lane closure breakdown is for information only. The lane closures were estimated as listed below:

- three nights for setting proposed beams for new structure over I-57/64
- three nights for removal of existing beams from existing structure over I-57/64
- three nights set-up and removal of necessary traffic control for median and/or bridge cone work

The Contractor will be allowed to utilize the northbound and southbound diamond interchange exit and entrance ramps to detour traffic around the mainline interstate lane closures beneath the bridge. The Contractor must prepare and submit a detailed plan in writing to the District 9 Project Implementation Engineer, describing the procedure for implementing the closure, and this must be approved by the Engineer prior to any mainline interstate lane closures.

Disincentive Plan (Nighttime Period). The Contractor shall be liable to the Department in the amount of $15,000 for each nighttime period beyond the number allowed in the contract, and any daytime period as specified herein whenever all six mainline interstate lanes are not open to traffic by the specified time included herein. There is no limit to the number or amount of charges assessed that exceed the allotted nighttime lane closure periods.

The cost to complete the necessary traffic control and install temporary signage for the I-57/64 lane closures shall be included in the cost for Traffic Control and Protection, (Special).

LANE RENTAL IL 15 (NIGHTTIME)

Description. For the purpose of this IL 15 lane rental specification, the work day will be divided into a 12 hour nighttime period and a 12 hour daytime period defined as follows. The nighttime period shall be from 7:00 PM to 7:00 AM (off peak periods), and the daytime period shall be from 7:00 AM to 7:00 PM (peak periods). Lane closures are to be allowed only during the nighttime period.

If due to equipment failure or any other reason the Contractor is not able to open IL 15 to at least two lanes of traffic in each direction by 7:00 AM, the Contractor will be charged for a lane rental disincentive as described below. All lanes to be re-opened shall be subject to compliance with IDOT's drop-off policies prior to reopening after the nighttime period closure. Lane rental disincentive charges in excess of the allotted number of days will be deducted from the monthly progress payments.

Lane Rental (Nighttime Period). A lane rental closure will be measured as a 12 foot wide traffic lane, or any part thereof, per direction of travel that is closed to traffic. If eastbound and westbound lanes are both closed, then two closures will be assessed. The Contractor will be assessed a minimum of one day lane rental charge for each lane closure or obstruction during the nighttime period.

A total of 20 nighttime period lane closures (10 one-lane closures in each direction) will be allowed for the Contractor to complete all work requiring lane closures on IL 15. The following lane closure breakdown is for information only. The lane closures were estimated as listed below:

- Ten nights (in each direction) for set-up and removal of traffic control for switching traffic

Disincentive Plan (Nighttime Period). he Contractor shall be liable to the Department in the amount of $15,000 for each nighttime period beyond the number allowed in the contract, and any daytime period and as specified herein whenever at least two lanes of traffic in each direction are not open to traffic by the specified time included herein. There is no limit to the number or amount of charges assessed that exceed the allotted nighttime lane closure periods.

The cost to complete the necessary traffic control and install temporary signage for the IL 15 lane closures shall be included in the cost for Traffic Control and Protection, (Special).

3D MODEL – CONTRACTOR SUPPLIED

Revised: December 10, 2019

3D models developed by the Contractor shall be provided to the Engineer at no additional cost to the Department.

AGGREGATE FOR TEMPORARY ACCESS

Description. This work shall consist of placing courses of aggregate on a prepared subgrade to provide temporary but continuous access to existing entrances during construction operations.

Construction Requirements. The aggregate material shall be in accordance with the Standard Specifications except that CA 10 may be used in lieu of CA 06 at the option of the Contractor.

Granular material shall be compacted to no less than 95% of the standard laboratory density according to ASHTO T99 (Method A or C). The base shall be constructed to a minimum thickness of 6" and to a minimum width of 10'. The Contractor shall be required to grade, blade, and provide additional aggregate for maintenance as directed by the Engineer to maintain suitable access. A nominal quantity for this item has been added to the contract for use as directed by the Engineer. No additional compensation or adjustment to the unit prices shall be allowed for adjustments in the plan quantity.

Basis of Payment. This work will be measured and paid for at the contract unit price per TON for AGGREGATE FOR TEMPORARY ACCESS.

AESTHETIC ENHANCEMENTS

Description: This work shall consist of designing, fabricating, furnishing, and installing fascia arch and aesthetic mounted logo as shown in the plans. This work shall be in accordance with Sections 505 and 506 of the Standard Specifications.

The Contractor shall be required to have an Illinois licensed structural engineer design the fascia arch and its connection to the bridge and the aesthetic mounted logo and its connection to the pedestal.

The columns and pedestal at the abutment and piers have been designed to accommodate the fascia arch, aesthetic mounted logo, and their accompanying loads. The connection of the arch hanger to the parapet is allowed as long as a vertical slotted hole is used to minimize the vertical forces on the superstructure.

Fascia Arch. The arch design will include the additional loads identified in the plan. The arch will be designed to design specifications stated in the plans. The arch design and shop drawings will be submitted to IDOT for approval prior to fabrication.

Aesthetic Mounted Logo. The aesthetic mounted logo will be made of metal and will be coated to

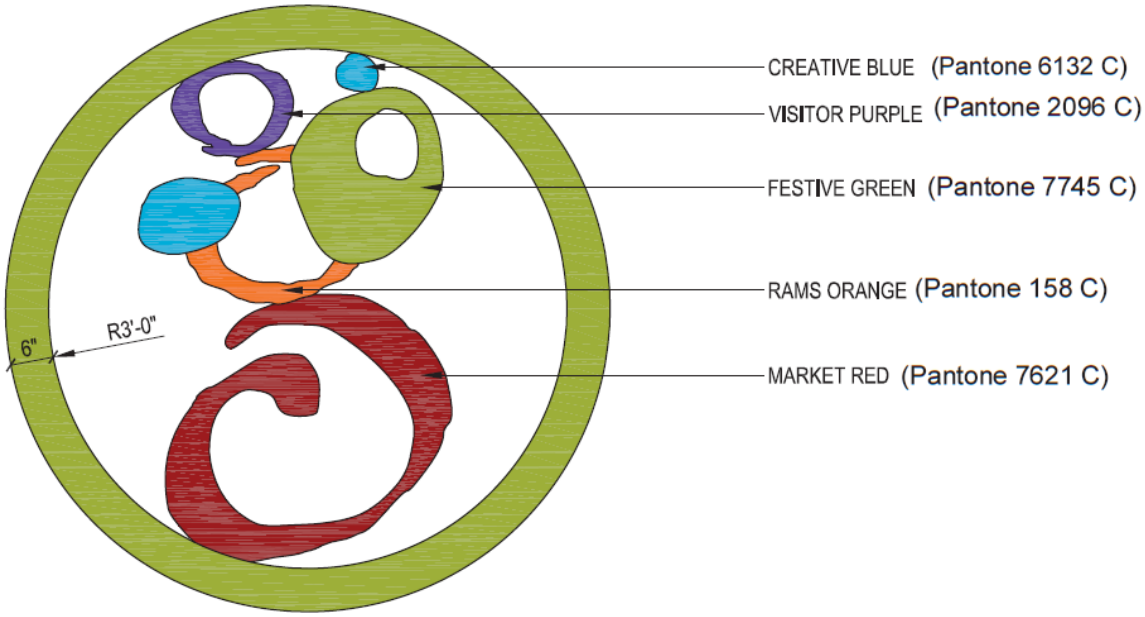
resist corrosion caused by salt spray from the roadway. The logo shall have a base plate that will allow the logo to be removed in the future. The aesthetic mounted logo shall be three-dimensional.

The Engineer shall provide the Contractor a CAD drawing of the aesthetic mounted logo. The Contractor will provide a 3D model and detailed shop drawing of the sign and proposed mounting plated to IDOT for approval prior to fabrication.

See attachments for renderings of the aesthetic enhancement.

Method of Measurement. This work will be measured as a lump sum upon completion of the work and the approval of the Engineer.

Basis of Payment. This work will be paid for at the contract unit price per LUMP SUM for AESTHETIC ENHANCEMENTS, which price includes all material, connections, coating, fabrication, design, equipment, labor, and other work necessary to complete this item.



A1 TYP. ELEVATION: MT. VERNON SYMBOL
1/2" = 1'-0"
-0417

AVAILABILITY OF ELECTRONIC FILES

Effective: October 2016 Revised: December 11, 2019

Electronic files of this project will be made available to the Contractor after the contract award. The Contractor shall coordinate obtaining electronic files through the Engineer. If there is a conflict between the electronic files and the printed contract plans and documents, the printed contract plans and documents shall take precedence over the electronic files. The Contractor shall accept all risk associated with using the electronic files and shall hold the Department harmless for any errors or omissions in the electronic files and the data contained therein. Errors or delays resulting from the use of the electronic files by the Contractor shall not result in an extension of time for any interim or final completion date or shall not be considered cause for additional compensation.

The Contractor shall not use, share, or distribute these electronic files except for the purpose of constructing this contract. Any claims by third parties due to use or errors shall be the sole responsibility of the Contractor. The Contractor shall include this disclaimer with the transfer of these electronic files to any other parties and shall include appropriate language binding them to similar responsibilities.

BORROW EXCAVATION

Revised: August 2, 2021

In addition to the requirements of Article 107.22 and Section 204, the Contractor shall submit to the Department a request for approval of the material in a proposed borrow pit. The submittal shall contain an 8 1/2" x 11" topographic map or sketch containing the dimensions of the area proposed, the locations of pertinent landmarks, the names of the property owner, and the proposed depth of cut. Copies of this map may also be used for subsequent submittal required for the archeological survey of the borrow pit.

The Contractor shall provide access for truck mounted drilling equipment, if required, to and from and in all areas where he/she requests material investigations.

Borrow excavation which is to be used in the roadway embankment without restrictions must have more than 35% of the total sample passing the No. 200 sieve. The soil must have a liquid limit value of 50.0 or less and a plasticity index value of 12.0 or more as defined by the AASHTO Classification System. These soils shall be capable of obtaining the required design embankment strengths. Soils proposed by the Contractor for furnished excavation or borrow which do not meet the these requirements will be assigned varying degrees of restrictions up to and including complete rejection depending on the nature and engineering properties of the material. These restrictions, if any, will be set forth in the proposed borrow material report.

It is anticipated that, depending upon the workload at the time, this field and laboratory investigation may take up to 15 days.

CAT 5 ETHERNET CABLE

Revised: March 22, 2018

Description: This work shall consist of furnishing and installing an outdoor rated CAT 5E cable in conduits, handholes, and poles. This work shall be in accordance with Sections 873, 1076, and 1088 of the Standard Specifications, except as modified herein.

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

- Outdoor CMX rated jacket (climate/oil resistant jacket)
- UV Resistant Outer Jacket material (PVC-UV, UV Stabilized)
- Outer jacket ripcord
- Designed For outdoor above-ground or conduit duct applications
- Cat 5E rated to 350MHz (great for 10/100 or even 1000mbps gigabit Ethernet)
- Meets TIA/EIA 568b.2 standard
- Unshielded twist pair
- Four pairs, eight conductors
- 24AWG, solid core copper
- UL 444 ANSI TIA/EIA-568.2 ISO/IEC 11801
- RoHS compliant

- Water blocking gel

Basis of Payment: This work will be paid for at the contract unit price per FOOT for CAT 5 ETHERNET CABLE.

COMBINATION CURB AND GUTTER REMOVAL

Description. This work shall consist of removing and disposing existing concrete curb and gutter, gutter, gutter outlets, curb, and bituminous or stone curb at the locations shown on the plans and according to Section 440 of the Standard Specifications.

Construction Requirements. This work also will include the removal of any existing bituminous concrete which extends beyond the existing edge of pavement into the gutter flag. The bituminous material shall be sawed or otherwise cut to a smooth face along the edge of the pavement before removal. The material shall be disposed outside of the right of way limits.

Basis of Payment. This work will be paid for at the contract unit price per FOOT for COMBINATION CURB AND GUTTER REMOVAL, which price includes all labor and equipment required to complete the work as specified.

CONCRETE BARRIER WALL (SPECIAL)

Description. This work shall include the construction of a concrete parapet wall transition from/to combination concrete curb and gutter type B-6.24 height to the typical median bridge parapet wall height in accordance with the plans and the applicable portions of Section 637 of the Standard Specifications, unless otherwise directed by the Engineer. This work will be paid for at the contract unit price per FOOT for CONCRETE BARRIER WALL (SPECIAL).

CONCRETE FOUNDATIONS, GROUND MOUNTED

Description. This work shall include the construction of a concrete foundation for service installation cabinets in accordance with the plans and Section 878 of the Standard Specifications, unless otherwise directed by the Engineer. This work will be paid for at the contract unit price per CUBIC YARD for CONCRETE FOUNDATIONS, GROUND MOUNTED.

CONCRETE MEDIAN SURFACE, 4 INCH

Description. This work shall include the construction of a 4" concrete median surface and coarse aggregate backfill according to the plans, Standard 606301, Section 606 of the Standard Specifications, and as specified herein, unless otherwise directed by the Engineer.

Construction Requirements. The coarse aggregate fill behind the median or corner island curb lines shown in Standard 606301 and described in Article 606.09 of the Standard Specifications shall be considered included in the cost of the concrete median surface, and no additional compensation will be allowed. The coarse aggregate fill shall be constructed from the bottom of curb on a compacted subgrade to the bottom of the concrete median surface.

Basis of Payment. This work will be paid for at the contract unit price per SQUARE FOOT for CONCRETE MEDIAN SURFACE, 4 INCH.

CONCRETE MEDIAN SURFACE, 4 INCH (SPECIAL)

Description. This work shall consist of stamped colored PCC median surface, 4" and curb flanking the proposed shared-use path and/or sidewalk according to the plans, Section 606 of the Standard Specifications, the Concrete Median Surface, 4" special provision, and as specified herein, unless otherwise directed by the Engineer.

Construction Requirements. The installer shall provide a qualified foreman or supervisor who has a minimum of three years experience with imprinted and textured concrete and whom has successfully completed at least five imprinted concrete installations that are high quality and similar in scope to that required.

Prior to beginning work, the Contractor shall provide field samples of integrally colored PCC median surface with the imprinted pattern. The sample is to be 4' by 4' in size, 4" thick, and with surface colors and patterns as specified. Work shall not proceed until the workmanship, pattern, and color are approved by the Engineer. The Contractor will be required to provide additional samples as required to obtain the Engineer's approval.

The concrete shall be integrally colored for the full depth of the median surface. The color shall be Solomon Color 418 brick red or approved equal. Pigment shall meet the requirements of ASTM C979 and be on the Department's Approved List of Pigments for Integrally Colored Concrete. All work shall also be in accordance with the manufacturer's recommendations, including pigment %, pigment mixing, additional concrete admixture compatibility, concrete curing, required sealants, etc. Care shall be taken so different batches of concrete do not have different finished colors.

Do not add calcium chloride to the concrete mix design.

The stamped pattern shall be a 4" x 8" paver brick placed in a herringbone pattern. Vertical surface discontinuities shall be 0.5 inches maximum. Vertical surface discontinuities between 0.25 inches and 0.5 inches shall be beveled with a slope not steeper than 50%. The bevel shall be applied

across the entire vertical surface discontinuity.

The adjacent combination curb and gutter, shared-use path and/or sidewalk is measured and paid for separately and is to remain natural concrete color. The curb flanking the proposed shared-use-path and/or sidewalk shall have a typical barrier curb shape with a height of 6 inches from the top of the proposed shared-use-path and/or sidewalk and a thickness that extends to the bottom of the 4 inch shared-use-path and/or sidewalk. See Standard 606001 for the barrier curb dimensions.

The proposed stabilized subbase, 4” and aggregate subgrade improvement, 12” are placed beneath the median curb line and under the entirety of the median surface. These items are measured and paid for separately.

Basis of Payment. This work will be paid for at the contract unit price per SQUARE FOOT for CONCRETE MEDIAN SURFACE, 4 INCH (SPECIAL).

CONCRETE MEDIAN SURFACE REMOVAL

This work shall include removing and disposing existing concrete median surface according to Section 440 of the Standard Specifications and as directed by the Engineer. This work will be paid for at the contract unit price per SQUARE FOOT for CONCRETE MEDIAN SURFACE REMOVAL.

CONNECTION TO EXISTING MANHOLE

Description. This work consists of connecting proposed storm sewer to existing manholes according to applicable portions of Sections 550 and 602 of the Standard Specifications or as directed by the Engineer. The work shall include all labor, equipment, and material necessary to complete the connection which may include, but is not limited to, saw-cutting the existing manhole to accommodate the new storm sewer size or angle, patching existing holes in the manhole structure, placing masonry in the manhole to provide a watertight connection, and backfill and compaction.

Basis of Payment. This work will be paid for at the contract unit price per EACH for CONNECTION TO EXISTING MANHOLE, which price includes all labor, equipment, and materials necessary to complete the connection as specified herein or directed by the Engineer.

CONTROLLED LOW-STRENGTH MATERIAL

Description. This work shall consist of filling voids between drainage structures and/or storm sewer and pipe culverts where soil or trench backfill compaction is difficult or as directed by the Engineer. The voids shall be backfilled with a controlled low-strength material to the elevation of the proposed subgrade in accordance with Section 593 of the Standard Specifications.

The controlled low-strength material shall be poured in three lifts not to exceed 3 feet per lift.

Basis of Payment. This work will be paid for at the contract unit price per CUBIC YARD for CONTROLLED LOW-STRENGTH MATERIAL, which price includes all labor, equipment, and materials necessary to fill the voids as specified herein or directed by the Engineer.

DELINEATORS

Revised: December 10, 2019

Revise Article 635.02 to read:

The two-piece post will meet the following requirements.

The post shall be 2½" in diameter and approximately 62" in length. A tubular metal sleeve for ground embedment, 18" in length, shall be required.

The post shall be constructed of impact resistant polyethylene tubing capable of self-erecting after ten vehicle impacts at a temperature of 0°F or above without loss of serviceability. Impacts shall be made at an angle of 25° (±5°) at a vehicle speed of 50 mph. An inner support tube to aid in recovery after impact shall be provided. The ground anchor of heavy gauge galvanized steel, approximately 18" long with bottom end flattened for driving convenience, will be required for each post.

The top of each post shall be flattened to accommodate the required sheeting. The posts shall be white or yellow with a matching strip of 3" x 12" of high intensity type AP prismatic sheeting. Posts located on the right side shall be white, and posts located on the left side shall be yellow.

DRAINAGE SCUPPERS, DS-11

This work shall consist of all labor, equipment, and materials required for furnishing and installing drainage scuppers for the SN 041-0121 in accordance with the details shown in the plans. This work will be paid for at the contract unit price per EACH for DRAINAGE SCUPPERS, DS-11, which the price includes all labor, equipment, and materials required to complete this work.

DRAINAGE STRUCTURES TO BE ADJUSTED

Description. This work shall consist of all materials, labor, and equipment necessary to adjust drainage structure outfall pipes through roadway embankments to maintain positive drainage during construction.

Partial removal of outfall pipes shall be paid for as pipe culvert removal per the removal plans and schedule. After the partial removal of outfall pipes is completed as needed, the existing outfall pipes shall be extended and daylighted through the roadway embankment to ensure positive drainage of the existing inlets. This work shall be in accordance with Section 542 of the Standard Specifications.

Removal of any temporary extensions of existing pipe culverts and/or storm sewers when no longer needed to maintain drainage during construction shall be considered included in the cost of this work.

Basis of Payment. This work will be paid for at the contract unit price per EACH for DRAINAGE STRUCTURES TO BE ADJUSTED.

DROP-OFF NEAR THE EDGE OF TRAVELLED WAY

Revised: March 20, 2017

In order to be in compliance with Safety Engineering Policy Memorandum 4-21 (Drop Off Policy) the Contractor will utilize traffic control and protection standards as shown in the plans. At any time a greater than 12” drop off is located within 8 ft. of the edge of the nearest open traffic lane, that lane shall be closed until the drop off is brought up to less than 12”. Pavement patching is not considered a drop off condition, except when individual patching holes are left open in excess of 24 hours. For drop offs >1.5” but <12”, there shall be no long duration stationary operation allowed (14 days or more) located within 8 ft. of the edge of the nearest open traffic lane.

The Contractor will be assessed a traffic control deficiency deduction per Article 105.03(b) for each day a drop off greater than 1.5” exists for more than 14 days within 8 ft. of the edge of the nearest open traffic lane.

ENGINEERED BARRIER

Description. This work shall consist of installing an engineered barrier above regulated substance material to limit the exposure and to control the migration of contamination from the contaminated soil. It shall be placed above the regulated substance material at the following locations:

- I-57/64 trilevel interchange (south and north locations–The limits of grading shall be as shown in the plans. The engineered barrier shall be placed over the entirety of the grading limits.

The engineered barrier shall consist of a geosynthetic clay liner system, geomembrane liner, or equivalent material as approved by the Engineer. A geosynthetic clay liner shall be composed of

a bentonite clay liner approximately 0.25 inches thick. The engineered barrier shall have a permeability of less than 10-7 cm/sec. Installation of the geosynthetic clay liner system shall be in accordance with the manufacturer's recommendations except that all laps shall face downslope.

The geomembrane liner shall have a minimum thickness of 30 mils. The geomembrane liner shall line the entire trench and be installed in accordance with the manufacturer's recommendations.

No equipment will be allowed on the engineered barrier until it is covered by a minimum of 1 foot of backfill. Any damage to the engineered barrier caused by the Contractor shall be repaired at no additional expense to the Department in accordance with the manufacturer's recommendations and as directed by the Engineer.

Method of Measurement. This work will be measured for payment in place, and the area computed in square yards.

Basis of Payment. This work will be paid for at the contract unit price per SQUARE YARD for ENGINEERED BARRIER.

EXISTING STATE-OWNED UTILITIES

Eff. 04-01-2020

Existing state-owned and maintained underground utilities exist with the right of way. The Department is not a member of JULIE and does not locate its own facilities. The Contractor shall be responsible for securing an approved locating firm to locate all existing Department underground facilities prior to commencing any excavation per the requirements of Article 803 of the Standard Specifications. Utility locates may be also required outside the project limits for traffic control signage and other items.

This work shall not be paid for separately but shall be considered included in the various pay items for which JULIE locations are required.

FENCE (SPECIAL)

Description. This work consists of black PVC 4' fence and black gate components, gate hardware (black where possible), reinforcing steel for concrete-filled, reinforced fence posts, and concrete for post footings and for concrete filled reinforced fence posts

The Contractor shall submit the following to the Engineer.

- Product Data: In the form of manufacturer's technical data, specifications, and installations for fence, posts, gate uprights, post caps, gates, gate hardware, and accessories.
- Samples for verification of PVC color in form of 3-inch lengths of actual product to be used in color selection.
- Shop drawings showing the fence design.

The Contractor shall engage an experienced installer who has at least three years experience and has completed at least five PVC fence projects with the same material and similar scope to that indicated for this project with a successful construction record of in-service performance. The Contractor shall obtain PVC fences and gates, including accessories, fittings, and fastenings, from a single source.

Materials

Fence Materials. The Contractor shall provide PVC fence materials recognized to be of the type indicated and tested to show compliance with indicated performances. Fence height is to be 4 feet with a three-rail fence.

Fence Components. Posts, rails, gate uprights, post caps, and accessories shall be of high impact, UV resistant, rigid PVC and shall comply with ASTM D1784, Class 14344B. Fence posts should be one piece extruded of lengths indicated and pre-routed to receive rails at the spacing indicated. The cross section should be 5"x5" minimum. Rails should be one piece extruded of lengths indicated, hollow, and have a cross section of 2"x 6" minimum. The gate uprights should be one piece extruded of the lengths indicated and have a 5” x 5” minimum cross sections. The post caps should be a molded, one piece, with a cross section that matches the post or gate upright cross section, have a 0.095” minimum thickness, and have a configuration of a flat or four-sided pyramid design. The accessories should be the manufacturers' standard gate brace, screw caps, rail end reinforcers, and other accessories as required.

Miscellaneous Materials. Fasteners and anchorage should be stainless steel with sizes as recommended by the fence manufacturer. PVC cement should be as recommended by the fence manufacturer. Rail plugs should be a manufacturer's standard duct tape to prevent seepage at the concrete filled posts.

Gate Hardware and Accessories. The Contractor shall provide hardware and accessories for each gate according to the following requirements.

- Hinges: Size and material to suit gate size and be a lift-off type stainless-steel and adjustable,
    - offset to permit 120° gate opening. Provide one pair of hinges for each gate.
    - Stainless-steel with a finish of two coats “Polane” pre-painted the color black
- Latch: Manufacturers' standard self-latching, stainless-steel latch.
    - Provide one latch per gate that should match gate hinge finish.
- Hardware: Stainless-steel.
    - Provide sizes as recommended by fence manufacturer and match gate hinge finish.

Concrete. The Contractor shall provide concrete consisting of Portland cement per ASTM C 150, aggregates per ASTM C 33, and potable water. Contractor shall mix materials to obtain concrete with a minimum 28-day compressive strength of 2000 psi. The Contractor should use at least four sacks of cement per cubic yard, 1-inch maximum size aggregate, and a 3-inch maximum slump. Use 1/2 inch maximum size aggregate in post where required. For packaged concrete mix, mix dry-packaged normal-weight concrete conforming to ASTM C 387 with clean water to obtain a 2 to 3 inch slump.

Reinforcement for filled posts should be steel reinforcing bars conforming to ASTM A 615 grade

60 #4 deformed. Contractor shall install two bars for each post to a length of 2 feet.

Construction Requirement. The fence should be installed in compliance with manufacturer's written instructions. During installation, PVC components shall be carefully handled and stored to avoid contact with abrasive surfaces. Install components in sequence as recommended by fence manufacturer and as indicated on the drawings provided. Variations from the installation indicated must be approved, and variations from the fence and gate installation indicated and all costs for removal and replacement will be the responsibility of the Contractor.

Four Foot Fence Installation.

- Excavation: Drill or hand-excavate (using post hole digger) holes for posts to diameters and spacings indicated, in firm, undisturbed or compacted soil. Unless otherwise indicated, excavate hole depths no less than 30 inches or to the frost line.
- Posts: Install posts in one piece, plumb, in-line, and spaced a maximum of 8 feet on centers unless otherwise indicated. Enlarge excavation as required to provide the clearance indicated between the post and side of excavation.
    - The Contractor shall protect a portion of posts above ground from concrete splatter. Place concrete around posts and vibrate or tamp for consolidation. Check each post for vertical and top alignment and hold in position during placement and finishing operations. Unless otherwise indicated, terminate top of concrete footings 3 inches below adjacent grade and trowel to a crown to shed water.
    - Secure posts in position per manufacturers' recommendations until concrete sets.
    - After installation of rails and unless otherwise indicated, install reinforcing in the posts in opposing corners of the post as shown and fill end and gate posts with concrete to level as indicated. Concrete fill shall completely cover the reinforcing steel and gate hardware fasteners. Consolidate the concrete by striking the post face with a rubber mallet, carefully tamping around the exposed post bottom.
    - Install post caps. Use #8 screws, nylon washers, and snap caps.
- Top and Bottom Rails: Install rails in one piece into routed hole fabricated into posts to receive top and bottom rails, and middle where necessary. Except at sloping terrain, install rails level. Prior to installation of rails into posts, insert concealed steel channel stiffeners in top rail, where necessary. Bottom rails shall include a minimum of two 1/4" drainage holes. At posts to receive concrete fill, tape rail ends to prevent seepage when filling post with concrete.
- Remove concrete splatters from PVC fence materials with care to avoid scratching.
- Fence Installation at Sloping Terrain: At sloping terrain rails may be racked (sloped) or steeped to comply with the manufacturers' recommendations.

Four Foot Gate Installation. Prior to installation of rails into posts, apply PVC cement into sockets per manufacturers' recommendations. Bottom rail shall include a minimum of two 1/4" drainage holes. Assemble gate prior to fence installation to accurately locate hinge and latch post. Align gate horizontal rails with fence horizontal rails. Install gate plumb, level, and secure for full opening without interference according to manufacturer's instructions.

Gate Latch Installation. Install gate latch according to manufacturer's instructions. Adjust for smooth, trouble-free operation.

Contractor shall allow a minimum of 72 hours to let concrete set-up before opening gates.

Adjusting and Cleaning. Contract shall remove all traces of dirt and soiled areas.

Method of Measurement. This work will be measured for payment in feet along the top of the fence from center to center of end posts, including length occupied by gates.

Basis of Payment. The work will be paid for at the contract unit price per FOOT for FENCE (SPECIAL).

FILLING INLETS (SPECIAL)

Description. This work shall consist of all materials, labor, and equipment necessary to fill an existing inlet located within the southern shoulder of IL 15, just east of the existing IL 15 bridge over I-57/64 as described below or as otherwise directed by the Engineer. This work shall be in accordance with Section 605 of the Standard Specifications or as otherwise directed by the Engineer.

Construction Requirements. Removal of the existing outlet pipe from the inlet shall be paid for as pipe culvert removal per the removal plans and schedule. After removal of the outlet pipe, the outlet pipe opening in the inlet shall be plugged water-tight using brick and mortar. After plugging the existing inlet, the existing inlet grate shall be removed, and the inlet shall be filled completely with class SI concrete to create a flush surface with the surrounding pavement. This surface shall also be water-tight so no water can enter the existing inlet.

Upon removal of the existing inlet, which shall be paid for as removing inlets per the removal plans and schedule, all material resulting from the filling of the inlet shall be disposed by the Contractor according to Article 202.03.

Basis of Payment. This work will be measured and paid for at the contract unit price per EACH for FILLING INLETS (SPECIAL).

FULL-ACTUATED CONTROLLER AND TYPE V CABINET

The installation of a traffic actuated controller shall meet the requirements of Sections 857, except as revised by this special provision. A traffic actuated, solid state, digital controller shall meet or exceed the requirements of NEMA Standards for Traffic Control Systems, TS 2-2016. This unit shall be capable of being used as a master or local controller and/or a combination of both.

One possible start up mode shall be an all-red display for a minimum of 15 seconds. The controller shall be capable of telemetry for controller to controller and controller to computer system or solo operation data transfer. The controller shall be capable of operating in both TS-2 type 1 and 2 cabinets. Through telemetry, the system or solo operation shall be capable of being monitored on an IBM AT or compatible personal computer. Typically, the controller shall be completely uploaded or downloaded through telemetry either from a remote location or side by side from the computer.

The CPU of the controller shall operate on a standard Linux operating system with an open

architecture platform. The CPU shall also contain the minimum memory requirements 512 MB FLASH, 64 MB DRAM, and 2 MB SRAM. The CPU shall also contain a TOD clock with automatic daylight savings time adjustment. The latest computer software shall be provided so data, including all timing parameters, can be transferred. The controller shall be compatible with SEPAC traffic controller software. The controller will use non-volatile EEPROM memory.

All harnesses shall be furnished, if different than provided previously, for the controller to controller and controller to computer data transfer. The controller shall contain all normal connectors and any special connectors required for data transfer. The controller's "D" connector termination panel and all other connectors shall be completely terminated, even if not required in this application. The twisted shielded field cables should remain shielded to within 1" of the cabinet terminals. The controller shall also feature an active TFT backlit LCD display.

The controllers supplied must be fully compatible for integration into the existing District 9 Eagle Signal system and shall be fully compatible with the District’s Tactics software.

The controller supplied shall be complete with internal modems for connection to a radio transceiver type of remote monitoring system. Any additional components necessary for connection to the radio transceiver shall be included in this pay item.

The controller shall be provided with an RS232 port 3 as well as an RS232 port 2. Connections on the "D" panel, Aux. one output should be connected to red rest. Aux. three should be connected to the special status3 inputs. Special status 1 shall be connected to report if the cabinet door is open. A door open switch shall be provided. The controller's "D" connector termination panel shall be provided and fully connected to provide information to the controller of manual or monitor flash status. The controller shall be provided with a communications module containing a 10/100 base-T Ethernet with built-in switch and 4 panel RJ-45 connectors - ENT1 and ENT2 network switches - 5 10/100 TCP/IP ports, four USB 2.0 Ports and a datakey port, dedicated GPS – SP8 port (9 pin EIA-574), and a unique MAC address assigned by the Institute of Electrical and Electronic Engineers (IEEE).

A slide-out shelf shall be provided below the standard shelf and above the back panel terminal board. The pull-out shelf should be mounted as far left as possible. The cabinet shall be equipped with an IP addressable power strip. A standard TS-2 detector card rack shall be provided. The cabinet shall have a thermostat-controlled heater.

During conflict monitor flash, a means shall be provided to restart the controller at the beginning of startup, just as if the power had been removed, and reset the monitor with a momentary pulse. The signal to restart/reset shall be delivered by telemetry and/or a momentary switch, labeled RESET, located in the police door. The pulse shall only be functional while the signals are in a monitor flash mode. Jumpers shall be installed in the unused load switch sockets to prevent false red fail reports. Hardwiring of this feature on the back panel will not be permitted. The cabinet series/parallel surge protector shall be the plug in type. The controller cabinet shall be a TS-2, type 1 equipped with a 16-load switch, load bay using a conflict monitor capable of operating with 16 or 12 channels. The cabinet size shall be 44” x 26” x 77” in size.

The conflict monitor shall be a MMU meeting NEMA TS2-2016 standards and capable of supporting flashing yellow arrow (FYA) operation and be equipped with IP addressable network capability. The conflict monitor shall be capable of providing modes in both TS-2 and TS-1 cabinet configurations. The conflict monitor shall provide error sensing of two +24Vdc cabinet supplies

and the controller power supplies via +24V MONITOR I, +24V MONITOR II, and CVM inputs respectively. The conflict monitor shall use a programmable, alpha-numeric LCD to show monitor status and two icon-based LCDs to show field signal channel and fault status.

The traffic signal controller will not be approved for installation until the requirements of Articles 801.10(b) and 801.07 are satisfied. The Contractor shall prepare traffic signal materials at a suitable location meeting the approval of the Engineer. The cabinet shall be tested and approved by IDOT at the Contractor's shop before moving it to the jobsite.

Basis of Payment. This work will be paid for at the contract unit price per EACH for FULL-ACTUATED CONTROLLER AND TYPE V CABINET, which price includes furnishing and installing the controller complete with the necessary connections for proper operation.

GRANULAR BACKFILL FOR STRUCTURES

Effective: March 6, 2019

This work shall consist of placing granular backfill for structures according to the applicable portions of the Standard Specifications, the details in the plans, and the following. The material used for the backfill shall be either gradation CA-05 or CA-07.

This work will be measured for payment in cubic yards.

Basis of Payment: This work will be paid for at the contract unit price per CUBIC YARD for GRANULAR BACKFILL FOR STRUCTURES.

GROUND ROD, 8', COPPER CLAD

Description. This work shall include the installation of an 8' long, copper clad, ground rod into handholes and double handholes in accordance with the details in the plans. unless otherwise directed by the Engineer.

Materials. Materials shall include an 8' long, copper clad, ground rod and a heavy-duty, ground rod clamp as shown in the details in the plans.

Construction Requirements. The proposed ground wire shall be connected to the handholes or double handholes and the ground rod as shown in the details in the plans.

Basis of Payment. This work will be paid for at the contract unit price per EACH for GROUND ROD, 8', COPPER CLAD, which price includes all labor, equipment, and materials required to install the ground rods.

HANDHOLE

Description: This work shall consist of furnishing the materials and installing a precast composite concrete handhole, heavy-duty handhole, or double handhole according to Section 814 and 1088.05 of the Standard Specifications and the following additions or exceptions.

The frame and cover shall be constructed of a polymer concrete and reinforced with a heavy-weave fiberglass cloth. The nominal dimensions of the handhole shall be a minimum 17" (W) x 30" (L) x 30" (D), and the nominal dimensions of the double handhole shall be a minimum 30" (W) x 48" (L) x 30" (D). The cover shall contain the legend "TRAFFIC SIGNALS" and shall be held down by two stainless-steel, hex head bolts. The cover shall contain two recessed lift pins. The cover for a double handhole shall be a split lid, two-piece cover.

Basis of Payment: This work will be paid for at the contract unit price per EACH for HANDHOLE; HEAVY-DUTY HANDHOLE; or DOUBLE HANDHOLE.

CONCRETE HEADWALL REMOVAL

This work shall consist of removing existing culvert headwalls at the locations shown on the plans or as directed by the Engineer. All material included with this removal shall be disposed offsite by the Contractor according to Article 202.03 of the Standard Specifications. All work shall be completed according to applicable portions of Section 501 of the Standard Specifications. The work associated with this pay item includes any and all shapes, sizes, and materials of culvert headwalls and all appurtenances used to fasten or support the headwall materials.

Basis of Payment. This work will be measured and paid for at the contract unit price per EACH for CONCRETE HEADWALL REMOVAL.

HIGH-EARLY-STRENGTH PORTLAND CEMENT CONCRETE PAVEMENT 10 ¼" (JOINTED)

Description. This work shall include the construction of jointed concrete pavement according to the plans, Section 420 of the Standard Specifications, and as specified herein unless otherwise directed by the Engineer.

The constructed thickness of the high-early-strength jointed concrete pavement shall be 10 ½"and not 10 ¼". This pavement is anticipated to be utilized at the intersection of 45th Street/Potomac Boulevard and IL 15 for all pavement constructed during stages 2A, 2B, 3A and 3B unless otherwise directed by the Engineer. The intent of this item is to limit the duration of one-way traffic along 45th Street/Potomac Boulevard during staging.

Basis of Payment. This work will be measured and paid for at the contract unit price per SQUARE YARD for HIGH-EARLY-STRENGTH PORTLAND CEMENT CONCRETE PAVEMENT 10 ¼" (JOINTED).

INLETS TO BE ADJUSTED

Description. This work shall consist of removing the existing casting and adjusting the inlet structure according to Section 602 of the Standard Specifications. The Contractor shall establish the casting grade to the satisfaction of the Engineer. Any damage caused to the casting or inlet by the Contractor shall be repaired or replaced at their expense.

Basis of Payment. This work will be paid for at the contract unit price per EACH for INLETS TO BE ADJUSTED.

JUNCTION BOXES, STAINLESS STEEL, ATTACHED TO STRUCTURE

Description. This work shall consist of furnishing and installing a junction box in accordance with Section 813 of the Standard Specifications, except as modified herein.

Materials. Add the following to Article 1088.04(a):

(b) Finish. The junction box shall be painted black using a powder coat process or an Engineer approved equivalent. The box shall be cleaned prior to the powder coat process by the immersion process using both an alkaline and acid bath. The black finish shall be a thermosetting powder coat. The powder resin shall be a type TGIC, super durable grade polyester or an Engineer approved equivalent. The steel shall be preheated to a sufficient temperature, prior to the coating process, to ensure all water vapor is removed to fuse the powder to the metal. The box shall be oven cured, after spraying, for a cycle of 5 to 15 minutes at a temperature of 375 to 400 °F. The finished coat shall have a dry coat minimum thickness of 3-5 mil.

A thorough visual inspection shall be made of the painted finish of the installed box and a field touchup or recoat shall be performed by the Contractor at no additional cost.

The black powder coating shall be applied to all junction boxes, stainless steel, attached to structure of the size specified in the plans.

Basis of Payment. This work will be paid for at a contract unit price per EACH for JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, of the size specified in the plans.

LIGHTING CONTROLLER, BASE MOUNTED, 480VOLT, 200AMP WITH BLACK POWDER COAT FINISH

Description. This work shall consist of furnishing and installing an electrical controller. Work shall be according to Section 825 of the Standard Specifications, except as modified herein.

Controller. Revise Article 1068.01(c)(2) to read:

(2) Finished Enclosures. The enclosure, base, and attachments shall be painted black using a powder coat process or an Engineer approved equivalent. The controller shall be cleaned prior to the powder coat process by the immersion process using both an alkaline and acid bath. The black finish shall be a thermosetting powder coat. The powder resin shall be a type TGIC, super durable grade polyester or an Engineer approved equivalent. The aluminum shall be preheated to a sufficient temperature, prior to the coating process, to ensure all water vapor is removed to fuse the powder to the metal. The controller shall be oven cured, after spraying, for a cycle of 5 to 15 minutes at a temperature of 375 to 400 °F. The finished coat shall have a dry coat minimum thickness of 3-5 mil.

A thorough visual inspection shall be made of the painted finish of the installed controller, and a field touchup or recoat shall be performed by the Contractor at no additional cost.

LIGHTING CONTROLLER, PEDESTAL MOUNTED, 240VOLT, 60AMP WITH BLACK POWDER COAT FINISH

Description. This work shall consist of furnishing and installing an electrical controller. Work shall be according to Section 825 of the Standard Specifications, except as modified herein.

Controller. Revise Article 1068.01(c)(2) to read:

(2) Finished Enclosures. The enclosure, base, and attachments shall be painted black using a powder coat process or an Engineer approved equivalent. The controller shall be cleaned prior to the powder coat process by the immersion process using both an alkaline and acid bath. The black finish shall be a thermosetting powder coat. The powder resin shall be a type TGIC, super durable grade polyester or an Engineer approved equivalent. The aluminum shall be preheated to a sufficient temperature, prior to the coating process, to ensure all water vapor is removed to fuse the powder to the metal. The controller shall be oven cured, after spraying, for a cycle of 5 to 15 minutes at a temperature of 375 to 400 °F. The finished coat shall have a dry coat minimum thickness of 3-5 mil.

A thorough visual inspection shall be made of the painted finish of the installed controller, and a field touchup or recoat shall be performed by the Contractor at no additional cost.

LIGHTING CONTROLLER (SPECIAL)

Description. This work shall consist of furnishing and installing an electrical controller, base mounted, 240V, 60A. Work shall be according to Standard 825021 and Section 825 of the Standard Specifications, except as modified herein.

The base mounted decorative lighting controller shall accept a 60AMP 240/120VAC electrical service and include the following equipment:

Enclosure: Revise Article 1068.01(c)(2) to read:

(2) Finished Enclosures. The enclosure, base, and attachments shall be painted black using a powder coat process or an Engineer approved equivalent. The controller shall be cleaned prior to the powder coat process by the immersion process using both an alkaline and acid bath. The black finish shall be a thermosetting powder coat. The powder resin shall be a type TGIC, super durable grade polyester or an Engineer approved equivalent. The aluminum shall be preheated to a sufficient temperature, prior to the coating process, to ensure all water vapor is removed to fuse the powder to the metal. The controller shall be oven cured, after spraying, for a cycle of 5 to 15 minutes at a temperature of 375 to 400 °F. The finished coat shall have a dry coat minimum thickness of 3-5 mil.

A thorough visual inspection shall be made of the painted finish of the installed controller and a field touchup or recoat shall be performed by the Contractor at no additional cost.

Main Circuit Breaker: Provide 60 amp, two pole 240 VAC, UL 489 CB

Power Distribution Blocks: Each terminal block shall be provided with a clear plexiglass cover.

Branch Circuit Breakers: Thermal magnetic UP 489 listed.

1. One-20 amp, two pole for SPD
2. Two-20 amp two pole for the decorative lighting power
3. Two-20 amp, two pole spare
4. One-20 amp, single pole for receptacle
5. One-20 amp, single pole for heater
6. One-20 amp, single pole for light
7. One-20 amp, single pole for power supply
8. One-20 amp, single pole control circuit
9. Two-20 amp, single pole spare

Surge Protection Device (SPD): SPD to provide 40 kA withstand capability per phase and 600 V voltage protection rating with visual indication (LED light per each leg). The SPD shall be UL 1449 (3rd Edition) listed.

Condensate Heater: Provide a condensation strip type heater sized as required for the pump control panel enclosure to minimize moisture that may accumulate inside the enclosure. Include integral thermostat and circulating fan for condensation heater. Circulating fan shall be 4" to 6" nominal diameter axial type fan with wire guards, 115 VAC, and 60 Hz. Thermostat shall be line voltage thermostat, 120 VAC, 5 amp minimum current rating, SPST, and with adjustable control

knob as manufactured by Honeywell, White-Rogers, Hammond, Hoffman, Rittal,, or Chromalox.

Convenience Duplex Receptacle: Provide a duplex receptacle with ground fault circuit interrupter.

Enclosure Light: Provide an LED light fixture for the control panel enclosure with a door activated switch. Light fixture shall be Pentair/Hoffman Catalog Number LEDA1S3, or equivalent.

Power Supply: Provide the panel with a 24 VDC, 2 amp power supply for two-wire analog loop excitation, PULS QS10.241, Phoenix Contact TRIO-PS-2G/1AC/24DC/10, SOLA HD SDN 5-24-100P or equal to provide power to the main control panel

Provide dedicated space for installation of the decorative lighting main control panel and associated touchscreen.

Basis of Payment. This work will be paid for at a contract unit price per EACH for LIGHTING CONTROLLER (SPECIAL).

LIGHT POLE, SPECIAL, (4 FT. AND 15 FT, MAST ARM)

Description. This work shall consist of furnishing and installing a light pole complete with arms and all hardware and accessories required for the intended permanent use of the pole. Work shall be according to Section 830 of the Standard Specifications, except as modified herein.

Pole and Tower. Revise the second paragraph of Article 1069.01(h) to read. “Poles, arms, and attachments shall be a black anodized aluminum made of ASTM B211 Alloy 3003-H14 or 5052-H32, 0.0625 in. thick minimum.’

Basis of Payment. Add the following to Article 830.05: LIGHT POLE, SPECIAL, of the mast arm length specified.

LOGO SIGN PANELS

The Contractor shall be required to install mountable business or agency logo signs, vertical and/or horizontal bars, and directional arrows in accordance with Section 720 of the Standard Specifications. The Contractor shall obtain a company logo sheet sign and attach it to the new logo sign panels as shown on the details in the signage plans. Company logo sheet signs shall first be obtained from the existing logo sign panels. If there are not enough company logo sheet signs to construct the proposed signage as shown on the plans, the Contractor shall notify the Engineer at least 45 calendar days in advance of the date they are needed. Either the Engineer will provide the necessary new company logo sheet signs at no cost to the Contractor for them to install, or if the Contractor is to provide the sign, they shall be paid for furnishing the new company logo sheet signs per the cost of the sign panel type specified.

This work will be included in the cost of the the overall service sign to which each of the company logo sheet signs are attached.

MAINTAIN EXISTING LIGHTING SYSTEM

Description. This work shall consist of furnishing all labor, equipment, and materials for maintaining roadway and sign lighting systems until the proposed new systems are installed, energized, tested, and accepted for operation. This work shall include both the existing and temporary lighting systems at the project locations specified in the plans. This work shall include the relocation of temporary lighting equipment as necessary to accommodate the various stages of construction. All work shall be according to the Standard Specifications, the plans, as directed by the Engineer, and as described herein.

Temporary poles, mast arms, luminaires, conductors, and conduit shall be paid for as separate pay items when part of initial installation of temporary lighting systems. This work shall include all other necessary temporary devices required to maintain existing roadway illumination. All temporary lighting materials shall be furnished, installed, terminated, and maintained in service until the proposed lighting systems are installed, tested, and accepted for operation. All repair work required under maintenance terms shall reinstate the temporary lighting back to full compliance with the design of the system including all parts and components. The location and protection of all temporary devices necessary to comply with these requirements shall be subject to the approval of the Engineer. This work is effective the date the Contractor's activities (electrical or otherwise) at the jobsite begin. The Contractor shall be responsible for the proper operation and maintenance of all existing and proposed lighting systems which are part of, or which may be affected by the work until final acceptance or as otherwise determined by the Engineer.

Existing lighting systems, when depicted on the plans, are intended only to indicate the general equipment installation of the systems involved and shall not be construed as an exact representation of the field conditions. It remains the Contractor's responsibility to visit the site to confirm and ascertain the exact condition of the electrical equipment and systems to be maintained. Contract documents shall indicate the circuit limits.

The Contractor shall submit any modifications to the lighting design plan showing the proposed locations of all temporary poles for each stage of construction associated with each phase of the project for the Engineer’s approval. Any modifications to the lighting design shall meet the requirements of the Department’s BDE Manual Chapter 56, and no poles shall be installed until the Contractor’s revised detailed lighting design plan is approved by the Engineer.

The Contractor shall not purchase temporary lighting equipment until the Contractor has submitted shop drawings and received the Engineer’s approval to proceed. Any temporary lighting materials used by the Contractor which come from stock rather than being purchased new for this project shall require written approval by the Engineer.

The Contractor shall be responsible to maintain the temporary lighting system throughout the project, and no additional compensation will be allowed for this work regardless how many times temporary and/or permanent lighting equipment are relocated. The Contractor shall furnish to the Engineer the names and phone numbers of two people responsible for call-out work on the lighting system on a 24/7 basis. All work required to keep the temporary and/or permanent lighting systems operational shall be at the Contractor’s expense. No lighting circuit or portion thereof shall be removed from nighttime operation without the approval of the Engineer.

Cable splicing, luminaire fusing, and lightning protection shall be submitted for the Engineer's approval. Dragging cable on the ground will not be permitted. Splices shall be rated for and designed to connect aluminum conductors to copper (or aluminum as applicable) conductors of the size range required. The cable shall be installed in one continuous length with no splices where possible. Underground portions of temporary lighting circuits shall be installed as shown on the plans with unit duct according to Section 816. No underground splicing of cable will be permitted. The cable shall be installed in trench or conduit as indicated on the plans and according to manufacturer's recommendations. The installation shall be inspected by the Engineer before it is backfilled.

An inspection and approval by the Engineer shall take place before the temporary lighting system or modified system is accepted for operation. Any damage to the existing lighting units and their circuitry because of the Contractor's negligence shall be repaired or replaced to the satisfaction of the Engineer at no cost to the Department. All burnouts shall be replaced on a next day basis, and temporary wiring shall be installed as necessary to keep all lights functioning every night.

The Contractor shall not be responsible for any utility charges for establishing a point of service from the power company at the locations shown on the plans. The Contractor shall pay the energy costs until such time as the project is final inspected and accepted by IDOT. Any energy charges which the Contractor would like to present to the Department for reimbursement shall be properly metered, billed, and prorated by the Contractor at no cost to the Department.

Removal of Temporary Lighting. Disconnection and removal of all temporary lighting systems shall be in accordance with the requirements of Section 841. The cost for the removal of all temporary lighting equipment shall be paid for under a separate pay item.

Basis of Payment. This work will be paid for at the contract unit price per LUMP SUM for MAINTAIN EXISTING LIGHTING SYSTEM.

MANHOLES TO BE ADJUSTED

Description. This work shall consist of removing the existing casting and adjusting the manhole structure according to Section 602 of the Standard Specifications. The Contractor shall establish the casting grade to the satisfaction of the Engineer. Any damage caused to the casting or manhole by the Contractor shall be repaired or replaced at their own expense.

Basis of Payment. This work will be paid for at the contract unit price per EACH for MANHOLES TO BE ADJUSTED.

PARAPET MOUNTED BRIDGE LIGHTING SYSTEM

Description. This item shall consist of developing a pre-demonstration/mock-up, furnishing, installing, commissioning, and testing decorative lighting including luminaires, control cabling, control boxes, main controller, and integration of the lighting system.

General: Prior to the actual installation of the decorative lighting, the Contractor shall provide a temporary demonstration/mock-up of how the fixtures would appear at the suggested locations and with the different colors. This would include a sample light temporarily mounted in the suggested locations to verify the looks of the light with respect to one vertical beam, one column, and the logo light. The Contractor shall provide temporary power for the fixtures. This demonstration shall occur during nighttime hours for a maximum of four hours and shall be coordinated with the city so that they may attend and provide input. The demonstration will need to occur after the vertical beams and arches have been installed and have had final painting.

The decorative lighting shall use a multi-die LED cluster that enables color combinations that are mixed at source within a prismatic optic. This should include electromechanical design, configurable multi-die led cluster, optics designed for each luminaire, and minimal distance required for color mixing. Control to be suitable for DMX/RDM type controls.

The decorative lighting fixtures shall be rated IP-66 (wet location rated) suitable for use of an operating temperature of -40 to 122 °F and include a vibration rating of 3G. All three decorative lighting fixtures listed below shall be a custom “blue angel” blue (Blue AMS-STD-595 15050) color.

1. D1 LED luminaire is to provide color mixing flood lighting on the vertical beam with narrow spot (10°) and 7,380 delivered lumen output for minimum of 1 fc at 300 ft. Power to be 205 W suitable for 240 VAC single phase input. Color to include 36 clusters (18 clusters per board, one red, one green, one blue and one white 4000K per cluster).
2. D2 LED luminaire is to provide color mixing flood lighting on the center column with a narrow asymmetric distribution and 1440 delivered lumen output. Power to be 28 W suitable for 240 VAC single phase input. Color to include 16 LEDs (four red, four green, four blue, and four white 4000K).
3. D3 LED luminaire is to provide flood lighting for the city logo at a nominal 24” in length with a 10° by 90° symmetric distribution and a 1,785 delivered lumen output. Power to be 10 W/FT suitable for 240 VAC single phase input. Control to be suitable for opticolor cluster with red, green, blue and white 4000K and CRI of 80.

Mounting shall be as recommended by the manufacturer and/as indicated on the plans.

The liquid tight, flexible metal conduit with the power and control cable from the respective junction boxes to the associated light fixtures (D1, D2, or D3) shall be included in the parapet mounted bridge lighting system installation and shall not be paid for separately.

The decorative lighting control and power supply (CBX) boxes shall be installed in NEMA 4X junction boxes as located in the plans. These are to be 240 VAC and provide a star type controls distribution. The CBX shall allow for DMX/RDM type input protocols with test button, indicator lights, and 3G vibration rating in a die cast aluminum housing.

The main decorative lighting controller shall be installed in the base mounted decorative lighting controller. It shall be able to provide fully-customizable, pre-programmed lighting displays with a touch panel controller. The controller shall also include a cellular access point for the controller and a five year cellular SIM service for remote monitoring/control.

The control cable shall be as required by the manufacturer (DMX/Data Cable). DMX cable shall adhere to ANSI E1.11-2008 (r2013)–Entertainment Technology–USITT DMX512-A Asynchronous serial digital data transmission standard for controlling lighting equipment and accessories. At a minimum, DMX cable shall be one-pair (24 AWG, 7x32 stranding), twisted (minimum of 4.8 twist/ft), shielded, minimum of 100 ohms impedance, and less than 25 pf/ft capacitance.

The combined power and data cable, six conductor DMX control, shall be SOOW 16/6 style cables with a minimum of 16 AWG annealed stranded bare copper per ASTM B-174 with a minimum temperature range of -40 to +90 °C. All conductor stranding must be a minimum of 26/30 and capable of handling 13 amps. Cable must include insulation and or shielding to be installed with 240VAC conductors in the same conduit.

The decorative lighting manufacturer shall include a lighting control system integrator (LCSI) subcontractor. The LCSI shall review the decorative lighting shop drawings and verify that the system would provide will be a complete and operational system. The LCSI shall be present for the demonstration/mock-up review. After installation, the LCSI shall inspect all aspects and verify proper installation per the manufacturer's requirements. The LCSI shall coordinate all hardware and software necessary to completely program and operate the decorative lighting according to the request of the city. The city shall describe reset scenes with the associated schedule. The LCSI shall provide all the final aiming, adjusting, and programming to allow for an optimal system. In addition, the LCSI shall incorporate the cellular devise for remote indication/control of the decorative lighting. After acceptance of the decorative lighting, the LCSI shall provide onsite training with a minimum of two sessions each up to four hours in length.

Basis of Payment. This work will be paid for at a contract unit price per LUMP SUM for PARAPET MOUNTED BRIDGE LIGHTING SYSTEM.

PAVEMENT JOINTS

The labor, equipment, and material required to construct all pavement joints, unless otherwise noted in the plans, shall be considered included in the contract unit price of the pavement being constructed.

Construction of the pavement joints shall be in accordance with the plans, the highway standards, and the applicable sections of the Standard Specifications, unless otherwise directed by the Engineer. Materials include, but are not limited to, dowel bars, expansion caps, tie bars, supporting chairs, joint sealants, preformed expansion joint fillers, and epoxy filler. Labor includes, but is not limited to, constructing formwork, setting dowels and tie bars, drilling for dowels, sawing joints, sealing dowels and joints, and setting expansion fillers.

This work shall not be paid for separately but considered included in the cost of the pavement being constructed, and no additional compensation will be allowed.

PEDESTRIAN PUSH-BUTTON POST, TYPE I

Description. This work shall consist of constructing a concrete foundation and furnishing and installing a pedestrian push-button post in accordance with the plans, details, Section 876 of the Standard Specifications, and the special provisions included herein.

Materials. Revise Article 1077.02(b) to read:

(b) Finish. The steel post shall be painted black using a powder coat process or an Engineer approved equivalent. The post shall be cleaned prior to the powder coat process by the immersion process using both an alkaline and acid bath. The black finish shall be a thermosetting powder coat. The powder resin shall be a type TGIC, super durable grade polyester or an Engineer approved equivalent. The steel shall be preheated to a sufficient temperature, prior to the coating process, to ensure all water vapor is removed to fuse the powder to the metal. The post shall be oven cured, after spraying, for a cycle of 5 to 15 minutes at a temperature of 375 to 400 °F. The finished coat shall have a dry coat minimum thickness of 3-5 mil.

A thorough visual inspection shall be made of the painted finish of the installed post, and a field touchup or recoat shall be performed by the Contractor at no additional cost.

The black powder coating shall only be applied to traffic signal equipment located at the intersections of IL 15 and Potomac Boulevard/45th Street, IL 15 and Ramps A/D, and IL 15 and Ramps B/C. Traffic signal equipment at the Veterans Memorial Drive intersections and the intersection of IL 15 and 44th Street shall not be powder coated.

Basis of Payment. This work will be paid for at the contract unit price per EACH for PEDESTRIAN PUSH-BUTTON POST, TYPE I.

PIPE UNDERDRAIN REMOVAL

Description. This work shall include removing existing pipe underdrains and associated appurtenances, if encountered during construction of the proposed improvements, as specified herein unless otherwise directed by the Engineer.

Where existing underdrains are encountered during construction for this project, the Contractor shall remove all existing pipe underdrains and associated appurtenances, including but not limited to concrete headwalls, in conflict with the proposed improvements or any existing pipe underdrains that no longer have a suitable outlet. The Contractor shall coordinate with the Engineer to determine the limits of the removals, provide caps as needed on the high side of the underdrains to remain, and provide suitable outlets as needed on the low side of the underdrains to remain.

Basis of Payment. All labor, equipment, and material required to remove the pipe underdrains and provide suitable termination points for the existing underdrains to remain shall not be paid for separately but shall be considered included in the cost of Earth Excavation.

PORTLAND CEMENT CONCRETE PAVEMENT 10 1/2”

Description. This work shall consist of stamped colored PCC pavement 10 1/2” according to the plans, Section 420 of the Standard Specifications, as specified herein, and as directed by the Engineer.

Construction Requirements. The Contractor shall provide a qualified foreman or supervisor who has a minimum of three years experience with imprinted and textured concrete and successfully completed at least five imprinted concrete installations of high quality and scope to that required.

Prior to beginning work, the Contractor shall provide field samples of integrally colored Portland cement pavement with the imprinted pattern. The sample is to be 48”x48” in size, 10 1/2” thick, and with surface colors and patterns as specified. Work shall not proceed until the workmanship, pattern, and color are approved by the Engineer. The Contractor will be required to provide additional samples as required to obtain the Engineer’s approval.

The concrete shall be integrally colored for the full depth of the pavement. The color shall be solomon color 418 brick red or approved equal. Pigment shall meet the requirements of ASTM C979 and be on the Department’s Approved List of Pigments for Integrally Colored Concrete. All work shall also be in accordance with the manufacturer’s recommendations, including pigment %, pigment mixing, additional concrete admixture compatibility, concrete curing, required sealants, etc. Care shall be taken so that different batches of concrete do not have different finished colors.

Do not add calcium chloride to the concrete mix design.

The stamped pattern shall be a 4” x 8” paver brick placed in a herringbone pattern. Vertical surface discontinuities shall be 0.5 inches maximum. Vertical surface discontinuities between 0.25 inches and 0.5 inches shall be beveled with a slope not steeper than 50%. The bevel shall be applied across the entire vertical surface discontinuity.

The adjacent combination curb and gutter, shared-use path and/or sidewalk is measured and paid for separately and is to remain natural concrete color. The proposed stabilized subbase, 4” and aggregate subgrade improvement, 12” are placed beneath the median curb line and under the entirety of the paved surface. These items are measured and paid for separately.

Basis of Payment. This work will be paid for at the contract unit price per SQUARE YARD for PORTLAND CEMENT CONCRETE PAVEMENT 10 1/2”.

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES

Description. This work shall consist of the removal and disposal of regulated substances according to Section 669 of the Standard Specifications as revised below.

Contract Specific Work Areas. For stationing, the lateral distance is measured from the centerline, and the farthest distance is the offset distance or construction limit, whichever is less.

The following contract specific work areas shall be monitored by the environmental firm for soil contamination and workers protection.

ISGS Site 4089-COV-2 - ROW, Approximate I-57 M.M. 93.5 to M.M. 95.4, Mt. Vernon, Jefferson County, Illinois

- Station 32+98 to Station 34+90 (Ramp A), 0 to 30 feet LT and 0 to 90 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(b)(1). COC sampling parameter: pH.
- Station 34+90 to Station 36+95 (Ramp A), 0 to 35 feet LT and 0 to 80 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, pH.
- Station 34+90 to Station 36+95 (Ramp A), 0 to 35 feet LT and 0 to 80 feet RT: All material reused for construction will require an engineered barrier.
- Station 34+90 to Station 36+95 (Ramp A), 0 to 35 feet LT and 0 to 80 feet RT: A construction worker caution is required for this location due to arsenic.
- Station 36+95 to Station 38+35 (Ramp A), 0 to 35 feet LT and 0 to 80 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameter: manganese.
- Station 39+45 to Station 41+30 (Ramp A), 0 to 35 feet LT and 0 to 85 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, manganese, pH.
- Station 39+45 to Station 41+30 (Ramp A), 0 to 35 feet LT and 0 to 85 feet RT: All material reused for construction will require an engineered barrier.
- Station 39+45 to Station 41+30 (Ramp A), 0 to 35 feet LT and 0 to 85 feet RT: A construction worker caution is required for this location due to arsenic.
- Station 41+30 to Station 43+40 (Ramp A), 0 to 35 feet LT and 0 to 100 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameter: arsenic.
- Station 41+30 to Station 43+40 (Ramp A), 0 to 35 feet LT and 0 to 100 feet RT: All material reused for construction will require an engineered barrier.
- Station 41+30 to Station 43+40 (Ramp A), 0 to 35 feet LT and 0 to 100 feet RT: A construction worker caution is required for this location due to arsenic.
- Station 43+40 to Station 44+95 (Ramp A), 0 to 80 feet LT and 0 to 185 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, manganese.
- Station 43+40 to Station 44+95 (Ramp A), 0 to 80 feet LT and 0 to 185 feet RT: All material reused for construction will require an engineered barrier.

- Station 43+40 to Station 44+95 (Ramp A), 0 to 80 feet LT and 0 to 185 feet RT: A construction worker caution is required for this location due to arsenic.
- Station 44+95 to Station 49+00 (Ramp A), 0 to 90 feet LT and 0 to 90 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(b)(1). COC sampling parameter: pH.
- Station 5+15 to Station 6+15 (Existing Ramp A), 0 to 85 feet LT and 0 to 75 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, manganese.
- Station 5+15 to Station 6+15 (Existing Ramp A), 0 to 85 feet LT and 0 to 75 feet RT: All material reused for construction will require an engineered barrier.
- Station 5+15 to Station 6+15 (Existing Ramp A), 0 to 85 feet LT and 0 to 75 feet RT: A construction worker caution is required for this location due to arsenic.
- Station 4+25 to Station 5+20 (Existing Ramp A), 0 to 75 feet LT and 0 to 80 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, manganese, thallium.
- Station 4+25 to Station 5+20 (Existing Ramp A), 0 to 75 feet LT and 0 to 80 feet RT: All material reused for construction will require an engineered barrier.
- Station 4+25 to Station 5+20 (Existing Ramp A), 0 to 75 feet LT and 0 to 80 feet RT: A construction worker caution is required for this location due to arsenic and thallium.
- Station 3+35 to Station 4+25 (Existing Ramp A), 0 to 80 feet LT and 0 to 85 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, manganese, pH.
- Station 3+35 to Station 4+25 (Existing Ramp A), 0 to 80 feet LT and 0 to 85 feet RT: All material reused for construction will require an engineered barrier.
- Station 3+35 to Station 4+25 (Existing Ramp A), 0 to 80 feet LT and 0 to 85 feet RT: A construction worker caution is required for this location due to arsenic.
- Station 2+35 to Station 3+35 (Existing Ramp A), 0 to 90 feet LT and 0 to 92 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, manganese, pH.
- Station 2+35 to Station 3+35 (Existing Ramp A), 0 to 90 feet LT and 0 to 92 feet RT: All material reused for construction will require an engineered barrier.
- Station 2+35 to Station 3+35 (Existing Ramp A), 0 to 90 feet LT and 0 to 92 feet RT: A construction worker caution is required for this location due to arsenic.
- Station 1+25 to Station 2+35 (Existing Ramp A), 0 to 130 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameter: arsenic.
- Station 1+25 to Station 2+35 (Existing Ramp A), 0 to 130 feet LT: All material reused for construction will require an engineered barrier.
- Station 1+25 to Station 2+35 (Existing Ramp A), 0 to 130 feet LT: A construction worker caution is required for this location due to arsenic.
- Station 1+25 to Station 2+35 (Existing Ramp A), 0 to 100 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameter: arsenic.
- Station 1+25 to Station 2+35 (Existing Ramp A), 0 to 100 feet RT: All material reused for construction will require an engineered barrier.

- Station 1+25 to Station 2+35 (Existing Ramp A), 0 to 100 feet RT: A construction worker caution is required for this location due to arsenic.
- Station 520+05 to Station 521+55 (IL 15), 0 to 125 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameter: arsenic.
- Station 520+05 to Station 521+55 (IL 15), 0 to 125 feet LT: All material reused for construction will require an engineered barrier.
- Station 520+05 to Station 521+55 (IL 15), 0 to 125 feet LT: A construction worker caution is required for this location due to arsenic.
- Station 520+05 to Station 521+80 (IL 15), 0 to 115 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, iron, lead.
- Station 520+05 to Station 521+80 (IL 15), 0 to 115 feet RT: All material reused for construction will require an engineered barrier.
- Station 520+05 to Station 521+80 (IL 15), 0 to 115 feet RT: A construction worker caution is required for this location due arsenic and lead.
- Station 520+30 to Station 521+85 (IL 15), 113 to 235 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). COC sampling parameter: lead.
- Station 521+55 to Station 522+80 (IL 15), 0 to 100 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameter: arsenic.
- Station 521+55 to Station 522+80 (IL 15), 0 to 100 feet LT: All material reused for construction will require an engineered barrier.
- Station 521+55 to Station 522+80 (IL 15), 0 to 100 feet LT: A construction worker caution is required for this location due to arsenic.
- Station 521+80 to Station 524+75 (IL 15), 0 to 105 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, manganese.
- Station 521+80 to Station 524+75 (IL 15), 0 to 105 feet RT: All material reused for construction will require an engineered barrier.
- Station 521+80 to Station 524+75 (IL 15), 0 to 105 feet RT: A construction worker caution is required for this location due to arsenic.
- Station 523+69 to Station 524+75 (IL 15), 0 to 100 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, pH.
- Station 523+69 to Station 524+75 (IL 15), 0 to 100 feet RT: All material reused for construction will require an engineered barrier.
- Station 523+69 to Station 524+75 (IL 15), 0 to 100 feet RT: A construction worker caution is required for this location due arsenic.
- Station 524+75 to Station 526+16 (IL 15), 0 to 95 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, manganese.
- Station 524+75 to Station 526+16 (IL 15), 0 to 95 feet RT: All material reused for construction will require an engineered barrier.
- Station 524+75 to Station 526+16 (IL 15), 0 to 95 feet RT: A construction worker caution is required for this location due to arsenic.

- Station 525+65 to Station 527+55 (IL 15), 0 to 181 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, iron, lead, manganese, pH.
- Station 525+65 to Station 527+55 (IL 15), 0 to 181 feet LT: All material reused for construction will require an engineered barrier.
- Station 525+65 to Station 527+55 (IL 15), 0 to 181 feet LT: A construction worker caution is required for this location due to arsenic and lead.
- Station 524+75 to Station 527+95 (IL 15), 0 to 95 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, iron, manganese.
- Station 524+75 to Station 527+95 (IL 15), 0 to 95 feet RT: All material reused for construction will require an engineered barrier.
- Station 524+75 to Station 527+95 (IL 15), 0 to 95 feet RT: A construction worker caution is required for this location due to arsenic.
- Station 526+16 to Station 527+57 (IL 15), 0 to 90 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, manganese, thallium, lead.
- Station 526+16 to Station 527+57 (IL 15), 0 to 90 feet RT: All material reused for construction will require an engineered barrier.
- Station 526+16 to Station 527+57 (IL 15), 0 to 90 feet RT: A construction worker caution is required for this location due to arsenic, thallium and lead.
- Station 69+10 to Station 71+05 (Ramp C), 0 to 40 feet LT and 0 to 65 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). COC sampling parameters: iron, lead, manganese, pH.
- Station 71+05 to Station 73+00 (Ramp C), 0 to 30 feet LT and 0 to 80 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, iron, lead, manganese, pH.
- Station 71+05 to Station 73+00 (Ramp C), 0 to 30 feet LT and 0 to 80 feet RT: All material reused for construction will require an engineered barrier.
- Station 71+05 to Station 73+00 (Ramp C), 0 to 30 feet LT and 0 to 80 feet RT: A construction worker caution is required for this location due to arsenic and lead.
- Station 73+00 to Station 75+00 (Ramp C), 0 to 35 feet LT and 0 to 85 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: manganese, thallium.
- Station 73+00 to Station 75+00 (Ramp C), 0 to 35 feet LT and 0 to 85 feet RT: All material reused for construction will require an engineered barrier.
- Station 73+00 to Station 75+00 (Ramp C), 0 to 35 feet LT and 0 to 85 feet RT: A construction worker caution is required for this location due to thallium.
- Station 75+00 to Station 76+90 (Ramp C), 0 to 65 feet LT and 0 to 95 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameter: manganese.
- Station 76+90 to Station 78+75 (Ramp C), 0 to 115 feet LT and 0 to 90 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameter: arsenic.
- Station 76+90 to Station 78+75 (Ramp C), 0 to 115 feet LT and 0 to 90 feet RT: All material reused for construction will require an engineered barrier.

- Station 76+90 to Station 78+75 (Ramp C), 0 to 115 feet LT and 0 to 90 feet RT: A construction worker caution is required for this location due to arsenic.
- Station 78+75 to Station 80+17 (Ramp C), 0 to 173 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameters: manganese, pH.
- Station 78+75 to Station 80+79 (Ramp C), 0 to 210 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(b)(1). COC sampling parameter: pH.
- Station 528+90 to Station 531+60 (IL 15), 0 to 190 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, iron, lead, pH.
- Station 528+90 to Station 531+60 (IL 15), 0 to 190 feet RT: All material reused for construction will require an engineered barrier.
- Station 528+90 to Station 531+60 (IL 15), 0 to 190 feet RT: A construction worker caution is required for this location due to arsenic and lead.
- Station 534+70 to Station 536+95 (IL 15), 0 to 175 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: manganese, thallium, benzo(a)pyrene.
- Station 534+70 to Station 536+95 (IL 15), 0 to 175 feet RT: All material reused for construction will require an engineered barrier.
- Station 534+70 to Station 536+95 (IL 15), 0 to 175 feet RT: A construction worker caution is required for this location due to thallium.
- Station 534+55 to Station 536+85 (IL 15), 0 to 105 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, manganese.
- Station 534+55 to Station 536+85 (IL 15), 0 to 105 feet LT: All material reused for construction will require an engineered barrier.
- Station 534+55 to Station 536+85 (IL 15), 0 to 105 feet LT: A construction worker caution is required for this location due to arsenic.
- Station 529+75 to Station 530+5 (IL 15), 0 to 85 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). COC sampling parameters: lead, manganese, nickel, pH.
- Station 529+00 to Station 530+60 (IL 15), 0 to 225 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameters: manganese, pH.
- Station 529+60 to Station 532+10 (IL 15), 0 to 85 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, lead, manganese, thallium.
- Station 529+60 to Station 532+10 (IL 15), 0 to 85 feet LT: All material reused for construction will require an engineered barrier.
- Station 529+60 to Station 532+10 (IL 15), 0 to 85 feet LT: A construction worker caution is required for this location due to arsenic, thallium and lead.
- Station 530+60 to Station 536+93 (IL 15), 90 to 225 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameters: manganese, pH.
- Station 531+50 to Station 532+10 (IL 15), 0 to 95 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, manganese, pH.

- Station 531+50 to Station 532+10 (IL 15), 0 to 95 feet LT: All material reused for construction will require an engineered barrier.
- Station 531+50 to Station 532+10 (IL 15), 0 to 95 feet LT: A construction worker caution is required for this location due to arsenic.
- Station 531+60 to Station 532+85 (IL 15), 0 to 170 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). COC sampling parameter: lead.
- Station 532+10 to Station 534+55 (IL 15), 0 to 100 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(b)(1). COC sampling parameter: pH.
- Station 532+85 to Station 534+70 (IL 15), 0 to 170 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameter: manganese.
- Station 53+05 to Station 55+13 (Ramp B), 0 to 105 feet LT and 0 to 65 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, manganese.
- Station 53+05 to Station 55+13 (Ramp B), 0 to 105 feet LT and 0 to 65 feet RT: All material reused for construction will require an engineered barrier.
- Station 53+05 to Station 55+13 (Ramp B), 0 to 105 feet LT and 0 to 65 feet RT: A construction worker caution is required for this location due to arsenic.
- Station 53+05 to Station 57+25 (Ramp B), 0 to 200 feet LT : The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, manganese.
- Station 53+05 to Station 57+25 (Ramp B), 0 to 200 feet LT: All material reused for construction will require an engineered barrier.
- Station 53+05 to Station 57+25 (Ramp B), 0 to 200 feet LT: A construction worker caution is required for this location due to arsenic.
- Station 54+60 to Station 56+30 (Ramp B), 0 to 105 feet LT and 0 to 65 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, manganese, thallium.
- Station 54+60 to Station 56+30 (Ramp B), 0 to 105 feet LT and 0 to 65 feet RT: All material reused for construction will require an engineered barrier.
- Station 54+60 to Station 56+30 (Ramp B), 0 to 105 feet LT and 0 to 65 feet RT: A construction worker caution is required for this location due to arsenic and thallium.
- Station 56+30 to Station 58+05 (Ramp B), 0 to 100 feet LT and 0 to 80 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, manganese.
- Station 56+30 to Station 58+05 (Ramp B), 0 to 100 feet LT and 0 to 80 feet RT: All material reused for construction will require an engineered barrier.
- Station 56+30 to Station 58+05 (Ramp B), 0 to 100 feet LT and 0 to 80 feet RT: A construction worker caution is required for this location due to arsenic.
- Station 58+05 to Station 59+80 (Ramp B), 0 to 85 feet LT and 0 to 85 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, manganese, thallium, pH.
- Station 58+05 to Station 59+80 (Ramp B), 0 to 85 feet LT and 0 to 85 feet RT: All material reused for construction will require an engineered barrier.

- Station 58+05 to Station 59+80 (Ramp B), 0 to 85 feet LT and 0 to 85 feet RT: A construction worker caution is required for this location due to arsenic and thallium.
- Station 59+80 to Station 61+55 (Ramp B), 0 to 55 feet LT and 0 to 100 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, pH.
- Station 59+80 to Station 61+55 (Ramp B), 0 to 55 feet LT and 0 to 100 feet RT: All material reused for construction will require an engineered barrier.
- Station 59+80 to Station 61+55 (Ramp B), 0 to 55 feet LT and 0 to 100 feet RT: A construction worker caution is required for this location due to arsenic.
- Station 61+55 to Station 63+65 (Ramp B), 0 to 25 feet LT and 0 to 90 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). COC sampling parameters: manganese, benzo(a)pyrene.
- Station 65+55 to Station 67+65 (Ramp B), 0 to 20 feet LT and 0 to 75 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameter: manganese.
- Station 65+55 to Station 67+65 (Ramp B), 0 to 20 feet LT and 0 to 75 feet RT: All material reused for construction will require an engineered barrier.
- Station 65+55 to Station 67+65 (Ramp B), 0 to 20 feet LT and 0 to 75 feet RT: A construction worker caution is required for this location due to arsenic.
- Station 67+65 to Station 69+60 (Ramp B), 0 to 15 feet LT and 0 to 85 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameter: manganese.
- Station 12+40 to Station 13+62 (Existing Ramp D), 0 to 123 feet LT and 0 to 40 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). COC sampling parameters: lead, pH.
- Station 10+80 to Station 12+40 (Existing Ramp D), 0 to 119 feet LT and 0 to 73 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameters: manganese, pH.
- Station 9+59 to Station 10+80 (Existing Ramp D), 0 to 115 feet LT and 0 to 60 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(b)(1). COC sampling parameter: pH.
- Station 8+63 to Station 9+59 (Existing Ramp D), 0 to 107 feet LT and 0 to 88 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(b)(1). COC sampling parameter: pH.
- Station 92+67 to Station 95+80 (Ramp D), 0 to 65 feet LT and 0 to 70 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameter: manganese.
- Station 95+80 to Station 98+35 (Ramp D), 0 to 95 feet LT and 0 to 45 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). COC sampling parameters: lead, pH.
- Station 98+35 to Station 100+70 (Ramp D), 0 to 85 feet LT and 0 to 45 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). COC sampling parameter: lead.
- Station 100+70 to Station 102+70 (Ramp D), 0 to 25 feet LT and 0 to 90 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameter: manganese.
- Station 104+55 to Station 108+50 (Ramp D), 0 to 15 feet LT and 0 to 100 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in

accordance with Article 669.05(a)(1)*. COC sampling parameters: lead, manganese, thallium.
- Station 104+55 to Station 108+50 (Ramp D), 0 to 15 feet LT and 0 to 100 feet RT: All material reused for construction will require an engineered barrier.
- Station 104+55 to Station 108+50 (Ramp D), 0 to 15 feet LT and 0 to 100 feet RT: A construction worker caution is required for this location.

ISGS Site 4089-COV-14 - Freddy's Frozen Custard, 101 Potomac Boulevard, Mt. Vernon, Jefferson County, Illinois

- Station 50+85 to Station 52+05 (Potomac Boulevard), 0 to 45 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). COC sampling parameters: lead, manganese, VOCs.

ISGS Site 4089-COV-17 - Flying J Travel Plaza, 101 S. 45th Street, Mt. Vernon, Jefferson County, Illinois

- Station 513+28 to Station 513+70 (IL 15), 0 to 75 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, chromium, iron, lead, vanadium.
- Station 513+28 to Station 513+70 (IL 15), 0 to 75 feet RT: All material reused for construction will require an engineered barrier.
- Station 513+28 to Station 513+70 (IL 15), 0 to 75 feet RT: A construction worker caution is required for this location.
- Station 45+72 to Station 47+15 (Potomac Boulevard), 0 to 50 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). COC sampling parameter: iron, benzo(a)pyrene.

ISGS Site 4089-COV-19 - Cracker Barrel, 4425 Fairfax Drive, Mt. Vernon, Jefferson County, Illinois

- Station 517+80 to Station 520+05 (IL 15), 0 to 120 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameter: manganese

ISGS Site 4089-COV-21 - ROW, 4400-4500 blocks of Broadway Street, Mt. Vernon, Jefferson County, Illinois

- Station 513+70 to Station 514+70 (IL 15), 0 to 135 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, iron, lead, manganese, vanadium.
- Station 513+70 to Station 514+70 (IL 15), 0 to 135 feet RT: All material reused for construction will require an engineered barrier.
- Station 513+70 to Station 514+70 (IL 15), 0 to 135 feet RT: A construction worker caution is required for this location.
- Station 514+70 to Station 516+35 (IL 15), 0 to 125 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameter: manganese.

ISGS Site 4089-COV-22 - Monken Toyota of Mt. Vernon, 100 S. 45th Street, Mt. Vernon, Jefferson County, Illinois

- Station 516+30 to Station 518+85 (IL 15), 0 to 105 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, lead, manganese, thallium.
- Station 516+30 to Station 518+85 (IL 15), 0 to 105 feet RT: All material reused for construction will require an engineered barrier.
- Station 516+30 to Station 518+85 (IL 15), 0 to 105 feet RT: A construction worker caution is required for this location due to arsenic, lead and thallium.
- Station 518+85 to Station 520+05 (IL 15), 0 to 110 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameter: manganese.
- Station 46+40 to Station 47+60 (Potomac Blvd), 0 to 50 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, iron, manganese, thallium.
- Station 46+40 to Station 47+60 (Potomac Blvd), 0 to 50 feet RT: All material reused for construction will require an engineered barrier.
- Station 46+40 to Station 47+60 (Potomac Blvd), 0 to 50 feet RT: A construction worker caution is required for this location due to arsenic and thallium.
- Station 47+60 to Station 48+85 (Potomac Blvd), 0 to 50 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). COC sampling parameters: iron, lead, manganese.

ISGS Site 4089-COV-23 - Goldies Gaming & Golf, 200 S. 45th Street, Mt. Vernon, Jefferson County, Illinois

- Station 45+50 to Station 46+40 (Potomac Blvd), 0 to 50 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). COC sampling parameter: benzo(a)pyrene.

ISGS Site 4089-COV-27 - Drury Inn & Suites, 145 N. 44th Street, Mt. Vernon, Jefferson County, Illinois

- Station 536+85 to Station 538+35 (IL 15), 0 to 90 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: manganese, thallium, benzo(a)pyrene.
- Station 536+85 to Station 538+35 (IL 15), 0 to 90 feet LT: All material reused for construction will require an engineered barrier.
- Station 536+85 to Station 538+35 (IL 15), 0 to 90 feet LT: A construction worker caution is required for this location due to thallium.

ISGS Site 4089-COV-28 - Panera Bread, 101 N. 44th Street, Mt. Vernon, Jefferson County, Illinois

- Station 539+35 to Station 540+40 (IL 15), 0 to 85 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). COC sampling parameter: lead.
- Station 540+40 to Station 541+85 (IL 15), 0 to 85 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). COC sampling parameters: lead, benzo(a)pyrene.

ISGS Site 4089-COV-38 - Circle K gas station, 103 S. 44th Street, Mt. Vernon, Jefferson County, Illinois

- Station 540+25 to Station 541+85 (IL 15), 0 to 85 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(b)(1). COC sampling parameter: pH.

ISGS Site 4089-COV-40 - Super 8, 401 S. 44th Street, Mt. Vernon, Jefferson County, Illinois

- Station 536+95 to Station 538+50 (IL 15), 0 to 95 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1)*. COC sampling parameters: arsenic, manganese, pH.
- Station 536+95 to Station 538+50 (IL 15), 0 to 95 feet RT: All material reused for construction will require an engineered barrier.
- Station 536+95 to Station 538+50 (IL 15), 0 to 95 feet RT: A construction worker caution is required for this location due to arsenic.
- Station 538+50 to Station 539+35 (IL 15), 0 to 90 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameter: manganese.

Work Zones. Three distinct OSHA HAZWOPER work zones (exclusion, decontamination, and support) shall apply to projects adjacent to or within sites with documented leaking underground storage tank (LUST) incidents or sites under management in accordance with the requirements of the Site Remediation Program (SRP); Resource Conservation and Recovery Act (RCRA); Comprehensive Environmental Response, Compensation and Liability Act (CERCLA); or as deemed necessary. For this project, the work zones apply for the following ISGS PESA Sites**: IDOT ROW (ISGS 4089-COV-2), Flying J Travel Center (ISGS 4089-COV-17), IDOT ROW (ISGS 4089-COV-21), Monken Toyota of Mt. Vernon (ISGS 4089-COV-22), Drury Inn & Suites ((ISGS 4089-COV-27), Super 8 (ISGS 4089-COV-40).**

Additional information on the contract specific work areas listed above collected during the regulated substances due-diligence process is available through the District's Environmental Studies Unit (DESU).

Material classified as 669.05(a)(1)* will be used as fill and covered with an engineered barrier. Based on discussions with district personnel, District 9 agrees that most of the material classified as 669.05(a)(1), 669.05(a)(1)*, 669.05(a)(2), 669.05(a)(3), 669.05(b)(1), or 669.05(c) does not constitute a serious environmental concern, and the material shall be reused onsite as embankment or fill in accordance with this special provision. The District has committed to placing approximately 151,167 cubic yards of regulated substances material classified in the November 1, 2024 preliminary site investigation report (PSI) as 669.05(a)(1), 669.05(a)(1)*, 669.05(a)(2), 669.05(a)(3), 669.05(b)(1), or 669.05(c) along the roadway as fill or embankment within the project limits using engineered barriers to address materials classified as 669.05(a)(1)*. If plans for this project change and material classified as 669.05(a)(1), 669.05(a)(1)*, 669.05(a)(2), 669.05(a)(3), 669.05(b)(1), or 669.05(c) is to be removed, the regulated substances material referenced in this special provision will need to be managed using Article 109.04 as non-special waste. The intent of the commitment is not covered by Section 202.

REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL

Some areas may be encountered or identified during construction as containing material that may not provide a stable platform for paving operations because they normally contain saturated materials or standing water. These areas shall be undercut 18'' or to a stable material as determined by the Engineer. The excavated soils shall be replaced with aggregate or suitable earth excavation as determined by the Engineer. The material placed in the undercuts is considered part of the embankment and shall be placed and compacted in accordance with the requirements of Section 205 of the Standard Specifications.

The excavated undercut material may be used elsewhere in the embankment subject to that the placement location of the undercut soils is approved by the Engineer and that the moisture content of the undercut material must be reduced by thorough disking to no more than 110% of standard proctor optimum.

If aggregate material is determined to replace excavated unsuitable material, rock fill shall be utilized, and the Contractor shall be compensated at the contract unit price per ton.

Excavation of the undercut material and subsequent placement for embankment or offsite disposal will be paid for as Removal and Disposal of Unsuitable Material. No additional compensation will be allowed for the additional drying and/or haul distance necessary to meet the requirements of this special provision. The undercut included in the contract quantities is approximate only and may be increased or reduced by the Engineer as field conditions warrant.

REMOVE EXISTING SERVICE INSTALLATION

Effective: October 19, 1990

Description. his work shall consist of removing the existing service installation at the location shown on the plans and disposing of the material as directed by the Engineer. The existing service installation material to be removed is to remain the property of the Contractor. The Contractor may use their discretion to remove the material assembled or disassembled. The removal of the existing wood service pole shall be removed as part of this item.

Basis of Payment. This work will be paid for at the contract unit price per EACH for REMOVE EXISTING SERVICE INSTALLATION.

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

Description. The Contractor shall be required to remove all existing traffic signal equipment, suspended and buried, to an elevation of no less than 12" below finished grade when it interferes with the proposed improvements.

Construction Requirements. The existing traffic signal equipment includes all posts, mast arms poles, concrete foundations, handholes, signal heads, controller cabinets, conduit, cabling, and all associated appurtenances shall be removed in accordance with the applicable portions of Section 895 of the Standard Specifications and as shown in the plans and shall be disposed offsite or salvaged as directed by the Engineer. The Contractor shall be required to deliver any traffic signal items requested for salvage to the IDOT's Mt. Vernon Maintenance Yard at 1 Fountain Place, Mt. Vernon. The Contractor shall dispose of all surplus traffic signal equipment not claimed by IDOT.

It shall be the responsibility of the Contractor to make any necessary arrangements with the utility company for the disconnection and removal of the traffic signal equipment and transfer to either temporary or permanent signal system as necessary. The temporary or new traffic signal equipment proposed shall be operational prior to this removal.

Basis of Payment. This work will be paid for at the contract unit price per EACH for REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT, which price includes removing and delivering all of the equipment collectively as indicated on the plans.

REMOVAL OF EXISTING STRUCTURES

Description. After construction of the proposed IL 15 bridge over the I-57/64 mainline and the IL 15 traffic is shifted onto the new bridge, the entire existing IL 15 bridge (SN 041-0025) over the I-57/64 mainline shall be removed in accordance with Section 501 of the Standard Specifications and as herein specified. The existing structure consists of a four span rigid frame bridge (41'-11 ¼", 120'-3 ¾ ", 120'-3 ¾ ", and 41'-11 ¼ "). The back to back abutment length is 330', and the out to out bridge width is 88'. The existing deck slab is 7 ½" thick and is non-composite. The existing substructure is stub abutments on steel H-piles, and the intermediate supports are founded on concrete spread footings with pedestals. The intermediate support pedestals and abutment piles need to be removed to 2' below the finished grade. The following are estimated quantities for structure removal. The Contractor is responsible for verifying quantities:

- Superstructure Concrete: 819.2 Cu. Yds.
- Substructure Concrete: 400.0 Cu. Yds.
- Structural Steel: 974,030 Pounds
- Piling Removal at Abutments: 1,085 Ft.

Concrete, steel materials, and other appurtenances removed from any part of the existing structure shall be disposed of offsite in accordance with Article 202.03 of the Standard Specifications.

The existing structure includes a protective shield system. The Contractor shall be required to evaluate the existing protective shield system to ensure it is functional during demolition of the existing structure. The Contractor may replace the system with their own if desired. The proposed protective shield system shall be in accordance with Section 501 of the Standard Specifications.

Basis of Payment. This work will be paid for at the contract unit price per EACH for REMOVAL OF EXISTING STRUCTURES.

The protective shield system will be paid for at the contract unit price per SQUARE YARD for PROTECTIVE SHIELD.

REMOVAL OF LIGHTING LUMINAIRE, NO SALVAGE

Description: This work shall consist of removing an existing roadway luminaire in accordance with applicable portions of Section 842 of the Standard Specifications and as directed by the Engineer. The luminaire, associated components, wiring, and splices shall not be salvaged and shall be removed and disposed from the site at the Contractor's expense. The pole shall not be left without a luminaire installed on the tenon.

Basis of Payment: This work will be paid for at the contract unit price per EACH for REMOVAL OF LIGHTING LUMINAIRE, NO SALVAGE.

ROCK FILL

Description. This work shall consist of furnishing, transporting, and placing rock fill for ground stabilization.

Construction Requirements. The material to be used for rock fill shall be granular material that will provide a stable platform for construction. The granular material shall be 3" bedding stone meeting the gradation limits of RR 1. The rockfill shall be placed in lifts not exceeding 12" and compacted in a manner approved by the Engineer. Scrapers or other equipment which result in excessive rutting of the rockfill will not be allowed on the rock fill. The rock fill shall be capped with a minimum of 4" of granular material meeting the gradation limits of CA 6 or CA 10. The CA 6 or CA 10 lift shall be compacted with a steel wheel roller meeting the requirements of note 1 and obtain 95% of the standard proctor density as determined by AASHTO T 99.

Note 1. Steel rollers shall weigh less than 6 tons and no more than 12 tons and have a compression on the drive wheels of no less than 190 lb/in. and no more than 400 lb/in. of width of roller.

Rock fill will be measured for payment in cubic yards in accordance with Article 311.08.

Basis of Payment. This work will be paid for at the contract unit price per TON for ROCK FILL.

ROCK FILL – FOUNDATION

Effective 12/11/19

Description. This work consists of constructing a layer of rock fill below culverts or spread footings having unstable or unsuitable soil conditions. When shown on the plans, the rock fill limits and thickness shall be confirmed by the Engineer prior to excavating below the theoretical top of rock fill line.

Materials. Materials shall meet the requirements of the following Articles:

CA-6 and CA-7	1004.04
Rock fill	1005.01

All rock fill shall be well graded. The gradation of rock fill shall be selected based on layer thickness as shown below:

Less than or equal to 3 ft	Stone Riprap RR 1
Greater than 3 ft. .	Primary Crusher Run or Shot Rock (18" max size)

Construction Requirements. The method of rock fill placement shall be approved by the Engineer. Rock fill shall be capped according to application as shown below:

Spread Footing	4 to 6 inches CA-6
Cast-In-Place Box Culverts	6 inches CA-6
Pre-Cast Box Culverts	Porous Granular Bedding Material (Article 540.06)
Pre-Cast Pipe Culverts	4 to 6 inches Fine Aggregate (Article 542.04(c))

The rock fill and CA 6 cap shall be compacted to the satisfaction of the Engineer.

Basis of Payment. This work will be measured and paid for at the contract unit price per TON for ROCK FILL–FOUNDATION, which price includes aggregate materials and aggregate material placement.

Excavation for the rock fill will be performed in accordance with Section 502 and measured according to Article 502.12 (b). he excavation will be paid for at the contract unit price per CUBIC YARD for REMOVAL AND DISPOSAL OF UNSUITABLE MATERIALS FOR STRUCTURES.

SANITARY MANHOLES TO BE ADJUSTED

Description. This work shall consist of removing existing castings and adjusting the manhole structure according to Section 602 of the Standard Specifications. The Contractor shall establish the casting grade to the satisfaction of the Engineer. Any damage caused to the casting or manhole by the Contractor shall be repaired or replaced at their own expense.

Basis of Payment. This work will be paid for at the contract unit price per EACH for SANITARY MANHOLES TO BE ADJUSTED.

SAWED JOINTS

Where a portion of existing pavement, shoulders, curb and gutter, and medians are to be removed and there is not a joint at or near the limits of the proposed removal, the proposed joint between the existing and new construction shall be scored with a saw to prevent the surface from spalling. The score line shall be straight and shall be at the locations shown on the plans or as directed by the Engineer.

A sawing machine meeting the approval of the Engineer shall be used. Saw cuts shall be made full depth to provide a square face for abutting future construction or to establish a clean uniform edge for pavement to be left in place. The work shall be completed in accordance with the applicable portions of Section 442 of the Standard Specifications and as directed by the Engineer.

This work shall not be paid for separately but shall be considered included in the cost of the item being removed, and no additional compensation will be allowed.

SEDIMENT BASINS

This work shall consist of constructing sediment basins for the purpose of erosion control in accordance with Section 280 of the Standard Specifications, Standard 280001, and the details shown in the plans.

Initial excavation and interim maintenance of these temporary basins shall be measured and paid for as Earth Excavation for Erosion Control and as for Aggregate (Erosion Control).

Maintenance of sediment basins will be as directed by the Engineer and shall include the removal of trapped sediment from the basins when the basin becomes 75% filled. Trapped sediment and accumulated silt shall be disposed according to Article 202.03. Maintenance excavation shall also be measured and paid for as Earth Excavation for Erosion Control.

SEEDING, CLASS 1

Description. This work shall consist of preparing the seed bed and placing the seed and other materials required in seeding operations on the shoulders, slopes, and other areas in accordance with Section 250 of the Standard Specifications. A nominal quantity of seeding, class 1 has been included for use as directed by the Engineer for landscaping commercial businesses along 45th Street and Potomac Boulevard. If seeding, class 1 is used in lieu of seeding, class 2 in the aforementioned areas, then a deduction of quantity shall be made for seeding, class 2.

Basis of Payment. This work will be paid for at the contract unit price per ACRE for SEEDING, CLASS 1. All fertilizers, agricultural ground limestone, and mulch shall be paid for separately.

SERVICE INSTALLATION – GROUND MOUNTED

Description. This work shall consist of all labor, equipment, and materials required to furnish and install an electric service installation for decorative lighting, combination lighting, and traffic signal operation. This work shall include all utility meters and service disconnects and shall be in accordance with Sections 804 and 805 of the Standard Specifications, the details in the plans, and as described below unless otherwise directed by the Engineer.

The electric service installation shall be the electric service disconnecting means, and it shall be identified as suitable for use as service equipment.

The Contractor must request in writing for service and/or service modification within ten days of contract award and must follow-up with the electric utility to assure all necessary documents and payment are received by the utility. The Contractor shall forward copies of all correspondence between the Contractor and utility company to the Engineer and Owner. The service agreement and sketch shall be submitted for signature to the Owner.

This service installation shall be utilized by the decorative lighting controller (lighting controller (special)), combination lighting controller (lighting controller, pedestal mounted, 240 volt, 60 amp), and the traffic signal controller (full-actuated controller and type V cabinet).

Materials. The completed control panel shall be constructed in accordance with UL Std. 508A, Industrial Control Panel, and carry the UL label. Wire terminations shall be UL listed.

Enclosures-Ground Mounted Cabinet. The cabinet shall be UL 50, NEMA type 3R unfinished with a customer and utility section with lockable hasp design. The cabinet shall be constructed from raw uncoated aluminum. Seams shall be continuous welded and ground smooth. Hinges shall be stainless steel and piano type. The cabinet shall be 16” wide. The cabinet shall be bolted with stainless steel hardware to mounting base secured in concrete pad as indicated on the plans. The foundation is paid for separately.

Electric Utility Meter Housing. The electric meter housing and meter socket shall be supplied and installed by the Contractor. The Contractor is to coordinate the work to be performed and the materials required with the utility company to make the final connection at the power source. Electric utility required risers, weather/service head, and any other materials necessary for connection shall also be included in the pay item. Materials shall be in accordance with the electric utility’s requirements. For ground-mounted service, the electric utility meter shall be exposed. The meter shall be supplied by the utility company. Metered service shall not be used unless specified in the plans.

Surge Protector. SPD installed on load side of main breaker Hubbel Part HBLSDSA36- 36KA single phase with LED indicator or equal.

Circuit Breakers. Circuit breakers shall be standard UL listed molded case, thermal-magnetic bolt-on type, circuit breakers with trip free indicating handles and must include lug to lug connections. Circuit breakers need to be 480 V rated Cutler EHD series or equal. Unless otherwise indicated, the main disconnect circuit breaker shall be rated 100 amperes, 120 V-240 V single phase 3 wire. The auxiliary circuit breakers shall be rated 30 amp-two pole, 120 V-240 V for signals, 20 amp-

two pole, 120 V-240 V for roadway lighting and 60 amp-two pole, 120 V-240 V for decorative lighting.

GFCI Receptacle. A 20 amp GFCI shall be mounted to dead front.

Ground and Neutral Bus Bars. A single copper ground and neutral bus bar mounted on the equipment panel shall be provided.

Utility Services Connection. The Contractor shall notify the utility company marketing representative a minimum of 30 working days prior to the anticipated date of hook-up. This 30-day advance notification will begin only after the utility company marketing representative has received service charge payments from the Contractor. Prior to contacting the utility company marketing representative for service connection, the service installation controller cabinet and cable must be installed for inspection by the utility company.

Ground Rod. Ground rods shall be copper-clad steel, a minimum of 8 feet in length, and 3/4 inch in diameter. Ground rod resistance measurements to ground shall be 10 ohms or less. If necessary, additional rods shall be installed to meet resistance requirements at no additional cost.

Installation. The Contractor shall confirm the orientation of the traffic service installation and its door side with the Engineer prior to installation. All conduit entrances into the service installation shall be sealed with a pliable waterproof material.

Ground Mounted. The service installation shall be mounted plumb and level on the foundation. The space between the bottom of the enclosure and the top of the foundation shall be caulked at the base with silicone.

Basis of Payment. The service installation shall be paid for at the contract unit price per EACH for SERVICE INSTALLATION–GROUND MOUNTED, which price includes furnishing and installing the service installation complete. The concrete foundation, which includes the ground rod, shall be paid for separately. Any charges by the utility companies shall be approved by the Engineer and paid for as an addition to the contract according to Article 109.05 of the Standard Specifications.

SETTLEMENT PLATFORMS

This work shall consist of furnishing and installing settlement platforms according to Article 204.06 of the Standard Specifications and as detailed in the plans and this special provision. The settlement platforms will be used by the Engineer to determine when the abutment pile driving can commence after completion of the embankment. Upon completion of the embankment, the settlement readings will continue to be taken until 90% consolidation has been achieved and the District determines that readings are no longer necessary.

Monitoring. Frequency of monitoring the settlement platforms shall be established by the Engineer. Monitoring/taking readings on the platforms and plotting data shall be performed by the District. On the basis of the readings taken from the settlement platforms, the District will make the determination of the duration of the monitoring.

SN 041-0121 (IL 15 over I-67/64) West Abutment/Embankment. The estimated overall long-term magnitude of embankment settlement at the west abutment is 2.14 inches. Settlement platforms are to measure the magnitude of settlement induced by embankment fill. The point of substantial completion of settlement shall be determined by the District based on the monitoring data collected from the settlement platform. The estimated time to 90% consolidation is seven months based on instantaneous loading.

SN 041-0121 (IL 15 over I-67/64) East Abutment/Embankment. The estimated overall long-term magnitude of embankment settlement at the east abutment is 1.85 inches. Settlement platforms are to measure the magnitude of settlement induced by embankment fill. The point of substantial completion of settlement shall be determined by the District based on the monitoring data collected from the settlement platform. The estimated time to 90% consolidation is 2.4 months based on instantaneous loading.

Basis of Payment. This work will be paid for at the contract unit price per EACH for SETTLEMENT PLATFORMS, which price includes supplying, installing, maintaining, and abandoning the platforms.

SIGN REMOVAL, SALVAGE AND RELOCATION

This work shall consist of coordinating construction and traffic control activities for removing and disposing any existing sign panels not identified for removal on the plans or not identified for payment otherwise. Existing traffic and object marker signs located along the existing roadways shall be removed when they interfere with construction. Signs shall not be removed until the construction traffic control signage is in place.

The signs shall be securely stockpiled at a central location. IDOT's District 9 Bureau of Operations shall be allowed to salvage any signs that have been removed. The Contractor shall be required to deliver any traffic signs requested for salvage to the Mt. Vernon IDOT Maintenance Yard at 1 Fountain Place, Mt. Vernon. The Contractor shall dispose of all surplus signs and posts not claimed by IDOT. This work is included in the cost of Traffic Control and Protection, (Special). Construction signage shall not be removed until permanent signs have been re-installed by the Contractor.

SLEEPER SLAB

This work shall include the construction of a PCC sleeper slab with reinforcement bars under the pavement separation joints in accordance with the details in the plans and Section 420 of the Standard Specifications, unless otherwise directed by the Engineer. This work will be paid for at the contract unit price per FOOT for SLEEPER SLAB.

SPECIAL GRATE NO. 1

Description. This work shall consist of furnishing and installing an elevated beehive-type grate as specified below or an approved equal in accordance with Section 604 of the Standard Specifications and as shown in the plans.

Special Grate (R-4342) Characteristics:

- Round shape
- Gray iron material type
- Grate diameter = 33 inches
- Grate seat depth = 6¾ inches
- Depth from top of structure = 5¼ inches
- Free open area = 278 square inches
- Grate slit opening width – 2½ inches
- Grate thickness = 1 inch

A minimum amount of 6 inches of adjusting rings shall be provided between the drainage structure flat top slab and the special grate to promote turf growth unless in restrictive cover areas or as otherwise directed by the Engineer.

Basis of Payment. This work will be measured and paid for at the contract unit price per EACH for SPECIAL GRATE NO. 1.

STEEL COMBINATION MAST ARM ASSEMBLY AND POLE (SPECIAL)

Description. This work shall consist of furnishing and installing a steel combination mast arm assembly and pole with dual luminaire arms in accordance with the plans, Section 877 of the Standard Specifications, and the special provisions included herein.

Materials. Amend Article 1077.01(a) to read:

(5) Finish. The steel mast arm, luminaire mast arms or davit arms, steel pole, and all mounting hardware and assemblies shall be painted black using a powder coat process or Engineer approved equivalent. The equipment shall be cleaned prior to the powder coat process by the immersion process using both an alkaline and acid bath. The black finish shall be a thermosetting powder coat. The powder resin shall be a type TGIC, super durable grade polyester or an Engineer approved equivalent. The steel shall be preheated to a sufficient temperature, prior to the coating process, to ensure all water vapor is removed to fuse the powder to the metal. The equipment shall be oven cured, after spraying, for a cycle of 5 to 15 minutes at a temperature of 375 to 400 °F. The finished coat shall have a dry coat minimum thickness of 3-5 mil.

A thorough visual inspection shall be made of the painted finish of the installed equipment, and a field touchup or recoat shall be performed by the Contractor at no additional cost.

The black powder coating shall only be applied to traffic signal equipment located at the intersections of IL 15 and Potomac Boulevard/45th Street, IL 15 and Ramps A/D, and IL 15 and Ramps B/C. Traffic signal equipment at the Veterans Memorial Drive intersections and the intersection of IL 15 and 44th Street shall not be powder coated.

Basis of Payment. This work will be measured and paid for at the contract unit price per EACH for STEEL COMBINATION MAST ARM ASSEMBLY AND POLE (SPECIAL) of the length specified in the plans.

STEEL MAST ARM ASSEMBLY AND POLE

Description. This work shall consist of furnishing and installing a steel mast arm assembly and pole or a steel combination mast arm assembly and pole in accordance with the plans, Section 877 of the Standard Specifications, and the special provisions included herein.

Materials. Amend Article 1077.01(a) to read:

(5) Finish. The steel mast arm, luminaire mast arms or davit arms, steel pole, and all mounting hardware and assemblies shall be painted black using a powder coat process or Engineer approved equivalent. The equipment shall be cleaned prior to the powder coat process by the immersion process using both an alkaline and acid bath. The black finish shall be a thermosetting powder coat. The powder resin shall be a type TGIC, super durable grade polyester or an approved equivalent. The steel shall be preheated to a sufficient temperature, prior to the coating process, to ensure all water vapor is removed to fuse the powder to the metal. The equipment shall be oven cured, after spraying, for a cycle of 5 to 15 minutes at a temperature of 375 to 400 °F. The finished coat shall have a dry coat minimum thickness of 3-5 mil.

A thorough visual inspection shall be made of the painted finish of the installed equipment, and a field touchup or recoat shall be performed by the Contractor at no additional cost.

The black powder coating shall only be applied to traffic signal equipment located at the intersections of IL 15 and Potomac Boulevard/45th Street, IL 15 and Ramps A/D, and IL 15 and Ramps B/C. Traffic signal equipment at the Veterans Memorial Drive intersections and the intersection of IL 15 and 44th Street shall not be powder coated.

Basis of Payment. This work will be paid for at the contract unit price per EACH for STEEL MAST ARM ASSEMBLY AND POLE or STEEL COMBINATION MAST ARM ASSEMBLY AND POLE of the length specified in the plans.

SUBGRADE

Effective: 1984 Revised: December, 9, 2020

In addition to the provisions of Article 301.04 which require that the entire subgrade shall be compacted to no less than 95% of the standard laboratory density, the top 6" of the subgrade in cut sections shall not contain more than 120% of the optimum moisture determined in accordance with AASHTO T 99 (Method A or C). The cost of this work will not be paid for directly but shall be included in the cost of the various pay items for the pavement structure.

TELESCOPING STEEL SIGN SUPPORT (SPECIAL)

Description. This work shall consist of furnishing and installing removable telescoping steel sign supports for ground-mounted signs in pavement in accordance with Section 728 of the Standard Specifications and as shown in the plans.

Materials. Materials shall be in accordance with Article 728.02 of the Standard Specifications in addition to the materials for the sleeve, base, and fasteners per District 9's Telescoping Steel Sign Support detail.

Construction Requirements. The concrete median surface or PCC pavement shall be cored. The telescoping steel sign support shall be installed in accordance with the applicable portions of Article 728.04 of the Standard Specifications and District 9's Telescoping Steel Sign Support detail.

Basis of Payment. This work will be paid for at the contract unit price per FOOT for TELESCOPING STEEL SIGN SUPPORT (SPECIAL), which price includes all labor, equipment, and materials to core the pavement and furnish and install the sign support.

TEMPORARY LIGHTING SYSTEM

Description. This work shall consist of furnishing all labor, equipment, and materials to provide and maintain temporary roadway lighting systems at the proposed temporary traffic signal locations at 45th St./Potomac Blvd. and the IL 15 ramp terminal intersections until the proposed new combination lighting is installed, energized, tested, and accepted for operation for the new traffic signals. This work shall include coordination with both the existing and temporary lighting systems at the project locations specified in the plans. This work shall also include the relocation of temporary lighting equipment as necessary to accommodate the various stages of construction. All work shall be according to the Standard Specifications for Road and Bridge Construction, the plans, as directed by the Engineer, and as described herein.

Temporary lighting controllers, poles, mast arms, luminaires, conductors, and conduit shall be required as part of this work for the installation of temporary lighting systems. This work shall include all necessary temporary devices required to maintain existing roadway illumination. All temporary lighting materials shall be furnished, installed, terminated, and maintained in service

until the proposed lighting systems are completed. Work also includes all repair work to maintain temporary lighting system, including all parts and components. The location and protection of all temporary devices necessary to comply with these requirements shall be subject to the approval of the Engineer.

Existing lighting systems, when depicted on the plans, are intended only to indicate the general equipment installation of the systems involved and shall not be construed as an exact representation of the field conditions. It remains the Contractor's responsibility to visit the site to confirm and ascertain the exact condition of the electrical equipment and systems to be installed and maintained. The Contractor shall submit for the Engineer’s approval, a proposed temporary lighting system plan showing the proposed locations of all temporary poles for each stage of construction associated with each phase of the project. The Contractor shall not purchase temporary lighting equipment until the Contractor has submitted shop drawings and received the Engineer’s approval to proceed.

The Contractor shall be responsible to maintain the temporary lighting system throughout the project, and no additional compensation will be allowed for this work, regardless the times temporary and/or permanent lighting equipment are relocated. The Contractor shall furnish the names and phone numbers of two persons responsible for call-out work on the lighting system on a 24/7 basis. All work required to keep the temporary and/or permanent lighting systems operational shall be at the Contractor’s expense.

Cable splicing, luminaire fusing, and lightning protection shall be submitted for the Engineer’s approval. Dragging cable on the ground will not be permitted. The cable shall be installed in one continuous length with no splices where possible.

An inspection and approval by the Engineer shall take place before the temporary lighting system or modified system is accepted for operation. Any damage to the existing lighting units and their circuitry due to the Contractor’s negligence shall be repaired or replaced to the satisfaction of the Engineer at no cost to the Department. All burnouts shall be replaced on a next day basis and temporary wiring shall be installed as necessary to keep all lights functioning every night.

The Contractor shall not be responsible for any utility charges for establishing a point of service from the power company at the locations shown on the plans. The Contractor shall pay the energy costs until such time as the project is final inspected and accepted by IDOT. Any energy charges which the Contractor would like to present to the Department for reimbursement shall be properly metered, billed, and prorated by the Contractor at no cost to the Department.

Removal of Temporary Lighting. Disconnection and removal of all temporary lighting systems shall be in accordance with the requirements of Section 841. The cost for the removal of all temporary lighting equipment associated with the temporary traffic signals shall be included in this work.

Basis of Payment. This work will be paid for at the contract unit price per LUMP SUM for TEMPORARY LIGHTING SYSTEM.

TEMPORARY LUMINAIRE, LED, ROADWAY

Description. This work shall consist of furnishing and installing a light emitting diode luminaire. This work shall be according to the Supplemental Specifications and Recurring Special Provisions, except as modified herein.

Basis of Payment. Add the following to Article 821.08: TEMPORARY LUMINAIRE, LED, ROADWAY, of the output designation specified.

TEMPORARY PAVEMENT

Description. This work shall consist of furnishing all materials, labor, and equipment necessary to construct full-depth HMA pavement on a prepared subgrade for use during construction staging which shall carry temporary traffic according to applicable portions of Sections 406 and 407 of the Standard Specifications, the plans, the special provisions, included herein or as otherwise directed by the Engineer.

Construction Requirements. Temporary pavement is intended to be used to widen existing and proposed pavement and to fill in existing islands and medians at locations shown on the plans or as directed by the Engineer. The HMA material and overall thickness to be used for temporary pavement is shown in the mixture requirements table in the plans and all bituminous materials (prime coat) and/or (tack coat) shall be considered included in the unit price for this pay item.

Basis of Payment. This work will be paid for at the contract unit price per SQUARE YARD for TEMPORARY PAVEMENT.

TEMPORARY PAVEMENT REMOVAL

Description. This work shall consist of furnishing all labor, materials, and equipment necessary for removing temporary pavement constructed at the locations shown on the plans and/or as directed by the Engineer. This work shall be done in accordance with applicable portions of Section 440 of the Standard Specifications or as otherwise directed by the Engineer. Temporary pavement and temporary pavement (variable depth) shall be removed when it is no longer needed to handle traffic during construction. The Contractor shall remove all temporary pavement and temporary pavement (variable depth) and either complete the construction of other items in the contract or restore grading as shown in the plans and cross sections.

Method of Measurement. Temporary pavement removal will be measured for payment in place, and the area computed in squared yards.

Basis of Payment. This work will be paid for at the contract unit price per SQUARE YARD for TEMPORARY PAVEMENT REMOVAL.

TEMPORARY PAVEMENT (VARIABLE DEPTH)

Description. This work shall consist of furnishing all materials, labor, and equipment necessary to construct variable depth HMA pavement on existing pavement or on a prepared subgrade for use during construction staging to carry temporary traffic according to applicable portions of Sections 406 and 407 of the Standard Specifications, the plans, the special provisions, or as otherwise directed by the Engineer.

Construction Requirements. Temporary pavement (variable depth) is intended for use to bridge elevation differences between the proposed pavement and/or shoulders constructed at final elevations to the existing pavement to provide access for temporary traffic during stages 2, 2B, 5, 6, 6A, and 8. The HMA material to be used for temporary pavement is shown in the mixture requirements table in the plans, and all bituminous materials (prime coat) and/or (tack coat) shall be considered included in the unit price for this pay item. The Engineer may also allow milling of existing pavement to allow construction of the minimum of HMA pavement lifts for the mixture requirements used. The milling required to construct the variable depth temporary pavement shall be considered included and shall not be cause for additional compensation.

Basis of Payment. This work will be paid for at the contract unit price per TON for TEMPORARY PAVEMENT (VARIABLE DEPTH).

TEMPORARY TRAFFIC SIGNAL INSTALLATION

Revised: December 11, 2019

The temporary traffic signal/lighting installation will be in accordance with Section 890 and this special provision. A temporary traffic signal system for one stage has been shown on the plans for information only. The Contractor will be required to get approval for the design of the temporary traffic signal/lighting system and modifications for each stage of construction. The Contractor will be required to keep the existing signal/lighting, the temporary signal/lighting, the new signal/lighting, or a combination of the above signal/lighting systems, including pedestrian signals (if existing), operational during all phases of construction. The proposed temporary traffic signal/lighting installation shall have the Engineer’s approval before any changes are made to the existing signal/lighting installation.

Any span wire mounted traffic signals shall use the three-wire method of mounting. The Contractor shall provide traffic signal faces, wood poles, span wire, temporary traffic signal cable, anchor devices, highway lighting luminaries, and all other materials required for the temporary installation. The Contractor's temporary traffic signal installation shall meet the requirements of Chapter IV of the MUTCD at all times. The traffic control deficiency deduction shall be applied when vehicle detection is not maintained to the greatest extent possible. The methods used to accomplish these tasks shall be as determined by the Contractor and approved by the District's Traffic Operations Engineer.

The Contractor shall install and place in operation each temporary traffic signal/lighting system. During changes in the traffic signal system, the Contractor will be required to keep at least one traffic signal face flashing red with temporary stop signs in place for each approach to the intersection. The traffic signal shutdowns (flashing all red operation) shall be kept to a minimum

as required by the District's Traffic Operations Engineer. All preparatory work for the change in the signal system shall be completed before the signal system is shut down.

The Contractor shall maintain each of these signal/lighting systems until all construction of this project is completed to the satisfaction of the Engineer.

This work will be paid for at the contract unit price per EACH per intersection for TEMPORARY TRAFFIC SIGNAL INSTALLATION.

TEMPORARY WOOD POLE

Description. This work shall consist of furnishing and installing a wood pole complete with an arm, when specified, and all hardware and accessories required for the intended temporary or permanent use of the pole. This work shall be according to Section 830 of the Standard Specifications for Road and Bridge Construction, except as modified herein.

Basis of Payment. Add the following to Article 830.05: TEMPORARY WOOD POLE, 60 FT., CLASS 4, 15 FT. MAST ARM and TEMPORARY WOOD POLE, 60 FT., CLASS 4.

TRAFFIC SIGNAL POST, ALUMINUM

Description. This work shall consist of furnishing and installing an aluminum traffic signal post in accordance with the plans, Section 875 of the Standard Specifications, and the special provisions.

Materials. Revise Article 1077.01(d) to read:

(d) Finish. The aluminum post shall be painted black using a powder coat process or Engineer approved equivalent. The post shall be cleaned prior to the powder coat process by the immersion process using both an alkaline and acid bath. The black finish shall be a thermosetting powder coat. The powder resin shall be a type TGIC, super durable grade polyester or an Engineer approved equivalent. The aluminum shall be preheated to a sufficient temperature, prior to the coating process, to ensure all water vapor is removed to fuse the powder to the metal. The post shall be oven cured, after spraying, for a cycle of 5 to 15 minutes at a temperature of 375 to 400 °F. The finished coat shall have a dry coat minimum thickness of 3-5 mil.

A thorough visual inspection shall be made of the painted finish of the installed post, and a field touchup or recoat shall be performed by the Contractor at no additional cost.

The black powder coating shall only be applied to traffic signal equipment located at the intersections of IL 15 and Potomac Boulevard/45th Street, IL 15 and Ramps A/D, and IL 15 and Ramps B/C. Traffic signal equipment at the Veterans Memorial Drive intersections and the intersection of IL 15 and 44th Street shall not be powder coated.

Basis of Payment. This work will be paid for at the contract unit price per EACH for TRAFFIC SIGNAL POST, ALUMINUM of the height specified in the plans.

TRAFFIC SIGNAL SYSTEM SHUTDOWN

Revised: February 10, 2017

Before any signalized intersection is shut down, both the District 9 Bureau of Operations and the local police department shall be notified 48 hours in advance. The police department shall be given the anticipated duration of the shutdown.

The existing signal system shall remain operational until the temporary system is in place. These existing systems may be shut down for one working day each to switch over to the temporary installations and to install new controllers and/or service installations. During these shutdowns, the Contractor shall maintain flashing red lights at each intersection and shall erect stop signs while signals are in the red flashing mode.

Each intersection switch over must be completed by the end of the workday. Unless otherwise indicated in the plans, any work involved in these system shutdowns shall be included in the cost of the contract.

TREES

Description. This work shall be done in accordance with the applicable portions of Section 253 and 1081 of the Standard Specifications, the plans, and the special provisions. Prior to ordering and delivery of any trees, the Contractor shall notify the Engineer for verification of tree species and inspection of the trees selected for planting.

Construction Requirements. The tree shall be planted to allow 4” between the top of the tree ball and the finished grade. Mulch (shredded tree bark or wood chips) shall be applied in a layer 4” deep on top of the root ball and backfill. Mulch will not be measured separately for payment but shall be included in the cost for Trees.

All trees shall be planted within the new interchange and the grading limits of the proposed improvements. The Contractor shall coordinate with the Engineer on exact planting locations. In general, trees should be placed in groups of five, spaced 30’-60’ apart, and place at least 20’ off the edge of pavement.

Basis of Payment. This work will be paid for at the contract unit price per EACH for TREES, of the species, root type, and plant size specified.

UNDERGROUND FACILITIES – DEPARTMENT OWNED

Effective: February 1, 1996 Reviewed: April 14, 2020

The Contractor's attention is directed to the presence of state-owned underground utilities within the limits of the proposed improvements. The Contractor shall coordinate with the District 9's Bureau of Operations, (618) 351-5240, to locate the underground facilities, providing a minimum of 72 hours' notice. IDOT **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 their failure to contact the Department 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 cables shall be replaced from pole to pole or controller.

Basis of Payment. This work will be paid for at the contract unit price per LUMP SUM for LOCATING UNDERGROUND FACILITIES.

UNINTERRUPTIBLE POWER SUPPLY, EXTENDED

Revised: June 8, 2023

This work shall consist of furnishing and installing an uninterruptible power supply, hereinafter referred to as the "UPS", in the local controller cabinet. The UPS shall be capable of keeping the signals running green, yellow, and red during periods of utility power failure. The UPS shall meet the following requirements:

1. Maintain power for a minimum of 60 minutes upon power failure.
2. Electrical inputs:
    a. AC Input Voltage: 95-135 Volts
    b. AC Input Current: 30 Amps Max
    c. Frequency: Auto-sensing
3. Electrical outputs:
    a. AC Output Voltage: +/- 10% over input voltage range
    b. Current: 9.2A nominal
    c. Power at 50°C: 1100W/VA
    d. Display: Full graphic LCD, 480x272 pixels, resistive touch screen
4. Dimensions: 5.22" H x 15.5" W x 8.75" D
5. A plug type connection (if possible) should output to the controller's "D" panel when the UPS battery is about to fail.
6. A heater shall be provided either internally or externally to maintain an adequate operation temperature for the UPS. The batteries shall be kept charged by a balanced charging system.

Basis of Payment. This work will be paid for at the contract unit price per EACH for UNINTERRUPTIBLE POWER SUPPLY, EXTENDED, which price includes furnishing and

installing the UPS with necessary connections for proper operation at the local controller intersection.

UTILITIES

Effective: 1984 Revised: February 15, 2023

Add the following after the first paragraph of Article 105.07:

Underground utilities have been plotted from available surveys and records. Therefore, their locations must be considered approximate only. There also may be utilities for which the locations are unknown. Verification of locations of underground utilities, shown or not shown, will be the responsibility of the Contractor. The following utility companies have facilities within the project limits which may require adjustment:

Name and Address of Utility	Type	Location	Estimated Adjustment Status
Ameren Illinois Gas 1800 West Main Street Marion, IL 62959 ATTN: Devon Dejournett Tel: (618) 315-1213 Email: ddejournett@ameren.com	Electric/gas	Throughout	Before construction
AT&T 1420 Frontage Rd O'fallon, IL 62269 ATTN: Dean Litzenburg Tel: (618) 624-4004 Cell: (618) 402-9819 Email: dl6686@att.com	Telephone/fiber optic	Throughout	None anticipated
Charter Communications, Inc. 101 Northwest Plaza St. Ann, MO 63074 ATTN: Larry Andis Tel: (618) 410-1529 Email: Larry.Andis@charter.com	Cable tv.	Throughout	None anticipated
Clearwave Fiber Two North Vine St. P.O. Box 808 Harrisburg, IL 62946 ATTN: Mylon Rice Tel: (618) 918-1539 Email: mylon.rice@clearwavefiber.com	Fiber optic	Throughout	None anticipated

Mt. Vernon, City of 1100 Main St. P.O. Box 1708 Mt. Vernon, IL 62864 ATTN: Matt Fauss Tel: (618) 242-6853 Cell: (618) 316-0532 Email: matt.fauss@mvn.net	Water/sewer	Throughout	Before or during construction
Tri County Electric Co-Op. P.O. Box 369 Mt. Vernon, IL. 62864 ATTN: Danny Hopfinger Tel: (618) 244-5151 Cell: (618) 214-9980 Email: dhopfinger@tricountycoop.com	Electric	Throughout	None anticipated
Woodlawn, Village of P.O. Box 209 Woodlawn, IL 62898 ATTN: Hart Jerry Tel: (618) 735-2110 Cell: (618) 231-2434 Email: woodlawnvillage@hotmail.com	Water	Throughout	None anticipated
Ameren Illinois 10 Executive Dr Collinsville, IL 62234 ATTN: Steven Tanner Cell: (314) 803-0696 Email: STanner@ameren.com	Gas transmission	Throughout	Before construction

Additional utility information may be obtained by calling the JULIE's phone number, 800-892-0123. This project is located at the existing I-57/64 interchange with IL 15 on the west side of the City of Mount Vernon in Jefferson County.

Add the following after the first paragraph of Article 107.31:

The Contractor is advised that this project includes areas of highway illumination and/or signalized intersections. These areas have underground cable or conduit throughout which is to remain in service. Before driving any posts or beginning any excavation operations, the Contractor shall locate, uncover by hand, and relocate any wiring which conflicts with the proposed work. Any cable or conduit which is damaged due to the Contractor's operations shall be replaced by them at their expense. Replacement material and methods shall meet or exceed the original specifications for the wiring. Splicing will not be permitted.

VALVE BOXES TO BE ADJUSTED

Description. This work shall include adjusting utility valve boxes according to Section 602 of the Standard Specifications and the plans. Utility valve boxes shall include, but are not limited to, gas valves and vaults, water valves and vaults, and water meters.

Construction Requirements. The Contractor shall establish the valve box grade to the satisfaction of the Engineer. Any damage caused to the valve box by the Contractor shall be repaired or replaced at their own expense.

The Contractor shall be required to coordinate utility main adjustments and relocations with the utility companies prior to commencing work. At the direction of the Engineer, the Contractor shall make the necessary utility valve box adjustments.

Basis of Payment. This work will be paid for at the contract unit price per EACH for VALVE BOXES TO BE ADJUSTED.

VIDEO VEHICLE DETECTION SYSTEM COMPLETE

Description: This work shall include installation of a vehicle detection system that detects vehicles on a roadway using a multi-sensor detection system. This work shall consist of furnishing and installing video cameras, cables, video processors, a controller interface unit, and a remote communication module to operate the video vehicle detection system.

The multi-sensor system shall utilize two different sensors of different technologies, video imaging and radar, to detect and track licensed and unlicensed vehicles at distances over 500 feet. The sensor system shall fuse vehicle information from the two sensors to provide highly accurate and precise detection for simultaneous stop bar presence detection, advanced detection, and special or advanced applications.

Detection Performance: The system shall use video imaging for stop bar detection and radar for advanced detection up to 500 ft. Advanced detection will only be required on the IL 15 approaches. The system features shall include vehicle volumes (including turning movements) on all four approaches and advanced, speed, and dilemma zone detection on IL 15. The system shall have the capability of detecting and differentiating bicycles. The system shall be able to detect and count pedestrians in the crosswalk.

All video detection systems shall be equipped with the latest software and firmware revision.

Hardware: The multi-sensor detection system (MSDS) shall consist of two hybrid video camera/radar sensors, two video-only sensors, up to two detection processors (DP) capable of processing from one to two sensors each, one CCU (either 19” rack or shelf-mount form factor), input/output extension modules, video surge suppressors, HDMI monitor and a pointing device, or any combination thereof.

The vehicle detection system shall include all necessary camera risers, electric cable, electrical junction boxes, hardware, software, programming, and any camera brackets that are required for installation and configuration. These items should be taken into consideration and shall be included in the cost for the video detection system.

The CCU shall be supplied in three separate form factors. Users may choose one form factor for use within their controller cabinet system:

1. Standard One Rack Unit (1U) 19” Rack Format. There shall be brackets to allow the CCU to be mounted under shelves where a 19” frame is not available.
2. Shelf-Mount format; TS1 Version. The CCU shall be able to stand up on available shelf-space within the cabinet. All connections shall be made from the front of the CCU, including connections to separate DPs located within the cabinet.
3. Shelf-Mount Format; TS2 Version. The CCU shall be able to stand up on available shelf-space within the cabinet. All connections shall be made from the front of the CCU, and no external DPs will be required.

The CCU shall incorporate surge suppression for each sensor input. The CCU shall be appropriately grounded to the cabinet ground rod using 14 AWG minimum. The CCU shall incorporate power surge suppression both on the input power and on the power supplied to the sensors. The CCU shall be appropriately grounded to the cabinet ground rod using 14 AWG minimum.

An Ethernet communications port shall be provided on the front panel. The Ethernet port shall be compliant with IEEE 802.3 and shall use a RJ-45 type connector mounted on the front panel of the CCU. The Ethernet communications interface shall allow the user to remotely configure the system and/or to extract calculated vehicle/roadway information. The interface protocol shall be documented, or interface software shall be provided. Each MSDS shall have the capability to be IP addressable. The DP shall support data rates of up to 100 Mbps.

The CCU shall provide a Wi-Fi connection. The connection shall be over a standard 2.4 GHz connection. The Wi-Fi connection shall be enabled and disabled by a switch on the CCU. The CCU shall provide an indicator when the Wi-Fi connection is active.

Software: The system shall include software that discriminately detects the presence of individual vehicles and bicycles in a single or multiple lanes using only the video image. Detection zones shall be defined using only an embedded software application. A monitor, a keyboard, and a pointing device are used to place the zones on a video image. A minimum of 32 video detection zones and 16 radar detection zones plus five trip lines per sensor shall be available.

A separate computer shall not be required to program the detection zones. In addition to creating vehicle and bicycle zones, the system shall automatically define a pedestrian crossing area in front of the stop bar zones. The system shall provide a tracking mechanism that counts pedestrian volume moving within this crossing area and determines the average, maximum, and minimum speed of pedestrians moving within this crossing zone. The system shall also provide discrete outputs when pedestrians are in the crosswalk during normal crossing phases (one for each direction of travel) and when a red phase input has been detected. The system shall also provide a visual indication on the video image that a pedestrian is in the crosswalk.

Installation: The video detection cameras shall be installed in accordance with the manufacturer recommendations. All holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent the chafing of wires.

Warranty and Support: A vendor/manufacturer representative shall be present the day of activation to assist in the setup of the detection zones.

The video detection system shall be warranted by the supplier for a minimum of three years from the date of turn-on. This warranty shall cover all material defects and shall also provide all parts and labor as well as unlimited technical support. Ongoing software updates to the system shall be included in the cost of the system.

A training session shall be provided to City/IDOT personnel in the operation, setup, and maintenance of the video detection system if requested.

Basis of Payment: This work will be paid for at the contract unit price per EACH for VIDEO VEHICLE DETECTION SYSTEM COMPLETE.

WIRELESS ETHERNET RADIO

Description. This work shall consist of furnishing and installing a wireless Ethernet radio transceiver inside a traffic signal controller cabinet with necessary connections for proper operation in accordance with the applicable requirements of Section 859 and the special provisions included herein. The Contractor shall establish integration of the radio transceiver with the existing Encom radio system for the City of Mt. Vernon.

Basis of Payment. This work will be paid for at the contract unit price per EACH for WIRELESS ETHERNET RADIO.

DELINEATOR REMOVAL

Description. Delineators encountered during construction shall be removed and disposed in accordance with the applicable portions of Sections 635 and 202 of the Standard Specifications for Road and Bridge Construction or as otherwise directed by the Engineer.

This work will be paid at the contract unit price per EACH for DELINEATOR REMOVAL

FENCE REMOVAL

Description. This work consists of removing all existing fencing, gates, posts, supports, foundations, and associated hardware at the locations as shown on the plans or as directed by the Engineer. All material included with this removal shall be disposed offsite by the Contractor. All work shall be completed in accordance with the applicable portions of Section 201 of the Standard Specifications.

Basis of Payment. This work will be measured and paid for at the contract unit price per FOOT for FENCE REMOVAL.

REMOVE EXISTING RIPRAP

This work shall include the removal and disposal of existing riprap according to Section 202 of the Standard Specifications and as directed by the Engineer. This work will be paid for at the contract unit price per SQUARE YARD for REMOVE EXISTING RIPRAP.

STRUCTURAL STEEL COATING

The specification for Waterborne Acrylic, ARTICLE 1008.04 that is referenced in the METALLIZING OF STRUCTURAL STEEL shall be followed except the following:

(i) Color and Hiding Power. The color shall be tested according to the Bureau of Materials ITP, “Color Difference of Waterborne Acrylic Paint”. The intermediate coat and finish coat shall both match AMS-STD-595 15050 Blue Angels Blue. The color difference shall exceed 10 hunter Delta E units for primer and 3.0 Hunter Delta E units for finish coat.

Article 1008.01 Sampling, Testing, Acceptance and Certification shall be followed.

Basis of Payment. This work shall not be paid for separately but shall be included in the unit price bid for furnishing and/or erecting structural steel according to Article 505.13.

HIGH LOAD MULTI-ROTATIONAL BEARINGS

Effective: October 13, 1988 Revised: June 28, 2024

Description. This work shall consist of furnishing and installing High Load Multi-Rotational type bearing assemblies at the locations shown on the plans.

High Load Multi-Rotational (HLMR) bearings shall be the type as shown on the plans, which will be one of the following:

a) Pot Bearings. These bearings shall be manufactured so that the rotational capability is provided by an assembly having a rubber disc of proper thickness, confined in a manner so it behaves like a fluid. The disc shall be installed, with a snug fit, into a steel cylinder and confined by a tight fitting piston. The outside diameter of the piston shall be no more than 0.03 in. (750 microns) less than the inside diameter of the cylinder at the interface level of the piston and rubber disc. The sides of the piston shall be beveled. PTFE sheets, or silicone grease shall be utilized to facilitate rotation of the rubber disc. Suitable brass sealing rings shall be provided to prevent any extrusion between piston and cylinder.

b) Shear Inhibited Disc Type Bearing. The Structural Element shall be restricted from shear by the pin and ring design and need not be completely confined as with the Pot Bearing design. The disc shall be a molded monolithic Polyether Urethane compound.

These bearings shall be further subdivided into one or more of the following classes:

1) Fixed. These allow rotation in any direction but are fixed against translation.

2) Guided Expansion. These allow rotation in any direction but translation only in limited directions.

3) Non-Guided Expansion. These allow rotation and translation in any direction.

Suppliers: The Department maintains a pre-qualified list of proprietary structural systems allowed for High Load Multi-Rotational Bearings. This list can be found on the Departments web site under Prequalified Structural Systems. The Contractor's options are limited to those systems pre-qualified by the Department on the date that the contract was bid. These systems have been reviewed for structural feasibility and adequacy only. Presence on this list shall in no case relieve the Contractor of the site-specific design or QC/QA requirements stated herein.

The supplier shall notify the Department at least two weeks in advance of fabrication of the fabrication shop address. The fabricator shall provide evidence of current certification by AISC according to Article 106.08(e) of the Standard Specifications.

The overall depth dimension for the HLMR bearings shall be as specified on the plans. The horizontal dimensions shall be limited to the available bearing seat area.

Any modifications required to accommodate the bearings chosen shall be submitted to the Engineer for approval prior to ordering materials. Modifications may include the addition of steel filler plates or the adjustment of beam seat elevations. Adjustments to bridge seat elevations and accompanying reinforcement details shall be approved by the Structural Engineer of Record.

Modifications required shall be made at no additional cost to the State. Inverted bearing or center-guided bearing configurations will not be permitted.

The Contractor shall comply with all manufacturer's material, fabrication and installation requirements specified.

Submittals. Shop drawings shall be submitted to the Engineer for approval according to Article 105.04 of the Standard Specifications. All steel filler plate details shall be included in the shop drawings. In addition the Contractor shall furnish certified copies of the bearing manufacturer's test reports on the physical properties of the component materials for the bearings to be furnished and a certification by the bearing manufacturer stating the bearing assemblies furnished conform to all the requirements shown on the plans and as herein specified. Submittals with insufficient test data and supporting certifications will be rejected.

Materials. The materials for the HLMR bearing assemblies shall be according to the following:

(a) Elastomeric Materials. The rubber disc for Pot bearings shall be according to Article 1083.02(a) of the Standard Specifications.

(b) Polytetrafluoroethylene (PTFE) Material. The PTFE material shall be according to Article 1083.02(b) of the Standard Specifications, except that it shall be dimpled lubricated with a maximum coefficient of friction of 0.02 on stainless steel. The dimpled and lubricated PTFE surface shall comply with AASHTO 14.7.2. The friction requirement shall be as specified in the Long Term Deterioration Test required for prequalification and the Sliding Friction Test as specified below.

(c) Stainless Steel Sheets. The stainless steel sheets shall be of the thickness specified and shall be according to Article 1083.02(c).

(d) Structural Steel. All structural steel used in the bearing assemblies shall be according to AASHTO M 270, Grade 50 (M 270M Grade 345), unless otherwise specified.

(e) Threaded studs. The threaded stud, when required, shall conform to the requirements of Article 1083.02(d)(4) of the Standard Specifications.

(f) Polyether Urethane for Disc bearings shall be according to all of the following requirements:

PHYSICAL PROPERTY	ASTM TEST METHOD	REQUIREMENTS	
Hardness, Type D durometer	D 2240	45 Min	65 Max
Tensile Stress, psi (kPa) At 100% elongation, min	D 412	1500 psi (10,350 kPa)	2300 psi (15,900 kPa)
Tensile Stress, psi (kPa) At 200% elongation, min	D 412	2800 psi (19,300 kPa)	4000 psi (27,600 kPa)
Tensile Strength, psi (kPa), min	D 412	4000 psi (27,600 kPa)	6000 psi (41,400 kPa)
Ultimate Elongation, %, min	D 412	350	220
Compression Set 22 hr. at 158 °F (70 °C), Method B %, max	D 395	40	40

The physical properties for a durometer hardness between the minimum and maximum values shown above shall be determined by straight line interpolation.

Design. The HLMR bearings shall be of the type and class specified and designed for the loads shown on the plans. Bearing details shown on the contract plans are a schematic representation of the bearing. Actual design of the bearing shall be by the supplier according to:

- the exact parameters specified in the Design Data table noted on the bridge plans,
- the appropriate AASHTO LRFD Bridge Design Specifications, and
- the IDOT Bridge Manual.

The design of the masonry and sole bearing plates are based on detail assumptions which may require modifications depending on the supplier chosen by the Contractor.

Fabrication. The bearings shall be complete factory-produced assemblies. They shall provide for rotation in all directions and for sliding, when specified, in directions as indicated on the plans. All bearings shall be furnished as a complete unit from one manufacturing source. All material used in the manufacture shall be new and unused with no reclaimed material incorporated into the finished assembly.

The translation capability for both guided and non-guided expansion bearings shall be provided by means of a polished stainless steel sliding plate that bears on a PTFE sheet bonded and recessed to the top surface of the piston or disc. The sliding element of expansion bearings shall be restrained against movement in the fixed direction by exterior guide bars capable of resisting the horizontal forces or 20 percent of the vertical design load on the bearing applied in any direction, whichever is greater. The sliding surfaces of the guide bar shall be of PTFE sheet and stainless steel. Guiding off of the fixed base, or any extension of the base, will not be permitted.

Structural steel plates shall be fabricated according to Article 505.04(l) of the Standard Specifications. Prior to shipment the exposed edges and other exposed portions of the structural steel plates shall be cleaned and given a corrosion protection coating as specified on the plans and according to the applicable Special Provisions and Articles 506.03 and 506.04 of the Standard Specifications. During cleaning and coating the stainless steel, PTFE sheet and neoprene shall be protected from abrasion and coating material.

PTFE sheets shall be bonded to steel under factory controlled conditions using heat and pressure for the time required to set the epoxy adhesive used. The PTFE sheet shall be free from bubbles and the sliding surface shall be burnished to an absolutely smooth surface.

The steel piston and the steel cylinder for pot bearings shall each be machined from a solid piece of steel. The steel base cylinder shall be either integrally machined, recessed into with a snug fit, or continuously welded to its steel masonry plate. If the sole plate and piston are not one piece, the piston shall be recessed ⅜ inch into the sole plate.

If the bottom disc plate or base cylinder is recessed into the masonry plate, the designed thickness of the masonry plate shall take into account the depth of the recess. If the top disc plate is recessed into the sole plate, the designed thickness of the sole plate shall take into account the depth of the recess.

The shear resisting mechanism shall be machined from a solid piece of steel. Connection of the shear resisting mechanism to top and bottom disc plate shall be determined by the bearing fabricator.

Packaging. Each HLMR bearing assembly shall be fully assembled at the manufacturing plant and delivered to the construction site as complete units. The assemblies shall be packaged, crated or wrapped so the assemblies will not be damaged during handling, transporting and shipping. The bearings shall be held together with removable restraints so sliding surfaces are not damaged.

Centerlines shall be marked on both masonry and sole plates for alignment in the field. The bearings shall be shipped in moisture-proof and dust-proof covers.

Performance Testing. The following performance tests are required per lot on the project. A lot size shall be the number of bearings per class (fixed, guided expansion, non-guided expansion) on the project, but not to exceed 25 bearings per class. When multiple sizes of bearings are used on the same contract, they shall be grouped by class when determining lot sizes and amount of bearings to be tested. All tests shall be performed by the manufacturer prior to shipment.

Dimension Check. Each bearing shall be checked dimensionally to verify all bearing components are within tolerances. Failure to satisfy any dimensional tolerance shall be grounds for rejecting the bearing component or the entire bearing assembly.

Clearance Test. This test shall be performed on one bearing per lot. The bearing selected for this test shall be the one with the least amount of clearance based on the dimension check. The bearing assembly shall be loaded to its service limit state rated capacity at its full design rotation but not less than 0.02 radians to verify the required clearances exist. This test shall be performed twice for each bearing with the rotation oriented longitudinally with the bridge once in each direction. Any visual signs of rubbing or binding shall be grounds for rejection of the lot.

Proof Load Test. This test shall be performed on one bearing per lot. The bearing assembly shall be load tested to 150 percent of the service limit state rated capacity at a rotation of 0.02 radians. The load shall be maintained for 5 minutes, removed then reapplied for 5 minutes. If the load drops below the required value during either application, the test shall be restarted from the beginning. This test shall be performed twice for each bearing with the rotation oriented longitudinally with the bridge once in each direction.

The bearing shall be visually examined both during the test and upon disassembly after the test. Any resultant visual defects include, but are not limited to:

1. Extruded or deformed elastomer, polyether urethane, or PTFE.

2. Insufficient clearances such as evidence of metal to metal contact between the pot wall and the top or sole plate.

3. Damaged components such as cracked steel, damaged seal rings, or damaged limiting rings.

4. Bond failure.

If any of the above items are found it shall be grounds for rejection of the lot.

Sliding Friction Test. For expansion bearings, this test shall be performed on one bearing per lot. The sliding surfaces shall be thoroughly cleaned with a degreasing solvent. No lubrication other than that specified for the bearing shall be used. The bearing shall be loaded to its service limit state rated capacity for 1 hour prior to and throughout the duration of the sliding test. At least 12 cycles of plus and minus sliding with an amplitude equaling the smaller of the design displacement and 1 inch (25 mm) shall then be applied. The average sliding speed shall be between 0.1 inch and 1.0 inches (2.5 mm and 25 mm) per minute. The sliding friction coefficient shall be computed for each direction of each cycle and its mean and standard deviation shall be computed for the sixth through twelfth cycles.

The friction coefficient for the first movement and the mean plus two standard deviations for the sixth through twelfth cycles shall not exceed the design value used. In addition, the mean value for the sixth through twelfth cycles shall not exceed 2/3 of the design value used. Failure of either of these shall result in rejection of the lot.

The bearing shall also be visually examined both during and after the testing, any resultant defects, such as bond failure, physical destruction, or cold flow of the PTFE shall also be cause for rejection of the lot.

The Contractor shall furnish a notarized certification from the bearing manufacturer stating the HLMR bearings have been performance tested as specified, and a. purchase order prior to fabrication. The purchase order shall contain, as a minimum, the quantity and size of each type of bearing furnished. The notarized certifications and the purchase order shall be submitted in one package to the Engineer of Tests at the Bureau of Materials and Physical Research (126 East Ash Springfield, IL 62704). The Department reserves the right to perform any of the specified tests on one or more of the furnished bearings. If the tested bearing shows failure it shall be replaced and the remaining bearings shall be similarly tested for acceptance at the Contractor's expense.

The manufacturer shall furnish samples of component materials used in the bearings, for testing by the Department, to the Engineer of Tests at the Bureau of Materials and Physical Research (126 East Ash Springfield, IL 62704). The required components shall be those components of HLMR bearings that are consistent with elastomeric bearing components according to Article 1083.04 of the Standard Specifications.

Installation. The HLMR bearings shall be erected according to Article 521.05 of the Standard Specifications.

Exposed edges and other exposed portions of the structural steel plates shall be field painted as specified for Structural Steel.

Basis of Payment. This work will be paid for at the contract unit price each for HIGH LOAD MULTI-ROTATIONAL BEARINGS, POT , FIXED; HIGH LOAD MULTI-ROTATIONAL BEARINGS, POT, GUIDED EXPANSION; HIGH LOAD MULTI-ROTATIONAL BEARINGS, POT, NON-GUIDED EXPANSION; HIGH LOAD MULTI-ROTATIONAL BEARINGS, DISC, FIXED; HIGH LOAD MULTI-ROTATIONAL BEARINGS, DISC, GUIDED EXPANSION; or HIGH LOAD

MULTI-ROTATIONAL BEARINGS, DISC, NON-GUIDED EXPANSION of the load capacity specified.

When the fabrication and erection of HLMR bearings is accomplished under separate contracts, the applicable requirements of Article 505.09 shall apply.

Fabricated HLMR bearings and other materials complying with the requirements of this item, furnished and accepted, will be paid for at the contract unit price each for FURNISHING HIGH LOAD MULTI-ROTATIONAL BEARINGS, POT, FIXED; FURNISHING HIGH LOAD MULTI-ROTATIONAL BEARINGS, POT, GUIDED EXPANSION; FURNISHING HIGH LOAD MULTI-ROTATIONAL BEARINGS, POT, NON-GUIDED EXPANSION; FURNISHING HIGH LOAD MULTI-ROTATIONAL BEARINGS, DISC, FIXED; FURNISHING HIGH LOAD MULTI-ROTATIONAL BEARINGS, DISC, GUIDED EXPANSION; or FURNISHING HIGH LOAD MULTI-ROTATIONAL BEARINGS, DISC, NON-GUIDED EXPANSION of the load capacity specified.

Storage and care of fabricated HLMR bearings and other materials complying with the requirements of this item by the Fabrication Contractor beyond the specified storage period, will be paid for at the contract unit price per calendar day for STORAGE OF HIGH LOAD MULTI-ROTATIONAL BEARINGS if a pay item is provided for in the contract, or will be paid for according to Article 109.04 if a pay item is not provided in the contract.

HLMR bearings and other materials fabricated under this item erected according to the requirements of the specifications, and accepted, will be paid for at the contract unit price each for ERECTING HIGH LOAD MULTI-ROTATIONAL BEARINGS, POT, FIXED; ERECTING HIGH LOAD MULTI-ROTATIONAL BEARINGS, POT, GUIDED EXPANSION; ERECTING HIGH LOAD MULTI-ROTATIONAL BEARINGS, POT, NON-GUIDED EXPANSION; ERECTING HIGH LOAD MULTI-ROTATIONAL BEARINGS, DISC, FIXED; ERECTING HIGH LOAD MULTI-ROTATIONAL BEARINGS, DISC, GUIDED EXPANSION; or ERECTING HIGH LOAD MULTI-ROTATIONAL BEARINGS, DISC, NON-GUIDED EXPANSION of the load capacity specified.

BRIDGE DECK CONSTRUCTION

Effective: October 22, 2013 Revised: December 21, 2016

When Diamond Grinding of Bridge Sections is specified, hand finishing of the deck surface shall be limited to areas not finished by the finishing machine and to address surface corrections according to Article 503.16(a)(2). Hand finishing shall be limited as previously stated solely for the purpose of facilitating a more timely application of the curing protection. In addition the requirements of 503.16(a)(3)a. and 503.16(a)(4) will be waived.

Revise the Second Paragraph of Article 503.06(b) to read as follows.

"When the Contractor uses cantilever forming brackets on exterior beams or girders, additional requirements shall be as follows."

Revise Article 503.06(b)(1) to read as follows.

"(1) Bracket Placement. The spacing of brackets shall be per the manufacturer's published design specifications for the size of the overhang and the construction loads anticipated. The resulting force of the leg brace of the cantilever bracket shall bear on the web within 6 inches (150 mm) of the bottom flange of the beam or girder."

Revise Article 503.06(b)(2) to read as follows.

"(2) Beam Ties. The top flange of exterior steel beams or girders supporting the cantilever forming brackets shall be tied to the bottom flange of the next interior beam. The top flange of exterior concrete beams supporting the cantilever forming brackets shall be tied to the top flange of the next interior beam. The ties shall be spaced at 4 ft (1.2 m) centers. Permanent cross frames on steel girders may be considered a tie. Ties shall be a minimum of 1/2 inch (13 mm) diameter threaded rod with an adjusting mechanism for drawing the tie taut. The ties shall utilize hanger brackets or clips which hook onto the flange of steel beams. No welding will be permitted to the structural steel or stud shear connectors, or to reinforcement bars of concrete beams, for the installation of the tie bar system. After installation of the ties and blocking, the tie shall be drawn taut until the tie does not vary from a straight line from beam to beam. The tie system shall be approved by the Engineer."

Revise Article 503.06(b)(3) to read as follows.

"(3) Beam Blocks. Suitable beam blocks of 4 in x 4 in (100 x 100 mm) timbers or metal structural shapes of equivalent strength or better, acceptable to the Engineer, shall be wedged between the webs of the two beams tied together, within 6 inches (150 mm) of the bottom flange at each location where they are tied. When it is not feasible to have the resulting force from the leg brace of the cantilever brackets transmitted to the web within 6 inches (150 mm) of the bottom flange, then additional blocking shall be placed at each bracket to transmit the resulting force to within 6 inches (150 mm) of the bottom flange of the next interior beam or girder."

Delete the last paragraph of Article 503.06(b).

MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES

Effective: October 4, 2016 Revised: March 1, 2019

Description. This work shall consist of furnishing and placing a membrane waterproofing system on the top slab and sidewalls, or portions thereof, for buried structures as detailed on the contract plans.

All membrane waterproofing systems shall be supplied by qualified producers. The Department will maintain a list of qualified producers.

Materials. The materials used in the waterproofing system shall consist of the following.

(a) Cold-applied, self-adhering rubberized asphalt/polyethylene membrane sheet with the following properties:

Physical Properties	
Thickness ASTM D 1777 or D 3767	60 mils (1.500 mm) min.
Width	36 inches (914 mm) min.
Tensile Strength, Film ASTM D 882	5000 lb./in^2 (34.5 MPa) min.
Pliability [180° bend over 1" inch (25 mm) mandrel @ -20 °F (-29 °C)] ASTM D 146 (Modified) or D1970	No Effect
Puncture Resistance-Membrane ASTM E 154	40 lb. (178 N) min.
Permeability (Perms) ASTM E 96, Method B	0.1 max.
Water Absorption (% by Weight) ASTM D 570	0.2 max.
Peel Strength ASTM D 903	9 lb./in (1576 N/m) min.

(b) Ancillary Materials: Adhesives, Conditioners, Primers, Mastic, Two-Part Liquid Membranes, and Sealing Tapes as required by the manufacturer of the membrane and film for use with the respective membrane waterproofing system.

Construction. The areas requiring waterproofing shall be prepared and the waterproofing shall be installed in accordance with the manufacturer's instructions. The Contractor shall not install any part of a membrane waterproofing system in wet conditions, or if the ambient or concrete surface temperature is below 40° (4° C), unless allowed by the Engineer.

Surfaces to be waterproofed shall be smooth and free from projections which might damage the membrane sheet. Projections or depressions on the surface that may cause damage to the membrane shall be removed or filled as directed by the Engineer. The surface shall be power washed and cleaned of dust, dirt, grease, and loose particles, and shall be dry before the waterproofing is applied.

The Contractor shall uniformly apply primer to the entire area to be waterproofed, at the rate stated in the manufacturer's instructions, by brush, or roller. The Contractor shall brush out primer that tends to puddle in low spots to allow complete drying. The primer shall be cured according to the manufacturer's instructions. Primed areas shall not stand uncovered overnight. If membrane sheets are not placed over primer within the time recommended by the manufacturer, the Contractor shall recoat the surfaces at no additional cost to the Department.

The installation of the membrane sheet to primed surfaces shall be such that all joints are shingled to shed water by commencing from the lowest elevation of the buried structure's top slab and progress towards the highest elevation. The membrane sheets shall be overlapped as required by the manufacturer. The Contractor shall seal with mastic any laps that were not thoroughly sealed. The membrane shall be smooth and free of wrinkles and there shall be no depressions in horizontal surfaces of the finished waterproofing. After placement, exposed edges of membrane sheets shall be sealed with a troweled bead of a manufacturer's recommended mastic, or two-part liquid membrane, or with sealing tape.

Sealing bands at joints between precast segments shall be installed prior to the waterproofing system being applied. Where the waterproofing system and sealing band overlap, the installation

shall be planned such that water will not be trapped or directed underneath the membrane or sealing band.

Care shall be taken to protect and to prevent damage to the waterproofing system prior to and during backfilling operations. The waterproofing system shall be removed as required for the installation of slab mounted guardrails and other appurtenances. After the installation is complete, the system shall be repaired and sealed against water intrusion according to the manufacturer's instructions and to the satisfaction of the Engineer.

Replace the last paragraph of Article 540.06 Precast Concrete Box Culverts and replace with:

> Handling holes shall be filled with a polyethylene plug. The plug shall not project beyond the inside surface after installation nor project above the outside surface to the extent that may cause damage to the membrane. When metal lifting inserts are used, their sockets shall be filled with mastic or mortar compatible with the membrane.

Method of Measurement. The waterproofing system will be measured in place, in square yards (square meters) of the concrete surface to be waterproofed.

Basis of Payment. This will work will be paid for at the contract unit price, per square yard (square meter) for MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES.

METALLIZING OF STRUCTURAL STEEL

Effective: October 4, 2016 Revised: October 20, 2017

Description: This work consists of furnishing all materials, equipment, labor, and other essentials necessary to accomplish the surface preparation and application of thermal spray metallizing to all new structural steel, or portions thereof as detailed in the plans, in the shop. Also included in this work, when specified on the Contract plans, is the application of a paint system over the metallizing in the shop and/or in the field.

Materials: Materials shall be according to the following.

Metallizing Wire: All thermal spray feedstock (metallizing wire) shall be the products of a single manufacturer, meet the requirements below, and meet the thermal spray equipment manufacturer's specifications.

a. The metallizing wire shall consist of 99.9% zinc or 85/15 zinc/aluminum complying with ASTM B-833 and ANSI/AWS C2.25/C2.25M

b. The Contractor shall provide a certificate of chemical composition of the proposed metallizing wire from the metallizing wire manufacturer.

Paint: All materials to be used on an individual structure shall be produced by the same manufacturer.

The Bureau of Materials and Physical Research has established a list of all paint products that have met preliminary requirements. Each batch of material, except for the clear aliphatic urethane

and the penetrating sealer shall be tested and approved for use. The specified colors shall be produced in the coating manufacturer's facility. Tinting of coating after it leaves the manufacturing facility is not allowed.

The paint materials shall meet the following requirements of the Standard Specification and as noted below:

Item	Article
(a) Waterborne Acrylic	1008.04
(b) Aluminum Epoxy Mastic (Note 1)	1008.03
(c) Epoxy/ Aliphatic Urethane (Note 1)	1008.05
(d) Penetrating Sealer (Note 2)	
(e) Clear Aliphatic Urethane (Note 3)	

Note 1: If the finish coats are being applied in the field over a shop applied epoxy, select an epoxy intermediate for shop application with a recoat window that is long enough to support the construction schedule.

Note 2:The Epoxy Penetrating Sealer shall be a cross-linked multi component sealer. The sealer shall have the following properties:

(a) The volume solids shall be 98 percent (plus or minus 2 percent).
(b) Shall be clear or slightly tinted color.

Note 3: The Clear Aliphatic Urethane material shall be one of the following products:

(a) Carbothane Clear Coat by Carboline Company
(b) Pitthane Ultra Clear 95-8000 by Pittsburgh Paints (PPG)
(c) ArmorSeal Rexthane I MCU by Sherwin-Williams

Shop Prequalification: The Contractor performing the shop work shall have either an SSPC-QP 3 Certification or an AISC Sophisticated Paint Endorsement certification. The certification(s) shall remain current throughout the duration of the contract.

The Contractor performing the shop work shall have satisfactorily performed a minimum of three (3) previous projects involving abrasive blast cleaning, metallizing, and paint application. At least one project within the past two (2) years shall have involved a bridge or similar industrial type application. The suitability of the Contractor's qualifications and prior experience will be considered by the Department before granting approval to proceed.

Submittals: The Contractor performing the shop work shall submit the following plans and information for Engineer review and acceptance within 30 days of contract execution (unless written permission from the Engineer states otherwise). When full coats are being applied in the field, the field painting contractor shall comply with the submittal requirements of Article 506.03. Work in the shop or field shall not proceed until submittals are accepted by the Engineer.

(a) Contractor Personnel Qualifications: Evidence of experience and the names and qualifications/experience/training of the personnel managing and implementing the Quality Control program, and for those performing the quality control tests. QC personnel

qualification requirements are found under "Quality Control (QC) Inspection."

All metallizing applicators shall be qualified in accordance with AWS C2.16/C2.16M.

(b) Quality Control (QC) Plan: A Quality Control Plan that identifies: test instruments to be used, a schedule of required measurements and observations, procedures for correcting unacceptable work, and procedures for improving surface preparation and metallizing/painting quality as a result of quality control findings. The program shall incorporate the IDOT Quality Control Daily Report Forms as supplied by the Engineer, or equivalent information on Engineer-approved Shop Contractor-designed forms.

(c) Surface Preparation Plan: The surface preparation plan shall include the methods of surface preparation and types of equipment that will be used to prepare the surfaces as specified herein. Also any solvents proposed for solvent cleaning shall be identified and MSDS provided.

(d) Abrasives: Identify the type and brand name of the abrasive proposed for use, provide MSDS and manufacturer's data indicating that the abrasive meets requirements of the SSPC-AB 1 or AB 3 standards as specified herein.

(e) Metallizing Plan: Written procedures for the shop application of metallizing, including the brand name and type of metallizing wire and application equipment to be used. Proof that the metallizing wire complies with ASTM B-833 and ANSI/AWS C2.25/C2.25M shall also be provided. Provide written documentation verifying that all metallizing applicators are qualified in accordance with ANSI/AWS C2.16/C2.16M.

(f) Painting Plan: If shop painting is specified to be applied over the metallizing or if galvanizing is used in lieu of metallizing on minor bridge members, procedures for the application of the coating system shall be provided along with MSDS and product data sheets. A description of the application equipment to be used shall be included. The plan shall include the requirements to be followed by the field contractor for field touch up.

(g) Shipping and Handling Plan: A written plan outlining the precautions that shall be taken for the protection of the finished surface during shipping and handling. The plan shall address the steps to be taken, such as insulating padding, wood dunnage, load securing strapping, binding apparatus, etc.

(h) Galvanizing Option: At the Contractor's option, hot dip galvanizing may be proposed as a substitute for shop metallizing of bearings, typical cross frames, or diaphragms on non-curved structures; expansion joint assemblies; and other elements not carrying calculated stress. Submittal requirements are found under "Hot Dip Galvanizing Option." Include the proposed cleaning and painting plan.

The Engineer will provide written notification to the Contractor when submittals are complete and acceptable. No surface preparation work shall begin until that notification is received. This acceptance shall not be construed to imply approval of any particular method or sequence for conducting the work, or for addressing health and safety concerns. Acceptance does not relieve the Contractor from the responsibility to conduct the work according to the requirements of Federal, State, or Local regulations and this specification, or to adequately protect the health and safety of all workers involved in the project and any members of the public who may be affected

by the project. The Contractor remains solely responsible for the adequacy and completeness of the programs and work practices, and adherence to them.

Quality Control (QC) Inspections: The Contractor performing the shop work shall perform first line, in process QC inspections. The Contractor shall implement the accepted QC Program to insure that the work complies with these specifications. The designated Quality Control inspector shall be onsite full time during any operations that affect the quality of the system (e.g., surface preparation, metallizing application, paint application, and final inspection at project completion). The Contractor shall use the IDOT Contractor Daily (QC) Metallizing & Painting Report form (supplied by the Engineer, or Engineer-approved Contractor-designed forms that contain the same information, to record the results of quality control tests and inspections. The completed reports shall be given to the Engineer before work resumes the following day.

QC inspections shall include, but are not limited to the following:

- Ambient conditions.
- Surface preparation (solvent cleaning, abrasive blast cleanliness, surface profile depth, etc.).
- Metallizing application (specified materials used, bend test, continuity and coverage, adhesion, dry film thickness).
- Verification that the MISTIC test ID number for the paint system has been issued when painting is specified.
- Paint Application (when specified)(specified materials used, continuity and coverage, dry film thickness, freedom from overspray, dry spray, pinholes, skips, misses, etc.).

The personnel managing the QC Program shall possess a minimum classification as a NACE CIP Level 2, or shall provide evidence of successful inspection of three projects of similar or greater complexity and scope completed in the last two years. References shall include the name, address, and telephone number of a contact person employed by the facility owner.

The personnel performing the QC tests shall be trained in all tests, inspections, and instrument use required for the inspection of surface preparation, metallizing and paint application. Documentation of training shall be provided. The QC personnel shall be solely dedicated to quality control activities and shall not perform any production work. QC personnel shall take the lead in all inspections, but applicators shall perform wet film thickness measurements during application of the coatings, with QC personnel conducting random spot checks. The Contractor shall not replace the QC personnel assigned to the project without advance notice to the Engineer, and acceptance of the replacement(s), by the Engineer.

The Contractor performing the shop work shall supply all necessary equipment to perform the QC tests and inspections as specified. Equipment shall include the following at a minimum:

- Psychrometer or comparable equipment for measurement of dew point and relative humidity, including weather bureau tables or psychrometric charts

- Surface temperature thermometer
- SSPC Visual Standard VIS 1
- Surface profile replica tape and spring micrometer or electronic micrometer designed for use with replica tape; or electronic profilometer designed for measuring blast profile.
- Blotter paper for compressed air cleanliness checks
- Type 2 Electronic Dry Film Thickness Gage
- Calibration standards for dry film thickness gage
- Bend test coupons and bend test mandrel
- Adhesion testing instrument
- Companion panels for adhesion testing (if that option is selected)
- All applicable ASTM, ANSI, AWS, and SSPC Standards used for the work (reference list attached)

The instruments shall be verified for accuracy and adjusted by the Contractor's personnel in accordance with the equipment manufacturer's recommendations and the Contractor's QC Program. All inspection equipment shall be made available to the Engineer for QA observations as needed.

Hold Point Notification: Specific inspection and testing requirements within this specification are designated as Hold Points. Unless other arrangements are made, the Contractor shall provide the Engineer with a minimum four-hour notification in advance of the Hold Point. If four-hour notification is provided and the work is ready for inspection at that time, the Engineer will conduct the necessary observations. If the work is not ready at the appointed time, unless other arrangements are made, an additional four-hour notification is required. Permission to proceed beyond a Hold Point without a QA inspection will be at the sole discretion of the Engineer and will only be granted on a case-by-case basis.

Quality Assurance (QA) Observations: The Engineer will conduct QA observations of any or all phases of the work. The presence or activity of Engineer observations in no way relieves the Contractor of the responsibility to perform all necessary daily QC inspections of their own and to comply with all requirements of this Specification.

The Engineer has the right to reject any work that was performed without adequate provision for QA observations.

CONSTRUCTION REQUIREMENTS

The surface preparation and metallizing shall be according to the SSPC Specification for the Application of Thermal Spray Coatings (Metallizing) of Aluminum, Zinc and their Alloys and Composites for the Corrosion Protection of Steel, SSPC-CS 23.00/AWS C2.23M/NACE No. 12

except as modified herein. In the event of a conflict, the requirements of this specification shall prevail.

Hot Dip Galvanizing Option: At the Contractor's option, hot dip galvanizing may be substituted for shop metallizing of bearings, typical cross frames, or diaphragms on non-curved structures; expansion joint assemblies; and other elements not carrying calculated stress. Galvanized surfaces which shall have concrete poured against them shall be chemically passivated or otherwise protected by a method approved by the Engineer. Galvanized bearings for exterior members and elements readily visible after erection shall be prepared for field painting, but galvanized items obscured from public view will not require field painting. The Contractor shall submit a proposal for substituting galvanizing to the Engineer, showing items to be field painted, applicable provisions of AASHTO M 111 (ASTM A 123), drain/vent holes and any other necessary modifications.

Notification: The Contractor shall notify the Engineer 24-hours in advance of beginning surface preparation operations.

Surface Preparation, Metallizing and Painting Equipment: The Contractor shall provide surface preparation, metallizing, and painting equipment as needed to perform the work as specified herein.

Metallizing application equipment shall be portable electric arc thermal spray units that are set-up, adjusted and operated in accordance with the manufacturer's written instructions.

All cleaning and painting equipment shall include gages capable of accurately measuring fluid and air pressures and shall have valves capable of regulating the flow of air, water or paint as recommended by the equipment manufacturer. The equipment shall be maintained in proper working order.

Diesel or gasoline powered equipment shall be positioned or vented in a manner to prevent deposition of combustion contaminants on any part of the structure.

Hand tools, power tools, pressure washing, water jetting, abrasive blast cleaning equipment, brushes, rollers, and spray equipment shall be of suitable size and capacity to perform the work required by this specification. Appropriate filters, traps and dryers shall be provided for the compressed air used for abrasive blast cleaning and conventional spray application. Paint pots shall be equipped with air operated continuous mixing devices unless prohibited by the coating manufacturer.

Test Areas (Sections): Prior to proceeding with production work on the project, the Contractor shall prepare test sections of at least 10 square feet (0.93 sq. m). More than one test section may be needed to represent the various design configurations of the structure. The test section(s) shall be blast cleaned, metallized and painted (if specified) in accordance with the requirements specified herein using the same equipment, materials and procedures that will be used for the production.

During the blast cleaning, metallizing, and painting of the test section(s), in the presence of the Engineer, the Contractor shall perform all quality control tests and inspections required by this specification including complete documentation. In addition, the Contractor shall allow sufficient time for the Engineer to perform any or all quality assurance tests and inspections desired.

Production work shall not proceed until the Engineer agrees that the blast cleaning, metallizing, and painting work, along with the quality control testing, inspection, and documentation are acceptable.

No additional compensation will be paid for the preparation of the test section(s).

Protective Coverings and Damage: The Contractor shall apply protective coverings to all surfaces of the structural steel that are not scheduled for surface preparation, metallizing, and painting. The coverings shall be maintained and remain in place until the work is completed and then shall be removed prior to shipping.

Metallized or painted surfaces damaged by any Contractor's operation shall be repaired, and re-metallized and/or re-painted, as directed by the Engineer, at no additional cost to the Department.

Ambient Conditions: Surfaces prepared for metallizing or painting shall be free of moisture and other contaminants. The Contractor shall control operations to insure that dust, dirt, or moisture do not come in contact with surfaces on which work will take place. The surface temperature shall be at least 5°F (3°C) above the dew point during final surface preparation operations, and the application of metallizing. Metallizing shall only be applied when the surface and air temperatures are above 32°F (0°C). The manufacturers' published literature shall be followed for specific temperature, dew point, and humidity restrictions during the application of each paint coat. Metallizing or paint shall not be applied in rain, wind, snow, fog or mist. Ambient conditions shall be maintained during the drying period specified by the manufacturer.

Compressed Air Cleanliness: Prior to using compressed air for abrasive blast cleaning, blowing down surfaces, and metallizing or painting application, the Contractor shall verify that the compressed air is free of moisture and oil contamination according to the requirements of ASTM D 4285. The tests shall be conducted at least one time per shift for each compressor system in operation. If air contamination is evident, the Contractor shall change filters, clean traps, add moisture separators or filters, or make other adjustments as necessary to achieve clean, dry air. The Contractor shall also examine the work performed since the last acceptable test for evidence of defects or contamination caused by the contaminated compressed air. Contaminated work shall be repaired at no additional cost to the Department.

Solvent Cleaning (HOLD POINT): All traces of oil, grease, and other detrimental contaminants on the steel surfaces to be metallized shall be removed by solvent cleaning in accordance with SSPC-SP 1. The brand name of proposed cleaning solvent(s) and/or proprietary chemical cleaners including manufacturers' product data sheet and MSDS shall be submitted for Engineer acceptance prior to use.

Under no circumstances shall blast cleaning be performed in areas containing surface contaminants or in areas where the Engineer has not accepted the solvent cleaning. Rejected surfaces shall be re-cleaned to the specified requirements at no additional cost to the Department.

Abrasives: Abrasive blast cleaning shall be performed using either expendable abrasives or recyclable steel grit abrasives. Expendable abrasives shall be used one time and discarded. The abrasive shall be angular in shape. Acceptable angular shaped abrasives include, but are not limited to, aluminum oxide, steel grit, and crushed slag. Silica sand shall not be used. Steel shot and other abrasives producing a rounded surface profile are not acceptable, even if mixed with

angular grit abrasives.

Abrasive suppliers shall provide written certification that expendable abrasives and recyclable steel grit abrasives meet the requirements of SSPC-AB 1 and AB 3, respectively. Abrasive suppliers shall certify that abrasives are not oil contaminated and shall have a water extract pH value within the range of 6 to 8. On a daily basis, the Contractor shall verify that recycled abrasives are free of oil and contamination by performing a vial test in accordance with SSPC-AB 2.

All surfaces that are found to have been prepared using abrasives not meeting the SSPC-AB 1, AB 2, or AB 3 requirements, as applicable, are oil contaminated, or have a pH outside the specified range, shall be solvent cleaned or low pressure water cleaned, and re-blast cleaned at no cost to the Department.

Surface Preparation (HOLD POINT): The following method of surface preparation shall be used:

(a) Flame Cut Steel: Prior to blast cleaning, all flame cut edges shall be ground to remove hardened steel and any sharp or irregular shapes.

(b) Near-White Metal Blast Cleaning: All steel surfaces to be metallized shall be near white metal blast cleaned in accordance with SSPC-SP 10 using dry abrasive blast cleaning methods.

(c) Galvanized Minor Bridge Members: If galvanizing of minor bridge members is selected in lieu of metallizing, prepare all galvanized surfaces for painting by brush-off blast cleaning in accordance with SSPC-SP 16 or by using proprietary solutions that are specifically designed to clean and etch (superficially roughed) galvanized steel for painting. If cleaning and etching solutions are selected, submit manufacturer's technical product literature and MSDS for Engineer's review and written acceptance prior to use.

(d) Base Metal Irregularities: If hackles, burrs, or slivers in the base metal are visible on the steel surface after cleaning, the Contractor shall remove them by grinding followed by re-blast cleaning.

Surface Profile (HOLD POINT): Blast cleaning abrasives shall be of the size and grade that will produce a uniform angular surface profile depth of 3.5 to 4.5 mils (89 to 114 microns). If the metallizing wire manufacturer's profile requirements are more restrictive, the Contractor shall advise the Engineer and comply with those requirements. For recycled abrasives, an appropriate operating mix shall be maintained in order to control the profile within these limits.

The average surface profile shall be determined each work day with a minimum frequency of one location per every 200 sq ft (18.6 sq m) per piece of equipment. All surfaces, including flame cut edges, shall be tested in accordance with SSPC-PA 17. Surface profile replica tape or electronic profilometer shall be used. The tape shall be retained and included with the daily QC report. Single measurements less than 3.5 mils (89 microns) are unacceptable. In that event, additional testing shall be done to determine the limits of the deficient area and, if it is not isolated, work will be suspended. The Contractor shall submit a plan for making the necessary adjustments to insure that the specified surface profile is achieved on all surfaces. Work shall not resume until the Engineer provides written acceptance.

Surface Condition Prior to Metallizing (HOLD POINT): Prepared surfaces shall meet the requirements of SSPC-SP 10 immediately prior to metallizing, and shall be metallized within six hours of blast cleaning. If rust appears or bare steel has been exposed for more than six hours, the affected area shall be re-blasted at no additional cost to the Department.

All dust and surface preparation residue on steel surfaces shall be removed prior to metallizing.

The quality of surface preparation and cleaning of surface dust and debris shall be accepted by the Engineer prior to metallizing.

The Engineer has the right to reject any work that was performed without adequate provision for QA observations to accept the degree of cleaning. Rejected metallizing work shall be removed and replaced at no additional cost to the Department.

Daily Metallizing Operator-Equipment Qualification – Bend Tests: Unless directed otherwise by the Engineer, each day that metallizing will be applied, the Contractor shall perform bend testing prior to beginning production work. For each metallizing applicator, five carbon steel coupons measuring 2 inch wide x 8 inch long x 0.05 inch (50mm x400 mm x 1.3 mm) thick shall be blast cleaned using the same equipment and abrasive used for the production work. Each applicator shall apply the metallizing to five coupons in accordance with the requirements of this Specification to a dry film thickness of 8.0 to 12.0 mils (200 to 300µm). 180 degree bend testing shall be performed on all five coupons using a 13mm (1/2”) mandrel in accordance with the requirements and acceptance criteria of SSPC-CS 23/AWS C2.23M/NACE 12. Minor cracks that cannot be lifted from the substrate with knife blade are acceptable. If lifting occurs on any coupon, the surface preparation and/or metallizing process shall be modified until acceptable results are achieved before proceeding with production work.

Application of Metallizing: Application shall be done in overlapping passes in a cross-hatch pattern (i.e., a second set of overlapping passes shall be applied at right angles to the first set of overlapping passes) to ensure uniform coverage. The gun shall be held at such a distance from the work surfaces that the metal is still molten on impact. The metallizing shall be applied as a continuous film of uniform thickness, firmly adherent, and free from thin spots, misses, lumps or blisters, and have a fine sprayed texture. Thin spots and misses shall be re-metallized. If touch up metallizing or the application of additional metallizing to previously applied metallizing does not occur within 24 hours, the surface of the metallizing shall be brush off blast cleaned according to SSPC-SP7 to remove oxidation and surface contaminates prior to the application of additional metallizing. The final appearance of the metallizing when left un-top coated or top coated with System 1 shall be uniform without excessive blotchiness or contrast in color. If the surface does not have a uniform appearance, remove and replace the metallizing at no cost to the Department. If the configuration of the surface being metallized does not allow for a proper gun-to-work piece standoff distance, the Contractor shall notify the Engineer.

Unless required by the contract plans, the top of the top flanges shall not be metallized or painted. If the contract plans indicate that the top flange is to be metallized, only the first coat of the paint system shall be applied to the top flange.

Metallizing Thickness: The thickness of the metallizing shall be 8.0 to 12.0 mils (200-300 microns). Thickness shall be measured as specified by SSPC-PA 2 (use a Type 2 Electronic Gauge only).

Metallizing Adhesion: Adhesion testing of metallizing applied each day shall be determined with a self-adjusting adhesion tester in accordance with ASTM D 4541. Unless otherwise directed by the Engineer, a minimum of one test shall be conducted for every 500 sq ft (46sq m) of metallized surface. The tests shall be conducted prior to application of any coating. If any of the tests exhibit less than 700 psi (4.83 MPa) for 85/15 or less than 500 psi (3.45 MPa) for zinc, additional tests shall be conducted to determine the extent of the deficient material. All deficient metallizing shall be removed by blast cleaning and re-applied at no additional cost to the Department.

At the discretion of the Engineer, a representative blast cleaned test panel (or steel companion panel approximately 12 inch x 12 inch x ¼ inch thick) can be metallized at the same time each 500 sq ft (46sq m) of surface area, or portion thereof, is metallized. Adhesion testing can be performed on the companion panel rather than on the structure. If the adhesion tests on the panels are acceptable, the metallizing on the structure is considered acceptable and testing on the structure is not required. If adhesion testing of the panels fails, testing shall be conducted on the structure. If adhesion testing on the structure is acceptable, the metallizing on the structure is considered to be acceptable. If tests on the structure are unacceptable, complete removal of the failing metallizing and re-metallizing in accordance with this Specification shall be performed at no additional cost to the Department.

Application of Paint Systems Over Metallizing:

When painting over the metallizing is specified, three painting system options exist for application over the metallizing as shown below. Systems, or components of systems, specified to be shop applied shall not be applied to the faying surfaces of bolted connections. The system to be applied shall be as designated on the plans.

(a) **System 1** is a single coat system consisting of a full clear aliphatic urethane coat shop applied to all metallized surfaces except as noted above.

The thickness of the clear coat to be applied is dependent on the product selected and shall be as follows:

TABLE 1

CLEAR URETHANE COAT (SINGLE COAT SYSTEM)

MANUFACTURER	SEALER COAT ONLY (DFT)
Carboline Company	Carbothane Clear Coat (3.0 to 5.0 mils) (75 to 125 microns)
Pittsburgh Paints (PPG)	Pitthane Ultra Clear 95-8000 (2.0 to 3.0 mils) (50 to 75 microns)
Sherwin-Williams	ArmorSeal Rexthane I MCU (3.0 to 5.0 mils) (75 to 125 microns)

The clear urethane shall be applied in a 2 step process. The first step shall be to apply a "mist coat" that is thinned at the maximum allowable thinning rate as listed on the manufacturer's product data sheet that is compliant with VOC regulations. The intent of the mist coat is to saturate the porous metallizing surface and displace entrapped air within the porosity of the metallizing. After allowing the mist coat to flash off for 20 minutes, the full coat of clear urethane shall be applied to achieve the manufacturer's recommended dry film thickness.

(b) **System 2** is a four coat system consisting of a full shop coat of epoxy penetrating sealer coat, a full shop coat of an extended recoat epoxy and two full field applied coats of waterborne acrylic.

The epoxy penetrating sealer shall be applied in accordance with the coating manufacturer's instructions at a coverage rate designed to achieve a theoretical dry film thickness of 1.5 mils (38 microns). The intent of the epoxy penetrating sealer coat is to saturate the metallizing and cover the surface rather than to build a film thickness; therefore, dry film thickness measurement of the epoxy penetrating sealer coat is not required. The top of top flanges that are specified to be metallized and embedded in concrete shall receive the epoxy penetrating sealer only.

The thicknesses of the epoxy and waterborne acrylic coats shall be according to Article 506.09(f)(1).

(c) **System 3** is a three coat system consisting of a full epoxy penetrating sealer coat, a full epoxy intermediate coat, and a full urethane finish coat. All coats shall be shop-applied unless specified otherwise. If the urethane is field-applied, an extended recoat epoxy shall be applied in the shop.

The epoxy penetrating sealer shall be applied in accordance with the coating manufacturer's instructions at a coverage rate designed to achieve a theoretical dry film thickness of 1.5 mils (38 microns). The intent of the epoxy penetrating sealer coat is to saturate the metallizing and cover the surface rather than to build a film thickness; therefore, dry film thickness measurement of the epoxy penetrating sealer coat is not required. The top of top flanges that are specified to be metallized and embedded in concrete shall receive the epoxy penetrating sealer only.

The thicknesses of the epoxy and urethane coats shall be according to Article 506.09(f)(2).

The single clear urethane coat or the epoxy penetrating sealer coat shall be applied within 24 hours of metallizing providing that the immediate work environment is controlled. If temperature and humidity cannot be controlled, that time frame shall be reduced to within 8 hours. The metallizing shall be dry and free of any visible debris or oxidation (zinc oxide) at the time of application. Visible oxidation shall be removed by mechanical methods such as stiff bristle or wire brushing. Contact surfaces for bolted connections shall consist of bare, uncoated metallizing only and shall be masked off prior to the application of any shop applied coatings.

The clear urethane coat or the epoxy penetrating sealer shall be applied in accordance with the manufacturer's instructions and in such a manner to assure thorough wetting and sealing of the metallizing.

For systems 2 and 3, prior to application of any subsequent coat, the surface of the previous coat shall be dry in accordance with the manufacturer's instructions and free of any visible contamination. If the manufacturer's specified recoat times are exceeded, the effected coat(s) shall be completely roughened or removed and replaced, according to the manufacturer's instructions, at no cost to the Department. The same restrictions regarding film appearance and continuity for the seal coat apply to the intermediate coat and topcoat.

All coats shall be applied to achieve a smooth, uniform appearance that is free of dryspray, overspray, and orange peel. Shadow-through, pinholes, bubbles, skips, misses, lap marks between applications, runs, sags, or other visible discontinuities are unacceptable.

Masked off areas around field connections shall be coated in the field after the steel is fully erected according to the touch-up procedure for the completed system.

When the application of field coat(s) is required, the existing shop applied coats shall be prepared and field painting performed according to the applicable provisions of Article 506.10. If any coat has exceeded its recoat time, the surface shall be completely roughened or removed and replaced according to the manufacturer's instructions, prior to the application of the topcoat.

All coatings shall be applied by spray, supplemented with brushing or rolling, if needed. Special attention shall be given to obtaining complete coverage and proper coating thickness in crevices, on welds and edges, and in hard to reach areas.

Application of Paint System over Galvanizing: If galvanizing is used in lieu of metallizing and Paint System 1, no further painting is required. If galvanizing is used in lieu of metallizing and Paint System 2, apply a two-coat system consisting of a full waterborne acrylic intermediate coat and a full waterborne acrylic finish coat from System 2. If galvanizing is used in lieu of metallizing and Paint System 3, apply a full epoxy intermediate coat and a full urethane coat from System 3. To minimize handling and erection damage the acrylic coats of System 2 shall be applied in the field. Except as noted on the plans, the epoxy and urethane coats of System 3 can be applied in the shop or field.

Touch-Up of Completed Coating System: The Contractor shall repair all damaged and/or unacceptable areas of the completed coating system (all metallizing, galvanizing, and paint layers) prior to shipment as defined below. The same process shall be followed for the repair of shipping, handling, and erection damage.

Damage to the metallizing, galvanizing, and/or paint that does not expose the substrate shall be prepared by solvent cleaning in accordance with SSPC-SP 1 followed by power tool cleaning in accordance with SSPC-SP 3 to remove loose material. For the repair of damaged metallizing or galvanizing that exposes the substrate, the surface shall be spot blast cleaned in accordance with SSPC-SP 10. If blast cleaning cannot be performed, as authorized by the Engineer, the damage shall be spot power tool cleaned to SSPC-SP11.

The metallizing, galvanizing and/or paint surrounding each repair area shall be feathered for a distance of 1 to 2 inches (25 to 50 mm) to provide a smooth, tapered transition into the existing intact material. The surrounding intact paint shall be roughened to promote adhesion of the repair coats.

Damage to metallizing or galvanizing extends to the substrate shall be repaired. For metallizing it is critical that all remnants of sealer or paint have been removed from the porosity of the metallizing before applying new metallizing or an adhesion failure can occur. If it is no longer feasible to apply metallizing, spot-apply an organic zinc primer meeting the requirements of Section 1008. For galvanizing, spot apply organic zinc. After priming, for both the metallizing and galvanizing, apply the same intermediate and finish coats used on the surrounding steel. If the damage does not expose the substrate, only the effected paint coat(s) shall be applied.

Surface Preparation and Painting of Galvanized Fasteners: All ASTM A 325 or ASTM F 3125 high strength steel bolts, nuts and washers shall be hot dip galvanized according to AASHTO M232, except in areas where the metallized surfaces are to be top coated, in which case they shall be mechanically galvanized according to Article 1006.08(a) of the Standard Specifications.

The Contractor shall prepare all fasteners (i.e., galvanized nuts, bolts, etc.) by power tool cleaning in accordance with SSPC-SP 3. Following power tool cleaning and prior to painting, the surfaces shall be solvent cleaned according to SSPC-SP 1. Slight stains of torqueing compound dye may remain after cleaning provided the dye is not transferred to a cloth after vigorous rubbing. If any dye is transferred to a cloth after vigorous rubbing, additional cleaning is required.

Spot paint the fasteners with one coat of an aluminum epoxy mastic coating meeting the requirements of Article1008.03 of the Standard Specifications.

Shipping and Handling: The Contractor shall take special care in handling the steel in the shop and when loading for shipment. Painted, metallized, or galvanized steel shall not be moved or handled until sufficient cure time has elapsed to prevent handling damage. During shipping, the steel shall be insulated from the moving apparatus (i.e., chains, cables, hooks, clamps, etc.) by softeners approved by the Engineer. Apparatus used to hoist the steel shall be padded. Steel shall be placed on wood dunnage and spaced in such a manner that no rubbing will occur during shipment that could damage the paint, metallizing or galvanizing.

Special Instructions: At the completion of the work, the Contractor shall stencil on the bridge, using a contrasting colored paint, the date of metallizing and painting. The letters shall be capitals, not less than 2 inches (50 mm) and not more than 3 inches (75 mm) in height. The information defined below shall be stenciled on the exterior face of the first girders at the bridge abutments (approximately 1 or 2 feet outward from the abutment end of the girders). The Engineer will identify the bridge member(s) to be stenciled.

When all coats are applied in the shop with the exception of touch-up, the shop Contractor shall do the stenciling. The stencil shall contain the following words on four lines: "METALLIZED BY" on the first line; name of the Contractor on the second line; and the month and year in which the coating was completed on the third line; and the applicable system Code on the fourth line.

When the finish coat is applied in the field, the Contractor shall do the stenciling as described above, but insert “PAINTED BY” and the Contractor’s name after the fourth line.

Basis of Payment: This work shall not be paid for separately but shall be included in the unit price bid for furnishing and/or erecting structural steel according to Article 505.13.

Appendix 1 – Reference List

The Shop and Field Contractor(s) shall maintain the following regulations and references on site for the duration of the project:

Illinois Environmental Protection Act

American Society of Testing Material

- ASTM D 4285, Standard Test Method for Indicating Oil or Water in Compressed Air
- ASTM B833, Standard Specifications for Zinc Wire for Thermal Spraying (Metallizing)
- ASTM D4541, Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers

Society of Protective Coatings

- SSPC-AB 1, Mineral and Slag Abrasives
- SSPC-AB 2, Specification for Cleanliness of Recycled Ferrous Metallic Abrasives
- SSPC-AB 3, Newly Manufactured or Re-Manufactured Steel Abrasives
- SSPC-PA 2, Measurement of Dry Coating Thickness with Magnetic Gages
- SSPC-QP 1, Standard Procedure for Evaluating Painting Shop Contractors (Field Application to Complex Structures)
- SSPC-QP 2, Standard Procedure for Evaluating the Qualifications of Painting Shop Contractors to Remove Hazardous Paint
- SSPC-SP 1, Solvent Cleaning
- SSPC-SP 5/NACE No. 1, White Metal Blast Cleaning
- SSPC-SP 11, Power Tool Cleaning to Bare Metal
- SSPC-SP 12/NACE No. 5, Surface Preparation and Cleaning of Metals by Water Jetting Prior to Recoating
- SSPC-SP 16, Brush-Off Blast Cleaning of Coated and Uncoated Galvanized Steel, Stainless Steels, and Non-Ferrous Metals
- SSPC-PA 17, Procedure for Determining Conformance to Steel Profile/Surface Roughness/Peak Count Requirements.
- SSPC-VIS 1, Guide and Reference Photographs for Steel Surfaces Prepared by Dry Abrasive Blast Cleaning

- SSPC-VIS 5, Guide and Reference Photographs for Steel Prepared by Wet Abrasive Blast Cleaning

- SSPC-Guide 15, Field Methods for Retrieval and Analysis of Soluble Salts on Steel and Other Nonporous Surfaces

- SSPC-CS 23.00/AWS C2.23M/NACE No. 12, Specification for the Application of Thermal Spray Coatings (Metallizing) of Aluminum, Zinc, and Their Alloys and Composites for the Corrosion Protection of Steel

American National Standards Institute/American Welding Society

- ANSI/AWS C2.25/C2.25M, Specification for Solid and Composite Wires, and Ceramic Rods for Thermal Spraying

- AWS C2.6/C2.6M, Guide for Thermal-Spray Operator Qualification

Metallizing wire and coating manufacturer's application instructions, MSDS and product data sheets

DRILLED SHAFTS

Effective: October 5, 2015 Revised: October 27, 2023

Revise Section 516 of the Standard Specifications to read:

"SECTION 516. DRILLED SHAFTS

516.01 Description. This work shall consist of constructing drilled shaft foundations.

516.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Portland Cement Concrete (Note 1)	1020
(b) Reinforcement Bars	1006.10
(c) Grout (Note 2)	1024.01
(d) Permanent Steel Casing	1006.05(d)
(e) Slurry (Note 3)	

Note 1. When the soil contains sulfate contaminates, ASTM C 1580 testing will be performed to assess the severity of sulfate exposure to the concrete. If the sulfate contaminate is >0.10 to < 0.20 percent by mass, a Type II (MH) cement shall be used. If the sulfate contaminate is >0.20 to < 2.0 percent by mass, a Type V cement shall be used. If the sulfate contaminate is ≥ 2.0 percent by mass, refer to ACI 201.2R for guidance.

Note 2. The sand-cement grout mix shall be according to Section 1020 and shall be two

to five parts sand and one part Type I or II cement. The maximum water cement ratio shall be sufficient to provide a flowable mixture with a typical slump of 10 in. (250 mm).

Note 3. Slurry shall be bentonite, emulsified polymer, or dry polymer, and shall be approved by the Engineer.

516.03 Equipment. Equipment shall be according to the following.

Item	Article/Section
(a) Concrete Equipment	1020.03
(b) Drilling Equipment (Note 1)	
(c) Hand Vibrator	1103.17(a)
(d) Underwater Concrete Placement Equipment	1103.18

Note 1. The drilling equipment shall have adequate capacity, including power, torque and down thrust, to create a shaft excavation of the maximum diameter specified to a depth of 20 percent beyond the depths shown on the plans.

516.04 Submittals. The following information shall be submitted on form BBS 133.

(a) Qualifications. At the time of the preconstruction conference, the Contractor shall provide the following documentation.

(1) References. A list containing at least three projects completed within the three years prior to this project's bid date which the Contractor performing this work has installed drilled shafts of similar diameter, length, and site conditions to those shown in the plans. The list of projects shall contain names and phone numbers of owner's representatives who can verify the Contractor's participation on those projects.

(2) Experience. Name and experience record of the drilled shaft supervisor, responsible for all facets of the shaft installation, and the drill operator(s) who will be assigned to this project. The supervisor and operator(s) shall each have a minimum of three years experience in the construction of drilled shafts.

(b) Installation Procedure. A detailed installation procedure shall be submitted to the Engineer for acceptance at least 28 days prior to drilled shaft construction and shall address each of the following items unless otherwise directed by the Engineer in writing.

(1) Equipment List. List of proposed equipment to be used including cranes, drill rigs, augers, belling tools, casing, vibratory hammers, core barrels, bailing buckets, final cleaning equipment, slurry equipment, tremies, or concrete pumps, etc.

(2) General Sequence. Details of the overall construction operation sequence, equipment access, and the sequence of individual shaft construction within each substructure bent or footing group. The submittal shall address the Contractor's proposed time delay and/or the minimum concrete strength necessary before initiating a shaft excavation adjacent to a recently installed drilled shaft.

(3) Shaft Excavation. A site specific step by step description of how the Contractor anticipates the shaft excavation to be advanced based on their evaluation of the

subsurface data and conditions expected to be encountered. This sequence shall note the method of casing advancement, anticipated casing lengths, tip elevations and diameters, the excavation tools used and drilled diameters created. The Contractor shall indicate whether wet or dry drilling conditions are expected and if groundwater will be sealed from the excavation.

(4) Slurry. When the use of slurry is proposed, details on the types of additives to be used and their manufacturers shall be provided. In addition, details covering the measurement and control of the hardness of the mixing water, agitation, circulation, de-sanding, sampling, testing, and chemical properties of the slurry shall be submitted.

(5) Shaft Cleaning. Method(s) and sequence proposed for the shaft cleaning operation.

(6) Reinforcement Cage and Permanent Casing. Details of reinforcement placement including rolling spacers to be used and method to maintain proper elevation and location of the reinforcement cage within the shaft excavation during concrete placement. The method(s) of adjusting the reinforcement cage length and permanent casing if rock is encountered at an elevation other than as shown on the plans. As an option, the Contractor may perform soil borings and rock cores at the drilled shaft locations to determine the required reinforcement cage and permanent casing lengths.

(7) Concrete Placement. Details of concrete placement including proposed operational procedures for free fall, tremie or pumping methods. The sequence and method of casing removal shall also be stated along with the top of pour elevation, and method of forming through water above streambed.

(8) Mix Design. The proposed concrete mix design(s).

(9) Disposal Plan. Containment and disposal plan for slurry and displaced water. Containment and disposal plan for contaminated concrete pushed out of the top of the shaft by uncontaminated concrete during concrete placement.

(10) Access and Site Protection Plan. Details of access to the drilled shafts and safety measures proposed. This shall include a list of casing, scaffolding, work platforms, temporary walkways, railings, and other items needed to provide safe access to the drilled shafts. Provisions to protect open excavations during non-working hours shall be included.

The Engineer will evaluate the drilled shaft installation procedure and notify the Contractor of acceptance, need for additional information, or concerns with the installation’s effect on the existing or proposed structure(s).

CONSTRUCTION REQUIREMENTS

516.05 General. Excavation for drilled shaft(s) shall not proceed until written authorization is received from the Engineer. The Contractor shall be responsible for verification of the dimensions and alignment of each shaft excavation as directed by the Engineer.

Unless otherwise approved in the Contractor's installation procedure, no shaft excavation, casing installation, or casing removal with a vibratory hammer shall be made within four shaft diameters center to center of a shaft with concrete that has a compressive strength less than 1500 psi (10,300 kPa). The site-specific soil strengths and installation methods selected will determine the actual required minimum spacing, if any, to address vibration and blow out concerns.

Lost tools shall not remain in the shaft excavation without the approval of the Engineer.

Blasting shall not be used as a method of shaft excavation.

516.06 Shaft Excavation Protection Methods. The construction of drilled shafts may involve the use of one or more of the following methods to support the excavation during the various phases of shaft excavation, cleaning, and concrete placement dependent on the site conditions encountered. Surface water shall not flow uncontrolled into the shaft excavation, however water may be placed into the shaft excavation in order to meet head pressure requirements according to Articles 516.06(c) and 516.13.

The following are general descriptions indicating the conditions when these methods may be used.

(a) Dry Method. The dry construction method shall only be used at sites where the groundwater and soil conditions are suitable to permit the drilling and dewatering of the excavation without causing subsidence of adjacent ground, boiling of the base soils, squeezing, or caving of the shaft side walls. The dry method shall consist of drilling the shaft excavation, removing accumulated water, cleaning the shaft base, and placing the reinforcement cage and concrete in a predominately dry excavation.

Slurry Method. The slurry construction method may be used at sites where dewatering the excavation would cause collapse of the shaft sidewalls or when the volume and head of water flowing into the shaft is likely to contaminate the concrete during placement resulting in a shaft defect. This method uses slurry, or in rare cases water, to maintain stability of the shaft sidewall while advancing the shaft excavation. After the shaft excavation is completed, the slurry level in the shaft shall be kept at an elevation to maintain stability of the shaft sidewall, maintain stability of the shaft base, and prevent additional groundwater from entering the shaft. The shaft base shall be cleaned, the reinforcement cage shall be set, and the concrete shall be discharged at the bottom of the shaft excavation, displacing the slurry upwards.

(b) Temporary Casing Method. Temporary casing shall be used when either the dry or slurry methods provide inadequate support to prevent sidewall caving or excessive deformation of the shaft excavation. Temporary casing may be used with slurry or be used to reduce the flow of water into the excavation to allow dewatering and concrete placement in a dry shaft excavation. Temporary casing shall not be allowed to remain permanently without the approval of the Engineer.

During removal of the temporary casing, the level of concrete in the casing shall be maintained at a level such that the head pressure inside the casing is a minimum of 1.25 times the head pressure outside the casing, but in no case is less than 5 ft (1.5 m) above

the bottom of the casing. Casing removal shall be at a slow, uniform rate with the pull in line with the shaft axis. Excessive rotation of the casing shall be avoided to limit deformation of the reinforcement cage. In addition, the slump requirements during casing removal shall be according to Article 516.12.

When called for on the plans, the Contractor shall install a permanent casing as specified. Permanent casing may be used as a shaft excavation support method or may be installed after shaft excavation is completed using one of the above methods. After construction, if voids are present between the permanent casing and the drilled excavation, the voids shall be filled with grout by means of tremie(s) or concrete pump which shall be lowered to the bottom of the excavation. The contractor's means and methods for grout placement shall fill the annular void(s) between the permanent casing and the surrounding earth material to restore and provide lateral earth resistance to the shaft. Grout yield checks shall be performed by the contractor for submittal to the Engineer. Permanent casing shall not remain in place beyond the limits shown on the plans without the specific approval of the Engineer.

When the shaft extends above the streambed through a body of water and permanent casing is not shown, the portion above the streambed shall be formed with removable casings, column forms, or other forming systems as approved by the Engineer. The forming system shall not scar or spall the finished concrete or leave in place any forms or casing within the removable form limits as shown on the plans unless approved as part of the installation procedure. The forming system shall not be removed until the concrete has attained a minimum compressive strength of 2500 psi (17,200 kPa) and cured for a minimum of 72 hours. For shafts extending through water, the concrete shall be protected from water action after placement for a minimum of seven days.

516.07 Slurry. When slurry is used, the Contractor shall provide a technical representative of the slurry additive manufacturer at the site prior to introduction of the slurry into the first shaft where slurry will be used, and during drilling and completion of a minimum of one shaft to adjust the slurry mix to the specific site conditions. During construction, the level of the slurry shall be maintained a minimum of 5 feet (1.5 m) above the height required to prevent caving of the shaft excavation. In the event of a sudden or significant loss of slurry in the shaft excavation, the construction of that foundation shall be stopped and the shaft excavation backfilled or supported by temporary casing, until a method to stop slurry loss, or an alternate construction procedure, has been approved by the Engineer.

(a) General Properties. The material used to make the slurry shall not be detrimental to the concrete or surrounding ground. Mineral slurries shall have both a mineral grain size that remains in suspension and sufficient viscosity and gel characteristics to transport excavated material to a suitable screening system. Polymer slurries shall have sufficient viscosity and gel characteristics to transport excavated material to suitable screening systems or settling tanks. The percentage and specific gravity of the material used to make the slurry shall be sufficient to maintain the stability of the excavation and to allow proper concrete placement.

If approved by the Engineer, the Contractor may use water and excavated soils as drilling slurry. In this case, the range of acceptable values for density, viscosity and pH, as shown in the following table for bentonite slurry shall be met.

When water is used as the slurry to construct rock sockets in limestone, dolomite,

sandstone or other formations that are not erodible, the requirements for slurry testing shall not apply if the entire fluid column is replaced with fresh water after drilling. To do so, fresh water shall be introduced at the top of the shaft excavation and existing water used during drilling shall be pumped out of the shaft excavation from the bottom of the shaft excavation until the entire volume of fluid has been replaced.

(b) Preparation. Prior to introduction into the shaft excavation, the manufactured slurry admixture shall be pre-mixed thoroughly with clean, fresh water and for adequate time in accordance with the slurry admixture manufacturer's recommendations. Slurry tanks of adequate capacity shall be used for slurry mixing, circulation, storage and treatment. No excavated slurry pits will be allowed in lieu of slurry tanks without approval from the Engineer. Adequate desanding equipment shall be provided to control slurry properties during the drilled shaft excavation in accordance with the values provided in Table 1.

(c) Quality Control. Quality control tests shall be performed on the slurry to determine density, viscosity, sand content and pH of freshly mixed slurry, recycled slurry and slurry in the shaft excavation. Tests of slurry samples from within two feet of the bottom and at mid-height of the shaft excavation shall be conducted in each shaft excavation during the excavation process to measure the consistency of the slurry. A minimum of four sets of tests shall be conducted during the first eight hours of slurry use on the project. When a series of four test results do not change more than 1% from the initial test, the testing frequency may be decreased to one set every four hours of slurry use. Reports of all tests, signed by an authorized representative of the Contractor, shall be furnished to theEngineer upon completion of each drilled shaft. The physical properties of the slurry shall be as shown in Table 1.

The slurry shall be sampled and tested less than 1 hour before concrete placement. Any heavily contaminated slurry that has accumulated at the bottom of the shaft shall be removed. The contractor shall perform final shaft bottom cleaning after suspended solids have settled from the slurry. Concrete shall not be placed if the slurry does not have the required physical properties.

Table 1 – SLURRY PROPERTIES				
	Bentonite	Emulsified Polymer	Dry Polymer	Test Method
Density, lb/cu ft (kg/cu m) (at introduction)	65.2 ± 1.6[1] (1043.5 ± 25.6)	63 (1009.0) max.	63 (1009.0) max.	ASTM D 4380
Density, lb/cu ft (kg/cu m) (prior to concrete placement)	67.0 ± 3.5[1] (1073.0 ± 56.0)	63 (1009.0) max.	63 (1009.0) max.	ASTM D 4380
Viscosity[2], sec/qt (sec/L)	46 ± 14 (48 ± 14)	38 ± 5 (40 ± 5)	65 ± 15 (69 ± 16)	ASTM D 6910
pH	9.0 ± 1.0	9.5 ± 1.5	9.0 ± 2.0	ASTM D 4972
Sand Content, percent by volume (at introduction)	4 max.	1 max.	1 max.	ASTM D 4381
Sand Content, percent by volume (prior to concrete placement)	10 max.	1 max.	1 max.	ASTM D 4381
Contact Time[3], hours	4 max.	72 max.	72 max	

Note 1. When the slurry consists of only water and excavated soils, the density shall not exceed 70 lb/cu ft (1121 kg/cu m).
Note 2. Higher viscosities may be required in loose or gravelly sand deposits.
Note 3. Contact time is the time without agitation and sidewall cleaning.

516.08 Obstructions. An obstruction is an unknown isolated object that causes the shaft excavation method to experience a significant decrease in the actual production rate and requires the Contractor to core, break up, push aside, or use other means to mitigate the obstruction. Subsurface conditions such as boulders, cobbles, or logs and buried infrastructure such as footings, piling, or abandoned utilities, when shown on the plans, shall not constitute an obstruction. When an obstruction is encountered, the Contractor shall notify the Engineer immediately and upon concurrence of the Engineer, the Contractor shall mitigate the obstruction with an approved method.

516.09 Top of Rock. The top of rock will be considered as the point where rock, defined as bedded deposits and conglomerate deposits exhibiting the physical characteristics and difficulty of rock removal as determined by the Engineer, is encountered which cannot be drilled with augers and/or underreaming tools configured to be effective in the soils indicated in the contract documents.

516.10 Design Modifications. If the top of rock elevation differs from that shown on the plans by more than 10 percent of the length of the drilled shaft above the rock, the Engineer shall be contacted to determine if any drilled shaft design changes may be required. In addition, if the type of soil or rock encountered is not similar to that shown in the subsurface exploration data, the Contractor may be required to extend the drilled shaft length(s) beyond those specified in the plans. In either case, the Engineer will determine if revisions are necessary and the extent of the modifications required.

516.11 Excavation Cleaning and Inspection. Materials removed or generated from the shaft excavations shall be disposed of according to Article 202.03.

After excavation, each shaft shall be cleaned. For a drilled shaft terminating in soil, the depth of sediment or debris shall be a maximum of 1 1/2 in. (38 mm). For a drilled shaft terminating in rock, the depth of sediment or debris shall be a maximum of 1/2 in. (13 mm).

A shaft excavation shall be overreamed when, in the opinion of the Engineer, the sidewall has softened, swelled, or has a buildup of slurry cake. Overreaming may also be required to correct a shaft excavation which has been drilled out of tolerance. Overreaming may be accomplished with a grooving tool, overreaming bucket, or other approved equipment. Overreaming thickness shall be a minimum of 1/2 in. (13 mm) and a maximum of 3 in. (75 mm).

516.12 Reinforcement. This work shall be according to Section 508 and the following.

The shaft excavation shall be cleaned and inspected prior to placing the reinforcement cage. The reinforcement cage shall be completely assembled prior to drilling and be ready for adjustment in length as required by the conditions encountered. The reinforcement cage shall be lifted using multiple point sling straps or other approved methods to avoid reinforcement cage distortion or stress. Cross frame stiffeners may be required for lifting or to keep the reinforcement cage in proper position during lifting and concrete placement.

The Contractor shall attach rolling spacers to keep the reinforcement cage centered within the shaft excavation during concrete placement and to ensure that at no point will the finished shaft have less than the minimum concrete cover(s) shown on the plans. The rolling spacers or other approved non-corrosive spacing devices shall be installed within 2 ft (0.6 m) of both the top and bottom of the drilled shaft and at intervals not exceeding 10 ft (3 m) throughout the length of the shaft to ensure proper reinforcement cage alignment and clearance for the entire shaft. The number of rolling spacers at each level shall be one for each 1.0 ft (300 mm) of shaft diameter, with a minimum of four rolling spacers at each level. For shafts with different shaft diameters throughout the length of the excavation, different sized rolling spacers shall be provided to ensure the reinforcement cage is properly positioned throughout the entire length of the shaft.

When a specific concrete cover between the base of the drilled shaft and the reinforcement cage is shown on the plans, the bottom of the reinforcement cage shall be supported so that the proper concrete cover is maintained.

If the conditions differ such that the length of the shaft is increased, additional longitudinal bars shall be either mechanically spliced or lap spliced to the lower end of the reinforcement cage and confined with either hoop ties or spirals. The Contractor shall have additional reinforcement available or fabricate the reinforcement cages with additional length as

necessary to make the required adjustments in a timely manner as dictated by the encountered conditions. The additional reinforcement may be non-epoxy coated.

516.13 Concrete Placement. Concrete work shall be performed according to the following.

Throughout concrete placement the head pressure inside the drilled shaft shall be at least 1.1 times the head pressure outside the drilled shaft.

Concrete placement shall begin within 1 hour of shaft cleaning and inspection. The pour shall be made in a continuous manner from the bottom to the top elevation of the shaft as shown on the contract plan or as approved in the Contractor's installation procedure. Concrete placement shall continue after the shaft excavation is full and until 18 in. (450 mm) of good quality, uncontaminated concrete is expelled at the top of shaft. Vibration of the concrete will not be allowed when the concrete is displacing slurry or water. In dry excavations, the concrete in the top 10 ft (3 m) of the shaft shall be vibrated.

When using temporary casing or placing concrete under water or slurry, a minimum of seven days prior to concrete placement, a 4 cu yd (3 cu m) trial batch of the concrete mixture shall be performed to evaluate slump retention. Temporary casing shall be withdrawn before the slump of the concrete drops below 6 in. (150 mm). For concrete placed using the slurry method of construction, the slump of all concrete placed shall be a minimum of 6 in. (150 mm) at the end of concrete placement.

Devices used to place concrete shall have no aluminum parts in contact with concrete.

When the top of the shaft is at the finished elevation and no further concrete placement above the finished elevation is specified, the top of the shaft shall be level and finished according to Article 503.15(a).

Concrete shall be placed by free fall, tremie, or concrete pump subject to the following conditions.

(a) Free Fall Placement. Concrete shall only be placed by free fall when the rate of water infiltration into the shaft excavation is less than 12 in. (300 mm) per hour and the depth of water in the shaft excavation is less than 3 in. (75 mm) at the time of concrete placement.

Concrete placed by free fall shall fall directly to the base without contacting the reinforcement cage, cross frame stiffeners, or shaft sidewall. Drop chutes may be used to direct concrete to the base during free fall placement.

Drop chutes used to direct placement of free fall concrete shall consist of a smooth tube. Concrete may be placed through either a hopper at the top of the tube or side openings as the drop chute is retrieved during concrete placement. The drop chute shall be supported so that free fall does not exceed 60 ft (18.3 m) for conventional concrete or 30 ft (9.1 m) for self-consolidating concrete. If placement cannot be satisfactorily accomplished by free fall in the opinion of the Engineer, either a tremie or pump shall be used to accomplish the pour.

(b) Tremie and Concrete Pump Placement. Concrete placement shall be according to Article 503.08, except the discharge end of the steel pipe shall remain embedded in the concrete a minimum of 10 ft (3.0 m) throughout concrete placement when displacing slurry or water.

516.14 Construction Tolerances. The following construction tolerances shall apply to all drilled shafts.

(a) Center of Shaft. The center of the drilled shaft shall be within 3 in. (75 mm) of the plan station and offset at the top of the shaft.

(b) Center of Reinforcement Cage. The center of the reinforcement cage shall be within 1 1/2 in. (40 mm) of plan station and offset at the top of the shaft.

(c) Vertical Plumbness of Shaft. The out of vertical plumbness of the shaft shall not exceed 1.5 percent.

(d) Vertical Plumbness of Reinforcement Cage. The out of vertical plumbness of the shaft reinforcement cage shall not exceed 0.83 percent.

(e) Top of Shaft. The top of the shaft shall be no more than 1 in. (25 mm) above and no more than 3 in. (75 mm) below the plan elevation.

(f) Top of Reinforcement Cage. The top of the reinforcement cage shall be no more than 1 in. (25 mm) above and no more than 3 in. (75 mm) below the plan elevation.

(g) Bottom of shaft. Excavation equipment and methods used to complete the shaft excavation shall have a nearly planar bottom. The cutting edges of excavation equipment used to create the bottom of shafts in rock shall be normal to the vertical axis of the shaft within a tolerance of 6.25 percent.

516.15 Method of Measurement. This work will be measured for payment in place and the volume computed in cubic yards (cubic meters). The volume will be computed using the plan diameter of the shaft multiplied by the measured length of the shaft. The length of shaft in soil will be computed as the difference in elevation between the top of the drilled shaft shown on the plans, or as installed as part of the Contractor's installation procedure, and the bottom of the shaft or the top of rock (when present) whichever is higher. The length of shaft in rock will be computed as the difference in elevation between the measured top of rock and the bottom of the shaft.

When permanent casing is specified, it will be measured for payment in place, in feet (meters). Permanent casing installed at the Contractor's option will not be measured for payment.

Reinforcement furnished and installed will be measured for payment according to Article 508.07.

516.16 Basis of Payment. This work will be paid for at the contract unit price per cubic yard (cubic meter) for DRILLED SHAFT IN SOIL, and/or DRILLED SHAFT IN ROCK.

Permanent casing will be paid for at the contract unit price per foot (meter) for PERMANENT CASING.

Reinforcement furnished and installed will be paid for according to Article 508.08.

Obstruction mitigation will be paid for according to Article 109.04."

PREFORMED PAVEMENT JOINT SEAL

Effective: October 4, 2016 Revised: March 24, 2023

Description. This work shall consist of furnishing all labor, equipment and materials necessary to prepare the joint opening and install pavement joint seal(s) at the locations specified. Unless otherwise detailed on the plans, the joint shall be sized for a rated movement of 2 inches (50 mm).

Materials: Unless otherwise specified, one of the following prefabricated joint seals will be permitted.

(a) Preformed Elastomeric Joint Seal. This material shall be according to Section 1053.01.

(b) Preformed Pre-compressed, Silicone Coated, Self-Expanding Sealant System. This Sealant system shall be comprised of three components: 1) cellular polyurethane foam impregnated with hydrophobic 100% acrylic, water-based emulsion, factory coated with highway-grade, fuel resistant silicone; 2) field-applied epoxy adhesive primer, 3) field-injected silicone sealant bands.

The preformed, pre-compressed silicone joint seal shall, as a minimum, be according to the following:

- The joint seal shall be held in place by a non-sag, high modulus silicone adhesive.
- The joint seal shall be compatible with the epoxy and header material.
- The joint seal shall withstand the effects of vertical and lateral movements, skew movements and rotational movement without adhesive or cohesive failure.
- The joint seal shall be designed so that, the material is capable of movement of +50%, -50% (100% total) of nominal material size.
- The gland shall not contain any open, unsealed joints along its length in its final condition.
- Changes in plane and direction shall be executed using factory fabricated 90 degree transition assemblies. The transitions shall be watertight at the inside and outside corners through the full movement of the product.
- The depth of the joint shall be recessed 3/4 in. (19 mm) below the riding surface throughout the normal limits of joint movement.
- The joint seal shall be resistant to ultraviolet rays.
- The joint seal shall be resistant to abrasion, oxidation, oils, gasoline, salt, and other materials that may be spilled on or applied to the surface.
- The manufacturer shall certify that the joint composition shall be free of any waxes or wax compounds; asphalts or asphalt compounds.

The joint material shall meet the following physical properties:

Property	Requirement	Test Method
Tensile Strength of Silicone Coating (min)	140 psi	ASTM D 412
UV Resistance of Joint System	No Changes--2000 Hours	ASTM C793
Density of Cellular Polyurethane Foam	4.0 lb/ cu ft (200kg/cu m)	ASTM D545
Heat Aging Effects (Silicone Coating)	No cracking, chalking	ASTM C 792
Joint System Operating temp range (min)	-40° F to 185° F	ASTM C 711

The adhesive shall be a two-component, 100% solid, modified epoxy meeting the requirements of ASTM C881, Type I, Grade 3, Class B & C. The adhesive shall also have the following properties:

Property	Requirement	Test method
Tensile Strength	2,500 psi (24 MPa) min.	ASTM D638
Compressive Strength	7000 psi (48 MPa) min.	ASTM D695
Bond Strength (Dry Cure)	2000 psi (28MPa) min	ASTM C882
Water Absorption	0.1% by weight	ASTM D570

The silicone band adhesive shall have the following properties:

Property	Requirement	Test Method
Movement Capability	+50/-50%	ASTM C 719
Elongation at Break	>600%	ASTM D 5893
Slump	≤=0.3"	ASTM D 2202
Hardness (Shore A) max.	20	ASTM C 661
Tack free time (max)	60 minutes	ASTM C 679
Heat Aging Effects	No cracking, chalking	ASTM C 792
Resilience	≥ 75%	ASTM D5329
Bond	0% Adhesive or Cohesive Failure after 5 cycles @100%extension	ASTM D 5329

(c) Performed Silicone Joint Seal. The preformed silicone joint seal used for this item shall conform to the following specifications:

Table 1
Physical Properties of Preformed Silicone Gland

Property	Requirement	Test Method
Rated Movement Capability	+2 ¼ inch total	N/A
Tensile Strength, psi.	1000 min	ASTM D 412
Elongation	400% min	ASTM D 412
Tear (die B)	100 ppi. min	ASTM D 624
Hardness Durometer (Shore A).	55 +/- 5 max	ASTM D 2240
Compression set at 212°F, 70 hrs	30% max	ASTM D 395
Heat Aged Properties	5pt max loss on Durometer	ASTM D 573
Tensile and Elongation % Loss	10 % max	

The color of the preformed silicone seal shall be black, made by the addition of Carbon Black fillers which increases UV resistance, tensile strength, and abrasion wear properties.

The locking adhesive shall be non-sag, high modulus silicone adhesive conforming to the following specifications:

Table 2
Physical Properties of the Silicone Locking Adhesive

Property	Requirement	Test Method
Tensile Strength, psi.	200 min	ASTM D 412
Elongation, %	450 min	ASTM D 412
Tack Free Time, minutes.	20 max.	ASTM C 679
Cure Time ¼" bead, hrs	24 max	ASTM C 679
Resistance to U.V.	No cracking, chalking,or degradation	ASTM C793
VOC (g/L)	0	ASTM D 3960

Any rips, tears, or bond failure will be cause for rejection.

The two part epoxy primer shall be supplied for application to the vertical faces of the joint opening. The supplied primer shall be equally as effective when bonded to concrete or steel. This primer shall meet the following criteria:

Table 3
Physical Properties of Preformed Silicone Joint System Primer

Property	Requirement	Test Method
Viscosity (cps)	44	ASTM D 2196
Color	Light Amber	Visual
Solids (%)	41	ASTM D 4209
Specific Gravity	0.92	ASTM D 1217
Product Flash Point (◦F, T.C.C.)	48	ASTM D 56
Package Stability	N/A	One year in tightly sealed containers
Cleaning	N/A	Mineral Spirits
VOC (g/L)	520	ASTM D 3960

(d) Preformed Inverted EPDM Joint Seal. The preformed inverted EPDM joint seal used for this item shall conform to the following specifications:

Table 1
Physical Properties of Preformed Silicone Gland

Property	Requirement	Test Method
Rated Movement Capability	Up To 5 inch total	N/A
Tensile Strength, psi.	1200 psi min	ASTM D 412
Elongation	400 % min	ASTM D 412
Tear (Die C)	150 pli. min	ASTM D 624
Durometer Content	50 +/- 5 max	ASTM D 2240
Water Resistance (70 hrs @ 100c)	10% max	ASTM D 471
Ozone Resistance	100 min	ASTM D 1171

V-Epoxy-R adhesive meets the requirements of ASTM C881 Type III, Grade 2. The adhesive shall also have the following properties:

Table 2
Physical Properties of the V-Epoxy-R

Property	Requirement	Test Method
Color	Gray	Visual
Viscosity	45,000 CP (typ.)	N/A
Gel Time (minutes)	30 min.	ASTM C 881
Shelf Life (Separate Sealed Containers)	12 Months	N/A
Resistance to U.V.	No cracking, chalking,or degradation	ASTM C793
VOC (g/L)	0	ASTM D 3960

Any rips, tears, or bond failure will be cause for rejection.

(e) Bonded Preformed Joint Seal. This joint system shall consist of preformed elastomeric seal bonded to the side walls of the joint opening using an adhesive as specified by the Manufacturer of the joint seal.

The bonded preformed joint seal shall be according to Table 1 of ASTM D2628 with the following exceptions: Compression set shall not be over 40 percent when tested according to Method B (Modified) of ASTM D 395 after 70 hours at 212 ºF (100 ºC). The Compression-Deflection requirement will not apply to the bonded preformed joint seal.

The adhesive shall be epoxy base, dual component, which resists salt, diluted acids, alkalis, solvents, greases, oils, moisture, sunlight and weathering. Temperatures up to 200 ºF (93 ºC) shall not reduce bond strength. At 68 ºF (20 ºC), the bond strength shall be a minimum of 1000 psi (6.9 MPa) within 24 hours.

Any primers or cleaning solutions used on the faces of the joint or on the profile of the sides of the bonded preformed joint seal shall be supplied by the manufacturer of the bonded preformed joint seal.

Any additional installation materials and adhesive for splicing joint sections shall be as supplied by the manufacturer of the preformed joint seal.

The Contractor shall submit the Manufacturer's material certification documentation stating that their materials meet the applicable requirements of this specification for the joint seal(s) installed.

CONSTRUCTION REQUIREMENTS

General. The Contractor shall furnish the Engineer with the manufacturer's product information and installation procedures at least two weeks prior to installation.

The minimum ambient air temperature in which the joint seal can be installed is 40° F (4.4° C) and rising, except for bonded preformed joint seals which shall not be installed when temperatures below 50 ºF (10 ºC) are predicted within a 48 hour period.

The joint surface shall be completely dry before installing the Joint Seal. For newly placed concrete, the concrete shall be fully cured and allowed to dry out a minimum of seven additional days prior to placement of the seal. Cold, wet, inclement weather will require an extended drying time.

The Joint Seal shall not be installed immediately after precipitation or if precipitation is forecasted for the day. Joint preparation and installation of Joint Seal shall be done during the same day.

Surface Preparation. Surface preparation shall be according to the joint seal manufacturer's written instructions.

After surface preparation is completed, the joint shall be cleaned of debris using compressed air with a minimum pressure of 90 psi (620 kPa). The air compressor shall be equipped with traps to prevent the inclusion of water and/or oil in the air line. The compressed air shall be according to the cleanliness requirements of ASTM D 4285.

When priming is required per the manufacturer's instruction, this operation shall immediately follow cleaning.

Joint Installation. The Joint installation shall be per the manufacturer's instructions; special attention shall be given to ensure the joint seal is properly recessed below the top of the riding surface as recommended by the manufacturer.

For bonded joint seals the seal shall be inserted into the joint and held tightly against both sides of the joint until sufficient bond strength has been developed to resist the expected expansion forces.

Opening to traffic. As these joint systems are supposed to be recessed below the top of the riding surface, there should be no restriction, based on the joint seal installation, on when these joints can be reopened to traffic.

Method of Measurement. The installed prefabricated joint seal will not be measured for payment.

Basis of Payment. The prefabricated joint seal will not be paid for separately but shall be considered included in the cost of the adjacent concrete work involved.

CROSSHOLE SONIC LOGGING TESTING OF DRILLED SHAFTS

Effective: April 20, 2016 Revised: March 24, 2023

Description. This work shall consist of furnishing and installing materials and equipment necessary to install access ducts in all drilled shafts of structures identified on the plans, and to perform Crosshole Sonic Logging (CSL) testing, analysis, and reports only on selected drilled shafts where specified and as directed by the Engineer. This work shall be according to Illinois Modified ASTM D6760. This work includes investigating anomalies identified in the CSL data and grouting of all access ducts after testing and analysis.

Materials. Materials shall be according to the following.

(a) Nonshrink Grout (Note 1) ……1024.02
(b)

Note 1. Grout shall attain a minimum strength equal to the required strength of the drilled shaft concrete at 14 days.

Qualifications. A consulting firm experienced in CSL testing shall conduct this work. The CSL consulting firm shall be a company independent from the Contractor with a minimum of 3 years of experience in performing CSL testing of drilled shafts. The individual evaluating the CSL data and preparing the report shall be an Illinois Licensed Professional Engineer and have experience on a minimum of 5 CSL testing projects.

The name, contact information, and qualifications of the CSL consulting firm, including the names and experience of the individual employees performing and analyzing the test results and preparing the report, shall be submitted to the Engineer at least 30 days prior to drilled shaft construction.

Construction. Access ducts shall be placed in all drilled shafts identified on the plans according to Illinois Modified ASTM D6760. The completed rebar cage with the required access ducts shall be lifted to prevent cage bending and damage to the access ducts and/or joints. Joints of the access ducts shall be watertight.

The Engineer will determine which drilled shafts shall have CSL testing performed after the concrete has been placed, and may direct additional tests, if necessary, due to problems encountered or observed during drilled shaft construction.

After permission is given by the Engineer, the access ducts shall be grouted. The grout shall be placed with a pump, starting at the bottom of each access duct.

Superimposed loads, either dead or live, shall not be applied to a drilled shaft until CSL testing is completed, CSL reports have been submitted, any necessary testing and repairs have been completed, access ducts have been grouted, and permission has been granted by the Engineer.

Reports. Reports shall be according to Illinois Modified ASTM D6760. Reports shall identify, label, and discuss anomalies, potential flaws, or defects. If none are identified, that shall be stated in the report. An anomalous zone shall be defined as an area where the First Arrival Time (FAT) increase exceeds 20 percent of the local average FAT value of the shaft concrete at the time of testing. Reports shall discuss recommendations for additional investigation or testing of anomalous zones identified. Reports shall give an overall assessment of the constructed shaft quality based on the data and information analyzed. Reports shall be submitted to the Bureau of Bridges and Structures, or the local agency owner, for review and acceptance.

Anomalies. If anomalies are identified, they shall be investigated by coring or other methods approved by the Engineer. If coring is to be performed, the Engineer will determine the location of the core(s).

Remediation of Drilled Shaft Defects. When the Engineer determines a defect is present, the Engineer will direct the Contractor to repair the defect. The Contractor shall submit a plan to repair the defect to the Engineer for approval. No compensation will be made for remedial work, or losses, or damage, due to remedial work of drilled shafts found defective or not in accordance with the drilled shaft specifications or plans. Modifications to the structure shall be designed, detailed, and sealed by an Illinois Licensed Structural Engineer.

Method of Measurement. Installation and grouting of access ducts will be measured for payment by the linear foot of drilled shafts with access ducts. Each individual access duct will not be measured for payment.

CSL testing, analysis, and reporting will be measured for payment by each drilled shaft foundation tested.

Investigation of anomalies will not be measured for payment.

Basis of Payment. Installation and grouting of access ducts will be paid for at the contract unit price per foot for CROSSHOLE SONIC LOGGING ACCESS DUCTS. CSL testing, analysis, and reporting will be paid for at the contract unit price per each for CROSSHOLE SONIC LOGGING TESTING.

ILLINOIS MODIFIED ASTM D6760
Effective Date: April 20, 2016
Revised Date: August 4, 2023

Standard Test Method for
Integrity Testing of Concrete Deep Foundations by Ultrasonic Crosshole Testing
Reference ASTM D6760-16

<table>
<tr><th>ASTM SECTION</th><th>Illinois Modification</th></tr>
<tr><td>1.7</td><td>Revise this section as follows:
Units—The values stated in either English units or SI units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in nonconformance with the standard. Reporting of test results in units other than English shall not be regarded as nonconformance with this standard.</td></tr>
<tr><td>3.1.1</td><td>Revise this section as follows:
access ducts, n – preformed steel tubes or drilled boreholes, placed in the concrete to allow probe entry in pairs to measure pulse transmission in the concrete between the probes.</td></tr>
<tr><td>5.2.1</td><td>Revise the first sentence of this section as follows:
For crosshole tests, the access ducts shall be made of steel to prevent debonding of the access duct from the concrete resulting in an anomaly.</td></tr>
<tr><td>5.2.2</td><td>Delete this section.</td></tr>
<tr><td>6.1</td><td>Revise the second sentence of this section as follows:
The access ducts shall be mild steel with internal diameter of 38 mm (1.5 in.).
Delete the third, fourth, and fifth sentences of this section.</td></tr>
<tr><td>7.1.1</td><td>Revise this section as follows:
The access ducts shall be installed during construction of the drilled shaft.
For drilled shafts foundations, access ducts shall be provided according to the following table.
<table>
<tr><th>Reinforcing Cage Diameter (feet)</th><th>Number of Access Ducts</th></tr>
<tr><td>≤ 5.0</td><td>4</td></tr>
<tr><td>5.1 to 7.0</td><td>6</td></tr>
<tr><td>> 7.0</td><td>8</td></tr>
</table>
Access ducts shall be spread equally around the perimeter and spaced at an equal distance from the axis.

Delete Fig. 4. In Section 7.1.1.</td></tr>
</table>

ILLINOIS MODIFIED ASTM D6760
Effective Date: April 20, 2016
Revised Date: August 4, 2023

Standard Test Method for
Integrity Testing of Concrete Deep Foundations by Ultrasonic Crosshole Testing
Reference ASTM D6760-16

7.1.2	Revise the second sentence of this section as follows: The exterior duct surface shall be free from contamination (for example, oil, dirt, loose rust, mill scale, etc.) to ensure a good bond between the duct surface and the surrounding concrete.
7.1.3	Delete the third sentence of this section.
7.2	Revise the first sentence of this section as follows: The access ducts shall be installed such that the bottom of the access ducts are at the bottom of the concrete deep foundation element so that the bottom of the drilled shaft can be tested. Revise the sixth sentence of this section as follows: Access ducts shall be filled with water prior to concrete placement to assure good bonding of the concrete to the duct after the concrete cools. The access ducts shall be kept full of water until the ducts are grouted.
7.3	Revise the first sentence of this section as follows: In cases where drilled shafts to be tested have access ducts that do not permit passage of the probes, do not retain water, are not plumb, are debonded from the concrete, or cannot be used for testing for other reasons, drilled boreholes shall be used to provide probe access.
7.4.2	Revise the second sentence of this section as follows: The tests shall be performed no later than 21 days after concrete casting.
7.6	Delete this section.
7.8.1	Revise the first sentence of this section as follows: If the ultrasonic profile indicates an anomaly, then the suspect anomaly zone shall be further investigated by special test procedures such as fan shaped tests, tests with the probes raised at a fixed offset distance, or other tomographical techniques.
7.8.2	Delete Note 4 of this section.
8.1.1 (New Section)	Add as follows: Test data and results shall be reported in US Customary units.

BAR SPLICERS, HEADED REINFORCEMENT

Effective: September 2, 2022
Revised: October 27, 2023

Add the following to Article 508.08(b):

When bar splicers are epoxy-coated, all damaged or uncoated areas near the threaded ends shall be coated with a two-part epoxy according to ASTM D 3963 (D 3963M). All threaded ends of Stage II construction threaded splicer bars shall be coated according to ASTM D 3963 or dipped in an epoxy-mastic primer prior to joining the Stage II construction threaded splicer bar to the threaded coupler.

Add the following Article 508.02 (d)

Bar Terminators ……1006.10(a)(1)h

Add the following paragraph after Article 508.08 (c):

Bar terminators are threaded, headed attachments to reinforcement to form headed reinforcement. When specified on the plans, a bar terminator shall be attached to the designated reinforcement for development.

Add the following 4th paragraph to Article 508.11:

Bar Terminators will be paid for at the contract unit price per each for BAR TERMINATORS.

Add the following to Article 1006.10(a)(1)g:

For bar splicers with welded connections between the threaded coupler and threaded rod, the Stage I construction threaded splicer bar shall be welded to the threaded coupler using an all-around fillet weld.

Add the following Article 1006.10(a)(1)h:

Bar Terminators. Designated bars shall use a bar terminator to form headed reinforcement. Headed reinforcement shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706, except the connection strength of the bar terminator to the reinforcement bar shall meet, in tension, at least 125 percent of the specified yield strength of the reinforcement bar. The bar terminator shall be on the Department's qualified product list.

When the reinforcement bar to receive the bar terminator is epoxy coated, the bar terminator shall also be epoxy coated according to ASTM A 775 (A 775M)

ACCESSIBLE PEDESTRIAN SIGNALS (APS) (BDE)

Effective: April 1, 2003 Revised: January 1, 2022

Description. This work shall consist of furnishing and installing accessible pedestrian signals (APS). Each APS shall consist of an interactive vibrotactile pedestrian pushbutton with speaker, an informational sign, a light emitting diode (LED) indicator light, a solid-state electronic control board, a power supply, wiring, and mounting hardware. The APS shall meet the requirements of the MUTCD and Sections 801 and 888 of the Standard Specifications, except as modified herein.

Electrical Requirements. The APS shall operate with systems providing 95 to 130 VAC, 60 Hz and throughout an ambient air temperature range of -29 to +160 °F (-34 to +70 °C).

The APS shall contain a power protection circuit consisting of both fuse and transient protection.

Audible Indications. A pushbutton locator tone shall sound at each pushbutton and shall be deactivated during the associated walk indication and when associated traffic signals are in flashing mode. Pushbutton locator tones shall have a duration of 0.15 seconds or less and shall repeat at 1-second intervals. Each actuation of the pushbutton shall be accompanied by the speech message "Wait".

If two accessible pedestrian pushbuttons are placed less than 10 ft (3 m) apart or placed on the same pole, the audible walk indication shall be a speech walk message. This message shall sound throughout the WALK interval only. The verbal message shall be modeled after: "'Street Name.' Walk Sign is on to cross "Street Name'." For signalized intersections utilizing exclusive pedestrian phasing, the verbal message shall be "Walk sign is on for all crossings". In addition, a speech pushbutton information message shall be provided by actuating the APS pushbutton when the WALK interval is not timing. This verbal message shall be modeled after: "Wait. Wait to cross 'Street Name' at 'Street Name'".

Where two accessible pedestrian pushbuttons are separated by at least 10 ft (3 m), the walk indication shall be an audible percussive tone. It shall repeat at 8 to 10 ticks per second with a dominant frequency of 880 Hz.

Automatic volume adjustments in response to ambient traffic sound level shall be provided up to a maximum volume of 100 dBA. Locator tone and verbal messages shall be no more than 5 dB louder than ambient sound.

At locations with railroad interconnection, an additional speech message stating "Walk time shortened when train approaches" shall be used after the speech walk message. At locations with emergency vehicle preemption, an additional speech message "Walk time shortened when emergency vehicle approaches" shall be used after the speech walk message.

Pedestrian Pushbutton. Pedestrian pushbuttons shall be at least 2 in. (50 mm) in diameter or width. The force required to activate the pushbutton shall be no greater than 3.5 lb (15.5 N).

A red LED shall be located on or near the pushbutton which, when activated, acknowledges the pedestrians request to cross the street.

Signage. A sign shall be located immediately above the pedestrian pushbutton and parallel to

the crosswalk controlled by the pushbutton. The sign shall conform to one of the following standard MUTCD designs: R10-3, R10-3a, R10-3e, R10-3i, R10-4, and R10-4a.

Tactile Arrow. A tactile arrow, pointing in the direction of travel controlled by a pushbutton, shall be provided on the pushbutton.

Vibrotactile Feature. The pushbutton shall pulse when depressed and shall vibrate continuously throughout the WALK interval.

Method of Measurement. This work will be measured for payment as each, per pushbutton.

Basis of Payment. This work will be paid for at the contract unit price per each for ACCESSIBLE PEDESTRIAN SIGNALS.

AGGREGATE SUBGRADE IMPROVEMENT (BDE)

Effective: April 1, 2012 Revised: April 1, 2022

Add the following Section to the Standard Specifications:

"**SECTION 303. AGGREGATE SUBGRADE IMPROVEMENT**

303.01 Description. This work shall consist of constructing an aggregate subgrade improvement (ASI).

303.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Coarse Aggregate	1004.07
(b) Reclaimed Asphalt Pavement (RAP)	1031.09

303.03 Equipment. The vibratory roller shall be according to Article 1101.01, or as approved by the Engineer. Vibratory machines, such as tampers, shall be used in areas where rollers do not fit.

303.04 Soil Preparation. The minimum immediate bearing value (IBV) of the soil below the improved subgrade shall be according to the Department's "Subgrade Stability Manual" for the aggregate thickness specified.

303.05 Placing and Compacting. The maximum nominal lift thickness of aggregate gradations CA 2, CA 6, and CA 10 when compacted shall be 9 in. (225 mm). The maximum nominal lift thickness of aggregate gradations CS 1, CS 2, and RR 1 when compacted shall be 24 in. (600 mm).

The top surface of the aggregate subgrade improvement shall consist of a layer of capping aggregate gradations CA 6 or CA 10 that is 3 in. (75 mm) thick after compaction. Capping aggregate will not be required when aggregate subgrade improvement is used as a cubic yard pay item for undercut applications.

Each lift of aggregate shall be compacted to the satisfaction of the Engineer. If the moisture content of the material is such that compaction cannot be obtained, sufficient water shall be added so that satisfactory compaction can be obtained.

303.06 Finishing and Maintenance. The aggregate subgrade improvement shall be finished to the lines, grades, and cross sections shown on the plans, or as directed by the Engineer. The aggregate subgrade improvement shall be maintained in a smooth and compacted condition.

303.07 Method of Measurement. This work will be measured for payment according to Article 311.08.

303.08 Basis of Payment. This work will be paid for at the contract unit price per cubic yard (cubic meter) or ton (metric ton) for AGGREGATE SUBGRADE IMPROVEMENT or at the contract unit price per square yard (square meter) for AGGREGATE SUBGRADE IMPROVEMENT, of the thickness specified."

Add the following to Section 1004 of the Standard Specifications:

"**1004.07 Coarse Aggregate for Aggregate Subgrade Improvement (ASI).** The aggregate shall be according to Article 1004.01 and the following.

(a) Description. The coarse aggregate shall be crushed gravel, crushed stone, or crushed concrete. In applications where greater than 24 in. (600 mm) of ASI material is required, gravel may be used below the top 12 in (300 mm) of ASI.

(b) Quality. The coarse aggregate shall consist of sound durable particles reasonably free of deleterious materials.

(c) Gradation.

(1) The coarse aggregate gradation for total ASI thickness less than or equal to 12 in. (300 mm) shall be CA 2, CA 6, CA 10, or CS 1.

The coarse aggregate gradation for total ASI thickness greater than 12 in. (300 mm) shall be CS 1 or CS 2 as shown below or RR 1 according to Article 1005.01(c).

	COARSE AGGREGATE SUBGRADE GRADATIONS				
Grad No.	Sieve Size and Percent Passing				
	8"	6"	4"	2"	#4
CS 1	100	97 ± 3	90 ± 10	45 ± 25	20 ± 20
CS 2		100	80 ± 10	25 ± 15	

	COARSE AGGREGATE SUBGRADE GRADATIONS (Metric)				
Grad No.	Sieve Size and Percent Passing				
	200 mm	150 mm	100 mm	50 mm	4.75 mm
CS 1	100	97 ± 3	90 ± 10	45 ± 25	20 ± 20
CS 2		100	80 ± 10	25 ± 15	

(2) Capping aggregate shall be gradation CA 6 or CA 10."

Add the following to Article 1031.09 of the Standard Specifications:

"(b) RAP in Aggregate Subgrade Improvement (ASI). RAP in ASI shall be according to Articles 1031.01(a), 1031.02(a), 1031.06(a)(1), and 1031.06(a)(2), and the following.

(1) The testing requirements of Article 1031.03 shall not apply.

(2) Crushed RAP used for the lower lift may be mechanically blended with aggregate gradations CS 1, CS 2, and RR 1 but it shall be no greater than 40 percent of the total product volume. RAP agglomerations shall be no greater than 4 in. (100 mm).

(3) For capping aggregate, well graded RAP having 100 percent passing the 1 1/2 in. (38 mm) sieve may be used when aggregate gradations CS 1, CS 2, CA 2, or RR 1 are used in the lower lift. FRAP will not be permitted as capping material.

Blending shall be through calibrated interlocked feeders or a calibrated blending plant such that the prescribed blending percentage is maintained throughout the blending process. The calibration shall have an accuracy of ± 2.0 percent of the actual quantity of material delivered."

BITUMINOUS MATERIALS COST ADJUSTMENTS (BDE)

Effective: November 2, 2006 Revised: August 1, 2017

Description. Bituminous material cost adjustments will be made to provide additional compensation to the Contractor, or credit to the Department, for fluctuations in the cost of bituminous materials when optioned by the Contractor. The bidder shall indicate with their bid whether or not this special provision will be part of the contract.

The adjustments shall apply to permanent and temporary hot-mix asphalt (HMA) mixtures, bituminous surface treatments (cover and seal coats), and preventative maintenance type surface treatments that are part of the original proposed construction, or added as extra work and paid for by agreed unit prices. The adjustments shall not apply to bituminous prime coats, tack coats, crack filling/sealing, joint filling/sealing, or extra work paid for at a lump sum price or by force account.

Method of Adjustment. Bituminous materials cost adjustments will be computed as follows.

$CA = (BPI_P - BPI_L) \times (\%AC_V / 100) \times Q$

Where: CA = Cost Adjustment, $.
BPI_P = Bituminous Price Index, as published by the Department for the month the work is performed, $/ton ($/metric ton).
BPI_L = Bituminous Price Index, as published by the Department 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, $/ton ($/metric ton).

$\%AC_V$ = Percent of virgin Asphalt Cement in the Quantity being adjusted. For HMA mixtures, the $\% AC_V$ will be determined from the adjusted job mix formula. For bituminous materials applied, a performance graded or cutback asphalt will be considered to be 100% AC_V and undiluted emulsified asphalt will be considered to be 65% AC_V.

Q = Authorized construction Quantity, tons (metric tons) (see below).

For HMA mixtures measured in square yards: Q, tons = A x D x (G_{mb} x 46.8) / 2000. For HMA mixtures measured in square meters: Q, metric tons = A x D x (G_{mb} x 1) / 1000. When computing adjustments for full-depth HMA pavement, separate calculations will be made for the binder and surface courses to account for their different G_{mb} and $\% AC_V$.

For bituminous materials measured in gallons: Q, tons = V x 8.33 lb/gal x SG / 2000
For bituminous materials measured in liters: Q, metric tons = V x 1.0 kg/L x SG / 1000

Where: A = Area of the HMA mixture, sq yd (sq m).
D = Depth of the HMA mixture, in. (mm).
G_{mb} = Average bulk specific gravity of the mixture, from the approved mix design.
V = Volume of the bituminous material, gal (L).
SG = Specific Gravity of bituminous material as shown on the bill of lading.

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

Percent Difference = $\{(BPI_L - BPI_P) \div BPI_L\} \times 100$

Bituminous materials cost adjustments will be calculated for each calendar month in which applicable bituminous material is placed; and will be paid or deducted when all other contract requirements for the work placed during the month are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire 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."

CONCRETE SEALER (BDE)

Effective: November 1, 2023

Replace Section 1026 of the Standard Specifications with the following:

"**SECTION 1026. CONCRETE SEALER**

1026.01 General. Sealer types shall be according to the listing in AASHTO M 224. All concrete sealer types shall meet the sealer requirements of AASHTO M 224 when tested in accordance with AASHTO T 384. The sealer shall be listed on the Department's qualified product list.

The sealer shall have a clear or amber color when dry.

The Department will perform the sealer characterization properties of ATR-FTIR spectra, total solids, and specific gravity in accordance with AASHTO M 224."

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 **__3.00____%** 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.

FUEL COST ADJUSTMENT (BDE)

Effective: April 1, 2009 Revised: August 1, 2017

Description. Fuel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in fuel 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 category of work will make that category of work exempt from fuel cost adjustment.

General. The fuel cost adjustment shall apply to contract pay items as grouped by category. The adjustment shall only apply to those categories of work checked "Yes", and only when the cumulative plan quantities for a category exceed the required threshold. Adjustments to work items in a category, either up or down, and extra work paid for by agreed unit price will be subject to fuel cost adjustment only when the category representing the added work was subject to the fuel cost adjustment. Extra work paid for at a lump sum price or by force account will not be subject to fuel cost adjustment. Category descriptions and thresholds for application and the fuel usage factors which are applicable to each are as follows:

(a) Categories of Work.

(1) Category A: Earthwork. Contract pay items performed under Sections 202, 204, and 206 including any modified standard or nonstandard items where the character of the work to be performed is considered earthwork. The cumulative total of all applicable item plan quantities shall exceed 25,000 cu yd (20,000 cu m). Included in the fuel usage factor is a weighted average 0.10 gal/cu yd (0.50 liters/cu m) factor for trucking.

(2) Category B: Subbases and Aggregate Base Courses. Contract pay items constructed under Sections 311, 312 and 351 including any modified standard or nonstandard items where the character of the work to be performed is considered construction of a subbase or aggregate, stabilized or modified base course. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is a 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.

(3) Category C: Hot-Mix Asphalt (HMA) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 355, 406, 407 and 482 including any modified standard or nonstandard items where the character of the work to be performed is considered HMA bases, pavements and shoulders. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.

(4) Category D: Portland Cement Concrete (PCC) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 353, 420, 421 and 483 including any modified standard or nonstandard items where the character of the work to be performed is considered PCC base, pavement or shoulder. The cumulative total of all applicable item plan quantities shall exceed 7500 sq yd (6000 sq m). Included in the fuel usage factor is 1.20 gal/cu yd (5.94 liters/cu m) factor for trucking.

(5) Category E: Structures. Structure items having a cumulative bid price that exceeds $250,000 for pay items constructed under Sections 502, 503, 504, 505, 512, 516 and 540 including any modified standard or nonstandard items where the character of the work to be performed is considered structure work when similar to that performed under these sections and not included in categories A through D.

(b) Fuel Usage Factors.

English Units

Category	Factor	Units
A - Earthwork	0.34	gal / cu yd
B – Subbase and Aggregate Base courses	0.62	gal / ton
C – HMA Bases, Pavements and Shoulders	1.05	gal / ton
D – PCC Bases, Pavements and Shoulders	2.53	gal / cu yd
E – Structures	8.00	gal / $1000

Metric Units

Category	Factor	Units
A - Earthwork	1.68	liters / cu m
B – Subbase and Aggregate Base courses	2.58	liters / metric ton
C – HMA Bases, Pavements and Shoulders	4.37	liters / metric ton
D – PCC Bases, Pavements and Shoulders	12.52	liters / cu m
E – Structures	30.28	liters / $1000

(c) Quantity Conversion Factors.

Category	Conversion	Factor
B	sq yd to ton	0.057 ton / sq yd / in depth
	sq m to metric ton	0.00243 metric ton / sq m / mm depth
C	sq yd to ton	0.056 ton / sq yd / in depth
	sq m to metric ton	0.00239 m ton / sq m / mm depth
D	sq yd to cu yd	0.028 cu yd / sq yd / in depth
	sq m to cu m	0.001 cu m / sq m / mm depth

Method of Adjustment. Fuel cost adjustments will be computed as follows.

$CA = (FPI_P - FPI_L) \times FUF \times Q$

Where: CA = Cost Adjustment, $
FPI_P = Fuel Price Index, as published by the Department for the month the work is

performed, $/gal ($/liter)

FPI_L = Fuel Price Index, as published by the Department 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, $/gal ($/liter)

FUF = Fuel Usage Factor in the pay item(s) being adjusted

Q = Authorized construction Quantity, tons (metric tons) or cu yd (cu m)

The entire FUF indicated in paragraph (b) will be used regardless of use of trucking to perform the work.

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

Percent Difference = $\{(FPI_L - FPI_P) \div FPI_L\} \times 100$

Fuel cost adjustments will be calculated for each calendar month in which applicable work is performed; and will be paid or deducted when all other contract requirements for the items of work are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

HOT-MIX ASPHALT (BDE)

Effective: January 1, 2024 Revised: January 1, 2025

Revise the first and second paragraphs of Articles 1030.06(c)(2) of the Standard Specifications to read:

"(2) Personnel. The Contractor shall provide a QC Manager who shall have overall responsibility and authority for quality control. This individual shall maintain active certification as a Hot-Mix Asphalt Level II technician.

In addition to the QC Manager, the Contractor shall provide sufficient personnel to perform the required visual inspections, sampling, testing, and documentation in a timely manner. Mix designs shall be developed by personnel with an active certification as a Hot-Mix Asphalt Level III technician. Technicians performing mix design testing and plant sampling/testing shall maintain active certification as a Hot-Mix Asphalt Level I technician. The Contractor may provide a technician trainee who has successfully completed the Department's "Hot-Mix Asphalt Trainee Course" to assist in the activities completed by a Hot-Mix Asphalt Level I technician for a period of one year after the course completion date. The Contractor may also provide a Gradation Technician who has successfully completed the Department's "Gradation Technician Course" to run gradation tests only under the supervision of a Hot-Mix Asphalt Level II Technician. The Contractor shall provide a Hot-Mix Asphalt Density Tester who has successfully completed the Department's "Nuclear Density Testing" course to run all nuclear density tests on the job site."

Revise the second paragraph of Articles 1030.07(a)(11) and 1030.08(a)(9) of the Standard

Specifications to read:

"When establishing the target density, the HMA maximum theoretical specific gravity (G_{mm}) will be based on the running average of four available Department test results for that project. If less than four G_{mm} test results are available, an average of all available Department test results for that project will be used. The initial G_{mm} will be the last available Department test result from a QMP project. If there is no available Department test result from a QMP project, the Department mix design verification test result will be used as the initial G_{mm}."

Revise Article 1030.09(g)(2) of the Standard Specifications to read:

"(2) The Contractor shall complete split verification sample tests listed in the Limits of Precision table in Article 1030.09(h)(1)."

In the Supplemental Specifications, replace the revision for the end of the third paragraph of Article 1030.09(h)(2) with the following:

"When establishing the target density, the HMA maximum theoretical specific gravity (G_{mm}) will be the Department mix design verification test result."

Revise the tenth paragraph of Article 1030.10 of the Standard Specifications to read:

"Production is not required to stop after a test strip has been constructed."

PERFORMANCE GRADED ASPHALT BINDER (BDE)

Effective: January 1, 2023

Revise Article 1032.05 of the Standard Specifications to read:

"**1032.05 Performance Graded Asphalt Binder.** These materials will be accepted according to the Bureau of Materials Policy Memorandum, "Performance Graded Asphalt Binder Qualification Procedure." The Department will maintain a qualified producer list. These materials shall be free from water and shall not foam when heated to any temperature below the actual flash point. Air blown asphalt, recycle engine oil bottoms (ReOB), and polyphosphoric acid (PPA) modification shall not be used.

When requested, producers shall provide the Engineer with viscosity/temperature relationships for the performance graded asphalt binders delivered and incorporated in the work.

(a) Performance Graded (PG) Asphalt Binder. The asphalt binder shall meet the requirements of AASHTO M 320, Table 1 "Standard Specification for Performance Graded Asphalt Binder" for the grade shown on the plans and the following.

Test	Parameter
Small Strain Parameter (AASHTO PP 113) BBR, ΔTc, 40 hrs PAV (40 hrs continuous or 2 PAV at 20 hrs)	-5 °C min.

(b) Modified Performance Graded (PG) Asphalt Binder. The asphalt binder shall meet the requirements of AASHTO M 320, Table 1 “Standard Specification for Performance Graded Asphalt Binder” for the grade shown on the plans.

Asphalt binder modification shall be performed at the source, as defined in the Bureau of Materials Policy Memorandum, “Performance Graded Asphalt Binder Qualification Procedure.”

Modified asphalt binder shall be safe to handle at asphalt binder production and storage temperatures or HMA construction temperatures. Safety Data Sheets (SDS) shall be provided for all asphalt modifiers.

(1) Polymer Modification (SB/SBS or SBR). Elastomers shall be added to the base asphalt binder to achieve the specified performance grade and shall be either a styrene-butadiene diblock, triblock copolymer without oil extension, or a styrene-butadiene rubber. The polymer modified asphalt binder shall be smooth, homogeneous, and be according to the requirements shown in Table 1 or 2 for the grade shown on the plans.

Table 1 - Requirements for Styrene-Butadiene Copolymer (SB/SBS) Modified Asphalt Binders		
Test	Asphalt Grade SB/SBS PG 64-28 SB/SBS PG 70-22	Asphalt Grade SB/SBS PG 64-34 SB/SBS PG 70-28 SB/SBS PG 76-22 SB/SBS PG 76-28
Separation of Polymer ITP, "Separation of Polymer from Asphalt Binder" Difference in °F (°C) of the softening point between top and bottom portions	4 (2) max.	4 (2) max.
TESTS ON RESIDUE FROM ROLLING THIN FILM OVEN TEST (AASHTO T 240)		
Elastic Recovery ASTM D 6084, Procedure A, 77 °F (25 °C), 100 mm elongation, %	60 min.	70 min.

Table 2 - Requirements for Styrene-Butadiene Rubber (SBR) Modified Asphalt Binders		
Test	Asphalt Grade SBR PG 64-28 SBR PG 70-22	Asphalt Grade SB/SBS PG 64-34 SB/SBS PG 70-28 SBR PG 76-22 SBR PG 76-28
Separation of Polymer ITP, "Separation of Polymer from Asphalt Binder" Difference in °F (°C) of the softening point between top and bottom portions	4 (2) max.	4 (2) max.
Toughness ASTM D 5801, 77 °F (25 °C), 20 in./min. (500 mm/min.), in.-lbs (N-m)	110 (12.5) min.	110 (12.5) min.
Tenacity ASTM D 5801, 77 °F (25 °C), 20 in./min. (500 mm/min.), in.-lbs (N-m)	75 (8.5) min.	75 (8.5) min.
TESTS ON RESIDUE FROM ROLLING THIN FILM OVEN TEST (AASHTO T 240)		
Elastic Recovery ASTM D 6084, Procedure A, 77 °F (25 °C), 100 mm elongation, %	40 min.	50 min.

(2) Ground Tire Rubber (GTR) Modification. GTR modification is the addition of recycled ground tire rubber to liquid asphalt binder to achieve the specified performance grade. GTR shall be produced from processing automobile and/or truck tires by the ambient grinding method or micronizing through a cryogenic process. GTR shall not exceed 1/16 in. (2 mm) in any dimension and shall not contain free metal particles, moisture that would cause foaming of the asphalt, or other foreign materials. A mineral powder (such as talc) meeting the requirements of AASHTO M 17 may be added, up to a maximum of four percent by weight of GTR to reduce sticking and caking of the GTR particles. When tested in accordance with Illinois Modified AASHTO T 27 “Standard Method of Test for Sieve Analysis of Fine and Coarse Aggregates” or AASHTO PP 74 “Standard Practice for Determination of Size and Shape of Glass Beads Used in Traffic Markings by Means of Computerized Optical Method”, a 50 g sample of the GTR shall conform to the following gradation requirements.

Sieve Size	Percent Passing
No. 16 (1.18 mm)	100
No. 30 (600 µm)	95 ± 5
No. 50 (300 µm)	> 20

GTR modified asphalt binder shall be tested for rotational viscosity according to AASHTO T 316 using spindle S27. GTR modified asphalt binder shall be tested for original dynamic shear and RTFO dynamic shear according to AASHTO T 315 using a gap of 2 mm.

The GTR modified asphalt binder shall meet the requirements of Table 3.

Table 3 - Requirements for Ground Tire Rubber (GTR) Modified Asphalt Binders		
Test	Asphalt Grade GTR PG 64-28 GTR PG 70-22	Asphalt Grade GTR PG 76-22 GTR PG 76-28 GTR PG 70-28
TESTS ON RESIDUE FROM ROLLING THIN FILM OVEN TEST (AASHTO T 240)		
Elastic Recovery ASTM D 6084, Procedure A, 77 °F (25 °C), 100 mm elongation, %	60 min.	70 min.

(3) Softener Modification (SM). Softener modification is the addition of organic compounds, such as engineered flux, bio-oil blends, modified vegetable oils, glycol amines, and fatty acid derivatives, to the base asphalt binder to achieve the specified performance grade. Softeners shall be dissolved, dispersed, or reacted in the asphalt binder to enhance its performance and shall remain compatible with the asphalt binder with no separation. Softeners shall not be added to modified PG asphalt binder as defined in Articles 1032.05(b)(1) or 1032.05(b)(2).

An Attenuated Total Reflectance-Fourier Transform Infrared spectrum (ATR-FTIR) shall be collected for both the softening compound as well as the softener modified asphalt binder at the dose intended for qualification. The ATR-FTIR spectra shall be collected on unaged softener modified binder, 20-hour Pressurized Aging Vessel (PAV) aged softener modified binder, and 40-hour PAV aged softener modified binder. The ATR-FTIR shall be collected in accordance with Illinois Test Procedure 601. The electronic files spectral files (in one of the following extensions or equivalent: *.SPA, *.SPG, *.IRD, *.IFG, *.CSV, *.SP, *.IRS, *.GAML, *.[0-9], *.IGM, *.ABS, *.DRT, *.SBM, *.RAS) shall be submitted to the Central Bureau of Materials.

Softener modified asphalt binders shall meet the requirements in Table 4.

Table 4 - Requirements for Softener Modified Asphalt Binders	
Test	Asphalt Grade SM PG 46-28 SM PG 46-34 SM PG 52-28 SM PG 52-34 SM PG 58-22 SM PG 58-28 SM PG 64-22
Small Strain Parameter (AASHTO PP 113) BBR, ΔTc, 40 hrs PAV (40 hrs continuous or 2 PAV at 20 hrs)	-5°C min.
Large Strain Parameter (Illinois Modified AASHTO T 391) DSR/LAS Fatigue Property, Δ|G*|peak τ, 40 hrs PAV (40 hrs continuous or 2 PAV at 20 hrs)	≥ 54 %

The following grades may be specified as tack coats.

Asphalt Grade	Use
PG 58-22, PG 58-28, PG 64-22	Tack Coat"

Revise Article 1031.06(c)(1) and 1031.06(c)(2) of the Standard Specifications to read:

"(1) RAP/RAS. When RAP is used alone or RAP is used in conjunction with RAS, the percentage of virgin ABR shall not exceed the amounts listed in the following table.

HMA Mixtures - RAP/RAS Maximum ABR % 1/ 2/			
Ndesign	Binder	Surface	Polymer Modified Binder or Surface 3/
30	30	30	10
50	25	15	10
70	15	10	10
90	10	10	10

1/ For Low ESAL HMA shoulder and stabilized subbase, the RAP/RAS ABR shall not exceed 50 percent of the mixture.

2/ When RAP/RAS ABR exceeds 20 percent, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28).

3/ The maximum ABR percentages for ground tire rubber (GTR) modified mixes shall be equivalent to the percentages specified for SBS/SBR polymer modified mixes.

(2) FRAP/RAS. When FRAP is used alone or FRAP is used in conjunction with RAS, the percentage of virgin asphalt binder replacement shall not exceed the amounts listed in the following table.

HMA Mixtures - FRAP/RAS Maximum ABR % 1/ 2/			
Ndesign	Binder	Surface	Polymer Modified Binder or Surface 3/
30	55	45	15
50	45	40	15
70	45	35	15
90	45	35	15
SMA	- -	- -	25
IL-4.75	- -	- -	35

1/ For Low ESAL HMA shoulder and stabilized subbase, the FRAP/RAS ABR shall not exceed 50 percent of the mixture.

2/ When FRAP/RAS ABR exceeds 20 percent for all mixes, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28).

3/ The maximum ABR percentages for GTR modified mixes shall be equivalent to the percentages specified for SBS/SBR polymer modified mixes."

Add the following to the end of Note 2 of Article 1030.03 of the Standard Specifications.

"A dedicated storage tank for the ground tire rubber (GTR) modified asphalt binder shall be provided. This tank shall be capable of providing continuous mechanical mixing throughout and/or recirculation of the asphalt binder to provide a uniform mixture. The tank shall be heated and capable of maintaining the temperature of the asphalt binder at 300 °F to 350 °F (149 °C to 177 °C). The asphalt binder metering systems of dryer drum plants shall be calibrated with the actual GTR modified asphalt binder material with an accuracy of ±0.40 percent."

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."

SEEDING (BDE)

Effective: November 1, 2022

Revise Article 250.07 of the Standard Specifications to read:

"**250.07 Seeding Mixtures.** The classes of seeding mixtures and combinations of mixtures will be designated in the plans.

When an area is to be seeded with two or more seeding classes, those mixtures shall be applied separately on the designated area within a seven day period. Seeding shall occur prior to placement of mulch cover. A Class 7 mixture can be applied at any time prior to applying any seeding class or added to them and applied at the same time.

TABLE 1 - SEEDING MIXTURES			
Class - Type		Seeds	lb/acre (kg/hectare)
1	Lawn Mixture 1/	Kentucky Bluegrass	100 (110)
		Perennial Ryegrass	60 (70)
		Festuca rubra ssp. r*ubra* (Creeping Red Fescue)	40 (50)
1A	Salt Tolerant	Kentucky Bluegrass	60 (70)
	Lawn Mixture 1/	Perennial Ryegrass	20 (20)
		Festuca rubra ssp. *rubra* (Creeping Red Fescue)	20 (20)
		Festuca brevipilla (Hard Fescue)	20 (20)
		Puccinellia distans (Fults Saltgrass or Salty Alkaligrass)	60 (70)
1B	Low Maintenance	Turf-Type Fine Fescue 3/	150 (170)
	Lawn Mixture 1/	Perennial Ryegrass	20 (20)
		Red Top	10 (10)
		Festuca rubra ssp. *rubra* (Creeping Red Fescue)	20 (20)
2	Roadside Mixture 1/	*Lolium arundinaceum* (Tall Fescue)	100 (110)
		Perennial Ryegrass	50 (55)
		Festuca rubra ssp. r*ubra* (Creeping Red Fescue)	40 (50)
		Red Top	10 (10)
2A	Salt Tolerant	*Lolium arundinaceum* (Tall Fescue)	60 (70)
	Roadside Mixture 1/	Perennial Ryegrass	20 (20)
		Festuca rubra ssp. *rubra* (Creeping Red Fescue)	30 (20)
		Festuca brevipila (Hard Fescue)	30 (20)
		Puccinellia distans (Fults Saltgrass or Salty Alkaligrass)	60 (70)
3	Northern Illinois	*Elymus canadensis*	5 (5)
	Slope Mixture 1/	(Canada Wild Rye) 5/	
		Perennial Ryegrass	20 (20)
		Alsike Clover 4/	5 (5)
		Desmanthus illinoensis	2 (2)
		(Illinois Bundleflower) 4/ 5/	
		Schizachyrium scoparium	12 (12)
		(Little Bluestem) 5/	
		Bouteloua curtipendula	10 (10)
		(Side-Oats Grama) 5/	
		Puccinellia distans (Fults Saltgrass or Salty Alkaligrass)	30 (35)
		Oats, Spring	50 (55)
		Slender Wheat Grass 5/	15 (15)
		Buffalo Grass 5/ 7/	5 (5)
3A	Southern Illinois	Perennial Ryegrass	20 (20)
	Slope Mixture 1/	*Elymus canadensis*	20 (20)
		(Canada Wild Rye) 5/	
		Panicum virgatum (Switchgrass) 5/	10 (10)
		Schizachyrium scoparium	12 (12)
		(Little Blue Stem) 5/	
		Bouteloua curtipendula	10 (10)
		(Side-Oats Grama) 5/	
		Dalea candida	5 (5)
		(White Prairie Clover) 4/ 5/	
		Rudbeckia hirta (Black-Eyed Susan) 5/	5 (5)
		Oats, Spring	50 (55)

Class – Type		Seeds	lb/acre (kg/hectare)
4	Native Grass 2/ 6/	*Andropogon gerardi* (Big Blue Stem) 5/	4 (4)
		Schizachyrium scoparium (Little Blue Stem) 5/	5 (5)
		Bouteloua curtipendula (Side-Oats Grama) 5/	5 (5)
		Elymus canadensis (Canada Wild Rye) 5/	1 (1)
		Panicum virgatum (Switch Grass) 5/	1 (1)
		Sorghastrum nutans (Indian Grass) 5/	2 (2)
		Annual Ryegrass	25 (25)
		Oats, Spring	25 (25)
		Perennial Ryegrass	15 (15)
4A	Low Profile Native Grass 2/ 6/	*Schizachyrium scoparium* (Little Blue Stem) 5/	5 (5)
		Bouteloua curtipendula (Side-Oats Grama) 5/	5 (5)
		Elymus canadensis (Canada Wild Rye) 5/	1 (1)
		Sporobolus heterolepis (Prairie Dropseed) 5/	0.5 (0.5)
		Annual Ryegrass	25 (25)
		Oats, Spring	25 (25)
		Perennial Ryegrass	15 (15)
4B	Wetland Grass and Sedge Mixture 2/ 6/	Annual Ryegrass	25 (25)
		Oats, Spring	25 (25)
		Wetland Grasses (species below) 5/	6 (6)

Species:	% By Weight
Calamagrostis canadensis (Blue Joint Grass)	12
Carex lacustris (Lake-Bank Sedge)	6
Carex slipata (Awl-Fruited Sedge)	6
Carex stricta (Tussock Sedge)	6
Carex vulpinoidea (Fox Sedge)	6
Eleocharis acicularis (Needle Spike Rush)	3
Eleocharis obtusa (Blunt Spike Rush)	3
Glyceria striata (Fowl Manna Grass)	14
Juncus effusus (Common Rush)	6
Juncus tenuis (Slender Rush)	6
Juncus torreyi (Torrey's Rush)	6
Leersia oryzoides (Rice Cut Grass)	10
Scirpus acutus (Hard-Stemmed Bulrush)	3
Scirpus atrovirens (Dark Green Rush)	3
Bolboschoenus fluviatilis (River Bulrush)	3
Schoenoplectus tabernaemontani (Softstem Bulrush)	3
Spartina pectinata (Cord Grass)	4

Class – Type	Seeds	lb/acre (kg/hectare)
5 Forb with Annuals Mixture 2/ 5/ 6/	Annuals Mixture (Below)	1 (1)
	Forb Mixture (Below)	10 (10)

Annuals Mixture - Mixture not exceeding 25 % by weight of any one species, of the following:

Coreopsis lanceolata (Sand Coreopsis)
Leucanthemum maximum (Shasta Daisy)
Gaillardia pulchella (Blanket Flower)
Ratibida columnifera (Prairie Coneflower)
Rudbeckia hirta (Black-Eyed Susan)

Forb Mixture - Mixture not exceeding 5 % by weight PLS of any one species, of the following:

Amorpha canescens (Lead Plant) 4/
Anemone cylindrica (Thimble Weed)
Asclepias tuberosa (Butterfly Weed)
Aster azureus (Sky Blue Aster)
Symphyotrichum leave (Smooth Aster)
Aster novae-angliae (New England Aster)
Baptisia leucantha (White Wild Indigo) 4/
Coreopsis palmata (Prairie Coreopsis)
Echinacea pallida (Pale Purple Coneflower)
Eryngium yuccifolium (Rattlesnake Master)
Helianthus mollis (Downy Sunflower)
Heliopsis helianthoides (Ox-Eye)
Liatris aspera (Rough Blazing Star)
Liatris pycnostachya (Prairie Blazing Star)
Monarda fistulosa (Prairie Bergamot)
Parthenium integrifolium (Wild Quinine)
Dalea candida (White Prairie Clover) 4/
Dalea purpurea (Purple Prairie Clover) 4/
Physostegia virginiana (False Dragonhead)
Potentilla arguta (Prairie Cinquefoil)
Ratibida pinnata (Yellow Coneflower)
Rudbeckia subtomentosa (Fragrant Coneflower)
Silphium laciniatum (Compass Plant)
Silphium terebinthinaceum (Prairie Dock)
Oligoneuron rigidum (Rigid Goldenrod)
Tradescantia ohiensis (Spiderwort)
Veronicastrum virginicum (Culver's Root)

Class – Type		Seeds	lb/acre (kg/hectare)
5A	Large Flower Native Forb Mixture 2/ 5/ 6/	Forb Mixture (see below)	5 (5)
		Species:	% By Weight
		Aster novae-angliae (New England Aster)	5
		Echinacea pallida (Pale Purple Coneflower)	10
		Helianthus mollis (Downy Sunflower)	10
		Heliopsis helianthoides (Ox-Eye)	10
		Liatris pycnostachya (Prairie Blazing Star)	10
		Ratibida pinnata (Yellow Coneflower)	5
		Rudbeckia hirta (Black-Eyed Susan)	10
		Silphium laciniatum (Compass Plant)	10
		Silphium terebinthinaceum (Prairie Dock)	20
		Oligoneuron rigidum (Rigid Goldenrod)	10
5B	Wetland Forb 2/ 5/ 6/	Forb Mixture (see below)	2 (2)
		Species:	% By Weight
		Acorus calamus (Sweet Flag)	3
		Angelica atropurpurea (Angelica)	6
		Asclepias incarnata (Swamp Milkweed)	2
		Aster puniceus (Purple Stemmed Aster)	10
		Bidens cernua (Beggarticks)	7
		Eutrochium maculatum (Spotted Joe Pye Weed)	7
		Eupatorium perfoliatum (Boneset)	7
		Helenium autumnale (Autumn Sneeze Weed)	2
		Iris virginica shrevei (Blue Flag Iris)	2
		Lobelia cardinalis (Cardinal Flower)	5
		Lobelia siphilitica (Great Blue Lobelia)	5
		Lythrum alatum (Winged Loosestrife)	2
		Physostegia virginiana (False Dragonhead)	5
		Persicaria pensylvanica (Pennsylvania Smartweed)	10
		Persicaria l*apathifolia* (Curlytop Knotweed)	10
		Pychanthemum virginianum (Mountain Mint)	5
		Rudbeckia laciniata (Cut-leaf Coneflower)	5
		Oligoneuron riddellii (Riddell Goldenrod)	2
		Sparganium eurycarpum (Giant Burreed)	5
6	Conservation Mixture 2/ 6/	*Schizachyrium scoparium* (Little Blue Stem) 5/	5 (5)
		Elymus canadensis (Canada Wild Rye) 5/	2 (2)
		Buffalo Grass 5/ 7/	5 (5)
		Vernal Alfalfa 4/	15 (15)
		Oats, Spring	48 (55)
6A	Salt Tolerant Conservation Mixture 2/ 6/	*Schizachyrium scoparium* (Little Blue Stem) 5/	5 (5)
		Elymus canadensis (Canada Wild Rye) 5/	2 (2)
		Buffalo Grass 5/ 7/	5 (5)
		Vernal Alfalfa 4/	15 (15)
		Oats, Spring	48 (55)
		Puccinellia distans (Fults Saltgrass or Salty Alkaligrass)	20 (20)
7	Temporary Turf Cover Mixture	Perennial Ryegrass	50 (55)
		Oats, Spring	64 (70)

Notes:

1/ Seeding shall be performed when the ambient temperature has been between 45 ºF (7 ºC) and 80 ºF (27 ºC) for a minimum of seven (7) consecutive days and is forecasted to be the same for the next five (5) days according to the National Weather Service.
2/ Seeding shall be performed in late fall through spring beginning when the ambient temperature has been below 45 ºF (7 ºC) for a minimum of seven (7) consecutive days and ending when the ambient temperature exceeds 80 ºF (27 ºC) according to the National Weather Service.
3/ Specific variety as shown in the plans or approved by the Engineer.
4/ Inoculation required.
5/ Pure Live Seed (PLS) shall be used.
6/ Fertilizer shall not be used.
7/ Seed shall be primed with KNO_3 to break dormancy and dyed to indicate such.

Seeding will be inspected after a period of establishment. The period of establishment shall be six (6) months minimum, but not to exceed nine (9) months. After the period of establishment, areas not exhibiting 75 percent uniform growth shall be interseeded or reseeded, as determined by the Engineer, at no additional cost to the Department."

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."

SIGN PANELS AND APPURTENANCES (BDE)

Effective: January 1, 2025

Revise the third paragraph of Article 720.02 of the Standard Specifications to read:

"Steel support channels shall be according to ASTM A 653 (A 653M) (mild strip), Standard 720001, and galvanized according to AASHTO M 232, Class B 2 after forming."

Revise the fifth paragraph of Article 720.02 of the Standard Specifications to read:

"The stainless steel banding for mounting signs or sign support channels to light or signal standards shall be according to ASTM A 240 (A 240M) Type 302 stainless steel."

SOURCE OF SUPPLY AND QUALITY REQUIREMENTS (BDE)

Effective: January 2, 2023

Add the following to Article 106.01 of the Standard Specifications:

"The final manufacturing process for construction materials and the immediately preceding manufacturing stage for construction materials shall occur within the United States. Construction materials shall include an article, material, or supply that is or consists primarily of the following.

(a) Non-ferrous metals;

(b) Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);

(c) Glass (including optic glass);

(d) Lumber;

(e) Drywall.

Items consisting of two or more of the listed construction materials that have been combined through a manufacturing process, and items including at least one of the listed materials combined with a material that is not listed through a manufacturing process shall be exempt."

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

In accordance with 49 CFR 26.11(c) all bidders for federally assisted contracts shall submit bidders list information with their bid or initial response to a procurement solicitation. Submission of the bidders list information is a material bidding requirement, and failure to comply with this requirement may render the bid non-responsive.

The bidders list information shall be provided for each firm from whom the bidder receives any bid as a subcontractor. This requirement is not limited to DBE subcontractor bids but applies to 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 contain the following.

(a) Firm name;
(b) Firm address including ZIP code;
(c) Firm's status as a DBE or non-DBE;
(d) Race and gender information for the firm's majority owner;
(e) NAICS code applicable to each scope of work the firm sought to perform in its bid;
(f) Age of the firm; and
(g) The annual gross receipts of the firm (this may be provided by indicating whether the firm's annual gross receipts are less than $1 million; $1-3 million; $3-6 million; $6-10 million; etc.).

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."

SURFACE TESTING OF PAVEMENTS – IRI (BDE)

Effective: January 1, 2021 Revised: January 1, 2023

Description. This work shall consist of testing the ride quality of the finished surface of pavement sections with new concrete pavement, PCC overlays, full-depth HMA, and HMA overlays with at least 2.25 in. (57 mm) total thickness of new HMA combined with either HMA binder or HMA surface removal, according to Illinois Test Procedure 701, "Ride Quality Testing Using the International Roughness Index (IRI)". Work shall be according to Sections 406, 407, or 420 of the Standard Specifications, except as modified herein.

Hot-Mix Asphalt (HMA) Overlays

Add the following to Article 406.03 of the Standard Specifications:

"(n) Pavement Surface Grinding Equipment.....1101.04"

Revise Article 406.11 of the Standard Specifications to read:

"**406.11 Surface Tests.** Prior to HMA overlay pavement improvements, the Engineer will measure the smoothness of the existing high-speed mainline pavement. The Contractor shall measure the smoothness of the finished high-speed mainline, low-speed mainline, and miscellaneous pavements after the pavement improvement is complete but within the same construction season. Testing shall be performed in the presence of the Engineer and according to Illinois Test Procedure 701. The pavement will be identified as high-speed mainline, low-speed mainline, or miscellaneous as follows.

(a) Test Sections.

(1) High-Speed Mainline Pavement. High-speed mainline pavement consists of pavements, ramps, and loops with a posted speed limit greater than 45 mph. These sections shall be tested with an inertial profiling system (IPS).

(2) Low-Speed Mainline Pavement. Low-speed mainline pavement consists of pavements, ramps, and loops with a posted speed limit of 45 mph or less. These sections shall be tested using a 16 ft (5 m) straightedge or with an IPS analyzed using the rolling 16 ft (5 m) straightedge simulation in ProVAL.

(3) Miscellaneous Pavement. Miscellaneous pavement are segments that either cannot readily be tested by an IPS or conditions beyond the control of the Contractor preclude the achievement of smoothness levels typically achievable with mainline pavement construction. This may include the following examples or as determined by the Engineer.

a. Pavement on horizontal curves with a centerline radius of curvature of less than or equal to 1,000 ft (300 m) and the pavement within the superelevation transition of such curves;

b. Pavement on vertical curves having a length less than or equal to 200 ft (60 m) in combination with an algebraic change in tangent grade greater than or equal to 3 percent as may occur on urban ramps or other constricted-space facilities;

c. The first and last 50 ft (15 m) of a pavement section where the Contractor is not responsible for the adjoining surface;

d. Intersections and the 25 ft (7.6 m) before and after an intersection or end of radius return;

e. Variable width pavements;

f. Side street returns, to the end of radius return;

g. Crossovers;

h. Pavement connector for bridge approach slab;

i. Bridge approach slab;

j. Pavement that must be constructed in segments of 600 ft (180 m) or less;

k. Pavement within 25 ft (7.6 m) of manholes, utility structures, at-grade railroad crossings, or other appurtenances;

l. Turn lanes; and

m. Pavement within 5 ft (1.5 m) of jobsite sampling locations for HMA volumetric testing that fall within the wheel path.

Miscellaneous pavement shall be tested using a 16 ft (5 m) straightedge.

(4) International Roughness Index (IRI). An index computed from a longitudinal profile measurement using a quarter-car simulation at a simulation speed of 50 mph (80 km/h).

(5) Mean Roughness Index (MRI). The average of the IRI values for the right and left wheel tracks.

a. MRI_O. The MRI of the existing pavement prior to construction.

b. MRI_I. The MRI value that warrants an incentive payment.

c. MRI_F. The MRI value that warrants full payment.

d. MRI_D. The MRI value that warrants a financial disincentive.

(6) Areas of Localized Roughness (ALR). Isolated areas of roughness, which can cause significant increase in the calculated MRI for a given sublot.

(7) Sublot. A continuous strip of pavement 0.1 mile (160 m) long and one lane wide. A partial sublot greater than or equal to 264 ft (80 m) will be subject to the same evaluation as a whole sublot. Partial sublots less than 264 ft (80 m) shall be included with the previous sublot for evaluation purposes.

(b) Corrective Work. Corrective work shall be completed according to the following.

(1) High-Speed Mainline Pavement. For high-speed mainline pavement, any 25 ft (7.6 m) interval with an ALR in excess of 200 in./mile (3,200 mm/km) will be identified by the Engineer and shall be corrected by the Contractor. Any sublot having a MRI greater than MRI_D, including ALR, shall be corrected to reduce the MRI to the MRI_F, or replaced at the Contractor's option.

(2) Low-Speed Mainline Pavement. Surface variations in low-speed mainline pavement which exceed the 5/16 in. (8 mm) tolerance will be identified by the Engineer and shall be corrected by the Contractor.

(3) Miscellaneous Pavements. Surface variations in miscellaneous pavement which exceed the 5/16 in. (8 mm) tolerance will be identified by the Engineer and shall be corrected by the Contractor.

Corrective work shall be completed with pavement surface grinding equipment or by removing and replacing the pavement. Corrective work shall be applied to the full lane width. When completed, the corrected area shall have uniform texture and appearance, with the beginning and ending of the corrected area perpendicular to the centerline of the paved surface.

Upon completion of the corrective work, the surface of the sublot(s) shall be retested. The Contractor shall furnish the data and reports to the Engineer within 2 working days after corrections are made. If the MRI and/or ALR still do not meet the requirements, additional corrective work shall be performed.

Corrective work shall be at no additional cost to the Department.

(c) Smoothness Assessments. Assessments will be paid to or deducted from the Contractor for each sublot of high-speed mainline pavement per the Smoothness Assessment Schedule. Assessments will be based on the MRI of each sublot prior to performing any corrective work unless the Contractor has chosen to remove and replace the pavement. For pavement that is replaced, assessments will be based on the MRI determined after replacement.

The upper MRI thresholds for high-speed mainline pavement are dependent on the MRI of the existing pavement before construction (MRI_0) and shall be determined as follows.

Upper MRI Thresholds [1/]	MRI Thresholds (High-Speed, HMA Overlay)	
	$MRI_0 \leq 125.0$ in./mile (≤ 1,975 mm/km)	$MRI_0 > 125.0$ in./mile [1/] (> 1,975 mm/km)
Incentive (MRI_I)	45.0 in./mile (710 mm/km)	$0.2 \times MRI_0 + 20$
Full Pay (MRI_F)	75.0 in./mile (1,190 mm/km)	$0.2 \times MRI_0 + 50$
Disincentive (MRI_D)	100.0 in./mile (1,975 mm/km)	$0.2 \times MRI_0 + 75$

1/ MRI_0, MRI_I, MRI_F, and MRI_D shall be in in./mile for calculation.

Smoothness assessments for high-speed mainline pavement shall be determined as follows.

SMOOTHNESS ASSESSMENT SCHEDULE (High-Speed, HMA Overlay)	
Mainline Pavement MRI Range	Assessment Per Sublot [1/]
$MRI \leq MRI_I$	$+ (MRI_I - MRI) \times \$20.00$ [2/]
$MRI_I < MRI \leq MRI_F$	+ \$0.00
$MRI_F < MRI \leq MRI_D$	$- (MRI - MRI_F) \times \$8.00$
$MRI > MRI_D$	– \$200.00

1/ MRI, MRI_I, MRI_F, and MRI_D shall be in in./mile for calculation.

2/ The maximum incentive amount shall not exceed \$300.00.

Smoothness assessments will not be paid or deducted until all other contract requirements for the pavement are satisfied. Pavement that is corrected or replaced for reasons other than smoothness, shall be retested as stated herein."

Hot-Mix Asphalt (HMA) Pavement (Full-Depth)

Revise the first paragraph of Article 407.03 of the Standard Specifications to read:

"**407.03 Equipment.** Equipment shall be according to Article 406.03."

Revise Article 407.09 of the Standard Specifications to read:

"**407.09 Surface Tests.** The finished surface of the pavement shall be tested for smoothness according to Article 406.11, except as follows:

The testing of the existing pavement prior to improvements shall not apply and the smoothness assessment for high-speed mainline pavement shall be determined according to the following table.

SMOOTHNESS ASSESSMENT SCHEDULE (High-Speed, Full-Depth HMA)	
Mainline Pavement MRI, in./mile (mm/km)	Assessment Per Sublot 1/
≤ 45.0 (710)	+ (45 – MRI) × $45.00 2/
> 45.0 (710) to 75.0 (1,190)	+ $0.00
> 75.0 (1,190) to 100.0 (1,580)	– (MRI – 75) × $20.00
> 100.0 (1,580)	– $500.00

1/ MRI shall be in in./mile for calculation.

2/ The maximum incentive amount shall not exceed $800.00."

Portland Cement Concrete Pavement

Delete Article 420.03(i) of the Standard Specifications.

Revise Article 420.10 of the Standard Specifications to read:

"**420.10 Surface Tests.** The finished surface of the pavement shall be tested for smoothness according to Article 406.11, except as follows.

The testing of the existing pavement prior to improvements shall not apply. The Contractor shall measure the smoothness of the finished surface of the pavement after the pavement has attained a flexural strength of 250 psi (3,800 kPa) or a compressive strength of 1,600 psi (20,700 kPa).

Membrane curing damaged during testing shall be repaired as directed by the Engineer at no additional cost to the Department.

(a) Corrective Work. No further texturing for skid resistance will be required for areas corrected by grinding. Protective coat shall be reapplied to areas ground according to Article 420.18 at no additional cost to the Department.

Jointed portland cement concrete pavement corrected by removal and replacement, shall be corrected in full panel sizes.

(b) Smoothness Assessments. Smoothness assessment for high-speed mainline pavement shall be determined as follows.

SMOOTHNESS ASSESSMENT SCHEDULE (High-Speed, PCC)	
Mainline Pavement MRI, in./mile (mm/km) 3/	Assessment Per Sublot 1/
≤ 45.0 (710)	+ (45 – MRI) × $60.00 2/
> 45.0 (710) to 75.0 (1,190)	+ $0.00
> 75.0 (1,190) to 100.0 (1,580)	– (MRI – 75) × $37.50
> 100.0 (1,580)	– $750.00

1/ MRI shall be in in./mile for calculation.

2/ The maximum incentive amount shall not exceed $1200.00.

3/ If pavement is constructed with traffic in the lane next to it, then an additional 10 in./mile will be added to the upper thresholds."

Removal of Existing Pavement and Appurtenances

Revise the first paragraph of Article 440.04 of the Standard Specifications to read:

"**440.04 HMA Surface Removal for Subsequent Resurfacing.** The existing HMA surface shall be removed to the depth specified on the plans with a self-propelled milling machine. The removal depth may be varied slightly at the discretion of the Engineer to satisfy the smoothness requirements of the finished pavement. The temperature at which the work is performed, the nature and condition of the equipment, and the manner of performing the work shall be such that the milled surface is not torn, gouged, shoved or otherwise damaged by the milling operation. Sufficient cutting passes shall be made so that all irregularities or high spots are eliminated to the satisfaction of the Engineer. When tested with a 16 ft (5 m) straightedge, the milled surface shall have no surface variations in excess of 3/16 in. (5 mm)."

General Equipment

Revise Article 1101.04 of the Standard Specifications to read:

"**1101.04 Pavement Surface Grinding Equipment.** The pavement surface grinding device shall have a minimum effective head width of 3 ft (0.9 m).

(a) Diamond Saw Blade Machine. The machine shall be self-propelled with multiple diamond saw blades.

(b) Profile Milling Machine. The profile milling machine shall be a drum device with carbide or diamond teeth with spacing of 0.315 in. (8 mm) or less and maintain proper forward speed for surface texture according to the manufacturer's specifications."

TRAINING SPECIAL PROVISIONS (BDE)

Effective: October 15, 1975 Revised: September 2, 2021

This Training Special Provision supersedes Section 7b of the Special Provision entitled "Specific Equal Employment Opportunity Responsibilities," and is in implementation of 23 U.S.C. 140(a).

As part of the Contractor's equal employment opportunity affirmative action program, training shall be provided as follows:

The Contractor shall provide on-the-job training aimed at developing full journeyman in the type of trade or job classification involved. The number of trainees to be trained under this contract will be **4**. In the event the Contractor subcontracts a portion of the contract work, it shall determine

how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The Contractor shall also ensure that this Training Special Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the Contractor's needs and the availability of journeymen in the various classifications within the reasonable area of recruitment. Prior to commencing construction, the Contractor shall submit to the Illinois Department of Transportation for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. The Contractor will be credited for each trainee it employs on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision. Accordingly, the Contractor shall make every effort to enroll minority trainees and women (e.g. by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent such persons are available within a reasonable area of recruitment. The Contractor will be responsible for demonstrating the steps it has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he or she has successfully completed a training course leading to journeyman status or in which he or she has been employed as a journeyman. The Contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the Contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the Contractor and approved by the Illinois Department of Transportation and the Federal Highway Administration. The Illinois Department of Transportation and the Federal Highway Administration shall approve a program, if it is reasonably calculated to meet the equal employment opportunity obligations of the Contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved by not necessarily sponsored by the U.S. Department of Labor Employment Training Administration shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the Illinois Department of Transportation and the Federal Highway Administration.

Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the Contractor will be reimbursed 80 cents per hour of training given an employee on this contract in accordance with an approved training program. As approved by the Engineer, reimbursement will be made for training of persons in excess of the number specified herein. This reimbursement will be made even though the Contractor receives additional training program funds from other sources, provided such other source does not specifically prohibit the Contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the Contractor where he does one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the offsite training period.

No payment shall be made to the Contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the Contractor and evidences a lack of good faith on the part of the Contractor in meeting the requirement of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program.

It is not required that all trainees be on board for the entire length of the contract. A Contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The Contractor shall furnish the trainee a copy of the program he will follow in providing the training. The Contractor shall provide each trainee with a certification showing the type and length of training satisfactorily complete.

The Contractor shall provide for the maintenance of records and furnish periodic reports documenting its performance under this Training Special Provision.

For contracts with an awarded contract value of $500,000 or more, the Contractor is required to comply with the Illinois Works Apprenticeship Initiative (30 ILCS 559/20-20 to 20-25) and all applicable administrative rules to the extent permitted by Section 20-20(g). For federally funded projects, the number of trainees to be trained under this contract, as stated in the Training Special Provisions, will be the established goal for the Illinois Works Apprenticeship Initiative 30 ILCS 559/20-20(g). The Contractor shall make a good faith effort to meet this goal. For federally funded projects, the Illinois Works Apprenticeship Initiative will be implemented using the FHWA approved OJT procedures. The Contractor must comply with the recordkeeping and reporting obligations of the Illinois Works Apprenticeship Initiative for the life of the project, including the

certification as to whether the trainee/apprentice labor hour goals were met.

Method of Measurement. The unit of measurement is in hours.

Basis of Payment. This work will be paid for at the contract unit price of 80 cents per hour for TRAINEES. The estimated total number of hours, unit price, and total price have been included in the schedule of prices.

IDOT TRAINING PROGRAM GRADUATE ON-THE-JOB TRAINING SPECIAL PROVISION

Effective: August 1, 2012 Revised: February 2, 2017

In addition to the Contractor's equal employment opportunity (EEO) affirmative action efforts undertaken as required by this Contract, the Contractor is encouraged to participate in the incentive program described below to provide additional on-the-job training to certified graduates of the IDOT pre-apprenticeship training program, as outlined in this Special Provision.

IDOT funds, and various Illinois community colleges operate, pre-apprenticeship training programs throughout the State to provide training and skill-improvement opportunities to promote the increased employment of minority groups, disadvantaged persons and women in all aspects of the highway construction industry. The intent of this IDOT Pre-Apprenticeship Training Program Graduate (TPG) special provision (Special Provision) is to place these certified program graduates on the project site for this Contract in order to provide the graduates with meaningful on-the-job training. Pursuant to this Special Provision, the Contractor must make every reasonable effort to recruit and employ certified TPG trainees to the extent such individuals are available within a practicable distance of the project site.

Specifically, participation of the Contractor or its subcontractor in the Program entitles the participant to reimbursement for graduates' hourly wages at $15.00 per hour per utilized TPG trainee, subject to the terms of this Special Provision. Reimbursement payment will be made even though the Contractor or subcontractor may also receive additional training program funds from other non-IDOT sources for other non-TPG trainees on the Contract, provided such other source does not specifically prohibit the Contractor or subcontractor from receiving reimbursement from another entity through another program, such as IDOT through the TPG program. With regard to any IDOT funded construction training program other than TPG, however, additional reimbursement for other IDOT programs will not be made beyond the TPG Program described in this Special Provision when the TPG Program is utilized.

No payment will be made to the Contractor if the Contractor or subcontractor fails to provide the required on-site training to TPG trainees, as solely determined by IDOT. A TPG trainee must begin training on the project as soon as the start of work that utilizes the relevant trade skill and the TPG trainee must remain on the project site through completion of the Contract, so long as training opportunities continue to exist in the relevant work classification. Should a TPG trainee's employment end in advance of the completion of the Contract, the Contractor must promptly notify the IDOT District EEO Officer for the Contract that the TPG's involvement in the Contract has ended. The Contractor must supply a written report for the reason the TPG trainee involvement terminated, the hours completed by the TPG trainee on the Contract, and the number of hours for

which the incentive payment provided under this Special Provision will be, or has been claimed for the separated TPG trainee.

Finally, the Contractor must maintain all records it creates as a result of participation in the Program on the Contract, and furnish periodic written reports to the IDOT District EEO Officer that document its contractual performance under and compliance with this Special Provision. Finally, through participation in the Program and reimbursement of wages, the Contractor is not relieved of, and IDOT has not waived, the requirements of any federal or state labor or employment law applicable to TPG workers, including compliance with the Illinois Prevailing Wage Act.

Method of Measurement: The unit of measurement is in hours.

Basis of Payment: This work will be paid for at the contract unit price of $15.00 per hour for each utilized certified TPG Program trainee (TRAINEES TRAINING PROGRAM GRADUATE). The estimated total number of hours, unit price, and total price must be included in the schedule of prices for the Contract submitted by Contractor prior to beginning work. The initial number of TPG trainees for which the incentive is available for this contract is **4**.

The Department has contracted with several educational institutions to provide screening, tutoring and pre-training to individuals interested in working as a TPG trainee in various areas of common construction trade work. Only individuals who have successfully completed a Pre-Apprenticeship Training Program at these IDOT approved institutions are eligible to be TPG trainees. To obtain a list of institutions that can connect the Contractor with eligible TPG trainees, the Contractor may contact: HCCTP TPG Program Coordinator, Office of Business and Workforce Diversity (IDOT OBWD), Room 319, Illinois Department of Transportation, 2300 S. Dirksen Parkway, Springfield, Illinois 62764. Prior to commencing construction with the utilization of a TPG trainee, the Contractor must submit documentation to the IDOT District EEO Officer for the Contract that provides the names and contact information of the TPG trainee(s) to be trained in each selected work classification, proof that that the TPG trainee(s) has successfully completed a Pre-Apprenticeship Training Program, proof that the TPG is in an Apprenticeship Training Program approved by the U.S. Department of Labor Bureau of Apprenticeship Training, and the start date for training in each of the applicable work classifications.

To receive payment, the Contractor must provide training opportunities aimed at developing a full journeyworker in the type of trade or job classification involved. During the course of performance of the Contract, the Contractor may seek approval from the IDOT District EEO Officer to employ additional eligible TPG trainees. In the event the Contractor subcontracts a portion of the contracted work, it must determine how many, if any, of the TPGs will be trained by the subcontractor. Though a subcontractor may conduct training, the Contractor retains the responsibility for meeting all requirements imposed by this Special Provision. The Contractor must also include this Special Provision in any subcontract where payment for contracted work performed by a TPG trainee will be passed on to a subcontractor.

Training through the Program is intended to move TPGs toward journeyman status, which is the primary objective of this Special Provision. Accordingly, the Contractor must make every effort to enroll TPG trainees by recruitment through the Program participant educational institutions to the extent eligible TPGs are available within a reasonable geographic area of the project. The Contractor is responsible for demonstrating, through documentation, the recruitment efforts it has undertaken prior to the determination by IDOT whether the Contractor is in compliance with this

Special Provision, and therefore, entitled to the Training Program Graduate reimbursement of $15.00 per hour.

Notwithstanding the on-the-job training requirement of this TPG Special Provision, some minimal off-site training is permissible as long as the offsite training is an integral part of the work of the contract, and does not compromise or conflict with the required on-site training that is central to the purpose of the Program. No individual may be employed as a TPG trainee in any work classification in which he/she has previously successfully completed a training program leading to journeyman status in any trade, or in which he/she has worked at a journeyman level or higher.

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.

WOOD SIGN SUPPORT (BDE)

Effective: November 1, 2023

Add the following to Article 730.02 of the Standard Specifications:

"(c) Preservative Treatment .....1007.12"

Revise the first paragraph of Article 730.03 of the Standard Specifications to read:

" **730.03 General.** Wood sign supports shall be treated. When the 4 x 6 in. (100 x 150 mm) posts are used, they shall be modified to satisfy the breakaway requirements by drilling 1 1/2 in. (38 mm) diameter holes centered at 4 and 18 in. (100 and 450 mm) above the groundline and perpendicular to the centerline of the roadway."

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."

PROJECT LABOR AGREEMENT

Effective: May 18, 2007 Revised: August 1, 2019

Description. The Illinois Project Labor Agreements Act, 30 ILCS 571, states that the State of Illinois has a compelling interest in awarding public works contracts so as to ensure the highest standards of quality and efficiency at the lowest responsible cost. A project labor agreement (PLA) is a form of pre-hire collective bargaining agreement covering all terms and conditions of employment on a specific project that is intended to support this compelling interest. It has been determined by the Department that a PLA is appropriate for the project that is the subject of this contract. The PLA document, provided below, only applies to the construction site for this contract. It is the policy of the Department on this contract, and all construction projects, to allow all contractors and subcontractors to compete for contracts and subcontracts without regard to whether they are otherwise parties to collective bargaining agreements.

Execution of Letter of Assent. A copy of the PLA applicable to this project is included as part of this special provision. As a condition of the award of the contract, the successful bidder and each of its subcontractors shall execute a "Contractor Letter of Assent", in the form attached to the PLA as Exhibit A. The successful bidder shall submit a Subcontractor's Contractor Letter of Assent to the Department prior to the subcontractor's performance of work on the project. Upon request, copies of the applicable collective bargaining agreements will be provided by the appropriate signatory labor organization at the pre-job conference.

Quarterly Reporting. Section 37 of the Illinois Project Labor Agreements Act requires the Department to submit quarterly reports regarding the number of minorities and females employed under PLAs. To assist in this reporting effort, the Contractor shall provide a quarterly workforce participation report for all minority and female employees working under the PLA of this contract. The data shall be reported on Construction Form BC 820, Project Labor Agreement (PLA) Workforce Participation Quarterly Reporting Form available on the Department's website http://www.idot.illinois.gov/Assets/uploads/files/IDOT-Forms/BC/BC%20820.docx.

The report shall be submitted no later than the 15th of the month following the end of each quarter (i.e., April 15 for the January – March reporting period). The form shall be emailed to DOT.PLA.Reporting@illinois.gov or faxed to (217) 524-4922.

Any costs associated with complying with this provision 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.

Illinois Department of Transportation
PROJECT LABOR AGREEMENT

This Project Labor Agreement ("PLA" or "Agreement") is entered into this_____ day of _____, 2024, by and between the Illinois Department of Transportation ("IDOT" or "Department") in its proprietary capacity, and each relevant Illinois AFL-CIO Building Trades signatory hereto as determined by the Illinois AFL-CIO Statewide Project Labor Agreement Committee on behalf of each of its affiliated members (individually and collectively, the "Unions"). This PLA shall apply to Construction Work (as defined herein) to be performed by IDOT's Prime Contractor and each of its subcontractors of whatever tier ("Subcontractor" or "Subcontractors") on Contract No. (hereinafter, the "Project").

ARTICLE 1 - INTENT AND PURPOSES

1.1 This PLA is entered into in accordance with the Project Labor Agreement Act ("Act", 30 ILCS 571). It is mutually understood and agreed that the terms and conditions of this PLA are intended to promote the public interest in obtaining timely and economical completion of the Project by encouraging productive and efficient construction operations; by establishing a spirit of harmony and cooperation among the parties; and by providing for peaceful and prompt settlement of any and all labor grievances or jurisdictional disputes of any kind without strikes, lockouts, slowdowns, delays, or other disruptions to the prosecution of the work. The parties acknowledge the obligations of the Contractors and Subcontractors to comply with the provisions of the Act. The parties will work with the Contractors and Subcontractors within the parameters of other statutory and regulatory requirements to implement the Act's goals and objectives.

1.2 As a condition of the award of the contract for performance of work on the Project, IDOT's Prime Contractor and each of its Subcontractors shall execute a "Contractor Letter of Assent", in the form attached hereto as Exhibit A, prior to commencing Construction Work on the Project. The Contractor shall submit a Subcontractor's Contractor Letter of Assent to the Department prior to the Subcontractor's performance of Construction Work on the Project. Upon request copies of the applicable collective bargaining agreements will be provided by the appropriate signatory labor organization consistent with this Agreement and at the pre-job conference referenced in Article III, Section 3.1.

1.3 Each Union affiliate and separate local representing workers engaged in Construction Work on the Project in accordance with this PLA are bound to this agreement by the Illinois AFL-CIO Statewide Project Labor Agreement Committee which is the central committee established with full authority to negotiate and sign PLAs with the State on behalf of all respective crafts. Upon their signing the Contractor Letter of Assent, the Prime Contractor, each Subcontractor, and the individual Unions shall thereafter be deemed a party to this PLA. No party signatory to this PLA shall, contract or subcontract, nor permit any other person, firm, company, or entity to contract or subcontract for the performance of Construction Work for the Project to any person, firm, company, or entity that does not agree in writing to become bound for the term of this Project by the terms of this PLA prior to commencing such work and to the applicable area-wide collective bargaining agreement(s) with the Union(s) signatory hereto.

1.4 It is understood that the Prime Contractor(s) and each Subcontractor will be considered and accepted by the Unions as separate employers for the purposes of collective bargaining, and it is further agreed that the employees working under this PLA shall constitute a bargaining unit separate and distinct from all others. The parties hereto also agree that this PLA shall be applicable solely with respect to this Project, and shall have no bearing on the interpretation of any other collective bargaining agreement or as to the recognition of any bargaining unit other than for the specific purposes of this Project.

1.5 In the event of a variance or conflict, whether explicit or implicit, between the terms and conditions of this PLA and the provisions of any other applicable national, area, or local collective bargaining agreement, the terms and conditions of this PLA shall supersede and control. For any work performed under the NTL Articles of Agreement, the National Stack/Chimney Agreement, the National Cooling Tower Agreement, the National Agreement of the International Union of Elevator Constructors, and for any instrument calibration work and loop checking performed under the UA/IBEW Joint National Agreement for Instrument and Control Systems Technicians, the preceding sentence shall apply only with respect to Articles I, II, V, VI, and VII.

1.6 Subject to the provisions of paragraph 1.5 of this Article, it is the parties' intent to respect the provisions of any other collective bargaining agreements that may now or hereafter pertain, whether between the Prime Contractor and one or more of the Unions or between a Subcontractor and one or more of the Unions. Accordingly, except and to the extent of any contrary provision set forth in this PLA, the Prime Contractor and each of its Subcontractors agrees to be bound and abide by the terms of the following in order of precedence: (a) the applicable collective bargaining agreement between the Prime Contractor and one or more of the Unions made signatory hereto; (b) the applicable collective bargaining agreement between a Subcontractor and one or more of the Unions made signatory hereto; or (c) the current applicable area collective bargaining agreement for the relevant Union that is the agreement certified by the Illinois Department of Labor for purposes of establishing the Prevailing Wage applicable to the Project. The Union will provide copies of the applicable collective bargaining agreements pursuant to part (c) of the preceding sentence to the Prime Contractor. Assignments by the Contractors or Subcontractors amongst the trades shall be consistent with area practices; in the event of unresolved disagreements as to the propriety of such assignments, the provisions of Article VI shall apply.

1.7 Subject to the limitations of paragraphs 1.4 to 1.6 of this Article, the terms of each applicable collective bargaining agreement as determined in accordance with paragraph 1.6 are incorporated herein by reference, and the terms of this PLA shall be deemed incorporated into such other applicable collective bargaining agreements only for purposes of their application to the Project.

1.8 To the extent necessary to comply with the requirements of any fringe benefit fund to which the Prime Contractor or Subcontractor is required to contribute under the terms of an applicable collective bargaining agreement pursuant to the preceding paragraph, the Prime Contractor or Subcontractor shall execute all "Participation Agreements" as may be reasonably required by the Union to accomplish such purpose; provided, however, that such Participation Agreements shall, when applicable to the Prime Contractor or Subcontractor solely as a result of this PLA, be amended as reasonably necessary to reflect such fact. Upon written notice in the form of a lien of a Contractor's or Subcontractor's delinquency from any applicable fringe benefit fund, IDOT will withhold from the Contractor's periodic pay request an amount sufficient to extinguish any delinquency obligation of the Contractor or Subcontractor arising out of the Project.

1.9 In the event that the applicable collective bargaining agreement between a Prime Contractor and the Union or between the Subcontractor and the Union expires prior to the completion of this Project, the expired applicable contract's terms will be maintained until a new applicable collective bargaining agreement is ratified. The wages and fringe benefits included in any new applicable collective bargaining agreement will apply on and after the effective date of the newly negotiated collective bargaining agreement, except to the extent wage and fringe benefit retroactivity is specifically agreed upon by the relevant bargaining parties.

ARTICLE II – APPLICABILITY, RECOGNITION, AND COMMITMENTS

2.1 The term Construction Work as used herein shall include all “construction, demolition, rehabilitation, renovation, or repair” work performed by a “laborer or mechanic” at the “site of the work” for the purpose of “building” the specific structures and improvements that constitute the Project. Terms appearing within quotation marks in the preceding sentence shall have the meaning ascribed to them pursuant to 29 CFR Part 5 and Illinois labor laws.

2.2 By executing the Letters of Assent, Prime Contractor and each of its Subcontractors recognizes the Unions signatory to this PLA as the sole and exclusive bargaining representatives for their craft employees employed on the jobsite for this Project. Unions who are signatory to this PLA will have recognition on the Project for their craft.

2.3 The Prime Contractor and each of its Subcontractors retains and shall be permitted to exercise full and exclusive authority and responsibility for the management of its operations, except as expressly limited by the terms of this PLA or by the terms and conditions of the applicable collective bargaining agreement.

2.4 Except to the extent contrary to an express provision of the relevant collective bargaining agreement, equipment or materials used in the Project may be pre-assembled or pre- fabricated, and there shall be no refusal by the Union to handle, transport, install, or connect such equipment or materials. Equipment or materials delivered to the job-site will be unloaded and handled promptly without regard to potential jurisdictional disputes; any such disputes shall be handled in accordance with the provisions of this PLA.

2.5 The parties are mutually committed to promoting a safe working environment for all personnel at the job-site. It shall be the responsibility of each employer to which this PLA applies to provide and maintain safe working conditions for its employees, and to comply with all applicable federal, state, and local health and safety laws and regulations.

2.6 The use or furnishing of alcohol or drugs and the conduct of any other illegal activity at the job-site is strictly prohibited. The parties shall take every practical measure consistent with the terms of applicable collective bargaining agreements to ensure that the job-site is free of alcohol and drugs.

2.7 All parties to this PLA agree that they will not discriminate against any employee based on race, creed, religion, color, national origin, union activity, age, gender or sexual orientation and shall comply with all applicable federal, state, and local laws.

2.8 In accordance with the Act and to promote diversity in employment, IDOT will establish, in cooperation with the other parties, the apprenticeship hours which are to be performed by minorities and females on the Project. IDOT shall consider the total hours to be performed by these underrepresented groups, as a percentage of the workforce, and create aspirational goals for each Project, based on the level of underutilization for the service area of the Project (together "Project Employment Objectives"). IDOT shall provide a quarterly report regarding the racial and gender composition of the workforce on the Project.

Persons currently lacking qualifications to enter apprenticeship programs will have the opportunity to obtain skills through basic training programs as have been established by the Department. The parties will endeavor to support such training programs to allow participants to obtain the requisite qualifications for the Project Employment Objectives.

The parties agree that all Contractors and Subcontractors working on the Project shall be encouraged to utilize the maximum number of apprentices as permitted under the terms of the applicable collective bargaining agreements to realize the Project Employment Objectives.

The Unions shall assist the Contractor and each Subcontractor in efforts to satisfy Project Employment Objectives. A Contractor or Subcontractor may request from a Union specific categories of workers necessary to satisfy Project Employment Objectives. The application of this section shall be consistent with all local Union collective bargaining agreements, and the hiring hall rules and regulations established for the hiring of personnel, as well as the apprenticeship standards set forth by each individual Union.

2.9 The parties hereto agree that engineering consultants and materials testing employees, to the extent subject to the terms of this PLA, shall be fully expected to objectively and responsibly perform their duties and obligations owed to the Department without regard to the potential union affiliation of such employees or of other employees on the Project.

2.10 This Agreement shall not apply to IDOT employees or employees of any other governmental entity.

ARTICLE III - ADMINISTRATION OF AGREEMENT

3.1 In order to assure that all parties have a clear understanding of the PLA, and to promote harmony, at the request of the Unions a post-award pre-job conference will be held among the Prime Contractor, all Subcontractors and Union representatives prior to the start of any Construction Work on the Project. No later than the conclusion of such pre-job conference, the parties shall, among other matters, provide to one another contact information for their respective representatives (including name, address, phone number, facsimile number, e-mail). Nothing herein shall be construed to limit the right of the Department to discuss or explain the purpose and intent of this PLA with prospective bidders or other interested parties prior to or following its award of the job.

3.2 Representatives of the Prime Contractor and the Unions shall meet as often as reasonably necessary following award until completion of the Project to assure the effective implementation of this PLA.

3.3 Any notice contemplated under Article VI and VII of this Agreement to a signatory labor organization shall be made in writing to the Local Union with copies to the local union's International Representative.

ARTICLE IV - HOURS OF WORK AND GENERAL CONDITIONS

4.1 The standard work day and work week for Construction Work on the Project shall be consistent with the respective collective bargaining agreements. In the event Project site or other job conditions dictate a change in the established starting time and/or a staggered lunch period for portions of the Project or for specific crafts, the Prime Contractor, relevant Subcontractors and business managers of the specific crafts involved shall confer and mutually agree to such changes as appropriate. If proposed work schedule changes cannot be mutually agreed upon between the parties, the hours fixed at the time of the pre-job meeting shall prevail.

4.2 Shift work may be established and directed by the Prime Contractor or relevant Subcontractor as reasonably necessary or appropriate to fulfill the terms of its contract with the Department. If used, shift hours, rates and conditions shall be as provided in the applicable collective bargaining agreement.

4.3 The parties agree that chronic and/or unexcused absenteeism is undesirable and must be controlled in accordance with procedures established by the applicable collective bargaining agreement. Any employee disciplined for absenteeism in accordance with such procedures shall be suspended from all work on the Project for not less than the maximum period permitted under the applicable collective bargaining agreement.

4.4 Except as may be otherwise expressly provided by the applicable collective bargaining agreement, employment begins and ends at the Project site; employees shall be at their place of work at the starting time; and employees shall remain at their place of work until quitting time.

4.5 Except as may be otherwise expressly provided by the applicable collective bargaining agreement, there shall be no limit on production by workmen, no restrictions on the full use of tools or equipment, and no restrictions on efficient use of manpower or techniques of construction other than as may be required by safety regulations.

4.6 The parties recognize that specialized or unusual equipment may be installed on the Project. In such cases, the Union recognizes the right of the Prime Contractor or Subcontractor to involve the equipment supplier or vendor's personnel in supervising the setting up of the equipment, making modifications and final alignment, and performing similar activities that may be reasonably necessary prior to and during the start-up procedure in order to protect factory warranties. The Prime Contractor or Subcontractor shall notify the Union representatives in advance of any work at the job-site by such vendor personnel in order to promote a harmonious relationship between the equipment vendor's personnel and other Project employees.

4.7 For the purpose of promoting full and effective implementation of this PLA, authorized Union representatives shall have access to the Project job-site during scheduled work hours. Such access shall be conditioned upon adherence to all reasonable visitor and security rules of general applicability that may be established for the Project site at the pre-job conference or from time to time thereafter.

ARTICLE V – GRIEVANCE PROCEDURES FOR DISPUTES ARISING UNDER A PARTICULAR COLLECTIVE BARGAINING AGREEMENT

5.1 In the event a dispute arises under a particular collective bargaining agreement specifically not including jurisdictional disputes referenced in Article VI below, said dispute shall be resolved by the Grievance/Arbitration procedure of the applicable collective bargaining agreement. The resulting determination from this process shall be final and binding on all parties bound to its process.

5.2 Employers covered under this Agreement shall have the right to discharge or discipline any employee who violates the provisions of this Agreement. Such discharge or discipline by a contractor or subcontractor shall be subject to Grievance/Arbitration procedure of the applicable collective bargaining agreement only as to the fact of such violation of this agreement. If such fact is established, the penalty imposed shall not be disturbed. Work at the Project site shall continue without disruption or hindrance of any kind as a result of a Grievance/Arbitration procedure under this Article.

5.3 In the event there is a deadlock in the foregoing procedure, the parties agree that the matter shall be submitted to arbitration for the selection and decision of an Arbitrator governed under paragraph 6.8.

ARTICLE VI –DISPUTES: GENERAL PRINCIPLES

6.1 This Agreement is entered into to prevent strikes, lost time, lockouts and to facilitate the peaceful adjustment of jurisdictional disputes in the building and construction industry and to prevent waste and unnecessary avoidable delays and expense, and for the further purpose of at all times securing for the employer sufficient skilled workers.

6.2 A panel of Permanent Arbitrators are attached as addendum (A) to this agreement. By mutual agreement between IDOT and the Unions, the parties can open this section of the agreement as needed to make changes to the list of permanent arbitrators.

The arbitrator is not authorized to award back pay or any other damages for a miss assignment of work. Nor may any party bring an independent action for back pay or any other damages, based upon a decision of an arbitrator.

6.3 The PLA Jurisdictional Dispute Resolution Process ("Process") sets forth the procedures below to resolve jurisdictional disputes between and among Contractors, Subcontractors, and Unions engaged in the building and construction industry. Further, the Process will be followed for any grievance or dispute arising out of the interpretation or application of this PLA by the parties except for the prohibition on attorneys contained in 6.11. All decisions made through the Process are final and binding upon all parties.

DISPUTE PROCESS

6.4 Administrative functions under the Process shall be performed through the offices of the President and/or Secretary-Treasurer of the Illinois State Federation of Labor, or their designated representative, called the Administrator. In no event shall any officer, employee, agent, attorney, or other representative of the Illinois Federation of Labor, AFL- CIO be subject to any subpoena to appear or testify at any jurisdictional dispute hearing.

6.5 There shall be no abandonment of work during any case participating in this Process or in violation of the arbitration decision. All parties to this Process release the Illinois State Federation of Labor ("Federation") from any liability arising from its action or inaction and covenant not to sue the Federation, nor its officers, employees, agents or attorneys.

6.6 In the event of a dispute relating to trade or work jurisdiction, all parties, including the employers, Contractors or Subcontractors, agree that a final and binding resolution of the

dispute shall be resolved as follows:

(a) Representatives of the affected trades and the Contractor or Subcontractor shall meet on the job site within two (2) business days after receiving written notice in an effort to resolve the dispute. (In the event there is a dispute between local unions affiliated with the same International Union, the decision of the General President, or his/her designee, as the internal jurisdictional authority of that International Union, shall constitute a final and binding decision and determination as to the jurisdiction of work.)

(b) If no settlement is achieved subsequent to the preceding Paragraph, the matter shall be referred to the local area Building & Construction Trades Council, which shall meet with the affected trades within two (2) business days subsequent to receiving written notice. In the event the parties do not wish to avail themselves of the local Building & Construction Trades Council, the parties may elect to invoke the services of their respective International Representatives with no extension of the time limitations. An agreement reached at this Step shall be final and binding upon all parties.

(c) If no settlement agreement is reached during the proceedings contemplated by Paragraphs “a” or “b” above, the matter shall be immediately referred to the Illinois Jurisdictional Dispute Process for final and binding resolution of said dispute. Said referral submission shall be in writing and served upon the Illinois State Federation of Labor, or the Administrator, pursuant to paragraph 6.4 of this agreement. The Administrator shall, within three (3) days, provide for the selection of an available Arbitrator to hear said dispute within this time period. Upon good cause shown and determined by the Administrator, an additional three (3) day extension for said hearing shall be granted at the sole discretion of the Administrator. Only upon mutual agreement of all parties may the Administrator extend the hearing for a period in excess of the time frames contemplated under this Paragraph. Business days are defined as Monday through Friday, excluding contract holidays.

6.7 The primary concern of the Process shall be the adjustment of jurisdictional disputes arising out of the Project. A sufficient number of Arbitrators shall be selected from list of approved Arbitrators as referenced Sec. 6.2 and shall be assigned per Sec. 6.8. Decisions shall be only for the Project and shall become effective immediately upon issuance and complied with by all parties. The authority of the Arbitrator shall be restricted and limited specifically to the terms and provisions of Article VI and generally to this Agreement as a whole.

6.8 Arbitrator chosen shall be randomly selected based on the list of Arbitrators in Sec. 6.2 and geographical location of the jurisdictional dispute and upon his/her availability, and ability to conduct a Hearing within two (2) business days of said notice. The Arbitrator may issue a "bench" decision immediately following the Hearing or he/she may elect to only issue a written decision, said decision must be issued within two (2) business days subsequent to the completion of the Hearing. Copies of all notices, pleadings, supporting memoranda, decisions, etc. shall be provided to all disputing parties and the Illinois State Federation of Labor.

Any written decision shall be in accordance with this Process and shall be final and binding upon all parties to the dispute and may be a "short form" decision. Fees and costs of the arbitrator shall be divided evenly between the contesting parties except that any party wishing a full opinion and decision beyond the short form decision shall bear the reasonable fees and costs of such full opinion. The decision of the Arbitrator shall be final and binding upon the parties hereto, their members, and affiliates.

In cases of jurisdictional disputes or other disputes between a signatory labor organization and another labor organization, both of which is an affiliate or member of the same International Union, the matter or dispute shall be settled in the manner set forth by their International Constitution and/or as determined by the International Union's General President whose decision shall be final and binding upon all parties. In no event shall there be an abandonment of work.

6.9 In rendering a decision, the Arbitrator shall determine:

(a) First, whether a previous agreement of record or applicable agreement, including a disclaimer agreement, between National or International Unions to the dispute or agreements between local unions involved in the dispute, governs;

(b) Only if the Arbitrator finds that the dispute is not covered by an appropriate or applicable agreement of record or agreement between the crafts to the dispute, he shall then consider the established trade practice in the industry and prevailing practice in the locality. Where there is a previous decision of record governing the case, the Arbitrator shall give equal weight to such decision of record, unless the prevailing practice in the locality in the past ten years favors one craft. In that case, the Arbitrator shall base his decision on the prevailing practice in the locality. Except, that if the Arbitrator finds that a craft has improperly obtained the prevailing practice in the locality through raiding, the undercutting of wages or by the use of vertical agreements, the Arbitrator shall rely on the decision of record and established trade practice in the industry rather than the prevailing practice in the locality; and,

(c) Only if none of the above criteria is found to exist, the Arbitrator shall then consider that because efficiency, cost or continuity and good management are essential to the well being of the industry, the interests of the consumer or the past practices of the employer shall not be ignored.

(d) The arbitrator is not authorized to award back pay or any other damages for a mis-assignment of work. Nor may any party bring an independent action for back pay or any other damages, based upon a decision of an arbitrator.

6.10 The Arbitrator shall set forth the basis for his/her decision and shall explain his/her findings regarding the applicability of the above criteria. If lower ranked criteria are relied upon, the Arbitrator shall explain why the higher-ranked criteria were not deemed applicable. The Arbitrator's decision shall only apply to the Project. Agreements of Record, for other PLA projects, are applicable only to those parties signatory to such agreements. Decisions of Record are those that were either attested to by the former Impartial Jurisdictional Disputes Board or adopted by the National Arbitration Panel.

6.11 All interested parties, as determined by the Arbitrator, shall be entitled to make presentations to the Arbitrator. Any interested labor organization affiliated to the PLA Committee and party present at the Hearing, whether making a presentation or not, by such presence shall be deemed to accept the jurisdiction of the Arbitrator and to agree to be bound by its decision. In addition to the representative of the local labor organization, a representative of the labor organization's International Union may appear on behalf of the parties. Each party is responsible for arranging for its witnesses. In the event an Arbitrator's subpoena is required, the party requiring said subpoena shall prepare the subpoena for the Arbitrator to execute. Service of the subpoena upon any witness shall be the responsibility of the issuing party.

Attorneys shall not be permitted to attend or participate in any portion of a Hearing.

The parties are encouraged to determine, prior to Hearing, documentary evidence which may be presented to the Arbitrator on a joint basis.

6.12 The Order of Presentation in all Hearings before an Arbitrator shall be

I. Identification and Stipulation of the Parties
II. Unions(s) claiming the disputed work presents its case
III. Union(s) assigned the disputed work presents its case
IV. Employer assigning the disputed work presents its case
V. Evidence from other interested parties (i.e., general contractor, project manager, owner)
VI. Rebuttal by union(s) claiming the disputed work
VII. Additional submissions permitted and requested by Arbitrator VIII. Closing arguments by the parties

6.13 All parties bound to the provisions of this Process hereby release the Illinois State Federation of Labor and IDOT, their respective officers, agents, employees or designated representatives, specifically including any Arbitrator participating in said Process, from any and all liability or claim, of whatsoever nature, and specifically incorporating the protections provided in the Illinois Arbitration Act, as amended from time to time.

6.14 The Process, as an arbitration panel, nor its Administrator, shall have any authority to undertake any action to enforce its decision(s). Rather, it shall be the responsibility of the prevailing party to seek appropriate enforcement of a decision, including findings, orders or awards of the Arbitrator or Administrator determining non-compliance with a prior award or decision.

6.15 If at any time there is a question as to the jurisdiction of the Illinois Jurisdictional Dispute Resolution Process, the primary responsibility for any determination of the arbitrability of a dispute and the jurisdiction of the Arbitrator shall be borne by the party requesting the Arbitrator to hear the underlying jurisdictional dispute. The affected party or parties may proceed before the Arbitrator even in the absence or one or more stipulated parties with the issue of jurisdiction as an additional item to be decided by the Arbitrator. The Administrator may participate in proceedings seeking a declaration or determination that the underlying dispute is subject to the jurisdiction and process of the Illinois Jurisdictional Dispute Resolution Process. In any such proceedings, the non-prevailing party and/or the party challenging the jurisdiction of the Illinois Jurisdictional Dispute Resolution Process shall bear all the costs, expenses and attorneys' fees incurred by the Illinois Jurisdictional Dispute Resolution Process and/or its Administrator in establishing its jurisdiction.

ARTICLE VII - WORK STOPPAGES AND LOCKOUTS

7.1 During the term of this PLA, no Union or any of its members, officers, stewards, employees, agents or representatives shall instigate, support, sanction, maintain, or participate in any strike, picketing, walkout, work stoppage, slow down or other activity that interferes with the routine and timely prosecution of work at the Project site or at any other contractor's or supplier's facility that is necessary to performance of work at the Project site. Hand billing at the Project site during the designated lunch period and before commencement or following conclusion of the established standard workday shall not, in itself, be deemed an activity that interferes with the routine and timely prosecution of work on the Project.

7.2 Should any activity prohibited by paragraph 7.1 of this Article occur, the Union shall undertake all steps reasonably necessary to promptly end such prohibited activities.

7.2.A No Union complying with its obligations under this Article shall be liable for acts of employees for which it has no responsibility or for the unauthorized acts of employees it represents. Any employee who participates or encourages any activity prohibited by paragraph 7.1 shall be immediately suspended from all work on the Project for a period equal to the greater of (a) 60 days; or (b) the maximum disciplinary period allowed under the applicable collective bargaining agreement for engaging in comparable unauthorized or prohibited activity.

7.2.B Neither the PLA Committee nor its affiliates shall be liable for acts of employees for which it has no responsibility. The principal officer or officers of the PLA Committee will immediately instruct, order and use the best efforts of his office to cause the affiliated union or unions to cease any violations of this Article. The PLA Committee in its compliance with this obligation shall not liable for acts of its affiliates. The principal officer or officers of any involved affiliate will immediately instruct, order or use the best effort of his office to cause the employees the union represents to cease any violations of this Article. A union complying with this obligation shall not be liable for unauthorized acts of employees it represents. The failure of the Contractor to exercise its rights in any instance shall not be deemed a waiver of its rights in any other instance.

During the term of this PLA, the Prime Contractor and its Subcontractors shall not engage in any lockout at the Project site of employees covered by this Agreement.

7.3 Upon notification of violations of this Article, the principal officer or officers of the local area Building and Construction Trades Council, and the Illinois AFL-CIO Statewide Project Labor Agreement Committee as appropriate, will immediately instruct, order and use their best efforts to cause the affiliated union or unions to cease any violations of this Article. A Trades Council and the Committee otherwise in compliance with the obligations under this paragraph shall not be liable for unauthorized acts of its affiliates.

7.4 In the event that activities in violation of this Article are not immediately halted through the efforts of the parties, any aggrieved party may invoke the special arbitration provisions set forth in paragraph 7.5 of this Article.

7.5 Upon written notice to the other involved parties by the most expeditious means available, any aggrieved party may institute the following special arbitration procedure when a breach of this Article is alleged:

7.5.A The party invoking this procedure shall notify the individual designated as the Permanent Arbitrator pursuant to paragraph 6.8 of the nature of the alleged violation; such notice shall be by the most expeditious means possible. The initiating party may also furnish such additional factual information as may be reasonably necessary for the Permanent Arbitrator to understand the relevant circumstances. Copies of any written materials provided to the arbitrator shall also be contemporaneously provided by the most expeditious means possible to the party alleged to be in violation and to all other involved parties.

7.5.B Upon receipt of said notice the Permanent Arbitrator shall set and hold a hearing within twenty-four (24) hours if it is contended the violation is ongoing, but not before twenty-four (24) hours after the written notice to all parties involved as required above.

7.5.C The Permanent Arbitrator shall notify the parties by facsimile or any other effective written means, of the place and time chosen by the Permanent Arbitrator for this hearing. Said hearing shall be completed in one session. A failure of any party or parties to attend said hearing shall not delay the hearing of evidence or issuance of an Award by the Permanent Arbitrator.

7.5.D The sole issue at the hearing shall be whether a violation of this Article has, in fact, occurred. An Award shall be issued in writing within three (3) hours after the close of the hearing, and may be issued without a written opinion. If any party desires a written opinion, one shall be issued within fifteen (15) days, but its issuance shall not delay compliance with, or enforcement of, the Award. The Permanent Arbitrator may order cessation of the violation of this Article, and such Award shall be served on all parties by hand or registered mail upon issuance.

7.5.E Such Award may be enforced by any court of competent jurisdiction upon the filing of the Award and such other relevant documents as may be required. Facsimile or other hardcopy written notice of the filing of such enforcement proceedings shall be given to the other relevant parties. In a proceeding to obtain a temporary order enforcing the Permanent Arbitrator's Award as issued under this Article, all parties waive the right to a hearing and agree that such proceedings may be ex parte. Such agreement does not waive any party's right to participate in a hearing for a final order of enforcement. The Court's order or orders enforcing the Permanent Arbitrator's Award shall be served on all parties by hand or by delivery to their last known address or by registered mail.

7.6 Individuals found to have violated the provisions of this Article are subject to immediate termination. In addition, IDOT reserves the right to terminate this PLA as to any party found to have violated the provisions of this Article.

7.7 Any rights created by statue or law governing arbitration proceedings inconsistent with the above procedure or which interfere with compliance therewith are hereby waived by parties to whom they accrue.

7.8 The fees and expenses of the Permanent Arbitrator shall be borne by the party or parties found in violation, or in the event no violation is found, such fees and expenses shall be borne by the moving party.

ARTICLE VIII – TERMS OF AGREEMENT

8.1 If any Article or provision of this Agreement shall be declared invalid, inoperative or unenforceable by operation of law or by any of the above mentioned tribunals of competent jurisdiction, the remainder of this Agreement or the application of such Article or provision to persons or circumstances other than those as to which it has been held invalid, inoperative or unenforceable shall not be affected thereby.

8.2 This Agreement shall be in full force as of and from the date of the Notice of Award until the Project contract is closed.

8.3 This PLA may not be changed or modified except by the subsequent written agreement of the parties. All parties represent that they have the full legal authority to enter into this PLA. This PLA may be executed by the parties in one or more counterparts.

8.4 Any liability arising out of this PLA shall be several and not joint. IDOT shall not be liable to any person or other party for any violation of this PLA by any other party, and no Contractor or Union shall be liable for any violation of this PLA by any other Contractor or Union.

8.5 The failure or refusal of a party to exercise its rights hereunder in one or more instances shall not be deemed a waiver of any such rights in respect of a separate instance of the same or similar nature.

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Addendum A

IDOT Slate of Permanent Arbitrators

1. Bruce Feldacker
2. Thomas F. Gibbons
3. Edward J. Harrick
4. Brent L. Motchan
5. Robert Perkovich
6. Byron Yaffee
7. Glenn A. Zipp

Exhibit A - Contractor Letter of Assent

(Date)

To All Parties:

In accordance with the terms and conditions of the contract for Construction Work on [Contract No.], this Letter of Assent hereby confirms that the undersigned Prime Contractor or Subcontractor agrees to be bound by the terms and conditions of the Project Labor Agreement established and entered into by the Illinois Department of Transportation in connection with said Project.

It is the understanding and intent of the undersigned party that this Project Labor Agreement shall pertain only to the identified Project. In the event it is necessary for the undersigned party to become signatory to a collective bargaining agreement to which it is not otherwise a party in order that it may lawfully make certain required contributions to applicable fringe benefit funds, the undersigned party hereby expressly conditions its acceptance of and limits its participation in such collective bargaining agreement to its work on the Project.

(Authorized Company Officer)

(Company)

STORM WATER POLLUTION PREVENTION PLAN

Illinois Department of Transportation

Storm Water Pollution Prevention Plan

Route	Marked Route	Section Number
F.A.P. 821	IL Route 15	13, 13-2 (N-1, TS-1); (41-3)HB2
Project Number	**County**	**Contract Number**
BH-NHPP-910M(937)	Jefferson	78483

This plan has been prepared to comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Permit No. ILR10 (Permit ILR10), issued by the Illinois Environmental Protection Agency (IEPA) for storm water discharges from construction site activities.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature	Date
Kirk H. Brown	10/21/24

Print Name	Title	Agency
Kirk Brown	Region 5 Engineer	Illinois Department of Transportation

Note: Guidance on preparing each section of BDE 2342 can be found in Chapter 41 of the IDOT Bureau of Design and Environment (BDE) Manual. Chapter 41 and this form also reference the IDOT Drainage Manual which should be readily available.

I. Site Description:

A. Provide a description of the project location; include latitude and longitude, section, town, and range:

The project is located at the Interstate 57/64 interchange with Illinois Route 15 on the west side of the City of Mt. Vernon. The project limits along IL Route 15 stretch from the intersection of 45th Street / Potomac Boulevard to the intersection of 44th Street. The project is located in Sections 26 and 35 of Township 2 South, Range 2 East. Latitude 38°18'45"N, Longitude 88°57'6"W.

B. Provide a description of the construction activity which is the subject of this plan. Include the number of construction stages, drainage improvements, in-stream work, installation, maintenance, removal of erosion measures, and permanent stabilization:

The proposed project includes reconstruction of the existing I-57/64 and IL 15 diamond interchange configuration to a diverging diamond interchange configuration along with the replacement of the IL 15 grade separation structure and reconstruction of the associated IL 15 approaches and ramps. Other IL 15 roadway intersections improved besides the interchange ramps in this project include Potomac Boulevard / 45th Street and 44th Street. Improvements include PCC pavement on granular sub-base, PCC shoulders, concrete curb and gutter, concrete medians, sidewalk, entrances, traffic signals, inlets, manholes, storm sewer, culverts, erosion control, earthwork and grading, pavement marking, and landscaping. This project also includes traffic signal improvements at the intersections of Veterans Memorial Drive with the I-57/64 interchange ramps. The project has 10 construction stages.

C. Provide the estimated duration of this project:

Thirty (30) months.

D. The total area of the construction site is estimated to be 69.6 acres.

The total area of the site estimated to be disturbed by excavation, grading or other activities is 48.75 acres.

E. The following are weighted averages of the runoff coefficient for this project before and after construction activities are completed; see Section 4-102 of the IDOT Drainage Manual:

0.60

F. List all soils found within project boundaries; include map unit name, slope information, and erosivity:

Orthents, loamy, undulating: 0 to 5% slopes, K Factor - 0.40
Orthents, loamy, hilly and very hilly: 20 to 60% slopes, K Factor - 0.40

G. If wetlands were delineated for this project, provide an extent of wetland acreage at the site; see Phase I report:

There are no inventoried wetlands within the project limits.

H. Provide a description of potentially erosive areas associated with this project:

Potentially erosive areas include interchange bridge and ramp embankments, drainage ditches, swales and detention areas. These areas are to be covered in seed and mulch and the erosion control plan provides Best Management Practices (BMPs) to minimize erosion from occurring during construction.

I. The following is a description of soil disturbing activities by stages, their locations, and their erosive factors (e.g., steepness of slopes, length of slopes, etc.):

See staging plan sheets for locations of soil disturbance by stage. Embankments will typically be 1:4, but will have slopes as steep as 1:2 approaching bridge abutments. Excavation and grading for removals, pavement, medians, sidewalk, curb and gutter, entrances, storm sewer, and pipe culverts will disturb soil. The proposed typical turf area slopes will be 1:4 or flatter.

J. See the erosion control plans and/or drainage plans for this contract for information regarding drainage patterns, approximate slopes anticipated before and after major grading activities, locations where vehicles enter or exit the site and controls to prevent offsite sediment tracking (to be added after contractor identifies locations), areas of soil disturbance, the location of major structural and non-structural controls identified in the plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands) , and locations where storm water is discharged to surface water including wetlands.

K. Identify who owns the drainage system (municipality or agency) this project will drain into:

City of Mt. Vernon, Illinois Department of Transportation

L. The following is a list of General NPDES ILR40 permittees within whose reporting jurisdiction this project is located:

City of Mt. Vernon

M. The following is a list of receiving water(s) and the ultimate receiving water(s) for this site. In addition, include receiving waters that are listed as Biologically Significant Streams by the Illinois Department of Natural Resources (IDNR). The location of the receiving waters can be found on the erosion and sediment control plans:

Runoff will drain into Illinois Department of Transportation open ditches, storm sewer and detention ponds as well as City of Mt. Vernon open ditches and storm sewer. The ultimate receiving water is the Big Muddy River, which flows into Rend Lake.

N. Describe areas of the site that are to be protected or remain undisturbed. These areas may include steep slopes (i.e., 1:3 or steeper), highly erodible soils, streams, stream buffers, specimen trees, natural vegetation, nature preserves, etc. Include any commitments or requirements to protect adjacent wetlands.

For any storm water discharges from construction activities within 50-feet of Waters of the U.S. (except for activities for water-dependent structures authorized by a Section 404 permit, describe: a) How a 50-foot undisturbed natural buffer will be provided between the construction activity and the Waters of the U.S. or b) How additional erosion and sediment controls will be provided within that area.

There are no areas that require special soil protection and no trees are identified for protection.

O. Per the Phase I document, the following sensitive environmental resources are associated with this project and may have the potential to be impacted by the proposed development. Further guidance on these resources is available in Section 41-4 of the BDE Manual.

None.

☐ 303(d) Listed receiving waters for suspended solids, turbidity, or siltation.
The name(s) of the listed water body, and identification of all pollutants causing impairment:

None.

Provide a description of how erosion and sediment control practices will prevent a discharge of sediment resulting from a storm event equal to or greater than a twenty-five (25) year, twenty-four (24) hour rainfall event:

Maintaining the listed practices in this plan will not increase discharge levels.

Provide a description of the location(s) of direct discharge from the project site to the 303(d) water body:

None.

Provide a description of the location(s) of any dewatering discharges to the MS4 and/or water body:

None.

☐ Applicable Federal, Tribal, State, or Local Programs

☐ Floodplain

☐ Historic Preservation

☐ Receiving waters with Total Maximum Daily Load (TMDL) for sediment, total suspended solids, turbidity or siltation

TMDL (fill out this section if checked above)

The name(s) of the listed water body:

Provide a description of the erosion and sediment control strategy that will be incorporated into the site design that is consistent with the assumptions and requirements of the TMDL:

If a specific numeric waste load allocation has been established that would apply to the project's discharges, provide a description of the necessary steps to meet that allocation:

☐ Threatened and Endangered Species/Illinois Natural Areas (INAI)/Nature Preserves

☐ Other

☐ Wetland

P. The following pollutants of concern will be associated with this construction project:

☒ Antifreeze / Coolants ☒ Solid Waste Debris

- ☒ Concrete
- ☒ Concrete Curing Compounds
- ☒ Concrete Truck Waste
- ☒ Fertilizers / Pesticides
- ☒ Paints
- ☒ Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids)
- ☒ Soil Sediment
- ☒ Solvents
- ☒ Waste water from cleaning construction equipments
- ☒ Other (Specify) Portable Restrooms
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

II. Controls:

This section of the plan addresses the controls that will be implemented for each of the major construction activities described in Section I.C above and for all use areas, borrow sites, and waste sites. For each measure discussed, the Contractor will be responsible for its implementation as indicated. The Contractor shall provide to the Resident Engineer a plan for the implementation of the measures indicated. The Contractor, and subcontractors, will notify the Resident Engineer of any proposed changes, maintenance, or modifications to keep construction activities compliant with the Permit ILR10. Each such Contractor has signed the required certification on forms which are attached to, and are a part of, this plan:

A. **Erosion and Sediment Controls:** At a minimum, controls must be coordinated, installed and maintained to:

1. Minimize the amount of soil exposed during construction activity;
2. Minimize the disturbance of steep slopes;
3. Maintain natural buffers around surface waters, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration, unless infeasible;
4. Minimize soil compaction and, unless infeasible, preserve topsoil.

B. **Stabilization Practices:** Provided below is a description of interim and permanent stabilization practices, including site- specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices may include but are not limited to: temporary seeding, permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided below in II.B.1 and II.B.2, stabilization measures shall be initiated **immediately** where construction activities have temporarily or permanently ceased, but in no case more than **one (1) day** after the construction activity in that portion of the site has temporarily or permanently ceases on all disturbed portions of the site where construction will not occur for a period of fourteen (14) or more calendar days.

1. Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable.

2. On areas where construction activity has temporarily ceased and will resume after fourteen (14) days, a temporary stabilization method can be used.

The following stabilization practices will be used for this project:

- ☒ Erosion Control Blanket / Mulching
- ☒ Geotextiles
- ☒ Permanent Seeding
- ☒ Preservation of Mature Seeding
- ☐ Protection of Trees
- ☐ Sodding
- ☒ Temporary Erosion Control Seeding
- ☒ Temporary Turf (Seeding, Class 7)
- ☒ Temporary Mulching
- ☐ Vegetated Buffer Strips
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

Describe how the stabilization practices listed above will be utilized during construction:

The project is designed to minimize the effects of construction activities that will result in earth disturbing activities causing erosion. The phasing of the construction activities will involve only disturbing what is required and leaving the remainder of the site with established grass cover to be undisturbed. All areas exposed due to construction will utilize temporary erosion control seeding applied with mulch to minimize the potential discharge of sediment.

Describe how the stabilization practices listed above will be utilized after construction activities have been completed:

The permanent stabilization practices will be to establish permanent grass turf to stabilize any disturbance and

control the effects of storm water. A erosion control blanket or mulch will be applied over the permanent seeding. Erosion control blanket will be utilized on steep slopes to prevent erosion and aid in establishment of turf. Geotextiles will be placed under rock outlet protection or riprap. Any areas disturbed by construction that will not be permanently stabilized prior to winter will be temporarily stabilized with an application of temporary seed and mulch.

C. **Structural Practices:** Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include but are not limited to: perimeter erosion barrier, earth dikes, drainage swales, sediment traps, ditch checks, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. The installation of these devices may be subject to Section 404 of the Clean Water Act.

☐ Aggregate Ditch	☐ Stabilized Construction Exits
☐ Concrete Revetment Mats	☐ Stabilized Trench Flow
☐ Dust Suppression	☐ Slope Mattress
☐ Dewatering Filtering	☐ Slope Walls
☐ Gabions	☒ Temporary Ditch Check
☐ In-Stream or Wetland Work	☐ Temporary Pipe Slope Drain
☐ Level Spreaders	☒ Temporary Sediment Basin
☐ Paved Ditch	☐ Temporary Stream Crossing
☐ Permanent Check Dams	☐ Turf Reinforcement Mats
☒ Perimeter Erosion Barrier	☐ Other (Specify) _____
☐ Permanent Sediment Basin	☐ Other (Specify) _____
☐ Retaining Walls	☐ Other (Specify) _____
☒ Riprap	☐ Other (Specify) _____
☐ Rock Outlet Protection	☐ Other (Specify) _____
☐ Sediment Trap	☐ Other (Specify) _____
☒ Storm Drain Inlet Protection	☐ Other (Specify) _____

Describe how the structural practices listed above will be utilized during construction:

Structural practices will be utilized to prevent sediment from being discharged off site. The perimeter barrier will be placed at locations indicated on the plans and will be installed prior to major earth disturbing activities. Storm drain inlet protection will be utilized where completed drains are active inlets to the storm sewer system to prevent infiltration of any sediment. All outfalls will be protected using riprap with a filter fabric blanket. Temporary ditch checks will be utilized in the graded ditches. Temporary sediment basins will be utilized at the downstream ends of large detention areas and/or drainage outlets.

Describe how the structural practices listed above will be utilized after construction activities have been completed:

All permanent outfalls and discharge points will be protected using riprap with a filter fabric blanket. Once permanent vegetation, in the form of grass turf, has been established the temporary measures will be removed.

D. **Treatment Chemicals**

Will polymer flocculants or treatment chemicals be utilized on this project: ☐ Yes ☒ No

If *yes* above, identify where and how polymer flocculants or treatment chemicals will be utilized on this project.

E. **Permanent (i.e., Post-Construction) Storm Water Management Controls:** Provided below is a description of measures that will be installed during the construction process to control volume and pollutants in storm water discharges that will occur after construction operations have been completed.The installation of these devices may be subject to Section 404 of the Clean Water Act.

1. Such practices may include but are not limited to: storm water detention structures (including wet ponds), storm water retention structures, flow attenuation by use of open vegetated swales and natural depressions, infiltration of runoff on site, and sequential systems (which combine several practices).

The practices selected for implementation were determined based on the technical guidance in Chapter 41 (Construction Site Storm Water Pollution Control) of the IDOT BDE Manual. If practices other than those discussed in Chapter 41 are selected for implementation or if practices are applied to situations different from those covered in Chapter 41, the technical basis for such decisions will be explained below.

2. Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., maintenance of hydrologic conditions such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Description of permanent storm water management controls:

The storm water management controls for the project are primarily planned to be open vegetated areas and storm runoff drains into the storm sewer system.

F. **Approved State or Local Laws:** The management practices, controls and provisions contained in this plan will be in accordance with IDOT specifications, which are at least as protective as the requirements contained in the IEPA's Illinois Urban Manual. Procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials shall be described or incorporated by reference in the space provided below. Requirements specified in sediment and erosion site plans, site permits, storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI, to be authorized to discharge under the Permit ILR10 incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.
Description of procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials:

All storm water conveyances are designed to be in compliance with all federal, state, and local laws, ordinances, and procedures.

G. **Contractor Required Submittals:** Prior to conducting any professional services at the site covered by this plan, the Contractor and each subcontractor responsible for compliance with the permit shall submit to the Resident Engineer a Contractor Certification Statement, BDE 2342A.

1. The Contractor shall provide a construction schedule containing an adequate level of detail to show major activities with implementation of pollution prevention BMPs, including the following items:
   - Approximate duration of the project, including each stage of the project
   - Rainy season, dry season, and winter shutdown dates
   - Temporary stabilization measures to be employed by contract phases
   - Mobilization time-frame
   - Mass clearing and grubbing/roadside clearing dates
   - Deployment of Erosion Control Practices
   - Deployment of Sediment Control Practices (including stabilized cons
   - Deployment of Construction Site Management Practices (including concrete washout facilities, chemical storage, refueling locations, etc.)
   - Paving, saw-cutting, and any other pavement related operations
   - Major planned stockpiling operation
   - Time frame for other significant long-term operations or activities that may plan non-storm water discharges as dewatering, grinding, etc
   - Permanent stabilization activities for each area of the project
2. During the pre-construction meeting, the Contractor and each subcontractor shall provide, as an attachment to their signed Contractor Certification Statement, a discussion of how they will comply with the requirements of the permit in regard to the following items and provide a graphical representation showing location and type of BMPs to be used when applicable:
   - Temporary Ditch Checks - Identify what type and the source of Temporary Ditch Checks that will be installed as part of the project. The installation details will then be included with the SWPPP.
   - Vehicle Entrances and Exits - Identify type and location of stabilized construction entrances and exits to be used and how they will be maintained.
   - Material Delivery, Storage and Use - Discuss where and how materials including chemicals, concrete curing compounds, petroleum products, etc. will be stored for this project.
   - Stockpile Management - Identify the location of both on-site and off-site stockpiles. Discuss what BMPs will be used to prevent pollution of storm water from stockpiles.
   - Waste Disposal - Discuss methods of waste disposal that will be used for this project.
   - Spill Prevention and Control - Discuss steps that will be taken in the event of a material spill (chemicals, concrete curing compounds, petroleum, etc.)

- Concrete Residuals and Washout Wastes - Discuss the location and type of concrete washout facilities to be used on this project and how they will be signed and maintained.
- Litter Management - Discuss how litter will be maintained for this project (education of employees, number of dumpsters, frequency of dumpster pick-up, etc.).
- Vehicle and Equipment Fueling - Identify equipment fueling locations for this project and what BMPs will be used to ensure containment and spill prevention.
- Vehicle and Equipment Cleaning and Maintenance - Identify where equipment cleaning and maintenance locations for this project and what BMPs will be used to ensure containment and spill prevention.
- Dewatering Activities - Identify the controls which will be used during dewatering operations to ensure sediments will not leave the construction site.
- Polymer Flocculants and Treatment Chemicals - Identify the use and dosage of treatment chemicals and provide the Resident Engineer with Material Safety Data Sheets. Describe procedures on how the chemicals will be used and identify who will be responsible for the use and application of these chemicals. The selected individual must be trained on the established procedures.
- Additional measures indicated in the plan.

III. Maintenance:

When requested by the Contractor, the Resident Engineer will provide general maintenance guides (e.g., IDOT Erosion and Sediment Control Field Guide) to the Contractor for the practices associated with this project. Describe how all items will be checked for structural integrity, sediment accumulation and functionality. Any damage or undermining shall be repaired immediately. Provide specifics on how repairs will be made. The following additional procedures will be used to maintain, in good and effective operating conditions, the vegetation, erosion and sediment control measures and other protective measures identified in this plan. It will be the Contractor's responsibility to attain maintenance guidelines for any manufactured BMPs which are to be installed and maintained per manufacture's specifications.

The Contractor will be responsible for installing, making inspections, completing relevant compliance forms and maintaining erosion control systems as directed by the Engineer.

During construction, areas outside the construction limits as outlined previously herein shall be protected. The Contractor shall not use this area for staging except as described on the plans and directed by the Engineer, parking of vehicles or construction equipment, storage of materials, or other construction related activities.

1. Within the construction limits, areas that may be susceptible to erosion as determined by the Engineer shall remain undisturbed until full-scale construction is underway to prevent unnecessary soil erosion.

2. Earth stockpiles shall be temporarily seeded if they are to remain unused for more than fourteen days.

3. As construction proceeds, the Contractor shall institute the following as directed by the Engineer:
Place temporary erosion control facilities at locations shown on the plans. Construct swales or ditches and provide temporary erosion control systems.

4. Excavated areas and embankment shall be permanently seeded/sodded immediately after final grading. If not, they shall be temporarily seeded if no construction activity in the area is planned for 7 days.

5. Construction equipment shall be stored and fueled only at designated locations. All necessary measures shall be taken to contain any fuel or other pollutant in accordance with EPA water quality regulations. Leaking equipment or supplies shall be immediately repaired or removed from site.

6. The Contractor shall inspect the project daily during construction activities. Inspection shall also be done weekly after rains of 1/2" or greater or equivalent snowfall and during the winter shutdown period. Additionally, the project shall be inspected by the Contractor on a bi-weekly basis to determine that erosion control efforts are in place and effective and if other erosion control is necessary.

7. Sediment collected during construction in the various temporary erosion control systems shall be disposed of on the site on a regular basis as directed by the Engineer. The cost of this maintenance shall be included in the unit bid price for various temporary erosion control pay items.

8. The temporary erosion control systems shall be removed as directed by the Engineer after use is no longer needed or no longer functioning. The cost of this removal shall be included in the unit bid price for various temporary erosion control pay items.

IV. Inspections:

Qualified personnel shall inspect disturbed areas of the construction site including Borrow, Waste, and Use Areas, which have not yet been finally stabilized, structural control measures, and locations where vehicles and equipment enter and exit the site using IDOT Storm Water Pollution Prevention Plan Erosion Control Inspection Report, BC 2259. Such inspections shall be conducted at least once every seven (7) calendar days and within twenty-four (24) hours of the end of a storm or by the end of the following business or work day that is 0.5 inch or greater or equivalent snowfall.

Inspections may be reduced to once per month when construction activities have ceased due to frozen conditions. Weekly inspections will recommence when construction activities are conducted, or if there is 0.5" or greater rain event, or a discharge due to snowmelt occurs.

If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer shall notify the appropriate IEPA Field Operations Section office by email at: epa.swnoncomp@illinois.gov, telephone or fax within twenty-four (24) hours of the incident. The Resident Engineer shall then complete and submit an "Incidence of Non-Compliance" (ION) report for the identified violation within five (5) days of the incident. The Resident Engineer shall use forms provided by IEPA and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of non-compliance shall be signed by a responsible authority in accordance with Part VI. G of the Permit ILR10.

The Incidence of Non-Compliance shall be mailed to the following address:
Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Compliance Assurance Section
1021 North Grand East
Post Office Box 19276
Springfield, Illinois 62794-9276

V. Failure to Comply:

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of a National Pollutant Discharge Elimination System/Erosion and Sediment Control Deficiency Deduction against the Contractor and/or penalties under the Permit ILR10 which could be passed on to the Contractor.

Storm Water Prevention Plan- BDE 2342- Appendix

I. Site Description:

F. See attached Drainage Plan and Profile Sheets, Interchange Grading Plan Sheets and Erosion Control Sheets for construction limits and drainage patterns. The attached Construction Staging and Maintenance of Traffic Sheets show the sequence of construction; the contractor will be required to work behind temporary concrete barrier for construction of the proposed work. After the subject IDOT contract is awarded, the contractor will determine their means and methods of construction and delivery of materials while ensuring to follow IDOT Plans & Specifications as well as complying with the provisions of the NPDES Permit No. ILR10.

II. Controls:

B. Stabilization Practices: Stabilization efforts must be completed within 14 days of initiation.

G. Contractor Required Submittals:

The Contractor shall additionally provide and ensure the following:

- Shall include spill response procedure and provisions for reporting if there are releases of reportable quantities.
- Shall ensure that regulated hazardous or toxic waste that may be present at the site must be stored and disposed in accordance with any applicable State and Federal regulations.

IV. Inspections:

Additional inspection duties shall be as follows:

- Areas that are inaccessible during inspections due to flooding or other unsafe conditions must be inspected within 72 hours of becoming accessible.
- Disturbed areas, areas used for storage of materials that are exposed to precipitation and all areas where stormwater typically flows within the site shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. All locations where stabilization measures have been implemented shall be observed to ensure that they are still stabilized. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.
- If the SWPPP must be revised as a result of an inspection report, the revisions must be completed within 7 calendar days following inspection.
- A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the SWPPP, and actions taken in accordance with IV.D.4.b above must be made and retained as part of the SWPPP for at least three years from the date that the permit coverage expires or is terminated. All inspection reports must be retained at the construction site. The report must be signed in accordance with Part IV.G of this permit. Any flooding or other unsafe conditions that delay inspections must be documented in the inspection report.

- **Corrective actions** must be taken when:
  - A stormwater control needs repair or replacement; or
  - A stormwater control necessary to comply with the requirements of this permit was never installed, or was installed incorrectly; or
  - Discharges are causing an exceedance of applicable water quality standards; or
  - A prohibited discharge has occurred.

Corrective Actions must be completed as soon as possible and documented within 7 days in an Inspection Report or report of noncompliance. If it is infeasible to complete the installation or repair within 7 calendar days, it must be documented in the records why it is infeasible to complete the installation or repair within the 7-day timeframe and document the schedule for installing the stormwater control(s) and making it operational as soon as feasible after the 7-day timeframe.

In the event that maintenance is required for the same stormwater control at the same location three or more times, the control must be repaired in a manner that prevents continued failure to the extent feasible, and it must be documented the condition and how it was repaired in the records. Alternatively, it must be documented why the specific reoccurrence of this same issue must continue to be addressed as a routine maintenance fix.

Retention of Records

- The permittee must retain copies of SWPPPs and all reports and notices required by this permit, records of all data used to complete the NOI to be covered by this permit, and the Agency Notice of Permit Coverage letter for at least three years from the date that the permit coverage expires or is terminated.
- The permittee must retain a copy of the SWPPP and any revisions to the SWPPP required by this permit at the construction site from the date of project initiation to the date of final stabilization. Any manuals or other documents referenced in the SWPPP must also be retained at the construction site.

- All SWPPPs and all completed inspection forms/reports required under this permit are considered reports that must be available to the public within 30 days upon request. If a SWPPP or inspection form/report cannot be provided, the permittee must respond to the request within 30 days with a statement that explains why the document cannot be provided. The permittee may claim any portion of a SWPPP as confidential.

Illinois Department of Transportation

Contractor Certification Statement

Prior to conducting any professional services at the site covered by this contract, the Contractor and every subcontractor must complete and return to the Resident Engineer the following certification. A separate certification must be submitted by each firm. Attach to this certification all items required by Section II.G of the Storm Water Pollution Prevention Plan (SWPPP) which will be handled by the Contractor/subcontractor completing this form.

Route	Marked Route	Section Number
F.A.P. 821	IL Route 15	13, 13-2 (N-1, TS-1); (41-3)HB2
Project Number	**County**	**Contract Number**
BH-NHPP-910M(937)	Jefferson	78483

This certification statement is a part of SWPPP for the project described above, in accordance with the General NPDES Permit No. ILR10 issued by the Illinois Environmental Protection Agency.

I certify under penalty of law that I understand the terms of the Permit No. ILR 10 that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Additionally, I have read and understand all of the information and requirements stated in SWPPP for the above mentioned project; I have received copies of all appropriate maintenance procedures; and, I have provided all documentation required to be in compliance with the Permit ILR10 and SWPPP and will provide timely updates to these documents as necessary.

☐ Contractor
☐ Sub-Contractor

Signature	Date

Print Name	Title

Name of Firm	Phone

Street Address	City	State	Zip Code

Items which this Contractor/subcontractor will be responsible for as required in Section II.G. of SWPPP

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (*see* 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:
(1) Withholding monthly progress payments;
(2) Assessing sanctions;
(3) Liquidated damages; and/or
(4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than $10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA- 1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act (40 U.S.C. 3141(2)(B)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided,* That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH–1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in 29 CFR part 1, a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is used in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to *DBAconformance@dol.gov*. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

(4) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to *DBAconformance@dol.gov*, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

d. *Fringe benefits not expressed as an hourly rate.* Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided,* That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in § 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

3. Records and certified payrolls (29 CFR 5.5)

a. *Basic record requirements* (1) *Length of record retention.* All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) *Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct 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 of the types described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

(4) *Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. *Certified payroll requirements* (1) *Frequency and method of submission.* The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (*e.g.,* the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH–347 or in any other format desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division website at *https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347/.pdf* or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) *Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR part 3; and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

(4) *Use of Optional Form WH–347.* The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 3729.

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under 29 CFR part 6 any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices* (1) *Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

c. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeyworkers shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility. a. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of 40 U.S.C. 3144(b) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of 40 U.S.C. 3144(b) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, 18 U.S.C. 1001.

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or 29 CFR part 1 or 3; or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or 29 CFR part 1 or 3.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchpersons and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1. of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or

mechanic, including watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1. of this section.

* $31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal- aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of $150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1. **Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

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3. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

* * * * *

4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

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XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B) This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.