61

Letting August 2, 2024

Notice to Bidders, Specifications and Proposal

Contract No. 76818
MADISON County
Section 60-3K-1
Route FAI 270
Project NHFP-U7JU(108)
District 8 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. August 2, 2024 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. 76818
   MADISON County
   Section 60-3K-1
   Project NHFP-U7JU(108)
   Route FAI 270
   District 8 Construction Funds

Reconstruction of the IL 111 and I-270 interchange.

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

FAI ROUTE 270 (I-270)
SECTION NHFP-U7JU(108)
SECTION 60-3K-1
MADISON COUNTY
CONTRACT NO. 76818

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2024

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 1-1-24)

SUPPLEMENTAL SPECIFICATIONS

FAI ROUTE 270 (I-270)
SECTION NHFP-U7JU(108)
SECTION 60-3K-1
MADISON COUNTY
CONTRACT NO. 76818

RECURRING SPECIAL PROVISIONS

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

TABLE OF CONTENTS

STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction," adopted January 1st, 2022, the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," and the "Manual of Test Procedures for Materials" in effect on the date of invitation for bids, and the Supplemental Specifications and Recurring Special Provisions indicated on the Check Sheet included herein which apply to and govern the construction of FAI Route 270 (I-270), Section NHFP-U7JU(108), Section 60-3K-1, Madison County, Contract No. 76818, and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

FAI Route 270 (I-270)
Section NHFP-U7JU(108)
Section 60-3K-1
Madison County
Contract No. 76818

LOCATION OF PROJECT

This project is located at the IL 111 and I-270 Interchange.

DESCRIPTION OF PROJECT

This project consists of the complete reconstruction and reconfiguration of the existing interchange into a proposed diverging diamond interchange. This project consists of the removal of existing pavement and replacing with new PCC pavement, minor HMA resurfacing, storm sewer, culvert extensions, traffic signals, lighting, and other work necessary to complete the project as shown in the plans and described herein.

SUBMITTAL OF EEO/LABOR DOCUMENTATION

Effective: April 2016

This work shall be done in accordance with Check Sheets No. 1, 3, and 5 of the IDOT Supplemental Specifications and Recurring Special Provisions and the Weekly DBE Trucking Reports (BDE) special provision, except as here-in modified.

PAYROLL AND STATEMENT OF COMPLIANCE:

Certified payroll (FORM SBE 48 OR AN APPROVED FACSIMILE) and the Statement of Compliance (FORM SBE 348) shall be submitted by two methods:

1. By Mail (United States Postal Service): The ORIGINAL of the certified payroll and the Statement of Compliance for the Prime Contractor and each Subcontractor shall be submitted by mail to the Regional Engineer for District 8.

2. Electronically: Scan both the ORIGINAL of the certified payroll and the Statement of Compliance to the same PDF file, and email to the District at the email address designated by the District EEO Officer.

SBE 48 and SBE 348 forms shall be submitted weekly and will be considered late if received after midnight seven business days after the payroll ending date.

WEEKLY DBE TRUCKING REPORT:

The Weekly DBE Trucking Report (FORM SBE 723) shall be submitted electronically. Scan the form to a PDF file, and email to the District at the email address designated by the District EEO Officer.

SBE 723 forms shall be submitted weekly and will be considered late if received after midnight ten business days following the reporting period.

MONTHLY LABOR SUMMARY & MONTHLY CONTRACT ACTIVITY REPORTS:

The Monthly Labor Summary Report (MLSR) shall be submitted by one of two methods:

1. For contractors having IDOT contracts valued in the aggregate at $250,000 or less, the report may be typed or clearly handwritten using Form D8 PI0148. Submit the ORIGINAL report by mail to the Regional Engineer for District Eight. Contractors also have the option of using the method #2 outlined below.

2. For contractors having IDOT contracts valued in the aggregate at more than $250,000, the report must be submitted in a specific “Fixed Length Comma Delimited ASCII Text File Format”. This file shall be submitted by e-mail using specific file formatting criteria provided by the District EEO Officer. Contractors must submit a sample text file to District 8 for review at least 14 days prior to the start of construction.

The Monthly Contract Activity Report (MCAR) may be typed or clearly handwritten using Form D8 PI0149.

The MLSR and the MCAR shall be submitted concurrently. If the method of transmittal is method #1 above, then both the MLSR and the MCAR shall be mailed together in the same envelope. If the method of transmittal is method #2 above, then the MCAR shall be scanned to a .pdf file and attached to the email containing the MLSR .txt file.

The MLSR and MCAR must be submitted for each consecutive month, for the duration of the project, and will be considered late if received after midnight ten calendar days following the reporting period.

REQUEST FOR APPROVAL OF SUBCONTRACTOR:

The ORIGINAL and one copy of the Request for Approval of Subcontractor (FORM BC 260A) shall be submitted to the District at the IDOT Preconstruction Conference.

SUBSTANCE ABUSE PREVENTION PROGRAM CERTIFICATION:

The ORIGINAL and one copy of the Substance Abuse Prevention Program Certification (FORM BC 261) shall be submitted to the District at the IDOT Preconstruction Conference.

The Contractor is required to follow submittal procedures as provided by the EEO Officer at the preconstruction conference and to follow all revisions to those procedures as issued thereafter.

If a report is rejected, it is the Contractor's responsibility to make required adjustments and/or corrections and resubmit the report. Reports not submitted and accepted within the established timeframes will be considered late.

Disclosure of this information is necessary to accomplish the statutory purpose as outlined under 23CFR part 230 and 41CFR part 60.4 and the Illinois Human Rights Act. Disclosure of this information is REQUIRED. **Failure to comply with this special provision may result in the withholding of payments to the Contractor and/or cancellation, termination, or suspension of the contract in whole or part.**

This special provision must be included in each subcontract agreement.

ALL HARD COPY FORMS TO BE SUBMITTED TO:

Region 5 Engineer
Illinois Department of Transportation
ATTN: EEO/LABOR OFFICE
1102 Eastport Plaza Drive
Collinsville, IL 62234-6198

Compliance with this special provision shall be included in the cost of the contract, and no additional compensation will be allowed for any costs incurred.

SURVEY MONUMENT COVER ASSEMBLY

Effective: February 5, 1975 *Revised: November 1, 2006*

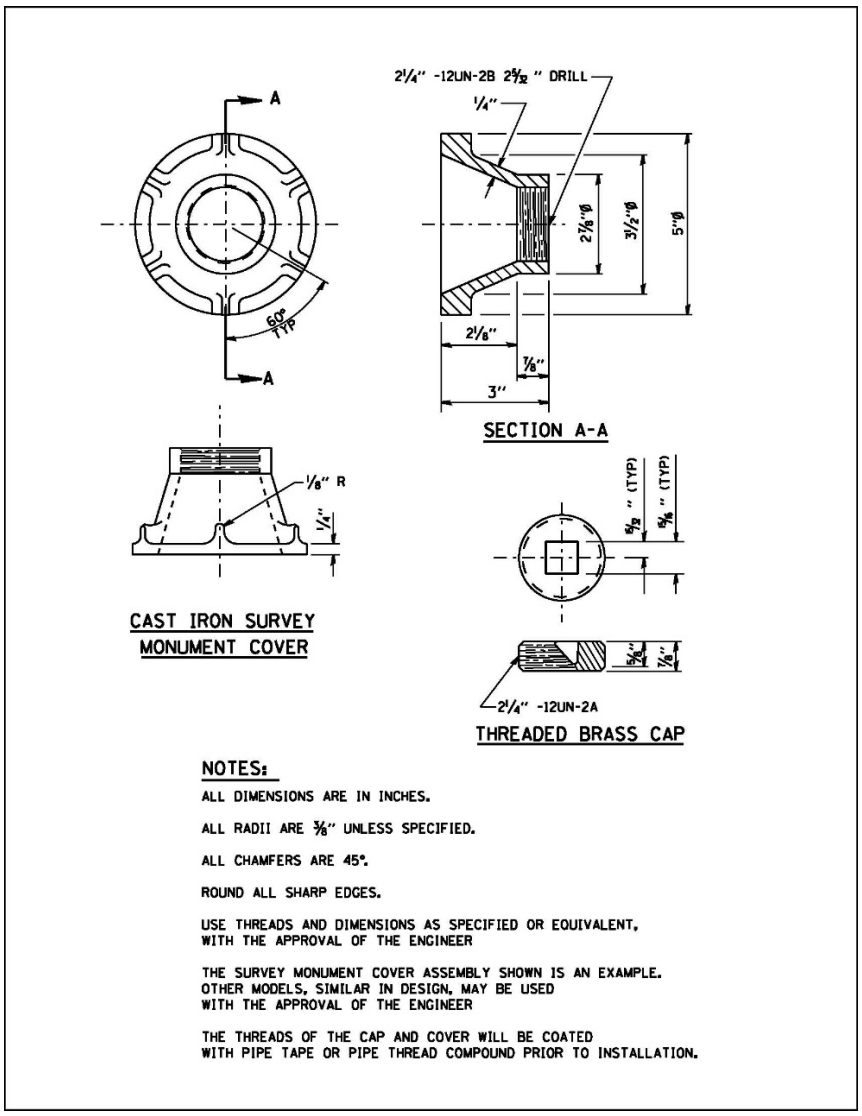
This item shall consist of furnishing and placing a survey monument cover assembly as shown and specified in the plans at all sections, sub-section monuments, landmarks, and pavement alignment control points that might occur in the pavement.

The Contractor may be directed by the Engineer to remove existing HMA surface in trying to relocate and re-establish such monuments or landmarks in the original pavement. All exploration work will not be paid for separately but shall be considered included in the cost of the contract.

The survey monument cover assembly (attached) may require modifications to accommodate the total thickness of HMA surface, existing and/or proposed, on the concrete pavement. In the event the total thickness is greater than 3 in, the Contractor may attach a metal cylinder, in a manner meeting the approval of the Engineer, to accommodate the additional height required. In the event the thickness of proposed resurfacing is less than 3 in the Contractor shall have the option of coring the existing pavement to the depth required to install the assembly or the Contractor may remove the bottom portion of the assembly and attach a metal flange 1 in minimum in width to ensure proper seating.

This work will be paid for at the contract unit price per EACH for SURVEY MONUMENT COVER ASSEMBLY.

The quantity shown in the plans is estimated and has been included to establish a contract unit price. The final pay quantity will be adjusted to the number of assemblies actually needed as determined by the Engineer at the contract unit price bid.



TRAFFIC CONTROL PLAN

Effective: July 12, 1993 *Revised: May 12, 1997*

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

The Contractor shall provide two weeks notice to the Department prior to any lane closures. The Department will provide all lane closure information to Madison County, the City of Granite City, the Village of Pontoon Beach, the Village of Glen Carbon, and the City of Edwardsville.

Special attention is called to Sections 107, 701- 704, and 706 of the Standard Specifications and as amended by the Supplemental Specifications, Recurring Special Provisions, the special provisions contained herein, and the following highway standards relating to traffic control:

701101	701106	701400	701401	701406	701411
701421	701426	701428	701446	701451	701701
701901					

In addition, the following special provisions will also govern traffic control for this project:

Traffic Control and Protection, (Special)
Lane Rental
Peak Hour Restrictions
Temporary Traffic Signal Installation (Special)
SMART Traffic Monitoring System
Maintenance of Detour and Alternate Truck Routes
Short Term and Temporary Pavement Markings
Speed Display
Traffic Spotters
Vehicle and Equipment Warning Lights
Work Zone Traffic Control Lights

TRAFFIC CONTROL AND PROTECTION, (SPECIAL)

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 for the closure of IL 111, the loop ramp closures between IL 111 and I-270, and directional ramp closures between IL 111 and I-270, and alternate and detour route plans as shown in the plans.

This work shall be completed in accordance with Article 107.14 and Section 701 of the Standard Specifications; the Maintenance of Traffic plan sheets (the staging, alternate and detour route, and road closure details in the plans); all applicable highway standards, the special provisions, and as specified herein.

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 standards. This work will not be paid for separately but will be governed by Article 107.25 of the Standard Specifications.

Changeable message signs shall be installed two weeks prior to the IL 111, loop ramp, and directional ramp closures at locations in the plans or as directed by the Engineer.

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 road closures and for any alterations, modifications, or additions necessary to accommodate construction of the various work items shown in the plans.

The furnishing, installing, relocating, and removing of temporary concrete barrier and signing, signing adjustments, changeable message signs, arrowboards, nighttime lighting, temporary striping and removal, temporary impact attenuators, type III barricades, and channelizers per the Standard Specifications; the highway standards; and the staging, alternate and detour routes, and road closure details in the plans will not be paid for separately but included in this bid item.

Basis of Payment. This work will be paid for at the contract unit price per LUMP SUM for TRAFFIC CONTROL AND PROTECTION (SPECIAL).

TEMPORARY TRAFFIC SIGNAL INSTALLATION (SPECIAL)

This work shall consist of furnishing, installing, maintaining, and removing a temporary span wire traffic signal installation at the following intersection:

- IL 157 @ I-270 westbound ramp terminal intersection;

This work Includes, but not limited to, temporary signal heads, vehicle detectors, standby power supply, signal interconnect, and signage in accordance with Section 890 of the Standard Specifications. Temporary signal heads, cable, and other appurtenances shall be provided and installed as directed by the Department. The Contractor shall provide a signal plan and suggested signal timing for review and approval by the Engineer. Upon removal of the temporary traffic signals, the Contractor shall restore all disturbed areas to their original condition, including topsoil, seed/sod, and fertilizer to the satisfaction of the Department.

This work will be paid for at the contract unit price per EACH for TEMPORARY TRAFFIC SIGNAL INSTALLATION (SPECIAL). Following approval of the installation, 60% of the bid price will be paid. The remaining 40% will be paid following removal of the installation. Any charges by the utility company to provide electrical service to the service installation will be paid for according to Article 109.05. The signals shall remain in place through the duration of the project or until the Engineer directs them to be removed.

PEAK HOUR RESTRICTIONS

The Contractor shall have all lanes open to traffic during peak hours along I-270 and IL 111. The Contractor shall not be permitted to conduct any type of operation that would impede the flow of traffic during peak hours. The Contractor shall be permitted to work through the weekends except for those holiday weekends specified in Article 107.09, *not including the closure of IL 111*. However, the peak hours still apply.

Peak hours for I-270:

Monday-Thursday	Westbound	5:00 AM – 8:00 PM
	Eastbound	6:00 AM – 8:00 PM
Friday	Westbound	5:00 AM – 9:00 PM
	Eastbound	6:00 AM – 9:00 PM

Should the Contractor fail to have all lanes open to traffic during the defined peak hours, the Contractor shall be liable and shall pay to the Department $1,000, not as a penalty but as liquidated damages, for every 15-minute interval or portion thereof that the flow of traffic is impeded by the Contractor's operations. The Department will deduct these liquidated damages from any monies due or to become due to the Contractor from the Department.

MAINTENANCE OF DETOUR AND ALTERNATE TRUCK ROUTES

Prior to utilizing Gateway Commerce Center Drive East as an alternate truck route and/or New Poag Road as a detour route, the Contractor shall document the existing condition of both routes via video recording or other video capturing devices. Digital copies of the video shall be provided to the Engineer, the Madison County Engineer, City of Edwardsville Public Works, and Village of Pontoon Beach Public Works for their files.

While the routes are being used as detour or alternate truck routes, the Contractor shall maintain both Gateway Commerce Center Drive East and New Poag Road to a condition equal to or better than the existing condition prior to the roads being utilized as detour or alternate truck routes. Any repairs needed to the detour or alternate truck routes shall be made immediately, as directed by the Engineer.

Upon conclusion of Gateway Commerce Center Drive East and New Poag Road being used as an alternate truck and detour route, the Contractor and the Engineer, including the Madison County Engineer for New Poag Road and the city engineers for the City of Edwardsville and Village of Pontoon Beach, shall jointly inspect the roadways and agree what, if any, repairs shall be performed to the road. The Contractor shall complete those repairs within the allotted five working days.

This work will be paid for according to Article 109.04.

LANE RENTAL

Description. The Contractor will be charged a monetary assessment for each day or part of a day that any lane is closed to traffic in excess of an accumulated total allowed **150** consecutive calendar days to perform all work associated with this contract.

Lane rental will be assessed a minimum of one day for the time the Contractor occupies or obstructs part of the roadway. Lane rental in excess of allotted number of days will be deducted from the monthly progress payments.

Lane Rental. The Contractor will be assessed a minimum of a one day lane rental charge for each lane closure or obstruction during the lane rental day. A lane rental day is defined as a 24 hour period beginning at 6:00 PM.

A lane rental closure will be measured as any lanes, or any part thereof, per direction of travel that is closed to traffic.

Incentive Payment Plan. The Contractor shall be entitled to an incentive payment for the completion of all work necessary to open all lanes to traffic as set forth by the number of days allowed for lane rental in the contract.

The incentive payment shall be paid at the Rate of $25,000 for each day of lane rental less than the amount lane rental days allowed by the Contract. The maximum number of incentive days under this plan will be 20 days.

No lane rental incentive payment will be made if the Contractor fails to complete the work within the days allowed for lane rental or within such extended time allowed for lane rental by the Department. Failure of the Contractor to complete all work as required by the contract within the days allowed for lane rental shall release and discharge the State, the Department, and all of its officers, agents, and employees from any and all claims and demands for the payment of any incentive amount of damages arising from the refusal to pay any incentive amount.

Disincentive Plan (Lane Rental Days Exceeding Allotted Days). The Contractor shall be liable to the Department in the amount of $25,000 for each lane rental day beyond the number of lane rental days allowed in the contract. There is no limit to the number of lane rental days assessed that exceed the allotted days.

Ramp Closure Day. The Contractor can close each ramp, one at a time, for the time shown in the table inclusive to the 150 consecutive lane rental days allowed by this special provision.

Stage 1A (Ramp D): 14 consecutive days
Stage 1B (Ramp A): 14 consecutive days
Stage 1C (Ramp B): 14 consecutive days
Stage 1D (Ramp C): 14 consecutive days

Liquidated Damages (Ramp Closure Days Exceeding Allotted Days). The Contractor shall be liable to the Department in the amount of $25,000 for each full or partial ramp closure day beyond the number of ramp closure days allowed in the contract not as a penalty, but as liquidated

damages. There is no limit to the liquidated damages associated with ramp closure days in excess of the allotted days shown above.

SMART TRAFFIC MONITORING SYSTEM

Description. This work shall consist of furnishing, installing, maintaining, removing, and programming various components of an automated smart traffic monitoring (STM) system. The STM system will be located on the interstate and state highways as shown in the plans and as directed by the Engineer. The general intent is to deploy STM systems in advance of workzones on I-270, both eastbound and westbound, and state highways that may be used as alternate routes. This work shall be performed according to Section 701 of the Standard Specifications, as described herein, and as directed by the Engineer.

Lane Closures. The STM system shall be able to detect traffic slowdowns and stoppages upstream of workzone lane closures at a single location and lane closures at multiple locations and display dynamic messages to alert approaching motorists of the potential need to “Stop Ahead” or “Use Alt Route”.

Schedule. The STM system shall be 100% operable seven calendar days prior to the Contractor’s closing a lane of traffic. The STM system shall be in operation 24 hours a day and 7 days per week until the project is completed or until removal of the system is directed by the Engineer.

Function. The STM system components shall include monitoring devices, changeable message signs, communications equipment, and control software for various communication functions. The STM system shall collect real time vehicle data at various locations prior to and within lane closures and display messages on changeable message signs to alert drivers of stopped traffic ahead. The messages shall be in real time and dynamic based on the data collected at the STM monitoring points.

The STM system shall be able to notify drivers of stopped traffic ahead (speeds less than 30 mph) within two miles of the traffic backup by displaying messages on changeable message signs located along the interstate roadways. The number and location of changeable message signs displaying messages shall be as shown in the plans. The actual message dialog will be determined by the Engineer. Changeable message signs used in the STM system shall have no message displayed except as approved by the Engineer.

Monitoring Devices. The monitoring devices shall be crashworthy as defined by NCHRP 350 or shall be protected by a NCHRP 350 device if placed within the clear zone, 30 feet from the edge of pavement. The monitoring devices shall be independent of all local or regional power unless approved by the Engineer. All communication networks used in the STM system shall be provided by the Contractor. The monitoring devices shall communicate in series and in real time with multiple other monitoring devices and changeable message signs. The number of monitoring devices needed to provide dynamic messages from the system shall be determined by the manufacturer.

Control Software: The control software shall be configurable to meet the project requirements. The control software shall be able to store all information collected by the SMD 24 hours a day

and seven days a week. The software shall include parameters to dynamically trigger in real time new messages on the changeable message signs located on the project.

Changeable Message Signs. The changeable message signs shall be compatible with the communication between the monitoring devices and the control software.

Protection. All communications in the STM system shall be protected to prevent unauthorized personnel from accessing the data or changing the displays on the changeable message signs.

System Communications. When any part of the STM system has not been functioning for ten minutes, the system shall notify the Engineer of the malfunction. Upon the direction of the Engineer, the system will also notify the Contractor and/or the District's Traffic Management Center.

Deficiencies. Any deficiencies in the STM system shall be determined in accordance with Article 105.03(b). Penalties for any deficiencies in the STM system shall be in accordance with Article 105.03(b).

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 SMART TRAFFIC MONITORING SYSTEM.

a. After the STM system is set up and 100% operable, 25% of the pay item will be paid.
b. After each month of use, 65% of the pay item will be paid on a prorated monthly basis. The method for calculating prorated payments will be determined by the Engineer in consideration of the approved progress schedule and the actual progress of the work.
c. After the STM system is completely removed, 10% of the pay item will be paid.

MAINTAINING ITS DURING CONSTRUCTION

This work shall be performed according to the Articles 801.10 and 801.11, and as modified herein and shall consist of maintaining the ITS system within the project limits along I-270 at IL 111 during construction. 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 ITS systems which are part of, or which may be affected by, the work until final acceptance or as otherwise determined by the Engineer.

Before performing any excavation, removal, or installation work (electrical or otherwise) at the site, the Contractor shall initiate a request for a maintenance transfer and preconstruction inspection, as specified elsewhere herein, to be held in the presence of the Engineer and a representative of the party or parties responsible for maintenance of any of the ITS system which may be affected by the work. During the maintenance preconstruction inspection, the party responsible for existing maintenance shall perform testing of the existing system in accordance with Article 801.13d. The Contractor shall request a date for the preconstruction inspection no less than fourteen days prior to the desired date of the inspection.

The Engineer will document all test results and note deficiencies. All substandard equipment will be repaired or replaced by the existing maintenance contractor or the Engineer can direct the Contractor to make the necessary repairs under Section109.04.

Existing ITS 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. The Contractor is responsible 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 limits of the work.

Maintenance of existing ITS Systems. Existing ITS systems include control box, junction boxes, handholes, conduits, and fiber optic cables as shown on the plans. The Contractor is responsible to visit the site and ascertain the extent of effort required for compliance with these specifications, and failure to do so will not be justification for extra payment or reduced responsibilities.

Maintenance of temporary ITS Systems. Existing fiber optic cables that are relocated to temporary poles during construction shall be maintained. The temporary ITS system shall be maintained by the Contractor until the proposed equipment is installed and operational.

Maintenance of proposed ITS Systems. The Contractor shall maintain all existing ITS equipment to remain within the project limits and shall maintain proposed ITS equipment in areas affected by the contract (handholes, conduits, and fiber optic cables), including grounding and connections at enclosures.

Basis of Payment. The Contractor shall demonstrate to the satisfaction of the Engineer that the ITS system is fully operational prior to submitting a pay request. Failure to do so will be grounds for denying the pay request. Months in which the ITS systems are not maintained and not operational will not be paid for. Payment will not be made retroactively for months in which ITS systems were not operational.

This work will be paid for at the contract unit price per CALENDAR MONTH for MAINTAINING ITS DURING CONSTRUCTION.

FIBER OPTIC CABLE IN CONDUIT, 72 COND. S.M. F.O.

This work shall consist of furnishing and installing fiber optic cable in conduit as indicated on the plans. The cable shall be Corning Cable Systems type 072EW4-T3100A20 or approved equivalent (ALTOS fiber optic cable, maximum attenuation of 0.35dB/km at 1310nm, 0.25dB/km at 1550nm).

A minimum of 40 feet of slack cable shall be provided for each handhole nearest to the controller cabinet, 20 feet of slack shall be in each controller cabinet, and 30 feet of slack in all other handholes. The controller cabinet slack cable shall be stored as directed by the Engineer. All other fiber optic cables shall be clearly labeled.

Basis of Payment. This work will be paid for at the contract unit price per FOOT for FIBER OPTIC CABLE IN CONDUIT, 72 COND. S.M. F.O., which price includes furnishing and installing all single mode fiber optic cable in conduit.

FIBER OPTIC TERMINATION IN CABINET

This work shall consist of terminating existing fibers and new fibers and furnishing and installing fiber optic patch panels, cable management hardware, and distribution enclosures in field cabinets or buildings as indicated on the plans. The single mode fibers shall be terminated at each location per the schedule in the plans. All fiber optic cabling shall be clearly labeled. Existing multi-mode fibers located in the ground field controller cabinet and junction boxes that are bare shall also be terminated.

A Corning PCH-04U closet connector housing or approved equivalent shall be provided at each termination point. Required SC simplex connectors shall be included at no additional cost to the Department. All fiber optic patch cables required to light all terminations shall be installed at no additional cost to the Department.

The Contractor shall perform appropriate tests and provide documentation according to the Fiber Optic Cable Splicing, Testing and Acceptance Standards, and Procedures special provision.

Basis of Payment. This work shall be included in the cost of fiber optic cable in conduit, 72 COND. S.M. F.O., including splicing all required multimode and single-mode fibers and testing, supplying, and installing new patch panels, cable management hardware, and distribution enclosures at a cabinet or the TMC building location.

FIBER OPTIC SPLICING IN CABINET

This work shall consist of splicing existing fibers, new fibers, and furnishing and installing distribution enclosures in field cabinets or buildings as indicated on the plans. The single mode fibers shall be spliced at each location per the schedule in the plans. All splices shall be fusion spliced in an environmentally controlled enclosure, and no mechanical splicing shall be accepted. All fiber optic cabling shall be clearly labeled.

Corning PCH-04U closet connector housings and splice tray kits or approved equivalents shall be provided at each splice point as necessary.

The Contractor shall perform appropriate tests and provide documentation according to the Fiber Optic Cable Splicing, Testing and Acceptance Standards, and Procedures special provision.

Basis of Payment. This work shall be included in the cost of fiber optic cable in conduit, 72 COND. S.M. F.O., including terminating all required multimode and single-mode fibers and testing, supplying, and installing new cable management hardware, splice trays, and distribution enclosures at a cabinet or the TMC building location.

FIBER OPTIC CABLE SPLICING, TESTING, AND ACCEPTANCE STANDARDS AND PROCEDURES

During construction, an optical domain reflectometer (OTDR) shall be used to test splices, and an OTDR and a 1-km launch reel (for single mode fiber) or a 300 km launch reel (for multi-mode fiber) shall be used to test pigtail connectors. Such construction tests shall be uni-directional and performed at both 1310 nm and 1550 nm for single mode fiber and at 850 nm for multi-mode fiber. The Contractor may substitute another fiber optic testing device for an OTDR if the device specifications, testing parameters, and reason for using this type of device are submitted for review and approval by the Engineer.

If the loss value of two connectors and the associated pigtail splice exceeds 1dB for single mode fiber or 2 dB for multi-mode fiber, then splice and re-splice until the loss value is 1.0 dB or less or 2 dB or less, respectively.

If the loss value for a splice, when measured in one direction with an OTDR, exceeds 0.15 dB, break the splice and re-splice until the loss value is 0.15 dB or less. If not able to achieve a loss value of 0.15 dB after three total splicing attempts, then the maximum loss value shall be 0.3 dB.

After end-to-end connectivity has been established on the fibers during construction the following shall be completed:

a. Bi-directional end-to-end tests
b. Test continuity to confirm that no fibers have crossed at any splice points
c. Record loss measurements using a light source and a power meter
d. Take OTDR traces and record splice loss measurements

Bi-directional end-to-end tests and OTDR traces shall be performed at both 1310 nm and 1550 nm for single mode fiber and at 850 nm for multi-mode fiber. All losses for each splice point shall be measured, verified, and averaged in both directions.

ODTR Equipment and Settings. The Contractor shall use OTDR equipment and settings that are in the Engineer's opinion suitable for performing accurate measurements of the fiber.

Acceptance Test Deliverables. The Contractor shall provide data sheets or computer media in a format that is readily accessible to the Department containing the following information for the relevant fibers and cable segments for approval prior to connecting any fiber optic hardware:

- Verification of end-to-end fiber continuity with power level readings for each fiber taken with a light source and power meter.
- Verification that the loss at each splice point is below 0.3 dB.
- The final bi-directional OTDR test data, with distances.
- Cable manufacturer, cable type (buffer/ribbon), fiber type, cable reel number, and number and distance of each section of cable between splice points.

The cost of performing the appropriate tests and providing the documentation shall be included in the cost of the fiber optic cable in conduit, 72 COND. S.M. F.O.

ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C

To trace the fiber optic cable after installation, a black insulated copper tracer cable No. 14 shall be installed with the fiber optic cable where there is no other electric cable per the applicable portions of Section 873 of the Standard Specifications. The tracer cable splices are allowed in handholes only. All tracer splices shall be kept to a minimum and shall incorporate maximum lengths of cable supplied by the manufacturer. The tracer cable splice shall be per Section 870 of the Standard Specifications. Conductors shall be spliced in a rigid mold. Rosin core solder shall be used.

Basis of Payment. This work will be paid for at the contract unit price per FOOT for ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C.

FIBER OPTIC UTILITY MARKER (SUPPLIED BY OTHERS) IDENTIFICATION AND INSTALLATION

Marking of the fiber optic in-ground conduit runs will be done to prevent future damage to the fiber backbone. The supplied markers will be placed every 300 feet along the fiber run and at other important junctions, turns, or other areas as specified by the Engineer.

The Contractor shall be supplied unidentified markers by the Department from the IDOT Traffic and Maintenance Yard in Fairview Heights, Illinois. The Contractor shall contact the Brian Sneed at 618-346-3118 to coordinate marker pick-up details two weeks prior to picking up these markers.

The supplied marker's identification shall adhere to the following minimum specifications:

Below the text, "Before digging, trenching, or pushing pipe in this vicinity, call 618-3463233. Failure to comply will result in Legal Action.", there should be a horizontal line and then "MARKER ID NUMBER" with a blank space for the marker ID number to be inserted in the field. The Contractor shall be responsible for adding the marker ID number based on the following template:

557007.84.01F

Where:
5570 = Interstate designation
07.74 = Milepost number to nearest hundredth of mile
01 = Marker number
F = Fiber marker

The marker ID number shall exhibit good workmanship and shall be free of burns, discoloration, and other objectionable marks or defects, which affect appearance or serviceability.

The marker/post shall be installed to a 2 foot burial depth. The warning legend shall be retained on the marker after each impact.

GPS coordinates for every line marker placed will be measured. The coordinates shall be measured in geographic decimal degrees and recorded in a table provided to IDOT in both electronic and hard copy format. GPS coordinate data collection shall continue to fiber termination points at controller cabinets and to the TMC so that all conduit and fiber runs are clearly identified. The conduit, fiber markers, and controller cabinets shall be located with an accuracy level of 18 inches. The fiber optic utility markers, conduit, and controller cabinets shall be distinguishable in the GPS locator device as they are collected, so they are clearly identified in the table provided to the Department.

This work will be paid for at the contract unit price per EACH for FIBER OPTIC UTILITY MARKER.

ETHERNET SWITCH)

Description. This work shall consist of providing a hardened Ethernet switch, including the applicable power supply. Two 10km single-mode fiber optic modules shall be supplied with each Ethernet switch. There are no support requirements associated with this pay item

The Ethernet switch shall meet the following material specifications:

Overall Switch Station Capacity and Flexibility: Managed gigabit Ethernet switch with seven 10/100BaseT(X) ports and three 10/100/1000BaseT(X) or 100/1000BaseSFP combo ports with -40 to 75 °C operating temperature. In addition, the switch shall include a SFP modulewith one 1000BaseLX port with LC connector for 10 km transmission with -40 to 85 °C operating temperature.

Cabling Options: The switch shall be able to utilize a variety of connecting interfaces including 10/100Base(T)X, 10/100/1000Base(T)X, and 1000BaseSX/LX/LHX/ZX (LC connector).

Port Configuration Options: Port configurations shall be accessible via a standard web browser without requiring special vendor software. Port configuration changes shall be possible by personnel without special IT training. The configuration can be done via a console UI, telnet connection or command line interface. All T(X) ports shall provide cable autocross capability.

The Ethernet switch shall be compatible with following network and software requirements:

Networking and Software: The Ethernet switches shall be IEEE802.3/802.3u/802.3ab/ 802.3z/802.3x/802.1D-2004/802.1w/802.1s/802.1Q/802.1p/802.1X/802.3ad compliant. The switch shall support the following standards and software interfaces:

- Redundant fast/gigabit Ethernet ring capability
- IGMP snooping and GMRP for filtering multicast traffic from industrial Ethernet protocols
- Supports IEEE 802.1Q VLAN and GVRP protocol to ease network planning
- Supports QoS-IEEE 802.1p/1Q and TOS/DiffServ to increase determinism
- Supports 802.3ad, LACP for optimum bandwidth utilization
- Supports TACACS+, SNMPv3, IEEE 802.1X, HTTPS, and SSH to enhance network security
- Support EtherNet/IP, PROFINET, and Modbus/TCP protocols for device management and monitoring

- SNMPv1/v2c/v3 for different levels of network management security
- Bandwidth management to prevent unpredictable network status
- Lock port for authorized MAC address access only
- Port mirroring for online debugging
- Automatic warning by exception through e-mail, relay output
- Digital inputs to integrate a sensor and alarm with an IP network
- Automatic recovery of connected device IP addresses
- Line-swap fast recovery

Port Trunking for Flexible Network Connection: Maximum of four trunk groups for all gigabit ports with maximum of eight trunk ports for each trunk group shall be available. The user shall be able to either choose the type of the trunk group to be “Static” or “LACP.”

IP Addressing Approach Options: IP addresses shall be set over the network using BootP/DHCP. The user shall have the capability to disable BootP or DHCP network based IP address changes. In addition, the switch shall support both a serial port and web page based manual (static) addressing approach.

Ethernet Packet Transfer Accuracy and Capacity: The switch shall be capable of forwarding valid Ethernet frames using the store and forward method or equivalent method, and the address table shall have a maximum capacity of 8192 addresses.

Quality of Service Functions Enhance Determinism: The switches shall be able to read IEEE 802.1Q VLAN priority tags and support a minimum of a low, normal, medium, and high priority buffer. High priority messages shall be able to process before low priority messages. It also shall support QoS-IEEE 802.1p/1Q and TOS/DiffServ.

SNMP Traps: The switches shall support sending SNMP messages to maximum two SNMP “Trap” server. The SNMP traps IP addresses shall be settable through a web browser interface.

Multicast Message Control for Filtering Multicast Traffic: The switches shall be able to support IEEE 802.1D-1998 GMRP (GARP multicast registration protocol), and IGMP (internet group management protocol).

Port Access Control Enhances User Authentication: The switches shall support IEEE 802.1X and static port lock for port-base access control.

Accessible IP Settings: It shall allow the user to add or remove “Legal” remote host IP addresses to prevent unauthorized access. Access to switch shall be controlled by IP address. That is, if a host’s IP address is in the accessible IP table, then the host shall be allowed access to the switch.

Additional network and software requirements shall be met:

- IEEE 802.1X, HTTPS, and SSH to enhance network security
- Bandwidth management prevents unpredictable network status
- Port mirroring for online debugging
- Automatic warning by exception through email and relay output
- Digital inputs to integrate sensors and alarms with IP networks
- Automatic recovery of connected device’s IP addresses
- Line-swap fast recovery

- Support EDS-SNMP OPC Server Pro
- Software based IEEE 1588 PTP (Precision Time Protocol) for precise time synchronization of networks
- DHCP Option 82 for IP address assignment with different policies
- Modbus/TCP / EtherNet/IP / PROFINET industrial Ethernet protocols supported
- Supports LLDP (Link Layer Discovery Protocol)
- Turbo Ring™ and Turbo Chain™ (< 20ms recovery time for fast Ethernet ports and < 50 ms recovery time for gigabit Ethernet ports at full load) and STP/RSTP (IEEE 802.1w/D)

The Ethernet Switch shall meet the following general installation requirements:

Mounting: The switch shall be DIN-Rail or wall mountable.

Power supply: Low voltage ranges: 12/24/48 VDC (9.6-60 VDC). In addition, a provision shall be made such that the loss of a power supply may be user configurable to trigger a hardware (i.e. relay contact), SNMP, e-mail, and web page alarms.

Environmental Specifications:

1. Temperature & humidity-The switch shall have operating temperature ranges of 14 °F to 140 °F or -40 °F to 167 °F. In addition, the switch shall be rated to withstand a maximum continuous operating humidity of 95% without condensation.
2. Electronical Noise Immunity: The switch will conform to the IEC 61000-4-2 to 4-8 series of noise specifications as specified below:
    a. IEC 61000-4-2 Electrostatic Discharge: Criterion A
    b. IEC 61000-4-3 Radiated Noise Immunity: Criterion A
    c. IEC 61000-4-4 Fast Transient (Burst) Withstand: Criterion A
    d. IEC 61000-4-5 Surge Voltage: Criterion A
    e. IEC 61000-4-6 Conducted Noise Interference: Criterion A
    f. IEC 61000-4-8 Electromagnetic Field withstand: Criterion A
    g. IEC 61000-4-12
    h. IEC 61000-4-29
3. Shock & Vibration: The operating shock rating shall conform to IEC 60068-2-27 and withstand a 15 g, 11 ms duration, and 18 shocks. In addition, the operating vibration spec shall conform to IEC 60068-2-6 (Criterion 3) at 1 mm, 2 Hz - 13.2 Hz, 90 min.; 0.7g, 13.2 Hz - 100 Hz, 90 min.; 3.5 mm, 3 Hz - 9 Hz, 10 cycles, 1 octave/min.; 1g, 9 Hz - 150 Hz, 10 cycles, 1 octave/min.

Switch shall be compliant with IEC 62443-4-2

The Ethernet switch shall meet the following hardware-based diagnostics and user interface requirements:

- Alarm contact: The switch shall contain an alarm contact that can be configured via standard web browser to annunciate the drop out of either or both power supply inputs and/or to annunciate the active link status of any combination of ports. A Fault LED will be provided to indicate the status of the alarm contact.
- LED Indications
- Diagnostic display for internal switch status
- Serial Port: The switch shall include a USB serial port that can be accessed by computers

with hyper terminal or equivalent capability. The serial console connection manner shall require a short USB cable applied to connect the switch to a PC's USB port.

The Ethernet switch shall meet the following security requirements:

- Port Disable: Unused ports shall be able to be disabled to prevent unauthorized access.
- It shall support IEEE 802.1X and SSL to enhance network security.
- Switch configuration password protection
- https/SSL

The Ethernet switch shall have following communication redundancy:

- The switch shall be able to detect and compensate for the failure of another switch, cable disruption or hardware failure of one or more ports.
- IEEE standards b,ased redundancy, including IEEE 802.1D/W spanning tree
- Turbo Ring: Gigabit Ethernet redundant ring capability (Turbo Ring V2: recovery time <20ms for fast Ethernet ports; < 50 ms for Gigabit Ethernet ports). Ring coupling function to integrate different Turbo Ring for distributed application
- Turbo Chain function for a multiple-ring architecture (recovery time <20ms for fast Ethernet ports; <50 ms for gigabit Ethernet ports).

The Ethernet switch shall be compatible with following software suite that assists with installation, operation, maintenance, and diagnostics of the existing network:

- The switch must be compliant with a mass configuration tool: The tool must contain a security wizard for convenient setup of security-relatedparameters. The tool must allow for topology analysis to eliminate manual setting errors and must contain a configuration overview for efficient management.
    - The switch shall be compliant with network management software (NMS). The NMS must allow for auto-discovery of network devices and physical connections. The NMS must allow for event playback for quick troubleshooting and must allow for color-coded VLAN/IGMP groups and other visualized network data. The NMS must allow for a security view for the security status of network devices and must support a mobile app for remote monitoring and notification.
    - The switch must be compliant with a stand-alone data collection tool to take networksnapshots for quick troubleshooting. The collection tool must allow for the ability to compare network and device data and then highlight the differences.

Construction. The Contractor shall deliver the Ethernet switches, power supplies, and fiber optic modules to the District 8 headquarters. It is the Contractor's responsibility to coordinate the delivery location and time with District 6 Operations at the phone numbers, 618-346-3175

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

HANDHOLES

Add the following to Section 814 of the Standard Specifications.

The handhole cover shall be labeled “ITS" with legible raised letters.

All conduits shall enter the handhole at a minimum depth of 30 inches. However, the depth of conduit from detector locations located less than 5 feet from the handhole may be less than 30 inches.

All cable hooks shall be hot-dipped galvanized in accordance with AASHTO Specification M111. Hooks shall be a minimum of 3/8-inch diameter and extend into the handhole at least 6 inches. Hooks shall be placed a minimum of 12 inches below the lid, or lower if additional space is required. All cable hooks shall be secured with a retaining nut tightened against the handhole concrete.

This work will be paid for at the contract unit price per EACH for HANDHOLE, PORTLAND CEMENT CONCRETE.

REMOVE FIBER OPTIC CABLE FROM CONDUIT

Description. This work shall consist of removing single mode fiber optic cables from existing ducts along SB I-270. The Contractor shall cap vacated ducts for installation of the new fiber optic cable.

Removal. The fiber optic cable shall be removed from conduit according to Section 895 of the Standard Specifications. This work shall consist of removing the fiber optic cable from a conduit without damage to the fiber or conduit.

Basis of Payment. This work will be paid for at the contract unit price for per FOOT for REMOVE FIBER OPTIC CABLE FROM CONDUIT.

REMOVAL OF TEMPORARY WOOD POLES AND FIBER OPTIC CABLE

Description. This work shall consist of removing temporary wood poles and fiber optic trunk lines used to temporarily connect the fiber optic system impacted by construction. The temporary fiber system shall not be removed until the proposed fiber optic cable has been installed and tested.

Removal. All equipment and material removed as part of this item shall become the property of the Contractor and shall be removed from the site. The void caused by the removal of the pole shall be backfilled with suitable excavated material approved by the Engineer. Backfill shall be deposited uniformly and not to exceed 6 in. thick loose measure and compacted.

Basis of Payment. This work will be paid for at the contract unit price per LUMP SUM for REMOVAL OF TEMPORARY WOOD POLES AND FIBER OPTIC CABLE.

TEMPORARY WOOD POLE

Description. This item consists of furnishing, installing, and removing a temporary wood pole and all hardware and accessories required for the intended temporary use of the pole as specified herein.

Materials. Materials shall be according to the following Sections of the Standard Specifications.

(a) Light Pole Identification..... 1069.06
(b) Wood Pole..... 1069.04

Construction Requirements

Installation. Installation shall be as described in Article 830.03(c). Wood poles may be used as described in Article 830.04 and as approved by the Engineer.

Method of Measurement. Wood poles will be measured per each pole installed.

Basis of Payment. This work will be paid for at the contract unit price per EACH for TEMPORARY WOOD POLE, of the class and length indicated.

REMOVE AND REINSTALL EXISTING CCTV CAMERA AND EQUIPMENT

Description. This work shall consist of removing and reinstalling an existing CCTV camera and equipment cabinet from a sign structure to a permanent CCTV camera pole with all hardware, accessories, and connections required for permanent use. The existing camera shall be removed from its existing location and reinstalled at the new location as shown on the plans, as described herein, and as directed by the Engineer. This item shall also include the installation of existing cables in new conduit, reconnection of existing cables at the new location, mounting hardware, and appurtenances associated with the existing CCTV camera to be removed and reinstalled as required for a complete installation.

Removal. The existing CCTV camera, equipment cabinet, conduits, cables, and all associated connections shall be disconnected and removed from the existing sign structure. No work shall be permitted without approval from the Engineer. The existing CCTV camera and mounts shall be removed with care to prevent damage. Removal will include all incidental work and items associated with the CCTV camera for a complete removal.

Reinstallation. The CCTV camera shall be installed on the camera pole at the location shown on the plans and at the direction of the Engineer. The reinstallation of the camera and associated cables and hardware shall occur in a timely manner to minimize the downtime of the camera’s operation.

Construction. This work shall be closely coordinated with construction staging. The existing camera shall be removed from the existing location and reinstalled at the new location shown on the plans and as directed by the Engineer.

The Contractor shall demonstrate to the satisfaction of the Engineer that the existing CCTV camera, related equipment, and cables have been properly installed, protected, and maintained and that the appropriate data is being transmitted to the Traffic Management Center. The Contractor must demonstrate that the equipment is working as intended following inspection by the Engineer.

Basis of Payment. This work will be paid for at the contract unit price per LUMP SUM for REMOVE AND REINSTALL EXISTING CCTV CAMERA AND EQUIPMENT.

CCTV CAMERA STRUCTURE

Description. This work shall consist of furnishing a CCTV camera structure complete with a camera lowering device. The structure shall be a galvanized steel structure as shown in the plans.

Definitions.

- CCTV Camera Structure: The complete camera structure and lowering device as one integral working system.
- Shaft: The camera structure shaft.
- Lowering Device: The components involved with the mounting, operating, raising, and lowering of the CCTV camera.
- Structure Height: The height of the structure shall be measured as indicated on the detail drawings.

Deflection. The design of the structure shaft shall achieve a maximum, fully loaded deflection no greater than 1 inch at the top of the structure.

Submittals and Certifications. The structure shall be designed in accordance with 2001 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals with a wind pressure for a 90 mph wind zone with a 1.3 gust factor as shown in Appendix C. The pole shall be designed for use with a single arm camera lowering device with a total effective area of 2 square feet and total weight of 95 lbs. The structure shall not exceed 1” deflection in a 30 mph (non-gust) wind.

The camera structure shall be designed and constructed so no structural member or other component is applied in excess of the manufacturer's recommended rating (when applicable) or the published rating, whichever is lower.

Shop drawings, product data ,and certifications shall be submitted. The submitted information shall be complete and shall include information relative to all specified requirements suitable for verification of compliance.

The submittals shall be arranged and cross-referenced to the special provisions and standard specifications. Failure to cross-reference the submittal information with the special provisions will result in the submittal being returned without review.

The submittal information shall be dated, current, project specific, and identified as to the project and shall also include the following calculations and certifications as applicable to the material utilized:

- Shaft design calculations, including registered engineer certification.
- Certification of intent to provide domestic steel in accordance with Article 106.01 of the Standard Specifications.
- Welding details and procedures.
- Letter of intent to provide specified weld inspection reports.
- Confirmation of coordination between anchor rod supplier and the structure manufacturer for adequacy of anchor rod assembly.
- Manufacturer's recommended installation procedures.
- Letter of intent to provide manufacturer's representative during installation and to provide specified installation certification.

All certifications shall be notarized.

Shaft. The pole shall be a maximum of three sections for field assembly. The pole shafts shall be a round cross section and meet the requirements of ASTM A595 grade A with a minimum yield strength of 55,000 psi. The bottom section shall have a minimum .3125" wall thickness and a minimum diameter of 23". The three shafts' sections shall taper at a rate of .14" per foot and have an overall height of 80'. The pole base plate shall meet the requirements of ASTM A36 and be arranged to accommodate four 1 ½" x 54" x 6" anchor bolts on a 27" bolt circle. Anchor bolts shall conform to ASTM F1554 gr. 55

The pole assembly shall be equipped with a 6" x 27" reinforced handhole opening with a three gauge cover and shall be attached with four ¼"-20 hex head stainless steel screws. The bottom of the handhole shall be located 14" from the bottom. The handhole frame shall meet ASTM A529 grade 50 and shall be made from ¾" x 3 ½" bar. There shall be a 3/8" diameter rod for wire tie off located at the top of the opening and 1 ¾" from the front of the handhole frame and a ½" tapped hole located 1 ¾" from the front of the frame at the bottom of the opening as shown on the drawing.

Six 1" inner diameter eye rings for power and communication cables are required as shown on the drawing. Two shall be located 38" up from the bottom, two located 6" below the top of the bottom shaft, and two 6" below the top of the center shaft.

There shall be a 3 ½", schedule 40 (4" O.D.), pipe tenon 11 ¾" tall on a 3/8" thick plate welded to the top of the pole. The pipe tenon shall include a 1 ¾" x 5 ¼" slot and two 5/8" holes as shown on the drawing to accommodate the camera lowering system arm assembly. A J-hook shall be included inside the top of the tenon assembly and shall include a removable cast aluminum pole top.

Camera Lowering Device. The camera lowering system shall be designed to support and lower a standard closed circuit television camera, lens, housing, PTZ mechanism, cabling, connectors, and other supporting field components without damage or causing degradation of camera

operations. The camera lowering system device and pole are interdependent and must be considered a single unit or system. The lowering system shall consist of a pole, suspension contact unit, divided support arm, and a pole adapter for attachment to a pole top tenon, pole top junction box, conduit mount adapter, and camera connection box.

The divided support arm and receiver brackets shall be designed to self-align the contact unit with the pole center line during installation and to ensure the contact unit cannot twist under high wind conditions. For maximum arm strength, round support arms are not acceptable. The camera-lowering device shall withstand wind forces of 100 mph with a 30% gust factor using a 1.65 safety factor. The lowering device manufacturer, upon request, shall furnish independent laboratory testing documents certifying adherence to the stated wind force criteria utilizing, as a minimum effective projected area, the actual EPA or an EPA greater than that of the camera system to be attached.

The camera-lowering device to be furnished shall be the product of a manufacturer with a minimum of three years of experience in the successful manufacturing of camera lowering systems. The lowering device provider shall be able to identify a minimum of three previous projects where the purposed system has been installed successfully for over a one-year time period each.

The lowering device manufacturer shall furnish a factory representative to assist the Contractor with the assembly and testing of the first lowering system onto the pole assembly. The manufacturer shall furnish the applicable DOT engineer documentation certifying that the Contractor has been instructed on the installation, operation, and safety features of the lowering device. The Contractor shall be responsible for providing applicable maintenance personnel onsite operational instructions.

Suspension Contact Unit. The suspension contact unit shall have a load capacity of 200 lbs. with a 4 to 1 safety factor. There shall be a locking mechanism between the fixed and moveable components of the lowering device. The movable assembly shall have a minimum of two latches. This latching mechanism shall securely hold the device and its mounted equipment. The latching mechanism shall operate by alternately raising and lowering the assembly using the winch and lowering cable. When latched, all weight shall be removed from the lowering cable. The fixed unit shall have a heavy duty cast, tracking guide and means to allow latching in the same position each time. The contact unit housing shall be weatherproof with a gasket provided to seal the interior from dust and moisture.

The prefabricated components of the lift unit support system shall be designed to preclude the lifting cable from contacting the power or video cabling. The lowering device manufacturer shall provide a conduit mount adapter for housing the lowering cable. This adapter shall have an interface to allow the connection of a contactor provided 1.25 inch PVC conduit and be located just below the cable stop block at the back of the lowering device. The Contractor shall supply internal conduit in the pole as directed by the lowering device manufacturer. The only cable permitted to move within the pole or lowering device during lowering or raising shall be the stainless-steel lowering cable. All other cables must remain stable and secure during lowering and raising operations.

The female and male socket contact halves of the connector block shall be made of Hypalon. The female brass socket contacts and the male high conductivity brass pin contacts shall be permanently molded into the polymer body.

The current carrying male contacts shall be 1/8 inches in diameter. There shall be two male contacts that are longer than the rest which will make first and break last providing optimum grounding performance. The number of contacts shall be a minimum of 14 and shall be fully coordinated with the camera specified elsewhere herein.

The current carrying female contacts shall be 1/8 inches I.D. All the contacts shall be recessed 0.125” from the face of the connector. Cored holes in the socket measuring 0.25” in diameter and 0.125” deep molded into the connector body are centered on each contact on the face of the connector to create rain-tight seals when mated with the male connector.

The wire leads from both the male and female contacts shall be permanently and integrally molded in the Hypalon body. The current carrying and signal wires molded to the connector body shall be constructed of #18/1 AWG Hypalon jacketed wire. The contacts shall be self-wiping with a shoulder at the base of each male contact so that it will recess into the female block, thereby giving a rain-tight seal when mated. The facility manufacturing the electrical contact connector must comply with Mil Spec Q-9858 and Mil Spec I-45208.

Lowering Tool. The camera-lowering device shall be operated by using a portable lowering tool. The tool shall consist of a lightweight metal frame and winch assembly with cable as described herein; a quick release cable connector; an adjustable safety clutch; and a variable speed, industrial duty, electric drill motor. This tool shall be compatible with accessing the support cable through the handhole of the pole. The lowering tool shall attach to the pole with one single bolt. The tool will support itself and the load assuring lowering operations and provide a means to prevent freewheeling when loaded. The lowering tool shall be delivered to the State upon project completion. The lowering tool shall have a reduction gear to reduce the manual effort required to operate the lifting handle to raise and lower a capacity load. The lowering tool shall be provided with an adapter for operating the lowering device by a portable drill using a clutch mechanism. The lowering tool shall be equipped with a positive breaking mechanism to secure the cable reel during raising and lowering operations and prevent freewheeling. The manufacturer shall provide a variable speed, heavy-duty, reversible drill motor and a minimum of two complete lowering tools plus any additional tools required by plan notes. The lowering tool shall be made of durable and corrosion resistant materials, powder coated, galvanized, or otherwise protected from the environment by industry-accepted coatings to withstand exposure to a corrosive environment.

Camera Junction Box. The camera junction box shall be a two-piece clamshell design with one hinge side and one latch side to facilitate easy opening. The general shape of the box shall be cylindrical to minimize the EPA. The camera junction box shall be cast aluminum with stabilizing weights on the outside of the box to increase room on the interior. The box shall be capable of having up to 40 pounds of stabilizing weights. The bottom of the camera junction box shall be drilled and tapped with a 1-1/2” NPT thread to accept industry standard dome housings and be able to be modified to accept a wide variety of other camera mountings. The junction box shall be gasketed to prevent water intrusion. The bottom of the box shall incorporate a screened and vented hole to allow airflow and reduce internal condensation.

Materials. All pulleys for the camera lowering device and portable lowering tool shall have sealed self-lubricated bearings, oil tight bronze bearings, or sintered-oil impregnated, bronze bushings. The lowering cable shall be a minimum 1/8-inch diameter stainless steel aircraft cable with a minimum breaking strength of 1740 pounds with seven strands of 19 wire each.

All electrical and video coaxial connections between the fixed and lowerable portion of the contact block shall be protected from exposure to the weather by a waterproof seal to prevent degradation of the electrical contacts. The electrical connections between the fixed and movable lowering device components shall be designed to conduct high frequency data bits and one volt peak to-peak video signals as well as the power requirements for operation of dome environmental controls.

The interface and locking components shall be made of stainless steel and or aluminum. All external components of the lowering device shall be made of corrosion resistant materials, powder coated, galvanized, or otherwise protected from the environment by industry-accepted coatings to withstand exposure to a corrosive environment.

The camera manufacturer shall provide weights and/or counterweights as necessary to ensure that the alignment of pins and connectors are proper for the camera support to be raised into position without binding. The lowering unit will have sufficient weight to disengage the camera and its control components in order to be lowered properly.

Installation of the lowering device and camera shall be included as a part of this item and shall not be paid for separately.

Method of Measurement**.** This work shall be measured per each with all appurtenances installed.

Basis of Payment. This work will be paid for at the contract unit price per EACH for CLOSED CIRCUIT TELEVISION CAMERA STRUCTURE, GALVANIZED STEEL, of the mounting height specified.

CLOSED CIRCUIT TELEVISION CAMERA STRUCTURE FOUNDATION, 30” DIAMETER

Description. This work shall consist of constructing a reinforced concrete foundation, of the dimensions indicated, complete with raceways. The foundation depth shall be as indicated in the Foundation Depth Table on the plans where applicable, as otherwise shown on the plans, or as directed by the Engineer. The foundation shall include boring/excavation, reinforcement, concrete, grout, anchor bolts, nuts, washers, raceways, and clean up and restoration of the location when such work is not provided under other paid items.

Materials. Reinforcement bars shall comply with Article 706.10 of the Standard Specifications.

Unless otherwise indicated, anchor bolts shall comply with the requirements of ASTM Designation A 687. Unless otherwise indicated, nuts shall be hexagon nuts in conformance with ASTM A 194 grade 2H or ASTM A563 grade DH, and washers shall be in conformance with ASTM F436. The entire length of the anchor bolts as well as the nuts and washers shall be hot dip galvanized in accordance with the requirements of ASTM Designation A 153.

Unless otherwise indicated, conduit raceways shall be heavy wall, rigid, PVC conduit, Schedule 40 UL listed, and in conformance with NEMA TC2 and Federal Specification WC 1094A. Raceways shall be of the number and size as indicated.

Construction Requirements. The foundation depths shall be as directed by the Engineer based upon evaluation of the soil conditions encountered. The Engineer may determine soil condition by visual inspection or, where practical, using a pocket penetrometer and will establish foundation depth based upon the Foundation Depth Table shown on the plans, where applicable.

The hole for the foundation shall be made by drilling with an auger of the same diameter as the foundation. The foundation shall be cast in place and allowed to cure for ten days minimum before the light pole is erected. If soil conditions require the use of a liner to form the hole, the liner shall be withdrawn as the concrete is deposited. The top of the foundation shall be constructed level so that no shims or other leveling device will be needed to set the light standard plumb on the foundation. A liner or form shall be used to produce a uniform smooth side to the top of the foundation. Foundation top shall be chamfered 3/4 inch unless otherwise indicated.

Extreme care shall be used in establishing the top elevation of concrete foundations, especially when foundations are installed before final grading is complete. Foundations shall not protrude above grade more than the limits indicated on the plans, except for specifically indicated locations. Where not otherwise indicated, foundation shall not protrude above grade more than 4 inches above a 60-inch chord centered at the foundation at any point around the circumference. Where foundation heights extend beyond specified limits, the Engineer may direct replacement of the foundation, and the incorrect foundation will not be measured for payment.

The steel reinforcement, the raceway conduits, and the anchor bolts shall be secured in place to each other and properly positioned in the augered hole so that at time of pouring the concrete mixture in place the above said components retain their proper positions. Special attention shall be paid to the positioning of the anchor bolts. It is of utmost importance that the anchor bolt projections on top of the foundation, after placement of the concrete, remain in a perfectly vertical position.

Method of Measurement. This work will be measured for payment in feet in place. The length measured will be limited to that shown on the plans or authorized by the Engineer.

Basis of Payment. This work will be paid for at the contract unit price per FOOT for CLOSED CIRCUIT TELEVISION CAMERA STRUCTURE FOUNDATION, 30” DIAMETER.

PORTLAND CEMENT CONCRETE PAVEMENT 11” (JOINTED)

Description. Proposed IL 111 from Station 17+25.00 to 48+00.00 and the ramps to and from I-270 shall be constructed of PCC pavement with additional thicknesses removed by grinding.

Construction Requirements. This pavement shall be constructed according to Section 420, except as follows.

This section of pavement is to be placed nominally 1/4 in. thicker than the final profile grades and thickness shown on the plans to allow for diamond grinding and grooving of the surface according to the Diamond Grinding, Grooving, and Surface Testing special provision. The final pavement thickness after diamond grinding and grooving shall be the nominal 11 in. and within the thickness tolerance required in Article 420.15. The final pavement profile after diamond grinding and grooving shall be as shown in the plans.

The location of the tie bars and dowel bars shall be according to Standard 420001, consistent with the final 11 in. slab thickness, and shall meet the tolerance requirements of Article 420.08.

The sealing of joints shall be according to Article 420.12, but shall be delayed until after the diamond grinding, grooving, and surface testing is completed.

Protective coat shall be applied according to Article 420.18, except that the entire surface shall be treated regardless of the date of construction and the age of the pavement. The protective coat shall be applied after grinding, grooving, and surface testing, but prior to opening to traffic.

Surface testing shall be performed according to the Diamond Grinding, Grooving, and Surface Testing special provision.

Basis of Payment. This work will be paid for at the contract unit price per SQUARE YARD for PORTLAND CEMENT CONCRETE PAVEMENT 11" (JOINTED). No additional compensation will be allowed for the additional pavement thickness.

Diamond grinding and grooving will be paid for separately.

DIAMOND GRINDING, GROOVING, AND SURFACE TESTING

Description. This work shall consist of diamond grinding, grooving, and surface testing a section of PCC and HMA pavement as described herein.

The PCC pavement to receive diamond grinding, grooving, and surface testing includes all the 11" jointed PCC pavement built on this contract. Diamond grinding shall be used to remove a nominal 1/4 in. thickness, provide a pavement surface that meets the lines and grades shown on the plans, and conform to the smoothness criteria described herein.

Equipment. Equipment shall be according to the following.

Diamond Grinding and Grooving Machine. The diamond grinding and grooving machine shall be a self-propelled planing machine specifically designed for diamond saw grinding and grooving. It shall be capable of accurately and automatically establishing the profile grade and shall have a positive means for controlling cross slope. It shall also have an effective means for removing excess material and slurry from the surface and for preventing dust from escaping into the air. The diamond grinding and grooving machine shall not cause strain or damage to the surface.

The grinding head shall be a minimum of 3 ft wide, and the diamond saw blades shall be gang mounted on the grinding head at a rate of 50 blades/ft.

The grooving blades shall be either mounted within the grinding head to be used concurrently with the grinding operation or on a separate head for use in a second operation. The grooving pattern shall produce longitudinal grooves 1/8 in. wide and 3/16 in. ± 1/16 in. deep at 3/4 in. centers.

Pavement Surface Test Equipment. This equipment shall meet the requirements of the Surface Testing of Pavements – IRI special provision.

Construction Requirements.

Pavement Grinding and Grooving. When the proposed staging and maintenance of traffic allows and at a time approved by the Engineer, the roadway section noted earlier in this special provision shall be ground over its entire length and width. The maximum thickness removed shall be 1/4 in. However, when the roadway thickness noted on the plans can be maintained as a minimum, additional removal thickness may be permitted.

The vertical difference between longitudinal passes shall be 1/8 in. maximum. The grinding at the ends of the roadway section shall be diminished uniformly at a rate of 1:480 over the adjacent pavement. Grinding shall be extended as needed onto the existing gutters at the same cross slope as the roadway pavement to maintain proper drainage of the pavement and shoulders.

Grinding and grooving shall be continuous through all joints. When sealed joints are specified, grinding shall be completed prior to final installation of the joint sealer.

Surface Tests**.** Surface testing shall be completed according to the Surface Testing of Pavements – IRI special provision, except as follows. The finished surface of the pavement shall be tested for smoothness once the pavement has been ground to the final grade and cross slope.

For pavement that is corrected by removal and replacement, the minimum length to be removed shall meet the requirements of either class A or B patching.

For trace evaluation and smoothness assessment purposes, a singular lane of mainline IL 111 or each ramp as described herein shall be considered one roadway section.

Method of Measurement. his work will be measured for payment in place, and the area computed in square yards of diamond grinding and grooving performed.

Protective coat 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 DIAMOND GRINDING AND GROOVING (ROADWAY SECTION).

Delete the fourth paragraph of Article 420.20 of the Standard Specifications.

Protective coat will be paid for at the contract unit price per SQUARE YARD for PROTECTIVE COAT.

3D MODEL FEEDBACK

Description: This contract has been prepared utilizing a 3D model in MicroStation by IDOT. The 3D model will be provided to the Contractor at the preconstruction meeting by the Department. IDOT is requesting that the Contractor provide written feedback regarding the 3D model and its effectiveness for use in construction. The Contractor must review the 3D model and complete all questions listed in this special provision. Feedback will be provided at the progress meetings with IDOT.

Questions:

1) Please explain the usefulness of the 3D model provided and how the Contractor will utilize 3D models during construction. Please provide specific feedback on each of the following parts of the 3D model:

- Project content file
- DGN sheet files
- Separate LandXML files for each roadway alignment and profile
- DGN files that include:
    - -All geometry elements
    - -Terrain model of PR roadway subgrade
    - -Terrain model of PR finished grade
    - -Terrain model of EX ground surface
    - -Corridor Models that include component meshes and 3D linear features for all alignments (for finished grade and subgrade)
    - Roadway template library (ITL) file
    - Survey raw data files

2) How useful was the storm sewer drainage model? Describe when and for what purpose it was used for.

3) Will the Contractor QA/QC this 3D model and utilize it in their machines, or will a new model be created by the Contractor?

4) Is the information provided in the 3D model sufficient, or is there additional information that is needed to implement it in the Contractor's machines and that would be beneficial for the Contractor to have?

5) For what size of scope of work is it beneficial to provide a 3D model? Should it only be for large intersection reconstruction and added lane corridor improvements, or will smaller projects benefit from a 3D model?

6) What problems were encountered when utilizing the 3D model?

7) If the original 3D model was modified or redone by the Contractor, please provide the final model to the Engineer who will then provide it to the designer.

This work will be included in the cost of the contract, and no additional compensation will be allowed.

AVAILABILITY OF ELECTRONIC FILES

Effective 10/16 Revised 12/11/19

Electronic files of this project will be made available to the Contractor after contract award. 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.

TEMPORARY LIGHTING SYSTEM

This work shall consist of providing a temporary lighting system at the project locations specified in the plans. The Contractor shall provide all labor, material, and equipment necessary to furnish, install, maintain, and remove the temporary lighting system and shall pay all utility charges associated with it. This work shall also include the relocation of temporary lighting facilities as necessary to accommodate the various stages of construction and removal of all temporary lighting facilities at the completion of the project. All work shall be performed in accordance with the plans and Standard Specifications, as directed by the Engineer, and as described herein.

The Contractor shall submit for the District's approval, 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. Any modifications by the Contractor to the lighting design shall meet the requirements of Chapter 56 of the Department's BDE Design Manual, and no poles shall be installed until the Contractor's revised detailed lighting design plan is approved by the Engineer.

No temporary lighting facilities shall be purchased until the Contractor has submitted shop drawings and received the Engineer's approval to proceed. All temporary lighting facilities shall become property of the Contractor and shall be removed from the site at no additional cost. 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 of how many times temporary and/or permanent lighting facilities are relocated. The Contractor shall provide

the Engineer the names and phone numbers of two people available for call-out work on the lighting system 24 hours per day, seven days per week.

Cable splicing, luminaire fusing, and lightning protection shall be submitted for District approval. All work required to keep the temporary and/or permanent lighting systems operational shall be included in the cost of the contract. No lighting circuit or portion thereof shall be removed from nighttime operation without the approval of the Engineer. The connection of some exiting lighting units to the temporary lighting units as shown on the plans shall be included as part of this work.

An inspection and approval by the Engineer shall take place before the temporary lighting system or modified system is approved for operation. Any damage to the existing lighting units and their circuitry as a result of the Contractor's workmanship 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 be responsible for all costs associated with providing service to the lighting system as the project progresses through the various stages of construction and circuit orientation changes including all costs of coordinating with the local utility for new and/or relocated electric service and metering.

The Contractor shall pay all energy charges associated with the lighting. 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. The only energy charges which will be considered for reimbursement by the Department are those associated with existing or permanent lighting facilities that are identified and agreed to by the Engineer in writing at the time the Contractor's detailed lighting design plan is approved.

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

PIPE CULVERTS (JACKED)

This work shall consist of furnishing and installing by jacking pipe culverts of the required size at locations shown on the plans. This work shall be done according to Section 552 of the Standard Specifications. Except, pipe culverts will be jacked rather than storm sewers, and metal liners are required and not optional.

Pipe culverts jacked in place will be measured for payment in feet in place, which price shall include the pipe culvert; metal liner; backfilling all voids between the pipe culvert and metal liner; all other materials, labor, and equipment necessary to install the pipe culvert; and all excavation except excavation in rock. Excavation in rock will be measured for payment as specified in Article 502.12.

This work will be paid for at the contract unit price per FOOT for PIPE CULVERTS (JACKED), of the class and diameter specified.

Excavation in rock will be paid for as specified in Article 502.13 for rock excavation for structures.

OUTLET PROTECTOR

Description: This work shall consist of constructing underdrain outlet protectors consisting of reinforced concrete aprons, 6” pipe underdrain, and rodent shields. This work shall be done in accordance with the applicable portions of Sections 601 and 606, the plan details, and in accordance with the Engineer.

All connections from the proposed roadway underdrain to the outlet protection shall be made with fittings manufactured for the pipe being used, including any transitions in pipe material and size. All excavation and disposal of earth material shall be included in the cost of the miscellaneous items used for this work.

Basis of Payment: This work will be paid for at the contract unit price per CUBIC YARD for CLASS SI CONCRETE PIPE UNDER DRAIN OUTLET, the contract unit price per EACH for RODENT SHIELDS, and the contract unit price per POUND for REINFORCEMENT BARS.

INLETS, TYPE B, WITH FRAME AND GRATE (SPECIAL)

Description: This work shall consist of constructing inlets with frame and grates with reinforced concrete aprons. This work shall be done in accordance with the applicable portions of Section 602 of the Standard Specifications; Standards 602306, 602601, 604101; and the plan details. Castings shall meet the requirements of Section 1006.15 of the Standard Specification and the dimensions of a type 37 frame and grate as shown in the plans and as approved by the Engineer.

Basis of Payment: This work will be paid for at the contract unit price per EACH for INLETS, TYPE B, WITH FRAME AND GRATE (SPECIAL).

FILLING EXISTING CULVERTS

This work shall consist of filling six existing box and pipe culverts located as shown in the plans with controlled low strength material meeting the requirements Section 593 of the Standard Specifications.

The culverts shall be plugged on both ends with a plug material meeting the approval of the Engineer. The plug shall be adequate to withstand the hydrostatic load created during the filling operation. If the plugs fail during the filling operation, the Contractor shall be responsible for the cost of repairing the plugs and filling the remainder of the culvert.

The culvert to be filled shall be measured for payment in place, and the volume computed in cubic yards.

This work shall be paid for at the contract unit price per CUBIC YARD for FILLING EXISTING CULVERTS.

UNDERDRAIN CONNECTION TO STRUCTURE

Description: This work shall consist of outletting pipe underdrains, type 1, 4" to proposed or existing drainage structures as shown on the plans and details. This work shall be done in accordance with the applicable portions of Section 601, 602, and 606 of the Standard Specifications.

Basis of Payment: This work will be paid for at the contract unit price per EACH for UNDERDRAIN CONNECTION TO STRUCTURE.

FENCE REMOVAL

This work shall consist of removing portions of an existing fence and its appurtenances at locations shown in the plans or as directed by the Engineer. This work shall be completed according to the applicable portions of Section 201 of the Standard Specifications and as noted herein. The Contractor will be required to transport all removed material off the jobsite as specified in applicable portions of Article 202.03 of the Standard Specifications.

Method of Measurement: This work shall be measured for payment in feet along the base of the existing fence.

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

TREE REMOVAL (SPECIAL)

This work shall be done according to Section 201 of the Standard Specifications for tree removal, except that all trees have been previously felled by others.

Stump Removal. This work shall be done in accordance with Section 201 of the Standard Specifications for tree removal, except that stumps are to be removed to a minimum of 12 inches below the natural surface of the ground, and surface roots shall be ground out. All excess chips and debris from this operation shall be removed from state right-of-way.

Method of Measurement. Stumps to be removed as a payment item will be measured per unit of diameter where one unit is equal to 1 inch at flush with the ground. Surface roots will not be measured for payment.

Basis of Payment. This work will be paid for by the contract unit price per UNIT for TREE REMOVAL (SPECIAL).

EARTH EXCAVATION

This work shall consist of the excavation and transportation of suitable excess excavated material to the NW quadrant of the IL 3/I-270 interchange. The exact location to be determined by the Engineer.

This work will be included in the cost for earth excavation.

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 and 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.

Site 3565-1 – ROW, I-270 between M.M. 0.9 and M.M. 9.2, Madison, Granite City, Pontoon Beach, Glen Carbon, and unincorporated Chouteau and Edwardsville Townships

- Station 24+30 to Station 26+10 (IL 111), 0 to 115 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(5). COC sampling parameter: Pentachlorophenol.
- Station 28+00 to Station 34+10 (IL 111), 0 to 100 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(5). COCs sampling parameters: Benzo(a)pyrene, manganese and TVOCs.
- Station 34+10 to Station 36+05 (IL 111), 0 to 100 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(c). COC sampling parameter: Manganese.
- Station 44+15 to Station 46+15 (IL 111), 0 to 55 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(c). COC sampling parameter: Manganese.
- Station 17+25 to Station 19+15 (IL 111), 0 to 80 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(c). COC sampling parameter: Manganese.
- Station 19+15 to Station 21+25 (IL 111), 0 to 80 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(2). COC sampling parameter: Lead.
- Station 21+25 to Station 23+32 (IL 111), 0 to 125 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(5). COCs sampling parameters: Benzo(a)pyrene and manganese.
- Station 25+18 to Station 27+06 (IL 111), 0 to 140 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(c). COCs sampling parameters: Manganese and pH.

- Station 27+06 to Station 29+90 (IL 111), 0 to 100 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(1). COCs sampling parameters: Manganese and lead.
- Station 32+85 to Station 35+10 (IL 111), 0 to 130 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(c). COCs sampling parameters: Manganese and pH.
- Station 35+10 to Station 39+05 (IL 111), 0 to 120 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(c). COC sampling parameter: Manganese.
- Station 41+10 to Station 45+10 (IL 111), 0 to 175 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(c). COC sampling parameter: Manganese.
- Station 8+13 to Station 10+10 (Existing Ramp C1), 40 feet LT to 50 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(c). COC sampling parameter: Manganese.
- Station 13+90 to Station 15+00 (Existing Ramp C1), 40 feet LT to 50 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(c). COC sampling parameter: Manganese.
- Station 9+00 to Station 10+90 (Existing Ramp C2), 50 feet LT to 70 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(c). COCs sampling parameters: Manganese and pH.
- Station 9+49 to Station 12+20 (Existing Ramp C5), 65 feet LT to 65 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(c). COC sampling parameter: Manganese.
- Station 3+00 to Station 4+75 (Existing Ramp C6), 50 feet LT to 100 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(c). COC sampling parameter: Manganese.
- Station 9+00 to Station 11+00 (Existing Ramp C6), 40 feet LT to 30 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(c). COC sampling parameter: Manganese.
- Station 12+00 to Station 13+90 (Existing Ramp C8), 35 feet LT to 60 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(b)(1). COC sampling parameter: pH
- Station 15+98 to Station 18+00 (Existing Ramp C8), 30 feet LT to 80 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(c). COC sampling parameter: Manganese.
- Station 3+00 to Station 5+90 (Existing Ramp C7), 50 feet LT to 50 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(c). COC sampling parameter: Manganese.
- Station 10+00 to Station 10+77 (Existing Ramp C4), 30 feet LT to 40 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(1). COCs sampling parameters: Manganese and lead.
- Station 16+56 to Station 18+50 (Existing Ramp C4), 40 feet LT to 30 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(c). COCs sampling parameter: Manganese.
- Station 8+00 to Station 10+00 (Existing Ramp C3), 40 feet LT to 50 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(b)(1). COC sampling parameter: pH.

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 following work zones apply for the following ISGS PESA Sites**: None.**

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).

THREE WEEK NOTIFICATION PRIOR TO STARTING WORK

In order to provide the public with adequate notification of the pending construction, revise the first sentence of Article 107.09 Public Convenience and Safety to the following. "The Contractor shall notify the Engineer at least 21 days in advance of starting any construction work which might in any way inconvenience or endanger traffic, so arrangements may be made, if necessary, for closing the road and providing suitable detours."

ARCHAEOLOGICAL COORDINATION

The Contractor shall be made aware that this project has been cleared for archaeology. However, there is the potential for archaeological deposits within the project limits. The Contractor shall notify Thomas J. Loebel, Illinois State Archaeological Survey, at 773-704-4184 two weeks prior to installing the east and west storm sewer trunk lines along IL 111 from Sta 18+50 to 38+50.

The Illinois State Archaeological Survey will monitor excavations for the presence of archaeological deposits. Excavations will need to be halted if archaeological deposits or human remains are encountered and will resume after compliance with applicable state and federal laws. Once the excavations are complete, the Illinois State Archaeological Survey will submit a report to the Department.

Additional compensation or the extension of the contract time will not be allowed for the progress of work items affected by the lack of such coordination by the Contractor.

Basis of Payment: All expenses incurred by the Contractor for this coordination and by reason of compliance with these requirements shall be considered as included in and completed covered by the contract unit prices for the various items included in the contract.

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

Effective: May 22, 2002 Revised: March 1, 2024

Add the following to Article 895.05 of the Standard Specifications:

“The traffic signal equipment which is to be removed and is to become the property of the Contractor shall be disposed of outside the right-of-way at the Contractor’s expense.

All equipment to be returned to the State shall be delivered by the Contractor to the State's traffic signal maintenance contractor's main facility. The Contractor shall contact the State's electrical maintenance contractor to schedule an appointment to deliver the equipment. No equipment will be accepted without a prior appointment. All equipment shall be delivered within 30 days of removing it from the traffic signal installation. The Contractor shall provide one hard copy and one electronic file of a list of equipment that is to remain the property of the State, including model and serial numbers where applicable. The Contractor shall also provide a copy of the plan or special provision showing the quantities and type of equipment. Controllers and peripheral equipment from the same location shall be boxed together (equipment from different locations may not be mixed), and all boxes and controller cabinets shall be clearly marked or labeled with the location from which they were removed. If equipment is not returned according to these requirements, it will be rejected by the State's electrical maintenance contractor. The Contractor shall be responsible for the condition of the traffic signal equipment from the time the Contractor takes maintenance of the signal installation until approval by the Department. A delivery receipt will be signed by the State's electrical maintenance contractor indicating the items have been returned.

The Contractor shall safely store and arrange for pick up or delivery of all equipment to be returned to agencies other than the State. The Contractor shall package the equipment and provide all necessary documentation as stated above.

Traffic signal equipment which is lost, damaged, or not returned to the Department for any reason shall be replaced with new equipment meeting the requirements of these specifications at no cost to the contract.”

CONTROLLER CABINET

This work shall be in conformance with Sections 857 and 895 of the Standard Specifications for Road and Bridge Construction, except as modified herein. This specification sets forth the minimum requirements for a TS2 type 1 traffic control modular cabinet assembly. The cabinet assembly shall meet, as a minimum, all applicable sections of the NEMA Standard Publication No. TS2-2003. Where differences occur, this specification shall govern.

Cabinet Design and Construction. The cabinet shall be constructed from type 5052-H32 aluminum with a minimum thickness of 0.125 inches.

The cabinet shall be designed and manufactured with materials that will allow rigid mounting, whether intended for pole, base, or pedestal mounting. The cabinet must not flex on its mount. A

rain channel shall be incorporated into the design of the main door opening to prevent liquids from entering the enclosure. The cabinet door opening must be a minimum of 80% of the front surface of the cabinet. A stiffener plate shall be welded across the inside of the main door to prevent flexing. The top of the cabinet shall incorporate a 1-inch slope toward the rear to prevent rain accumulation.

Unless otherwise specified, the cabinet shall be supplied with a natural aluminum finish. Sufficient care shall be taken in handling to ensure that scratches are minimized. All surfaces shall be free from weld flash. Welds shall be smooth; neatly formed; and free from cracks, blowholes, and other irregularities. All sharp edges shall be ground smooth.

Where painted cabinets are specified, the exterior shall be degreased and primed with a spray applied iron phosphate coat equivalent to a four-stage iron phosphate coat prior to painting. The final coat shall consist of a powder coat paint (TGIC or equivalent) applied with a minimum thickness of 2 mils.

All seams shall be sealed with RTV sealant or equivalent material on the interior of the cabinet.

All cabinets shall be supplied with a minimum of one removable shelf manufactured from 5052-H32 aluminum. Shelf shall be a minimum of 10 inches deep. The shelf shall have horizontal slots at the rear and vertical slots at the front of the turned downside flange. The shelf shall be installed by first inserting the rear edge of the shelf on the cabinet rear sidewall mounting studs, then lowering the shelf on the front sidewall mounting studs. The shelf shall be held in place by a nylon tie-wrap inserted through holes on the front edge of the shelf and around the front sidewall mounting studs. The front edge of the shelf shall have holes punched every 6 inches to accommodate tie-wrapping of cables/harnesses.

A minimum of one set of vertical "C" channels shall be mounted on each interior wall of the cabinet for the purpose of mounting the cabinet components. The channels shall accommodate spring mounted nuts or studs. All mounting rails shall extend to within 7 inches of the top and bottom of the cabinet. Sidewall rail spacing shall be 7.88 inches center-to-center. Rear wall rail spacing shall be 18.50 inches center-to-center.

The main door and police door-in-door shall close against a weatherproof and dust-proof, closed-cell, neoprene gasket seal. The gasket material for the main door shall be a minimum of 0.250 inches thick by 1.00 inch wide. The gasket material for the police door shall be a minimum of 0.250 inches thick by 0.500 inches wide. The gaskets shall be permanently bonded to the cabinet.

The lower section of the cabinet shall be equipped with a louvered air entrance. The air inlet shall be large enough to allow sufficient air flow per the rated fan capacity. Louvers must satisfy the NEMA rod entry test for 3R ventilated enclosures. A non-corrosive, vermin- and insect-proof, removable air filter shall be secured to the air entrance. The filter shall fit snugly against the cabinet door wall.

The roof of the cabinet shall incorporate an exhaust plenum with a vent screen. Perforations in the vent screen shall not exceed 0.125 inches in diameter.

The main door on a size 3 or larger cabinet shall be equipped with a three-point latching mechanism.

The handle on the main door of the cabinet shall be manufactured from cast aluminum or stainless steel. The handle shall include a hasp for the attachment of an optional padlock. The cabinet door handle shall rotate counterclockwise to open. The handle shall not extend beyond the perimeter of the main door at any time. The lock assembly shall be positioned so that the handle shall not cause any interference with the key when opening the cabinet door.

The main door hinge shall be a one-piece, continuous piano hinge with a stainless-steel pin running the entire length of the door. The hinge shall be attached in such a manner that no rivets or bolts are exposed.

The main door shall include a mechanism capable of holding the door open at approximately 90, 145, and 165 degrees under windy conditions. The main door of a size 3 or 4 cabinet shall include a mechanism capable of holding the door open at approximately 90 and 165 degrees under windy conditions. The cabinet may be provided with two doors, one front and one back.

The main door shall be equipped with a Corbin tumbler lock number 1548-1 or exact equivalent with a minimum of two keys supplied. The police door-in-door shall be provided with a treasury type lock Corbin No. R357SGS or exact equivalent and have a minimum of one key.

All base mounted cabinets require anchor bolts to properly secure the cabinet to its base. The cabinet flange for securing the anchor bolts shall not protrude outward from the bottom of the cabinet. When a size 3, 4, or 5 cabinet is base mounted, two anchor bolts shall be required for proper installation. For size 6 and 7 cabinets, four anchor bolts shall be required for proper installation.

The main door shall incorporate a shroud to cover the filtered louvered openings as appropriate for the design. The assembly is secured on the interior of the door over the filtered louvers. The shroud is louvered downward and matches the door louvers.

All enclosures must be constructed, approved, and marked in accordance with the requirements for type 1 industrial control panel enclosures contained in UL 508A, Standard for Industrial Control Panels. Enclosure must meet NEMA 3R rating requirements and be marked with an UL approval sticker.

Terminals and Facilities/Main Panel Design and Construction. The main panel shall be constructed from 5052-H32 brushed aluminum of 0.125 inches minimum thickness and installed to minimize flexing when plug-in components are installed. All 8-, 12-, and 16-position main panels are provided with a mounting mechanism which allows easy access to all wiring on the rear of the panel. Lowering of the main panel can be accomplished without the use of hand tools. Complete removal can be accomplished using simple hand tools.

The terminals and facilities for this project shall be in the following configuration:

- Configuration #4 - 16 load switch sockets, six flash transfer relay sockets, one flasher socket, two- BIU sockets, one 16-channel detector rack with one BIU, and one type-16 MMU.

All load switch and flash transfer relay socket reference designators shall be silk-screen labeled on the front and rear of the main panel to match drawing designations. Socket pins shall be marked for reference on the rear of the panel.

A maximum of eight load switch sockets may be positioned horizontally or stacked in two rows on the main panel. Main panels requiring more than eight load switch sockets shall be mounted in one horizontal row.

All load switches shall be supported by a bracket extending at least half the length of the load switch.

The 4- and 8- load switch position main panels shall have all field wires contained within one or two rows of horizontally mounted terminal blocks.

The 12- and 16-load switch position main panels shall have all field wires contained on two rows of horizontally mounted terminal blocks. The upper row shall be wired for the pedestrian and overlap field terminations. The lower row shall be reserved for phase one through phase eight vehicle field terminations. As an alternate, a 12 or 16 position horizontal main panel and field terminal configuration may be used.

All field output circuits shall be terminated on a non-fused barrier type terminal block with a minimum rating of 10 amps.

All field input/output (I/O) terminals shall be identified by permanent alphanumerical labels. All labels shall use standard nomenclature per the NEMA TS2 specification.

It shall be possible to flash either the yellow or red indication on any vehicle movement and to change from one color indication to the other by use of a screwdriver.

Field terminal blocks shall be wired to use four positions per vehicle or overlap phase (green, yellow, and red, flash). It shall not be necessary to de-buss field terminal blocks for flash programming.

The main panel shall contain at least one flasher socket (silk screen labeled) capable of operating a 15-amp, two-pole, NEMA solid-state flasher. The flasher shall be supported by a bracket extending at least half its length.

One RC network shall be wired in parallel with each group of three flash-transfer relays and any other relay coils.

All logic-level, NEMA-controller, and MMU input and output terminations on the main panel shall be permanently labeled. Cabinet prints shall identify the function of each terminal position.

At a minimum, three 20-position terminal blocks shall be provided at the top of the main panel to provide access to the controller unit's programmable and non-programmable I/O. Terminal blocks for DC signal interfacing shall have a number 6-32 x 7/32-inch screw as a minimum.

All main panel wiring shall conform to the following wire size and color:

- Green/Walk load switch output - brown wire - 14 gauge
- Yellow load switch output - yellow wire - 14 gauge
- Red/Don't Walk load switch - red wire output - 14 gauge
- MMU (other than AC power) - violet wire - 22 gauge
- Controller I/O - blue wire - 22 gauge

- AC Line (power panel to - black wire main panel) - 8 / 10 gauge
- AC Line (main panel) - black wire - 10 gauge
- AC Neutral (power panel to - white wire main panel) - 8 / 10 gauge
- AC Neutral (main panel) - white wire - 10 gauge
- Earth ground (power panel) - green wire - 8 gauge
- Logic ground - gray wire - 22 gauge
- Flash programming - Orange wire
- Flasher terminal - Black wire red or yellow field terminal - 14 gauge

All wiring, 14 AWG and smaller, shall conform to MIL-W-16878/1, type B/N, 600V, 19-strand tinned copper. The wire shall have a minimum of 0.010 inches thick PVC insulation with clear nylon jacket and rated to 105 °C. All 12 AWG and larger wire shall have UL listed THHN/THWN 90 °C, 600V, 0.020 inches thick PVC insulation, and clear nylon jacketed.

Connecting cables shall be sleeved in a braided nylon mesh or poly-jacketed. The use of exposed tie-wraps or interwoven cables is unacceptable.

All terminals and facilities configurations shall be provided with BIU wiring assignments consistent with NEMA TS2-1998 specifications. All terminals and facilities configurations shall be provided with sufficient RS-485 port 1 communication cables to allow for the intended operation of that cabinet. Each communication cable connector shall be a 15-pin metal shell D subminiature type. The cable shall be a shielded cable suitable for RS-485 communications.

All main panels shall be pre-wired for a type-16 MMU. All wiring shall be neat in appearance. All cabinet wiring shall be continuous from its point of origin to its termination point. Butt type connections/splices are not acceptable. All connecting cables and wire runs shall be secured by mechanical clamps. Stick-on type clamps are not acceptable.

The grounding system in the cabinet shall be divided into three separate circuits (AC neutral, earth ground, and logic ground). These ground circuits shall be connected together at a single point as outlined in the NEMA TS2 Standard.

The main panel shall incorporate a relay, designated as K1, to remove +24 VDC from the common side of the load switches when the intersection is placed into mechanical flash. The relay shall have a momentary pushbutton to apply power to the load switch inputs for ease of troubleshooting. The relay shall have a momentary pushbutton to apply power to the load switch inputs for ease of troubleshooting.

All pedestrian pushbutton inputs from the field to the controller shall be opto-isolated through the BIU and operate at 12 VAC.

All wire (size 16 AWG or smaller) at solder joints shall be hooked or looped around the eyelet or terminal block post prior to soldering to ensure circuit integrity. Lap joint soldering is not acceptable.

Power Panel Design and Construction. The power panel shall be integrated into the main panel and be located on the lower right portion of the cabinet. The power panel shall be wired to provide the necessary filtered power to the load switches, flashers, and power bus assembly. The power components shall be equipped with a removable plastic front cover for technician protection. The

design will allow a technician to access the main and auxiliary breakers without removing the protective front cover.

The power panel portion of the main panel shall include the following components:

- A minimum of a 40-amp main breaker for 12- or 16- position cabinets or a minimum of a 30-amp breaker for 4- or 8-position cabinets. This breaker shall supply power to the controller, MMU, signals, cabinet power supply, and auxiliary panels. Breakers shall be at minimum a thermal magnetic type, UL listed for HACR service with a minimum of 10,000 amp interrupting capacity.
- A minimum of one 15-amp auxiliary breaker. This breaker shall supply power to the fan, light, and GFI utility outlet.
- An EDCO model SHP-300-10 or exact approved equivalent surge arrester.
- A 50 amp, 125 VAC radio interference line filter.
- A normally-open, 75-amp, solid state signal buss relay. The SSR shall be a Crydom Model # HA4875H or approved equal.
- A minimum of one 8-position neutral bus bar capable of connecting three #12 wires per position.
- A minimum of one 6-position ground bus bar capable of connecting three #12 wires per position.
- A minimum of one NEMA type 5-15R GFI utility outlet.
- The cabinet shall be equipped with additional surge protection for the controller, MMU, and the video detection system. The surge protector shall be a Transtector – APC100BWN3 and shall be included in addition to an SHA-1250 IRS protector.

Power Bus Assembly. The power bus assembly shall be manufactured from 0.090”, 5052-H32 aluminum. It shall provide filtered power for the controller, MMU, cabinet power supply, and all auxiliary equipment. It shall include the SDLC bus connecting cables wired into a surface-mounted terminal block. As an alternate, SDLC bus connections may be made via an SDLC hub assembly.

The power bus assembly shall house a minimum of three and a maximum of six power connectors, two terminal strips to hardwire the power connections, and a SDLC terminal block with pre-wired cables or SDLC hub assembly.

All cabinet equipment requiring filtered power to operate shall be connected to the power bus assembly by a 12-pin Molex robotic type connector Model# 54332-1270 or exact equivalent or hardwired directly to the supplied terminal blocks.

An SDLC hub assembly shall include a minimum of three and maximum of eight D-subminiature female 15 pin (DB15) connectors that are wired in series.

Auxiliary Cabinet Equipment. The cabinet shall be provided with a thermostatically controlled (adjustable between 55-160 °F) ventilation fan in the top of the cabinet plenum. The fan plate shall be removable with the use of simple hand tools for serviceability. A minimum of one exhaust fan shall be provided. The fan shall be a ball bearing type fan and shall be capable of drawing a minimum of 100 cubic feet of air per minute. The fan/thermostat assembly shall be connected to the power panel by means of a four position plug-in cable.

At minimum, a 40-watt incandescent refrigerator lamp and socket mounted on an aluminum bracket shall be mounted in the cabinet to sufficiently illuminate the field terminals. The lamp shall be wired to either a 15-amp ON/OFF toggle switch mounted on the power panel or to a door activated switch mounted near the top of the door. Alternately, a 40-watt incandescent lamp mounted on a 14-inch flexible arm shall be included. The flexible arm shall be permanently mounted to the middle of the cabinet door. The lamp shall be wired to either a 15-amp ON/OFF toggle switch mounted on the power panel or to a door activated switch mounted near the top of the door. Alternately, a fluorescent lighting fixture shall be mounted on the inside top of the cabinet near the front edge. The fixture shall be rated to accommodate at minimum a F15T8 lamp operated from a normal power factor UL or ETL listed ballast. The lamp shall be wired to either a 15-amp ON/OFF toggle switch mounted on the power panel or to a door activated switch mounted near the top of the door. Alternately, an LED cabinet lighting system may be used to illuminate the internal structure of the cabinet assembly.

A resealable print pouch shall be mounted to the door of the cabinet. The pouch shall be of sufficient size to accommodate one complete set of folded cabinet prints. A minimum of two sets of complete and accurate cabinet drawings shall be supplied with each cabinet.

Cabinet Test Switches and Police Panel. A test switch panel shall be mounted on the inside of the main door. The test switch panel shall provide as a minimum the following:

- Signals on/off switch-In the off position, power shall be removed from signal heads in the intersection. The controller shall continue to operate. When in the off position, the MMU shall not conflict or require reset.
- Auto/flash switch-When in the flash position, power shall be maintained to the controller, and the intersection shall be placed in flash. The controller shall not be stop timed when in flash. Wired according to NEMA-TS2-2003, the MMU forces the controller to initiate the start-up sequence when existing flash.
- Stop time switch-When applied, the controller shall be stop timed in the current interval.
- Control equipment power on/off-This switch shall control the controller, MMU, and cabinet power supply AC power.
- Momentary test push buttons for all vehicle and pedestrian inputs to the controller are not required. The TS2 controller to be provided with the cabinet assembly shall provide vehicular and pedestrian call inputs from its keyboard while in the standard status display.

The police door switch panel shall contain the following:

- Signals on/off switch-In the off position, power shall be removed from signal heads in the intersection. The controller shall continue to operate. When in the off position, the MMU shall not conflict or require reset.
- Auto/flash switch–When in the flash position, power shall be maintained to the controller and the intersection shall be placed in flash. The controller shall be stop timed when in flash. Wired according to NEMA-TS2-1998, the MMU forces the controller to initiate the start-up sequence when exiting flash.
- Auto/manual switch-Cabinet wiring shall include provisions for an auto/manual switch and a momentary pushbutton or hand cord. The auto/manual switch and pushbutton or hand cord shall not be provided unless it is called for in the customer specification.

All toggle type switches shall be heavy duty and rated 15 amps minimum. Single- or double-pole switches may be provided, as required.

Any exposed terminals or switch solder points shall be covered with a non-flexible shield to prevent accidental contact.

All switch functions must be permanently and clearly labeled.

All wire routed to the police door-in-door and test switch push button panel shall be adequately protected against damage from repetitive opening and closing of the main door. All test switch panel wiring shall be connected to the main panel via a 50-pin Molex robotic type connector Model #54332-5001 or exact equivalent. Wiring from the main panel to the test switch panel shall be connected to the switch panel via a 30-pin Molex robotic type connector Model # 54332-3070 or exact equivalent.

Controller Telemetry Interface Panel. A telemetry interface harness and interface panel shall be supplied with each cabinet assembly when specified in the special provisions. The harness shall be a minimum of 6 feet long and shall consist of two twisted shielded pairs, 22 AWG wire with drain wire in an overall jacket terminated to a 9-pin "D" type connector at one end. The pin out of the 9-pin connector shall be in exact accordance with the NEMA TS2 Standard. The opposite end of the harness shall be terminated on a 10-position EDCO PCB-1B or exact equal lightening protection socket base.

All terminal block designations and peripheral board-mounted components shall be labeled as to their number and function and shall correspond to the cabinet wiring diagrams.

The following signals shall be accessible from the telemetry interface panel:

- Local controller command lines 1 & 2
- Local controller read back lines 1 & 2
- Master controller command lines 1 & 2
- Master controller read back lines 1 & 2
- Earth grounds

A socket mounted, communication line, transient protection device shall be supplied with the telemetry interface panel. The device shall be an EDCO model PC642C-008D or exact approved equivalent. The transient protection device shall be wired in series with the telemetry communication circuit.

Communication line impedance shall be matched to the transmitter output impedance to minimize noise on the communication lines. The panel shall allow connection of a 620 ohm resistor across the command and read back lines, where necessary.

Auxiliary Devices

Load Switches. Load switches shall be solid state and shall conform to the requirements of Section 6.2 of the NEMA TS2 Standard. Signal load switches shall have a minimum rating of 10 amperes at 120 VAC for an incandescent lamp load. The front of the load switch shall be provided with three indicators to show the input signal from the controller to the load switch. Load switches shall be dedicated per phase. The use of load switches for other partial phases is not acceptable.

The full complement of load switches shall be supplied with each cabinet to allow for maximum phase utilization for which the cabinet is designed.

Flashers. The flasher shall be solid state and shall conform to the requirements of Section 6.3 of the NEMA TS2 Standard. Flashing of field circuits for the purpose of intersection flash shall be accomplished by a separate flasher. The flasher shall be rated at 15 amperes, double pole with a nominal flash rate of 60 FPM.

Flash Transfer Relays. All flash transfer relays shall meet the requirements of Section 6.4 of the NEMA TS2 Standard. The coil of the flash transfer relay must be de-energized for flash operation. The full complement of relays shall be supplied with each cabinet to allow for maximum phase utilization for which the cabinet is designed.

Malfunction Management Units (MMU). Each cabinet assembly shall be supplied with one MMU as defined by the requirements of Section 4 of the NEMA TS2 Standard. MMUs shall be a type 16. The MMU shall be MMU-16 (Reno Model MMU-16) or approved equal.

Bus Interface Units (BIU). All BIUs shall meet the requirements of Section 8 of the NEMA TS2 Standard. BIUs shall be supplied with each cabinet to allow for maximum phase and function utilization for which the cabinet is designed. Each BIU shall include power on, transmit, and valid data indicators. All indicators shall be LEDs.

Cabinet Power Supply. The cabinet power supply shall meet the requirements of Section 5.3.5 of the NEMA TS2 Standard. The cabinet power supply shall provide LED indicators for the line frequency, 12 VDC, 12 VAC, and 24 VDC outputs. The cabinet power supply shall provide (on the front panel) jack plugs for access to the +24 VDC for test purposes. The cabinet power supply shall be supplied with each cabinet assembly and shall be wired directly to the power bus assembly via a 12-pin Molex robotic type connector Model #54332-1270 or exact equivalent.

Testing and Warranty

Testing. Each controller and cabinet assembly shall be tested as a complete entity under signal load for a minimum of 48 hours. Each assembly shall be delivered with a signed document detailing the cabinet final tests performed. The cabinet shall be assembled and tested by the controller manufacturer or authorized local distributor to ensure proper component integration and operation.

Warranty. The controller and MMU shall be warranted by the manufacturer against mechanical and electrical defects for a period of two years from date of shipment. The manufacturer's warranty shall be supplied in writing with each cabinet and controller. Second party extended warranties are not acceptable. The cabinet assembly and all other components shall be warranted for a period of one year from date of shipment. Any defects shall be corrected by the manufacturer or supplier at no cost to the owner.

CONTROLLER

This specification sets forth the minimum requirements for a shelf-mounted, 2 through 16 phase, fully-actuated, digital, solid-state traffic controller. The controller shall be configurable to meet, as a minimum, all applicable sections of the NEMA Standards Publications for TS2, NTCIP 1202, and ATC Standard 6.10. Where differences occur, these specifications shall govern. Controller versions shall be available to comply with NEMA TS2 types 1 and 2. Type 2 versions of the controller shall be capable of operating as a type 1 controller.

Hardware

Enclosure. The controller shall be compact to fit in limited cabinet space. It shall require no more than 7” shelf depth. External dimensions shall be no larger than 8.5" x 15.2 1/4" x 6.375" (H x W x D). The top and bottom of the chassis shall be made from extruded aluminum and include an integral handle on the back for easy transport. The sides shall be constructed of injection-molded polycarbonate. The front panel shall meet specifications set forth in Section 2.5 (Front Panel). The model, serial number, and program information shall be displayed on the outside of the controller.

Electronics. The electronics shall be modular in design and shall consist of vertical circuit boards. Horizontal circuit boards shall not acceptable.

In the interest of reliability, no sockets shall be used for any electronic device. All devices shall be directly soldered to the printed circuit board. Surface mount parts shall be used for the majority of the electronic components in the controller.

A built-in, high efficiency, switching power supply shall generate the primary, +5VDC internal voltage, an isolated +24 VDC for internal and external use, VSTANDBY, LINESYNC, POWERUP and POWERDOWN signals. All voltages shall be regulated.

The 120 or 220 VAC fuse shall be mounted on the front of the controller. Protection for the 24 VDC supply shall be provided by a resettable electronic fuse.

All printed circuit boards shall meet the requirements of the NEMA Standard plus the following requirements to enhance reliability. Both sides of the printed circuit board shall be covered with a solder mask material. The circuit reference designation for all components and the polarity of all polarized capacitors and two-leaded diodes shall be clearly marked adjacent to the component. Pin 1 for all integrated circuit packages shall be designated on all printed circuit boards. All printed circuit board assemblies shall be coated on both sides with a clear moisture-proof and fungus-proof sealant.

Timing of the controller traffic application shall be derived from the AC power line.

To facilitate the transfer of user-programmed data from one controller to another, a datakey receptacle for using a separate 2070-style, serial, flash memory device shall be an available hardware. In addition, two USB sockets and one SD card socket shall be provided for memory devices that can be used for data transfer. These data transfer devices shall be easily removable and directly accessible from the outside of the controller. The controller will require this datakey.

All controller software shall be stored in flash memory devices. The controller software shall be easily updated without the removal of any memory device from the controller. The use of removable PROMS or EPROMS from the controller shall not be acceptable. The controller shall include an option that allows updating software using a Windows based computer, a USB memory thumb drive, or an SD card.

ATC Engine Board. The controller shall include an ATC engine board compliant to ATC standard 5.2b and proposed version 6.10. The engine board shall include a PowerPC 83XX family processor with QUICC engine. The engine board shall have a minimum of the following memory:

- 128 Mbytes of DDR2 DRAM memory used for application and OS program execution
- 64 Mbytes of FLASH memory used for storage of OS software and user applications
- 2 MB of SRAM memory used for non-volatile parameter storage

The engine board shall provide the seven ATC serial ports, Ethernet, USB, and all other control signal required by ATC standard. The operating system shall be Linux 2.6.35 or later.

User Interface. Program values shall be entered through the keypad. Menu selections shall be entered by entering the numerical value of the desired option.

Front Panel. The front of the controller shall consist of a panel for the display, keyboard, and connectors for all necessary user connections. The display shall be a 7”, TFT (Thin Film Transistor) LCD with high brightness. It shall be readable in direct sunlight. The display shall perform over the NEMA temperature range and shall have a resolution of 800 X 480. The luminous intensity shall be a minimum of 800 nits. The display shall not be affected by condensation or water drops. Front-panel operator inputs shall be via clearly labeled elastomeric keypad. These shall include a ten-digit numeric keypad, main and sub keys, toggle keys, special function and enter keys, six function keys, status and help keys, and a large, four-direction, cursor control key. The front panel shall include a built-in speaker for enhanced controller audio feedback. The front panel shall include a tri-color status LED.

Ethernet Ports. The controller shall have the capability of supporting Ethernet communications using TCP/IP communications protocols. The controller shall provide four front-panel Ethernet ports. Two of the ports shall be connected to Ethernet switch ENET1. and the other two shall be connected to Ethernet switch ENET2.

USB Ports. The controller shall provide two USB 2.0 ports. USB ports shall be used for USB thumb drives to update software, upload, or download configuration or uploading logged data.

Connectors. All non-optional interface connectors shall be accessible from the front of the controller in the NEMA configured controller models. Configurations shall be offered to accommodate different versions as follows:

- NEMA TS2 Type 1
- NEMA TS2 Type 2
- NEMA TS1

To facilitate special applications, the controller shall have the capability of assigning any input or output function to any input or output pin respectively on the interface connectors except for

flashing monitor, controller voltage monitor, AC+, AC-, chassis ground, 24 VDC, logic ground, and TS2 mode bits. The controller shall as a minimum have the following communications ports:

- Port 1 SDLC for communications to other devices in the cabinet
- Port 2 serial port for systems communications
- Console serial port for local communications
- An optional telemetry module shall utilize TDM/FSK data transmission at 1200 baud or 9600 baud over two pairs of wires. This module shall include the 25-pin D-sub connector.
- Ports on optional ATC-2070 communication modules–See Section 2.10.2.

RS-232 Serial communications shall operate at from 1200 to 115.2 K baud.

Serviceability. All electronic modules, including the power supply, shall be easily removable from the controller using a screwdriver as the only tool. All power and signal connections to the circuit boards shall be via plug-in connectors.

Hardware Options

Optional DataKey. A datakey and receptacle shall be available for use as a database storage device (backup) or as a database transfer module. It shall be capable of storing a minimum 2 MB of data. The datakey shall be hot swappable, so it can be inserted and removed without powering down the controller. The datakey shall be capable of storing the entire controller database and shall retain the information without use of battery or capacitor backup. The controller shall not require this key to be present during normal operation. If the datakey is present, the controller shall automatically backup the database to the datakey 20 minutes following the last data change. The controller shall provide support via one ATC-2070 type communications slot that can be added, if needed, providing access to ATC communications ports

OPTIMIZE TRAFFIC SIGNAL SYSTEM

Effective: May 22, 2002 Revised: November 1, 2023

Description. This work shall consist of optimizing a traffic signal system.

Optimize traffic signal system applies when a new or existing traffic signal system is to be optimized and a formal Signal Coordination and Timing (SCAT) Report is to be prepared. The purpose of this work is to improve system performance by optimizing traffic signal timings and developing both a time of day (TOD) program and a traffic responsive program (TRP).

After the signal improvements are completed, the signal system shall be optimized as specified by an approved consultant.

A listing of existing signal equipment, interconnect information, phasing data, timing patterns, and SCAT Report may be obtained from the Department, if available and as appropriate. The consultant shall confer with the Traffic Signal Maintenance and Operations Engineer prior to optimizing the system to determine if any extraordinary conditions exist that would affect traffic flows in the vicinity of the system, in which case, the consultant may be instructed to wait until the conditions return to normal or to follow specific instructions regarding the optimization.

The following tasks are associated with optimize traffic signal system:

1. Appropriate signal timings and offsets shall be developed for each intersection, and appropriate cycle lengths shall be developed for the signal system. Consultant shall be present at the turn-ons, if applicable, to implement initial timing plans.

2. Traffic counts shall be taken at all intersections after the permanent traffic signals are approved for operation by the Traffic Signal Maintenance and Operations Engineer. Manual turning movement counts shall be conducted from 6:30 AM to 9:30 AM, 11:00 AM to 1:00 PM, and 3:30 PM to 6:30 PM on a typical weekday from midday Monday to midday Friday and on a Saturday or Sunday, as directed by the Engineer, to account for special traffic generators such as shopping centers, educational institutes, and special event facilities. The turning movement counts shall identify cars and single-unit and multi-unit heavy vehicles.

3. The intersections shall be re-addressed, and all system detectors reassigned as necessary. System detector quantities and locations shall be assessed for optimal performance. The Department shall be notified of any proposed changes during data collection.

4. A traffic responsive program shall be developed which considers both volume and occupancy. A TOD program shall be developed for use as a back-up system.

5. Proposed signal timing plan for the new or modified intersection shall be forwarded to IDOT for review prior to implementation.

6. Consultant shall conduct onsite implementation of the timings and make fine-tuning adjustments to the timings in the field to alleviate observed adverse operating conditions and to enhance operations. The consultant shall respond to IDOT comments and public complaints for a minimum period of six months from date of timing plan implementation.

7. Speed and delay studies shall be conducted during each of the count periods along the system corridor in the field before and after implementation of the proposed timing plans for comparative evaluations.

The following deliverables shall be provided for optimize traffic signal system. Consultant shall provide to IDOT one USB flash drive for the optimized system containing the following:

1. Electronic copy of the SCAT Report in PDF format
2. Copies of the Synchro (or other appropriate, approved optimization software) files for the optimized system.
3. Traffic counts for the optimized system

The flash drive shall be labeled with the IDOT system number and master location (if applicable), as well as the submittal date and the consultant logo. The SCAT Report shall include the following elements:

Cover Page in color showing a System Map
Figures 1. System overview map showing system number, system schematic map with numbered system detectors, oversaturated movements, master location (if applicable) system phone number (if applicable), cycle lengths, and date of completion. 2. General location map in color showing signal system location in the metropolitan area. 3. Detail system location map in color showing cross street names and local controller addresses. 4. Controller sequence showing controller phase sequence diagrams.
Table of Contents
Tab 1: Final Report 1. Project Overview 2. System and Location Description (Project specific) 3. Methodology 4. Data Collection 5. Data Analysis and Timing Plan Development 6. Implementation a. Traffic Responsive Programming (Table of TRP vs. TOD Operation) with AM, Midday, and PM cycle lengths 7. Evaluation a. Speed and Delay runs
Tab 2. Turning Movement Counts 1. Turning Movement Counts (Showing turning movement counts in the intersection diagram for each period, including truck percentage)
Tab 3. Synchro Analysis 1. AM: Time-Space diagram in color, followed by intersection Synchro report (timing report) summarizing the implemented timings. 2. Midday: same as AM 3. PM: same as AM 4. Special weekend or off-peak traffic generators (shopping centers, educational facilities, arenas, etc.): same as AM
Tab 4: Speed, Delay Studies 1. Summary of before and after runs results in two (2) tables showing travel time and delay time. 2. Plot of the before and after runs diagram for each direction and time period.
Tab 5: Environmental Report
1. Environmental impact report including gas consumption, NO_2, HCCO, improvements.

Basis of Payment. This work will be paid for at the contract unit per EACH for OPTIMIZE TRAFFIC SIGNAL SYSTEM, which price shall be payment in full for performing all work described herein for the entire traffic signal system. Following the completion of traffic counts, 25% of the bid price will be paid. Following the completion of the Synchro analysis, 25% of the bid price will be paid. Following the setup and fine tuning of the timings, the speed-delay study, and the TRP programming, 25% of the bid price will be paid. The remaining 25% will be paid when the USB flash drive containing the SCAT report has been submitted, and the system is operating to the satisfaction of the Engineer.

UNINTERRUPTABLE POWER SUPPLY, SPECIAL

Effective: January 1, 2013 Revised: March 1, 2024

This work shall be in accordance with Section 862 of the Standard Specification, except as modified herein.

Add the following to Article 862.01 of the Standard Specifications:

"The UPS shall have the power capacity to provide normal operation of a signalized intersection that utilizes all LED type signal head optics for a minimum of six hours."

Add the following to Article 862.02 of the Standard Specifications:

"Materials shall be according to Article 1074.04 as modified in Uninterruptable Power Supply, Special."

Add the following to Article 862.03 of the Standard Specifications:

"The UPS shall additionally include, but not be limited to, a battery cabinet, where applicable. For Super P and Super R cabinets, the battery cabinet is integrated to the traffic signal cabinet and shall be included in the cost for the traffic signal cabinet of the size and type indicated on the plans."

Revise Article 862.04 of the Standard Specifications to read:

"Installation.
When a UPS is installed at an existing traffic signal cabinet, the UPS cabinet shall partially rest on the lip of the existing controller cabinet foundation and be secured to the existing controller cabinet by means of at least four stainless steel bolts. The UPS cabinet shall be completely enclosed with the bottom and back constructed of the same material as the cabinet.

When a UPS is installed at a new signal cabinet and foundation, it shall be mounted as shown on the plans.

At locations where UPS is installed and an emergency vehicle priority system is in use, any existing incandescent confirmation beacons shall be replaced with LED lamps. A concrete apron shall be provided and be in accordance with Articles 424 and 202 of the Standard Specifications.

For a ground mounted UPS, the UPS shall be mounted on its own type A concrete foundation which will be paid for separately. A concrete apron shall be provided with a dimension of 36 in. in front of the UPS cabinet, 5 in. deep, and a width sized appropriately to the width of the concrete foundation. The concrete apron shall follow Articles 424 and 202 of the Standard Specifications.

This item shall include any required modifications to an existing traffic signal controller due to the addition of the UPS, including the addition of alarms."

Materials.

Revise Article 1074.04(a)(1) of the Standard Specifications to read:

"The UPS shall be line interactive or double conversion and provide voltage regulation and power conditioning when utilizing utility power. The UPS shall be sized appropriately for the intersection's normal traffic signal operating load. The UPS must be able to maintain the intersection's normal operating load plus 20% of the intersection's normal operating load. When installed at a railroad-interconnected intersection, the UPS must maintain the railroad preemption load, plus 20% of the railroad preemption-operating load. The total connected traffic signal load shall not exceed the published ratings for the UPS. The UPS shall provide a minimum of six hours of normal operation run-time for signalized intersections with LED type signal head optics at 77 °F (minimum 1000 W active output capacity, with 86% minimum inverter efficiency)."

Revise the first paragraph of Article 1074.04(a)(3) of the Standard Specifications to read:

"The UPS shall have a minimum of four sets of normally open (NO) and normally closed (NC) single-pole double-throw (SPDT) relay contact closures, available on a panel mounted terminal block or locking circular connectors, rated at a minimum 120 V/1 A and labeled so as to identify each contact according to the plans."

Revise Article 1074.04(a)(17) of the Standard Specifications to read:

"When the intersection is in battery backup mode, the UPS shall bypass all internal cabinet lights, ventilation fans, cabinet heaters, service receptacles, luminaires, any lighted street name signs, any automated enforcement equipment, and any other devices directed by the Engineer."

Revise Article 1074.04(b)(2) paragraph "b." of the Standard Specifications to read:

"Batteries, inverter/charger, and power transfer relay shall be housed in a separate NEMA type 3R cabinet. The cabinet shall be aluminum alloy 5052-H32, 0.125 in. thick, and have a natural mill finish."

Revise Article 1074.04(b)(2) paragraph "c." of the Standard Specifications to read:

"No more than three batteries shall be mounted on individual shelves for a cabinet housing six batteries and no more than four batteries per shelf for a cabinet housing eight batteries."

Revise Article 1074.04(b)(2) paragraph "e." of the Standard Specifications to read:

"The battery cabinet housing shall have the following nominal outside dimensions: a width of 25 in., a depth of 16 in., and a height of 41 to 48 in. Clearance between shelves shall be a minimum of 10 in."

Revise Article 1074.04(b)(2) paragraph "g." of the Standard Specifications to read:

"The door shall open to the entire cabinet; have a neoprene gasket; an aluminum, continuous piano hinge with stainless steel pin; and a three point locking system. The door shall be equipped with a two position doorstop, one a 90° and one at 120°. The cabinet shall be provided with a main door lock which shall operate with a traffic industry conventional No. 2 key. Provisions for padlocking the door shall be provided."

Add the following to Article 1074.04(b)(2) of the Standard Specifications:

j. The battery cabinet shall have provisions for an external generator connection.

Add the following to Article 1074.04(c) of the Standard Specifications:

(8) The UPS shall include a tip or kill switch installed in the battery cabinet, which shall completely disconnect power from the UPS when the switch is manually activated.

(9) The UPS shall include standard RS-232 and internal Ethernet interface.

(10) The UPS shall incorporate a flanged electric generator inlet for charging the batteries and operating the UPS. The generator connector shall be male type, twist-lock, rated as 15 A, 125 VAC with a NEMA L5-15P configuration, and weatherproof lift cover plate. Access to the generator inlet shall be from a secured weatherproof lift cover plate or behind a locked battery cabinet police panel.

(11) The bypass switch shall include an internal power transfer relay that allows removal of the battery back-up unit, while the traffic signal is connected to utility power without impacting normal traffic signal operation.

Revise Article 1074.04(d)(3) of the Standard Specifications to read:

"All batteries supplied in the UPS shall be either gel cell or AGM type, deep cycle, completely sealed, prismatic lead calcium based, silver alloy, and valve regulated lead acid (VRLA) requiring no maintenance. All batteries in a UPS installation shall be the same type; mixing of gel cell and AGM types within a UPS installation is not permitted."

Revise Article 1074.04(d)(4) of the Standard Specifications to read:

"Batteries shall be certified by the manufacturer to operate over a temperature range of -13 °F to 160 °F for gel cell batteries and -40 °F to 140 °F for AGM type batteries."

Add the following to Article 1074.04(d) of the Standard Specifications:

(9) The UPS shall consist of an even number of batteries that can maintain normal operation of the signalized intersection for a minimum of six hours. Calculations shall be provided showing the number of batteries of the type supplied that are needed to satisfy this requirement. A minimum of four batteries shall be provided.

(10) Battery heater mats shall be provided when gel cell type batteries are supplied.

Add the following to Article 1074.04 of the Standard Specifications:

(e) Warranty. The warranty for an UPS and batteries (full replacement) shall cover a minimum of five years from date the equipment is placed in operation.

(f) Installation. Bypass switch shall completely disconnect the traffic signal cabinet from the utility provider.

(g) The UPS shall be set-up to run the traffic signal continuously without going to a red flashing condition when switched to battery power unless otherwise directed by the Engineer. The Contractor shall confirm set-up with the Engineer. The continuous operation mode when switched to battery may require modification to unit connections, and these modifications are included in the unit price for this item.

Revise Article 862.04 of the Standard Specifications to read:

Basis of Payment. This work will be paid for at the contract unit price per EACH for UNINTERRUPTABLE POWER SUPPLY, SPECIAL, UNINTERRUPTABLE POWER SUPPLY, GROUND MOUNTED, or UNINTERRUPTABLE POWER SUPPLY AND CABINET, SPECIAL. Replacement of emergency vehicle priority system confirmation beacons and any required modifications to the traffic signal controller shall be included in the cost of this work. The concrete apron and earth excavation required shall be included in the cost of this work.

FIBER OPTIC CABLE

Effective: May 22, 2002 Revised: July 1, 2015

Add the following to Article 871.01 of the Standard Specifications:

The fiber optic cable shall be installed in conduit or as specified on the plans.

Add the following to Article 871.02 of the Standard Specifications:

The control cabinet distribution enclosure shall be a 24 port fiber wall enclosure, unless otherwise indicated on plans. The fiber optic cable shall provide 12 fibers per tube for the amount of fibers called for in the fiber optic cable pay item in the contract. Fiber optic cable may be gel filled or have an approved water blocking tape.

Add the following to Article 871.04 of the Standard Specifications:

A minimum of six multi-mode fibers from each cable shall be terminated with approved mechanical connectors at the distribution enclosure. Fibers not being used shall be labeled “spare." Fibers not attached to the distribution enclosure shall be capped. A minimum of 13.0 feet of extra cable length shall be provided for controller cabinets. Extra cable length for the controller cabinet shall be stored as directed by the Engineer.

Add the following to Article 871.06 of the Standard Specifications:

The distribution enclosure and all connectors will be included in the cost of the fiber optic cable.

Testing shall be in accordance with Article 801.13(d). Electronic files of OTDR signature traces shall be provided in the final project documentation with certification from the Contractor that attenuation of each fiber does not exceed 3.5 dB/km nominal at 850nm for multimode fiber and 0.4 bd/km nominal at 1300nm for single mode fiber.

VIDEO VEHICLE DETECTION SYSTEM COMPLETE

Effective: January 1, 2020 Revised: March 1, 2024

Description. This work shall consist of furnishing and installing a video vehicle detection system as specified and/or as shown on the plans, including all necessary work and equipment required to have a fully operational system. Necessary materials may include, but not limited to, the detector units, the interface unit, and all the necessary hardware, cables, and accessories required to complete the installation in accordance with the manufacturer's specifications.

The video vehicle detection system shall work under all weather conditions, including rain, freezing rain, snow, wind, dust, fog, and changes in temperature and light. It shall work in an ambient temperature range of –30 °F to 165 °F.

The video vehicle detection system shall be compatible with the District's approved traffic controller assemblies utilizing NEMA TS 1 or TS 2 controllers and cabinet components for full time operation. The video vehicle detection system shall provide a minimum of one interface unit that has Ethernet connectivity, surge protection, and shall be capable of supporting a minimum of two detector units. The video vehicle detection system shall include a display and stand inside the cabinet that has a minimum 10 in. screen with a minimum 1280 x 800 resolution. The display shall be temperature rated for the cabinet environment.

The video vehicle detection system shall be one of the following systems or an approved equivalent:

- Autoscope Vision
- Iteris Vantage Next

A representative from the supplier of the video vehicle detection system shall supervise the installation and testing of the system and shall be present at the traffic signal turn-on inspection. Once the video vehicle detection system is configured, it shall not need reconfiguration to maintain performance, unless the roadway configuration or the application requirements change.

The mounting locations of the detector units shall be per the manufacturer's recommendations. If an extension mounting assembly is needed, it shall be included in this item. All holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent chafing of wires.

The video detection system shall be warrantied for a period of two years from final inspection and shall be free from material and workmanship defects.

Basis of Payment. This work will be paid for at the contract unit price per EACH for VIDEO VEHICLE DETECTION SYSTEM COMPLETE, which price shall include the cost for all the work and material necessary for furnishing, installing, delivering, handling, testing, and setting-up all

appurtenances and mounting hardware necessary for a fully operational video vehicle detection system.

REMOVAL OF EXISTING SIGN LIGHTING UNIT WITH NO SALVAGE

Description. This work shall consist of removing and disposing existing sign lighting units, associated conduits, fittings, conductors, and junction boxes.

General. Disconnect the existing lighting circuit wiring from fixture to fixture and to the power source in the sign support structure handhole. Remove and dispose of the sign light fixture, conductors, conduits, conduit fittings, junction boxes, remote ballasts, all mounting hardware, complete from the sign support structure. All removed items shall become the property of the Contractor.

Method of Measurement. Each sign lighting unit removed and disposed of will be counted as a unit for payment.

Basis of Payment. This work will be paid for at the contract unit price per EACH for REMOVAL OF EXISTING SIGN LIGHTING UNIT WITH NO SALVAGE, which price includes all associated components and hardware.

REMOVAL OF CABLE IN CONDUIT

Description. This work shall consist of disconnecting and removing existing electrical cables for lighting circuits in underground conduits.

General. The removal of the existing cables shall prepare the existing underground conduits for modification and reuse in the reconnection of the existing roadway lighting circuits. Disconnect existing cables at each end of the conduit section, and remove conductor complete from the existing conduit. Cables removed from the conduit shall become the property of the Contractor and shall be disposed.

Method of Measurement. Removal of cables shall be measured by foot of the horizontal length of the conduit containing the cables and not by individual conductor length.

Basis of Payment. This work will be paid for at the contract unit price per FOOT for REMOVAL OF CABLE IN CONDUIT, which price shall include disposal..

ABANDON CONDUIT IN PLACE

Description. This work shall consist of removing and disposing existing electrical cables and abandoning the unused conduits in place.

General. Cables shall be removed from the conduit prior to abandonment. Abandoned underground conduit shall be removed to a depth of 1 ft. below ground level, and the hole backfilled. Cables and conduits removed shall become the property of the Contractor and shall be removed from the jobsite. Backfilled excavations shall be restored to match the existing.

Method of Measurement. Abandoned conduit shall be measured as each location.

Basis of Payment. This work will be paid for at the contract unit price per EACH for ABANDON CONDUIT IN PLACE, which price includes removal and disposal, backfill, and surface restoration..

CONDUIT SPLICE

Description. This work shall consist of splicing the existing underground lighting conduits to eliminate connection to the sign support structure and provide a continuous conduit from light pole to light pole.

General. The existing underground lighting circuit wiring is routed in conduit from light pole to the sign structure then to the next light pole along the roadway. Contractor shall locate the underground conduits at the sign structure foundation, cut the conduits free from the foundation, and connect making a continuous run from light pole to light pole. Joining of the existing conduit shall be with UL listed coupling that is suitable with the existing conduit material. Backfill and surface restoration of the affected areas shall be included and not counted separately for payment.

Method of Measurement. This work will be measured for payment per each splice.

Basis of Payment. This work will be paid for at the contract unit price per EACH for CONDUIT SPLICE, which price includes disconnection and removal of the excess conduit, conduit coupling, excavation, backfill, and restoration of the finish grade to match existing.

ROCK FILL – FOUNDATION

Effective 12/11/19

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 thicknesses shall be confirmed by the Engineer prior to excavating below the theoretical top of rock fill line.

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)

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.

This work will be measured and paid for at the contract unit price per CUBIC YARD for ROCK FILL–FOUNDATION, which price shall include 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). The excavation will be paid for at the contract unit price per CUBIC YARD for REMOVAL AND DISPOSAL OF UNSUITABLE MATERIALS FOR STRUCTURES.

REMOVE AND REINSTALL VIDEO DETECTION CAMERA

Effective: July 3, 2024

Description. This work shall consist of removing and reinstalling a video detection camera as specified and/or as shown on the plans. This work shall include all necessary work and equipment required to remove and reinstall a video detection camera including, but not limited to, all the necessary hardware, cables, and accessories required to complete the removal and reinstallation in accordance with the manufacturer's specifications.

Basis of Payment. This work shall be paid for at the contract unit price per EACH for REMOVE AND REINSTALL VIDEO CAMERA, which price shall include all the work and material necessary to complete this work and removing and reinstalling all cables and mounting hardware necessary for a fully operational video detection camera.

STATUS OF UTILITIES TO BE ADJUSTED

Company	Type	Location	Estimated Date Relocation Completed
Ameren Illinois 6 Executive Dr. Collinsville, IL 62234 Contact: Nathan Hill Work Phone: 618-301-5327	Electric	No relocation anticipated at this time.	
AT&T Distribution 423 W Clay St. Collinsville, IL 62234 Contact: Kevin Urbanek Work Phone:	Fiber/Communications	To retire in place buried duct package from approximate Sta 43+00 to approximate Sta 21+50. New duct package will be run along the easterly side of 270, boring 270 going north, and following the IDOT fence line just north of 270 to it's conclusion at a pre-existing handhole.	Relocation completed Fall 2023.

Buckeye Partners 1 Radar Way Tinton Falls, NJ 07724 Contact: Robert Patterson III Work Phone: 732-813-6715	Fuel Pipeline	No relocation anticipated at this time, however rock and a concrete collar will be installed by Buckeye during construction to ensure pipe security. Field Coordinator will also be present on site while construction is occurring on and around the pipe.	Coordination with field representative Brian Latham to take place before/during construction 314-379-9417. Additional contacts: Robert Patterson III-Engineer Direct: 732-813-6715 Mobile: 732-216-4413 rpatterson@kielybuilds.com Wes Pekarek-Right of Way, Real Estate, Damage Prevention & Public Awareness Direct: 816-836-6096 Mobile: 219-713-6913 wpekarek@buckeye.com
Charter Spectrum 210 West Division Street Maryville, IL 62062 Contact: Jordan Staat Work Phone: 314-393-3321	Fiber/Communications	No relocation anticipated at this time.	
Everstream Farm Bureau Oil Company 1200 Refinery Road Mt. Vernon, IN 47620 Contact: Jamie Lynn Marques Work Phone: 812-270-2107	Fiber/Communications	To relocate buried fiber jointly with MCI/Verizon.	Relocation completed summer 2023.
Illinois American Water-Granite City 3906n West Broadway P.O. Box 309 Mt. Vernon, IL 62864-0309 Contact: Dave Schwierjohn Work Phone: 618-876-0011 or 618-610-7414	Water	No relocation anticipated at this time.	

CenturyLink/Lumen 1 Solutions Pkwy Town and Country, MO 63017 Contact: Sandra Munoz-Cabuya Work Phone:	Fiber/Communications	To relocate buried fiber from approximate Sta 40+50 North to approximate Sta 39+90, maintaining a minimum depth of 8.5' below existing grade. Excavating and exposing conduit to relocate 2' below existing conduit depth from approximate Sta 3307+00 to approximate Sta 3309+50.	Relocation completed Spring 2023.
MCI/Verizon 200 East Spruce Street Jerseyville, IL 62052 Contact: Robert Greten Work Phone: 618-615-6281	Fiber/Communications	To relocate buried fiber from approximate Sta 78+50 to approximate Sta 99+00.	Relocation completed Summer 2023.
Madison County Sanitary Sewer 301 E Chain of Rocks Rd. Mitchell, IL 62040 Contact: Robert Falk Work Phone: 618-581-4675	Sanitary Sewer	No relocation anticipated at this time.	
Mitchell Public Water District 745 E Chain of Rocks Rd. Mitchell, IL 62040 Contact: Rory Morgan Work Phone: 618-931-0164	Water	No relocation anticipated at this time.	
Pontoon Beach Public Water 3959 Pontoon Rd. Granite City, IL 62040 Contact: Terry Kreher Work Phone: 618-830-5285	Water	No relocation anticipated at this time.	

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."

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, TYPE IL (BDE)

Effective: August 1, 2023

Add the following to Article 302.02 of the Standard Specifications:

"(k) Type IL Portland-Limestone Cement .....1001"

Revise Note 2 of Article 352.02 of the Standard Specifications to read:

"Note 2. Either Type I or Type IA portland cement or Type IL portland-limestone cement shall be used."

Revise Note 1 of Article 404.02 of the Standard Specifications to read:

"Note 1. The cement shall be Type I portland cement or Type IL portland-limestone cement."

Revise Article 1019.02(a) of the Standard Specifications to read:

"(a) Cement, Type I or IL .....1001"

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."

CONSTRUCTION AIR QUALITY – DIESEL RETROFIT (BDE)

Effective: June 1, 2010 Revised: November 1, 2014

The reduction of emissions of particulate matter (PM) for off-road equipment shall be accomplished by installing retrofit emission control devices. The term "equipment" refers to diesel fuel powered devices rated at 50 hp and above, to be used on the jobsite in excess of seven calendar days over the course of the construction period on the jobsite (including rental equipment).

Contractor and subcontractor diesel powered off-road equipment assigned to the contract shall be retrofitted using the phased in approach shown below. Equipment that is of a model year older than the year given for that equipment's respective horsepower range shall be retrofitted:

Effective Dates	Horsepower Range	Model Year
June 1, 2010 1/	600-749	2002
	750 and up	2006
June 1, 2011 2/	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006
June 1, 2012 2/	50-99	2004
	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006

1/ Effective dates apply to Contractor diesel powered off-road equipment assigned to the contract.

2/ Effective dates apply to Contractor and subcontractor diesel powered off-road equipment assigned to the contract.

The retrofit emission control devices shall achieve a minimum PM emission reduction of 50 percent and shall be:

a) Included on the U.S. Environmental Protection Agency (USEPA) *Verified Retrofit Technology List* (http://www.epa.gov/cleandiesel/verification/verif-list.htm), or verified by the California Air Resources Board (CARB) (http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm); or

b) Retrofitted with a non-verified diesel retrofit emission control device if verified retrofit emission control devices are not available for equipment proposed to be used on the project, and if the Contractor has obtained a performance certification from the retrofit device manufacturer that the emission control device provides a minimum PM emission reduction of 50 percent.

Note: Large cranes (Crawler mounted cranes) which are responsible for critical lift operations are exempt from installing retrofit emission control devices if such devices adversely affect equipment operation.

Diesel powered off-road equipment with engine ratings of 50 hp and above, which are unable to be retrofitted with verified emission control devices or if performance certifications are not available which will achieve a minimum 50 percent PM reduction, may be granted a waiver by the Department if documentation is provided showing good faith efforts were made by the Contractor to retrofit the equipment.

Construction shall not proceed until the Contractor submits a certified list of the diesel powered off-road equipment that will be used, and as necessary, retrofitted with emission control devices. The list(s) shall include (1) the equipment number, type, make, Contractor/rental company name; and (2) the emission control devices make, model, USEPA or CARB verification number, or performance certification from the retrofit device manufacturer. Equipment reported as fitted with emissions control devices shall be made available to the Engineer for visual inspection of the device installation, prior to being used on the jobsite.

The Contractor shall submit an updated list of retrofitted off-road construction equipment as retrofitted equipment changes or comes on to the jobsite. The addition or deletion of any diesel powered equipment shall be included on the updated list.

If any diesel powered off-road equipment is found to be in non-compliance with any portion of this special provision, the Engineer will issue the Contractor a diesel retrofit deficiency deduction.

Any costs associated with retrofitting any diesel powered off-road equipment with emission control devices 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. The Contractor's compliance with this notice and any associated regulations shall not be grounds for a claim.

Diesel Retrofit Deficiency Deduction

When the Engineer determines that a diesel retrofit deficiency exists, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency continues to exist. The calendar day(s) will begin when the time period for correction is exceeded and end with the Engineer's written acceptance of the correction. The daily monetary deduction will be $1,000.00 for each deficiency identified.

The deficiency will be based on lack of diesel retrofit emissions control.

If a Contractor accumulates three diesel retrofit deficiency deductions for the same piece of equipment in a contract period, the Contractor will be shutdown until the deficiency is corrected. Such a shutdown will not be grounds for any extension of the contract time, waiver of penalties, or be grounds for any claim.

CORRUGATED PLASTIC PIPE (CULVERT AND STORM SEWER) (BDE)

Effective: January 1, 2021

Revise Tables IIIA and IIIB of Article 542.03 and the storm sewers tables of Article 550.03 of the Standard Specifications to read:

(SEE TABLES ON NEXT 10 PAGES)

"PIPE CULVERTS
TABLE IIIA: PLASTIC PIPE PERMITTED
FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE

Nominal Diameter (in.)	Type 1					Type 2					Type 3					Type 4				
	Fill Height: 3' and less, with 1' min					Fill Height: Greater than 3', not exceeding 10'					Fill Height: Greater than 10', not exceeding 15'					Fill Height: Greater than 15', not exceeding 20'				
	PVC	CPVC	PE	CPE	CPP	PVC	CPVC	PE	CPE	CPP	PVC	CPVC	PE	CPE	CPP	PVC	CPVC	PE	CPE	CPP
10	X	QPL	X	QPL	NA	X	QPL	X	QPL	NA	X	QPL	X	QPL	NA	X	QPL	X	QPL	NA
12	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL
15	X	QPL	NA	QPL	QPL	X	QPL	NA	QPL	QPL	X	QPL	NA	QPL	QPL	X	QPL	NA	QPL	QPL
18	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL
21	X	QPL	NA	QPL	NA	X	QPL	NA	QPL	NA	X	QPL	NA	QPL	NA	X	QPL	NA	NA	NA
24	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	NA	QPL
27	X	NA	NA	NA	NA	X	NA	NA	NA	NA	X	NA	NA	NA	NA	X	NA	NA	NA	NA
30	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	NA	QPL
36	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	NA	QPL
42	X	NA	X	QPL	QPL	X	NA	X	QPL	QPL	X	NA	X	NA	QPL	X	NA	X	NA	NA
48	X	NA	X	QPL	QPL	X	NA	X	QPL	QPL	X	NA	X	NA	QPL	X	NA	X	NA	NA
54	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
60	NA	NA	NA	QPL	QPL	NA	NA	NA	QPL	QPL	NA	NA	NA	NA	QPL	NA	NA	NA	NA	NA

Notes:
PVC Polyvinyl Chloride Pipe
CPVC Corrugated Polyvinyl Chloride Pipe with a Smooth Interior
PE Polyethylene Pipe
CPE Corrugated Polyethylene Pipe with a Smooth Interior
CPP Corrugated Polypropylene Pipe with a Smooth Interior
X Permitted
QPL Permitted for the producers approved for that diameter in the Department's qualified product list
NA Not Acceptable

PIPE CULVERTS (metric)
TABLE IIIA: PLASTIC PIPE PERMITTED
FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE

Nominal Diameter (mm)	Type 1					Type 2					Type 3					Type 4				
	Fill Height: 1 m and less, with 0.3 m min. cover					Fill Height: Greater than 1 m, not exceeding 3 m					Fill Height: Greater than 3 m, not exceeding 4.5 m					Fill Height: Greater than 4.5 m, not exceeding 6 m				
	PVC	CPVC	PE	CPE	CPP	PVC	CPVC	PE	CPE	CPP	PVC	CPVC	PE	CPE	CPP	PVC	CPVC	PE	CPE	CPP
250	X	QPL	X	QPL	NA	X	QPL	X	QPL	NA	X	QPL	X	QPL	NA	X	QPL	X	QPL	NA
300	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL
375	X	QPL	NA	QPL	QPL	X	QPL	NA	QPL	QPL	X	QPL	NA	QPL	QPL	X	QPL	NA	QPL	QPL
450	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL
525	X	QPL	NA	QPL	NA	X	QPL	NA	QPL	NA	X	QPL	NA	QPL	NA	X	QPL	NA	NA	NA
600	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	NA	QPL
675	X	NA	NA	NA	NA	X	NA	NA	NA	NA	X	NA	NA	NA	NA	X	NA	NA	NA	NA
750	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	NA	QPL
900	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	NA	QPL
1050	X	NA	X	QPL	QPL	X	NA	X	QPL	QPL	X	NA	X	NA	QPL	X	NA	X	NA	NA
1200	X	NA	X	QPL	QPL	X	NA	X	QPL	QPL	X	NA	X	NA	QPL	X	NA	X	NA	NA
1350	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1500	NA	NA	NA	QPL	QPL	NA	NA	NA	QPL	QPL	NA	NA	NA	NA	QPL	NA	NA	NA	NA	NA

Notes:
- PVC Polyvinyl Chloride Pipe
- CPVC Corrugated Polyvinyl Chloride Pipe with a Smooth Interior
- PE Polyethylene Pipe
- CPE Corrugated Polyethylene Pipe with a Smooth Interior
- CPP Corrugated Polypropylene Pipe with a Smooth Interior
- X Permitted
- QPL Permitted for the producers approved for that diameter in the Department's qualified product list
- NA Not Acceptable

PIPE CULVERTS
TABLE IIIB: PLASTIC PIPE PERMITTED
FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE

Nominal Diameter (in.)	Type 5					Type 6			Type 7		
	Fill Height: Greater than 20', not exceeding 25'					Fill Height: Greater than 25', not exceeding 30'			Fill Height: Greater than 30', not exceeding 35'		
	PVC	CPVC	PE	CPE	CPP	PVC	CPVC	PE	PVC	CPVC	PE
10	X	QPL	X	QPL	NA	X	QPL	X	X	QPL	X
12	X	QPL	X	QPL	QPL	X	QPL	X	X	QPL	X
15	X	QPL	NA	NA	QPL	X	QPL	NA	X	QPL	NA
18	X	QPL	X	NA	NA	X	QPL	X	X	QPL	X
21	X	QPL	NA	NA	NA	X	QPL	NA	X	QPL	NA
24	X	QPL	X	NA	NA	X	QPL	X	X	QPL	X
27	X	NA	NA	NA	NA	X	NA	NA	X	NA	NA
30	X	QPL	X	NA	QPL	X	QPL	X	X	QPL	X
36	X	QPL	X	NA	NA	X	QPL	X	X	QPL	X
42	X	NA	X	NA	NA	X	NA	X	X	NA	X
48	X	NA	X	NA	NA	X	NA	X	X	NA	X
54	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
- PVC Polyvinyl Chloride Pipe
- CPVC Corrugated Polyvinyl Chloride Pipe with a Smooth Interior
- CPP Corrugated Polypropylene Pipe with a Smooth Interior
- X Permitted
- QPL Permitted for the producers approved for that diameter in the Department's qualified product list
- NA Not Acceptable

PIPE CULVERTS (metric)
TABLE IIIB: PLASTIC PIPE PERMITTED
FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE

Nominal Diameter (mm)	Type 5					Type 6			Type 7		
	Fill Height: Greater than 6 m, not exceeding 7.5 m					Fill Height: Greater than 7.5 m, not exceeding 9 m			Fill Height: Greater than 9 m, not exceeding 10.5 m		
	PVC	CPVC	PE	CPE	CPP	PVC	CPVC	PE	PVC	CPVC	PE
250	X	QPL	X	QPL	NA	X	QPL	X	X	QPL	X
300	X	QPL	X	QPL	QPL	X	QPL	X	X	QPL	X
375	X	QPL	NA	NA	QPL	X	QPL	NA	X	QPL	NA
450	X	QPL	X	NA	NA	X	QPL	X	X	QPL	X
525	X	QPL	NA	NA	NA	X	QPL	NA	X	QPL	NA
600	X	QPL	X	NA	NA	X	QPL	X	X	QPL	X
675	X	NA	NA	NA	NA	X	NA	NA	X	NA	NA
750	X	QPL	X	NA	QPL	X	QPL	X	X	QPL	X
900	X	QPL	X	NA	NA	X	QPL	X	X	QPL	X
1000	X	NA	X	NA	NA	X	NA	X	X	NA	X
1200	X	NA	X	NA	NA	X	NA	X	X	NA	X
1350	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
PVC Polyvinyl Chloride Pipe
CPVC Corrugated Polyvinyl Chloride Pipe with a Smooth Interior
CPP Corrugated Polypropylene Pipe with a Smooth Interior
X Permitted
QPL Permitted for the producers approved for that diameter in the Department's qualified product list
NA Not Acceptable

STORM SEWERS
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED
FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE

Nominal Diameter in.	Type 1								Type 2							
	Fill Height: 3' and less, with 1' min.								Fill Height: Greater than 3', not exceeding 10'							
	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP
10	NA	3	X	X	QPL	X	QPL	NA	NA	1	*X	X	QPL	X	QPL	NA
12	IV	NA	X	X	QPL	X	QPL	QPL	II	1	*X	X	QPL	X	QPL	QPL
15	IV	NA	NA	X	QPL	NA	QPL	QPL	II	1	*X	X	QPL	NA	QPL	QPL
18	IV	NA	NA	X	QPL	X	QPL	QPL	II	2	X	X	QPL	X	QPL	QPL
21	III	NA	NA	X	QPL	NA	QPL	NA	II	2	X	X	QPL	NA	QPL	NA
24	III	NA	NA	X	QPL	X	QPL	QPL	II	2	X	X	QPL	X	QPL	QPL
27	III	NA	NA	X	NA	NA	NA	NA	II	3	X	X	NA	NA	NA	NA
30	IV	NA	NA	X	QPL	X	QPL	QPL	II	3	X	X	QPL	X	QPL	QPL
33	III	NA	NA	NA	NA	NA	NA	NA	II	NA	X	NA	NA	NA	NA	NA
36	III	NA	NA	X	QPL	X	QPL	QPL	II	NA	X	X	QPL	X	QPL	QPL
42	II	NA	X	X	NA	X	QPL	QPL	II	NA	X	X	NA	X	QPL	QPL
48	II	NA	X	X	NA	X	QPL	QPL	II	NA	X	X	NA	X	QPL	QPL
54	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
60	II	NA	NA	NA	NA	NA	QPL	QPL	II	NA	NA	NA	NA	NA	QPL	QPL
66	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
72	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
78	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
84	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
90	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
96	II	NA	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA
102	II	NA	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA
108	II	NA	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
CSP Concrete Sewer, Storm drain, and Culvert Pipe (number in column indicates strength class)
ESCP Extra Strength Clay Pipe
PVC Polyvinyl Chloride Pipe
CPVC Corrugated Polyvinyl Chloride Pipe with a Smooth Interior
PE Polyethylene Pipe
CPE Corrugated Polyethylene Pipe with a Smooth Interior
CPP Corrugated Polypropylene Pipe with a Smooth Interior
X Permitted
QPL Permitted for the producers approved for that diameter in the Department’s qualified product list
NA Not Acceptable
* May also use Standard Strength Clay Pipe

STORM SEWERS (metric)
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED
FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE

Nominal Diameter mm	Type 1								Type 2							
	Fill Height: 1 m and less, with 300 mm min,								Fill Height: Greater than 1 m, not exceeding 3 m							
	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP
250	NA	3	X	X	QPL	X	QPL	NA	NA	1	*X	X	QPL	X	QPL	NA
300	IV	NA	X	X	QPL	X	QPL	QPL	II	1	*X	X	QPL	X	QPL	QPL
375	IV	NA	NA	X	QPL	NA	QPL	QPL	II	1	*X	X	QPL	NA	QPL	QPL
450	IV	NA	NA	X	QPL	X	QPL	QPL	II	2	X	X	QPL	X	QPL	QPL
525	III	NA	NA	X	QPL	NA	QPL	NA	II	2	X	X	QPL	NA	QPL	NA
600	III	NA	NA	X	QPL	X	QPL	QPL	II	2	X	X	QPL	X	QPL	QPL
675	III	NA	NA	X	NA	NA	NA	NA	II	3	X	X	NA	NA	NA	NA
750	IV	NA	NA	X	QPL	X	QPL	QPL	II	3	X	X	QPL	X	QPL	QPL
825	III	NA	NA	NA	NA	NA	NA	NA	II	NA	X	NA	NA	NA	NA	NA
900	III	NA	NA	X	QPL	X	QPL	QPL	II	NA	X	X	QPL	X	QPL	QPL
1050	II	NA	X	X	NA	X	QPL	QPL	II	NA	X	X	NA	X	QPL	QPL
1200	II	NA	X	X	NA	X	QPL	QPL	II	NA	X	X	NA	X	QPL	QPL
1350	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
1500	II	NA	NA	NA	NA	NA	QPL	QPL	II	NA	NA	NA	NA	NA	QPL	QPL
1650	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
1800	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
1950	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
2100	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
2250	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
2400	II	NA	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA
2550	II	NA	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA
2700	II	NA	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
CSP Concrete Sewer, Storm drain, and Culvert Pipe (number in column indicates strength class)
ESCP Extra Strength Clay Pipe
PVC Polyvinyl Chloride Pipe
CPVC Corrugated Polyvinyl Chloride Pipe with a Smooth Interior
PE Polyethylene Pipe
CPE Corrugated Polyethylene Pipe with a Smooth Interior
CPP Corrugated Polypropylene Pipe with a Smooth Interior
X Permitted
QPL Permitted for the producers approved for that diameter in the Department’s qualified product list
NA Not Acceptable
* May also use Standard Strength Clay Pipe

STORM SEWERS
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED
FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE

Nominal Diameter in.	Type 3								Type 4							
	Fill Height: Greater than 10' not exceeding 15'								Fill Height: Greater than 15' not exceeding 20'							
	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP
10	NA	2	X	X	QPL	X	QPL	NA	NA	3	X	X	QPL	X	QPL	NA
12	III	2	X	X	QPL	X	QPL	QPL	IV	NA	NA	X	QPL	X	QPL	QPL
15	III	3	X	X	QPL	NA	QPL	QPL	IV	NA	NA	X	QPL	NA	QPL	QPL
18	III	NA	X	X	QPL	X	QPL	QPL	IV	NA	NA	X	QPL	X	QPL	QPL
21	III	NA	NA	X	QPL	NA	QPL	NA	IV	NA	NA	X	QPL	NA	NA	NA
24	III	NA	NA	X	QPL	X	QPL	QPL	IV	NA	NA	X	QPL	X	NA	QPL
27	III	NA	NA	X	NA	NA	NA	NA	IV	NA	NA	X	NA	NA	NA	NA
30	III	NA	NA	X	QPL	X	QPL	QPL	IV	NA	NA	X	QPL	X	NA	QPL
33	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
36	III	NA	NA	X	QPL	X	QPL	QPL	IV	NA	NA	X	QPL	X	NA	QPL
42	III	NA	NA	X	NA	X	NA	QPL	IV	NA	NA	X	NA	X	NA	NA
48	III	NA	NA	X	NA	X	NA	QPL	IV	NA	NA	X	NA	X	NA	NA
54	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
60	III	NA	NA	NA	NA	NA	NA	QPL	IV	NA	NA	NA	NA	NA	NA	NA
66	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
72	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
78	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
84	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
90	III	NA	NA	NA	NA	NA	NA	NA	1680	NA	NA	NA	NA	NA	NA	NA
96	III	NA	NA	NA	NA	NA	NA	NA	1690	NA	NA	NA	NA	NA	NA	NA
102	III	NA	NA	NA	NA	NA	NA	NA	1700	NA	NA	NA	NA	NA	NA	NA
108	1360	NA	NA	NA	NA	NA	NA	NA	1710	NA	NA	NA	NA	NA	NA	NA

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe (RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the D-load to produce a 0.01 in crack.)
CSP Concrete Sewer, Storm drain, and Culvert Pipe (number in column indicates strength class)
ESCP Extra Strength Clay Pipe
PVC Polyvinyl Chloride Pipe
CPVC Corrugated Polyvinyl Chloride Pipe with a Smooth Interior
PE Polyethylene Pipe
CPE Corrugated Polyethylene Pipe with a Smooth Interior
CPP Corrugated Polypropylene Pipe with a Smooth Interior
X Permitted
QPL Permitted for the producers approved for that diameter in the Department's qualified product list
NA Not Acceptable

STORM SEWERS (metric)
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED
FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE

Nominal Diameter mm	Type 3								Type 4							
	Fill Height: Greater than 3 m, not exceeding 4.5 m								Fill Height: Greater than 4.5 m, not exceeding 6 m							
	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP
250	NA	2	X	X	QPL	X	QPL	NA	NA	3	X	X	QPL	X	QPL	NA
300	III	2	X	X	QPL	X	QPL	QPL	IV	NA	NA	X	QPL	X	QPL	QPL
375	III	3	X	X	QPL	NA	QPL	QPL	IV	NA	NA	X	QPL	NA	QPL	QPL
450	III	NA	X	X	QPL	X	QPL	QPL	IV	NA	NA	X	QPL	X	QPL	QPL
525	III	NA	NA	X	QPL	NA	QPL	NA	IV	NA	NA	X	QPL	NA	NA	NA
600	III	NA	NA	X	QPL	X	QPL	QPL	IV	NA	NA	X	QPL	X	NA	QPL
675	III	NA	NA	X	NA	NA	NA	NA	IV	NA	NA	X	NA	NA	NA	NA
750	III	NA	NA	X	QPL	X	QPL	QPL	IV	NA	NA	X	QPL	X	NA	QPL
825	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
900	III	NA	NA	X	QPL	X	QPL	QPL	IV	NA	NA	X	QPL	X	NA	QPL
1050	III	NA	NA	X	NA	X	NA	QPL	IV	NA	NA	X	NA	X	NA	NA
1200	III	NA	NA	X	NA	X	NA	QPL	IV	NA	NA	X	NA	X	NA	NA
1350	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
1500	III	NA	NA	NA	NA	NA	NA	QPL	IV	NA	NA	NA	NA	NA	NA	NA
1650	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
1800	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
1950	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
2100	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
2250	III	NA	NA	NA	NA	NA	NA	NA	80	NA	NA	NA	NA	NA	NA	NA
2400	III	NA	NA	NA	NA	NA	NA	NA	80	NA	NA	NA	NA	NA	NA	NA
2550	III	NA	NA	NA	NA	NA	NA	NA	80	NA	NA	NA	NA	NA	NA	NA
2700	70	NA	NA	NA	NA	NA	NA	NA	80	NA	NA	NA	NA	NA	NA	NA

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe (RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the D-load to produce a 25.4 micro-meter crack.)
CSP Concrete Sewer, Storm drain, and Culvert Pipe (number in column indicates strength class)
ESCP Extra Strength Clay Pipe
PVC Polyvinyl Chloride Pipe
CPVC Corrugated Polyvinyl Chloride Pipe with a Smooth Interior
PE Polyethylene Pipe
CPE Corrugated Polyethylene Pipe with a Smooth Interior
CPP Corrugated Polypropylene Pipe with a Smooth Interior
X Permitted
QPL Permitted for the producers approved for that diameter in the Department's qualified product list
NA Not Acceptable

STORM SEWERS
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED
FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE

Nominal Diameter in.	Type 5						Type 6				Type 7			
	Fill Height: Greater than 20', not exceeding 25'						Fill Height: Greater than 25', not exceeding 30'				Fill Height: Greater than 30', not exceeding 35'			
	RCCP	PVC	CPVC	PE	CPE	CPP	RCCP	PVC	CPVC	PE	RCCP	PVC	CPVC	PE
10	NA	X	QPL	X	QPL	NA	NA	X	QPL	X	NA	X	QPL	X
12	IV	X	QPL	X	QPL	QPL	V	X	QPL	X	V	X	QPL	X
15	IV	X	QPL	NA	NA	QPL	V	X	QPL	NA	V	X	QPL	NA
18	IV	X	QPL	X	NA	NA	V	X	QPL	X	V	X	QPL	X
21	IV	X	QPL	NA	NA	NA	V	X	QPL	NA	V	X	QPL	NA
24	IV	X	QPL	X	NA	NA	V	X	QPL	X	V	X	QPL	X
27	IV	X	NA	NA	NA	NA	V	X	NA	NA	V	X	NA	NA
30	IV	X	QPL	X	NA	QPL	V	X	QPL	X	V	X	QPL	X
33	IV	NA	NA	NA	NA	NA	V	NA	NA	NA	V	NA	NA	NA
36	IV	X	QPL	X	NA	NA	V	X	QPL	X	V	X	QPL	X
42	IV	X	NA	X	NA	NA	V	X	NA	X	V	X	NA	X
48	IV	X	NA	X	NA	NA	V	X	NA	X	V	X	NA	X
54	IV	NA	NA	NA	NA	NA	V	NA	NA	NA	V	NA	NA	NA
60	IV	NA	NA	NA	NA	NA	V	NA	NA	NA	V	NA	NA	NA
66	IV	NA	NA	NA	NA	NA	V	NA	NA	NA	V	NA	NA	NA
72	V	NA	NA	NA	NA	NA	V	NA	NA	NA	V	NA	NA	NA
78	2020	NA	NA	NA	NA	NA	2370	NA	NA	NA	2730	NA	NA	NA
84	2020	NA	NA	NA	NA	NA	2380	NA	NA	NA	2740	NA	NA	NA
90	2030	NA	NA	NA	NA	NA	2390	NA	NA	NA	2750	NA	NA	NA
96	2040	NA	NA	NA	NA	NA	2400	NA	NA	NA	2750	NA	NA	NA
102	2050	NA	NA	NA	NA	NA	2410	NA	NA	NA	2760	NA	NA	NA
108	2060	NA	NA	NA	NA	NA	2410	NA	NA	NA	2770	NA	NA	NA

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe (RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the D-load to produce a 0.01 in crack.)
PVC Polyvinyl Chloride Pipe
CPVC Corrugated Polyvinyl Chloride Pipe with a Smooth Interior
PE Polyethylene Pipe
CPE Corrugated Polyethylene Pipe with a Smooth Interior
CPP Corrugated Polypropylene Pipe with a Smooth Interior
X Permitted
QPL Permitted for the producers approved for that diameter in the Department's qualified product list
NA Not Acceptable

STORM SEWERS (metric)
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED
FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE

Nominal Diameter mm	Type 5						Type 6				Type 7			
	Fill Height: Greater than 6 m, not exceeding 7.5 m						Fill Height: Greater than 7.5 m, not exceeding 9 m				Fill Height: Greater than 9 m, not exceeding 10.5 m			
	RCCP	PVC	CPVC	PE	CPE	CPP	RCCP	PVC	CPVC	PE	RCCP	PVC	CPVC	PE
250	NA	X	QPL	X	QPL	NA	NA	X	QPL	X	NA	X	QPL	X
300	IV	X	QPL	X	QPL	QPL	V	X	QPL	X	V	X	QPL	X
375	IV	X	QPL	NA	NA	QPL	V	X	QPL	NA	V	X	QPL	NA
450	IV	X	QPL	X	NA	NA	V	X	QPL	X	V	X	QPL	X
525	IV	X	QPL	NA	NA	NA	V	X	QPL	NA	V	X	QPL	NA
600	IV	X	QPL	X	NA	NA	V	X	QPL	X	V	X	QPL	X
675	IV	X	NA	NA	NA	NA	V	X	NA	NA	V	X	NA	NA
750	IV	X	QPL	X	NA	QPL	V	X	QPL	X	V	X	QPL	X
825	IV	NA	NA	NA	NA	NA	V	NA	NA	NA	V	NA	NA	NA
900	IV	X	QPL	X	NA	NA	V	X	QPL	X	V	X	QPL	X
1050	IV	X	NA	X	NA	NA	V	X	NA	X	V	X	NA	X
1200	IV	X	NA	X	NA	NA	V	X	NA	X	V	X	NA	X
1350	IV	NA	NA	NA	NA	NA	V	NA	NA	NA	V	NA	NA	NA
1500	IV	NA	NA	NA	NA	NA	V	NA	NA	NA	V	NA	NA	NA
1650	IV	NA	NA	NA	NA	NA	V	NA	NA	NA	V	NA	NA	NA
1800	V	NA	NA	NA	NA	NA	V	NA	NA	NA	V	NA	NA	NA
1950	100	NA	NA	NA	NA	NA	110	NA	NA	NA	130	NA	NA	NA
2100	100	NA	NA	NA	NA	NA	110	NA	NA	NA	130	NA	NA	NA
2250	100	NA	NA	NA	NA	NA	110	NA	NA	NA	130	NA	NA	NA
2400	100	NA	NA	NA	NA	NA	120	NA	NA	NA	130	NA	NA	NA
2550	100	NA	NA	NA	NA	NA	120	NA	NA	NA	130	NA	NA	NA
2700	100	NA	NA	NA	NA	NA	120	NA	NA	NA	130	NA	NA	NA

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe (RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the D-load to produce a 25.4 micro-meter crack.)
PVC Polyvinyl Chloride Pipe
CPVC Corrugated Polyvinyl Chloride Pipe with a Smooth Interior
PE Polyethylene Pipe
CPE Corrugated Polyethylene Pipe with a Smooth Interior
CPP Corrugated Polypropylene Pipe with a Smooth Interior
X Permitted
QPL Permitted for the producers approved for that diameter in the Department's qualified product list
NA Not Acceptable"

Revise the first paragraph of Article 1040.03 of the Standard Specifications to read:

"**1040.03 Polyvinyl Chloride (PVC) Pipe.** Acceptance testing of PVC pipe and fittings shall be accomplished during the same construction season in which they are installed. The pipe shall meet the following additional requirements."

Revise Article 1040.04(b) of the Standard Specifications to read:

"(b) Corrugated PE Pipe with a Smooth Interior. The manufacturer shall be listed as compliant through the NTPEP program and the pipe shall be according to AASHTO M 294 (nominal size – 12 to 60 in. (300 to 1500 mm)). The pipe shall be Type S or D."

Revise the first paragraph of Article 1040.04(d) of the Standard Specifications to read:

"(d) PE Pipe with a Smooth Interior. The pipe shall be according to ASTM F 714 (DR 32.5) with a minimum cell classification of PE 335434 as defined in ASTM D 3350."

Revise the first paragraph of Article 1040.08 of the Standard Specifications to read:

"**1040.08 Polypropylene (PP) Pipe.** Storage and handling shall be according to the manufacturer's recommendations, except in no case shall the pipe be exposed to direct sunlight for more than six months. Acceptance testing of the pipe shall be accomplished during the same construction season in which it is installed. The pipe shall meet the following additional requirements."

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)

Effective: September 1, 2000 Revised: March 2, 2019

FEDERAL 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 by the Department in accordance with the requirements of 49 CFR Part 26 and listed in the Illinois Unified Certification Program (IL UCP) DBE Directory.

STATE OBLIGATION. This Special Provision will also be used by the Department to satisfy the requirements of the Business Enterprise for Minorities, Females, and Persons with Disabilities Act, 30 ILCS 575. When this Special Provision is used to satisfy state law requirements on 100 percent state-funded contracts, the federal government has no involvement in such contracts (not a federal-aid contract) and no responsibility to oversee the implementation of this Special Provision by the Department on those contracts. DBE participation on 100 percent state-funded contracts will not be credited toward fulfilling the Department's annual overall DBE goal required by the US Department of Transportation to comply with the federal DBE program requirements.

CONTRACTOR ASSURANCE. The Contractor makes the following assurance and agrees to include the assurance in each subcontract the Contractor signs with a subcontractor.

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 contracts funded in whole or in part with federal or state funds. 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:

(a) Withholding progress payments;

(b) Assessing sanctions;

(c) Liquidated damages; and/or

(d) Disqualifying the Contractor from future bidding as non-responsible.

OVERALL GOAL SET FOR THE DEPARTMENT. As a requirement of compliance with 49 CFR Part 26, the Department has set an overall goal for DBE participation in its federally assisted contracts. That goal applies to all federal-aid funds the Department will expend in its federally assisted contracts for the subject reporting fiscal year. The Department is required to make a good faith effort to achieve the overall goal. The dollar amount paid to all approved DBE companies performing work called for in this contract is eligible to be credited toward fulfillment of the Department's overall goal.

CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR. This contract includes a specific DBE utilization goal established by the Department. The goal has been included because the Department has determined the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies. The determination is based on an assessment of the type of work, the location of the work, and the availability of DBE companies to do a part of the work. The assessment indicates, in the absence of unlawful discrimination and in an arena of fair and open competition, DBE companies can be expected to perform **11.00%** 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. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set for in this Special Provision:

(a) The bidder documents enough DBE participation has been obtained to meet the goal or,

(b) The bidder documents a good faith effort has been made to meet the goal, even though the effort did not succeed in obtaining enough DBE participation to meet the goal.

DBE LOCATOR REFERENCES. Bidders shall consult the IL UCP DBE Directory as a reference source for DBE-certified companies. In addition, the Department maintains a letting and item specific DBE locator information system whereby DBE companies can register their interest in providing quotes on particular bid items advertised for letting. Information concerning DBE companies willing to quote work for particular contracts may be obtained by contacting the

Department's Bureau of Small Business Enterprises at telephone number (217) 785-4611, or by visiting the Department's website at:
http://www.idot.illinois.gov/doing-business/certifications/disadvantaged-business-enterprise-certification/il-ucp-directory/index.

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

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}."

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."

HOT-MIX ASPHALT – LONGITUDINAL JOINT SEALANT (BDE)

Effective: November 1, 2022 Revised: August 1, 2023

Add the following after the second sentence in the eighth paragraph of Article 406.06(h)(2) of the Standard Specifications:

"If rain is forecasted and traffic is to be on the LJS or if pickup/tracking of the LJS material is likely, the LJS shall be covered immediately following its application with FA 20 fine aggregate mechanically spread uniformly at a rate of 1.5 ± 0.5 lb/sq yd (0.75 ± 0.25 kg/sq m). Fine aggregate landing outside of the LJS shall be removed prior to application of tack coat."

Add the following after the first sentence in the ninth paragraph of Article 406.06(h)(2) of the Standard Specifications:

"LJS half-width shall be applied at a width of 9 ± 1 in. (225 ± 25 mm) in the immediate lane to be placed with the outside edge flush with the joint of the next HMA lift. The vertical face of any longitudinal joint remaining in place shall also be coated."

Add the following after the eleventh paragraph of Article 406.06(h)(2) of the Standard Specifications:

"LJS Half-Width Application Rate, lb/ft (kg/m) 1/			
Lift Thickness, in. (mm)	Coarse Graded Mixture (IL-19.0, IL-19.0L, IL-9.5, IL-9.5L, IL-4.75)	Fine Graded Mixture (IL-9.5FG)	SMA Mixture (SMA-9.5, SMA-12.5)
¾ (19)	0.44 (0.66)		
1 (25)	0.58 (0.86)		
1 ¼ (32)	0.66 (0.98)	0.44 (0.66)	
1 ½ (38)	0.74 (1.10)	0.48 (0.71)	0.63 (0.94)
1 ¾ (44)	0.82 (1.22)	0.52 (0.77)	0.69 (1.03)
2 (50)	0.90 (1.34)	0.56 (0.83)	0.76 (1.13)
≥ 2 ¼ (60)	0.98 (1.46)		

1/ The application rate includes a surface demand for liquid. The thickness of the LJS may taper from the center of the application to a lesser thickness on the edge of the application, provided the correct width and application rate are maintained."

Revise the second paragraph of Article 406.13(b) of the Standard Specifications to read:

"Aggregate for covering tack, LJS, or FLS will not be measured for payment."

Add the following to the end of the second paragraph of Article 406.14 of the Standard Specifications:

"Longitudinal joint sealant (LJS) half-width will be paid for at the contract unit price per foot (meter) for LONGITUDINAL JOINT SEALANT, HALF-WIDTH."

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."

PORTLAND CEMENT CONCRETE (BDE)

Effective: August 1, 2023

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."

PREFORMED PLASTIC PAVEMENT MARKING (BDE)

Effective: June 2, 2024

Revise Article 1095.03(h) of the Standard Specifications to read:

"(h) Glass Beads. Glass beads shall be colorless and uniformly distributed throughout the yellow and white portions of the material only. A top coating of beads shall be bonded to or directly embedded into the surface of the markings such that the beads are not easily removed when the film is scratched firmly with a thumb nail.

The glass bead refractive index shall be tested using the liquid immersion method.

Type B material shall have an inner mix of glass beads with a minimum refractive index of 1.50 and a top coating of ceramic beads bonded to top urethane wear surface with a minimum refractive index of 1.70. Beads with a refractive index greater than 1.80 shall not be used.

Type C material shall have glass beads with a minimum refractive index of 1.50 and a layer of skid resistant ceramic particles bonded to the top urethane wear surface. The urethane wear surface shall have a nominal thickness of 5 mils (0.13 mm)."

Revise Article 1095.03(n) of the Standard Specifications to read:

"(n) Sampling and Inspection.

(1) Sample. Prior to approval and use of preformed plastic pavement markings, 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 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 will be taken or witnessed by a representative of the Bureau of Materials and will 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."

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 Lawn Mixture 1/	Kentucky Bluegrass	60 (70)
		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 Lawn Mixture 1/	Turf-Type Fine Fescue 3/	150 (170)
		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 Roadside Mixture 1/	*Lolium arundinaceum* (Tall Fescue)	60 (70)
		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 Slope Mixture 1/	*Elymus canadensis* (Canada Wild Rye) 5/	5 (5)
		Perennial Ryegrass	20 (20)
		Alsike Clover 4/	5 (5)
		Desmanthus illinoensis (Illinois Bundleflower) 4/ 5/	2 (2)
		Schizachyrium scoparium (Little Bluestem) 5/	12 (12)
		Bouteloua curtipendula (Side-Oats Grama) 5/	10 (10)
		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 Slope Mixture 1/	Perennial Ryegrass	20 (20)
		Elymus canadensis (Canada Wild Rye) 5/	20 (20)
		Panicum virgatum (Switchgrass) 5/	10 (10)
		Schizachyrium scoparium (Little Blue Stem) 5/	12 (12)
		Bouteloua curtipendula (Side-Oats Grama) 5/	10 (10)
		Dalea candida (White Prairie Clover) 4/ 5/	5 (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) Forb Mixture (Below)	1 (1) 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."

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 X 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 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."

TRAFFIC SPOTTERS (BDE)

Effective: January 1, 2019

Revise Article 701.13 of the Standard Specifications to read:

"**701.13 Flaggers and Spotters.** Flaggers shall be certified by an agency approved by the Department. While on the job site, each flagger shall have in his/her possession a current driver's license and a current flagger certification I.D. card. For non-drivers, the Illinois Identification Card issued by the Secretary of State will meet the requirement for a current driver's license. This certification requirement may be waived by the Engineer for emergency situations that arise due to actions beyond the Contractor's control where flagging is needed to maintain safe traffic control on a temporary basis. Spotters are defined as certified flaggers that provide support to workers by monitoring traffic.

Flaggers and spotters shall be stationed to the satisfaction of the Engineer and be equipped with a fluorescent orange, fluorescent yellow/green, or a combination of fluorescent orange and fluorescent yellow/green vest meeting the requirements of ANSI/ISEA 107-2004 or ANSI/ISEA 107-2010 for Conspicuity Class 2 garments. Flaggers shall be equipped with a stop/slow traffic control sign. Spotters shall be equipped with a loud warning device. The warning sound shall be identifiable by workers so they can take evasive action when necessary. Other types of garments may be substituted for the vest as long as the garments have a manufacturer's tag identifying them as meeting the ANSI Class 2 requirement. The longitudinal placement of the flagger may be increased up to 100 ft (30 m) from that shown on the plans to improve the visibility of the flagger. Flaggers shall not encroach on the open lane of traffic unless traffic has been stopped. Spotters shall not encroach on the open lane of traffic, nor interact with or control the flow of traffic.

For nighttime flagging, flaggers shall be illuminated by an overhead light source providing a minimum vertical illuminance of 10 fc (108 lux) measured 1 ft (300 mm) out from the flagger's chest. The bottom of any luminaire shall be a minimum of 10 ft (3 m) above the pavement. Luminaire(s) shall be shielded to minimize glare to approaching traffic and trespass light to adjoining properties. Nighttime flaggers shall be equipped with fluorescent orange or fluorescent orange and fluorescent yellow/green apparel meeting the requirements of ANSI/ISEA 107-2004 or ANSI/ISEA 107-2010 for Conspicuity Class 3 garments.

Flaggers and spotters shall be provided per the traffic control plan and as follows.

(a) Two-Lane Highways. Two flaggers will be required for each separate operation where two-way traffic is maintained over one lane of pavement. Work operations controlled by flaggers shall be no more than 1 mile (1600 m) in length. Flaggers shall be in sight of

each other or in direct communication at all times. Direct communication shall be obtained by using portable two-way radios or walkie-talkies.

The Engineer will determine when a side road or entrance shall be closed to traffic. A flagger will be required at each side road or entrance remaining open to traffic within the operation where two-way traffic is maintained on one lane of pavement. The flagger shall be positioned as shown on the plans or as directed by the Engineer.

(b) Multi-Lane Highways. At all times where traffic is restricted to less than the normal number of lanes on a multilane pavement with a posted speed limit greater than 40 mph and the workers are present, but not separated from the traffic by physical barriers, a flagger or spotter shall be furnished as shown on the plans. Flaggers shall warn and direct traffic. Spotters shall monitor traffic conditions and warn workers of errant approaching vehicles or other hazardous conditions as they occur. One flagger will be required for each separate activity of an operation that requires frequent encroachment in a lane open to traffic. One spotter will be required for each separate activity with workers near the edge of the open lane or with their backs facing traffic.

Flaggers will not be required when no work is being performed, unless there is a lane closure on two-lane, two-way pavement."

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 **9**. 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 **9**.

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: November 1, 2021

The Contractor shall submit a weekly report of Disadvantaged Business Enterprise (DBE) trucks hired by the Contractor or subcontractors (i.e. not owned by the Contractor or subcontractors) that are used for DBE goal credit.

The report shall be submitted 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

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 manufactured after December 31, 2019 shall be MASH-16 compliant. Category 1 devices manufactured on or before December 31, 2019, and compliant with NCHRP 350 or MASH 2009, may be used on contracts let before December 31, 2024.

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 manufactured after December 31, 2019 shall be MASH-16 compliant. Category 2 devices manufactured on or before December 31, 2019, and compliant with NCHRP 350 or MASH 2009, may be used on contracts let before December 31, 2024.

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-16

compliant. Category 3 devices manufactured on or before December 31, 2019, and compliant with NCHRP 350 or MASH 2009, 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 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-16 compliant is available, an NCHRP 350 or MASH-2009 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."

WORKING DAYS (BDE)

Effective: January 1, 2002

The Contractor shall complete the work within **175** working days.

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 ortechniques 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.

[The Balance of This Page Intentionally Left Blank]

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

Execution Page

Illinois Department of Transportation

Stephen Travia, Director of Highways Project Implementation

Vicki L. Wilson, Director of Finance & Administration

Michael S. Prater, Chief Counsel

Omer Osman, Secretary (Date)

Illinois AFL-CIO Statewide Project Labor Agreement Committee, representing the Unions listed below:

(Date)

List Unions:

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)

requirement and failure of the bidder to comply will render the bid not responsive.

The bidder shall submit a DBE Utilization Plan (form SBE 2026), and a DBE Participation Statement (form SBE 2025) for each DBE company proposed for the performance of work to achieve the contract goal, with the bid. If the Utilization Plan indicates the contract goal will not be met, documentation of good faith efforts shall also be submitted. The documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor is selected over a DBE for work on the contract. The required forms and documentation must 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 Utilization Plan if it does not meet the bidding procedures set forth herein and the bid will be declared not responsive. In the event the bid is declared not 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.

GOOD FAITH EFFORT PROCEDURES. 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 enough DBE participation has been obtained or document the good faith efforts of the bidder, in the event enough DBE participation has not been obtained, before the Department will 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 bidder submits sufficient documentation of a good faith effort to meet the contract goal pursuant to 49 CFR Part 26, Appendix A. This means the bidder must show that all necessary and reasonable steps were taken to achieve the contract goal. Necessary and reasonable steps are those which, by their scope, intensity and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not successful. The Department will consider the quality, quantity, and intensity of the kinds of efforts the bidder has made. Mere *pro forma* efforts, in other words efforts done as a matter of form, are not good faith efforts; rather, the bidder is expected to have taken genuine efforts that would be reasonably expected of a bidder actively and aggressively trying to obtain DBE participation sufficient to meet the contract goal.

(a) The following is a list of types of action that the Department will consider as part of the evaluation of the bidder's good faith efforts to obtain participation. These listed factors are not intended to be a mandatory checklist and are not intended to be exhaustive. Other factors or efforts brought to the attention of the Department may be relevant in appropriate cases and will be considered by the Department.

(1) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBE companies that have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBE companies to respond to the solicitation. The bidder must determine with certainty if the DBE companies are interested by taking appropriate steps to follow up initial solicitations.

(2) Selecting portions of the work to be performed by DBE companies in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the Contractor might otherwise prefer to perform these work items with its own forces.

(3) Providing interested DBE companies with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

(4) a. Negotiating in good faith with interested DBE companies. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBE companies that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBE companies to perform the work.

b. A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBE companies is not in itself sufficient reason for a bidder's failure to meet the contract

DBE goal, as long as such costs are reasonable. Also the ability or desire of a bidder to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from DBE companies if the price difference is excessive or unreasonable. In accordance with the above Bidding Procedures, the documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract.

(5) Not rejecting DBE companies as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.

(6) Making efforts to assist interested DBE companies in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.

(7) Making efforts to assist interested DBE companies in obtaining necessary equipment, supplies, materials, or related assistance or services.

(8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBE companies.

(b) If the Department determines the bidder has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided it is otherwise eligible for award. If the Department determines the bidder has failed to meet the requirements of this Special Provision or that a good faith effort has not been made, the Department will notify the responsible company official designated in the Utilization Plan that the bid is not responsive. The notification will also include a statement of reasons for the adverse determination. If the Utilization Plan is not approved because it is deficient as a technical matter, unless waived by the Department, the bidder will be notified and will be allowed no more than a five calendar day period to cure the deficiency.

(c) The bidder may request administrative reconsideration of an adverse determination by emailing the Department at "DOT.DBE.UP@illinois.gov" within the five calendar days after the receipt of the notification of the determination. The determination shall become final if a request is not made on or before the fifth calendar day. A request may provide additional written documentation or argument concerning the issues raised in the determination statement of reasons, provided the documentation and arguments address efforts made prior to submitting the bid. The request will be reviewed by the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person to consider all issues of documentation and whether the bidder made a good faith effort to meet the goal. After the review by the Reconsideration Officer, the bidder will be sent a written decision within ten working days after receipt of the request for reconsideration, explaining the basis for finding that the bidder did or did not meet the

goal or make adequate good faith efforts to do so. A final decision by the Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid not responsive.

CALCULATING DBE PARTICIPATION. The Utilization Plan values represent work anticipated to be performed 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 companies. 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 counting guidelines are provided in 49 CFR Part 26.55, the provisions of which govern over the summary contained herein.

(a) DBE as the Contractor: 100 percent goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE does not count toward the DBE goals.

(b) DBE as a joint venture Contractor: 100 percent goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.

(c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the Contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE does not count toward the DBE goal.

(d) DBE as a trucker: 100 percent goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed, and insured by the DBE must be used on the contract. Credit will be given for the following:

(1) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.

(2) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission is receives as a result of the lease arrangement.

(e) DBE as a material supplier:

(1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.

(2) 100 percent goal credit for the cost of materials of supplies obtained from a DBE manufacturer.

(3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a DBE regular dealer or DBE manufacturer.

CONTRACT COMPLIANCE. Compliance with this Special Provision is an essential part of the contract. 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 goals has been paid to the DBE. The following administrative procedures and remedies govern the compliance by the Contractor with the contractual obligations established by the Utilization Plan. After approval of the Utilization Plan and award of the contract, the Utilization Plan and individual DBE Participation Statements become part of the contract. If the Contractor did not succeed in obtaining enough DBE participation to achieve the advertised contract goal, and the Utilization Plan was approved and contract awarded based upon a determination of good faith, the total dollar value of DBE work calculated in the approved Utilization Plan as a percentage of the awarded contract value shall become the amended contract goal. All work indicated for performance by an approved DBE shall be performed, managed, and supervised by the DBE executing the DBE Participation Commitment Statement.

(a) NO AMENDMENT. No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be emailed to the Department at DOT.DBE.UP@illinois.gov.

(b) CHANGES TO WORK. Any deviation from the DBE condition-of-award or contract plans, specifications, or special provisions must be approved, in writing, by the Department as provided elsewhere in the Contract. The Contractor shall notify affected DBEs in writing of any changes in the scope of work which result in a reduction in the dollar amount condition-of-award to the contract. Where the revision includes work committed to a new DBE subcontractor, not previously involved in the project, then a Request for Approval of Subcontractor, Department form BC 260A or AER 260A, must be signed and submitted. If the commitment of work is in the form of additional tasks assigned to an existing subcontract, a new Request for Approval of Subcontractor will not be required. However, the Contractor must document efforts to assure the existing DBE subcontractor is capable of performing the additional work and has agreed in writing to the change.

(c) SUBCONTRACT. The Contractor must provide copies of 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.

(d) ALTERNATIVE WORK METHODS. In addition to the above requirements for reductions in the condition of award, additional requirements apply to the two cases of Contractor-initiated work substitution proposals. Where the contract allows alternate work methods which serve to delete or create underruns in condition of award DBE work, and the Contractor selects that alternate method or, where the Contractor proposes a substitute

work method or material that serves to diminish or delete work committed to a DBE and replace it with other work, then the Contractor must demonstrate one of the following:

(1) The replacement work will be performed by the same DBE (as long as the DBE is certified in the respective item of work) in a modification of the condition of award; or

(2) The DBE is aware its work will be deleted or will experience underruns and has agreed in writing to the change. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so; or

(3) The DBE is not capable of performing the replacement work or has declined to perform the work at a reasonable competitive price. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so.

(e) TERMINATION AND REPLACEMENT PROCEDURES. The Contractor shall not terminate or replace a DBE listed on the approved Utilization Plan, or perform with other forces work designated for a listed DBE except as provided in this Special Provision. The Contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the Contractor obtains the Department's written consent as provided in subsection (a) of this part. Unless Department consent is provided for termination of a DBE subcontractor, the Contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the DBE in the Utilization Plan.

As stated above, the Contractor shall not terminate or replace a DBE subcontractor listed in the approved Utilization Plan without prior written consent. This includes, but is not limited to, instances in which the Contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm. Written consent will be granted only if the Bureau of Small Business Enterprises agrees, for reasons stated in its concurrence document, that the Contractor has good cause to terminate or replace the DBE firm. Before transmitting to the Bureau of Small Business Enterprises any request to terminate and/or substitute a DBE subcontractor, the Contractor shall give notice in writing to the DBE subcontractor, with a copy to the Bureau, of its intent to request to terminate and/or substitute, and the reason for the request. The Contractor shall give the DBE five days to respond to the Contractor's notice. The DBE so notified shall advise the Bureau and the Contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why the Bureau should not approve the Contractor's action. If required in a particular case as a matter of public necessity, the Bureau may provide a response period shorter than five days.

For purposes of this paragraph, good cause includes the following circumstances:

(1) The listed DBE subcontractor fails or refuses to execute a written contract;

(2) The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the Contractor;

(3) The listed DBE subcontractor fails or refuses to meet the Contractor's reasonable, nondiscriminatory bond requirements;

(4) The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;

(5) The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1200 or applicable state law.

(6) The Contractor has determined the listed DBE subcontractor is not a responsible contractor;

(7) The listed DBE subcontractor voluntarily withdraws from the projects and provides written notice to the Contractor of its withdrawal;

(8) The listed DBE is ineligible to receive DBE credit for the type of work required;

(9) A DBE owner dies or becomes disabled with the result that the listed DBE subcontractor is unable to complete its work on the contract;

(10) Other documented good cause that compels the termination of the DBE subcontractor. Provided, that good cause does not exist if the Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the Contractor can self-perform the work for which the DBE contractor was engaged or so that the Contractor can substitute another DBE or non-DBE contractor after contract award.

When a DBE is terminated or fails to complete its work on the Contract for any reason, the Contractor shall make a good faith effort to find another DBE to substitute for the original DBE to perform at least the same amount of work under the contract as the terminated DBE to the extent needed to meet the established Contract goal. The good faith efforts shall be documented by the Contractor. If the Department requests documentation under this provision, the Contractor shall submit the documentation within seven days, which may be extended for an additional seven days if necessary at the request of the Contractor. The Department will provide a written determination to the Contractor stating whether or not good faith efforts have been demonstrated.

(f) FINAL PAYMENT. After the performance of the final item of work or delivery of material by a DBE and final payment therefore 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 on Department form SBE 2115 to the Resident Engineer. If full and final payment has not been made to the DBE, the DBE Payment Agreement shall indicate whether a disagreement as to the payment required exists between the Contractor and the DBE or if the Contractor believes the work has not been satisfactorily completed. 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. The Contractor may request

an administrative reconsideration of any amount deducted as damages pursuant to subsection (h) of this part.

(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.

(h) RECONSIDERATION. Notwithstanding any other provision of the contract, including but not limited to Article 109.09 of the Standard Specifications, the Contractor may request administrative reconsideration of a decision to deduct the amount of the goal not achieved as liquidated damages. A request to reconsider shall be delivered to the Contract Compliance Section and shall be handled and considered in the same manner as set forth in paragraph (c) of “Good Faith Effort Procedures” of this Special Provision, except a final decision that a good faith effort was not made during contract performance to achieve the goal agreed to in the Utilization Plan shall be the final administrative decision of the Department. The result of the reconsideration process is not administratively appealable to the U.S. Department of Transportation.

STORM WATER POLLUTION PREVENTION PLAN

Illinois Department of Transportation

Storm Water Pollution Prevention Plan

Route	Marked Route	Section Number
FAP 582	IL 111	60-3K-1
Project Number	**County**	**Contract Number**
D-98-071-04	Madison	76818

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 HB	6/24/24

Print Name	Title	Agency
Kirk Brown, PE	Regional Engineer	IDOT

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:

This project is located at the intersection of IL 111 an I-270 in Pontoon Beach, Madison County (Lat. 38.75754 Lon. -90.06696)

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:

This project consists of removing the existing interchange and replacing with a Diverging Diamond Interchange. The majority of the work will be done under a full road closure of IL 111. New storm sewers, pipe underdrains, combination curb & gutter will be installed along with new pipe culverts and culvert extensions. Additional construction will include traffic signals, signing, pavement marking, landscaping and collateral work necessary to complete the contract.

C. Provide the estimated duration of this project:

150 consecutive calendar days plus 14 non consecutive calendar days

D. The total area of the construction site is estimated to be 37 acres.

The total area of the site estimated to be disturbed by excavation, grading or other activities is 37 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:

Before Construction = 0.39

F. List all soils found within project boundaries; include map unit name, slope information, and erosivity:

801D Orthents, silty, steep, Soil Erodibilty 807IL Darwin silty clay, 0 to 2 percent slopes, occasionally,

flooded, long duration, Soil Erodibilty .24

G. If wetlands were delineated for this project, provide an extent of wetland acreage at the site; see Phase I report:

3.728 acres, however less than 0.5 acres are considered regulatory by USACE

H. Provide a description of potentially erosive areas associated with this project:

The potential for erodible areas include all areas where existing pavement and shoulders are being removed, where excavation for new drainage structures occurs and where there is grading for the new pavement and shoulders.

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.):

Construction activities will include pavement removal, existing raised median removal, installation of storm sewer and drainage structures, concrete curb and gutter, concrete pavement and corner islands, construction of proposed concrete and landscaped medians, culvert extensions. The majority of this construction will be done under a full IL 111 closure. See contract plans for these contracts for detailed soil disturbing activities and locations. The diverging diamond interchange construction may involve steep slopes (3:1) adjacent to the proposed ramps and structures carrying Interstate 270 over IL 111. Proposed embankments placed throughout the project will be subject to erosion until temporary or permanent soil stabilization measures have been placed. In areas where foreslopes are steeper than 3:1, and as indicated on the plans, soil shall be stabilized with erosion control blanket or mulching.

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:

IDOT

L. The following is a list of General NPDES ILR40 permittees within whose reporting jurisdiction this project is located:

None

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:

Unnamed Ditch, Cahokia Canal, Mississippi River

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.

Best Management Practices employed, see erosion control pan sheets, MVS-2021-365 for in-stream work

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. No natural areas, historic sites, historic buildings, threatened or endangered species

☒ 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:

Cahokia Canal, Mississippi River (see attached for polluting impairments)

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:

Perimeter erosion control barrier, ditch checks, and inlet/pipe protect will be used throughout the project site.

Provide a description of the location(s) of direct discharge from the project site to the 303(d) water body:

Roadway ditches, crossroad culverts

Provide a description of the location(s) of any dewatering discharges to the MS4 and/or water body:

NA

☐ Applicable Federal, Tribal, State, or Local Programs

☒ Floodplain

Project is located in theMississippi River floodplain commonly referred to as the American Bottoms

☐ 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:

Perimeter erosion control barrier, ditch checks, temporary seeding, mulch, and inlet/pipe protect will be used throughout the project site.

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

A total of 3.728 acres of wetland were delineated within the project limits. Mitigation at a multiplier of 1.5 for a total of 5.592 acres of wetlands will occur at the Fairmont City Wetland Mitigation Bank. The US Army Corps of Engineers has determined that only the wetland delineated in the ditch along the SW side of the interchange (0.49 total acres) is considered jurisdictional under the NWPR and therefore a Nationwide permit is applicable.

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) Hot Mix Asphalt
- ☐ 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:

Temporary Erosion Control Seeding will be placed as needed during construction. All work shall be done in accordance with the current edition of the Standard Specifications for Road and Bridge Construction and all current applicable IDOT Highway Standards.

Describe how the stabilization practices listed above will be utilized after construction activities have been completed:

After construction activities are completed, permanent seeding and mulching will be placed. All work shall be done in accordance with the current edition of the Standard Specifications for Road and Bridge Construction and all current applicable IDOT Highway Standards.

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
- ☐ Concrete Revetment Mats
- ☐ Dust Suppression
- ☐ Dewatering Filtering
- ☐ Gabions
- ☒ In-Stream or Wetland Work
- ☐ Level Spreaders
- ☐ Paved Ditch
- ☐ Permanent Check Dams
- ☒ Perimeter Erosion Barrier
- ☐ Permanent Sediment Basin
- ☐ Retaining Walls
- ☒ Riprap
- ☐ Rock Outlet Protection
- ☐ Sediment Trap
- ☒ Storm Drain Inlet Protection
- ☐ Stabilized Construction Exits
- ☐ Stabilized Trench Flow
- ☐ Slope Mattress
- ☐ Slope Walls
- ☒ Temporary Ditch Check
- ☐ Temporary Pipe Slope Drain
- ☐ Temporary Sediment Basin
- ☐ Temporary Stream Crossing
- ☐ Turf Reinforcement Mats
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

Describe how the structural practices listed above will be utilized during construction:

Perimeter Erosion Barrier: Sediment control silt fence will be placed adjacent to areas of construction limits in areas where the ground slopes away from the project site to intercept waterborne silt and prevent it from leaving the project site. In locations where there is concentrated flow, temporary ditch checks should be used as perimeter erosion barrier.

Temporary Ditch checks will be placed in swales where runoff velocity is high or as directed by the Engineer in order to prevent downstream erosion. Temporary ditch checks will be constructed with urethane foam and/or geotextile ditch checks so that elevation of the toe in accordance with IDOT Standard 280001. For flat ditches the distance between successive ditch checks shall not exceed 400 feet.

Storm Drain Inlet Protection: Sediment filters will be placed in all inlets, catch basins and manholes during construction and will be maintained throughout the entire contract and will be cleaned regularly. Pipe and inlet protection will be in accordance with IDOT Standard 280001. Sediment filters will be cleaned on a regular basis as indicated in the special provisions.

Stone riprap will be utilized as protection at the discharge end of all culvert end sections to prevent downstream scouring and erosion.

Describe how the structural practices listed above will be utilized after construction activities have been completed:

After construction has been completed, Riprap shall be placed at the outlet of the culverts that have been extended to lessen erosion.

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:

NA

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 management practices, controls, and other provisions provided in this plan are in accordance with "IDOT Standard Specifications for Road and bridge Construction"

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.

During construction the Contractor shall: Remove all excavated material, Inspect construction entrances from off site daily, clean existing roads and maintain entrances, per IDOT Standard Specification Section 107, inspect erosion control measures weekly and after any storm event with 0.5" of rain or greater, maintain erosion control measures in good working order or replace when needed, remove and dispose of sediment from inlet and pipe protection measures when it has reached one-third of the height of the fence, inspect temporary and permanent seeding areas for bare spots, washouts and healthy growth,

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.

404 PERMIT

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, ST. LOUIS DISTRICT
1222 SPRUCE STREET
ST. LOUIS, MISSOURI 63103

February 20, 2024

Regulatory Branch
File Number: MVS-2021-365

Illinois Department of Transportation
Attn: Keith Roberts, P.E.
1102 Eastport Plaza Drive
Collinsville, Illinois 62234

Dear Mr. Roberts:

This letter is regarding an approved jurisdictional determination for the project known as the Interstate Highway 270 at Illinois Route 111 Interchange Reconstruction Project (the Review Area). The Review Area is the approximately 65-acre footprint of the Illinois Route 111 and Interstate Highway 270 clover leaf intersection located in Sections 32 and 33, Township 4 North, and Range 7 West near Pontoon Beach, Madison County, Illinois. Approximate geographic coordinates for the site are 38.7573°, -90.0671°.

For the purposes of this AJD, we have relied on Section 10 of the Rivers and Harbors Act of 1899 (RHA), the 2023 Rule as amended, as well as other applicable guidance, relevant case law, and longstanding practice in evaluating jurisdiction. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination, you must submit a completed RFA form to the Mississippi Valley Division Office at the address shown on the form.

The features included in this approved jurisdictional determination are:

- Wetland Site 37 (0.640-acre), non-jurisdictional (excluded)
- Wetland Site 39 (0.429-acre), non-jurisdictional (excluded)
- Wetland Site 44 (1.249-acre), non-jurisdictional (excluded)
- Wetland Site 46 (0.533-acre), non-jurisdictional (excluded)

Of note, 0.487-acre of Wetland Site 44 (1.736-acre) is a historically relocated tributary whereas 1.249-acre identified above is excluded under (b)(3). The remainder of the water resources associated with the Project and within the Review Area are not included within this AJD review as they are being permitted or are not within the Limits of Disturbance and therefore do not warrant further review.

For an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR 331.5, and that it has been received by the Division Office within 60 days of the date of the enclosed NAP. It is not necessary to submit an RFA form to the division office if you do not object to the determination in this letter.

This approved jurisdictional determination may be relied upon for five years from the date of this letter. However, the Corps reserves the right to review and revise the boundary in response to changing site conditions, information that was not considered during our initial review, or off-

site activities that could indirectly alter the extent of wetlands and other resources on-site. This determination may be renewed at the end of the five-year period provided you submit a written request, and our staff are able to verify that the limits established during the original determination are still accurate.

The delineation included herein has been conducted to identify the location and extent of the aquatic resource boundaries and/or the jurisdictional status of aquatic resources for purposes of the Clean Water Act for the site identified in this request. This delineation and/or jurisdictional determination may not be valid for the Wetland Conservation Provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should discuss the applicability of a certified wetland determination with the local USDA service center, prior to starting work.

This review is applicable only to the permit program administered by the Corps of Engineers. It does not eliminate the need to obtain other Federal, state, or local approvals before beginning work and any modification that includes impacts to potential waters may require subsequent review and authorization from this office.

If you have any questions, please contact me at (314) 331-8574 or Kamren.Metzger@usace.army.mil. In any correspondence or inquiries, please refer to the File Number **MVS-2021-365**. The St. Louis District Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to go to our Customer Service Survey found on our web site at https://regulatory.ops.usace.army.mil/customer-service-survey/.

Sincerely,

Date: 2024.02.26 11:37:29 -06'00'

Kamren Metzger
Illinois Project Manager
Regulatory Branch

Enclosures


Legend
Wetland Continues
Sampling Points
Non Wetland Determination Sites
Project Boundary
Wetland Sites
Streams
W-6 Ditch
W-5 Ditch
W-4 Ditch
Site 62
Site 39
Site 46
Site 47
Site 44
Site 37
Site 36
Site 41
State Route 111
270
Figure 4G
Wetland Determination Map
Interstate 270 (FAI 270)
Madison County
Seq. No: 21524
March 2019
0 Meters 100
0 Feet 400
ILLINOIS
Illinois Natural History Survey
PRAIRIE RESEARCH INSTITUTE
INHS/IDOT Wetland Science Program
1816 South Oak Street
Champaign, Illinois 61820

210

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant:	File Number:	Date:
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL WITHOUT PREJUDICE	C
	PERMIT DENIAL WITH PREJUDICE	D
	APPROVED JURISDICTIONAL DETERMINATION	E
	PRELIMINARY JURISDICTIONAL DETERMINATION	F

SECTION I

The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/appeals/ or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C. PERMIT DENIAL WITHOUT PREJUDICE: Not appealable
You received a permit denial without prejudice because a required Federal, state, and/or local authorization and/or certification has been denied for activities which also require a Department of the Army permit before final action has been taken on the Army permit application. The permit denial without prejudice is not appealable. There is no prejudice to the right of the applicant to reinstate processing of the Army permit application if subsequent approval is received from the appropriate Federal, state, and/or local agency on a previously denied authorization and/or certification.

D: PERMIT DENIAL WITH PREJUDICE: You may appeal the permit denial
You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information for reconsideration

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice means that you accept the approved JD in its entirety and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.
- RECONSIDERATION: You may request that the district engineer reconsider the approved JD by submitting new information or data to the district engineer within 60 days of the date of this notice. The district will determine whether the information submitted qualifies as new information or data that justifies reconsideration of the approved JD. A reconsideration request does not initiate the appeal process. You may submit a request for appeal to the division engineer to preserve your appeal rights while the district is determining whether the submitted information qualifies for a reconsideration.

F: PRELIMINARY JURISDICTIONAL DETERMINATION: Not appealable
You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also, you may provide new information for further consideration by the Corps to reevaluate the JD.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision you may contact:	If you have questions regarding the appeal process, or to submit your request for appeal, you may contact:
U.S. Army Corps of Engineers St. Louis District Regulatory Branch 1222 Spruce St. St. Louis, MO. 63103 314-331-8575	Administrative Appeals Review Officer Mississippi Valley Division U.S. Army Corps of Engineers 1400 Walnut Street Vicksburg, MS 39181-0080 601-634-5820

SECTION II – REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT	
REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. Use additional pages as necessary. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)	
ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.	
RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation and will have the opportunity to participate in all site investigations.	
_____ Signature of appellant or agent.	Date:
Email address of appellant and/or agent:	Telephone number:

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, ST. LOUIS DISTRICT
1222 SPRUCE STREET
ST. LOUIS, MISSOURI 63103

February 26, 2024

Regulatory Branch
File Number: MVS-2021-365

Illinois Department of Transportation
Attn: Keith Roberts, P.E.
1102 Eastport Plaza Drive
Collinsville, Illinois 62234

Dear Mr. Roberts:

We have reviewed the application regarding the Interstate Highway 270 at Illinois Route 111 Interchange Reconstruction Project (the Project). The project will reconstruct the existing cloverleaf interchange on I-270 at IL 111 to a diverging diamond interchange with new ramp alignments, additional turn lanes, and drainage improvements and culvert extensions to accommodate the revised interchange configuration. Approximately 41,100 cubic yards of earth excavation (includes both cut and fill), 3,250 cubic yards of topsoil excavation and placement, and 19,600 square yards of 12" thick subbase granular material will be used to construct the roadway base, subbase, side slopes and ditches. Rip rap, inlet protection, perimeter erosion barrier, erosion control blanket, seeding, and mulch will we used in accordance with the IDOT Standard Specifications. The project is in Sections 32 and 33, Township 4 North, and Range 7 West in Madison County, Illinois. Approximate geographic coordinates for the site are 38.7573°, -90.0671°. Regulated permanent impacts associated with the Project total 0.877-acre of emergent wetland and are summarized in Table 1 below. The impacted wetlands are within IDOT ROW and cannot be avoided to accommodate the interchange configuration and the re-establishment of proper roadway drainage.

Table 1. Regulated Impact Summary[1]

Feature ID	Impact Description	Impact Size	Compensatory Mitigation
Wetland Site 36	Fill/Mass Grading	0.302-acre	0.453-Wetland Credits
Wetland Site 44[2]	Ditch Relocation	0.487-acre	0.731-Wetland Credits
Wetland Site 47	Fill/Mass Grading	0.088-acre	0.132-Wetland Credits
	Total:	**0.877-acre**	**1.316-Wetland Credits**

[1]The remaining wetlands (2.851-acre) impacted were excluded in an Approved Jurisdictional Determination.
[2]0.487-acre of Wetland Site 44 (1.736-acre) is a historically relocated tributary whereas 1.249-acre identified above is excluded under (b)(3).

The Corps of Engineers has determined that these activities are authorized under Section 404 of the Clean Water Act by an existing Regional General Permit for *Linear Transportation Crossings.* In accordance with Title 33 CFR 323.3(a) and Title 33 CFR 325.5(c), the District Engineer reissued Regional General Permit 38 (CEMVS-OD-F-2021-593) on March 4, 2022. This Regional General Permit authorizes the placement of fill material into waters of the United States for Linear Transportation Crossings in the state of Illinois under the authority of Section 404 of the

Clean Water Act (33 USC 1344). Regional General Permit 38 is valid through March 4, 2027. It is imperative that you read all General and Special Conditions and the Appendices of this authorization. It is necessary that you notify the Regulatory Branch, in writing, prior to commencement of work and, within 30 days of completion and return Attachment A (enclosed) or this permit may be considered null and void. **Enclosed is a copy of the general permit and conditions with which you must comply. The District Engineer has further conditioned the permits to include the following special conditions:**

1. The Permittee shall compensate for 0.877-acre of emergent wetland impact by purchasing 1.316 wetland credits from IDOT's Fairmont City Wetland Mitigation Bank. Once the credits have been purchased and the required documentation for the purchase has been provided to our office, the permit will be considered valid.

The Illinois Environmental Protection Agency Division of Water Pollution Control (IEPA/WPC) has conditionally issued general Section 401 Water Quality Certification for this general permit (W2178990106), subject to the sixteen general conditions (see enclosure). These conditions are part of the Corps permit. If you have any questions regarding the water quality certification conditions, you may contact Darren Gove, with IEPA, at 217-782-3362.

This determination is applicable only to the permit program administered by the Corps of Engineers. It does not eliminate the need to obtain other federal, state, or local approvals before beginning work. This permit verification does not convey property rights, nor authorize any injury to property or invasion of other rights. You are reminded that the permit is based on submitted plans. Variations from these plans shall constitute a violation of Federal law and may result in the revocation of the permit. If this general permit is modified, reissued, or revoked during this period, the provisions described at 33 CFR 330.6(b) will apply.

If you have any questions, please contact Mr. Kamren Metzger at (314) 331-8574. Please refer to file number **MVS-2021-365**. The St. Louis District Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to go to our Customer Service Survey found on our web site at https://regulatory.ops.usace.army.mil/customer-service-survey/.

Sincerely,

Date: 2024.02.26
11:52:35 -06'00'

Kamren Metzger
Illinois Project Manager
Regulatory Branch

Enclosures

Copy Furnished (electronically):
Milner, IDNR-OWR
Gove, IEPA

ATTACHMENT A

COMPLETED WORK CERTIFICATION

Date of Issuance: February 26, 2024

File Number: MVS-2021-365

Name of Permittee(s): Illinois Department of Transportation
Attn: Keith Roberts, P.E.
1102 Eastport Plaza Drive
Collinsville, Illinois 62234

Name of Project: I-270 at Illinois Route 111 Interchange Reconstruction Project

Project Location: Sections 32 and 33, Township 4 North, and Range 7 West

River Basin/County/State: Mississippi / Madison / Illinois

Project Manager: K. Metzger

Upon completion of this activity authorized by this permit and any mitigation required by the permit, sign this certification, and return it to the following address or via email to MVS-Regulatory@usace.army.mil:

U.S. Army Corps of Engineers
Attn: Regulatory Branch
1222 Spruce Street
St. Louis, Missouri 63103-2833

(Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit, you are subject to permit suspension, modification, or revocation.)

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

_____ _____
Signature of Permittee(s) Date

DEPARTMENT OF THE ARMY PERMIT
Regional Permit 38
Fill Material Placed in Waters of the United States for
Linear Transportation Crossings
in the State of Illinois

Permittee:	General Public meeting the terms and conditions herein.
Number:	CEMVS-OD-F-2021-593 (Regional Permit 38)
Expiration Date:	March 4, 2027
Issuing Office:	U.S. Army Corps of Engineers, St. Louis District 1222 Spruce Street St. Louis, MO 63103-2833

You are authorized to perform work in accordance with the terms and conditions specified below.

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers (Corps) having jurisdiction over the permitted activity or the appropriate official of that office, acting under the authority of the Commanding Officer.

1. **Authorized Work.**

   Proposed Limits. (a) Activities required for the construction, expansion, modification, or improvement of linear transportation projects that result in impacts of up to 1 acre of waters of the United States. (b) Temporary fills for construction are authorized. (c) Linear transportation projects covered by this Regional General Permit must not result in permanent impacts to aquatic resources that exceed 500 linear feet as measured along the impacted stream corridor or 1 acre total of waters of the United States.

2. **Project Location.** All waters of the United States in Illinois within the regulatory boundaries of the Rock Island District, St. Louis District, Chicago District, Louisville District, and Memphis District.

3. **Permit Conditions**:

   A. **General Conditions**:

   1. The permittee must notify the District Engineer (DE) in their respective Corps Regulatory District for authorization of this Regional General Permit (RGP). The notification must include detailed drawings and sufficient information to determine if the proposed work conforms to the criteria and conditions of the RP, as well as a mitigation plan (see Section D), if unavoidable stream or wetland impacts will occur as a part of the project. Department of the Army (DA) permit application (ENG Form 4345) should be used for this purpose.

   2. The time limit for completing the work authorized ends 5 years from the date the permit is re-issued. If you commence or are under contract to commence this activity before the date the regional permit expires, you will have twelve months from that date to complete your activity under the present terms and conditions of this regional permit. The time limit for submittals ends 60 days prior to the expiration of the RP, unless the RP is modified, reissued or revoked. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before that date is reached.

   3. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party. If you sell the property associated by this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization. Should you wish to cease to maintain the authorized activity, or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

   4. If you discover any previously unknown historic or archaeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

7. The permittee understands and agrees that, if future operations by the United States requires the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army of his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

8. All work authorized under this regional permit will be in association with bridge, culvert, and roadway construction across waters of the United States.

9. The Corps of Engineers will determine on a case by case basis if a particular project proposal will fall under the conditions of this regional permit.

B. Special Conditions:

1. This regional permit is limited to excavation activities and fill material placed in wetlands or below the ordinary high water mark of other waters for bridge and/or culvert construction or replacement associated with bridge and/or culvert removal, or culvert extension. Linear transportation projects covered by this Regional General Permit must not result in permanent impacts to aquatic resources that exceed 500 linear feet as measured along the impacted stream corridor or 1 acre total of waters of the United States. New bridge, culvert, or roadway alignments must be based upon sound conservation and safety bases.

2. Minor stream shaping and channel realignment is authorized where necessary to provide adequate flow conveyance and proper alignment of the channel through the bridge or culvert. Linear transportation projects covered by this Regional General Permit must not result in permanent impacts to aquatic resources that exceed 500 linear feet as measured along the impacted stream corridor or 1 acre total of waters of the United States.

3. Riprap shall be clean native fieldstone, clean quarry run rock, or appropriately graded clean broken concrete with all reinforcing rods and / or wire cut flush with the surface of the concrete. It shall be the permittee's responsibility to maintain the riprap such that any reinforcement material that becomes exposed in the future is removed, the concrete pieces shall be appropriately graded, and no piece shall be larger than 3 feet across the longest flat surface. The width for placing a riprap toe in the streambed will vary depending on the size of the riprap used (see attached drawing). Asphalt, broken concrete containing asphalt, petroleum·based material, and items such as car bodies are specifically excluded from this authorization.

4. Measures must be taken for heavy equipment usage in wetland areas to minimize soil disturbance and compaction. All exposed soils and other fills as well as any work below the ordinary high water mark must be permanently stabilized at the earliest practicable date using permanent native vegetation, bioengineering methods, or armoring.

5. Any spoil material excavated, dredged, or otherwise produced, must not be returned to the waterway or wetlands but must be deposited in a self-contained area in compliance with all state statutes. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.

6. This permit does not authorize construction in environmentally sensitive areas, such as mussel beds, fish spawning areas, waterfowl nesting areas, fens, bogs, seeps, or sedge meadows.

7. Any excavation or placement of temporary or permanent fill must be performed in a way that would not result in the physical destruction of important fish spawning areas, including smothering of downstream spawning areas via turbidity.

8. Temporary and permanent structures must be installed to maintain low flow conditions and to pass normal and expected high flows.

9. Petroleum products, other chemicals, and other unsuitable materials (e.g. trash, debris, asphalt, etc.) will be prevented from entering water bodies, streams, and wetlands.

10. Appropriate soil erosion and sediment control measures must be used and maintained during project construction. Erosion control and sediment control features (i.e. silt fences, silt ditches, silt dikes, silt basins etc.) must be installed to provide continuous control throughout the construction and post construction period as well as the re-vegetation of all disturbed areas upon project completion.

C. Temporary Impacts/Restoration Requirements:

1. Material used as temporary fill for access, cofferdams, or other temporary structures required for the construction of highway crossings shall be included in the project plans or specifications and shall be clean, appropriately sized material and shall be free of loam, sod, and other deleterious materials.
2. All temporary structures and fill will be removed completely no later than 30 days after they are no longer needed for construction activities. Temporary fill materials, cleared vegetative materials, construction debris, including old bridge materials, and other fill not necessary for meeting the project purpose must be disposed of at an upland area or licensed landfill as appropriate.
3. Temporary work pads, cofferdams, access roads and other temporary fills shall be constructed of clean coarse aggregate or non-erodible non-earthen fill material that will not cause siltation. Sandbags, pre-fabricated rigid materials, sheet piling, inflatable bladders and fabric lined basins may be used for temporary facilities. Temporary work/fills shall be constructed in a manner to maintain flow in these waters by utilizing dam and pumping, fluming, culverts, or other such techniques.
4. All areas affected temporarily must be returned to pre-construction contours and must be re-vegetated with native vegetation if not armored.
5. Side slopes of a newly constructed channel will be no steeper than 2:1 and planted with permanent, perennial, native vegetation if not armored.
6. If jurisdictional wetlands and/or streams will be excavated within the permit area, the permittee will side-cast and stockpile the topsoil (top 10-12 inches), if practicable and/or if site conditions allow, that is being removed during the initial construction, to re-establish the topsoil once construction is complete. The soil must be returned to its original contours and a reestablished topsoil shall be present prior to the re-planting of vegetation. This ensures that the organic/hydric soils that were present prior to construction are returned to their natural condition and can provide for a fertile habitat to re-plant vegetation and increase the survival rate of any new habitat.
7. The applicant shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2010).

D. Mitigation:

1. Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal. If the cumulative permanent loss of wetland exceeds 0.10 acres or for stream losses that exceed 3/100 acres, compensatory mitigation is required and must follow the regulations published in the Federal Register dated April 10, 2008 under 33 CFR Parts 332 and 40 CFR Part 230 – Subpart J entitled "Compensatory Mitigation for Losses of Aquatic Resources," and any such Corps regulation/guidance that would supplement these mitigation requirements. Proposed projects resulting in wetland or stream loss will be required to provide adequate mitigation to replace lost aquatic functions and values.
2. The amount of mitigation required will be determined during review for authorization under this permit as per the mitigation rule requirements. Mitigation must be adequate to offset unavoidable impacts or losses to regulated waters of the United States (WOUS). For all permanent stream losses greater than 3/100 acre, completion of the applicable Illinois Stream Mitigation Method will determine adequate compensatory stream mitigation. The Corps has the final approval in determining the appropriate and practicable mitigation necessary. The discharge of fill material into WOUS prior to Corps approval of the mitigation plan is prohibited.
3. For stream losses of 3/100 acres and wetland losses of 1/10-acres or less, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment.
4. Existing approved stream or wetland banks or in-lieu fee programs should be utilized (where appropriate) to purchase credits to compensate for wetland or stream impacts. Prior to commencing land disturbing activities, the applicant shall submit documentation of the purchase/allocation of mitigation credits from the appropriate wetland bank. Specific mitigation conditions to ensure mitigation success will be included on a case-by-case basis in the authorization letter accompanying this permit.
5. If prospective permittees are not able to utilize stream or wetland banks, permittee responsible mitigation will be required. The permittee shall provide a wetland and/or stream mitigation plan with their Department of the Army application. For permittee responsible mitigation conditions, please refer to **Appendix A** of this regional permit
6. Compensatory mitigation may be required for any stream or wetland impacts, however, for projects impacting jurisdictional wetlands or other special aquatic sites, the permittee will provide a mitigation plan for approval which follows the regulations published in the Federal Register dated April 10, 2008 under 33 CFR Parts 325 and 332

and 40 CFR Part 230 entitled "Compensatory Mitigation for Losses of Aquatic Resources; Final Rule". Permittees must take all practicable measures to avoid and minimize impacts to waters of the United States by both temporary and permanent fills. Once such measures are taken, linear transportation projects covered by this Regional General Permit must not result in permanent impacts to aquatic resources that exceed 500 linear feet as measured along the impacted stream corridor or 1 acre total of waters of the United States, through the discharge of dredged or fill material in conjunction with each road crossing project. Compensatory wetland mitigation is required if the loss of wetland exceeds 0.10 acre. Mitigation must be adequate to offset unavoidable impacts or losses to regulated waters of the United States. The district engineer will consider the project factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal. The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., onsite).

E. Historic Properties/Archaeological:

1. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). In cases where the DE determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places (National Register), the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) are met.

2. Federal permittees should follow their own procedures for complying with the requirements of Section 106 of NHPA, permittee's must provide the DE with the appropriate documentation to demonstrate compliance with those requirements.

3. Non-federal permittee's must submit information to the DE if the authorized activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register, including previously unidentified properties. For such activities, the information must state which historic properties may be affected by the proposed work and include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer (SHPO) and/or Tribal Historic Preservation Officer (THPO), as appropriate, and the National Register (see 33 CFR 330.4(g)). The DE shall make a reasonable and good faith effort to ensure that appropriate identification efforts are carried out, which may include background research, consultation, history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the DE shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties which the activity may have the potential to cause effects, and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the DE either that the activity has no potential to cause effects, or that consultation under Section 106 of the NHPA has been completed.

4. The DE will notify the prospective permittee within 45 days of receipt of a complete application whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). If NHPA Section 106 consultation is required, the non-Federal applicant cannot begin work until Section 106 consultation is completed.

5. Permittee's should be aware that section 110k of the NHPA (16 U.S.C. 16 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands, or ancestral homelands, or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

6. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the Nation Register of Historic Places.

F. **Endangered Species:**

1. No activity is authorized under this regional permit which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under Section 7 of the Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under this regional permit which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed to address the effects of the proposed activity on a listed species or critical habitat.

2. Federal permittees and their designated state agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the Corps with the appropriate documentation to demonstrate compliance with those requirements. The Corps will review the documentation and determine whether it is sufficient to address ESA compliance for the activity, or whether additional ESA consultation is necessary.

3. Non-federal permittees must provide the Corps with the appropriate documentation to demonstrate compliance with the ESA. If the authorized activity may have the potential to effect any listed species or designated critical habitat might be affected or is in the vicinity of the project, or is located in designated critical habitat, permittee shall not begin work on the activity until notified by the DE that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that may affect Federally-listed endangered or threatened species or designated critical habitat, the notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The DE will determine whether the proposed activity "may affect" or will have "no effect" on listed species and designated critical habitat.

4. Authorization of an activity by this regional general permit does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. Fish and Wildlife Service (USFWS), both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the USFWS webpage.

G. **Water Quality Certification:**

Water quality certification. The conditions listed in the attached letter from the Illinois Environmental Protection Agency, Log No: C-0234-21, are considered to be part of this Regional Permit.

Further information:

1. **Congressional Authorities:** You have been authorized to undertake the activity described above pursuant to:

(X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. **Limits of this authorization.**

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. **Limits of Federal Liability.** In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. **Reliance on Applicant's Data.** The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. **Reevaluation of Permit Decision.** This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

d. Such a reevaluation may result in a determination that is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. **Extensions.** General condition 2 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

This permit becomes effective when the Federal official, designated to act for the District Engineer, has signed below.

Robert S. Gramke

Digitally signed by Robert S. Gramke
Date: 2022.03.22 12:29:15 -05'00'

Robert S. Gramke
Chief, Regulatory Branch
St. Louis District

Date

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

Transferee

Date

Appendix A

Permittee Responsible Mitigation Conditions

When permittee responsible mitigation is deemed appropriate to compensate for stream/wetland impacts, the following conditions will apply:

a.) Permittee Responsible Mitigation General Conditions:

1. Mitigation shall be constructed prior to or concurrent with the construction of the main project.

2. The technical specifications listed in the permittee's mitigation document will be used as a compliance document for construction, monitoring, site protection, etc., of the mitigation plan. However, the information contained in this document is superseded by any additional permit conditions or written specifications provided by the Corps of Engineers.

3. If excavation and construction are completed outside an optimal seeding period, temporary erosion control protection shall be implemented immediately upon completion of excavation and construction and shall be maintained until such time as riparian or wetland plantings can be completed during an optimal period. Permanent plantings shall then be completed during the next optimal seeding period.

4. The boundaries of mitigation sites shall be identified clearly by the placement of permanent markers.

5. If tiling is present in a wetland mitigation site, the tile must not detract from the function of the wetland.

6. Mitigation sites shall be fenced with a permanent fence if any domestic livestock are to be allowed to graze adjacent areas.

7. Your responsibility to complete the required mitigation as set forth in the project details will not be considered fulfilled until you have demonstrated mitigation success and have received written verification from the Corps of Engineers.

8. The mitigation site shall be protected from future activities that may interfere with or be detrimental to stream or wetland functions and values.

9. An as-built mitigation plan must be submitted to the Corps of Engineers and the Illinois Environmental Protect Agency by December 31 in the year that the mitigation is complete. This information will use GPS coordinates for location information. The as-built plan must include details, plan view drawings, and cross sectional drawings of all excavations and fills at the mitigation site(s). It must also include planting plans, planting lists, and maps showing the locations of all areas that were wetland prior to construction, all areas that are to be created wetland, all preserved stream channel segments, created or relocated stream channels, existing and proposed riparian buffers, riffle-pool structures, filter strips, all splash basins, and all other structures (including all streambed stabilization structures).

10. Annual monitoring reports shall be submitted to the Corps of Engineers by December 31 for at least five years for emergent wetland or grass/shrub riparian mitigation sites, and at least 10 years for forested wetland or forested riparian mitigation sites, or in-stream structures. The annual reports must include photos, a map with drawn boundaries indicating exactly what areas are wetland according to the 1987 Corps of Engineers Wetland Delineation Manual (Technical Report Y-87-1) and 2008 Midwest Regional Supplement, a vegetative cover map of created wetlands indicating Dominant species in each vegetative community, and an assessment of wetland hydrology in each vegetative community. The reports must also include assessments of the functionality of each splash basin stabilization structure, new stream meandered sections, and aerial coverage calculations of native vegetation within each filter strip or riparian zone and any corrective actions

taken or needed. The results of the reports will be documented annually on the Rock Island District Standard Mitigation Reporting Form available at: http://www.mvr.usace.army.mil/Missions/Regulatory/WetlandMitigion.aspx or in an annual progress report as specified in RGL 06-03, http://www.usace.army.mil/CECW/Documents/cecwo/reg/rgls/rgl06-03.pdf. All annual monitoring reports shall be formatted for 8.5 x 11- inch paper.

11. The permittee (in a timely manner) will perform any corrective measures and monitoring deemed necessary by the Corps of Engineers to ensure the success of the project (including mitigation). The permittee will assume all liability for accomplishing this corrective work. The corrective actions may include such modifications to the mitigation site as re-grading, re-planting, additional erosion control, etc., or may involve relocating the mitigation to another location. The permittee must accomplish corrective measures involving re-grading or erosion control within 60 days from the date that they are notified of a need. Deadlines for corrective measures involving re-planting will be determined based on best planting dates. Deadlines for corrective measures involving the relocation of mitigation will be determined by the Corps of Engineers. Corrective action may also involve additional monitoring to ensure success.
12. Your responsibility to complete the required compensatory mitigation will not be considered fulfilled until you have demonstrated mitigation success and have received written verification from the Corps of Engineers.
13. Any future development or land-use conversion of the mitigation area for any purpose which may interfere with or be detrimental to stream or wetland functions is prohibited without prior written approval from the Corps of Engineers.
14. Projects with mitigation require recording of the permit with the Register of Deeds or other appropriate official charged with the responsibility for maintaining records of title to or interest in real property and provide proof of recording to the Corps of Engineers. If the permit cannot be recorded in the manner indicated, the permittee shall provide the Corps of Engineers with documentation of agreements, contracts, etc., demonstrating to the Corps of Engineers' satisfaction that the mitigation site will be protected from future activities that may interfere with or be detrimental to wetland functions and values to a level of assurance equivalent to that provided by the aforementioned recording process. This requirement should be met prior to the project's construction.

b.) <u>For permittee responsible stream mitigation:</u>

1. Proposed project designs resulting in reductions in stream length will require applicants to seek foot-for-foot stream length replacement where practicable.
2. If a side slope of a newly constructed or modified channel is not protected by a suitable structural element, it will be no steeper than 2:1 and planted to permanent, perennial, vegetation or armored.
3. Native grass filter strips a minimum of 50 feet in width (measured from the top of the bank landward) shall be established along both sides of the realigned or modified channel unless there is a physical reason for not including one (such as a rock ledge). Filter strip establishment will be considered successful when there is at least 50% aerial coverage of native grasses and forbs in each 100 square foot area. Land ownership is not an acceptable reason for limiting filter strips.
4. Native trees and/or shrubs shall be planted along both sides of the realigned or modified channel. Replanting rates of trees and/or shrubs will be based on existing pre-project baseline vegetation conditions and the size of the selected tree/shrubs to be replanted. A survival rate of 100% of the replanted species shall be achieved each year for a period of 10 years from the establishment of the tree plantings.
5. Stream banks shall be stabilized with planted vegetation, riprap, or other suitable permanent bank stabilization measures to the limits of stream bank disturbance. Plantings of native prairie grasses are recommended where appropriate to diversify the stream bank protection.
6. The proposed channel shall have the same carrying capacity as the existing channel.
7. If the proposed channel grade is steeper than the grade of the existing channel, grade control structures are required at the upstream and downstream ends of the proposed channel. The downstream slopes of the grade control structures shall be no steeper than 20H: 1V and upstream slopes shall be no steeper than 4H: 1V. All structures must be keyed into the channel bed and banks and must be able to withstand and pass expected

high flows. The structures must be V- shaped with the point of the V pointing upstream. The sides of the V must be angled upstream (approximately 30 degrees measured along the shoreline). The center section will be lower in elevation than the outer sections to concentrate flows to the stream middle during periods of low flow. The structures must be submerged at normal stream flow (75% of the year). The structures must be fish passable at all times.

8. In-stream habitat structures and / or the use of rock riffles may be used to enhance aquatic habitat in the stream stretch modified by stream shaping or channel alignment. In-stream habitat structures should be constructed similar to grade control structures.
9. In areas where the stream channel is relocated, by-passed meanders must be preserved if they will not be a safety or structural hazard. The preserved meanders will remain as oxbow wetlands or pools.
10. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes.
11. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
12. The applicant shall not cause:
    - A violation of applicable provisions of the Illinois Environmental Protection Act;
    - Water pollution defined and prohibited by the Illinois Environmental Protection Act;
    - A violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
    - Interference with water use practices near public recreation areas or water supply intakes
13. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of staked straw bales, sedimentation basins and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) or more acres, total land area. An NPDES Storm Water Permit may be obtained by submitting a properly completed Notice of Intent (NOI) form by certified mail to the Illinois Environmental Protection Agency's (IEPA) Division of Water Pollution Control, Permit Section.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 · (217) 782-3397
JB PRITZKER, GOVERNOR JOHN J. KIM, DIRECTOR

FEB 15 2022

U.S. Army Corps of Engineers
Rock Island District, Regulatory Branch
Clock Tower Building, P.O. Box 2004
Rock Island, IL 61204-2004

Subject: Clean Water Act Section 401 Water Quality Certification
RE: Proposed Issuance of General Permit 38 Linear Transportation Crossings in the State of Illinois
Illinois EPA Log No.: C-0234-21 / Federal Agency Permit No.: CEMVR-RD-2021-1227
Bureau of Water ID#: W2178990106

Sir or Madam:

The Illinois Environmental Protection Agency (Agency) received notice of Proposed Issuance of Regional Permit 38 from U.S. Army Corps of Engineers, Rock Island District, ATTN: OD-P on October 4, 2021. Under the proposed regional general permit, a permittee would be allowed to discharge dredged or fill material into waters of the State thereby causing maximum impacts to a surface water area of 2 acres or 1,000 feet of stream channel, limited to 500 feet upstream and 500 feet downstream from the centerline of the activity, as measured along the stream channel. As a consequence of authorization under the subject General Permit, permittees would be authorized to construct, expand, modify and improve linear transportation projects that meet the current conditions of Nationwide Permit 14, except those limitations pertaining to the discharge of dredge or fill materials. Protection of existing uses will be assured given compliance with the Regional General Permit Special Condition No. 7 for compensatory mitigation for any loss exceeding 0.10 acres. This activity is described in the notice material titled:

"Joint Public Notice US Army Corps of Engineers Illinois Environmental Protection Agency Proposed Issuance of General Permit 38 Linear Transportation Crossings in the State of Illinois" dated September 29, 2021.

Based on our review of the application material, it is the judgment of this office that the activities covered by the proposed regional general permit may be completed without causing water pollution as defined in the Illinois Environmental Protection Act and will comply with applicable provisions of Sections 301, 302, 303, 306 and 307 of the Clean Water Act, provided the project is carefully planned, supervised and is performed in compliance with conditions specified in this water quality certification.

This Agency hereby issues certification under Section 401 of the Clean Water Act (PL 95-217), subject to the conditions identified below. This certification becomes effective when the Department of the Army, Corps of Engineers includes the following conditions no. 1 through no. 16 as conditions of the proposed permit pursuant to Section 404 of PL-95-217. These conditions are directed at the effect on water quality

2125 S. First Street, Champaign, IL 61820 (217) 278-5800
2009 Mall Street Collinsville, IL 62234 (618) 346-5120
9511 Harrison Street, Des Plaines, IL 60016 (847) 294-4000
595 S. State Street, Elgin, IL 60123 (847) 608-3131
2309 W. Main Street, Suite 116, Marion, IL 62959 (618) 993-7200
412 SW Washington Street, Suite D, Peoria, IL 61602 (309) 671-3022
4302 N. Main Street, Rockford, IL 61103 (815) 987-7760

of the construction procedures involved in the above described project and are not an approval of any discharge resulting from the completed facility, nor an approval of the design of the facility. These conditions do not supplant any permit responsibilities of the applicant toward the Agency. Any modifications to the project which are not described in the application material or specified by conditions below are not authorized.

Water Quality Condition No. 1. General.
The Proponent shall provide adequate planning and supervision for construction methods, processes, and cleanup procedures necessary to prevent water pollution and control erosion. The discharge and associated activity shall not cause:

a. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C, Water Pollution Rules and Regulations;
b. water pollution defined and prohibited by the Illinois Environmental Protection Act;
c. interference with water use practices near public recreation areas or water supply intakes; or
d. violation of applicable provisions of the Illinois Environmental Protection Act.

Water Quality Condition No. 2. Certification Limitations.
A case-specific (individual) 401 water quality certification from the Illinois EPA will be required for linear transportation activities covered by this Regional General Permit that would result in permanent impacts to aquatic resources, mitigation notwithstanding, that exceed 500 linear feet as measured along the impacted stream corridor or 1 acre total of waters of the United States.

Water Quality Condition No. 3. New or Expanded Crossings for Chloride Impaired Waterways.
a case-specific (individual) 401 water quality certification from the Illinois EPA will be required for new or expanded roadways that affect waterways which are designated by the State of Illinois as having water quality impairments caused by chloride. The most recent Illinois Integrated Water Quality Report and Section 303(d) List can be found at https://www2.illinois.gov/epa/topics/water-quality/watershed-management/tmdls/Pages/303d-list.aspx

Water Quality Condition No. 4. Waterbodies that Require Individual Certification.
Pursuant to 35 Ill. Adm. Code Section 302.105(d)(6), an individual 401 water quality certification will be required for activities permitted under these Nationwide Permits for discharges to waters designated by the State of Illinois as waters of particular biological significance or Outstanding Resource Waters under 35 Ill. Adm. Code 302.105(b). Biologically Significant Streams (BSS) are cataloged in Illinois DNR's publication "Integrating Multiple Taxa in a Biological Stream Rating System" and may be identified at: https://www2.illinois.gov/dnr/conservation/BiologicalStreamratings/Pages/default.aspx

Water Quality Condition No. 5. Threatened and Endangered Species.
Prior to proceeding with any work permitted under this Regional General Permit, potential impacts to State threatened or endangered species and Natural Areas shall be determined in accordance with applicable consultation procedures established under 17 Ill. Admin Code Part 1075. The Department of Natural Resources (IDNR) Ecological Compliance Assessment Tool (EcoCAT) is available to complete consultation at http://dnr.illinois.gov/EcoPublic/. If IDNR determines that adverse impacts to protected

natural resources are likely, the applicant shall address those identified concerns with IDNR through the consultation process. Please contact IDNR, Impact Assessment Section at 217-785-5500 if you have any questions regarding consultation.

Water Quality Condition No. 6. Total Maximum Daily Loads.
Activities permitted under this Regional General Permit that may cause a discharge that, whether temporarily or permanently, may cause or contribute to additional loading of any pollutant, or deterioration of any water quality parameter, such as pH or dissolved oxygen, where such pollutant or parameter is addressed by a USEPA approved Total Maximum Daily Load (TMDL) report for the receiving water body shall develop and implement additional measures and or procedures which ensure consistency with the load allocations, assumptions and requirements of the TMDL report. TMDL program information and water listings are available at https://www2.illinois.gov/epa/topics/water-quality/watershed-management/tmdls/Pages/reports.aspx

Water Quality Condition No. 7. Erosion and Sedimentation Control Measures.
The Proponent shall implement all necessary sedimentation and erosion control measures consistent with the current edition of the "Illinois Urban Manual" found at https://illinoisurbanmanual.org/. Interim measures to prevent erosion during construction shall be taken and may include the installation of sedimentation basins, silt fencing and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. All areas affected by construction shall be seeded and stabilized as soon after construction as possible.

Water Quality Condition No. 8. NPDES Stormwater Construction Permit.
The Proponent shall be responsible for obtaining an NPDES Storm Water Permit required by the federal Clean Water Act prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) or more acres, total land area. An NPDES Storm Water Permit may be obtained by submitting a properly completed Notice of Intent (NOI) form and application at https://www2.illinois.gov/epa/topics/forms/water-permits/storm-water/Pages/construction.aspx.

Water Quality Condition No. 9. Spill Response Plan.
The Permittee shall ensure that a spill avoidance and response plan has been developed and implemented for management of accidental releases of petroleum products to the aquatic environment during construction and for emergency notification of applicable downstream water supply operators and the Illinois EPA. Absorbent pads, containment booms and skimmers shall be available to facilitate the cleanup of petroleum spills. If floating hydrocarbon (oil and gas) products are observed, the proponent or their designee will be responsible for directing that work be halted so that appropriate corrective measures are taken in accordance with the plan prior to resuming work. For the purposes of this certification, "petroleum" means crude oil, refined petroleum, intermediates, fractions or constituents of petroleum, oil sheens, lubricants, and any other form of oil or petroleum.

Water Quality Condition No. 10. Hydraulic Machinery.
All hydraulic machinery utilized for the permitted activity and used in or immediately adjacent to waters of the State shall utilize biodegradable or bio-based hydraulic fluids to minimize pollution in the case of

broken or leaking hydraulic equipment. More information about environmentally acceptable alternatives are available at: https://www3.epa.gov/npdes/pubs/vgp_environmentally_acceptable_lubricants.pdf

Water Quality Condition No. 11. Temporary Structures and Work.
Temporary work pads, cofferdams, access roads and other temporary fills are approved provided that such activities are constructed with clean coarse aggregate or non-erodible non-earthen fill material that will not cause siltation. Sandbags, pre-fabricated rigid materials, sheet piling, inflatable bladders and fabric lined basins may be used for temporary facilities. Temporary fills within streams, creeks or rivers shall utilize adequate bypass measures (i.e. dam and pump, flumes, culverts, etc.) to minimize sedimentation and erosion and to maintain normal stream flow during construction.

Water Quality Condition No. 12. Channel Relocations.
Stream channel relocations conducted under this Regional General Permit shall be constructed under dry conditions and sufficiently stabilized prior to the diversion of flow to prevent erosion and sedimentation downstream.

Water Quality Condition No. 13. Construction Site Dewatering.
Dewatering of a construction site is authorized provided the dewatering activity is limited to the immediate work area within a cofferdam or otherwise isolated from waters of the State, and the work site is free from sources of contamination including those of natural origin. Dewatering activities shall incorporate Best Management Practices in accordance with the current edition of the "Illinois Urban Manual" https://illinoisurbanmanual.org/ Practice Standard for Dewatering (no. 813) or as otherwise appropriate to ensure that return flows from the dewatering activity are free of unnatural turbidity and floating debris and meet applicable water quality standards. Dewatering or discharge of flush water from construction of drilled piers or boreholes is not authorized and must be conducted in accordance with an NPDES permit issued by the Illinois EPA.

Water Quality Condition No. 14. Discharged Material Quality.
Any spoil material excavated, dredged or otherwise produced must not be returned to the water body or used as unconfined backfill unless the material is free of all known sources of contamination, is predominantly sand or larger grained material having a particle size distribution with no greater than 20% by volume passing a #230 U. S. sieve, and is placed in a manner to prevent violation of applicable water quality standards. Material not meeting these criteria must be deposited in a self-contained area in compliance with all state statutes.

Water Quality Condition No. 15. Prohibited Backfill Materials.
Asphalt, bituminous material and concrete with protruding material such as reinforcing bar or mesh shall not be 1) used for backfill, 2) placed on shorelines/streambanks, or 3) placed in waters of the State

Water Quality Condition No. 16. Other Permits Required.
The Proponent is advised that the following permit(s) must be obtained from the Agency: The Proponent must obtain permits to construct sanitary sewers, water mains and related facilities prior to construction.

This Section 401 water quality certification does not grant immunity from any enforcement action found necessary by this Agency to meet its responsibilities in prevention, abatement, and control of water pollution.

If you have any questions regarding this final determination, please contact Darren Gove of my staff at either 217/782-3362 or Darren.Gove@illinois.gov.

Sincerely,

Darin E. LeCrone, P.E.
Manager, Permit Section
Division of Water Pollution Control
Illinois Environmental Protection Agency

CC: USACE, Chicago District
USACE, Louisville District
USACE, Memphis District
USACE, St. Louis District
USEPA
IDNR
FOS
BOW_File

Illinois Department of Transportation
Office of Highways Project Implementation / Region 5 / District 8
1102 Eastport Plaza Drive / Collinsville, Illinois 62234-6198

August 31, 2021

ADVERTISEMENT DATE: October 1, 2021
RESPONSE DATE: October 29, 2021
CONTACT PERSON(S):
Philip Coppernoll 618-346-3181
philip.coppernoll@illinois.gov

County: Madison
Route: FAI 270
Section: 60-3K-1
Contract # 76818

Mr. Brenton Barkley
Department of the Army
Corps of Engineers
1222 Spruce Street
St. Louis, MO 63103-2833

Dear Mr. Barkley:

Enclosed are the permit drawings and application for the Department of the Army for activities in waterways as required under Section 404 of Public Law 92-500. Also enclosed is a copy of the Cultural Resources Clearance, Natural Resource Clearance, and Environment Survey Request. Based on an inspection of the project location, 408 permitting was not anticipated, but additional information in support of a 408 permit can be provided if needed.

This project consists of the reconstruction of the IL 111 and I-270 interchange in Pontoon Beach, IL. This project will reconstruct the existing cloverleaf interchange on I-270 at IL 111 to a diverging diamond interchange with the goal of improved safety, reduced congestion, and enhanced mobility for freight. This interchange is the primary access point for the Gateway Commerce Center, a 2300-acre warehouse distribution center, and the Gateway TradePort, a 7,500,000 SF, 600-acre, planned industrial park in the southwest quadrant of I-270/IL 111 interchange.

The proposed typical section for IL 111 will consist of 4-5 travel lanes varying from 12-15 feet with the median varying from 0-18 feet. There will also be additional turn lanes varying from 1 to 3 – 12 foot lanes. Total length of improvement along IL 111 is approximately 3,075 ft and will involve the removal and replacement of approximately 32,288 square yards of pavement and 6,600 square yards of paved shoulder. Approximately 18,162 sq yards of pavement and 8,613 sq yards of paved shoulder will be reconstructed to construct the four interstate ramps which vary from 1 to 4 lanes of varying width.

To accommodate the drainage associated with the reconfigured interchange, an existing 4'x8' box culvert south of the interchange will be cleaned out and extended to allow conveyance beneath IL 111 and the frontage road to the east of IL 111. In addition, and existing 4'x8' box culvert will be cleaned out and extended beneath Ramp C. Lastly, roadside ditches, storm sewers,

surface inlets and minor culverts are proposed to convey water originating from the northwest through the interchange and infields and to the W5-ditch (as denoted in attached delineation maps) in the southeast. In accordance with Illinois Department of Transportation (IDOT) District 8 policy, compensatory storage in the infields will account for additional fill which the project will add to the American Bottoms drainage area. Drainage plans are provided for your reference and we can provide the calculations which were performed as a part of a Location Drainage Study if necessary.

Approximately 98,776 cubic yards of Earth Excavation (includes both cut and fill), 1,269 cubic yards of Furnished Excavation, 2,672 cubic yards of Trench Backfill, and 415 cubic yards of Structure Excavation, and 52,288 square yards of 12" thick Aggregate Subgrade Improvement will be used to construct the roadway base, subbase, sideslopes and ditches. A regulated Substances Pre-Construction Plan will be presented at the pre-construction meeting to detail the monitoring of regulated substances, soil disposal analysis, and non-special waste disposal. Inlet protection, perimeter erosion barrier, erosion control blanket, seeding, and mulch will we used in accordance with the IDOT Standard Specifications and the details in the attached plans for storm water control.

The adjacent land use is primarily commercial, but residential and agricultural properties are nearby. It is anticipated that 308 trees with a diameter will be impacted by the proposed project, and they will be replaced in accordance with IDOT tree removal policy. Wetlands will be impacted by the proposed project. A corridor study was conducted and sites 36, 37, 39, 44, 46, and 47 were identified wetlands within the I-270 / IL 111 interchange reconstruction limits. Mitigation of the 3.728 acres associated with the above noted wetlands will occur at a 1.5 multiplier for a total of 5.592 acres at the Fairmont City Wetland Mitigation Bank. No utilities will be relocated into wetlands due to this project. The Department will implement erosion control measures consistent with the "Standards and Specifications for Erosion and Sediment Control" and the details shown on the attached plans.

IDOT anticipates that the Nationwide water quality permit is not applicable. IDOT has informed Illinois Environmental Protection Agency (IEPA) of the project and has sent a copy of this application to IEPA. Please notify IDOT and IEPA should you deem that the Nationwide permit is applicable.

Sincerely,

Keith Roberts, P.E.
Acting Region Five Engineer

Kirk H. Brown

Kirk H. Brown, P.E.
Program Development Engineer

Attachments

JOINT APPLICATION FORM FOR ILLINOIS

ITEMS 1 AND 2 FOR AGENCY USE

1. Application Number	2. Date Received

3. and 4. (SEE SPECIAL INSTRUCTIONS) NAME, MAILING ADDRESS AND TELEPHONE NUMBERS

3a. Applicant's Name	3b. Co-Applicant/Property Owner Name (if needed or if different from applicant)	4. Authorized Agent (an agent is not required)
Keith Roberts, PE Acting Region 5 Engineer Illinois Department of Transportation District 8 1102 Eastport Plaza Drive Collinsville, IL 62234-6198		Philip Coppernoll, PE Illinois Department of Transportation District 8 1102 Eastport Plaza Drive Collinsville, IL 62234-6198 philip.coppernoll@illinois.gov
Applicant's Phone Nos. w/area code Business: 618-346-3100 Residence: Cell: Fax:	Applicant's Phone Nos. w/area code Business: Residence: Cell: Fax:	Agent's Phone Nos. w/area code Business: 618-346-3181 Residence: Cell: 314-704-7654 Fax: 618-346-3203

STATEMENT OF AUTHORIZATION

I hereby authorize, _____Philip Coppernoll_____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

_____ Applicant's Signature

_____ Date

5. ADJOINING PROPERTY OWNERS (Upstream and Downstream of the water body and within Visual Reach of Project)

Name	Mailing Address	Phone No. w/area code
a. b. c. d.	See Attached, pdf pages 312,313	

6. PROJECT TITLE: I-270 at IL 111 Interchange Reconstruction

7. PROJECT LOCATION I-270 at IL 111 in Pontoon Beach, Madison County, IL

LATITUDE: 38.751386 LONGITUDE: -90.06696	UTMs 15S Northing: 4293965.2 N Easting: 754863.3 E

STREET, ROAD, OR OTHER DESCRIPTIVE LOCATION	LEGAL DESCRIPT	QUARTER	SECTION	TOWNSHIP NO.	RANGE
I-270 at IL 111		SE	32/33	4N	7W

☒ IN OR ☐ NEAR CITY OF TOWN (check appropriate box) Municipality Name	WATERWAY	RIVER MILE (if applicable)
Pontoon Beach	Unnamed Ditches and Wetlands	

COUNTY	STATE	ZIP CODE
Madison	IL	62040

Revised 2011

☐ Corps of Engineers ☐ IL Dept of Natural Resources ☐ IL Environmental Protection Agency ☐ Applicant's Copy

8. PROJECT DESCRIPTION (Include all features) This project will reconstruct the existing cloverleaf interchange on I-270 at IL 111 to a diverging diamond interchange with new ramp alignments, additional turn lanes, and drainage improvements and culvert extensions to accommodate the revised interchange configuration. Total length of improvement along IL 111 is approximately 3,075 ft and will involve the reconstruction of approximately 32,288 square yards of pavement and 6,600 square yards of paved shoulder. Approximately 18,162 sq yards of pavement and 8,613 sq yards of paved shoulder will be reconstructed to construct the four interstate ramps. 12 trees are expected to be cleared by the proposed project as show in the plan details, and they will be replaced in accordance with IDOT tree removal policy. Approximately 41,100 cubic yards of Earth Excavation (includes both cut and fill), 3,250 cubic yards of Topsoil Excavation and Placement, and 19,600 square yards of 12" thick Subbase Grannular Material will be used to construct the roadway base, subbase, sideslopes and ditches. Rip rap, inlet protection, perimeter erosion barrier, erosion control blanket, seeding, and mulch will we used in accordance with the IDOT Standard Specifications and the details in the attached plans for storm water control. The adjacent land use is a mixture of agricultural, residential, and commercial property. Approximately 3.728 acres of wetland impacts are anticipated. The impacted wetlands are within IDOT ROW and cannot be avoided to accommodate the interchange configuration and the re-establishment of proper roadway drainage. The wetlands will be mitigated using the Fairmont City Wetland Mitigation Bank at at a multiplier of 1.5 x 3.278 acres for a total of 5.592 acres.

9. PURPOSE AND NEED OF PROJECT:
The project's purpose is to increase safety by eliminating geometric deficiencies and to decrease congestion which will increase mobility through the interchange and adjacent intersections.

COMPLETE THE FOLLOWING FOUR BLOCKS IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

10. REASON(S) FOR DISCHARGE:

11. TYPE(S) OF MATERIAL BEING DISCHARGED AND THE AMOUNT OF EACH TYPE IN CUBIC YARDS FOR WATERWAYS:

TYPE:

AMOUNT IN CUBIC YARDS:

12. SURFACE AREA IN ACRES OF WETLANDS OR OTHER WATERS FILLED (See Instructions)

13. DESCRIPTION OF AVOIDANCE, MINIMIZATION AND COMPENSATION (See instructions)

14. Date activity is proposed to commence: March of 2022 — Date activity is expected to be completed: November of 2023

15. Is any portion of the activity for which authorization is sought now complete? Yes ☐ No ☒ NOTE: If answer is "YES" give reasons in the Project Description and Remarks section. Indicate the existing work on drawings.
Month and Year the activity was completed

16. List all approvals or certification and denials received from other Federal, interstate, state, or local agencies for structures, construction, discharges or other activities described in this application.

Issuing Agency	Type of Approval	Identification No.	Date of Application	Date of Approval	Date of Denial

17. CONSENT TO ENTER PROPERTY LISTED IN PART 7 ABOVE IS HEREBY GRANTED. Yes No

18. APPLICATION VERIFICATION (SEE SPECIAL INSTRUCTIONS)
Application is hereby made for the activities described herein. I certify that I am familiar with the information contained in the application, and that to the best of my knowledge and belief, such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities.

Signature of Applicant or Authorized Agent _____ Date _____

Signature of Applicant or Authorized Agent _____ Date _____

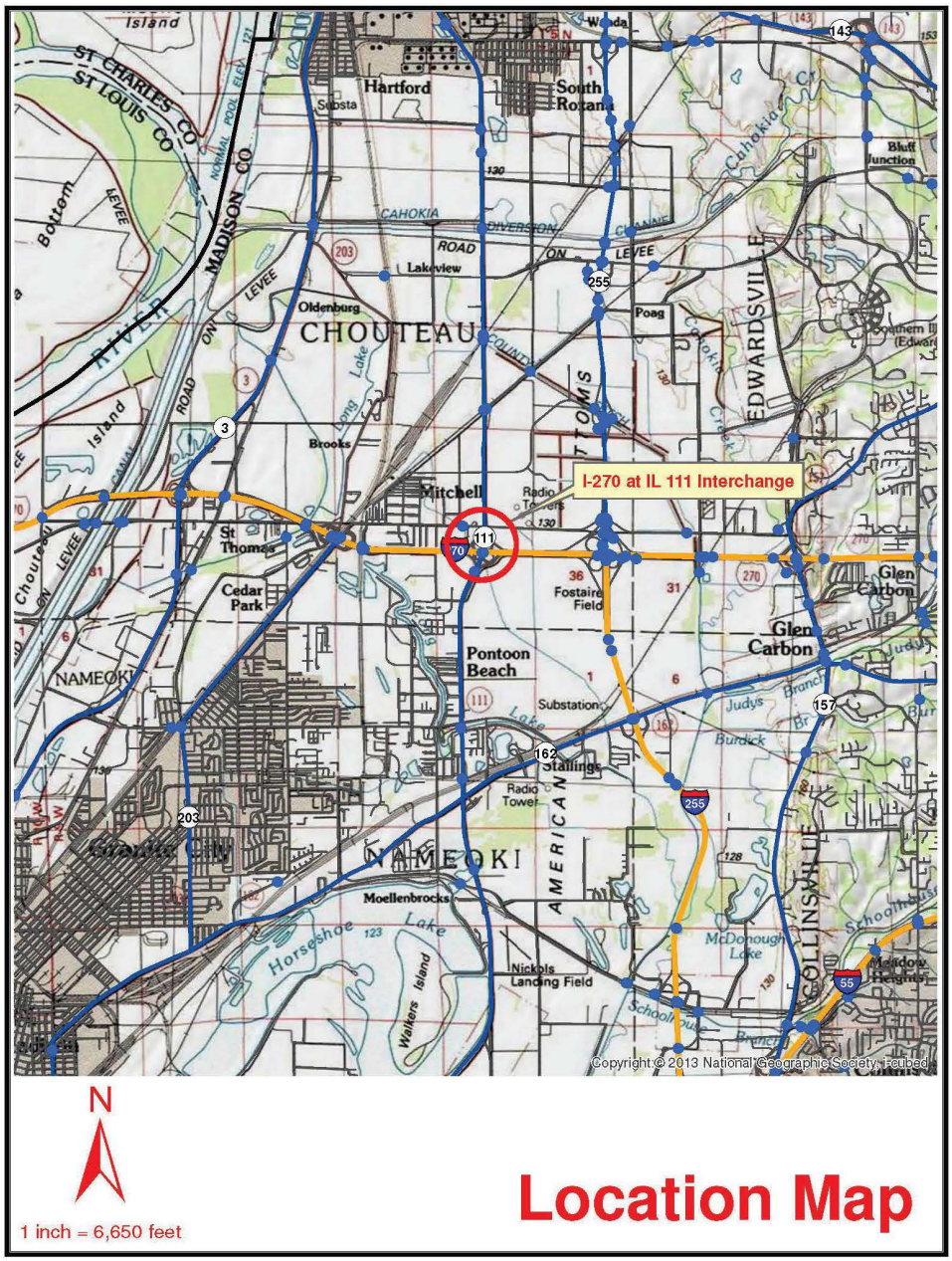
Signature of Applicant or Authorized Agent _____ Date _____

☐ Corps of Engineers ☐ IL Dept of Natural Resources ☐ IL Environmental Protection Agency ☐ Applicant's Copy

Revised 2011

SEE INSTRUCTIONS FOR ADDRESS

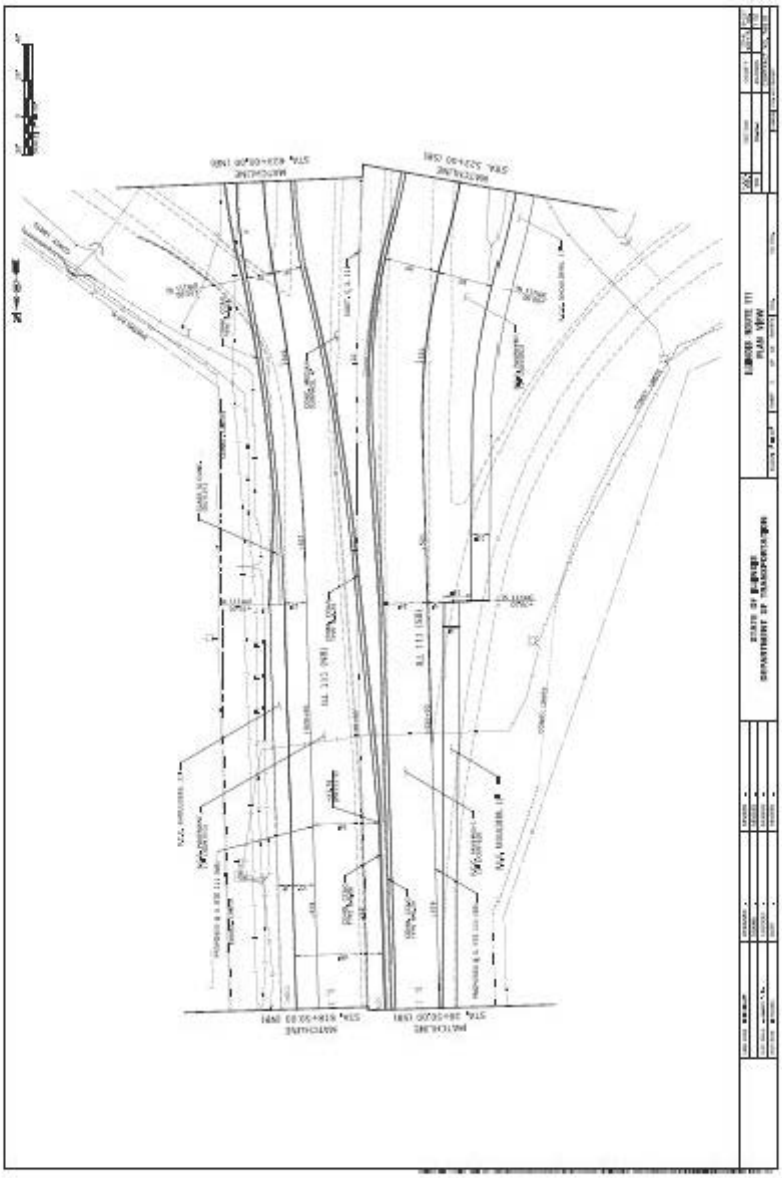
LOCATION MAP



Revised 2011

☐ Corps of Engineers ☐ IL Dept of Natural Resources ☐ IL Environmental Protection Agency ☐ Applicant's Copy

PLAN VIEW



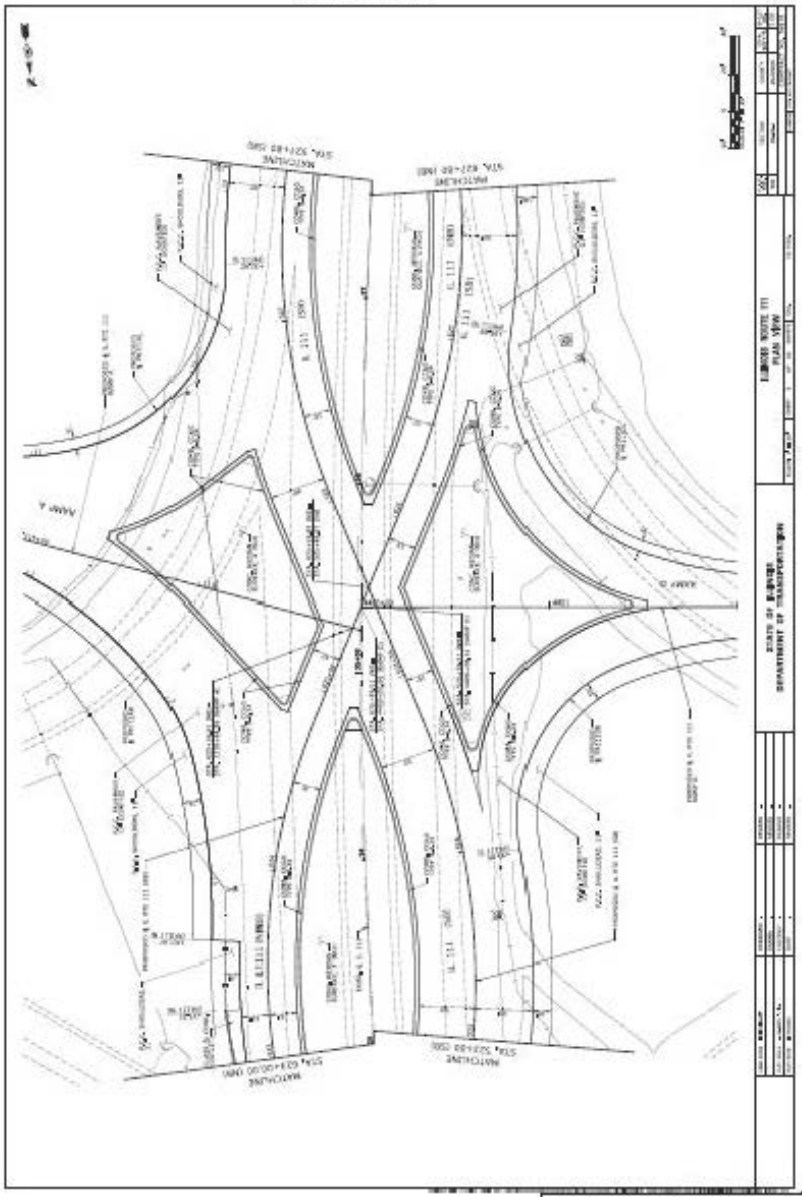
Additional drainage, erosion control, and drainage structre plan sheets are included at end of submittal

FOR AGENCY USE ONLY

Revised 2011

☐ Corps of Engineers ☐ IL Dept of Natural Resources ☐ IL Environmental Protection Agency ☐ Applicant's Copy

PLAN VIEW

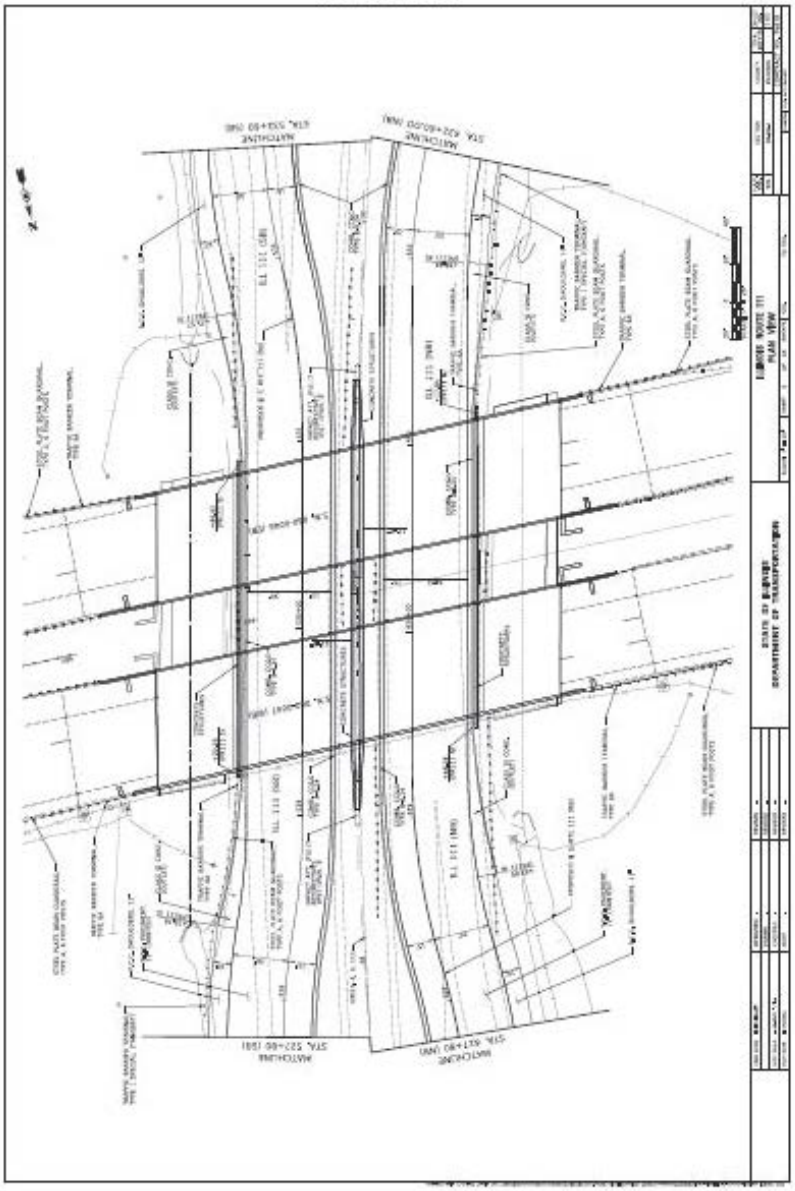


FOR AGENCY USE ONLY

Revised 2011

☐ Corps of Engineers ☐ IL Dept of Natural Resources ☐ IL Environmental Protection Agency ☐ Applicant's Copy

PLAN VIEW

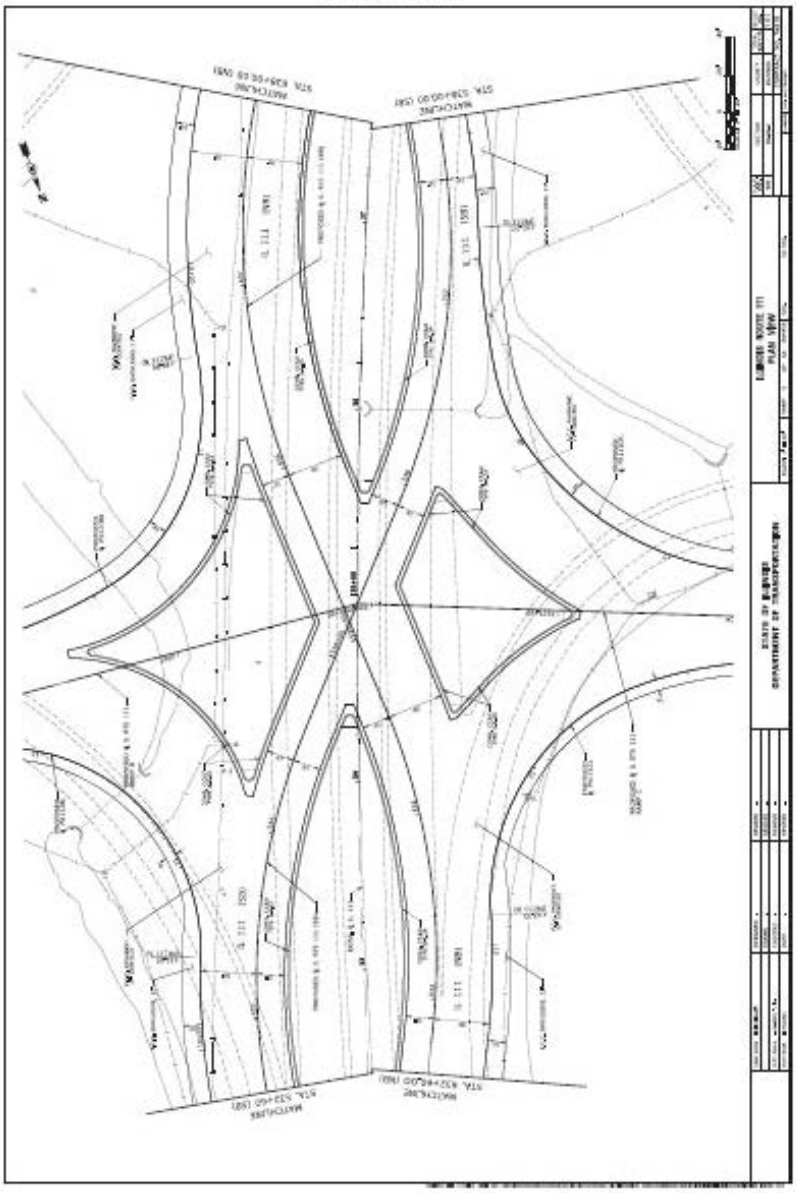


FOR AGENCY USE ONLY

Revised 2011

☐ Corps of Engineers ☐ IL Dept of Natural Resources ☐ IL Environmental Protection Agency ☐ Applicant's Copy

PLAN VIEW

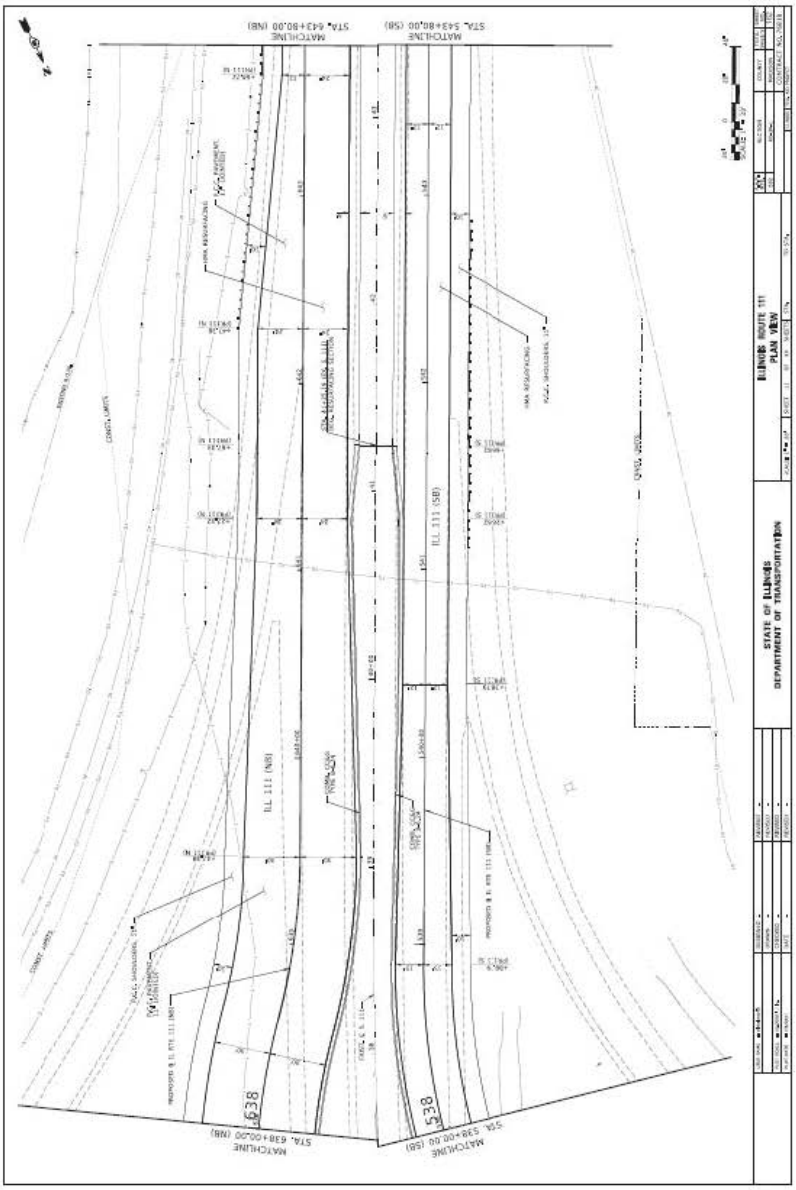


FOR AGENCY USE ONLY

Revised 2011

☐ Corps of Engineers ☐ IL Dept of Natural Resources ☐ IL Environmental Protection Agency ☐ Applicant's Copy

PLAN VIEW



FOR AGENCY USE ONLY

Revised 2011

☐ Corps of Engineers ☐ IL Dept of Natural Resources ☐ IL Environmental Protection Agency ☐ Applicant's Copy

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.

* * * * *

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.

* * * * *

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.