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Letting January 17, 2020

Notice to Bidders, Specifications and Proposal



**Contract No. 66961
KANKAKEE County
Section 46-2(1)HBR-2
Route FAI 57
Project NHPP-HGM4(021)
District 3 Construction Funds**

Prepared by

Checked by

F

(Printed by authority of the State of Illinois)



- 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 10:00 a.m. January 17, 2020 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. 66961
KANKAKEE County
Section 46-2(1)HBR-2
Project NHPP-HGM4(021)
Route FAI 57
District 3 Construction Funds**

Removal and replacement of SN 046-0087, Larry Power Rd over I-57.

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

(b) State law, and, if the work is to be paid wholly or in part with Federal-aid funds, Federal law requires the bidder to make various certifications as a part of the proposal and contract. By execution and submission of the proposal, the bidder makes the certification contained therein. A false or fraudulent certification shall, in addition to all other remedies provided by law, be a breach of contract and may result in termination of the contract.
- 4. AWARD CRITERIA AND REJECTION OF BIDS.** This contract will be awarded to the lowest responsive and responsible bidder considering conformity with the terms and conditions established by the Department in the rules, Invitation for Bids and contract documents. The issuance of plans and proposal forms for bidding based upon a prequalification rating shall not be the sole determinant of responsibility. The Department reserves the right to determine responsibility at the time of award, to reject any or all proposals, to readvertise the proposed improvement, and to waive technicalities.

By Order of the
Illinois Department of Transportation

Omer Osman,
Acting Secretary

INDEX
 FOR
 SUPPLEMENTAL SPECIFICATIONS
 AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2019

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

ERRATA Standard Specifications for Road and Bridge Construction (Adopted 4-1-16) (Revised 1-1-19)

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STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction," adopted April 1, 2016, 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 57 (I-57), Project NHPP-HGM4(021), Section 46-2(1)HBR-2, Kankakee County, Contract No. 66961 and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

LOCATION OF PROJECT

The project is located on Larry Power Rd. from approximately 650' west of existing structure SN 046-0087 over I-57 to approximately 800' east of the existing structure.

DESCRIPTION OF PROJECT

The project involves complete removal and replacement of existing Structure Number 046-0087 that carries Larry Power Road over I-57. The replacement structure consists of two-span continuous, composite, wide-flange steel beams supporting a reinforced concrete deck. The new deck is 51'-11" wide out to out and provides a three-lane roadway section with a 10' wide shared-use path on the north side of the deck. The length of the new structure is 215'-0" back to back of the abutments.

The profile grade of Larry Power Road will be raised approximately 2¼ feet to provide clearance over I-57. Larry Power Road improvements consist of pavement removal and replacement, curb and gutter, multi-use path, storm sewer, guardrail removal and replacement, seeding, pavement marking, and all other items shown in the contract documents.

The work shown on the contract documents will be completed using road closure on Larry Power Road and a combination of shoulder constrictions, short-term lane closures, and short-term total closures on I-57.

STATUS OF UTILITIES TO BE ADJUSTED

Effective January 1, 2007

Revised January 24, 2011

| <u>Name & Address of Utility</u> | <u>Type</u> | <u>Location</u> | <u>Estimated Date Relocation Complete</u> |
|---|---|---|---|
| <p>ComEd, An Exelon Company Two Lincoln Centre, 8th Floor Oakbrook Terrace, IL 60181</p> <p>ComEd Ref# H12741UNV</p> | <p>Overhead Electric sub-transmission poles (138 kV) with distribution (12 kV) under built wires.</p> <p>Underground distribution</p> | <p>Overhead along the south side Larry Power Road from Stations 2358+00 to 2377+00 RT.</p> <p>Near station 2360+45 the u.g. 12kV heads south; at 2362+40 the 12 kV u.g. crosses to the north; and near 2375+00 the u.g. heads south from the nearby pole.</p> | <p>Possible conflicts.</p> <p>Permit may be required.</p> |
| <p>Nicor Gas 1844 Ferry Road Naperville, IL 60563</p> <p>Nicor Ref# SC9319</p> | <p>Buried 2" Gas</p> | <p>Underground along the north side of Larry Power Road from 2360+00 to approximately 2362+00 LT. There is also some 2" near 2375+40 to 2380+00 RT.</p> | <p>Possible conflicts.</p> <p>Permit may be required.</p> |
| <p>AT&T 1000 Commerce Drive Oak Brook, IL 60523</p> <p>AT&T Ref# KK1206</p> | <p>Buried Telephone</p> <p>Power and telco cables buried joint in easement.</p> | <p>Underground on private easement just south of the ROW in the SW quadrant. It crosses to the north at 2360+76 and then heads east until station 2362+75 LT.</p> <p>AT&T also has some underground which crosses near station 2374+00 and then heads east on the north side of Larry Power Road.</p> | <p>Conflicts with various pedestals along the north side of the road.</p> <p>Permit will be required.</p> |

| | | | |
|---|---------------------|---|---|
| Comcast Cable 688 Industrial Drive Elmhurst, IL 60126 | Underground CATV | Underground on private easement just south of the ROW in the SW quadrant. Approximate stations are 2362+10 to 2367+00 RT. | No conflicts are anticipated. |
| Aqua Illinois 1000 S. Schuyler Ave. Kankakee, IL 60901 | 12" water main | Underground along the north (LT) side of Larry Power Road from station 2360+00 to 2377+00. | Possible conflicts. Aqua is trying to obtain stations and offsets for us. Permit may be required. |
| Village of Bourbonnais 600 Main Street NW Bourbonnais, IL 60914 | Sanitary sewer | Underground locations unknown at this time. | No anticipated conflicts. |
| CMS Fiber Department of Innovation and Technology Springfield, IL 62701 | Fiber | They are not within the project limits. Their fiber runs east at CH 8 and then south to Armour Road where it connects back to I-57. | No conflicts. |

The above represents the best information of the Department and is only included for the convenience of the bidder. The applicable provisions of Section 102 and Articles 105.07, 107.20, 107.37, 107.38, 107.39, 107.40, and 108.02 of the Standard Specifications for Road and Bridge Construction shall apply.

The estimated utility relocation dates should be part of the progress schedule submitted by the Contractor.

** Above utility relocation information reflected as of June 26, 2019 and final relocation completion dates are unknown at this time. Per SB 699 (90-day utility relocation law), a notice will be sent to the utility companies instructing them to have their facilities relocated within 90 days. Utility relocations are anticipated to be complete by May 1, 2020.

UTILITY RELOCATIONS AND DELAYED START DATE

It is anticipated that utility relocations will be underway when this project is awarded. The Contractor should assume that the start date for work on this project will be May 1, 2020 to allow for utility relocations to be completed. No working days shall be charged, and no additional compensation shall be due the Contractor for delays prior to May 1, 2020.

DUST CONTROL--HAULING EARTH, GRANULAR MATERIALS OR WASTE MATERIAL

Effective November 16, 1993

In addition to the general requirements of Section 107 of the Standard Specifications, the Contractor shall be required to prepare a plan for pavement cleaning and dust control for this project. A detailed plan outlining specific wetting, tarping, and/or cleaning procedures, or similar dust control methods is to be submitted for approval at the preconstruction meeting.

As required by Chapter 95 1/2, paragraphs 15-109 and 15-109.1 of the Illinois Vehicle Code, no blowing or spillage of material will be allowed during the hauling operations. The specific preventative measures proposed by the Contractor are to be included in the dust control plan.

If, in the opinion of the Engineer, excessive dust is produced during the hauling operations, the hauling shall stop until corrective action is taken.

Approval of the dust control and pavement cleaning procedures will not relieve the Contractor of his responsibility to provide a safe work zone for the traveling public.

No additional compensation will be allowed for dust alleviation.

INSPECTION FOR BATS

Effective: March 29, 2016

Description. This work shall consist of conducting an inspection for signs of bats in culverts with a height of four feet or more, bridges, structures and buildings. Inspections shall be conducted in accordance with the Bridge Inspection Form in the Federal Highway Administration and Federal Railroad Administration Range-Wide Biological Assessment for Transportation Projects for Indiana Bat and Northern Long-Eared Bat and available at:

<http://www.fws.gov/midwest/endangered/section7/fhwa/index.html>

Construction Requirements. The work shall be completed in accordance with section 107.23 of the Standard Specifications and the following:

If work which could disturb bats is scheduled to begin April 1 through September 30, the Contractor shall inspect the culvert/bridge/structure/building for signs of bats prior to initiation. The inspection shall be completed no more than seven business days prior to initiation of work at each culvert/bridge/structure/building location. The Contractor shall submit the completed form to the Resident Engineer no later than 2 business days before work is initiated at each culvert/bridge/structure/building location.

In order to reduce potential project schedule delays, the contractor shall conduct an additional initial inspection on a date determined during the pre-construction meeting by the Engineer.

Work shall not begin on any culvert/bridge/structure/building suspected of providing habitat for any species of bat until such time that IDOT has obtained clearance from the US Fish and Wildlife Service, if required. Additional studies may be undertaken by IDOT to determine what species may be utilizing each structure identified as supporting bats prior to allowing any construction to proceed. Estimates of numbers of bats observed should be placed in the Notes column.

Methods. Those individuals conducting inspections shall follow the Bridge Inspection Guidance and complete the Bridge/Structure Inspection Form in the Federal Highway Administration and Federal Railroad Administration Range-Wide Biological Assessment for Transportation Projects for Indiana Bat and Northern Long-Eared Bat (April 17, 2015). The Bridge Inspection Guidance and the Bridge Inspection Form are available at:

<http://www.fws.gov/midwest/endangered/section7/fhwa/index.html>

If portions of a culvert/bridge/structure/building are unsafe to inspect or are inaccessible, inspectors should avoid that section and base their determination on the portion that is safe to survey. If possible, a partial inspection should be combined with night observation. If the entire culvert/bridge/structure/building (or a significant portion) is unsafe, night observation should be used to determine if bats are using the location.

Basis of Payment. No additional compensation will be given for compliance with this inspection requirement. The costs associated with performing the inspection shall be considered as included in the contract unit prices bid for the various culvert/bridge/structure/building items of work.

Basis of payment shall be in accordance with Article 109.04 if additional studies are necessary. Additional studies may be necessary where a culvert/bridge/structure/building is suspected of providing habitat for any species of bat. Additional studies may require the service of a trained mammologist and use of special equipment, such as a snooper.

BORROW AND FURNISHED EXCAVATION

Revised January 1, 2010

In addition to the requirements of Section 204 of the Standard Specifications for suitable materials, the following restrictions shall apply:

1. The moisture content of the material as it is incorporated into the embankment shall be between 80% to 110% of AASHTO T99 optimum.
2. A 3 ft. (1 m) minimum cover of other suitable material shall be maintained outside of and on top of the embankment.
3. If the liquid limit of the material is greater than or equal to 50, the material shall not be used for capping, shall not be placed within 20 feet of any structure, and shall not be placed in locations where it may come into contact with water.
4. Embankment capping material (as outlined in #2) shall meet non-frost susceptibility criteria as outlined in the statewide Geotechnical Manual. Materials are considered frost susceptible when the soil contains at least 65% silt and sand content, according to AASHTO T88 and the Plasticity Index is less than 12.

EMBANKMENT

Effective July 1, 1990

Revised July 23, 2018

This work shall be performed in accordance with Section 205 of the Standard Specifications except the embankment material shall not be placed and compacted at moisture contents in excess of 110 percent of optimum moisture unless authorized, in writing, by the Engineer.

Topsoil material shall not be placed in the embankment within 12 inches (300 mm) of the pavement structure.

MULCH METHOD 2

Effective August 1, 1994

Revised January 1, 2007

Article 251.03 Method 2 Procedure 1 of the Standard Specifications shall be required for this improvement.

AGGREGATE SUBGRADE IMPROVEMENT (DISTRICT 3)

Effective April 1, 2012

Revised July 8, 2019

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.

303.02 Materials. Materials shall be according to the following.

| Item | Article/Section |
|--|-----------------|
| (a) Coarse Aggregate | 1004.07 |
| (b) Reclaimed Asphalt Pavement (RAP) (Notes 1, 2, and 3) | 1031 |

Note 1. Crushed RAP, from either full depth or single lift removal, may be mechanically blended with aggregate gradations CS 01 or CS 02 but shall not exceed 40 percent of the total product. The top size of the RAP shall be less than 4 in. (100 mm) and well graded.

Note 2. RAP having 100 percent passing the 1 1/2 in. (37.5 mm) sieve and being well graded, may be used as capping aggregate in the top 3 in. (75 mm) when aggregate gradations CS 01 or CS 02 are used in lower lifts. The RAP shall not be gap graded, single sized, or have a maximum size of less than 3/4 in. (19 mm).

Note 3. The RAP used for aggregate subgrade improvement shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, “Reclaimed Asphalt Pavement (RAP) for Aggregate Applications”.

303.03 Equipment. The vibratory machine shall be according to Article 1101.01 or as approved by the Engineer.

303.04 Soil Preparation. The stability of the soil shall be according to the Department’s Subgrade Stability Manual for the aggregate thickness specified.

303.05 Placing Aggregate. The maximum nominal lift thickness of aggregate gradations CS 01 and CS 02 shall be 24 in. (600 mm).

303.06 Capping Aggregate. The top surface of the aggregate subgrade shall consist of a minimum 3 inches (75 mm) of aggregate gradations CA 06 or CA 10.

303.07 Compaction. All aggregate lifts 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.

303.08 Finishing and Maintenance of Aggregate Subgrade Improvement. 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.

303.09 Method of Measurement. This work will be measured for payment according to Article 311.08.

303.10 Basis of Payment. This work will be paid for 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. 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.
- (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 subgrade thickness less than or equal to 12 inches (300 mm) shall be CS 02.

The coarse aggregate gradation for total subgrade thickness more than 12 inches (300 mm) shall be CS 01 or CS 02.

| COARSE AGGREGATE SUBGRADE GRADATIONS | | | | | |
|--------------------------------------|--------------------------------|--------|---------|---------|---------|
| Grad No. | Sieve Size and Percent Passing | | | | |
| | 8" | 6" | 4" | 2" | #4 |
| CS 01 | 100 | 97 ± 3 | 90 ± 10 | 45 ± 25 | 20 ± 20 |
| CS 02 | | 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 01 | 100 | 97 ± 3 | 90 ± 10 | 45 ± 25 | 20 ± 20 |
| CS 02 | | 100 | 80 ± 10 | 25 ± 15 | |

- (2) The 3 inch (75 mm) capping aggregate shall be gradation CA 6 or CA 10.”

AGGREGATE SUBGRADE IMPROVEMENT 12” SPECIAL

Description. This work shall consist of constructing an aggregate subgrade improvement using quarry by-products.

Materials. Materials shall be according to the following.

| Item | Article/Section |
|--|---------------------|
| (a) Coarse Aggregate | Note 1 |
| (b) Reclaimed Asphalt Pavement (RAP) (Notes 2 and 3) | 1031 |
| (c) Quarry By-Product Aggregate (Note 4)..... | 1003.01 and 1004.01 |

Note 1. The 3 in. (75 mm) capping aggregate shall be consist of sound durable particles reasonably free of deleterious materials and be gradation CA 6 or CA 10.

Note 2. RAP having 100 percent passing the 1 1/2 in. (37.5 mm) sieve and being well graded, may be used as capping aggregate in the top 3 in. (75 mm).

Note 3. The RAP used for aggregate subgrade improvement shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, “Reclaimed Asphalt Pavement (RAP) for Aggregate Applications”.

Note 4. Quarry by-product aggregate shall consist of a mixture of surplus quarry stone sand and primary crushed stone. The surplus quarry stone sand and primary crushed stone shall be combined in the presence of the Engineer with 25% to 50% by weight surplus quarry stone sand to create the quarry by-product aggregate. Mixing with loaders will be permitted provided the weights of materials being mixed can be verified and the resulting stockpile is evenly mixed and free from segregation. The surplus quarry stone sand shall be defined as surplus materials from the aggregate production process and shall be 100% passing the 3/8 in. (9.5 mm) sieve. The primary crushed stone shall be defined as the aggregate resulting after processing through one crusher and shall be 100% passing the 6 in. (150 mm) sieve. The gradation of the combined material shall be 100% passing the 6 in. (150 mm) sieve and 8% to 12% passing the No. 200 sieve. Quarry by-product aggregate shall be free of objectional deleterious material. The quarry by-product aggregate shall not be permitted to segregate during mixing, stockpiling, transporting, or placing. In the event segregation is not prevented during mixing, stockpiling, transporting, or placing, then all mixing shall be performed at the job site at the point of placement.

Equipment. The vibratory machine shall be according to Article 1101.01, or as approved by the Engineer.

Soil Preparation. The stability of the soil shall be according to the Department’s Subgrade Stability Manual for the aggregate thickness specified.

Placing Aggregate. The maximum nominal thickness of quarry by-product aggregate placed in a single lift shall be 24 in. (600 mm).

Capping Aggregate. The top surface of the aggregate subgrade improvement using quarry by-products shall consist of a minimum 3 in. (75 mm) of capping aggregate.

Compaction. All aggregate lifts 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.

Finishing and Maintenance of Aggregate Subgrade Improvement Using Quarry By-Products. The aggregate subgrade improvement using quarry by-products shall be finished to the lines, grades, and cross sections shown on the plans, or as directed by the Engineer. The aggregate subgrade improvement using quarry by-products shall be maintained in a smooth and compacted condition.

Method of Measurement. This work will be measured for payment according to Article 311.08.

Basis of Payment. This work will be paid for at the contract unit price per square yard for AGGREGATE SUBGRADE IMPROVEMENT 12" SPECIAL.

CROSSING STRUCTURES WITH MATERIAL TRANSFER DEVICE

Effective May 23, 2001

The Bureau of Bridges and Structures has analyzed the existing structures within the specified construction zone. Based on this analysis, an emptied Material Transfer Device will be allowed to cross the following bridges:

SN 046-0087

The Material Transfer Device shall be empty and the crossing shall be as described in the special provision "Material Transfer Device (BDE)."

PERMANENT SURVEY MARKERS, TYPE I

Effective July 1, 1990

Revised January 1, 2007

Survey markers shall be installed according to Highway Standard 667101, except that the tablet shall be bronze instead of aluminum.

When a survey marker is used to reference a land survey point, the lettering referring to the State of Illinois and the Division of Highways shall be omitted and the marker shall be marked as directed by the Engineer.

TRAFFIC CONTROL PLAN

Revised October 1, 2018

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 herein and in the plans.

Special attention is called to the following sections of the Standard Specifications, the highway standards, and the special provisions relating to traffic control:

Standard Specifications:

- Section 701 - Work Zone Traffic Control and Protection
- Section 702 - Nighttime Work Zone Lighting
- Section 703 - Work Zone Pavement Marking
- Section 704 - Temporary Concrete Barrier
- Section 706 - Impact Attenuators, Temporary
- Section 706 - Temporary Water Filled Barrier
- Section 780 - Pavement Striping
- Section 781 - Raised Reflective Pavement Markers
- Section 783 - Pavement Marking and Marker Removal
- Section 862 - Uninterruptable Power Supply
- Section 1106 - Work Zone Traffic Control Devices

Highway Standards:

| | | | | | |
|--------|--------|--------|--------|--------|--------|
| 701001 | 701006 | 701101 | 701106 | 701400 | 701401 |
| 701402 | 701428 | 701446 | 701501 | 701901 | 704001 |
| BLR 22 | | | | | |

In addition, the following also relate to traffic control for this project:

ERRATA – Standard Specifications for Road and Bridge Construction
(Adopted 4-1-16) (Revised 1-1-19)

SUPPLEMENTAL SPECIFICATIONS

- Temporary Concrete Barrier
- Work Zone Traffic Control and Protection
- Work Zone Traffic Control Devices

RECURRING SPECIAL PROVISIONS

- Night Time Inspection of Roadway Lighting
- Work Zone Public Information Signs

SPECIAL PROVISIONS

- Changeable Message Sign
- Equipment Illumination
- Equipment Parking and Storage (BDE)
- Keeping Roads Open to Traffic
- Lights on Barricades (BDE)
- Plastic Drums
- Portable Vehicle Mounted Changeable Message Sign
- Speed Display Trailer (BDE)
- Temporary Information Signing
- Traffic Control and Protection, Standards 701400 (Special) and 701401 (Special)
- Traffic Control Devices – Cones (BDE)
- Traffic Spotters (BDE)
- Traffic Control Surveillance
- Vehicle Parking

VEHICLE PARKING

Revised January 1, 2007

Parking of personal vehicles within the interstate right of way will be strictly prohibited. Parking of construction equipment within the right of way will be permitted only at locations approved by the Engineer and never within median area or overnight on any roadway area.

EQUIPMENT ILLUMINATION

Revised January 26, 1998

Revised April 1, 2016

The Contractor shall equip all vehicles entering and exiting the work area with flashing amber lights, installed so the illumination is visible from all directions.

LARRY POWER ROAD CLOSURE DELAY

It is anticipated that that the detour due to the closure of St. George Road over I-57 required by IDOT contract 66956 may remain in effect until June 1, 2020. Larry Power Road traffic shall not be detoured nor shall Larry Power Road be closed until June 1, 2020 or earlier unless directed by the Engineer. Until June 1, 2020 working days shall be charged in accordance with Article 108.04 of the Standard Specifications. In the event Larry Power Road is allowed to be closed prior to June 1, 2020, the charging of working days per the article will apply. If after June 1, 2020 the detour of St. George Road is still in place, contract 66961 will be suspended until either the St. George Road detour is removed, or the Engineer determines the detour for contract 66961 can be installed so Larry Power Road may be closed. The Department shall give the Contractor at least 5 working day notice allowing the closure of Larry Power Road.

KEEPING ROADS OPEN TO TRAFFIC

All lanes on I-57 shall be open to traffic at all times, with the following two exceptions:

Single lane closures will be allowed for installation, relocation and removal of temporary concrete barrier on I-57. Single lane closures will also be allowed, with barrier, for cleaning and painting the new steel structure.

Short-term total closures of both lanes in one direction, of I-57 will be allowed for removing the existing beams and setting the new beams. Traffic shall be detoured using Highway Standard 701451, the posted alternate route as detailed in the plans and the detail for interstate closure at night. Closures shall be scheduled during the period between 10 p.m. and 5 a.m. the following day.

I-57 closures will not be allowed outside of the time periods defined above, during the legal holiday periods according to Article 107.09 of the Standard Specifications, nor during weekends defined as 3 p.m. Friday to 12 midnight Sunday.

In order to minimize the length of I-57 total closures, the following are required:

All labor, equipment and materials required to remove or set the beams shall be present before the lanes are closed.

The Contractor shall notify the Engineer and the Illinois State Police at least 72 hours in advance of closing I-57.

Larry Power Road will be closed to through traffic between US 45/52 and IL 50 during construction of the bridge and approach roadways. Local access is to be maintained within the project limits at all times.

This work will not be paid for separately, but shall be included in the cost of the applicable traffic control items.

CHANGEABLE MESSAGE SIGN

Effective December 1, 1999

Revised August 7, 2008

In addition to any changeable message signs shown in the traffic control standards, the Contractor shall furnish 2 Changeable Message Signs for this project. The signs shall be operational two weeks prior to any lane closure and shall be located as directed by the Engineer. Any relocation of the signs directed by the Engineer during construction will not be paid for separately, but shall be included in the cost of the Changeable Message Sign.

TRAFFIC CONTROL SURVEILLANCE

Effective: January 1, 2016

Revise the first sentence of Article 701.10 of the Standard Specifications to read:

701.10 Surveillance. When open holes, broken pavement, trenches over 3 in. (75 mm) deep and 4 in. (100 mm) wide, or other hazards are present within 8 ft (2.4 m) of the edge of an open lane; when opposing directions of traffic are separated by barrier wall; or on a closed road from the time a structure is removed until the time the structure has been replaced, the Contractor shall furnish traffic control surveillance during all hours when the Contractor is not engaged in construction operations

PLASTIC DRUMS

Effective August 15, 2005

Revised April 27, 2018

Plastic drums according to Standard 701901 shall be used in lieu of cones, Type I and Type II barricades, and vertical barricades throughout lane closures.

TRAFFIC CONTROL AND PROTECTION, STANDARDS 701400 (SPECIAL) AND 701401 (SPECIAL)

Effective August 7, 2008

Revised March 31, 2014

Description. Replace any reference to Standard 701400 in Standard 701401 with the detail, Standard 701400 (Special), shown on the plans.

Construction Requirements. This work shall be done according to the applicable portions of Section 701 and 780 of the Standard Specifications, the details on the plans, and Standards 701401 and 701901.

Temporary rumble strips, when shown on the detail, shall be constructed of white thermoplastic or temporary tape pavement markings placed to a thickness of one-half inch.

Method of Measurement. Traffic control and protection required under the detail, Standard 701400 (Special), will not be measured for payment.

Temporary thermoplastic rumble strips and lane drop arrows, when shown on the detail, will not be measured for payment.

In Article 701.19(c) Measured As Lump Sum of the Standard Specifications, replace Standard 701401 with Standard 701401 (Special).

Basis of Payment. If the Engineer requires a lane closure on I-57 for work not specified in Traffic Control and Protection (Special) or Traffic Control and Protection, Standard 701402 (Special), this work will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, STANDARD 701401 (SPECIAL).

TRAFFIC CONTROL AND PROTECTION, STANDARDS 701400 (SPECIAL) AND 701402 (SPECIAL)

Description. Replace any reference to Standard 701400 in Standard 701402 with the detail, Standard 701400 (Special), shown on the plans.

Construction Requirements

General. This work shall be done according to the applicable portions of Sections 701 and 780 of the Standard Specifications, the details on the plans, and Standards 701402 and 701901. Temporary thermoplastic rumble strips, when shown on the detail, shall be constructed of thermoplastic pavement markings placed to a thickness of one-half inch.

Method of Measurement. Traffic control and protection required under the detail, Standard 701400 (Special), will not be measured for payment.

Traffic control and protection required under Standard 701402 will be measured for payment on a lump sum basis which will include all locations and installations of the associated traffic control devices.

Temporary thermoplastic rumble strips and lane drop arrows, when shown on the detail, will not be measured for payment.

Removal of temporary pavement markings will not be measured for payment. In Article 701.19(b) Measured As Each section of the Standard Specifications, replace 701402 with Standard 701402 (Special).

Basis of Payment. When using barrier with a lane closure on I-57 for bridge painting or other work not specified in Traffic Control Protection (Special), this work will be paid for at the contract unit price per each for TRAFFIC CONTROL AND PROTECTION, STANDARD 701402 (SPECIAL).

Temporary concrete barrier will be measured and paid for according to Section 704 of the Standard Specifications.

Temporary impact attenuators will be paid for separately.

TRAFFIC CONTROL AND PROTECTION (SPECIAL)

This work shall consist of furnishing, erecting and removing all signs and traffic control devices shown on the interstate closure detour plan sheets and the I-57 staging plan sheets. All signs shall be erected prior to any lane closure. The Contractor will be required to cover any conflicting signs when not in use.

For the removal and setting of the bridge beams over I-57 northbound and southbound, traffic will use the IL 50 detour. The traffic control items, including but not limited to flaggers and lighted flagger stations, shown on the Interstate Closure detail shall be included in the cost of this pay item. During the detour operation, additional flaggers may be required at all intersections on the detour route. The Engineer shall determine the number of additional flaggers required at each intersection to facilitate traffic movement. Additional flaggers and lighted flagger stations will be paid for according to Article 109.04 of the Standard Specifications.

All traffic control indicated on the I-57 staging plan sheets will also be included in the cost of this pay item except for items such as changeable message signs, temporary concrete barrier, and temporary impact attenuators, which will be paid for separately.

All traffic control as described will be paid for at the contract unit price lump sum for **TRAFFIC CONTROL AND PROTECTION (SPECIAL)**.

Changeable message signs will be paid for at the contract unit price per calendar day for **CHANGEABLE MESSAGE SIGN**.

Temporary concrete barrier will be paid for at the contract unit price per foot for **TEMPORARY CONCRETE BARRIER**.

Temporary impact attenuators will be paid for at the contract unit price per each for **IMPACT ATTENUATORS, TEMPORARY** of the type specified.

TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 22

This work shall consist of providing traffic control and protection according to the highway standard to close Larry Power Road at the I-57 structure. The signage shall be placed according to the Larry Power Road Closure Plan detail in the plans.

The contractor shall stage construction activities and traffic control to provide access to local businesses and residences at all times. This work will not be paid for separately but shall be included in the cost of this standard.

All traffic control as described will be paid for at the contract unit price lump sum for **TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 22**.

PORTABLE, VEHICLE MOUNTED, CHANGEABLE MESSAGE SIGN

Effective August 7, 2008

Revised April 27, 2018

Description. This item shall consist of heavy-duty vehicles fitted with a truck mounted attenuator and with a permanently mounted changeable message sign. The vehicle mounted message sign shall be required when Traffic Control and Protection, Standard 701401 is in place and the Contractor is working. Vehicle mounted message signs may also be required when high volumes of traffic occur such as on weekends and holidays. Specific times will be determined by the Engineer.

The vehicle location shall be in advance of the lane closure taper and in advance of any stopped traffic on the interstate.

Construction Requirements. The Contractor shall provide a person who shall remain with the vehicle at all times it is in use. The person shall have in his/her possession a current driver's license. The person shall be capable of operating the vehicle and capable of promptly programming and/or reprogramming the message sign to provide the messages as directed by the Engineer.

When the vehicle is not in use, it shall be stored at a location approved by the Engineer. The stored vehicle shall be capable of being on the jobsite within five minutes.

The sign shall meet the applicable requirements of Article 701.15 of the Standard Specifications.

Equipment. The vehicle shall be fitted with a truck mounted attenuator and should have an actual weight of no less than 11,000 pounds and no greater than 26,000 pounds. Higher weights may be used when approved by the Engineer and the attenuator manufacturer.

The message sign shall meet the applicable requirements of Article 1106.02(i) of the Standard Specifications. Character height shall be 10 in. (250 mm) minimum.

Method of Measurement. The vehicle with the mounted changeable message sign will be measured on a calendar month basis.

The person provided by the Contractor to operate the truck and message sign will be paid for separately on a per hour basis.

Basis of Payment. The vehicle and portable changeable message signs will be paid for at the contract unit price per calendar month for PORTABLE VEHICLE MOUNTED CHANGEABLE MESSAGE SIGN. The person provided by the Contractor to operate the truck and message sign will be paid for at the contract unit price per hour for MESSAGE BOARD VEHICLE DRIVER.

QUALITY CONTROL LABORATORY FOR CONCRETE MIXTURES

Effective August 12, 2013

Revised January 1, 2016

Revise Article 1020.16(c)(2) of the Recurring Special Provision for Quality Control/Quality Assurance of Concrete Mixtures to read:

“(2) Required Plant Tests. Sampling and testing shall be performed at the plant to control production of a mixture. The required minimum Contractor plant sampling and testing is indicated in Article 1020.16(g) Schedule A.”

Add to the end of the second paragraph of Article 1020.16(f)(1) of the Recurring Special Provision for Quality Control/Quality Assurance of Concrete Mixtures:

“Reporting of above documents shall be done using the Department’s electronic reporting system, QC/QA Excel Package.”

GRANULAR MATERIALS

Effective: November 26, 2013

Revised January 1, 2016

For trench backfill and bedding for pipe culverts and storm sewers, gradations CA 7 or CA 11 may be used, however, the granular material shall be encased in filter fabric. The filter fabric shall be installed according to Article 282 of the Standard Specifications, except that the work will not be measured for payment but will be included in the cost of the pipe culverts or storm sewers. Lifts for gradations CA 7 or CA 11 may exceed 8 inches (200 mm) in depth provided the material is seated to the satisfaction of the Engineer.

MATERIAL TRANSFER DEVICE (BDE)

Effective: June 15, 1999

Revised: August 1, 2014

Description. This work shall consist of placing all hot-mix asphalt for full-depth asphalt paving except that these materials shall be placed using a material transfer device (MTD).

Materials and Equipment. The MTD shall have a minimum surge capacity of 15 tons (13.5 metric tons), shall be self-propelled and capable of moving independent of the paver, and shall be equipped with the following:

- (a) Front-Dump Hopper and Conveyor. The conveyor shall provide a positive restraint along the sides of the conveyor to prevent material spillage. MTDs having paver style hoppers shall have a horizontal bar restraint placed across the foldable wings which prevents the wings from being folded.
- (b) Paver Hopper Insert. The paver hopper insert shall have a minimum capacity of 14 tons (12.7 metric tons).
- (c) Mixer/Agitator Mechanism. This re-mixing mechanism shall consist of a segmented, anti-segregation, re-mixing auger or two full-length longitudinal paddle mixers designed for the purpose of re-mixing the hot-mix asphalt (HMA). The longitudinal paddle mixers shall be located in the paver hopper insert.

CONSTRUCTION REQUIREMENTS

General. The MTD shall be used for the placement all hot-mix asphalt for full-depth asphalt paving. The MTD speed shall be adjusted to the speed of the paver to maintain a continuous, non-stop paving operation.

Use of a MTD with a roadway contact pressure exceeding 25 psi (172 kPa) will be limited to partially completed segments of full-depth HMA pavement where the thickness of binder in place is 10 in. (250 mm) or greater.

Structures. The MTD may be allowed to travel over structures under the following conditions:

- (a) Approval will be given by the Engineer.
- (b) The vehicle shall be emptied of HMA material prior to crossing the structure and shall travel at crawl speed across the structure.
- (c) The tires of the vehicle shall travel on or in close proximity and parallel to the beam and/or girder lines of the structure.

Method of Measurement. This work will be measured for payment in tons (metric tons) for all hot-mix asphalt for full-depth asphalt paving materials placed with a material transfer device.

Basis of Payment. This work will be paid for at the contract unit price per ton (metric ton) for MATERIAL TRANSFER DEVICE.

The various HMA mixtures placed with the MTD will be paid for as specified in their respective specifications. The Contractor may choose to use the MTD for other applications on this project; however, no additional compensation will be allowed.

STABILIZED CONSTRUCTION ENTRANCE

Description. This work shall consist of furnishing, installation, maintenance and removal of stabilized pad of aggregate underlain with filter fabric as shown on the plans or directed by the Engineer.

Materials. Materials shall conform to the following:

Aggregate size. IDOT Coarse Aggregate Graduation: CA-1 CA-2 CA-3, or CA-4.

Filter Fabric shall consist of synthetic polymers composed of at least 85 percent by weight polypropylene, polyesters, polyamides, polyethylene, polyolefins, or polyvinylidene chlorides. The geotextile shall be free of any chemical treatment or coating that significantly reduces its porosity. Fibers shall contain stabilizers and/or inhibitors to enhance resistance to ultraviolet lights.

Construction Requirements. The course aggregate shall be a thickness of 6 inches or more. The stone entrance should not be filled until the area has been inspected and approved by the Engineer.

The rock shall be dumped and spread into place in approximately horizontal layers not more than 3 feet in thickness. It shall be placed in a manner to produce a reasonable homogeneous stable fill that contains no segregated pockets or larger or small fragments or large unfilled space caused by bridging of larger fragments. No compaction will be required beyond that resulting from the placing and spreading operations.

The minimum width and length shall be 14 and 40 feet, respectively.

All surface water flowing or diverted toward the construction entrance shall be piped across the entrance. Any pipe used for this will be considered incidental to the STABILIZED CONSTRUCTION ENTRANCE. The stabilized construction entrance will have positive drainage away from the roadway.

The entrance shall remain in place and be maintained until the disturbed area is stabilized. Any sediment spilled onto public rights-of-way must be removed immediately.

Method of Measurement and Basis of Payment. The work will be measured and paid for at the contract unit price per square yard for STABILIZED CONSTRUCTION ENTRANCE, which price shall be payment in full for all material, labor and any other items required to complete the work.

REMOVE IMPACT ATTENUATOR SAND MODULE AND BASE

Description: This work shall consist of the removal and satisfactory disposal of the existing sand module impact attenuators and attenuator base at locations shown on the plans. A sand module impact attenuator is considered to be made of three parts: 1) barrel, 2) lid and 3) insert(s).

All barrels, lids and inserts shall be disposed of in accordance with Article 202.03 of the Standard Specifications. Surplus material including sand fill in the existing barrels and inserts shall be disposed of in accordance with Article 202.03 of the Standard Specifications. Anti-freeze, when present, shall be disposed of/recycled according to local ordinances.

Method of Measurement: This work shall be measured per each array for each location.

Basis of Payment: This work shall be paid for at the contract unit price per each array for REMOVE IMPACT ATTENUATOR SAND MODULE, which price shall include the removal the barrels and sand, salvage, and transport of the salvaged material.

Impact attenuator base removal, salvage, and transport will be paid for at the contract unit price per each for REMOVE ATTENUATOR BASE.

REMOVAL OF EXISTING STRUCTURES

The existing bearings shall be salvaged and delivered to the District 3 Kankakee Maintenance Yard, located at 1455 E. Brookmont in Kankakee, IL. The Contractor shall contact Mr. Junior Senat, the D3 Bridge Maintenance Engineer, at (815)434-8444, before delivering. The cost of removing, delivering and unloading the bearings at the maintenance yard shall be included in the cost of REMOVAL OF EXISTING STRUCTURES.

WOVEN WIRE FENCE REMOVAL

Description. This work shall consist of the removal and disposal of existing woven wire fence.

Construction Requirements

General. Woven wire fence shall be removed at locations shown on the plans and as directed by the Engineer, with removed material disposed of according to Article 202.03 of the Standard Specifications. Removal shall include fencing, wire, posts and all accessories. Holes resulting from the removal operations shall be backfilled with suitable material approved by the Engineer.

Method of Measurement. Woven wire fence removal will be measured for payment in feet along the top of the fence from center to center of end posts.

Basis of Payment. This work will be paid for at the contract unit price per foot for WOVEN WIRE FENCE REMOVAL.

REMOVE RIGHT-OF-WAY MARKERS

Description. This work shall consist of the removal and disposal of existing right of way markers.

Construction Requirements

General. Right of way markers shall be removed at locations shown on the plans to at least 2 feet below grade, with removed material disposed of according to Article 202.03 of the Standard Specifications. The removal shall extend deeper where required to facilitate roadway construction at no additional cost to the department. Holes resulting from the removal operations shall be backfilled with suitable material approved by the Engineer.

Basis of Payment. Removal of right of way markers will be paid for at the contract unit price per each for REMOVE RIGHT OF WAY MARKERS.

CONTRACTOR ACCESS

At road closure locations where Type III barricades are installed in a manner that will not allow Contractor access to the project without relocation of one or more of the barricades, the arrangement of the barricades at the beginning of each work day may be altered, when approved by the Engineer, in the manner shown on Highway Standard 701901 for Road Closed to Through Traffic. "Road Closed" signs (R11-2), supplemented by "Except Authorized Vehicles" signs (R3-1101), shall be mounted on both the near right and the far left barricade(s). At the end of each work day, the barricades shall be returned to their in-line positions. This work will not be paid for separately, but shall be included in the associated traffic control pay items.

Additional barricades, drums or cones, required by the Engineer to control traffic when relocation for Contractor access is used, will not be paid for separately, but shall be included in the associated traffic control pay items.

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES(PROJECT SPECIFIC)

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

Contract Specific Work Areas. The excavated soil and groundwater within the work areas listed below shall be managed as either "uncontaminated soil", hazardous waste, special waste or non-special waste. For stationing, the lateral distance is measured from centerline and the farthest distance is the offset distance or construction limit, whichever is less.

Site 1812V-6 I-57 ROW, Approximate mile marker 316.5, Bourbonnais and unincorporated Bourbonnais Township, Kankakee County

- Station 2366+50 to Station 2368+50 31 to 235 feet LT and Station 2366+50 to Station 2368+62 31 to 205 feet RT: The Engineer has determined that this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(1). Contaminants of concern sampling parameters: VOCs, SVOCs, and Metals.

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), or Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), or as deemed necessary. For this project, the work zones apply for the following ISGS PESA Sites: **None.**

Additional information on the above sites collected during the Phase I Engineering process is available through the District's Environmental Studies Unit (DESU).

PIPE UNDERDRAINS FOR STRUCTURES

Effective: May 17, 2000

Revised: January 22, 2010

Description. This work shall consist of furnishing and installing a pipe underdrain system as shown on the plans, as specified herein, and as directed by the Engineer.

Materials. Materials shall meet the requirements as set forth below:

The perforated pipe underdrain shall be according to Article 601.02 of the Standard Specifications. Outlet pipes or pipes connecting to a separate storm sewer system shall not be perforated.

The drainage aggregate shall be a combination of one or more of the following gradations, FA1, FA2, CA5, CA7, CA8, CA11, or CA13 thru 16, according to Sections 1003 and 1004 of the Standard Specifications.

The fabric surrounding the drainage aggregate shall be Geotechnical Fabric for French Drains according to Article 1080.05 of the Standard Specifications.

Construction Requirements. All work shall be according to the applicable requirements of Section 601 of the Standard Specifications except as modified below.

The pipe underdrains shall consist of a perforated pipe drain situated at the bottom of an area of drainage aggregate wrapped completely in geotechnical fabric and shall be installed to the lines and gradients as shown on the plans.

Method of Measurement. Pipe Underdrains for Structures shall be measured for payment in feet (meters), in place. Measurement shall be along the centerline of the pipe underdrains. All connectors, outlet pipes, elbows, and all other miscellaneous items shall be included in the measurement. Concrete headwalls shall be included in the cost of Pipe Underdrains for Structures, but shall not be included in the measurement for payment.

Basis of Payment. This work will be paid for at the contract unit price per foot (meter) for PIPE UNDERDRAINS FOR STRUCTURES of the diameter specified. Furnishing and installation of the drainage aggregate, geotechnical fabric, forming holes in structural elements and any excavation required, will not be paid for separately, but shall be included in the cost of the pipe underdrains for structures.

BRIDGE DECK CONSTRUCTION

Effective: October 22, 2013

Revised: December 21, 2016

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

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

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

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

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

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

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

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

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

Delete the last paragraph of Article 503.06(b).

PREFORMED PAVEMENT JOINT SEAL

Effective: October 4, 2016

Revised: March 1, 2019

Description. This work shall consist of furnishing all labor, equipment and materials necessary to prepare the joint opening and install pavement joint seal(s) at the locations specified. Unless otherwise detailed on the plans, the joint shall be sized for a rated movement of 2 inches (50 mm).

Materials: Unless otherwise specified, one of the following prefabricated joint seals will be permitted.

- (a) Preformed Elastomeric Joint Seal. This material shall be according to Section 1053.01.
- (b) Preformed Pre-compressed, Silicone Coated, Self-Expanding Sealant System. This Sealant system shall be comprised of three components: 1) cellular polyurethane foam impregnated with hydrophobic 100% acrylic, water-based emulsion, factory coated with highway-grade, fuel resistant silicone; 2) field-applied epoxy adhesive primer, 3) field-injected silicone sealant bands.

The preformed, pre-compressed silicone joint seal shall, as a minimum, be according to the following:

- The joint seal shall be held in place by a non-sag, high modulus silicone adhesive.
- The joint seal shall be compatible with the epoxy and header material.
- The joint seal shall withstand the effects of vertical and lateral movements, skew movements and rotational movement without adhesive or cohesive failure.
- The joint seal shall be designed so that, the material is capable of movement of +50%, -50% (100% total) of nominal material size.
- Changes in plane and direction shall be executed using factory fabricated 90 degree transition assemblies. The transitions shall be watertight at the inside and outside corners through the full movement of the product.
- The depth of the joint shall be recessed 3/4 in. (19 mm) below the riding surface throughout the normal limits of joint movement.
- The joint seal shall be resistant to ultraviolet rays.
- The joint seal shall be resistant to abrasion, oxidation, oils, gasoline, salt, and other materials that may be spilled on or applied to the surface.
- The manufacturer shall certify that the joint composition shall be free of any waxes or wax compounds; asphalts or asphalt compounds.

The joint material shall meet the following physical properties:

| Property | Requirement | Test Method |
|--|-------------------------------|--------------------|
| Tensile Strength of Silicone Coating (min) | 140 psi | ASTM D 412 |
| UV Resistance of Joint System | No Changes--2000 Hours | ASTM C793 |
| Density of Cellular Polyurethane Foam | 4.0 lb/ cu ft (200kg/cu m) | ASTM D545 |
| Heat Aging Effects (Silicone Coating) | No cracking, chalking | ASTM C 792 |
| Joint System Operating temp range (min) | -40° F to 185° F | ASTM C 711 |

The adhesive shall be a two-component, 100% solid, modified epoxy meeting the requirements of ASTM C881, Type I, Grade 3, Class B & C. The adhesive shall also have the following properties:

| Property | Requirement | Test method |
|--------------------------|-------------------------|--------------------|
| Tensile Strength | 2,500 psi (24 MPa) min. | ASTM D638 |
| Compressive Strength | 7000 psi (48 MPa) min. | ASTM D695 |
| Bond Strength (Dry Cure) | 2000 psi (28MPa) min | ASTM C882 |
| Water Absorption | 0.1% by weight | ASTM D570 |

The silicone band adhesive shall have the following properties:

| Property | Requirement | Test Method |
|-------------------------|---|--------------------|
| Movement Capability | +50/-50% | ASTM C 719 |
| Elongation at Break | >600% | ASTM D 5893 |
| Slump | ≤0.3" | ASTM D 2202 |
| Hardness (Shore A) max. | 20 | ASTM C 661 |
| Tack free time (max) | 60 minutes | ASTM C 679 |
| Heat Aging Effects | No cracking, chalking | ASTM C 792 |
| Resilience | ≥ 75% | ASTM D5329 |
| Bond | 0% Adhesive or Cohesive Failure after 5 cycles @100%extension | ASTM D 5329 |

- (c) Performed Silicone Joint Seal. The preformed silicone joint seal used for this item shall conform to the following specifications:

**Table 1
 Physical Properties of Preformed Silicone Gland**

| Property | Requirement | Test Method |
|----------------------------------|---------------------------|--------------------|
| Rated Movement Capability | +2 ¼ inch total | N/A |
| Tensile Strength, psi. | 1000 min | ASTM D 412 |
| Elongation | 400% min | ASTM D 412 |
| Tear (die B) | 100 ppi. min | ASTM D 624 |
| Hardness Durometer (Shore A). | 55 +/- 5 max | ASTM D 2240 |
| Compression set at 212°F, 70 hrs | 30% max | ASTM D 395 |
| Heat Aged Properties | 5pt max loss on Durometer | ASTM D 573 |
| Tensile and Elongation % Loss | 10 % max | |

The color of the preformed silicone seal shall be black, made by the addition of Carbon Black fillers which increases UV resistance, tensile strength, and abrasion wear properties.

The locking adhesive shall be non-sag, high modulus silicone adhesive conforming to the following specifications:

Table 2
Physical Properties of the Silicone Locking Adhesive

| Property | Requirement | Test Method |
|--------------------------|---------------------------------------|-------------|
| Tensile Strength, psi. | 200 min | ASTM D 412 |
| Elongation, % | 450 min | ASTM D 412 |
| Tack Free Time, minutes. | 20 max. | ASTM C 679 |
| Cure Time ¼" bead, hrs | 24 max | ASTM C 679 |
| Resistance to U.V. | No cracking, chalking, or degradation | ASTM C793 |
| VOC (g/L) | 0 | ATSM D 3960 |

Any rips, tears, or bond failure will be cause for rejection.

The two part epoxy primer shall be supplied for application to the vertical faces of the joint opening. The supplied primer shall be equally as effective when bonded to concrete or steel. This primer shall meet the following criteria:

Table 3
Physical Properties of Preformed Silicone Joint System Primer

| Property | Requirement | Test Method |
|----------------------------------|-------------|---------------------------------------|
| Viscosity (cps) | 44 | ASTM D 2196 |
| Color | Light Amber | Visual |
| Solids (%) | 41 | ASTM D 4209 |
| Specific Gravity | 0.92 | ATSM D 1217 |
| Product Flash Point (°F, T.C.C.) | 48 | ATSM D 56 |
| Package Stability | N/A | One year in tightly sealed containers |
| Cleaning | N/A | Mineral Spirits |
| VOC (g/L) | 520 | ATSM D 3960 |

- (a) Preformed Inverted EPDM Joint Seal. The preformed inverted EPDM joint seal used for this item shall conform to the following specifications:

Table 1
Physical Properties of Preformed Silicone Gland

| Property | Requirement | Test Method |
|----------------------------------|--------------------|--------------------|
| Rated Movement Capability | Up To 5 inch total | N/A |
| Tensile Strength, psi. | 1200 psi min | ASTM D 412 |
| Elongation | 400 % min | ASTM D 412 |
| Tear (Die C) | 150 pli. min | ASTM D 624 |
| Durometer Content | 50 +/- 5 max | ASTM D 2240 |
| Water Resistance (70 hrs @ 100c) | 10% max | ASTM D 471 |
| Ozone Resistance | 100 min | ASTM D 1171 |

Table 2
Physical Properties of the V-Epoxy-R

V-Epoxy-R adhesive meets the requirements of ASTM C881 Type III, Grade 2. The adhesive shall also have the following properties:

| Property | Requirement | Test Method |
|---|---------------------------------------|--------------------|
| Color | Gray | Visual |
| Viscosity | 45,000 CP (typ.) | N/A |
| Gel Time (minutes) | 30 min. | ASTM C 881 |
| Shelf Life (Separate Sealed Containers) | 12 Months | N/A |
| Resistance to U.V. | No cracking, chalking, or degradation | ASTM C793 |
| VOC (g/L) | 0 | ATSM D 3960 |

Any rips, tears, or bond failure will be cause for rejection.

- (e) Bonded Preformed Joint Seal. This joint system shall consist of preformed elastomeric seal bonded to the side walls of the joint opening using an adhesive as specified by the Manufacturer of the joint seal.

The bonded preformed joint seal shall be according to Table 1 of ASTM D2628 with the following exceptions: Compression set shall not be over 40 percent when tested according to Method B (Modified) of ASTM D 395 after 70 hours at 212 °F (100 °C). The Compression-Deflection requirement will not apply to the bonded preformed joint seal.

The adhesive shall be epoxy base, dual component, which resists salt, diluted acids, alkalis, solvents, greases, oils, moisture, sunlight and weathering. Temperatures up to 200 °F (93 °C) shall not reduce bond strength. At 68 °F (20 °C), the bond strength shall be a minimum of 1000 psi (6.9 MPa) within 24 hours.

Any primers or cleaning solutions used on the faces of the joint or on the profile of the sides of the bonded preformed joint seal shall be supplied by the manufacturer of the bonded preformed joint seal.

Any additional installation materials and adhesive for splicing joint sections shall be as supplied by the manufacturer of the preformed joint seal.

The Contractor shall submit the Manufacturer's material certification documentation stating that their materials meet the applicable requirements of this specification for the joint seal(s) installed.

CONSTRUCTION REQUIREMENTS

General. The Contractor shall furnish the Engineer with the manufacturer's product information and installation procedures at least two weeks prior to installation.

The minimum ambient air temperature in which the joint seal can be installed is 40° F (4.4° C) and rising, except for bonded preformed joint seals which shall not be installed when temperatures below 50 °F (10 °C) are predicted within a 48 hour period.

The joint surface shall be completely dry before installing the Joint Seal. For newly placed concrete, the concrete shall be fully cured and allowed to dry out a minimum of seven additional days prior to placement of the seal. Cold, wet, inclement weather will require an extended drying time.

The Joint Seal shall not be installed immediately after precipitation or if precipitation is forecasted for the day. Joint preparation and installation of Joint Seal shall be done during the same day.

Surface Preparation. Surface preparation shall be according to the joint seal manufacturer's written instructions.

After surface preparation is completed, the joint shall be cleaned of debris using compressed air with a minimum pressure of 90 psi (620 kPa). The air compressor shall be equipped with traps to prevent the inclusion of water and/or oil in the air line. The compressed air shall be according to the cleanliness requirements of ASTM D 4285.

When priming is required per the manufacturer's instruction, this operation shall immediately follow cleaning.

Joint Installation. The Joint installation shall be per the manufacturer's instructions; special attention shall be given to insure the joint seal is properly recessed below the top of the riding surface as recommended by the manufacturer.

For bonded joint seals the seal shall be inserted into the joint and held tightly against both sides of the joint until sufficient bond strength has been developed to resist the expected expansion forces.

Opening to traffic. As these joint systems are supposed to be recessed below the top of the riding surface, there should be no restriction, based on the joint seal installation, on when these joints can be reopened to traffic.

Method of Measurement. The installed prefabricated joint seal will not be measured for payment.

Basis of Payment. The prefabricated joint seal will not be paid for separately but shall be considered included in the cost of the adjacent concrete work involved.

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: $Q, \text{ tons} = A \times D \times (G_{mb} \times 46.8) / 2000$. For HMA mixtures measured in square meters: $Q, \text{ metric tons} = A \times D \times (G_{mb} \times 1) / 1000$. 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: $Q, \text{ tons} = V \times 8.33 \text{ lb/gal} \times SG / 2000$
For bituminous materials measured in liters: $Q, \text{ metric tons} = V \times 1.0 \text{ kg/L} \times SG / 1000$

- 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:

$$\text{Percent Difference} = \{(BPI_L - BPI_P) \div BPI_L\} \times 100$$

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.

COMPENSABLE DELAY COSTS (BDE)

Effective: June 2, 2017

Revised: April 1, 2019

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

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

- (1) Minor Delay. A minor delay occurs when the work in conflict with the utility in an unanticipated location is completely stopped for more than two hours, but not to exceed two weeks.
- (2) Major Delay. A major delay occurs when the work in conflict with the utility in an unanticipated location is completely stopped for more than two weeks.
- (3) Reduced Rate of Production Delay. A reduced rate of production delay occurs when the rate of production on the work in conflict with the utility in an unanticipated location decreases by more than 25 percent and lasts longer than seven calendar days.”

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

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

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

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

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

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

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

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

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

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

- (1) When adverse weather prevents work on the controlling item.
- (2) When job conditions due to recent weather prevent work on the controlling item.
- (3) When conduct or lack of conduct by the Department or its consultants, representatives, officers, agents, or employees; delay by the Department in making the site available; or delay in furnishing any items required to be furnished to the Contractor by the Department prevents work on the controlling item.
- (4) When delays caused by utility or railroad adjustments prevent work on the controlling item.
- (5) When strikes, lock-outs, extraordinary delays in transportation, or inability to procure critical materials prevent work on the controlling item, as long as these delays are not due to any fault of the Contractor.
- (6) When any condition over which the Contractor has no control prevents work on the controlling item.”

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

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

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

Add the following to Section 109 of the Standard Specifications.

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

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

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

- (a) Escalated Material and/or Labor Costs. When the delay causes work, which would have otherwise been completed, to be done after material and/or labor costs have increased, such increases will be paid. Payment for escalated material costs will be limited to the increased costs substantiated by documentation furnished by the Contractor. Payment for escalated labor costs will be limited to those items in Article 109.04(b)(1) and (2), except the 35 percent and 10 percent additives will not be permitted.
- (b) Extended Project Overhead. For the duration of the delay, payment for extended project overhead will be paid as follows.
 - (1) Direct Jobsite and Offsite Overhead. Payment for documented direct jobsite overhead and documented direct offsite overhead, including onsite supervisory and administrative personnel, will be allowed according to the following table.

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

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

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

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

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

CONCRETE END SECTIONS FOR PIPE CULVERTS (BDE)

Effective: January 1, 2013

Revised: April 1, 2016

Description. This work shall consist of constructing cast-in-place concrete and precast concrete end sections for pipe culverts. These end sections are shown on the plans as Highway Standard 542001 or 542011. This work shall be according to Section 542 of the Standard Specifications except as modified herein.

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

| Item | Article/Section |
|---|-----------------|
| (a) Portland Cement Concrete (Note 1) | 1020 |
| (b) Precast Concrete End Sections (Note 2) | |
| (c) Coarse Aggregate (Note 3) | 1004.05 |
| (d) Structural Steel (Note 4) | 1006.04 |
| (e) Anchor Bolts and Rods (Note 5) | 1006.09 |
| (f) Reinforcement Bars | 1006.10(a) |
| (g) Nonshrink Grout | 1024.02 |
| (h) Chemical Adhesive Resin System | 1027 |
| (i) Mastic Joint Sealer for Pipe | 1055 |
| (j) Hand Hole Plugs | 1042.16 |

Note 1. Cast-in-place concrete end sections shall be Class SI, except the 14 day mix design shall have a compressive strength of 5000 psi (34,500 kPa) or a flexural strength of (800 psi) 5500 kPa and a minimum cement factor of 6.65 cwt/cu yd (395 kg/cu m).

Note 2. Precast concrete end sections shall be according to Articles 1042.02 and 1042.03(b)(c)(d)(e) of the Standard Specifications. The concrete shall be Class PC according to Section 1020, and shall have a minimum compressive strength of 5000 psi (34,000 kPa) at 28 days.

Joints between precast sections shall be produced with reinforced tongue and groove ends according to the requirements of ASTM C 1577.

Note 3. The granular bedding placed below a precast concrete end section shall be gradation CA 6, CA 9, CA 10, CA 12, CA 17, CA 18, or CA 19.

Note 4. All components of the culvert tie detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable.

Note 5. The anchor rods for the culvert ties shall be according to the requirements of ASTM F 1554, Grade 105 (Grade 725).

CONSTRUCTION REQUIREMENTS

The concrete end sections may be precast or cast-in-place construction. Toe walls shall be either precast or cast-in-place, and shall be in proper position and backfilled according to the applicable paragraphs of Article 502.10 of the Standard Specifications prior to the installation of the concrete end sections. If soil conditions permit, cast-in-place toe walls may be poured directly against the soil. When poured directly against the soil, the clear cover of the sides and bottom of the toe wall shall be increased to 3 in. (75 mm) by increasing the thickness of the toe wall.

- (a) Cast-In-Place Concrete End Sections. Cast-in-place concrete end sections shall be constructed according to the requirements of Section 503 of the Standard Specifications and as shown on the plans.
- (b) Precast Concrete End Sections. When the concrete end sections will be precast, shop drawings detailing the slab thickness and reinforcement layout shall be submitted to the Engineer for review and approval.

The excavation and backfilling for precast concrete end sections shall be according to the requirements of Section 502 of the Standard Specifications, except a layer of granular bedding at least 6 in. (150 mm) in thickness shall be placed below the elevation of the bottom of the end section. The granular bedding shall extend a minimum of 2 ft (600 mm) beyond each side of the end section.

Anchor rods connecting precast sections shall be brought to a snug tight condition followed by an additional 2/3 turn on one of the nuts. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut.

When individual, precast end sections are placed side-by-side for a multi-pipe culvert installation, a 3 in. (75 mm) space shall be left between adjacent end section walls and the space(s) filled with Class SI concrete.

Method of Measurement. This work will be measured for payment as each, with each end of each culvert being one each.

Basis of Payment. This work will be paid for at the contract unit price per each for CONCRETE END SECTION, STANDARD 542001 or CONCRETE END SECTION, 542011, of the pipe diameter and slope specified.

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 **12.00%** 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>.

BIDDING PROCEDURES. Compliance with this Special Provision is a material bidding 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 it 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.

DISPOSAL FEES (BDE)

Effective: November 1, 2018

Replace Articles 109.04(b)(5) – 109.04(b)(8) of the Standard Specifications with the following:

- “(5) Disposal Fees. When the extra work performed includes paying for disposal fees at a clean construction and demolition debris facility, an uncontaminated soil fill operation or a landfill, the Contractor shall receive, as administrative costs, an amount equal to five percent of the first \$10,000 and one percent of any amount over \$10,000 of the total approved costs of such fees.
- (6) Miscellaneous. No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.
- (7) Statements. No payment will be made for work performed on a force account basis until the Contractor has furnished the Engineer with itemized statements of the cost of such force account work. Statements shall be accompanied and supported by invoices for all materials used and transportation charges. However, if materials used on the force account work are not specifically purchased for such work but are taken from the Contractor’s stock, then in lieu of the invoices, the Contractor shall furnish an affidavit certifying that such materials were taken from his/her stock, that the quantity claimed was actually used, and that the price and transportation claimed represent the actual cost to the Contractor.

Itemized statements at the cost of force account work shall be detailed as follows.

- a. Name, classification, date, daily hours, total hours, rate, and extension for each laborer and foreman. Payrolls shall be submitted to substantiate actual wages paid if so requested by the Engineer.
- b. Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.
- c. Quantities of materials, prices and extensions.
- d. Transportation of materials.
- e. Cost of property damage, liability and workmen’s compensation insurance premiums, unemployment insurance contributions, and social security tax.

- (8) Work Performed by an Approved Subcontractor. When extra work is performed by an approved subcontractor, the Contractor shall receive, as administrative costs, an amount equal to five percent of the total approved costs of such work with the minimum payment being \$100.
- (9) All statements of the cost of force account work shall be furnished to the Engineer not later than 60 days after receipt of the Central Bureau of Construction form "Extra Work Daily Report". If the statement is not received within the specified time frame, all demands for payment for the extra work are waived and the Department is released from any and all such demands. It is the responsibility of the Contractor to ensure that all statements are received within the specified time regardless of the manner or method of delivery."

ELECTRIC SERVICE INSTALLATION (BDE)

Effective: January 1, 2020

Revise Article 804.04 of the Standard Specifications to read:

" **804.04 Installation.** The electric service installation shall extend from the existing utility owned transformer to the point of cable termination of the incoming power at the controller enclosure.

The Contractor shall ascertain the work being provided by the electric utility and shall provide all additional material and work required to complete the electric service installation while meeting the requirements of the utility. Unless otherwise required by the utility, grounding shall be according to Section 806, raceways shall be according to Sections 810 – 812, and conductors shall be according to Sections 817 – 818.

The electric service installation shall include an appropriate service disconnect and when required, metering. Metering shall include all metering material, including potential and current transformers. The metering and service disconnect shall be installed remote to the controller enclosure where possible.

The total length of aerial and underground service between the controller enclosure and utility transformer shall not exceed 250 ft (76 m). The service pole or structure and controller shall be located adjacent to the right-of-way line or a minimum distance of 30 ft (9 m) from the edge of pavement. The exact location will be established by the Engineer.

Specific requirements for aerial and underground electric service installations shall be as follows.

- (a) Aerial Electric Service. The aerial service shall be mounted on a wood pole, along with a weatherhead, disconnect switch, meter base (if required), and all appurtenances to complete the installation.

The wood pole shall be installed according to Article 830.03(c), except the pole shall be a minimum of 25 ft (7.5 m) in length and shall be increased as necessary to maintain ground clearance.

- (b) Underground Electric Service.

(1) Ground Mounted Service. The ground mounted service shall be installed on a corrosion resistant pedestal or structure with a service disconnect switch, meter base (if required), and all appurtenances to complete the installation.

(2) Pole Mounted Service. The service shall be installed on a 12 ft (3.7 m) wood pole on which the meter base (if required) and service disconnect switch shall be channel mounted. The wood pole shall be installed according to Article 830.03(c), except the pole shall be plumb.

- (c) Conduit Protection. Feeder conductors in PVC conduit on the service pole or structure shall be protected by galvanized steel "U" guard. When on a pole, the "U" guard shall be attached with 3/8 in. x 3 in. (M10 x 75 mm) galvanized steel lag bolts."

Revise Article 804.05 of the Standard Specifications to read:

"804.05 Basis of Payment. This work will be paid for at the contract unit price per each for ELECTRIC SERVICE INSTALLATION.

For aerial electric service, work on the utility side of the weatherhead at the service pole will be paid for according to Article 109.04 when not provided by the utility company.

For underground electric service, work on the utility side of the service pole, pedestal, or structure where the service cables penetrate the ground will be paid for according to Article 109.04 when not provided by the utility company.

Any charges by the utility company to provide electrical service will be paid for according to Article 109.05."

EMULSIFIED ASPHALTS (BDE)

Effective: August 1, 2019

Revise Article 1032.06 of the Standard Specifications to read:

“1032.06 Emulsified Asphalts. Emulsified asphalts will be accepted according to the current Bureau of Materials Policy Memorandum, “Emulsified Asphalt Acceptance Procedure”. These materials shall be homogeneous and shall show no separation of asphalt after thorough mixing, within 30 days after delivery, provided separation has not been caused by freezing. They shall coat the aggregate being used in the work to the satisfaction of the Engineer and shall be according to the following requirements.

(a) Anionic Emulsified Asphalt. Anionic emulsified asphalts RS-1, RS-2, HFRS-2, SS-1h, and SS-1 shall be according to AASHTO M 140, except as follows.

(1) The cement mixing test will be waived when the emulsion is being used as a tack coat.

(2) The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent.

(b) Cationic Emulsified Asphalt. Cationic emulsified asphalts CRS-1, CRS-2, CSS-1h, and CSS-1 shall be according to AASHTO M 208, except as follows.

(1) The cement mixing test will be waived when the emulsion is being used as a tack coat.

(2) The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent.

(c) High Float Emulsion. High float emulsions HFE-90, HFE-150, and HFE-300 are medium setting and shall be according to the following table.

| Test | HFE-90 | HFE-150 | HFE-300 |
|--|-------------------------|-------------------|-------------------|
| Viscosity, Saybolt Furol, at 122 °F (50 °C), (AASHTO T 59), SFS ^{1/} | 50 min. | 50 min. | 50 min. |
| Sieve Test, No. 20 (850 µm), retained on sieve, (AASHTO T 59), % | 0.10 max. | 0.10 max. | 0.10 max. |
| Storage Stability Test, 1 day, (AASHTO T 59), % | 1 max. | 1 max. | 1 max. |
| Coating Test (All Grades), (AASHTO T 59), 3 minutes | stone coated thoroughly | | |
| Distillation Test, (AASHTO T 59): Residue from distillation test to 500 °F (260 °C), % Oil distillate by volume, % | 65 min. 7 max. | 65 min. 7 max. | 65 min. 7 max. |
| Characteristics of residue from distillation test to 500 °F (260 °C): Penetration at 77 °F (25 °C), (AASHTO T 49), 100 g, 5 sec, dmm | 90-150 | 150-300 | 300 min. |
| Float Test at 140 °F (60 °C), (AASHTO T 50), sec. | 1200 min. | 1200 min. | 1200 min. |

1/ The emulsion shall be pumpable.

(d) Penetrating Emulsified Prime. Penetrating Emulsified Prime (PEP) shall be according to AASHTO T 59, except as follows.

| Test | Result |
|--|-----------|
| Viscosity, Saybolt Furol, at 77 °F (25 °C), SFS | 75 max. |
| Sieve test, retained on No. 20 (850 µm) sieve, % | 0.10 max. |
| Distillation to 500 °F (260 °C) residue, % | 38 min. |
| Oil distillate by volume, % | 4 max. |

The PEP shall be tested according to the current Bureau of Materials Illinois Laboratory Test Procedure (ILTP), "Sand Penetration Test of Penetrating Emulsified Prime (PEP)". The time of penetration shall be equal to or less than that of MC-30. The depth of penetration shall be equal to or greater than that of MC-30.

(e) Delete this subparagraph.

- (f) Polymer Modified Emulsified Asphalt. Polymer modified emulsified asphalts, e.g. SS-1hP, CSS-1hP, CRS-2P (formerly CRSP), CQS-1hP (formerly CSS-1h Latex Modified) and HFRS-2P (formerly HFP) shall be according to AASHTO M 316, except as follows.
- (1) The cement mixing test will be waived when the polymer modified emulsion is being used as a tack coat.
 - (2) CQS-1hP (formerly CSS-1h Latex Modified) emulsion for micro-surfacing treatments shall use latex as the modifier.
 - (3) Upon examination of the storage stability test cylinder after standing undisturbed for 24 hours, the surface shall show minimal to no white, milky colored substance and shall be a homogenous brown color throughout.
 - (4) The distillation for all polymer modified emulsions shall be performed according to AASHTO T 59, except the temperature shall be 374 ± 9 °F (190 ± 5 °C) to be held for a period of 15 minutes and measured using an ASTM 16F (16C) thermometer.
 - (5) The specified temperature for the Elastic Recovery test for all polymer modified emulsions shall be 50.0 ± 1.0 °F (10.0 ± 0.5 °C).
 - (6) The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent.
- (g) Non-Tracking Emulsified Asphalt. Non-tracking emulsified asphalt NTEA (formerly SS-1vh) shall be according to the following.

| Test | Requirement |
|---|---------------|
| Saybolt Viscosity at 77 °F (25 °C), (AASHTO T 59), SFS | 20-100 |
| Storage Stability Test, 24 hr, (AASHTO T 59), % | 1 max. |
| Residue by Distillation, 500 ± 10 °F (260 ± 5 °C), or Residue by Evaporation, 325 ± 5 °F (163 ± 3 °C), (AASHTO T 59), % | 50 min. |
| Sieve Test, No. 20 (850 µm), (AASHTO T 59), % | 0.3 max. |
| Tests on Residue from Evaporation | |
| Penetration at 77 °F (25 °C), 100 g, 5 sec, (AASHTO T 49), dmm | 40 max. |
| Softening Point, (AASHTO T 53), °F (°C) | 135 (57) min. |
| Ash Content, (AASHTO T 111), % ^{1/} | 1 max. |

1/ The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent

The different grades are, in general, used for the following.

| Grade | Use |
|---|---|
| SS-1, SS-1h, RS-1, RS-2, CSS-1, CRS-1, CRS-2, CSS-1h, HFE-90, SS-1hP, CSS-1hP, NTEA (formerly SS-1vh) | Tack Coat |
| PEP | Prime Coat |
| RS-2, HFE-90, HFE-150, HFE-300, CRS-2P (formerly CRSP), HFRS-2P (formerly HFP), CRS-2, HFRS-2 | Bituminous Surface Treatment |
| CQS-1hP (formerly CSS-1h Latex Modified) | Micro-Surfacing Slurry Sealing Cape Seal” |

ENGINEER’S FIELD OFFICE AND LABORATORY (BDE)

Effective: January 1, 2020

Revise the last sentence of the first paragraph of Article 670.01 of the Standard Specifications to read:

“The building shall remain available for use until released by the Engineer.”

Revise the fifth and sixth paragraphs of Article 670.02 of the Standard Specifications to read:

“Sanitary facilities shall include hot and cold potable running water, lavatory and toilet as an integral part of the office where available. A portable toilet, if necessary, shall be serviced once per week. Solid waste disposal consisting of two waste baskets and an outside trash container of sufficient size to accommodate a weekly provided pick-up service.

In addition, the following furniture and equipment meeting the approval of the Engineer shall be furnished.”

Revise Article 670.02(b) through 670.02(r) of the Standard Specifications to read:

- “(b) One desk with minimum working surface of 48 x 72 in. (1.2 x 1.8 m).
- (c) Two free standing four drawer legal size file cabinets with lock and an underwriters' laboratories insulated file device 350 degrees one hour rating.
- (d) Table(s) and chairs capable of seating 10 people.
- (e) One equipment cabinet of minimum inside dimension of 44 in. (1100 mm) high x 24 in. (600 mm) wide x 30 in. (750 mm) deep with lock. The walls shall be of steel with a 3/32 in. (2 mm) minimum thickness with concealed hinges and enclosed lock constructed in such a manner as to prevent entry by force. The cabinet assembly shall be permanently attached to a structural element of the field office in a manner to prevent theft of the entire cabinet.
- (f) One refrigerator with a minimum size of 14 cu ft (0.40 cu m) with a freezer unit.
- (g) One electric desk type tape printing calculator.
- (h) A minimum of two communication paths. The configuration shall include:
 - (1) Internet Connection. An internet service connection with a wireless router capable of providing service to a minimum of five devices. The internet service shall be for unlimited data with a minimum internet data download speed of 25 megabits per second. For areas where this minimum download speed is not available, the maximum speed available for the area shall be provided.
 - (2) Telephone Line. One landline touch tone telephone with voicemail or answering machine. The telephone shall have an unpublished number.

- (i) One plain paper wireless color printer capable of reproducing prints up to 11 x 17 in. (280 x 432 mm) with an automatic feed tray. Separate paper trays for letter size and 11 x 17 in. (280 x 432 mm) paper shall be provided. The wireless printer shall also be equipped to copy in color and scan documents.
- (j) One electric water cooler dispenser.
- (k) One first-aid cabinet fully equipped.
- (l) One microwave oven (minimum 700 watt) with a turntable and 1 cu ft (0.03 cu m) minimum capacity.
- (m) One fire-proof safe, 0.5 cu ft (0.01 cu m) minimum capacity.
- (n) One electric paper shredder.
- (o) One post mounted rain gauge, located on the project site for each 5 miles (8 km) of project length.”

Revise the last sentence of the first paragraph of Articles 670.04 and 670.05 of the Standard Specifications to read:

“Doors and windows shall be equipped with locks.”

Revise Article 670.04(c) through 670.04(n) of the Standard Specifications to read:

- “(c) Two folding chairs.
- (d) One equipment cabinet of minimum inside dimension of 44 in. (1100 mm) high x 24 in. (600 mm) wide x 30 in. (750 mm) deep with lock. The walls shall be of steel with a 3/32 in. (2 mm) minimum thickness with concealed hinges and enclosed lock constructed to prevent entry by force. The cabinet assembly shall be permanently attached to a structural element of the field office to prevent theft of the entire cabinet.
- (e) A minimum of two communication paths. The configuration shall include:
 - (1) Internet Connection. An internet service connection with a wireless router capable of providing service to a minimum of five devices. The internet service shall be for unlimited data with a minimum internet download speed of 25 megabits per second. For areas where this minimum download speed is not available, the maximum speed available for the area shall be provided.
 - (2) Telephone Line. One land line touch tone telephone with voicemail or answering machine. The telephone shall have an unpublished number.
- (f) One electric desk type tape printing calculator.
- (g) One first-aid cabinet fully equipped.
- (h) One plain paper wireless color printer capable of reproducing prints up to 11 x 17 in. (280 x 432 mm) with an automatic feed tray. Separate paper trays for letter size and 11 x 17 in. (280 x 432 mm) paper shall be provided. The wireless printer shall also be equipped to copy in color and scan documents.
- (i) A portable toilet meeting Federal, State, and local health department requirements shall be provided, maintained clean and in good working condition, and shall be stocked with lavatory and sanitary supplies at all times. The portable toilet shall be serviced once per week.
- (j) One electric water cooler dispenser.
- (k) One refrigerator with a minimum size of 14 cu ft (0.45 cu m) with a freezer unit.
- (l) One microwave oven (minimum 700 watt) with a turntable and 1 cu ft (0.03 cu m) minimum capacity.”

Revise Article 670.05(f) of the Standard Specifications to read:

“(f) One landline touch tone telephone with voicemail or an answering machine. The telephone shall have an unpublished number.”

Delete the last sentence of the second paragraph of Article 670.06 of the Standard Specifications.

Revise the fifth sentence of the first paragraph of Article 670.07 of the Supplemental Specifications to read:

“This price shall include all utility costs and shall reflect the salvage value of the building or buildings, equipment, and furniture which remain the property of the Contractor after release by the Engineer, except the Department will pay that portion of the monthly long distance and monthly local telephone, when combined, exceed \$250.”

EQUIPMENT PARKING AND STORAGE (BDE)

Effective: November 1, 2017

Replace the first paragraph of Article 701.11 of the Standard Specifications with the following.

“701.11 Equipment Parking and Storage. During working hours, all vehicles and/or nonoperating equipment which are parked, two hours or less, shall be parked at least 8 ft (2.5 m) from the open traffic lane. For other periods of time during working and for all nonworking hours, all vehicles, materials, and equipment shall be parked or stored as follows.

- (a) When the project has adequate right-of-way, vehicles, materials, and equipment shall be located a minimum of 30 ft (9 m) from the pavement.
- (b) When adequate right-of-way does not exist, vehicles, materials, and equipment shall be located a minimum of 15 ft (4.5 m) from the edge of any pavement open to traffic.
- (c) Behind temporary concrete barrier, vehicles, materials, and equipment shall be located a minimum of 24 in. (600 mm) behind free standing barrier or a minimum of 6 in. (150 mm) behind barrier that is either pinned or restrained according to Article 704.04. The 24 in. or 6 in. measurement shall be from the base of the non-traffic side of the barrier.
- (d) Behind other man-made or natural barriers meeting the approval of the Engineer.”

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:

$$\text{Percent Difference} = \{(FPI_L - FPI_P) \div FPI_L\} \times 100$$

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 – BINDER AND SURFACE COURSE (BDE)

Effective: July 2, 2019

Revised: November 1, 2019

Description. This work shall consist of constructing a hot-mix asphalt (HMA) binder and/or surface course on a prepared base. Work shall be according to Sections 406 and 1030 of the Standard Specifications, except as modified herein.

Materials. Add the following after the second paragraph of Article 1003.03(c):

“For mixture IL-9.5FG, at least 67 percent of the required fine aggregate fraction shall consist of either stone sand, slag sand, steel slag sand, or combinations thereof meeting FA 20 gradation.”

Revise Article 1004.03(c) to read:

“(c) Gradation. The coarse aggregate gradations shall be as listed in the following table.

| Use | Size/Application | Gradation No. |
|-----------------------|------------------------|------------------------------|
| Class A-1, A-2, & A-3 | 3/8 in. (10 mm) Seal | CA 16 or CA 20 |
| Class A-1 | 1/2 in. (13 mm) Seal | CA 15 |
| Class A-2 & A-3 | Cover Coat | CA 14 |
| HMA High ESAL | IL-19.0 | CA 11 ^{1/} |
| | SMA 12.5 ^{2/} | CA 13, CA 14, or CA 16 |
| | SMA 9.5 ^{2/} | CA 13 or CA 16 ^{3/} |
| | IL-9.5 | CA 16 |
| | IL-9.5FG | CA 16 |
| HMA Low ESAL | IL-19.0L | CA 11 ^{1/} |
| | IL-9.5L | CA 16 |

1/ CA 16 or CA 13 may be blended with the CA 11.

2/ The coarse aggregates used shall be capable of being combined with stone sand, slag sand, or steel slag sand meeting the FA/FM 20 gradation and mineral filler to meet the approved mix design and the mix requirements noted herein.

3/ The specified coarse aggregate gradations may be blended.”

HMA Nomenclature. Revise the “High ESAL” portion of the table in Article 1030.01 to read:

| | | |
|------------|-----------------|---|
| “High ESAL | Binder Courses | IL-19.0, IL-9.5, IL-9.5FG, IL-4.75, SMA 12.5, SMA 9.5 |
| | Surface Courses | IL-9.5, IL-9.5FG, SMA 12.5, SMA 9.5” |

Mixture Design. Revise the table in Article 1030.04(a)(1) and add SMA 9.5 and IL-9.5FG mixture compositions as follows:

| “HIGH ESAL, MIXTURE COMPOSITION (% PASSING) ^{1/} | | | | | | |
|---|------------------------|--------------------|-----------------------|--------------------|----------|------|
| Sieve Size | SMA 12.5 ^{5/} | | SMA 9.5 ^{5/} | | IL-9.5FG | |
| | min. | max. | min. | max. | min. | max. |
| 1 in. (25 mm) | | | | | | |
| 3/4 in. (19 mm) | | 100 | | 100 | | |
| 1/2 in. (12.5 mm) | 90 | 99 | 95 | 100 | | 100 |
| 3/8 in. (9.5 mm) | 50 | 85 | 70 | 95 | 90 | 100 |
| #4 4.75 mm) | 20 | 40 | 30 | 50 | 60 | 75 |
| #8 (2.36 mm) | 16 | 24 ^{4/} | 20 | 30 | 45 | 60 |
| #16 (1.18 mm) | | | | 21 | 25 | 40 |
| #30 (600 μm) | | | | 18 | 15 | 30 |
| #50 (300 μm) | | | | 15 | 8 | 15 |
| #100 (150 μm) | | | | | 6 | 10 |
| #200 (75 μm) | 8.0 | 11.0 ^{3/} | 8.0 | 11.0 ^{3/} | 4.0 | 6.5 |
| #635 (20 μm) | | ≤ 3.0 | | ≤ 3.0 | | |
| Ratio of Dust/Asphalt Binder | | | | | | 1.0 |

- 1/ Based on percent of total aggregate weight.
- 2/ The mixture composition shall not exceed 44 percent passing the #8 (2.36 mm) sieve for surface courses with Ndesign = 90.
- 3/ Additional minus No. 200 (0.075 mm) material required by the mix design shall be mineral filler, unless otherwise approved by the Engineer.
- 4/ When establishing the adjusted job mix formula (AJMF) the percent passing the #8 (2.36 mm) sieve shall not be adjusted above 24 percent.
- 5/ When the bulk specific gravity (Gsb) of the component aggregates vary by more than 0.2, the blend gradations shall be based on volumetric percentage.”

Revise the table in Article 1030.04(b)(1) to read:

| “VOLUMETRIC REQUIREMENTS, High ESAL | | | | |
|-------------------------------------|---|--------------------|-----------------------|---|
| Ndesign | Voids in the Mineral Aggregate (VMA), % minimum | | | Voids Filled with Asphalt Binder (VFA), % |
| | IL-19.0 | IL-9.5 IL-9.5FG | IL-4.75 ^{1/} | |
| 50 | 13.5 | 15.0 | 18.5 | 65 - 78 ^{2/} |
| 70 | | | 65 - 75 ^{3/} | |
| 90 | | | | |

- 1/ Maximum draindown for IL-4.75 shall be 0.3 percent.
- 2/ VFA for IL-4.75 shall be 76-83 percent.
- 3/ VFA for IL-9.5FG shall be 65-78 percent.”

Revise the table in Article 1030.04(b)(3) to read:

| “VOLUMETRIC REQUIREMENTS, SMA 12.5 ^{1/} and SMA 9.5 ^{1/} | | | | |
|--|---------|----------------------------|--|------------------------------------|
| ESALs (million) | Ndesign | Design Air Voids Target, % | Voids in the Mineral Aggregate (VMA), % min. | Voids Filled with Asphalt (VFA), % |
| ≤ 10 | 50 | 4.0 | 16.0 | 75 - 80 |
| > 10 | 80 | 4.0 | 17.0 | 75 - 80 |

- 1/ Maximum draindown shall be 0.3 percent.”

Quality Control/Quality Assurance (QC/QA). Revise the third paragraph of Article 1030.05(d)(3) to read:

“If the Contractor and Engineer agree the nuclear density test method is not appropriate for the mixture, cores shall be taken at random locations determined according to the QC/QA document "Determination of Random Density Test Site Locations". Core densities shall be determined using the Illinois Modified AASHTO T 166 or T 275 procedure.”

Add the following paragraphs to the end of Article 1030.05(d)(3):

“Longitudinal joint density testing shall be performed at each random density test location. Longitudinal joint testing shall be located at a distance equal to the lift thickness or a minimum of 4 in. (100 mm), from each pavement edge (i.e. for a 5 in. (125 mm) lift the near edge of the density gauge or core barrel shall be within 5 in. (125 mm) from the edge of pavement). Longitudinal joint density testing shall be performed using either a correlated nuclear gauge or cores.

- a. Confined Edge. Each confined edge density shall be represented by a one-minute nuclear density reading or a core density and shall be included in the average of density readings or core densities taken across the mat which represents the Individual Test.
- b. Unconfined Edge. Each unconfined edge joint density shall be represented by an average of three one-minute density readings or a single core density at the given density test location and shall meet the density requirements specified herein. The three one-minute readings shall be spaced 10 ft (3 m) apart longitudinally along the unconfined pavement edge and centered at the random density test location.

When a longitudinal joint sealant (LJS) is applied, longitudinal joint density testing will not be required on the joint(s) sealed.”

Revise the second table in Article 1030.05(d)(4) and its notes to read:

| "DENSITY CONTROL LIMITS | | | |
|-------------------------|--------------------|---|--|
| Mixture Composition | Parameter | Individual Test (includes confined edges) | Unconfined Edge Joint Density, minimum |
| IL-4.75 | Ndesign = 50 | 93.0 – 97.4 % ^{1/} | 91.0% |
| IL-9.5FG | Ndesign = 50 - 90 | 93.0 – 97.4 % | 91.0% |
| IL-9.5 | Ndesign = 90 | 92.0 – 96.0 % | 90.0% |
| IL-9.5, IL-9.5L, | Ndesign < 90 | 92.5 – 97.4 % | 90.0% |
| IL-19.0 | Ndesign = 90 | 93.0 – 96.0 % | 90.0% |
| IL-19.0, IL-19.0L | Ndesign < 90 | 93.0 ^{2/} – 97.4 % | 90.0% |
| SMA | Ndesign = 50 or 80 | 93.5 – 97.4 % | 91.0% |

1/ Density shall be determined by cores or by correlated, approved thin lift nuclear gauge.

2/ 92.0 % when placed as first lift on an unimproved subgrade."

Equipment. Add the following to Article 1101.01 of the Standard Specifications:

"(h) Oscillatory Roller. The oscillatory roller shall be self-propelled and provide a smooth operation when starting, stopping, or reversing directions. The oscillatory roller shall be able to operate in a mode that will provide tangential impact force with or without vertical impact force by using at least one drum. The oscillatory roller shall be equipped with water tanks and sprinkling devices, or other approved methods, which shall be used to wet the drums to prevent material pickup. The drum(s) amplitude and frequency of the tangential and vertical impact force shall be approximately the same in each direction and meet the following requirements:

- (1) The minimum diameter of the drum(s) shall be 42 in. (1070 mm);
- (2) The minimum length of the drum(s) shall be 57 in. (1480 mm);
- (3) The minimum unit static force on the drum(s) shall be 125 lb/in. (22 N/m); and
- (4) The minimum force on the oscillatory drum shall be 18,000 lb (80 kN)."

CONSTRUCTION REQUIREMENTS

Add the following to Article 406.03 of the Standard Specifications:

“(j) Oscillatory Roller 1101.01”

Revise the third paragraph of Article 406.05(a) to read:

“All depressions of 1 in. (25 mm) or more in the surface of the existing pavement shall be filled with binder. At locations where heavy disintegration and deep spalling exists, the area shall be cleaned of all loose and unsound material, tacked, and filled with binder (hand method).”

Revise Article 406.05(c) to read.

“(c) Binder (Hand Method). Binder placed other than with a finishing machine will be designated as binder (hand method) and shall be compacted with a roller to the satisfaction of the Engineer. Hand tamping will be permitted when approved by the Engineer.”

Revise the special conditions for mixture IL-4.75 in Article 406.06(b)(2)e. to read:

“e. The mixture shall be overlaid within 5 days of being placed.”

Revise Article 406.06(d) to read:

“(d) Lift Thickness. The minimum compacted lift thickness for HMA binder and surface courses shall be as follows.

| MINIMUM COMPACTED LIFT THICKNESS | |
|----------------------------------|--|
| Mixture Composition | Thickness, in. (mm) |
| IL-4.75 | 3/4 (19) - over HMA surfaces ^{1/} 1 (25) - over PCC surfaces ^{1/} |
| IL-9.5FG | 1 1/4 (32) |
| IL-9.5, IL-9.5L | 1 1/2 (38) |
| SMA 9.5 | 1 1/2 (38) |
| SMA 12.5 | 2 (51) |
| IL-19.0, IL-19.0L | 2 1/4 (57) |

1/ The maximum compacted lift thickness for mixture IL-4.75 shall be 1 1/4 in. (32 mm).”

Revise Table 1 and Note 3/ of Table 1 in Article 406.07(a) of the Standard Specifications to read:

| "TABLE 1 - MINIMUM ROLLER REQUIREMENTS FOR HMA | | | | |
|--|---|---|---|--|
| | Breakdown Roller (one of the following) | Intermediate Roller | Final Roller (one or more of the following) | Density Requirement |
| Binder and Surface ^{1/} | V _D , P ^{3/} , T _B , 3W, O _T , O _B | P ^{3/} , O _T , O _B | V _S , T _B , T _F , O _T | As specified in Articles: 1030.05(d)(3), (d)(4), and (d)(7). |
| IL-4.75 and SMA ^{4/ 5/} | T _B , 3W, O _T | - - | T _F , 3W, O _T | |
| Bridge Decks ^{2/} | T _B | - - | T _F | As specified in Articles 582.05 and 582.06. |

3/ A vibratory roller (V_D) or oscillatory roller (O_T or O_B) may be used in lieu of the pneumatic-tired roller on mixtures containing polymer modified asphalt binder.”

Add the following to EQUIPMENT DEFINITION in Article 406.07(a) contained in the Errata of the Supplemental Specifications:

O_T - Oscillatory roller, tangential impact mode. Maximum speed is 3.0 mph (4.8 km/h) or 264 ft/min (80 m/min).

O_B - Oscillatory roller, tangential and vertical impact mode, operated at a speed to produce not less than 10 vertical impacts/ft (30 impacts/m).”

Basis of Payment. Replace the second through the fifth paragraphs of Article 406.14 with the following:

“HMA binder and surface courses will be paid for at the contract unit price per ton (metric ton) for MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS; HOT-MIX ASPHALT BINDER COURSE (HAND METHOD), of the Ndesign specified; HOT-MIX ASPHALT BINDER COURSE, of the mixture composition and Ndesign specified; HOT-MIX ASPHALT SURFACE COURSE, of the mixture composition, friction aggregate, and Ndesign specified; POLYMERIZED HOT-MIX ASPHALT BINDER COURSE (HAND METHOD), of the Ndesign specified; POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, of the mixture composition and Ndesign specified; POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, of the mixture composition, friction aggregate, and Ndesign specified; POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, STONE MATRIX ASPHALT, of the mixture composition and Ndesign specified; POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, of the mixture composition, friction aggregate, and Ndesign specified.”

HOT-MIX ASPHALT – LONGITUDINAL JOINT SEALANT (BDE)

Effective: August 1, 2018

Revised: November 1, 2019

Add the following to Article 406.02 of the Standard Specifications.

“(d) Longitudinal Joint Sealant (LJS)1032”

Add the following to Article 406.03 of the Standard Specifications.

- “(k) Longitudinal Joint Sealant (LJS) Pressure Distributor (Note 2)
- (l) Longitudinal Joint Sealant (LJS) Melter Kettle (Note 3)

Note 2. When a pressure distributor is used to apply the LJS, the distributor shall be equipped with a heating and recirculating system along with a functioning auger agitating system or vertical shaft mixer in the hauling tank to prevent localized overheating. The distributor shall be equipped with a guide or laser system to aid in proper placement of the LJS application.

Note 3. When a melter kettle is used to transport and apply the LJS, the melter kettle shall be an oil jacketed double-boiler with agitating and recirculating systems. Material from the kettle may be dispensed through a pressure feed wand with an applicator shoe or through a pressure feed wand into a hand-operated thermal push cart.”

Revise Article 406.06(g)(2) of the Standard Specifications to read:

“(2) Longitudinal Joints. Unless prohibited by stage construction, any HMA lift shall be complete before construction of the subsequent lift. The longitudinal joint in all lifts shall be at the centerline of the pavement if the roadway comprises two lanes in width, or at lane width if the roadway is more than two lanes in width.

When stage construction prohibits the total completion of a particular lift, the longitudinal joint in one lift shall be offset from the longitudinal joint in the preceding lift by not less than 3 in. (75 mm). The longitudinal joint in the surface course shall be at the centerline of the pavement if the roadway comprises two lanes in width, or at lane width if the roadway is more than two lanes in width.

A notched wedge longitudinal joint shall be used between successive passes of HMA binder course that has a difference in elevation of greater than 2 in. (50 mm) between lanes on pavement that is open to traffic.

The notched wedge longitudinal joint shall consist of a 1 to 1 1/2 in. (25 to 38 mm) vertical notch at the lane line, a 9 to 12 in. (230 to 300 mm) wide uniform taper sloped toward and extending into the open lane, and a second 1 to 1 1/2 in. (25 to 38 mm) vertical notch at the outside edge.

The notched wedge longitudinal joint shall be formed by the strike off device on the paver. The wedge shall then be compacted by the joint roller.

Tack coat shall be applied to the entire surface of the notched wedge joint immediately prior to placing the adjacent lift of binder. The material shall be uniformly applied at a rate of 0.05 to 0.1 gal/sq yd (0.2 to 0.5 L/sq m).

When the use of longitudinal joint sealant (LJS) is specified, the surface to which the LJS is applied shall be thoroughly cleaned and dry. The LJS may be placed before or after the tack coat. When placed after the tack coat, the tack shall be fully cured prior to placement of the LJS.

The LJS shall be applied in a single pass with a pressure distributor, melter kettle, or hand applied from a roll. At the time of installation, the pavement surface temperature and the ambient temperature shall be a minimum of 40 °F (4 °C) and rising.

The LJS shall be applied at a width of 18 in. (450 mm) ± 1 1/2 in. (38 mm) and centered ± 2 in. (± 50 mm) under the joint of the next HMA lift to be constructed. If the LJS flows more than 2 in. (50 mm) from the initial placement width, LJS placement shall stop and remedial action shall be taken.

When starting another run of LJS placement, suitable release paper shall be placed over the previous application of LJS to prevent doubling up of thickness of LJS.

The application rate of LJS shall be according to the following.

| LJS Application Table | | | |
|-------------------------------|---|---|------------------------------|
| Overlay Thickness in. (mm) | Coarse Graded Application Rate ^{1/} (IL-19.0, IL-19.0L, IL-9.5, IL-9.5L, IL-4.75) lb/ft (kg/m) | Fine Graded Application Rate ^{1/} lb/ft (kg/m) | SMA Mixtures ^{1/2/} |
| 3/4 (19) | 0.88 (1.31) | | |
| 1 (25) | 1.15 (1.71) | | |
| 1 1/4 (32) | 1.31 (1.95) | 0.88 (1.31) | |
| 1 1/2 (38) | 1.47 (2.19) | 0.95 (1.42) | 1.26 (1.88) |
| 1 3/4 (44) | 1.63 (2.43) | 1.03 (1.54) | 1.38 (2.06) |
| 2 (50) | 1.80 (2.68) | 1.11 (1.65) | 1.51 (2.25) |
| ≥ 2 1/4 (60) | 1.96 (2.92) | | |

- 1/ The application rate has a surface demand for liquid included within it. 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.
- 2/ If the joint is between SMA and either Coarse Graded or Fine Graded, the SMA rate shall be used.

The Contractor shall furnish to the Engineer a bill of lading for each tanker supplying material to the project. The application rate of LJS shall be verified within the first 1000 ft (300 m) of the day's placement and every 12,000 ft (3600 m) thereafter. A suitable paper or pan shall be placed at a random location in the path of the LJS. After application of the LJS, the paper or pan shall be picked up, weighed, and the application rate calculated. The tolerance between the application rate shown in the LJS Application Table and the calculated rate shall be ± 10 percent. The LJS shall be replaced in the area where the sample was taken.

A 1 qt (1 L) sample shall be taken from the pressure distributor or melting kettle at the jobsite once for each contract and sent to the Central Bureau of Materials.

The LJS shall be suitable for construction traffic to drive on without pickup or tracking of the LJS within 30 minutes of placement. If pickup or tracking occurs, LJS placement shall stop and damaged areas shall be repaired.

Prior to paving, the Contractor shall ensure the paver end plate and grade control device is adequately raised above the finished height of the LJS.

The LJS shall not flush to the final surface of the HMA pavement.”

Add the following paragraph after the second paragraph of Article 406.13(b) of the Standard Specifications.

“Application of longitudinal joint sealant (LJS) will be measured for payment in place in feet (meters).”

Add the following paragraph after the first paragraph of Article 406.14 of the Standard Specifications.

“Longitudinal joint sealant will be paid for at the contract unit price per foot (meter) for LONGITUDINAL JOINT SEALANT.”

Add the following to Section 1032 of the Standard Specifications.

“**1032.12 Longitudinal Joint Sealant (LJS).** Longitudinal joint sealant (LJS) will be accepted according to the current Bureau of Materials and Physical Research Policy Memorandum, “Performance Graded Asphalt Binder Acceptance Procedure” with the following exceptions: Article 3.1.9 and 3.4.1.4 of the policy memorandum will be excluded. The bituminous material used for the LJS shall be according to the following table. Elastomers shall be added to a base asphalt and shall be either a styrene-butadiene diblock or triblock copolymer without oil extension, or a styrene-butadiene rubber. Air blown asphalt, acid modification, or other modifiers will not be allowed. LJS in the form of pre-formed rollout banding may also be used.

| Test | Test Requirement | Test Method |
|--|------------------------|--|
| Dynamic shear @ 88°C (unaged), G*/sin δ, kPa | 1.00 min. | AASHTO T 315 |
| Creep stiffness @ -18°C (unaged), Stiffness (S), MPa m-value | 300 max. 0.300 min. | AASHTO T 313 |
| Ash, % | 1.0 – 4.0 | AASHTO T 111 |
| Elastic Recovery, 100 mm elongation, cut immediately, 25°C, % | 70 min. | ASTM D 6084 (Procedure A) |
| Separation of Polymer, Difference in °C of the softening point (ring and ball) | 3 max. | ITP Separation of Polymer from Asphalt Binder” |

HOT-MIX ASPHALT – MIXTURE DESIGN VERIFICATION AND PRODUCTION (MODIFIED FOR I-FIT PROJECTS) (BDE)

Effective: January 1, 2019
 Revised: November 1, 2019

Description. This special provision requires the Illinois Flexibility Index Test (I-FIT) be used during mixture design verification and production testing for the various hot-mix asphalt (HMA) mixtures described herein.

Mixture Design. Add the following to the list of referenced standards in Article 1030.04 of the Standard Specifications:

“Illinois Modified AASHTO TP 124 Determining the Fracture Potential of Asphalt Mixtures Using the Illinois Flexibility Index Test (I-FIT)”

Revise Article 1030.04(d) of the Standard Specifications to read:

“(d) Verification Testing. Prepared samples of High ESAL mixture designs shall be submitted to the District laboratory for verification of the Hamburg Wheel, Tensile Strength, and I-FIT tests. Prepared samples of Low ESAL mix designs shall be submitted to the District laboratory for verification of the I-FIT test. The prepared Hamburg Wheel and I-FIT samples shall be a total of three-160 mm tall compacted gyratory bricks yielding test specimens with $7.0 \pm 1.0\%$ air voids. If a Contractor does not possess the equipment to prepare the 160 mm tall bricks, a total of six-115 mm tall compacted gyratory bricks yielding test specimens with $7.0 \pm 1.0\%$ air voids will be acceptable. The prepared Tensile Strength samples shall be a total of six-95 mm tall compacted gyratory bricks yielding test specimens with $7.0 \pm 1.0\%$ air voids.

If the mix fails the Department’s verification testing, the Contractor shall make necessary changes to the mix and provide passing Hamburg Wheel, Tensile Strength, and I-FIT test results from a private lab. The Department will verify the passing results.

All new and renewal mix designs shall meet the following requirements for verification testing.

(1) Hamburg Wheel Test Criteria. The maximum allowable rut depth shall be 0.5 in. (12.5 mm). The minimum number of wheel passes at the 0.5 in. (12.5 mm) rut depth criteria shall be based on the high temperature binder grade of the mix as specified in the mix requirements table of the plans.

| Illinois Modified AASHTO T 324 Requirements ^{1/} | |
|---|------------------|
| PG Grade | Number of Passes |
| PG 58-xx (or lower) | 5,000 |
| PG 64-xx | 7,500 |
| PG 70-xx | 15,000 |
| PG 76-xx (or higher) | 20,000 |

- 1/ When produced at temperatures of 275 ± 5 °F (135 ± 3 °C) or less, loose Warm Mix Asphalt shall be oven aged at 270 ± 5 °F (132 ± 3 °C) for two hours prior to gyratory compaction of Hamburg Wheel specimens.
- (2) Tensile Strength Criteria. Tensile strength testing shall be according to the Illinois Modified AASHTO T 283 procedure. The minimum allowable conditioned tensile strength shall be 60 psi (415 kPa) for non-polymer modified performance graded (PG) asphalt binder and 80 psi (550 kPa) for polymer modified PG asphalt binder. The maximum allowable unconditioned tensile strength shall be 200 psi (1380 kPa).
- (3) I-FIT Flexibility Index (FI) Criteria. The minimum allowable FI shall be as follows:

| Illinois Modified AASHTO TP 124 ^{1/} | |
|---|------------|
| Mixture | Minimum FI |
| HMA | 8.0 |
| SMA | 8.0 |

1/ Existing mix designs shall also meet the FI Criteria for verification testing.”

Start of HMA Production and Job Mix Formula (JMF) Adjustments. Revise Article 1030.06(a) of the Standard Specifications to read:

“(a) High ESAL Mixtures. A test strip will be required at the beginning of HMA production for each mixture according to the Manual of Test Procedures for Materials “Hot Mix Asphalt Test Strip Procedures”. A test strip will not be required for shoulder applications or HMA mixtures with a quantity less than 3000 tons (2750 metric tons); however, such mixtures shall still be sampled on the first day of production for the Hamburg Wheel and I-FIT testing.

Before start-up, target values shall be determined by applying gradation correction factors to the JMF when applicable. These correction factors shall be determined from previous experience. The target values, when approved by the Engineer, shall be used to control HMA production. Plant settings and control charts shall be set according to target values.

Before constructing the test strip, target values shall be determined by applying gradation correction factors to the JMF when applicable. After any JMF adjustment, the JMF shall become the Adjusted Job Mix Formula (AJMF). Upon completion of the first acceptable test strip, the JMF shall become the AJMF regardless of whether or not the JMF has been adjusted. If an adjustment/plant change is made, the Engineer may require a new test strip to be constructed. If the HMA placed during the initial test strip is determined to be unacceptable to remain in place by the Engineer, it shall be removed and replaced.

The limitations between the JMF and AJMF are as follows.

| Parameter | Adjustment |
|-------------------|-------------|
| 1/2 in. (12.5 mm) | ± 5.0 % |

| | |
|------------------------|---------|
| No. 4 (4.75 mm) | ± 4.0 % |
| No. 8 (2.36 mm) | ± 3.0 % |
| No. 30 (600 µm) | * |
| No. 200 (75 µm) | * |
| Asphalt Binder Content | ± 0.3 % |

* In no case shall the target for the amount passing be greater than the JMF.

Any adjustments outside the above limitations will require a new mix design.

Mixture sampled to represent the test strip shall include approximately 60 lb (27 kg) of additional material for the Department to conduct Hamburg Wheel testing and approximately 60 lb (27 kg) of additional material for the Department to conduct I-FIT testing. Within one working day after sampling, the Contractor shall deliver prepared samples to the District laboratory for verification testing. The prepared Hamburg Wheel and I-FIT samples shall be a total of three-160 mm tall compacted gyratory bricks yielding test specimens with $7.0 \pm 1.0\%$ air voids. If a Contractor does not possess the equipment to prepare the 160 mm tall bricks, a total of six-115 mm tall compacted gyratory bricks yielding test specimens with $7.0 \pm 1.0\%$ air voids will be acceptable.

Upon notification by the Engineer of a failing Hamburg Wheel and/or I-FIT test and prior to restarting production, the Contractor shall make necessary adjustments approved by the Engineer to the mixture production and submit another mixture sample for the Department to conduct I-FIT and Hamburg testing. All prior produced material may be paved out provided all other mixture criteria is being met. Upon consecutive failing Hamburg Wheel or consecutive failing I-FIT tests, no additional mixture shall be produced until the Engineer receives passing Hamburg Wheel or I-FIT test results.

The Department may conduct additional Hamburg Wheel or I-FIT testing on production material as determined by the Engineer.”

Add the following to the end of Article 1030.06(b) of the Standard Specifications:

“I-FIT testing will be performed for Low ESAL mixtures (excluding Class D patches, pavement patching and incidental HMA) during mixture production.

Upon notification by the Engineer of a failing I-FIT test and prior to restarting production, the Contractor shall make necessary adjustments approved by the Engineer to the mixture production and submit another mixture sample for the Department to conduct I-FIT. All prior produced material may be paved out provided all other mixture criteria is being met. Upon consecutive failing I-FIT tests, no additional mixture shall be produced until the Engineer receives passing I-FIT test results.

The Department may conduct additional I-FIT testing on production material as determined by the Engineer.”

LUMINAIRES, LED (BDE)

Effective: April 1, 2019

Description. This work shall consist of furnishing and installing light emitting diode (LED) luminaires. Work shall be according to Sections 801, 821, and 1067 of the Standard Specifications, except as modified herein.

Submittals. In addition to the requirements listed in Article 801.05(a), submittals for LED luminaires shall include the following.

- Completed manufacturer's luminaire ordering form with the full catalog number provided.
- Descriptive literature and catalog cuts for the luminaire, driver, and surge protective device.
- Lighting calculations generated with AGi32 software demonstrating compliance with the Luminaire Performance Table shown in the contract. These calculations shall be performed to the following criteria: photopic units shall be used; calculations shall be performed to an accuracy of two digits ($x.xx \text{ cd/m}^2$); point-by-point illuminance, luminance, and veiling luminance ratios demonstrating that the submitted luminaire meets the lighting metrics specified in the Luminaire Performance Table using IES RP-8 methods.

Upon request by the Engineer, submittals for LED Luminaires shall also include any or all the following.

- IES file associated with each submitted luminaire in IES LM-63 format.
- TM-21 calculator spreadsheet (XLSX or PDF format) and if available, TM-28 report for the specified luminaire or luminaire family. Both reports shall be for 50,000 hours at an ambient temperature of 77 °F (25 °C).
- LM-79 report with National Voluntary Laboratory Accreditation Program (NVLAP) current at the time of testing in PDF format inclusive of the following: isofootcandle diagram with half candela contour and maximum candela point; polar plots through maximum plane and maximum cone; coefficient of utilization graph; candela table; and spectral distribution graph and chromaticity diagram.
- LM-80 report for the specified LED package in PDF format and if available, LM-84 report for the specified luminaire or luminaire family in PDF format. Both reports shall be conducted by a laboratory with NVLAP certification current at the time of testing.
- In Situ Temperature Measurement Test (ISTMT) report for the specified luminaire or luminaire family in PDF format.

- Vibration test report in accordance with ANSI C136.31 in PDF format.
- ASTM B117/ASTM D1654 (neutral salt spray) test and sample evaluation report in PDF format.
- ASTM G154 (ASTM D523) gloss test report in PDF format.
- LED drive current, total luminaire input wattage, and current over the operating voltage range at an ambient temperature of 77 °F (25 °C).
- Power factor (pf) and total harmonic distortion (THD) at maximum and minimum supply and at nominal voltage for the dimmed states of 70%, 50%, and 30% full power.
- Ingress protection (IP) test reports, conducted according to ANSI C136.25 requirements, for the driver and optical assembly in PDF format.
- Installation, maintenance, and cleaning instructions in PDF format, including recommendations on periodic cleaning methods.
- Documentation in PDF format that the reporting laboratory is certified to perform the required tests.

Warranty. Replace the last sentence of Article 801.14(a) with the following.

“The warranty, including the maintained minimum luminance, for LED signal head modules, optically programmed LED signal head modules, and LED pedestrian signal head modules shall cover a minimum of 60 months from the date of delivery. The warranty for LED roadway luminaires, LED highmast luminaires, LED underpass luminaires, LED sign lighting luminaires, LED obstruction warning luminaires, and all of their components shall cover a minimum of ten years from the date of delivery.”

Roadway Luminaires. Revise Article 821.02(d) to read.

“(d) Light Source1067.06”

Revise the third paragraph of Article 821.03 to read.

“Each luminaire driver and/or driver arrangement shall be checked to assure compatibility with the project power supply. When the luminaire driver has a readily accessible electrical compartment, the driver shall be attached so as to be easily removed for maintenance.”

Replace the fifth paragraph of Article 821.03 with the following.

“No luminaire shall be installed before it is approved. When independent luminaire testing is required, full approval will not be given until complete test results which demonstrate compliance with the contract documents have been reviewed and accepted by the Engineer. Independent luminaire testing will be required, and shall be conducted, according to Article 1067.01(k)”.

Revise the last paragraph of Article 821.03 to read.

“When installing or adjusting the luminaire, care shall be taken to avoid touching the lenses or allowing contaminants to be deposited on any part of the optical assembly. Each lens shall be free of all dirt, smudges, etc. Should the luminaire require cleaning, the luminaire manufacturer’s cleaning instructions shall be strictly followed.”

Revise Article 821.08 to read.

“821.08 Basis of Payment. This work will be paid for at the contract unit price per each for LUMINAIRE, LED, ROADWAY, of the output designation specified; LUMINAIRE, LED, HIGHMAST, of the output designation specified; LUMINAIRE, LED, UNDERPASS, WALLMOUNT, of the output designation specified; LUMINAIRE, LED, UNDERPASS, SUSPENDED, of the output designation specified; LUMINAIRE, LED, SIGN LIGHTING, of the output designation specified.

When independent luminaire testing is required, the work will be paid for at the contract lump sum price for INDEPENDENT LUMINAIRE TESTING.”

Luminaires. Revise Articles 1067.01 through 1067.06 to read.

“1067.01 General. The luminaire shall be mechanically strong and easy to maintain. The size, weight, and shape of the luminaire shall be designed so as not to incite detrimental vibrations in its respective pole and it shall be compatible with the pole and arm. All electrical and electronic components of the luminaire shall comply with the requirements of Restriction of Hazardous Materials (RoHS) regulations. The luminaire shall be listed for wet locations by an NRTL and shall meet the requirements of UL 1598 and UL 8750.

- (a) Labels. An internal label shall be provided indicating the luminaire is suitable for wet locations and indicating the luminaire is an NRTL listed product to UL1598 and UL8750. The internal label shall also comply with the requirements of ANSI C136.22.

An external label consisting of two black characters on a white background with the dimensions of the label and the characters as specified in ANSI C136.15 for HPS luminaires. The first character shall be the alphabetical character representing the initial lumen output as specified in Table 1 of Article 1067.06(c). The second character shall be the numerical character representing the transverse light distribution type as specified in IES RP-8 (i.e. Types 1, 2, 3, 4, or 5).

- (b) Surge Protection. The luminaire shall comply the requirements of ANSI C136.2 for electrical transient immunity at the “Extreme” level (20KV/10KA) and shall be equipped with a surge protective device (SPD) that is UL1449 compliant with indicator light. An SPD failure shall open the circuit to protect the driver.
- (c) Optical Assembly. The optical assembly shall have an IP66 or higher rating in accordance with ANSI C136.25. The circuiting of the LED array shall be designed to minimize the effect of individual LED failures on the operation of other LEDs. All optical components shall be made of glass or a UV stabilized, non-yellowing material.
- (d) Housing. All external surfaces shall be cleaned in accordance with the manufacturer’s recommendations and be constructed in such a way as to discourage the accumulation of water, ice, and debris.

- (e) Driver. The driver shall be integral to the luminaire and shall be capable of receiving indefinite open and short circuit output conditions without damage.

The driver shall incorporate the use of thermal foldback circuitry to reduce output current under abnormal driver case temperature conditions and shall be rated for a lifetime of 100,000 hours at an ambient temperature exposure of 77 °F (25 °C) to the luminaire. If the driver has a thermal shut down feature, it shall not turn off the LEDs when operated at 104 °F (40 °C) or less.

The driver shall have an input voltage range of 120 to 277 volts ($\pm 10\%$) or 347 to 480 volts ($\pm 10\%$) according to the contract documents. When the driver is operating within the rated input voltage range and in an un-dimmed state, the power factor measurement shall be not less than 0.9 and the THD measurement shall be no greater than 20%.

The driver shall meet the requirements of the FCC Rules and Regulations, Title 47, Part 15 for Class A devices with regard to electromagnetic compatibility. This shall be confirmed through the testing methods in accordance with ANSI C63.4 for electromagnetic interference.

The driver shall be dimmable using the protocol listed in the Luminaire Performance Table shown in the contract.

- (f) Photometric Performance. The luminaire shall be IES LM-79 tested by a laboratory holding accreditation from the NVLAP for IES LM-79 testing procedures. At a minimum the LM-79 report shall include a backlight/uplight/glare (BUG) rating and a luminaire classification system (LCS) graph showing lumen values and percent lumens by zone as described in IES RP-8. The uplight of the BUG rating shall be U=0.

The luminaire shall also meet the requirements of the Luminaire Performance Table shown in the contract.

- (g) Finish. The luminaire shall have a baked acrylic enamel finish. The color of the finish shall be gray, bronze, or black to match the pole or tower on which the luminaire is mounted.

The finish shall have a rating of six or greater according to ASTM D1654, Section 8.0 Procedure A – Evaluation of Rust Creepage for Scribed Samples after exposure to 1000 hours of testing according to ASTM B117 for painted or finished surfaces under environmental exposure.

The luminaire finish shall have less than or equal to 30% reduction of gloss according to ASTM D523 after exposure of 500 hours to ASTM G154 Cycle 6 QUV® accelerated weathering testing.

- (h) Hardware. All hardware shall be stainless steel or of other corrosion resistant material approved by the Engineer.

Luminaires shall be designed to be easily serviced, having fasteners such as quarter-turn clips of the heavy spring-loaded type with large, deep straight slot heads, complete with a receptacle and shall be according to military specification MIL-f-5591.

All hardware shall be captive and not susceptible to falling from the luminaire during maintenance operations. This shall include lens/lens frame fasteners as well hardware holding the removable driver and electronic components in place.

- (i) Vibration Testing. All luminaires shall be subjected to and pass vibration testing requirements at "3G" minimum zero to peak acceleration in accordance with ANSI C136.31 requirements using the same luminaire. To be accepted, the luminaire housing, hardware, and each individual component shall pass this test with no noticeable damage and the luminaire must remain fully operational after testing.
- (j) Wiring. All wiring in the luminaire shall be rated for operation at 600V, 221 °F (105 °C).
- (k) Independent Luminaire Testing. When a contract has 30 or more luminaires of the same manufacturer's catalog number, that luminaire shall be independently tested to verify it will meet the contract requirements. The quantity of luminaires requiring testing shall be one luminaire for the first 30 plus one additional luminaire for each additional 50 luminaires of that catalog number. Testing is not required for temporary lighting luminaires.

Prior to testing the Contractor shall propose a properly accredited laboratory and a qualified independent witness, submitting their qualifications to the Engineer for approval. After approval, the Contractor shall coordinate the testing and pay all associated costs, including travel expenses, for the independent witness.

- (1) Independent Witness. The independent witness shall select from the project luminaires at the manufacturer's facility the luminaires for testing. In all cases, the selection of luminaires shall be a random selection from the entire completed lot of luminaires required for the contract. Selections from partial lots will not be allowed. The independent witness shall mark each sample luminaire's shipping carton with the IDOT contract number and a unique sample identifier.

At the time of random selection, the independent witness shall inspect the luminaire(s) for compliance with all physical, mechanical, and labeling requirements for luminaires according to Sections 821 and 1067. If deficiencies are found during the physical inspection, the Contractor shall have all luminaires of that manufacturer's catalog number inspected for the identified deficiencies and shall correct the problem(s) where found. Random luminaire selection and physical inspection must then be repeated. When the physical inspection is successfully completed, the independent witness shall mark the project number and sample identifier on the interior housing and driver of the luminaires and have them shipped to the laboratory.

The independent witness shall be present when testing is approved to be performed by the luminaire manufacturer. If the tests are performed by a laboratory independent of the luminaire manufacturer, distributor, and Contractor, the independent witness need not be present during the testing.

- (2) Laboratory Testing. Luminaires shall be tested at an NVLAP accredited laboratory approved for each of the required tests. The testing shall include photometric, colorimetric, and electrical testing according to IES LM-79. Colorimetric values shall be determined from total spectral radiant flux measurements using a spectroradiometer. Photometric testing shall be according to IES recommendations and as a minimum, shall yield an isofootcandle chart, with max candela point and half candela trace indicated, an isocandela diagram, maximum plane and maximum cone plots of candela, a candlepower table (house and street side), a coefficient of utilization chart, a luminous flux distribution table, BUG rating report, and complete calculations based on specified requirements and test results.

All testing shall cover the full spherical light output at a maximum of 5 degree intervals at the vertical angles. The vertical angles shall run from 0 to 180 degrees. There shall be a minimum of 40 lateral test planes listed in Fig. 1 of IES LM-31 plus the two planes containing the maximum candela on the left and right sides of the luminaire axis. Before testing, the luminaire when mounted on the goniometer shall be scanned for vertical and horizontal angles of maximum candela and these planes included in the test. The luminaire shall be checked for a bi-symmetric light distribution. Individual tests must be conducted for each hemisphere, quadrant, and left/right sides.

The results for each photometric and colorimetric test performed shall be presented in a standard IES LM-79 report that includes the contract number, sample identifier, and the outputs listed above. The calculated results for each sample luminaire shall meet or exceed the contract specified levels in the luminaire performance table(s). The laboratory shall mark its test identification number on the interior of each sample luminaire.

Electrical testing shall be in according to IES LM-79 as well as NEMA and ANSI standards. The report shall list luminaire characteristics including input amperes, watts, power factor, total harmonic distortion, and LED driver current for full and partial power.

- (3) Summary Test Report. The summary test report shall consist of a narrative documenting the test process, highlight any deficiencies and corrective actions, and clearly state which luminaires have met or exceeded the test requirements and may be released for delivery to the jobsite. Photographs shall also be used as applicable to document luminaire deficiencies and shall be included in the test report. The summary test report shall include the Luminaire Physical Inspection Checklist (form BDE 5650), photometric and electrical test reports, and point-by-point photometric calculations performed in AGi32 sorted by luminaire manufacturers catalog number. All test reports shall be certified by the independent test laboratory's authorized representative or the independent witness, as applicable, by a dated signature on the first page of each report. The summary test reports shall be delivered to the Engineer and the Contractor as an electronic submittal. Hard copy reports shall be delivered to the Engineer for record retention.
- (4) Approval of Independent Testing Results. Should any of the tested luminaires fail to satisfy the specifications and perform according to approved submittal information, all luminaires of that manufacturers catalog number shall be deemed unacceptable and shall be replaced by alternate equipment meeting the specifications. The submittal and testing process shall then be repeated in its entirety. The Contractor may request in writing that unacceptable luminaires be corrected in lieu of replacement. The request shall identify the corrections to be made and upon approval of the request, the Contractor shall apply the corrections to the entire lot of unacceptable luminaires. Once the corrections are completed, the testing process shall be repeated, including selection of a new set of sample luminaires. The number of luminaires to be tested shall be the same quantity as originally tested.

The process of retesting, correcting, or replacing luminaires shall be repeated until luminaires for each manufacturers catalog number are approved for the project. Corrections and re-testing shall not be grounds for additional compensation or extension of time. No luminaires shall be shipped from the manufacturer to the jobsite until all luminaire testing is completed and approved in writing.

Submittal information shall include a statement of intent to provide the testing as well as a request for approval of the chosen independent witness and laboratory. All summary test reports, written reports, and the qualifications of the independent witness and laboratory shall be submitted for approval to the Engineer with a copy to the Bureau of Design and Environment, 2300 S Dirksen Parkway, Room 330 Springfield, IL 62764.

1067.02 Roadway Luminaires. Roadway luminaires shall be according to Article 1067.01 and the following.

The luminaire shall be horizontally mounted and shall be designed to slip-fit on a 2-3/8 in. (60 mm) outside diameter pipe arm with a stop to limit the amount of insertion to 7 in. (180 mm). It shall not be necessary to remove or open more than the access door to mount the luminaire.

The effective projected area (EPA) of the luminaire shall not exceed 1.6 sq ft (0.149 sq m) and the weight, including accessories, shall not exceed 40 lb (18.14 kg). If the weight of the luminaire is less than 20 lb (9.07 kg), weight shall be added to the mounting arm or a supplemental vibration damper installed as approved by the Engineer.

The luminaire shall be equipped with both internal and external leveling indicators. The external leveling indicator shall be clearly visible in daylight to an observer directly under the luminaire at a mounting height of 50 ft (15.2 m).

The luminaire shall be fully prewired to accept a seven-pin, twist-lock receptacle that is compliant with ANSI C136.41. All receptacle pins shall be connected according to TALQ Consortium protocol.

The luminaire shall be provided with an installed shorting cap that is compliant with ANSI C136.10.

1067.03 Highmast Luminaires. Highmast luminaires shall be according to Article 1067.01 and the following.

The luminaire shall be horizontally mounted and shall be designed and manufactured for highmast tower use. The EPA of the luminaire shall not exceed 3.0 sq ft (0.279 sq m) and the weight, including accessories, shall not exceed 85 lb (38.6 kg).

The optical assembly shall be capable of being rotated 360 degrees. A vernier scale shall be furnished on the axis of rotation for aiming the luminaire in relation to its mounting tenon arm. The scale shall be graduated in 5 degree increments or less. The luminaire shall be clearly marked at the vernier as to 'house-side' and 'street-side' to allow proper luminaire orientation.

1067.04 Underpass Luminaires. Underpass luminaries shall be according to Article 1067.01 and the following.

The underpass luminaire shall be complete with all supports, hardware, and appurtenant mounting accessories. The underpass luminaire shall be suitable for lighting a roadway underpass at an approximate mounting height of 15 ft (4.5 m) from a position suspended directly above the roadway edge of pavement or attached to a wall or pier. The underpass luminaire shall meet the requirements of ANSI C136.27.

It shall not be necessary to remove more than the cover, reflector and lens to mount the luminaire. The unit shall be heavy duty, suitable for highway use and shall have no indentations or crevices in which dirt, salt, or other corrosives may collect.

- (a) Housing. The housing and lens frame shall be made of heavy duty die cast aluminum or 16 gauge (1.5 mm) minimum thickness Type 304 stainless steel. All seams in the housing enclosure shall be welded by continuous welds.

The housing shall have an opening for installation of a 3/4 in. (19 mm) diameter conduit.

- (b) Lens and Lens Frame. The frame shall not overlap the housing when closed. The luminaire shall have a flat glass lens to protect the LEDs from dirt accumulation or be designed to prevent dirt accumulation. The optic assembly shall be rated IP 66 or higher.

1067.05 Sign Lighting Luminaires. Sign lighting luminaries shall be suitable for lighting overhead freeway and expressway guide signs; and shall be according to Article 1067.01.

1067.06 Light Sources. The light sources in all luminaires shall be LED according to Article 1067.01 and the following.

- (a) The light source shall be according to ANSI C136.37 for solid state light sources used in roadway and area lighting.
- (b) The light source shall have a minimum color rendering index (CRI) of 70 and a nominal correlated color temperature (CCT) of 4000 K.
- (c) The rated initial luminous flux (lumen output) of the light source, as installed in the luminaire, shall be according to the following table for each specified output designation.

| Output Designations and Initial Luminous Flux | | <i>(for information only)</i> |
|--|---|---|
| Output Designation | Initial Luminous Flux (lm) | Approximate High Pressure Sodium (HPS) Equivalent Wattage |
| A | 2,200 | 35 (Low Output) |
| B | 3,150 | 50 (Low Output) |
| C | 4,400 | 70 (Low Output) |
| D | 6,300 | 100 (Low Output) |
| E | 9,450 | 150 (Low Output) |
| F | 12,500 | 200 (Med Output) |
| G | 15,500 | 250 (Med Output) |
| H | 25,200 | 400 (Med Output) |
| I | 47,250 | 750 (High Output) |
| J | 63,300 | 1,000 (High Output) |
| K | 80,000+ | 1,000+ (High Output) |

Luminaires with an initial luminous flux less than the values listed in the above table may be acceptable if they meet the requirements given in the Luminaire Performance Table shown in the contract.”

MANHOLES, VALVE VAULTS, AND FLAT SLAB TOPS (BDE)

Effective: January 1, 2018

Revised: March 1, 2019

Description. In addition to those manufactured according to the current standards included in this contract, manholes, valve vaults, and flat slab tops manufactured prior to March 1, 2019, according to the previous Highway Standards listed below will be accepted on this contract:

| Product | Previous Standards | | |
|--|--------------------|-----------|-----------|
| Precast Manhole Type A, 4' (1.22 m) Diameter | 602401-05 | 602401-04 | 602401-03 |
| Precast Manhole Type A, 5' (1.52 m) Diameter | 602402-01 | 602402 | 602401-03 |
| Precast Manhole Type A, 6' (1.83 m) Diameter | 602406-09 | 602406-08 | 602406-07 |
| Precast Manhole Type A, 7' (2.13 m) Diameter | 602411-07 | 602411-06 | 602411-05 |
| Precast Manhole Type A, 8' (2.44 m) Diameter | 602416-07 | 602416-06 | 602416-05 |
| Precast Manhole Type A, 9' (2.74 m) Diameter | 602421-07 | 602421-06 | 602421-05 |
| Precast Manhole Type A, 10' (3.05 m) Diameter | 602426-01 | 602426 | |
| Precast Valve Vault Type A, 4' (1.22 m) Diameter | 602501-04 | 602501-03 | 602501-02 |
| Precast Valve Vault Type A, 5' (1.52 m) Diameter | 602506-01 | 602506 | 602501-02 |
| Precast Reinforced Concrete Flat Slab Top | 602601-05 | 602601-04 | |

The following revisions to the Standard Specifications shall apply to manholes, valve vaults, and flat slab tops manufactured according to the current standards included in this contract:

Revise Article 602.02(g) of the Standard Specifications to read:

“(g) Structural Steel (Note 4)..... 1006.04

Note 4. All components of the manhole joint splice shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable.”

Add the following to Article 602.02 of the Standard Specifications:

“(s) Anchor Bolts and Rods (Note 5)..... 1006.09

Note 5. The threaded rods for the manhole joint splice shall be according to the requirements of ASTM F 1554, Grade 55, (Grade 380).”

Revise the second paragraph of Article 1042.10 of the Standard Specifications to read:

“Catch basin Types A, B, C, and D; Manhole Type A; Inlet Types A and B; Drainage Structures Types 1, 2, 3, 4, 5, and 6; Valve Vault Type A; and reinforced concrete flat slab top (Highway Standard 602601) shall be manufactured according to AASHTO M 199 (M 199M), except as shown on the plans. Additionally, catch basins, inlets, and drainage structures shall have a minimum concrete compressive strength of 4500 psi (31,000 kPa) at 28 days and manholes, valve vaults, and reinforced concrete flat slab tops shall have a minimum concrete compressive strength of 5000 psi (34,500 kPa) at 28 days.”

PORTLAND CEMENT CONCRETE (BDE)

Effective: November 1, 2017

Revise the Air Content % of Class PP Concrete in Table 1 Classes of Concrete and Mix Design Criteria in Article 1020.04 of the Standard Specifications to read:

| "TABLE 1. CLASSES OF CONCRETE AND MIX DESIGN CRITERIA | | |
|---|---------------------------|---------------|
| Class of Conc. | Use | Air Content % |
| PP | Pavement Patching | 4.0 - 8.0" |
| | Bridge Deck Patching (10) | |
| | PP-1 | |
| | PP-2 | |
| | PP-3 | |
| | PP-4 | |
| PP-5 | | |

Revise Note (4) at the end of Table 1 Classes of Concrete and Mix Design Criteria in Article 1020.04 of the Standard Specifications to read:

“(4) For all classes of concrete, the maximum slump may be increased to 7 in (175 mm) when a high range water-reducing admixture is used. For Class SC, the maximum slump may be increased to 8 in. (200 mm). For Class PS, the maximum slump may be increased to 8 1/2 in. (215 mm) if the high range water-reducing admixture is the polycarboxylate type.”

PORTLAND CEMENT CONCRETE BRIDGE DECK CURING (BDE)

Effective: April 1, 2015

Revised: November 1, 2019

Revise the following three entries and add the following footnote to the Index Table of Curing and Protection of Concrete Construction in Article 1020.13 of the Standard Specifications:

| "INDEX TABLE OF CURING AND PROTECTION OF CONCRETE CONSTRUCTION" | | | |
|---|--|--------------------|--|
| TYPE OF CONSTRUCTION | CURING METHODS | CURING PERIOD DAYS | LOW AIR TEMPERATURE PROTECTION METHODS |
| Superstructure (except deck) | 1020.13(a)(1)(2)(3)(5)(6) ^{8/19/} | 7 | 1020.13(d)(1)(2) |
| Superstructure (Approach Slab) | 1020.13(a)(5)(6) ^{19/} | 3 | 1020.13(d)(1)(2) ^{17/} |
| Deck | 1020.13(a)(5)(6) ^{19/} | 7 | 1020.13(d)(1)(2) ^{17/} |

19/ The cellulose polyethylene or synthetic fiber with polymer polyethylene blanket method shall not be used on latex modified concrete, or vertical concrete surfaces greater than 1 ft (300 mm), e.g. parapets."

Add the following to Article 1020.13(a) of the Standard Specifications.

"(6)Cellulose Polyethylene Blanket Method and Synthetic Fiber with Polymer Polyethylene Blanket Method. After the surface of concrete has been textured or finished, it shall be covered immediately with a wetted cellulose polyethylene blanket or wetted synthetic fiber with polymer polyethylene blanket. The blankets shall be installed with the white perforated polyethylene side facing up. The blanket's fiber side shall be wetted immediately prior to placement or as the blanket is being placed, and the polyethylene side shall be thoroughly soaked with a gentle spray of water immediately after placement. For bridge decks, a foot bridge shall be used to place and wet the blankets.

Adjoining blankets shall overlap a minimum of 8 in. (200 mm). Bubbles and wrinkles shall be removed with a broom, squeegee, or as recommended by the manufacturer.

The blankets shall be maintained in a wetted condition until the concrete has hardened sufficiently to place soaker hoses without indentations to the concrete surface. The soaker hoses shall be placed on top of the blankets at a maximum 4 ft (1.2 m) spacing. The blankets shall be kept wet with a continuous supply of water for the remainder of the curing period. Other continuous wetting systems may be used if approved by the Engineer.

For areas inaccessible to the blankets, curing shall be according to Article 1020.13(a)(3)."

Revise the first paragraph of Article 1022.03 of the Standard Specifications to read:

“1022.03 Waterproof Paper Blankets, White Polyethylene Sheeting, Burlap-Polyethylene Blankets, Cellulose Polyethylene Blankets, and Synthetic Fiber with Polymer Polyethylene Blankets. These materials shall be white and according to ASTM C 171.

The cellulose polyethylene blanket shall consist of a perforated white polyethylene sheeting with cellulose fiber backing and shall be limited to single use only. The cellulose polyethylene blankets shall be delivered to the jobsite unused and in the manufacturer's unopened packaging until ready for installation. Each roll shall be clearly labeled on the product with product name, manufacturer, and manufacturer's certification of compliance with ASTM C 171.

The synthetic fiber with polymer polyethylene blanket shall consist of a perforated white polyethylene sheeting with absorbent synthetic fibers and super absorbent polymer backing, and shall be limited to single use only. The synthetic fiber with polymer polyethylene blankets shall be delivered to the jobsite unused and in the manufacturer's unopened packaging until ready for installation. Each roll shall be clearly labeled on the product with product name, manufacturer, and manufacturer's certification of compliance with ASTM C 171.”

PROGRESS PAYMENTS (BDE)

Effective: November 2, 2013

Revise Article 109.07(a) of the Standard Specifications to read:

- “(a) Progress Payments. At least once each month, the Engineer will make a written estimate of the quantity of work performed in accordance with the contract, and the value thereof at the contract unit prices. The amount of the estimate approved as due for payment will be vouchered by the Department and presented to the State Comptroller for payment. No amount less than \$1000.00 will be approved for payment other than the final payment.

Progress payments may be reduced by liens filed pursuant to Section 23(c) of the Mechanics' Lien Act, 770 ILCS 60/23(c).

If a Contractor or subcontractor has defaulted on a loan issued under the Department's Disadvantaged Business Revolving Loan Program (20 ILCS 2705/2705-610), progress payments may be reduced pursuant to the terms of that loan agreement. In such cases, the amount of the estimate related to the work performed by the Contractor or subcontractor, in default of the loan agreement, will be offset, in whole or in part, and vouchered by the Department to the Working Capital Revolving Fund or designated escrow account. Payment for the work shall be considered as issued and received by the Contractor or subcontractor on the date of the offset voucher. Further, the amount of the offset voucher shall be a credit against the Department's obligation to pay the Contractor, the Contractor's obligation to pay the subcontractor, and the Contractor's or subcontractor's total loan indebtedness to the Department. The offset shall continue until such time as the entire loan indebtedness is satisfied. The Department will notify the Contractor and Fund Control Agent in a timely manner of such offset. The Contractor or subcontractor shall not be entitled to additional payment in consideration of the offset.

The failure to perform any requirement, obligation, or term of the contract by the Contractor shall be reason for withholding any progress payments until the Department determines that compliance has been achieved.”

RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (BDE)

Effective: November 1, 2012

Revised: January 2, 2020

Revise Section 1031 of the Standard Specifications to read:

“SECTION 1031. RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES

1031.01 Description. Reclaimed asphalt pavement and reclaimed asphalt shingles shall be according to the following.

- (a) Reclaimed Asphalt Pavement (RAP). RAP is the material produced by cold milling or crushing an existing hot-mix asphalt (HMA) pavement. The Contractor shall supply written documentation that the RAP originated from routes or airfields under federal, state, or local agency jurisdiction.
- (b) Reclaimed Asphalt Shingles (RAS). Reclaimed asphalt shingles (RAS). RAS is from the processing and grinding of preconsumer or post-consumer shingles. RAS shall be a clean and uniform material with a maximum of 0.5 percent unacceptable material, as defined in Central Bureau of Materials Policy Memorandum, “Reclaimed Asphalt Shingle (RAS) Sources”, by weight of RAS. All RAS used shall come from a Central Bureau of Materials approved processing facility where it shall be ground and processed to 100 percent passing the 3/8 in. (9.5 mm) sieve and 93 percent passing the #4 (4.75 mm) sieve based on a dry shake gradation. RAS shall be uniform in gradation and asphalt binder content and shall meet the testing requirements specified herein. In addition, RAS shall meet the following Type 1 or Type 2 requirements.
 - (1) Type 1. Type 1 RAS shall be processed, preconsumer asphalt shingles salvaged from the manufacture of residential asphalt roofing shingles.
 - (2) Type 2. Type 2 RAS shall be processed post-consumer shingles only, salvaged from residential, or four unit or less dwellings not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP).

1031.02 Stockpiles. RAP and RAS stockpiles shall be according to the following.

(a) RAP Stockpiles. The Contractor shall construct individual, sealed RAP stockpiles meeting one of the following definitions. No additional RAP shall be added to the pile after the pile has been sealed. Stockpiles shall be sufficiently separated to prevent intermingling at the base. Stockpiles shall be identified by signs indicating the type as listed below (i.e. "Homogeneous Surface").

Prior to milling, the Contractor shall request the District provide documentation on the quality of the RAP to clarify the appropriate stockpile.

(1) Fractionated RAP (FRAP). FRAP shall consist of RAP from Class I, HMA (High and Low ESAL) mixtures. The coarse aggregate in FRAP shall be crushed aggregate and may represent more than one aggregate type and/or quality, but shall be at least C quality. All FRAP shall be fractionated prior to testing by screening into a minimum of two size fractions with the separation occurring on or between the #4 (4.75 mm) and 1/2 in. (12.5 mm) sieves. Agglomerations shall be minimized such that 100 percent of the RAP shall pass the sieve size specified below for the mix into which the FRAP will be incorporated.

| Mixture FRAP will be used in: | Sieve Size that 100 % of FRAP Shall Pass |
|-------------------------------|--|
| IL-19.0 | 1 1/2 in. (37.5 mm) |
| SMA 12.5 | 1 in. (25.0 mm) |
| IL-9.5, IL-9.5FG, SMA 9.5 | 3/4 in. (19.0 mm) |
| IL-4.75 | 1/2 in. (12.5 mm) |

(2) Homogeneous. Homogeneous RAP stockpiles shall consist of RAP from Class I, HMA (High and Low ESAL) mixtures and represent: 1) the same aggregate quality, but shall be at least C quality; 2) the same type of crushed aggregate (either crushed natural aggregate, ACBF slag, or steel slag); 3) similar gradation; and 4) similar asphalt binder content. If approved by the Engineer, combined single pass surface/binder millings may be considered "homogeneous" with a quality rating dictated by the lowest coarse aggregate quality present in the mixture.

(3) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I, HMA (High and Low ESAL) mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality, but shall be at least C quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate RAP shall be processed prior to testing by crushing to where all RAP shall pass the 5/8 in. (16 mm) or smaller screen. Conglomerate RAP stockpiles shall not contain steel slag.

(4) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as "Non-Quality".

RAP/FRAP containing contaminants, such as earth, brick, sand, concrete, sheet asphalt, bituminous surface treatment (i.e. chip seal), pavement fabric, joint sealants, etc., will be unacceptable unless the contaminants are removed to the satisfaction of the Engineer. Sheet asphalt shall be stockpiled separately.

(b) RAS Stockpiles. Type 1 and Type 2 RAS shall be stockpiled separately and shall not be intermingled. Each stockpile shall be signed indicating what type of RAS is present.

Unless otherwise specified by the Engineer, mechanically blending manufactured sand (FM 20 or FM 22) up to an equal weight of RAS with the processed RAS will be permitted to improve workability. The sand shall be "B Quality" or better from an approved Aggregate Gradation Control System source. The sand shall be accounted for in the mix design and during HMA production.

Records identifying the shingle processing facility supplying the RAS, RAS type, and lot number shall be maintained by project contract number and kept for a minimum of three years.

1031.03 Testing. RAP/FRAP and RAS testing shall be according to the following.

(a) RAP/FRAP Testing. When used in HMA, the RAP/FRAP shall be sampled and tested either during or after stockpiling.

(1) During Stockpiling. For testing during stockpiling, washed extraction samples shall be run at the minimum frequency of one sample per 500 tons (450 metric tons) for the first 2000 tons (1800 metric tons) and one sample per 2000 tons (1800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4000 tons (3600 metric tons).

(2) After Stockpiling. For testing after stockpiling, the Contractor shall submit a plan for approval to the District proposing a satisfactory method of sampling and testing the RAP/FRAP pile either in-situ or by restockpiling. The sampling plan shall meet the minimum frequency required above and detail the procedure used to obtain representative samples throughout the pile for testing.

Each sample shall be split to obtain two equal samples of test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall extract the other test sample according to Department procedure. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

(b) RAS Testing. RAS or RAS blended with manufactured sand shall be sampled and tested during stockpiling according to Central Bureau of Materials Policy Memorandum, "Reclaimed Asphalt Shingle (RAS) Source".

Samples shall be collected during stockpiling at the minimum frequency of one sample per 200 tons (180 metric tons) for the first 1000 tons (900 metric tons) and one sample per 250 tons (225 metric tons) thereafter. A minimum of five samples are required for stockpiles less than 1000 tons (900 metric tons). Once a ≤ 1000 ton (900 metric ton), five-sample/test stockpile has been established it shall be sealed. Additional incoming RAS or RAS blended with manufactured sand shall be stockpiled in a separate working pile as designated in the Quality Control plan and only added to the sealed stockpile when the test results of the working pile are complete and are found to meet the tolerances specified herein for the original sealed RAS stockpile.

Before testing, each sample shall be split to obtain two test samples. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall perform a washed extraction and test for unacceptable materials on the other test sample according to Department procedures. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

If the sampling and testing was performed at the shingle processing facility in accordance with the QC Plan, the Contractor shall obtain and make available all of the test results from start of the initial stockpile.

1031.04 Evaluation of Tests. Evaluation of test results shall be according to the following.

- (a) Evaluation of RAP/FRAP Test Results. All of the extraction results shall be compiled and averaged for asphalt binder content and gradation, and when applicable G_{mm} . Individual extraction test results, when compared to the averages, will be accepted if within the tolerances listed below.

| Parameter | FRAP/Homogeneous/ Conglomerate |
|-------------------|-----------------------------------|
| 1 in. (25 mm) | |
| 1/2 in. (12.5 mm) | ± 8 % |
| No. 4 (4.75 mm) | ± 6 % |
| No. 8 (2.36 mm) | ± 5 % |
| No. 16 (1.18 mm) | |
| No. 30 (600 µm) | ± 5 % |
| No. 200 (75 µm) | ± 2.0 % |
| Asphalt Binder | ± 0.4 % ^{1/} |
| G_{mm} | ± 0.03 |

1/ The tolerance for FRAP shall be ± 0.3 %.

If more than 20 percent of the individual sieves and/or asphalt binder content tests are out of the above tolerances, the RAP/FRAP shall not be used in HMA unless the RAP/FRAP representing the failing tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

With the approval of the Engineer, the ignition oven may be substituted for extractions according to the ITP, "Calibration of the Ignition Oven for the Purpose of Characterizing Reclaimed Asphalt Pavement (RAP)".

- (b) Evaluation of RAS and RAS Blended with Manufactured Sand Test Results. All of the test results, with the exception of percent unacceptable materials, shall be compiled and averaged for asphalt binder content and gradation. Individual test results, when compared to the averages, will be accepted if within the tolerances listed below.

| Parameter | RAS |
|------------------------|---------|
| No. 8 (2.36 mm) | ± 5 % |
| No. 16 (1.18 mm) | ± 5 % |
| No. 30 (600 µm) | ± 4 % |
| No. 200 (75 µm) | ± 2.0 % |
| Asphalt Binder Content | ± 1.5 % |

If more than 20 percent of the individual sieves and/or asphalt binder content tests are out of the above tolerances, or if the percent unacceptable material exceeds 0.5 percent by weight of material retained on the # 4 (4.75 mm) sieve, the RAS or RAS blend shall not be used in Department projects. All test data and acceptance ranges shall be sent to the District for evaluation.

1031.05 Quality Designation of Aggregate in RAP/FRAP.

- (a) RAP. The aggregate quality of the RAP for homogeneous and conglomerate stockpiles shall be set by the lowest quality of coarse aggregate in the RAP stockpile and are designated as follows.
- (1) RAP from Class I, Superpave/HMA (High ESAL), or (Low ESAL) IL-9.5L surface mixtures are designated as containing Class B quality coarse aggregate.
 - (2) RAP from Class I binder, Superpave/HMA (High ESAL) binder, or (Low ESAL) IL-19.0L binder mixtures are designated as containing Class C quality coarse aggregate.
- (b) FRAP. If the Engineer has documentation of the quality of the FRAP aggregate, the Contractor shall use the assigned quality provided by the Engineer.

If the quality is not known, the quality shall be determined as follows. Coarse and fine FRAP stockpiles containing plus #4 (4.75 mm) sieve coarse aggregate shall have a maximum tonnage of 5000 tons (4500 metric tons). The Contractor shall obtain a representative sample witnessed by the Engineer. The sample shall be a minimum of 50 lb (25 kg). The sample shall be extracted according to Illinois Modified AASHTO T 164 by a consultant laboratory prequalified by the Department for the specified testing. The consultant laboratory shall submit the test results along with the recovered aggregate to the District Office. The cost for this testing shall be paid by the Contractor. The District will forward the sample to the Central Bureau of Materials Aggregate Lab for MicroDeval Testing, according to ITP 327. A maximum loss of 15.0 percent will be applied for all HMA applications.

1031.06 Use of RAP/FRAP and/or RAS in HMA. The use of RAP/FRAP and/or RAS shall be the Contractor's option when constructing HMA in all contracts.

(a) RAP/FRAP. The use of RAP/FRAP in HMA shall be as follows.

- (1) Coarse Aggregate Size. The coarse aggregate in all RAP shall be equal to or less than the nominal maximum size requirement for the HMA mixture to be produced.
- (2) Steel Slag Stockpiles. Homogeneous RAP stockpiles containing steel slag will be approved for use in all HMA (High ESAL and Low ESAL) Surface and Binder Mixture applications.
- (3) Use in HMA Surface Mixtures (High and Low ESAL). RAP/FRAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall be FRAP or homogeneous in which the coarse aggregate is Class B quality or better. FRAP from Conglomerate stockpiles shall be considered equivalent to limestone for frictional considerations. Known frictional contributions from plus #4 (4.75 mm) homogeneous FRAP stockpiles will be accounted for in meeting frictional requirements in the specified mixture.
- (4) Use in HMA Binder Mixtures (High and Low ESAL), HMA Base Course, and HMA Base Course Widening. RAP/FRAP stockpiles for use in HMA binder mixtures (High and Low ESAL), HMA base course, and HMA base course widening shall be FRAP, homogeneous, or conglomerate, in which the coarse aggregate is Class C quality or better.
- (5) Use in Shoulders and Subbase. RAP/FRAP stockpiles for use in HMA shoulders and stabilized subbase (HMA) shall be FRAP, homogeneous, or conglomerate.
- (6) When the Contractor chooses the RAP option, the percentage of RAP shall not exceed the amounts indicated in Article 1031.06(c)(1) below for a given Ndesign.

(b) RAS. RAS meeting Type 1 or Type 2 requirements will be permitted in all HMA applications as specified herein.

(c) RAP/FRAP and/or RAS Usage Limits. Type 1 or Type 2 RAS may be used alone or in conjunction with RAP or FRAP in HMA mixtures up to a maximum of 5.0 percent by weight of the total mix.

(1) RAP/RAS. When RAP is used alone or RAP is used in conjunction with RAS, the percentage of virgin asphalt binder replacement shall not exceed the amounts listed in the following table.

RAP/RAS Maximum Asphalt Binder Replacement (ABR) Percentage

| HMA Mixtures ^{1/ 2/} | RAP/RAS Maximum ABR % | | |
|-------------------------------|-----------------------|---------|------------------------------------|
| Ndesign | Binder | Surface | Polymer Modified Binder or Surface |
| 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). If warm mix asphalt (WMA) technology is utilized and production temperatures do not exceed 275 °F (135 °C), the high and low virgin asphalt binder grades shall each be reduced by one grade when RAP/RAS ABR exceeds 25 percent (i.e. 26 percent RAP/RAS ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28).

(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.

FRAP/RAS Maximum Asphalt Binder Replacement (ABR) Percentage

| HMA Mixtures ^{1/2/} | FRAP/RAS Maximum ABR % | | |
|------------------------------|------------------------|---------|------------------------------------|
| Ndesign | Binder | Surface | Polymer Modified Binder or Surface |
| 30 | 50 | 40 | 10 |
| 50 | 40 | 35 | 10 |
| 70 | 40 | 30 | 10 |
| 90 | 40 | 30 | 10 |
| SMA | -- | -- | 20 |
| IL-4.75 | -- | -- | 30 |

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). If warm mix asphalt (WMA) technology is utilized and production temperatures do not exceed 275 °F (135 °C), the high and low virgin asphalt binder grades shall each be reduced by one grade when FRAP/RAS ABR exceeds 25 percent (i.e. 26 percent ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28).

1031.07 HMA Mix Designs. At the Contractor’s option, HMA mixtures may be constructed utilizing RAP/FRAP and/or RAS material meeting the detailed requirements specified herein.

(a) RAP/FRAP and/or RAS. RAP/FRAP and/or RAS mix designs shall be submitted for verification. If additional RAP/FRAP and/or RAS stockpiles are tested and found that no more than 20 percent of the results, as defined under “Testing” herein, are outside of the control tolerances set for the original RAP/FRAP and/or RAS stockpile and HMA mix design, and meets all of the requirements herein, the additional RAP/FRAP and/or RAS stockpiles may be used in the original mix design at the percent previously verified.

(b) RAS. Type 1 and Type 2 RAS are not interchangeable in a mix design.

The RAP, FRAP, and RAS stone bulk specific gravities (G_{sb}) shall be according to the “Determination of Aggregate Bulk (Dry) Specific Gravity (G_{sb}) of Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS)” procedure in the Department’s Manual of Test Procedures for Materials.

1031.08 HMA Production. HMA production utilizing RAP/FRAP and/or RAS shall be as follows.

- (a) RAP/FRAP. The coarse aggregate in all RAP/FRAP used shall be equal to or less than the nominal maximum size requirement for the HMA mixture being produced.

To remove or reduce agglomerated material, a scalping screen, gator, crushing unit, or comparable sizing device approved by the Engineer shall be used in the RAP feed system to remove or reduce oversized material.

If the RAP/FRAP control tolerances or QC/QA test results require corrective action, the Contractor shall cease production of the mixture containing RAP/FRAP and either switch to the virgin aggregate design or submit a new RAP/FRAP design.

- (b) RAS. RAS shall be incorporated into the HMA mixture either by a separate weight depletion system or by using the RAP weigh belt. Either feed system shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes. The portion of RAS shall be controlled accurately to within ± 0.5 percent of the amount of RAS utilized. When using the weight depletion system, flow indicators or sensing devices shall be provided and interlocked with the plant controls such that the mixture production is halted when RAS flow is interrupted.

(c) RAP/FRAP and/or RAS. HMA plants utilizing RAP/FRAP and/or RAS shall be capable of automatically recording and printing the following information.

(1) Dryer Drum Plants.

- a. Date, month, year, and time to the nearest minute for each print.
- b. HMA mix number assigned by the Department.
- c. Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- d. Accumulated dry weight of RAP/FRAP/RAS in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- e. Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.
- f. Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.
- g. Residual asphalt binder in the RAP/FRAP material as a percent of the total mix to the nearest 0.1 percent.
- h. Aggregate and RAP/FRAP moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAP/FRAP are printed in wet condition.)

(2) Batch Plants.

- a. Date, month, year, and time to the nearest minute for each print.
- b. HMA mix number assigned by the Department.
- c. Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).
- d. Mineral filler weight to the nearest pound (kilogram).
- e. RAP/FRAP/RAS weight to the nearest pound (kilogram).
- f. Virgin asphalt binder weight to the nearest pound (kilogram).
- g. Residual asphalt binder in the RAP/FRAP/RAS material as a percent of the total mix to the nearest 0.1 percent.

The printouts shall be maintained in a file at the plant for a minimum of one year or as directed by the Engineer and shall be made available upon request. The printing system will be inspected by the Engineer prior to production and verified at the beginning of each construction season thereafter.

1031.09 RAP in Aggregate Surface Course and Aggregate Wedge Shoulders, Type B.

The use of RAP in aggregate surface course (temporary access entrances only) and aggregate wedge shoulders, Type B shall be as follows.

- (a) Stockpiles and Testing. RAP stockpiles may be any of those listed in Article 1031.02, except “Non-Quality” and “FRAP”. The testing requirements of Article 1031.03 shall not apply. RAP used shall be according to the current Central Bureau of Materials Policy Memorandum, “Reclaimed Asphalt Pavement (RAP) for Aggregate Applications”.
- (b) Gradation. One hundred percent of the RAP material shall pass the 1 1/2 in. (37.5 mm) sieve. The RAP material shall be reasonably well graded from coarse to fine. RAP material that is gap-graded or single sized will not be accepted.”

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (BDE)

Effective: January 1, 2019

Revised: January 1, 2020

Revise Section 669 of the Standard Specifications to read:

“SECTION 669. REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES

669.01 Description. This work shall consist of the transportation and proper disposal of regulated substances. This work shall also consist of the removal, transportation, and proper disposal of underground storage tanks (UST), their contents and associated underground piping to the point where the piping is above the ground, including determining the content types and estimated quantities.

669.02 Equipment. The Contractor shall notify the Engineer of the delivery of all excavation, storage, and transportation equipment to a work area location. The equipment shall comply with OSHA and American Petroleum Institute (API) guidelines and shall be furnished in a clean condition. Clean condition means the equipment does not contain any residual material classified as a non-special waste, non-hazardous special waste, or hazardous waste. Residual materials include, but are not limited to, petroleum products, chemical products, sludges, or any other material present in or on equipment.

Before beginning any associated soil or groundwater management activity, the Contractor shall provide the Engineer with the opportunity to visually inspect and approve the equipment. If the equipment contains any contaminated residual material, decontamination shall be performed on the equipment as appropriate to the regulated substance and degree of contamination present according to OSHA and API guidelines. All cleaning fluids used shall be treated as the contaminant unless laboratory testing proves otherwise.

669.03 Pre-Construction Submittals and Qualifications. Prior to beginning this work, or working in areas with regulated substances, the Contractor shall submit a “Regulated Substances Pre-Construction Plan (RSPCP)” to the Engineer for review and approval using form BDE 2730. The form shall be signed by an Illinois licensed Professional Engineer or Professional Geologist.

As part of the RSPCP, the Contractor(s) or firm(s) performing the work shall meet the following qualifications.

- (a) Regulated Substances Monitoring. Qualification for environmental observation and field screening of regulated substances work and environmental observation of UST removal shall require either pre-qualification in Hazardous Waste by the Department or demonstration of acceptable project experience in remediation and operations for contaminated sites in accordance with applicable Federal, State, or local regulatory requirements using BDE 2730.

Qualification for each individual performing regulated substances monitoring shall require a minimum of one-year of experience in similar activities as those required for the project.

- (b) Underground Storage Tank Removal. Qualification for underground storage tank (UST) removal work shall require licensing and certification with the Office of the State Fire Marshall (OSFM) and possession of all permits required to perform the work. A copy of the permit shall be provided to the Engineer prior to tank removal.

The qualified Contractor(s) or firm(s) shall also document it does not have any current or former ties with any of the properties contained within, adjoining, or potentially affecting the work.

The Engineer will require up to 21 calendar days for review of the RSPCP. The review may involve rejection or revision and resubmittal; in which case, an additional 21 days will be required for each subsequent review. Work shall not commence until the RSPCP has been approved by the Engineer. After approval, the RSPCP shall be revised as necessary to reflect changed conditions in the field and documented using BDE 2730A “Regulated Substances Pre-Construction Plan (RSPCP) Addendum” and submitted to the Engineer for approval.

CONSTRUCTION REQUIREMENTS

669.04 Regulated Substances Monitoring. Regulated substances monitoring includes environmental observation and field screening during regulated substances management activities at the contract specific work areas. 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)".

- (a) Environmental Observation. Prior to beginning excavation, the Contractor shall mark the limits of the contract specific work areas. Once work begins, the monitoring personnel shall be present on-site continuously during the excavation and loading of material.
- (b) Field Screening. Field screening shall be performed during the excavation and loading of material from the contract specific work areas, except for material classified according to Article 669.05(b)(1) or 669.05(c) where field screening is not required.

Field screening shall be performed with either a photoionization detector (PID) (minimum 10.6eV lamp) or a flame ionization detector (FID), and other equipment as appropriate, to monitor for potential contaminants associated with regulated substances. The PID or FID shall be calibrated on-site, and background level readings taken and recorded daily, and as field and weather conditions change. Field screen readings on the PID or FID in excess of background levels indicates the potential presence of regulated substances requiring handling as a non-special waste, special waste, or hazardous waste. PID or FID readings may be used as the basis of increasing the limits of removal with the approval of the Engineer but shall in no case be used to decrease the limits.

669.05 Regulated Substances Management and Disposal. The management and disposal of soil and/or groundwater containing regulated substances shall be according to the following:

- (a) Soil Analytical Results Exceed Most Stringent MAC. When the soil analytical results indicate detected levels exceed the most stringent maximum allowable concentration (MAC) for chemical constituents in soil established pursuant to Subpart F of 35 Ill. Adm. Code 1100.605, the soil shall be managed as follows:
 - (1) When analytical results indicate inorganic chemical constituents exceed the most stringent MAC, but still considered within area background levels by the Engineer, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable. If the soils cannot be utilized within the right-of-way, they shall be managed and disposed of at a landfill as a non-special waste.
 - (2) When analytical results indicate inorganic chemical constituents exceed the most stringent MAC but do not exceed the MAC for a Metropolitan Statistical Area (MSA) County identified in 35 Ill. Admin. Code 742 Appendix A. Table G, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of at a clean construction and demolition debris (CCDD) facility or an uncontaminated soil fill operation (USFO) within an MSA County provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
 - (3) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, or the MAC within the Chicago corporate limits, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of off-site at a CCDD facility or an USFO within an MSA County excluding Chicago or within the Chicago corporate limits provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
 - (4) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of off-site at a CCDD facility or an USFO within an MSA County excluding Chicago provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
 - (5) When the Engineer determines soil cannot be managed according to Articles 669.05(a)(1) through (a)(4) above and the materials do not contain special waste or hazardous waste, as determined by the Engineer, the soil shall be managed and disposed of at a landfill as a non-special waste.

- (6) When analytical results indicate soil is hazardous by characteristic or listing pursuant to 35 Ill. Admin. Code 721, contains radiological constituents, or the Engineer otherwise determines the soil cannot be managed according to Articles 669.05(a)(1) through (a)(5) above, the soil shall be managed and disposed of off-site as a special waste or hazardous waste as applicable.
- (b) Soil Analytical Results Do Not Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels do not exceed the most stringent MAC, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of off-site according to Article 202.03. However, the excavated soil cannot be taken to a CCDD facility or an USFO for any of the following reasons.
- (1) The pH of the soil is less than 6.25 or greater than 9.0.
 - (2) The soil exhibited PID or FID readings in excess of background levels.
- (c) Soil Analytical Results Exceed Most Stringent MAC but Do Not Exceed Tiered Approach to Corrective Action Objectives (TACO) Residential. When the soil analytical results indicate that detected levels exceed the most stringent MAC but do not exceed TACO Tier 1 Soil Remediation Objectives for Residential Properties pursuant to 35 Ill. Admin. Code 742 Appendix B Table A, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of off-site according to Article 202.03. However, the excavated soil cannot be taken to a CCDD facility or an USFO.

- (d) Groundwater. When groundwater analytical results indicate the detected levels are above Appendix B, Table E of 35 Ill. Admin. Code 742, the most stringent Tier 1 Groundwater Remediation Objectives for Groundwater Component of the Groundwater Ingestion Route for Class 1 groundwater, the groundwater shall be managed off-site as a special waste or hazardous waste as applicable. Special waste groundwater shall be containerized and trucked to an off-site treatment facility, or may be discharged to a sanitary sewer or combined sewer when permitted by the local sewer authority. Groundwater discharged to a sanitary sewer or combined sewer shall be pre-treated to remove particulates and measured with a calibrated flow meter to comply with applicable discharge limits. A copy of the permit shall be provided to the Engineer prior to discharging groundwater to the sanitary sewer or combined sewer.

Groundwater encountered within trenches may be managed within the trench and allowed to infiltrate back into the ground. If the groundwater cannot be managed within the trench, it may be discharged to a sanitary sewer or combined sewer when permitted by the local sewer authority, or it shall be containerized and trucked to an off-site treatment facility as a special waste or hazardous waste. The Contractor is prohibited from discharging groundwater within the trench through a storm sewer. The Contractor shall install backfill plugs within the area of groundwater contamination.

One backfill plug shall be placed down gradient to the area of groundwater contamination. Backfill plugs shall be installed at intervals not to exceed 50 ft (15 m). Backfill plugs are to be 4 ft (1.2 m) long, measured parallel to the trench, full trench width and depth. Backfill plugs shall not have any fine aggregate bedding or backfill, but shall be entirely cohesive soil or any class of concrete. The Contractor shall provide test data that the material has a permeability of less than 10^{-7} cm/sec according to ASTM D 5084, Method A or per another test method approved by the Engineer.

The Contractor shall use due care when transferring contaminated material from the area of origin to the transporter. Should releases of contaminated material to the environment occur (i.e., spillage onto the ground, etc.), the Contractor shall clean-up spilled material and place in the appropriate storage containers as previously specified. Clean-up shall include, but not be limited to, sampling beneath the material staging area to determine complete removal of the spilled material.

The Contractor shall provide engineered barriers, when required, and shall include materials sufficient to completely line excavation surfaces, including sloped surfaces, bottoms, and sidewall faces, within the areas designated for protection.

The Contractor shall obtain all documentation including any permits and/or licenses required to transport the material containing regulated substances to the disposal facility. The Contractor shall coordinate with the Engineer on the completion of all documentation. The Contractor shall make all arrangements for collection and analysis of landfill acceptance testing. The Contractor shall coordinate waste disposal approvals with the disposal facility.

The Contractor shall provide the Engineer with all transport-related documentation within two days of transport or receipt of said document(s). For management of special or hazardous waste, the Contractor shall provide the Engineer with documentation that the Contractor is operating with a valid Illinois special waste transporter permit at least two weeks before transporting the first load of contaminated material.

Transportation and disposal of material classified according to Article 669.05(a)(5) or 669.05(a)(6) shall be completed each day so that none of the material remains on-site by the close of business, except when temporary staging has been approved.

Any waste generated as a special or hazardous waste from a non-fixed facility shall be manifested off-site using the Department's county generator number provided by the Bureau of Design and Environment. An authorized representative of the Department shall sign all manifests for the disposal of the contaminated material and confirm the Contractor's transported volume. Any waste generated as a non-special waste may be managed off-site without a manifest, a special waste transporter, or a generator number.

The Contractor shall select a landfill permitted for disposal of the contaminant within the State of Illinois. The Department will review and approve or reject the facility proposed by the Contractor to use as a landfill. The Contractor shall verify whether the selected disposal facility is compliant with those applicable standards as mandated by their permit and whether the disposal 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 landfill shall in no manner delay the construction schedule or alter the Contractor's responsibilities as set forth.

669.06 Non-Special Waste Certification. An authorized representative of the Department shall sign and date all non-special waste certifications. The Contractor shall be responsible for providing the Engineer with the required information that will allow the Engineer to certify the waste is not a special waste.

(a) Definition. A waste is considered a non-special waste as long as it is not:

- (1) a potentially infectious medical waste;
- (2) a hazardous waste as defined in 35 Ill. Admin. Code 721;
- (3) an industrial process waste or pollution control waste that contains liquids, as determined using the paint filter test set forth in subdivision (3)(A) of subsection (m) of 35 Ill. Admin. Code 811.107;
- (4) a regulated asbestos-containing waste material, as defined under the National Emission Standards for Hazardous Air Pollutants in 40 CFR Part 61.141;
- (5) a material containing polychlorinated biphenyls (PCB's) regulated pursuant to 40 CFR Part 761;

- (6) a material subject to the waste analysis and recordkeeping requirements of 35 Ill. Admin. Code 728.107 under land disposal restrictions of 35 Ill. Admin. Code 728;
 - (7) a waste material generated by processing recyclable metals by shredding and required to be managed as a special waste under Section 22.29 of the Environmental Protection Act; or
 - (8) an empty portable device or container in which a special or hazardous waste has been stored, transported, treated, disposed of, or otherwise handled.
- (b) Certification Information. All information used to determine the waste is not a special waste shall be attached to the certification. The information shall include but not be limited to:
- (1) the means by which the generator has determined the waste is not a hazardous waste;
 - (2) the means by which the generator has determined the waste is not a liquid;
 - (3) if the waste undergoes testing, the analytic results obtained from testing, signed and dated by the person responsible for completing the analysis;
 - (4) if the waste does not undergo testing, an explanation as to why no testing is needed;
 - (5) a description of the process generating the waste; and
 - (6) relevant material safety data sheets.

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. 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.

Temporary staging shall be accomplished within the right-of-way and the Contractor's means and methods shall be described in the approved or amended RSPCP. Staging areas shall not be located within 200 feet (61 m) of a public or private water supply well; nor within 100 feet (30 m) of sensitive environmental receptor areas, including wetlands, rivers, streams, lakes, or designated habitat zones.

The method of staging shall consist of containerization or stockpiling as applicable for the type, classification, and physical state (i.e., liquid, solid, semisolid) of the material. Materials of different classifications shall be staged separately with no mixing or co-mingling.

When containers are used, the containers and their contents shall remain intact and inaccessible to unauthorized persons until the manner of disposal is determined. The Contractor shall be responsible for all activities associated with the storage containers including, but not limited to, the procurement, transport, and labeling of the containers. The Contractor shall not use a storage container if visual inspection of the container reveals the presence of free liquids or other substances that could cause the waste to be reclassified as a hazardous or special waste.

When stockpiles are used, they shall be covered with a minimum 20-mil plastic sheeting or tarps secured using weights or tie-downs. Perimeter berms or diversionary trenches shall be provided to contain and collect for disposal any water that drains from the soil. Stockpiles shall be managed to prevent or reduce potential dust generation.

When staging non-special waste, special waste, or hazardous waste, the following additional requirements shall apply:

- (a) Non-Special Waste. When stockpiling soil classified according to Article 669.05(a)(1) or 669.05(a)(5), an impermeable surface barrier between the materials and the ground surface shall be installed. The impermeable barrier shall consist of a minimum 20-mil plastic liner material and the surface of the stockpile area shall be clean and free of debris prior to placement of the liner. Measures shall also be taken to limit or discourage access to the staging area.
- (b) Special Waste and Hazardous Waste. Soil classified according to Article 669.05(a)(6) shall not be stockpiled but shall be containerized immediately upon generation in containers, tanks or containment buildings as defined by RCRA, Toxic Substances Control Act (TSCA), and other applicable State or local regulations and requirements, including 35 Ill. Admin. Code Part 722, Standards Applicable to Generators of Hazardous Waste.

The staging area(s) shall be enclosed (by a fence or other structure) to restrict direct access to the area, and all required regulatory identification signs applicable to a staging area containing special waste or hazardous waste shall be deployed.

Storage containers shall be placed on an all-weather gravel-packed, asphalt, or concrete surface. Containers shall be in good condition and free of leaks, large dents, or severe rusting, which may compromise containment integrity. Containers must be constructed of, or lined with, materials that will not react or be otherwise incompatible with the hazardous or special waste contents. Containers used to store liquids shall not be filled more than 80 percent of the rated capacity. Incompatible wastes shall not be placed in the same container or comingled.

All containers shall be legibly labeled and marked using pre-printed labels and permanent marker in accordance with applicable regulations, clearly showing the date of waste generation, location and/or area of waste generation, and type of waste. The Contractor shall place these identifying markings on an exterior side surface of the container.

Storage containers shall be kept closed, and storage pads covered, except when access is needed by authorized personnel.

Special waste and hazardous waste shall be transported and disposed within 90 days from the date of generation.

669.08 Underground Storage Tank Removal. For the purposes of this section, an underground storage tank (UST) includes the underground storage tank, piping, electrical controls, pump island, vent pipes and appurtenances.

Prior to removing an UST, the Engineer shall determine whether the Department is considered an "owner" or "operator" of the UST as defined by the UST regulations (41 Ill. Adm. Code Part 176). Ownership of the UST refers to the Department's owning title to the UST during storage, use or dispensing of regulated substances. The Department may be considered an "operator" of the UST if it has control of, or has responsibility for, the daily operation of the UST. The Department may however voluntarily undertake actions to remove an UST from the ground without being deemed an "operator" of the UST.

In the event the Department is deemed not to be the "owner" or "operator" of the UST, the OSFM removal permit shall reflect who was the past "owner" or "operator" of the UST. If the "owner" or "operator" cannot be determined from past UST registration documents from OSFM, then the OSFM removal permit will state the "owner" or "operator" of the UST is the Department. The Department's Office of Chief Counsel (OCC) will review all UST removal permits prior to submitting any removal permit to the OSFM. If the Department is not the "owner" or "operator" of the UST then it will not register the UST or pay any registration fee.

The Contractor shall be responsible for obtaining permits required for removing the UST, notification to the OSFM, using an OSFM certified tank contractor, removal and disposal of the UST and its contents, and preparation and submittal of the OSFM Site Assessment Report in accordance with 41 Ill. Admin. Code Part 176.330.

The Contractor shall contact the Engineer and the OSFM's office at least 72 hours prior to removal to confirm the OSFM inspector's presence during the UST removal. Removal, transport, and disposal of the UST shall be according to the applicable portions of the latest revision of the "American Petroleum Institute (API) Recommended Practice 1604".

The Contractor shall collect and analyze tank content (sludge) for disposal purposes. The Contractor shall remove as much of the regulated substance from the UST system as necessary to prevent further release into the environment. All contents within the tank shall be removed, transported and disposed of, or recycled. The tank shall be removed and rendered empty according to IEPA definition.

The Contractor shall collect soil samples from the bottom and sidewalls of the excavated area in accordance with 35 Ill. Admin. Code Part 734.210(h) after the required backfill has been removed during the initial response action, to determine the level of contamination remaining in the ground, regardless if a release is confirmed or not by the OSFM on-site inspector.

In the event the UST is designated a leaking underground storage tank (LUST) by the OSFM's inspector, or confirmation by analytical results, the Contractor shall notify the Engineer and the District Environmental Studies Unit (DESU). Upon confirmation of a release of contaminants and notifications to the Engineer and DESU, the Contractor shall report the release to the Illinois Emergency Management Agency (IEMA) (e.g., by telephone or electronic mail) and provide them with whatever information is available ("owner" or "operator" shall be stated as the past registered "owner" or "operator", or the IDOT District in which the tank is located and the DESU Manager).

The Contractor shall perform the following initial response actions if a release is indicated by the OSFM inspector:

- (a) Take immediate action to prevent any further release of the regulated substance to the environment, which may include removing, at the Engineer's discretion, and disposing of up to 4 ft (1.2 m) of the contaminated material, as measured from the outside dimension of the tank;
- (b) Identify and mitigate fire, explosion and vapor hazards;
- (c) Visually inspect any above ground releases or exposed below ground releases and prevent further migration of the released substance into surrounding soils and groundwater; and
- (d) Continue to monitor and mitigate any additional fire and safety hazards posed by vapors and free product that have migrated from the tank excavation zone and entered into subsurface structures (such as sewers or basements).

The tank excavation shall be backfilled according to applicable portions of Sections 205, 208, and 550 with a material that will compact and develop stability. All uncontaminated concrete and soil removed during tank extraction may be used to backfill the excavation, at the discretion of the Engineer.

After backfilling the excavation, the site shall be graded and cleaned.

669.09 Regulated Substances Final Construction Report. Not later than 90 days after completing this work, the Contractor shall submit a "Regulated Substances Final Construction Report (RSFCR)" to the Engineer using form BDE 2733 and required attachments. The form shall be signed by an Illinois licensed Professional Engineer or Professional Geologist.

669.10 Method of Measurement. Non-special waste, special waste, and hazardous waste soil will be measured for payment according to Article 202.07(b) when performing earth excavation, Article 502.12(b) when excavating for structures, or by computing the volume of the trench using the maximum trench width permitted and the actual depth of the trench.

Groundwater containerized and transported off-site for management, storage, and disposal will be measured for payment in gallons (liters).

Backfill plugs will be measured in cubic yards (cubic meters) in place, except the quantity for which payment will be made shall not exceed the volume of the trench, as computed by using the maximum width of trench permitted by the Specifications and the actual depth of the trench, with a deduction for the volume of the pipe.

Engineered Barriers will be measured for payment in square yards (square meters).

669.11 Basis of Payment. The work of preparing, submitting and administering a Regulated Substances Pre-Construction Plan will be paid for at the contract lump sum price for REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN.

Regulated substances monitoring, including completion of form BDE 2732 for each day of work, will be paid for at the contract unit price per calendar day, or fraction thereof to the nearest 0.5 calendar day, for REGULATED SUBSTANCES MONITORING.

The installation of engineered barriers will be paid for at the contract unit price per square yard (square meter) for ENGINEERED BARRIER.

The work of UST removal, soil excavation, soil and content sampling, the management of excavated soil and UST content, and UST disposal, will be paid for at the contract unit price per each for UNDERGROUND STORAGE TANK REMOVAL.

The transportation and disposal of soil and other materials from an excavation determined to be contaminated will be paid for at the contract unit price per cubic yard (cubic meter) for NON-SPECIAL WASTE DISPOSAL, SPECIAL WASTE DISPOSAL, or HAZARDOUS WASTE DISPOSAL.

The transportation and disposal of groundwater from an excavation determined to be contaminated will be paid for at the contract unit price per gallon (liter) for SPECIAL WASTE GROUNDWATER DISPOSAL or HAZARDOUS WASTE GROUNDWATER DISPOSAL. When groundwater is discharged to a sanitary or combined sewer by permit, the cost will be paid for according to Article 109.05.

Backfill plugs will be paid for at the contract unit price per cubic yard (cubic meter) for BACKFILL PLUGS.

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) will be paid for according to Article 109.04. The Department will not be responsible for any additional costs incurred, if mismanagement of the staging area, storage containers, or their contents by the Contractor results in excess cost expenditure for disposal or other material management requirements.

Payment for accumulated stormwater removal and disposal will be according to Article 109.04. Payment will only be allowed if appropriate stormwater and erosion control methods were used.

Payment for decontamination, labor, material, and equipment for monitoring areas beyond the specified areas, with the Engineer's prior written approval, will be according to Article 109.04.

When the waste material for disposal requires sampling for landfill disposal acceptance, the samples shall be analyzed for TCLP VOCs, SVOCs, RCRA metals, pH, ignitability, and paint filter test. The analysis will be paid for at the contract unit price per each for SOIL DISPOSAL ANALYSIS using EPA Methods 1311 (extraction), 8260B for VOCs, 8270C for SVOCs, 6010B and 7470A for RCRA metals, 9045C for pH, 1030 for ignitability, and 9095A for paint filter.

The work of preparing, submitting and administering a Regulated Substances Final Construction Report will be paid for at the contract lump sum price REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT."

SILT FENCE, GROUND STABILIZATION AND RIPRAP FILTER FABRIC (BDE)

Effective: November 1, 2019

Revise Article 1080.02 of the Standard Specifications to read:

“ **1080.02 Geotextile Fabric.** The fabric for silt filter fence shall consist of woven fabric meeting the requirements of AASHTO M 288 for unsupported silt fence.

The fabric for ground stabilization shall consist of woven yarns or nonwoven filaments of polyolefins or polyesters. Woven fabrics shall be Class 2 and nonwoven fabrics shall be Class 1 according to AASHTO M 288.

The physical properties for silt fence and ground stabilization fabrics shall be according to the following.

| PHYSICAL PROPERTIES | | | |
|--|-----------------------------------|--|---|
| | Silt Fence Woven ^{1/} | Ground Stabilization Woven ^{2/} | Ground Stabilization Nonwoven ^{2/} |
| Grab Strength, lb (N) ^{3/} ASTM D 4632 | 123 (550) MD 101 (450) XD | 247 (1100) min. ^{4/} | 202 (900) min. ^{4/} |
| Elongation/Grab Strain, % ASTM D 4632 ^{4/} | 49 max. | 49 max. | 50 min. |
| Trapezoidal Tear Strength, lb (N) ASTM D 4533 ^{4/} | -- | 90 (400) min. | 79 (350) min. |
| Puncture Strength, lb (N) ASTM D 6241 ^{4/} | -- | 494 (2200) min. | 433 (1925) min. |
| Apparent Opening Size, Sieve No. (mm) ASTM D 4751 ^{5/} | 30 (0.60) max. | 40 (0.43) max. | 40 (0.43) max. |
| Permittivity, sec ⁻¹ ASTM D 4491 | 0.05 min. | | |
| Ultraviolet Stability, % retained strength after 500 hours of exposure ASTM D 4355 | 70 min. | 50 min. | 50 min. |

1/ NTPEP results or manufacturer’s certification to meet test requirements.

2/ NTPEP results to meet test requirements. Manufacturer shall have public release status and current reports on laboratory results in Test Data of NTPEP’s DataMine.

3/ MD = Machine direction. XD = Cross-machine direction.

4/ Values represent the minimum average roll value (MARV) in the weaker principle direction, MD or XD.

5/ Values represent the maximum average roll value.”

Revise Article 1080.03 of the Standard Specifications to read:

“ **1080.03 Filter Fabric.** The filter fabric shall consist of woven yarns or nonwoven filaments of polyolefins or polyesters. Woven fabrics shall be Class 3 for riprap gradations RR 4 and RR 5, and Class 2 for RR 6 and RR 7 according to AASHTO M 288. Woven slit film geotextiles (i.e. geotextiles made from yarns of a flat, tape-like character) shall not be permitted. Nonwoven fabrics shall be Class 2 for riprap gradations RR 4 and RR 5, and Class 1 for RR 6 and RR 7 according to AASHTO M 288. After forming, the fabric shall be processed so that the yarns or filaments retain their relative positions with respect to each other. The fabric shall be new and undamaged.

The filter fabric shall be manufactured in widths of not less than 6 ft (2 m). Sheets of fabric may be sewn together with thread of a material meeting the chemical requirements given for the yarns or filaments to form fabric widths as required. The sheets of filter fabric shall be sewn together at the point of manufacture or another approved location.

The filter fabric shall be according to the following.

| PHYSICAL PROPERTIES ^{1/} | | | | |
|--|-------------------------------|--------------------|-------------------------------|--------------------|
| | Gradation Nos. RR 4 & RR 5 | | Gradation Nos. RR 6 & RR 7 | |
| | Woven | Nonwoven | Woven | Nonwoven |
| Grab Strength, lb (N) ASTM D 4632 ^{2/} | 180 (800) min. | 157 (700) min. | 247 (1100) min. | 202 (900) min. |
| Elongation/Grab Strain, % ASTM D 4632 ^{2/} | 49 max. | 50 min. | 49 max. | 50 min. |
| Trapezoidal Tear Strength, lb (N) ASTM D 4533 ^{2/} | 67 (300) min. | 56 (250) min. | 90 (400) min. | 79 (350) min. |
| Puncture Strength, lb (N) ASTM D 6241 ^{2/} | 370 (1650) min. | 309 (1375) min. | 494 (2200) min. | 433 (1925) min. |
| Ultraviolet Stability, % retained strength after 500 hours of exposure - ASTM D 4355 | 50 min. | | | |

- 1/ NTPEP results to meet test requirements. Manufacturer shall have public release status and current reports on laboratory results in Test Data of NTPEP’s DataMine.
- 2/ Values represent the minimum average roll value (MARV) in the weaker principle direction [machine direction (MD) or cross-machine direction (XD)].

As determined by the Engineer, the filter fabric shall meet the requirements noted in the following after an onsite investigation of the soil to be protected.

| Soil by Weight (Mass) Passing the No. 200 sieve (75 μ m), % | Apparent Opening Size, Sieve No. (mm) - ASTM D 4751 ^{1/} | Permittivity, sec ⁻¹ ASTM D 4491 |
|---|---|---|
| 49 max. | 60 (0.25) max. | 0.2 min. |
| 50 min. | 70 (0.22) max. | 0.1 min. |

1/ Values represent the maximum average roll value.”

SPEED DISPLAY TRAILER (BDE)

Effective: April 2, 2014

Revised: January 1, 2017

Revise the third 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: August 1, 2017

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

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

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

- (a) The dates and quantity of steel, in lb (kg), shipped from the mill to the fabricator.
- (b) The quantity of steel, in lb (kg), incorporated into the various items of work covered by this special provision. The Department reserves the right to verify submitted quantities.

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

$$SCA = Q \times D$$

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

$$D = MPI_M - MPI_L$$

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

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

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

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

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

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

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

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

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

Attachment

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

STEEL PLATE BEAM GUARDRAIL MANUFACTURING (BDE)

Effective: January 1, 2019

Revise the first three paragraphs of Article 1006.25 of the Standard Specifications to read:

“**1006.25 Steel Plate Beam Guardrail.** Steel plate beam guardrail, including bolts, nuts, and washers, shall be according to AASHTO M 180. The guardrail shall be Class A, with a Type II galvanized coating.

Steel plates for mounting guardrail on existing culverts shall be according to AASHTO M 270 Grade 36 (M 270M Grade 250) and zinc coated according to AASHTO M 111.

The Department will accept guardrail based on the “Brand Registration and Guarantee” requirements of AASHTO M 180 and the manufacturer shall be listed as compliant through the NTPEP Program. The Department will maintain a qualified product list.”

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%” |

TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (BDE)

Effective: November 1, 2018

Revise Article 631.04 of the Supplemental Specifications to read:

“631.04 Traffic Barrier Terminal, Type 1 Special (Tangent) and Traffic Barrier Terminal, Type 1 Special (Flared). These terminals shall be on the Department’s qualified product list.

The terminal shall be installed according to the manufacturer’s specifications. The beginning length of need point of the terminal shall be placed within 12 ft 6 in (3.8 m) of the length of need point shown on the plans.

The terminal shall be delineated with a terminal marker direct applied. No other guardrail delineation shall be attached to the terminal section.”

Revise the first paragraph of Article 631.12 of the Standard Specifications to read:

“631.12 Method of Measurement. The various types of traffic barrier terminals will be measured for payment, complete in place, in units of each. The pay limit between the traffic barrier terminal and the adjacent guardrail shall be as shown on the plans, except for the following:

- (a) Traffic Barrier Type 1, Special. The pay limit for a traffic barrier, Type 1 special shall be as shown on the manufacturer’s drawing(s).
- (b) Traffic Barrier Type 10. The pay limit for the traffic barrier terminal, Type 10 shall be at the centerline of the end shoe splice.”

TRAFFIC CONTROL DEVICES - CONES (BDE)

Effective: January 1, 2019

Revise Article 701.15(a) of the Standard Specifications to read:

“(a) Cones. Cones are used to channelize traffic. Cones used to channelize traffic at night shall be reflectorized; however, cones shall not be used in nighttime lane closure tapers or nighttime lane shifts.”

Revise Article 1106.02(b) of the Standard Specifications to read:

“(b) Cones. Cones shall be predominantly orange. Cones used at night that are 28 to 36 in. (700 to 900 mm) in height shall have two white circumferential stripes. If non-reflective spaces are left between the stripes, the spaces shall be no more than 2 in. (50mm) in width. Cones used at night that are taller than 36 in. (900 mm) shall have a minimum of two white and two fluorescent orange alternating, circumferential stripes with the top stripe being fluorescent orange. If non-reflective spaces are left between the stripes, the spaces shall be no more than 3 in. (75 mm) in width.

The minimum weights for the various cone heights shall be 4 lb for 18 in. (2 kg for 450 mm), 7 lb for 28 in. (3 kg for 700 mm), and 10 lb for 36 in. (5 kg for 900 mm) with a minimum of 60 percent of the total weight in the base. Cones taller than 36 in. shall be weighted per the manufacturer’s specifications such that they are not moved by wind or passing traffic.”

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.”

TRAVERSABLE PIPE GRATE FOR CONCRETE END SECTIONS (BDE)

Effective: January 1, 2013

Revised: January 1, 2018

Description. This work shall consist of constructing a traversable pipe grate on a concrete end section.

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

| Item | Article/Section |
|--|-----------------|
| (a) Traversable Pipe Grate Components (Note 1) | |
| (b) Chemical Adhesive Resin System | 1027 |
| (c) High Strength Steel Bolts, Nuts, and Washers (Note 2)..... | 1006.08 |

Note 1. All steel pipe shall be according to ASTM A 53 (Type E or S), Grade B, or ASTM A 500 Grade B, standard weight (SCH. 40). Structural steel shapes and plates shall be according to AASHTO M270 Grade 50 (M 270M Grade 345) and the requirements of Article 1006.04 of the Standard Specifications. All steel components of the grating system shall be galvanized according to AASHTO M 111 or ASTM F 2329 as applicable.

Anchor rods shall be according to ASTM F 1554, Grade 36 (Grade 250).

Note 2. Threaded rods conforming to the requirements of ASTM F 1554, Grade 105 (Grade 725) may be used for the thru bolts.

CONSTRUCTION REQUIREMENTS

Fabrication of the traversable pipe grate shall be according to the requirements of Section 505 of the Standard Specifications and as shown on the plans.

Anchor rods shall be set according to Article 509.06 of the Standard Specifications. Bolts and anchor rods shall be snug tightened by a few impacts of an impact wrench or the full force of a worker using an ordinary spud wrench. Thru bolts shall be snug tightened and shall be brought to a snug tight condition followed by an additional 2/3 turn on one of the nuts. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut.

Splicing of pipes shall be made by utilizing full penetration butt welds according to Article 505.04(q) of the Standard Specifications. In lieu of welding, bolted or sleeve type splices may be utilized, provided the splices are located over intermediate supports with no more than one splice per pipe run with the exception that no splice may occur in pipe runs under 30 ft (9 m) in length.

Method of Measurement. This work will be measured for payment in place in feet (meters). The length measured shall be along the pipe grate elements from end to end for both longitudinal and intermediate support pipes.

Basis of Payment. This work will be paid for at the contract unit price per foot (meter) for TRAVERSABLE PIPE GRATE FOR CONCRETE END SECTION.

WARM MIX ASPHALT (BDE)

Effective: January 1, 2012

Revised: April 1, 2016

Description. This work shall consist of designing, producing and constructing Warm Mix Asphalt (WMA) in lieu of Hot Mix Asphalt (HMA) at the Contractor's option. Work shall be according to Sections 406, 407, 408, 1030, and 1102 of the Standard Specifications, except as modified herein. In addition, any references to HMA in the Standard Specifications, or the special provisions shall be construed to include WMA.

WMA is an asphalt mixture which can be produced at temperatures lower than allowed for HMA utilizing approved WMA technologies. WMA technologies are defined as the use of additives or processes which allow a reduction in the temperatures at which HMA mixes are produced and placed. WMA is produced by the use of additives, a water foaming process, or combination of both. Additives include minerals, chemicals or organics incorporated into the asphalt binder stream in a dedicated delivery system. The process of foaming injects water into the asphalt binder stream, just prior to incorporation of the asphalt binder with the aggregate.

Approved WMA technologies may also be used in HMA provided all the requirements specified herein, with the exception of temperature, are met. However, asphalt mixtures produced at temperatures in excess of 275 °F (135 °C) will not be considered WMA when determining the grade reduction of the virgin asphalt binder grade.

Equipment.

Revise the first paragraph of Article 1102.01 of the Standard Specifications to read:

“1102.01 Hot-Mix Asphalt Plant. The hot-mix asphalt (HMA) plant shall be the batch-type, continuous-type, or dryer drum plant. The plants shall be evaluated for prequalification rating and approval to produce HMA according to the current Bureau of Materials and Physical Research Policy Memorandum, “Approval of Hot-Mix Asphalt Plants and Equipment”. Once approved, the Contractor shall notify the Bureau of Materials and Physical Research to obtain approval of all plant modifications. The plants shall not be used to produce mixtures concurrently for more than one project or for private work unless permission is granted in writing by the Engineer. The plant units shall be so designed, coordinated and operated that they will function properly and produce HMA having uniform temperatures and compositions within the tolerances specified. The plant units shall meet the following requirements.”

Add the following to Article 1102.01(a) of the Standard Specifications.

“(11) Equipment for Warm Mix Technologies.

- a. Foaming. Metering equipment for foamed asphalt shall have an accuracy of ± 2 percent of the actual water metered. The foaming control system shall be electronically interfaced with the asphalt binder meter.
- b. Additives. Additives shall be introduced into the plant according to the supplier’s recommendations and shall be approved by the Engineer. The system for introducing the WMA additive shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes.”

Mix Design Verification.

Add the following to Article 1030.04 of the Standard Specifications.

“(e) Warm Mix Technologies.

- (1) Foaming. WMA mix design verification will not be required when foaming technology is used alone (without WMA additives). However, the foaming technology shall only be used on HMA designs previously approved by the Department.
- (2) Additives. WMA mix designs utilizing additives shall be submitted to the Engineer for mix design verification.”

Construction Requirements.

Revise the second paragraph of Article 406.06(b)(1) of the Standard Specifications to read:

“The HMA shall be delivered at a temperature of 250 to 350 °F (120 to 175 °C). WMA shall be delivered at a minimum temperature of 215 °F (102 °C).”

Basis of Payment.

This work will be paid at the contract unit price bid for the HMA pay items involved. Anti-strip will not be paid for separately, but shall be considered as included in the cost of the work.

WEEKLY DBE TRUCKING REPORTS (BDE)

Effective: June 2, 2012

Revised: April 2, 2015

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 Monday through Sunday 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.

WORKING DAYS (BDE)

Effective: January 1, 2002

The Contractor shall complete the work within 100 working days.

STORM WATER POLLUTION PREVENTION PLAN




Storm Water Pollution Prevention Plan



| | | |
|-------------------------------|----------------------|----------------------------------|
| Route FAI 57 | Marked Route I-57 | Section Number 46-2 (1) HBR-2 |
| Project Number C-93-103-12 | County Kankakee | Contract Number 66961 |

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 08/16/17 |
|---|------------------|

| | | |
|----------------------------|----------------------------|---|
| Print Name Masood Ahmad | Title Regional Engineer | Agency Illinois Department of Transportation |
|----------------------------|----------------------------|---|

Note: Guidance on preparing each section of BDE 2342 can be found in Chapter 41 of the IDOT Bureau of Design and Environment (BDE) Manual. Chapter 41 and this form also reference the IDOT Drainage Manual which should be readily available.

I. Site Description:

A. Provide a description of the project location; include latitude and longitude, section, town, and range:
 The Project consists of Bridge Replacement on Larry Powers Road over I-57 in Kankakee County. It is located at approximately 41°10'38.0"N 87°51'57.2"W, S8 T31N R12 & S17 T31 R12E.

B. Provide a description of the construction activity which is the subject of this plan. Include the number of construction stages, drainage improvements, in-stream work, installation, maintenance, removal of erosion measures, and permanent stabilization:
 The construction activity will consist of removal of existing bridge and pavement. Construction of bridge, pavement, multi-use path and embankment. The work shall include temporary erosion control measures (temporary seeding, silt fence, inlet protection, ditch checks) to be implemented and maintained during the project. As well as permanent seeding, storm sewer and slope drains, and erosion control blanket.

C. Provide the estimated duration of this project:
 The project is estimated to take 1 year.

D. The total area of the construction site is estimated to be 4 _____ acres.
 The total area of the site estimated to be disturbed by excavation, grading or other activities is 4 _____ 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:
 The existing runoff coefficient is approximately .39. After construction the runoff coefficient would be approximately .49.

F. List all soils found within project boundaries; include map unit name, slope information, and erosivity:
 Elliot Silt Loam (146A) - A somewhat poorly drained soil with moderately low to moderately high permeability. This soil is moderately susceptible to water erosion and is slightly susceptible to wind erosion with slopes

between 0 and 2 percent.

Ashkum Silty Clay Loam (232A) - A poorly drained soil with moderately high permeability. This soil has low susceptibility to water erosion and is moderately susceptible to wind erosion with slopes between 0 and 2 percent.

Beecher Silt Loam (298A) - A somewhat poorly drained soil with moderately low to moderately high permeability. This soil has very moderate susceptibility to water erosion and is slightly susceptible to wind erosion with slopes between 0 and 2 percent.

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

H. Provide a description of potentially erosive areas associated with this project:
The greatest concerns will be wind and water erosion of the soil on the slopes of the embankment.

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.):
The bridge, piers, and pavement will be removed. The embankments will be built up and graded to a 1:2 slope, which will increase from approximately 2 feet to approximately 25 feet vertical height.

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:
N/A

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

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:
N/A

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.

N/A

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.

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:

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:

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

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

Applicable Federal, Tribal, State, or Local Programs

Floodplain

Historic Preservation

Receiving waters with Total Maximum Daily Load (TMDL) for sediment, total suspended solids, turbidity or siltation
 TMDL (fill out this section if checked above)

The name(s) of the listed water body:

Provide a description of the erosion and sediment control strategy that will be incorporated into the site design that is consistent with the assumptions and requirements of the TMDL:

If a specific numeric waste load allocation has been established that would apply to the project's discharges, provide a description of the necessary steps to meet that allocation:

Threatened and Endangered Species/Illinois Natural Areas (INA)/Nature Preserves

Other

Wetland

P. The following pollutants of concern will be associated with this construction project:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Antifreeze / Coolants | <input checked="" type="checkbox"/> Solid Waste Debris |
| <input checked="" type="checkbox"/> Concrete | <input checked="" type="checkbox"/> Solvents |
| <input checked="" type="checkbox"/> Concrete Curing Compounds | <input checked="" type="checkbox"/> Waste water from cleaning construction equipments |
| <input checked="" type="checkbox"/> Concrete Truck Waste | <input type="checkbox"/> Other (Specify) _____ |
| <input checked="" type="checkbox"/> Fertilizers / Pesticides | <input type="checkbox"/> Other (Specify) _____ |
| <input checked="" type="checkbox"/> Paints | <input type="checkbox"/> Other (Specify) _____ |
| <input checked="" type="checkbox"/> Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids) | <input type="checkbox"/> Other (Specify) _____ |
| <input checked="" type="checkbox"/> Soil Sediment | <input type="checkbox"/> 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:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Erosion Control Blanket / Mulching | <input type="checkbox"/> Temporary Turf (Seeding, Class 7) |
| <input type="checkbox"/> Geotextiles | <input type="checkbox"/> Temporary Mulching |
| <input checked="" type="checkbox"/> Permanent Seeding | <input type="checkbox"/> Vegetated Buffer Strips |
| <input type="checkbox"/> Preservation of Mature Seeding | <input type="checkbox"/> Other (Specify) _____ |
| <input type="checkbox"/> Protection of Trees | <input type="checkbox"/> Other (Specify) _____ |
| <input type="checkbox"/> Sodding | <input type="checkbox"/> Other (Specify) _____ |
| <input checked="" type="checkbox"/> Temporary Erosion Control Seeding | <input type="checkbox"/> Other (Specify) _____ |

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

Temporary erosion control seeding will be used throughout the grading of embankment slopes and ditches, when activity has temporarily ceased.

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

Upon completion of grading activities, permanent seed will be applied with erosion control blanket.

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.

- | | |
|--|---|
| <input type="checkbox"/> Aggregate Ditch | <input checked="" type="checkbox"/> Stabilized Construction Exits |
| <input type="checkbox"/> Concrete Revetment Mats | <input type="checkbox"/> Stabilized Trench Flow |
| <input checked="" type="checkbox"/> Dust Suppression | <input type="checkbox"/> Slope Mattress |
| <input type="checkbox"/> Dewatering Filtering | <input type="checkbox"/> Slope Walls |
| <input type="checkbox"/> Gabions | <input checked="" type="checkbox"/> Temporary Ditch Check |

- | | |
|---|---|
| <input type="checkbox"/> In-Stream or Wetland Work <input type="checkbox"/> Level Spreaders <input type="checkbox"/> Paved Ditch <input type="checkbox"/> Permanent Check Dams <input checked="" type="checkbox"/> Perimeter Erosion Barrier <input type="checkbox"/> Permanent Sediment Basin <input type="checkbox"/> Retaining Walls <input type="checkbox"/> Riprap <input type="checkbox"/> Rock Outlet Protection <input type="checkbox"/> Sediment Trap <input checked="" type="checkbox"/> Storm Drain Inlet Protection | <input type="checkbox"/> Temporary Pipe Slope Drain <input type="checkbox"/> Temporary Sediment Basin <input type="checkbox"/> Temporary Stream Crossing <input checked="" type="checkbox"/> Turf Reinforcement Mats <input type="checkbox"/> Other (Specify) _____ <input type="checkbox"/> Other (Specify) _____ <input type="checkbox"/> Other (Specify) _____ <input type="checkbox"/> Other (Specify) _____ <input type="checkbox"/> Other (Specify) _____ <input type="checkbox"/> Other (Specify) _____ <input type="checkbox"/> Other (Specify) _____ |
|---|---|

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

Temporary ditch checks will be used in ditch bottoms to slow runoff flow and help prevent erosion of soils. Inlet and pipe protection will be used to retain soil material on site. Stabilized construction exits will be utilized to prevent vehicles and machinery from transporting soil off site. Turf reinforcement mats will be placed at outlets to prevent soil erosion from runoff. Perimeter erosion barrier will contain erodible soil on site. Dust protection will be used to minimize loss of soil from wind erosion.

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

Temporary ditch checks, inlet protection, perimeter erosion barrier and turf reinforcement mats will be maintained until permanent seeding has satisfactorily taken root. Stabilized construction exits will be maintained until sufficient road construction prevents soil loss.

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.

- 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.

- Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., maintenance of hydrologic conditions such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Description of permanent storm water management controls:

The permanent storm water management controls will be oversized storm sewers.

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:

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.

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.

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (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).

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.

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). 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 bid proposal or request for proposal 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).

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.

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. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 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 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, 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 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, 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 230, 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 (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 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 35 and 29 CFR 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.

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, 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 who 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.

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, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure 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. 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, 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, 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 there under. 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, 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 and 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. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor 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 contracting agency deems appropriate.

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 \$10,000 or more.

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, 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). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

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

a. All laborers and mechanics employed or working upon the site of the work, 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 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.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. 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 shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). 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 classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall 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. (1) The contracting officer shall 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 shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore 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 utilized 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) 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 shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. 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.

(3) 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 shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour 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.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall 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.

c. 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 shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. 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, 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.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, 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.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, 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 section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) 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 section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall 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. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed 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 Regulations, 29 CFR part 3;

(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 of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, 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 may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed 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 Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall 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 the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Apprentices shall 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, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. 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. 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 journeymen 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.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 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.

9. Disputes concerning labor standards. 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 he or she) 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 section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

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 watchmen 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.

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. 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 watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 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.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or 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, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

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" 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:

(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.

2. 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. 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.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

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 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.

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 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).

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 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 1, 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

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

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.

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.

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 or default.

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.

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 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee 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 grantee or subgrantee 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.

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.

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. 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 Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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. 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) 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;

(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; 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.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. 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)

a. By signing and submitting this proposal, the prospective lower tier 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.

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 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 grantee or subgrantee 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 grantee or subgrantee 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.

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.

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 Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall 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 20).

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.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

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.

Contract Provision - Cargo Preference Requirements

In accordance with Title 46 CFR § 381.7 (b), the contractor 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.

(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 Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.”

Provisions (1) and (2) apply to materials or equipment that are acquired solely for the project. The two provisions do not apply to goods or materials that come into inventories independent of the project, such as shipments of Portland cement, asphalt cement, or aggregates, when industry suppliers and contractors use these materials to replenish existing inventories.

**MINIMUM WAGES FOR FEDERAL AND FEDERALLY
ASSISTED CONSTRUCTION CONTRACTS**

This project is funded, in part, with Federal-aid funds and, as such, is subject to the provisions of the Davis-Bacon Act of March 3, 1931, as amended (46 Sta. 1494, as amended, 40 U.S.C. 276a) and of other Federal statutes referred to in a 29 CFR Part 1, Appendix A, as well as such additional statutes as may from time to time be enacted containing provisions for the payment of wages determined to be prevailing by the Secretary of Labor in accordance with the Davis-Bacon Act and pursuant to the provisions of 29 CFR Part 1. The prevailing rates and fringe benefits shown in the General Wage Determination Decisions issued by the U.S. Department of Labor shall, in accordance with the provisions of the foregoing statutes, constitute the minimum wages payable on Federal and federally assisted construction projects to laborers and mechanics of the specified classes engaged on contract work of the character and in the localities described therein.

General Wage Determination Decisions, modifications and supersedes decisions thereto are to be used in accordance with the provisions of 29 CFR Parts 1 and 5. Accordingly, the applicable decision, together with any modifications issued, must be made a part of every contract for performance of the described work within the geographic area indicated as required by an applicable DBRA Federal prevailing wage law and 29 CFR Part 5. The wage rates and fringe benefits contained in the General Wage Determination Decision shall be the minimum paid by contractors and subcontractors to laborers and mechanics.