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Letting June 15, 2018

Notice to Bidders, Specifications and Proposal



Springfield, Illinois 62764

Contract No. 78390
WHITE County
Section 5B-3
Route FAP 332
Project NHPP-IIBY(899)
District 9 Construction Funds

Prepared by

Checked by

Illinois Department of Transportation

NOTICE TO BIDDERS

- 1. TIME AND PLACE OF OPENING BIDS. Electronic bids are to be submitted to the electronic bidding system (iCX-Integrated Contractors Exchange). All bids must be submitted to the iCX system prior to 10:00 a.m. June 15, 2018 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. 78390
WHITE County
Section 5B-3
Project NHPP-IIBY(899)
Route FAP 332
District 9 Construction Funds

Remove and replace SN 097-7047 with a box culvert on IL 1 over an unnamed creek in Crossville.

- 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

Randall S. Blankenhorn, Secretary

INDEX FOR SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2018

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 1-1-18)

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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 FAP Route 332 (IL 1), Project NHPP-IIBY(899), Section 5B-3, White County, Contract No. 78390, 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

This project is located on FAP 332 (IL Route 1) approximately 0.1mi north of IL 14 in the Village of Crossville, White County.

DESCRIPTION OF PROJECT

The project involves the removal and replacement of the structure that carries IL Route 1 over an unnamed Tributary to Elliot Creek. The existing structure is a single 12'W x 4'-6"H reinforced concrete box culvert built in 1924 with a 40 degree skew and measuring 50'-0" out-to-out of headwalls. The proposed structure is a single 12'W x 5'H cast-in-place reinforced concrete box culvert with a 50 degree skew and measuring 76-0" out-to-out of headwalls. The removal and replacement shall be completed using stage construction that includes temporary bridge signals, soil retention system, temporary steel railings, and concrete barriers. Incidental improvements consist of sewer relocation, sidewalk construction, and concrete paving.

UTILITIESEffective 1984

Revised 2/10/17

Add the following after the first paragraph of Article 105.07 of the Standard Specifications:

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

| Name and Address of Utility | Туре | Locations | Anticipated Relocation Date |
|---|--------------------|---|-------------------------------------|
| Ameren Illinois I.P. 2610 Broadway Mt. Vernon, IL 62864 Attn: Terry Allali Tel: (618) 244-8228 Cell: (618) 780-3455 Email: TAllali@ameren.com | ELECTRIC | PARALLELING SOUTHEAST SIDE OF IL-1 | BEFORE OR DURING CONSTRUCTION |
| Clearwave Communications 2 North Vine Street, Floor #2 P.O. Box 808 Harrisburg, IL 62946 Attn: Roth Clayton Tel: (618) 294-8078 Cell: (618) 841-2600 Email: rclayton@corp.clearwave.com | FIBER OPTIC | PARALLELING EAST SIDE OF IL-1 | BEFORE OR DURING CONSTRUCTION |
| Crossville Gas, Water, Sewer P.O. Box 309 Crossville, IL 62827 Attn: Chuck Conner Tel: (618) 966-2237 Cell: (618) 838-0035 Email: villageofcrossville@gmail.com | GAS SEWER WATER | PARALLELING EAST AND WEST SIDE OF IL-1 | BEFORE OR DURING CONSTRUCTION |
| Crossville Communication P.O. Box 209 Crossville, IL 62821 Attn: Stan Rawlinson Tel: (618) 966-2196 Email: srawlinson@crosstelco.com | PHONE | PARALLELING EAST SIDE OF IL-1 | BEFORE OR DURING CONSTRUCTION |

| Frontier Communications 200 W. Cherry Carmi, IL 62821 Attn: Clark James Tel: (618) 382-2887 Cell: (217) 994-3841 Email: james.clark@ftr.com | FIBER OPTIC | PARALLELING EAST SIDE OF IL-1 | BEFORE OR DURING CONSTRUCTION |
|---|----------------|-------------------------------------|-------------------------------------|
| Wabash Communications P.O. Box 299 Louisville, IL 62858 Attn: Mike Chaney Tel: (618) 665-9961 Email: mchaney@wabash.net | FIBER OPTIC | PARALLELING EAST SIDE OF IL-1 | BEFORE OR DURING CONSTRUCTION |
| New Wave Communications 184 Southtowne Shopping Center Du Quoin, IL 62832 Attn: Randy Mathis Tel: (618) 790-9130 Cell: (618) 571-2196 Email: jmathis@newwavecom.com | FIBER OPTIC | PARALLELING EAST SIDE OF IL-1 | BEFORE OR DURING CONSTRUCTION |

The above represents the best information the Department has available 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 applicable edition of the Standard Specifications for Road and Bridge Construction shall apply.

Additional utility information may be obtained by calling the "Joint Utility Location Information for Excavators" phone number, 800-892-0123. This project is located in the Crossville Quadrangle, Section 23, Township 4S, Range 10E, 3rd Principal Meridian.

TRAFFIC CONTROL PLAN

Effective 1985 Revised 2/10/17

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

Special attention is called to Articles 107.09 and 107.14 of the Standard Specifications for Road and Bridge Construction and the following traffic control related (1) Highway Standards; (2) Supplemental Specifications and Recurring Special Provisions; (3) other Special Provisions; and (4) Plan Details which are included in this contract:

- 1. Standards: 701001, 701006, 701011, 701201, 701301, 701321, 701901, & 704001
- 2. Supplemental Specifications and Recurring Special Provisions: Supplemental Specifications for Sections 701, 704, and 1106

- 3. Special Provisions: TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL), NOTIFICATION PRIOR TO STARTING WORK, PORTABLE CHANGEABLE MESSAGE SIGNS, & TEMPORARY CONCRETE BARRIER RELOCATION
- 4. Plan Details: STAGING PLAN AND WIDE LOAD DETOUR SIGNING

Traffic control standards shall be applied as directed by the Engineer. Suggested applications for each standard are as follow:

- <u>701001</u> This standard should be used for work which is performed more than 15' from the edge of pavement.
- 701006 This standard should be used for work which is performed within 15', but not closer than 2' from the edge of pavement.
- 701011 This standard should be used when the Contractor's work is confined to the shoulder.
- 701201 This standard should be applied during daylight operations which require encroachment of any equipment, vehicles, or workers in the area between the center line and a line 2' outside the edge of pavement.
- 701301 This standard will apply when short time work operations are being performed. Typical such operations are temporary pavement marking and miscellaneous survey operations.
- 701321 This standard should be used when the road is limited to one-lane traffic for staged bridge reconstruction or replacement and temporary concrete barrier is being used to shield the work zone.

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

- (a) In accordance with the applicable portions of the Standard Specifications.
- (b) The highway shall be kept open to at least one lane of traffic at all times, and to two lanes of traffic to the greatest extent possible.
- (c) Access to all public roads and private entrances shall be maintained during all stages of the work, unless otherwise shown on plans.
- (d) Over one lane of the existing or new bridge during construction of the opposite lane of the structure.

If at any time the signs are in place but not applicable, they shall be turned from the view of motorists or covered as directed by the Engineer.

The temporary rumble strips shown on the Traffic Control Detail in the plans will be required on this project.

TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL)

In addition to the requirements of Standard 701321, Contractor shall place additional signage along IL State Route I and IL State Route 14, as shown on plans. This work shall be included in the contract unit price for TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL), no additional compensation shall be provided.

NOTIFICATION PRIOR TO STARTING WORK

Effective 12/05 Revised 2/10/17

Revise the first sentence of Article 107.09 Public Convenience and Safety to the following "The Contractor shall notify the Engineer at least 14 days in advance of starting any construction work. For projects involving width or height restrictions or complete closures of the roadway or ramp, an additional 7 days of notice (21 days total) will be required.

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

PORTABLE CHANGEABLE MESSAGE SIGNS

Revised 8/10/17

This work consists of furnishing, placing, and maintaining changeable message sign(s) according to the Standard Specifications and the following:

A total of 2 changeable message signs shall be required in this contract. All signs must be in place and operational for a minimum of 14 calendar days prior to lane or roadway closures. Each sign shall state the day work will begin and delays are possible. The exact message will be approved by the Engineer. The Contractor may be required to relocate each sign multiple times during the contract at his or her expense. The exact location of the placement of these signs shall be determined in the field by the Engineer.

The furnishing, placing, and maintaining of portable changeable message sign(s) shall be paid for per calendar day as CHANGEABLE MESSAGE SIGN.

ROCK FILL - FOUNDATION

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

Materials shall meet the requirements of the following Articles of the Standard Specifications:

CA-6 and CA-7 1004.04 Rock fill 1005.01

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

Less than or equal to 3 ft Stone Riprap RR 1

Greater than 3 ft Primary Crusher Run or Shot Rock (18" max size)

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

Spread Footing 4 to 6 inches CA-6 Cast-In-Place Box Culverts 6 inches CA-6

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

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

This work will be measured and paid for at the contract unit price per ton for ROCK FILL – FOUNDATION. The contract price for ROCK FILL – FOUNDATION shall include aggregate materials and aggregate material placement.

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

TEMPORARY CONCRETE BARRIER RELOCATION

Effective 1988 Revised 2/10/17

This item shall be performed in accordance with the plans, the applicable portions of section 704 of the Standard Specifications, and as specified herein.

The Contractor shall plan the operations involved in removing and relocating the temporary concrete barrier so as to minimize the period when the work zone will be unprotected; and to assure that, in the opinion of the Engineer, sufficient barrier will be in place at the end of each work day to shield traffic from all hazards. During the relocation operations, cones, drums or barricades shall be placed at 10 foot centers across all gaps in the barrier.

Prior to the relocation of the temporary concrete barrier from its initial location, the Contractor shall submit and obtain the Engineer's approval of a work plan for relocating the barrier which will meet the above requirements. The Engineer may require the Contractor to first furnish and install separate additional temporary concrete barrier of sufficient length to assure that the remaining needed barrier can be relocated from the initial installation in one daylight period.

Any additional barrier which must be furnished shall be paid for at the contract unit price per foot for RELOCATE TEMPORARY CONCRETE BARRIER. No additional compensation will be allowed on account of the above requirements.

TEMPORARY SUPPORT SYSTEM

This work shall consist of the design, fabrication, furnishing, erecting and subsequent removal of temporary support system at the location shown on the plans.

The Contractor shall submit complete design details and calculations sealed by an Illinois Licensed Structural Engineer to the Engineer for structural review and approval. Such approval shall in no way relieve the Contractor of responsibility for the safety of workers, the structure and the general public.

After the support system herein specified is no longer required, it shall be completely removed. All materials shall become the property of the Contractor.

This work will be paid for at the contract lump sum price for TEMPORARY SUPPORT SYSTEM.

WEEP HOLE DRAINS FOR ABUTMENTS, WINGWALLS, RETAINING WALLS AND CULVERTS

Effective: April 19, 2012 Revised: October 22, 2013

Delete the last paragraphs of Articles 205.05 and 502.10 and replace with the following.

"If a geocomposite wall drain according to Section 591 is not specified, a prefabricated geocomposite strip drain according to Section 1040.07 shall be placed at the back of each drain hole. The strip drain shall be 24 inches (600 mm) wide and 48 inches (1.220 m) tall. The strip drain shall be centered over the drain hole with the bottom located 12 inches (300 mm) below the bottom of the drain hole. All form boards or other obstructions shall be removed from the drain holes before placing any geocomposite strip drain."

Revise the last sentence of the first paragraph of Article 503.11 to read as follows.

"Drain holes shall be covered to prevent the leakage of backfill material according to Article 502.10."

Revise the title of Article 1040.07 to Geocomposite Wall Drains and Strip Drains.

MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES

Effective: October 4, 2016 Revised: April 13, 2018

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

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

<u>Materials</u>. The materials used in the waterproofing system shall consist of the following.

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

| Physical Properties | |
|--|--|
| Thickness ASTM D 1777 or D 3767 | 60 mils (1.500 mm) min. |
| Width | 36 inches (914 mm) min. |
| Tensile Strength, Membrane ASTM D 412 (Die C) | 325 lb./in ² (2240 kPa) min. |
| Tensile Strength, Film ASTM D 882 | 5000 lb./in ² (34.5 MPa) min. |
| Elongation (Ultimate Failure of Rubberized Asphalt) ASTM D 412 | 300% min. |
| Pliability [180° bend over 1" inch (25 mm) mandrel @ -20 °F (-29 °C)] ASTM D 146 (Modified) or D1970 | No Effect |
| Puncture Resistance-Membrane ASTM E 154 | 40 lb. (178 N) min. |
| Permeability (Perms) ASTM E 96, Method B | 0.1 max. |
| Water Absorption (% by Weight) ASTM D 570 | 0.2 max. |
| Peel Strength ASTM D 903 | 9 lb./in (1576 N/m) min. |

(b) Protective geocomposite drainage sheet composed of a woven monofilament or nonwoven geotextile fabric bonded to a dimpled/ridged drainage core with a smooth backing film providing cushioning for the membrane sheet. The protective drainage sheet shall be suitable for horizontal applications with heavy loads and vehicular traffic with the following properties:

| Physical Properties | |
|---|---|
| Core | |
| Compressive Strength ASTM D 1621 | 18,000 (862 kPa) psf Min. |
| Flow Rate ASTM D 4716 | 17 gal/min./ft. (211 L/min./m²) min. |
| Geotextile Fabric | |
| Woven Monofilament Fabric | |
| Water Flow Rate ASTM D 4491 | 145 gal/min./ft2 (5907 L/Min./m min. |
| Grab tensile Strength ASTM D 4632 (MARV - Weakest Principal Direction) | 200 lb. (890 N) min. |
| CBR Puncture Strength ASTM D 6241 (MARV) | 675 lb. (3004 N) min |
| Apparent Opening Size | Sieve No. 40 (0.430 mm) or Smaller Opening |
| Nonwoven fabric | |
| Water Flow Rate ASTM D 4491 | 90 gal/min./ft2 (3668 L/Min./m min |
| Grab tensile Strength ASTM D 4632 (MARV – Weakest Principal Direction) | 205 lb. (912 N) min. |
| CBR Puncture Strength ASTM D 6241 (MARV) | 500 lb. (2224 N) min |
| Apparent Opening Size | Sieve No. 80 (0.180 mm) or Smaller Opening |

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

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

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

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

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

The Contractor shall install protective geocomposite drainage sheet after application of the membrane sheet per the manufacturer's instructions.

Sealing bands at joints between precast segments shall be installed prior to the waterproofing system being applied. Where the waterproofing system and sealing band overlap, the installation shall be planned such that water will not be trapped or directed underneath the membrane or sealing band.

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

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

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

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

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

ADJUSTING FRAMES AND GRATES (BDE)

Effective: April 1, 2017

Add the following to Article 602.02 of the Standard Specifications:

- - Note 4. High density expanded polystyrene adjusting rings with polyurea coating shall meet the design load requirements of AASHTO HS20/25. The rings may be used to adjust the frames and grates of drainage and utility structures up to a maximum of 6 in. (150 mm). They shall be installed and sealed underneath the frames according to the manufacturer's specifications.

Note 5. Riser rings fabricated from EPP may be used to adjust the frames and grates of drainage and utility structures up to a maximum of 6 in. (150 mm). An adhesive meeting ASTM C 920, Type S, Grade N5, Class 25 shall be used with EPP adjustment rings. The top ring of the adjustment stack shall be a finish ring with grooves on the lower surface and flat upper surface. The joints between all manhole adjustment rings and the frame and cover shall be sealed using the approved adhesive. In lieu of the use of an adhesive, an internal or external mechanical frame-chimney seal may be used for watertight installation. EPP adjustment rings shall not be used with heat shrinkable infiltration barriers."

Add the following to Section 1043 of the Standard Specifications:

"1043.04 High Density Expanded Polystyrene Adjusting Rings with Polyurea Coating. High density expanded polystyrene adjustment rings with polyurea coating shall be designed and tested to meet or exceed an HS25 wheel load according to the AASHTO Standard Specifications for Highway Bridges (AASHTO M306 HS-25). The raw material suppliers shall provide certifications of quality or testing using the following ASTM standards, and upon request, certify that only virgin material was used in the manufacturing of the expanded polystyrene rings.

| Dhysical Property | Test Standard | Value | | | |
|---------------------------------|---------------|------------------------|---------------------|--|--|
| Physical Property | rest Standard | 3.0 lb/cu ft | 4.5 lb/cu ft | | |
| Compression Resistance | ASTM D 1621 | | | | |
| at 10% deformation | | 50 - 70 | 70 - 90 | | |
| at 5% deformation | | 45 - 60 | 60 - 80 | | |
| at 2% deformation | | 15 - 20 | 20 - 40 | | |
| Flexural Strength | ASTM D 790 | 90 - 120 | 130 - 200 | | |
| Water Absorption | ASTM D 570 | 2.0% | 1.7% | | |
| Coefficient of Linear Expansion | ASTM D 696 | 2.70E-06 in./in./°F | 2.80E-06 in./in./°F | | |
| Sheer Strength | ASTM D 732 | 55 | 80 | | |
| Tensile Strength | ASTM D 1623 | 70 - 90 | 130 - 140 | | |
| Water Vapor Transmission | ASTM C 355 | 0.82 – 0.86 perm – in. | | | |

High density expanded polystyrene adjustment rings with polyurea coating shall have no void areas, cracks, or tears. The actual diameter or length shall not vary more than 0.125 in. (3 mm) from the specified diameter or length. Variations in height are limited to \pm 0.063 in. (\pm 1.6 mm). Variations shall not exceed 0.25 in. (6 mm) from flat (dish, bow, or convoluting edge) or 0.125 in. (3 mm) for bulges or dips in the surface.

1043.05 Expanded Polypropylene (EPP) Adjusting Rings. The EPP adjusting rings shall be manufactured using a high compression molding process to produce a minimum finished density of 7.5 lb/cu ft (120 g/l). The EPP rings shall be made of materials meeting ASTM D 3575 and ASTM D 4819-13. The grade adjustments shall be designed and tested according to the AASHTO Standard Specifications for Highway Bridges (AASHTO M 306 HS-25).

Grade rings shall contain upper and lower keyways (tongue and groove) for proper vertical alignment and sealing. The top ring, for use directly beneath the cast iron frame, shall have keyways (grooves) on the lower surface with a flat upper surface.

Adhesive or sealant used for watertight installation of the manhole grade adjustment rings shall meet ASTM C 920, Type S, Grade NS, Class 25, Uses NT, T, M, G, A, and O.

EPP adjustment rings shall have no void areas, cracks, or tears. The actual diameter or length shall not vary more than 0.125 in. (3 mm) from the specified diameter or length. Variations in height are limited to ± 0.063 in. $(\pm 1.6 \text{ mm})$. Variations shall not exceed 0.25 in. (6 mm) from flat (dish, bow, or convoluting edge) or 0.125 in. (3 mm) for bulges or dips in the surface."

COMPENSABLE DELAY COSTS (BDE)

Effective: June 2, 2017

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 working day contracts the payment will be made according to Article 109.04. For completion date contracts, an adjustment will be determined as follows.

Extended Traffic Control occurs between April 1 and November 30:

ETCP Adjustment (\$) = TE x (%/100 x CUP / OCT)

Extended Traffic Control occurs between December 1 and March 31:

ETCP Adjustment (\$) = TE x 1.5 (%/100 x CUP / OCT)

Where:TE = Duration of approved time extension in calendar days.

% = Percent maintenance for the traffic control, % (see table below).

CUP = Contract unit price for the traffic control pay item in place during the delay.

OCT = Original contract time in calendar days.

| Original Contract Amount | Percent Maintenance |
|------------------------------|---------------------|
| Up to \$2,000,000 | 65% |
| \$2,000,000 to \$10,000,000 | 75% |
| \$10,000,000 to \$20,000,000 | 85% |
| Over \$20,000,000 | 90% |

When an ETCP 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 BOX CULVERTS WITH SKEWS > 30 DEGREES AND DESIGN FILLS ≤ 5 FEET (BDE)

Effective: April 1, 2012 Revised: July 1, 2016

Revise the second paragraph of Article 540.04 of the Standard Specifications to read:

"Unless otherwise noted on the plans, the Contractor shall have the option, when a cast-in-place concrete box culvert is specified, of constructing the box culvert using precast box culvert sections when the design cover is 6 in. (150 mm) minimum. The precast box culvert sections shall be designed for the same design cover shown on the plans for cast-in-place box culvert; shall be of equal or larger size opening, and shall satisfy the design requirements of ASTM C 1577."

Add the following after the seventh paragraph of Article 540.06 of the Standard Specifications:

"Precast concrete box culverts with skews greater than 30 degrees and having design covers less than or equal to 5 ft are not covered by the standard design table shown in ASTM C 1577. The design table provided herein is provided to address this design range. The same notes, reinforcement configurations, clearances, and requirements of ASTM C 1577 apply to this special design table. A box designated 7 x 6 x 8 indicates a span of 7 ft, a rise of 6 ft, and top slab, bottom slab, walls and haunches of 8 in. unless otherwise noted on the tables.

| 3 ft x 2 ft x 4 in. | | | | | | | | | |
|---------------------|------|------|----------|------------|-----------|------------|--------------|------|----------|
| Design | | | Circumfe | erential R | einforcen | nent Areas | s, sq in./ f | t | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. |
| 0<2* | 0.17 | 1.10 | 0.30 | 0.10 | 0.28 | 0.17 | 0.92 | 0.14 | |
| 2<3 | 0.14 | 0.18 | 0.19 | 0.10 | | | | | 31 |
| 3-5 | 0.10 | 0.12 | 0.12 | 0.10 | | | | | 29 |

^{*}top slab 7.0 in., bottom slab 6.0 in.

| | 3 ft x 3 ft x 4 in. | | | | | | | | | | | |
|--------------------|---------------------|---|------|------|------|------|------|------|----------|--|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | | |
| 0<2* | 0.17 | 1.17 | 0.33 | 0.10 | 0.31 | 0.17 | 0.92 | 0.14 | | | | |
| 2<3 | 0.10 | 0.22 | 0.22 | 0.10 | | | | | 31 | | | |
| 3-5 | 0.10 | 0.14 | 0.14 | 0.10 | | | | | 31 | | | |

^{*}top slab 7.0 in., bottom slab 6.0 in.

| 4 ft x 2 ft x 5 in. | | | | | | | | | | | | |
|---------------------|------|---|------|------|------|------|------|------|----------|--|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | | |
| 0<2* | 0.21 | 0.88 | 0.26 | 0.12 | 0.28 | 0.18 | 0.89 | 0.14 | | | | |
| 2<3 | 0.20 | 0.21 | 0.20 | 0.12 | | | | | 33 | | | |
| 3-5 | 0.13 | 0.13 | 0.14 | 0.12 | | | | | 32 | | | |

^{*}top slab 7.5 in., bottom slab 6.0 in.

| | | | 4 | ft x 3 ft x | 5 in. | | | | | |
|--------------------|---|------|------|-------------|-------|------|------|------|----------|--|
| Design | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | |
| 0<2* | 0.18 | 1.02 | 0.31 | 0.12 | 0.32 | 0.18 | 0.87 | 0.14 | | |
| 2<3 | 0.16 | 0.25 | 0.24 | 0.12 | | | | | 38 | |
| 3-5 | 0.12 | 0.16 | 0.17 | 0.12 | | | | | 34 | |

^{*}top slab 7.5 in., bottom slab 6.0 in.

| | | | 4 | ft x 4 ft x | 5 in. | | | | |
|--------------------|------|------|------------|-------------|----------|-----------|------------|------|----------|
| Design | | (| Circumfere | ential Reir | nforceme | nt Areas, | sq in./ ft | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. |
| 0<2* | 0.18 | 1.08 | 0.34 | 0.12 | 0.34 | 0.18 | 0.86 | 0.14 | |
| 2<3 | 0.13 | 0.28 | 0.27 | 0.12 | | | | | 38 |
| 3-5 | 0.12 | 0.18 | 0.19 | 0.12 | | | | | 38 |

^{*}top slab 7.5 in., bottom slab 6.0 in.

| | 5 ft x 2 ft x 6 in. | | | | | | | | | | | |
|--------------------|---|------|------|------|------|------|------|------|----------|--|--|--|
| Design | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | | |
| 0<2* | 0.27 | 0.63 | 0.23 | 0.14 | 0.24 | 0.19 | 0.19 | 0.17 | | | | |
| 2<3 | 0.25 | 0.22 | 0.20 | 0.14 | | | | | 37 | | | |
| 3-5 | 0.17 | 0.15 | 0.15 | 0.14 | | | | | 35 | | | |

^{*}top slab 8.0 in., bottom slab 7.0 in.

| | | | 5 | ft x 3 ft x | 6 in. | | | | | | |
|--------------------|------|---|------|-------------|-------|------|-------|------|----------|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2* | 0.20 | 0.72 | 0.27 | 0.14 | 0.29 | 0.19 | .0.71 | 0.17 | | | |
| 2<3 | 0.21 | 0.26 | 0.25 | 0.14 | | | | | 37 | | |
| 3-5 | 0.14 | 0.18 | 0.18 | 0.14 | | | | | 35 | | |

^{*}top slab 8.0 in., bottom slab 7.0 in.

| | | | 5 | ft x 4 ft x | 6 in. | | | | |
|--------------------|---|------|------|-------------|-------|------|------|------|----------|
| Design | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. |
| 0<2* | 0.19 | 0.78 | 0.30 | 0.14 | 0.31 | 0.19 | 0.70 | 0.17 | |
| 2<3 | 0.18 | 0.30 | 0.28 | 0.14 | | | | | 45 |
| 3-5 | 0.14 | 0.20 | 0.21 | 0.14 | | | | | 40 |

^{*}top slab 8.0 in., bottom slab 7.0 in.

| 5 ft x 5 ft x 6 in. | | | | | | | | | | | |
|---------------------|------|---|------|------|------|------|------|------|----------|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2* | 0.19 | 0.82 | 0.33 | 0.14 | 0.34 | 0.19 | 0.69 | 0.17 | | | |
| 2<3 | 0.16 | 0.33 | 0.32 | 0.14 | | | | | 45 | | |
| 3-5 | 0.14 | 0.22 | 0.23 | 0.14 | | | | | 45 | | |

^{*}top slab 8.0 in., bottom slab 7.0 in.

| 6 ft x 2 ft x 7 in. | | | | | | | | | | | |
|---------------------|------|---|------|------|------|------|------|------|----------|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2* | 0.33 | 0.51 | 0.21 | 0.17 | 0.23 | 0.19 | 0.61 | 0.17 | | | |
| 2<3 | 0.31 | 0.22 | 0.22 | 0.17 | | | | | 42 | | |
| 3-5 | 0.22 | 0.17 | 0.17 | 0.17 | | | | | 41 | | |

^{*}top slab 8.0 in.

| | 6 ft x 3 ft x 7 in. | | | | | | | | | | | |
|--------------------|---------------------|---|------|------|------|------|------|------|----------|--|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | | |
| 0<2* | 0.27 | 0.58 | 0.26 | 0.17 | 0.27 | 0.19 | 0.58 | 0.17 | | | | |
| 2<3 | 0.26 | 0.27 | 0.27 | 0.17 | | | | | 41 | | | |
| 3-5 | 0.18 | 0.19 | 0.20 | 0.17 | | | | | 39 | | | |

^{*}top slab 8.0 in.

| 6 ft x 4 ft x 7 in. | | | | | | | | | | | |
|---------------------|------|---|------|------|------|------|------|------|----------|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2* | 0.25 | 0.64 | 0.30 | 0.17 | 0.30 | 0.19 | 0.57 | 0.17 | | | |
| 2<3 | 0.23 | 0.31 | 0.31 | 0.17 | | | | | 42 | | |
| 3-5 | 0.17 | 0.22 | 0.23 | 0.17 | | | | | 41 | | |

^{*}top slab 8.0 in.

| 6 ft x 5 ft x 7 in. | | | | | | | | | | | | |
|---------------------|------|--|------|------|------|------|------|------|----------|--|--|--|
| Design | | Circumferential Reinforcement Areas, sq in. / ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | | |
| 0<2* | 0.23 | 0.68 | 0.33 | 0.17 | 0.32 | 0.19 | 0.56 | 0.17 | | | | |
| 2<3 | 0.20 | 0.34 | 0.35 | 0.17 | | | | | 52 | | | |
| 3-5 | 0.17 | 0.24 | 0.25 | 0.17 | | | | | 48 | | | |

^{*}top slab 8.0 in.

| | | | (| 6 ft x 6 ft | x 7 in. | | | | | | |
|--------------------|------|---|------|-------------|---------|------|------|------|----------|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2* | 0.21 | 0.72 | 0.37 | 0.17 | 0.34 | 0.19 | 0.55 | 0.17 | | | |
| 2<3 | 0.18 | 0.37 | 0.38 | 0.17 | | | | | 52 | | |
| 3-5 | 0.17 | 0.26 | 0.28 | 0.17 | | | | | 52 | | |

^{*}top slab 8.0 in.

| 7 ft x 2 ft x 8 in. | | | | | | | | | | |
|---------------------|------|---|------|------|------|------|------|------|----------|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | |
| 0<2 | 0.38 | 0.60 | 0.26 | 0.19 | 0.22 | 0.19 | 0.75 | 0.19 | | |
| 2<3 | 0.38 | 0.24 | 0.24 | 0.19 | | | | | 46 | |
| 3-5 | 0.27 | 0.19 | 0.19 | 0.19 | | | | | 44 | |

| 7 ft x 3 ft x 8 in. | | | | | | | | | | | |
|---------------------|------|---|------|------|------|------|------|------|----------|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2 | 0.36 | 0.57 | 0.32 | 0.19 | 0.25 | 0.19 | 0.71 | 0.19 | | | |
| 2<3 | 0.33 | 0.29 | 0.30 | 0.19 | | | | | 44 | | |
| 3-5 | 0.23 | 0.21 | 0.21 | 0.19 | | | | | 42 | | |

| 7 ft x 4 ft x 8 in. | | | | | | | | | | | |
|---------------------|------|---|------|------|------|------|------|------|----------|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2 | 0.34 | 0.61 | 0.37 | 0.19 | 0.27 | 0.19 | 0.70 | 0.19 | | | |
| 2<3 | 0.29 | 0.34 | 0.34 | 0.19 | | | | | 44 | | |
| 3-5 | 0.21 | 0.24 | 0.25 | 0.19 | | | | | 42 | | |

| | 7 ft x 5 ft x 8 in. | | | | | | | | | | | |
|--------------------|---------------------|---|------|------|------|------|------|------|----------|--|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | | |
| 0<2 | 0.32 | 0.65 | 0.42 | 0.19 | 0.30 | 0.19 | 0.69 | 0.19 | | | | |
| 2<3 | 0.26 | 0.37 | 0.38 | 0.19 | | | | | 49 | | | |
| 3-5 | 0.19 | 0.27 | 0.28 | 0.19 | | | | | 46 | | | |

| 7 ft x 6 ft x 8 in. | | | | | | | | | | | | |
|---------------------|------|---|------|------|------|------|------|------|----------|--|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | | |
| 0<2 | 0.29 | 0.69 | 0.46 | 0.19 | 0.32 | 0.19 | 0.67 | 0.19 | | | | |
| 2<3 | 0.23 | 0.40 | 0.42 | 0.19 | | | | | 59 | | | |
| 3-5 | 0.19 | 0.29 | 0.30 | 0.19 | | | | | 55 | | | |

| | | | 7 | 7 ft x 7 ft x | 8 in. | | | | |
|--------------------|------|------|----------|---------------|-----------|-----------|------------|------|----------|
| Design | | | Circumfe | rential Re | inforceme | nt Areas, | sq in./ ft | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. |
| 0<2 | 0.27 | 0.73 | 0.50 | 0.19 | 0.34 | 0.19 | 0.65 | 0.19 | |
| 2<3 | 0.21 | 0.43 | 0.45 | 0.19 | | | | | 59 |
| 3-5 | 0.19 | 0.31 | 0.33 | 0.19 | | | | | 59 |

| | 8 ft x 2 ft x 8 in. | | | | | | | | | | | |
|--------------------|---------------------|---|------|------|------|------|------|------|----------|--|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | | |
| 0<2 | 0.47 | 0.50 | 0.29 | 0.19 | 0.23 | 0.19 | 0.61 | 0.19 | | | | |
| 2<3 | 0.51 | 0.30 | 0.31 | 0.19 | | | | | 50 | | | |
| 3-5 | 0.36 | 0.22 | 0.22 | 0.19 | | | | | 48 | | | |

| 8 ft x 3 ft x 8 in. | | | | | | | | | | | | |
|---------------------|------|---|------|------|------|------|------|------|----------|--|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | | |
| 0<2 | 0.43 | 0.49 | 0.35 | 0.19 | 0.26 | 0.19 | 0.58 | 0.19 | | | | |
| 2<3 | 0.45 | 0.36 | 0.37 | 0.19 | | | | | 48 | | | |
| 3-5 | 0.32 | 0.26 | 0.27 | 0.19 | | | | | 45 | | | |

| | | | 3 | 3 ft x 4 ft x | 8 in. | | | | | |
|--------------------|------|---|------|---------------|-------|------|------|------|----------|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | |
| 0<2 | 0.40 | 0.52 | 0.40 | 0.19 | 0.29 | 0.19 | 0.57 | 0.19 | | |
| 2<3 | 0.40 | 0.42 | 0.43 | 0.19 | | | | | 45 | |
| 3-5 | 0.28 | 0.30 | 0.31 | 0.19 | | | | | 45 | |

| | | | 8 | 3 ft x 5 ft x | 8 in. | | | | | |
|--------------------|------|---|------|---------------|-------|------|------|------|----------|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | |
| 0<2 | 0.37 | 0.56 | 0.45 | 0.19 | 0.31 | 0.19 | 0.56 | 0.19 | | |
| 2<3 | 0.36 | 0.46 | 0.47 | 0.19 | | | | | 48 | |
| 3-5 | 0.26 | 0.33 | 0.34 | 0.19 | | | | | 45 | |

| 8 ft x 6 ft x 8 in. | | | | | | | | | | | |
|---------------------|------|---|------|------|------|------|------|------|----------|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2 | 0.34 | 0.61 | 0.49 | 0.19 | 0.33 | 0.19 | 0.56 | 0.19 | | | |
| 2<3 | 0.33 | 0.50 | 0.52 | 0.19 | | | | | 56 | | |
| 3-5 | 0.24 | 0.36 | 0.37 | 0.19 | | | | | 50 | | |

| 8 ft x 7 ft x 8 in. | | | | | | | | | | | |
|---------------------|------|---|------|------|------|------|------|------|----------|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2 | 0.32 | 0.65 | 0.53 | 0.19 | 0.35 | 0.19 | 0.56 | 0.19 | | | |
| 2<3 | 0.30 | 0.53 | 0.56 | 0.19 | | | | | 65 | | |
| 3-5 | 0.22 | 0.38 | 0.40 | 0.19 | | | | | 61 | | |

| | 8 ft x 8 ft x 8 in. | | | | | | | | | | | |
|--------------------|---------------------|---|------|------|------|------|------|------|----------|--|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | | |
| 0<2 | 0.30 | 0.69 | 0.57 | 0.19 | 0.36 | 0.19 | 0.55 | 0.19 | | | | |
| 2<3 | 0.28 | 0.56 | 0.59 | 0.19 | | | | | 65 | | | |
| 3-5 | 0.20 | 0.40 | 0.43 | 0.19 | | | | | 65 | | | |

| 9 ft x 2 ft x 9 in. | | | | | | | | | | | |
|---------------------|------|---|------|------|------|------|------|------|----------|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2 | 0.46 | 0.35 | 0.26 | 0.22 | 0.22 | 0.22 | 0.47 | 0.22 | | | |
| 2<3 | 0.58 | 0.32 | 0.32 | 0.22 | | | | | 55 | | |
| 3-5 | 0.41 | 0.23 | 0.23 | 0.22 | | | | | 52 | | |

| 9 ft x 3 ft x 9 in. | | | | | | | | | | | | |
|---------------------|------|---|------|------|------|------|------|------|----------|--|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | | |
| 0<2 | 0.42 | 0.35 | 0.32 | 0.22 | 0.23 | 0.22 | 0.47 | 0.22 | | | | |
| 2<3 | 0.52 | 0.38 | 0.39 | 0.22 | | | | | 52 | | | |
| 3-5 | 0.37 | 0.27 | 0.28 | 0.22 | | | | | 49 | | | |

| | 9 ft x 4 ft x 9 in. | | | | | | | | | | | |
|--------------------|---------------------|---|------|------|------|------|------|------|----------|--|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | | |
| 0<2 | 0.38 | 0.38 | 0.36 | 0.22 | 0.25 | 0.22 | 0.47 | 0.22 | | | | |
| 2<3 | 0.47 | 0.44 | 0.45 | 0.22 | | | | | 52 | | | |
| 3-5 | 0.33 | 0.31 | 0.32 | 0.22 | | | | | 49 | | | |

| 9 ft x 5 ft x 9 in. | | | | | | | | | | | |
|---------------------|------|---|------|------|------|------|------|------|----------|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2 | 0.35 | 0.41 | 0.41 | 0.22 | 0.28 | 0.22 | 0.47 | 0.22 | | | |
| 2<3 | 0.43 | 0.49 | 0.50 | 0.22 | | | | | 49 | | |
| 3-5 | 0.30 | 0.35 | 0.36 | 0.22 | | | | | 49 | | |

| 9 ft x 6 ft x 9 in. | | | | | | | | | | | |
|---------------------|------|--|------|------|------|------|------|------|----------|--|--|
| Design | | Circumferential Reinforcement Areas, sq in. / ft | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2 | 0.32 | 0.44 | 0.44 | 0.22 | 0.29 | 0.22 | 0.47 | 0.22 | | | |
| 2<3 | 0.39 | 0.53 | 0.54 | 0.22 | | | | | 55 | | |
| 3-5 | 0.28 | 0.38 | 0.39 | 0.22 | | | | | 52 | | |

| | 9 ft x 7 ft x 9 in. | | | | | | | | | | | |
|--------------------|--|------|------|------|------|------|------|------|----------|--|--|--|
| Design | Circumferential Reinforcement Areas, sq in. / ft | | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | | |
| 0<2 | 0.30 | 0.46 | 0.48 | 0.22 | 0.31 | 0.22 | 0.45 | 0.22 | | | | |
| 2<3 | 0.36 | 0.56 | 0.59 | 0.22 | | | | | 64 | | | |
| 3-5 | 0.26 | 0.40 | 0.42 | 0.22 | | | | | 58 | | | |

| 9 ft x 8 ft x 9 in. | | | | | | | | | | | |
|---------------------|------|---|------|------|------|------|------|------|----------|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2 | 0.28 | 0.49 | 0.52 | 0.22 | 0.33 | 0.22 | 0.45 | 0.22 | | | |
| 2<3 | 0.33 | 0.60 | 0.63 | 0.22 | | | | | 72 | | |
| 3-5 | 0.24 | 0.43 | 0.45 | 0.22 | | | | | 72 | | |

| 9 ft x 9 ft x 9 in. | | | | | | | | | | | |
|---------------------|------|---|------|------|------|------|------|------|----------|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2 | 0.27 | 0.51 | 0.55 | 0.22 | 0.34 | 0.22 | 0.45 | 0.22 | | | |
| 2<3 | 0.31 | 0.63 | 0.66 | 0.22 | | | | | 72 | | |
| 3-5 | 0.23 | 0.45 | 0.48 | 0.22 | | | | | 72 | | |

| | 10 ft x 2 ft x 10 in. | | | | | | | | | | | |
|--------------------|-----------------------|---|------|------|------|------|------|------|----------|--|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | | |
| 0<2 | 0.46 | 0.29 | 0.24 | 0.24 | 0.24 | 0.24 | 0.34 | 0.24 | | | | |
| 2<3 | 0.66 | 0.33 | 0.34 | 0.24 | | | | | 59 | | | |
| 3-5 | 0.46 | 0.24 | 0.24 | 0.24 | | | | | 59 | | | |

| 10 ft x 3 ft x 10 in. | | | | | | | | | | | |
|-----------------------|------|---|------|------|------|------|------|------|----------|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2 | 0.44 | 0.33 | 0.30 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | | | |
| 2<3 | 0.59 | 0.40 | 0.41 | 0.24 | | | | | 59 | | |
| 3-5 | 0.42 | 0.29 | 0.29 | 0.24 | | | | | 56 | | |

| 10 ft x 4 ft x 10 in. | | | | | | | | | | | |
|-----------------------|---|------|------|------|------|------|------|------|----------|--|--|
| Design | esign Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2 | 0.40 | 0.36 | 0.35 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | | | |
| 2<3 | 0.54 | 0.46 | 0.47 | 0.24 | | | | | 56 | | |
| 3-5 | 0.38 | 0.33 | 0.34 | 0.24 | | | | | 52 | | |

| 10 ft x 5 ft x 10 in. | | | | | | | | | | | |
|-----------------------|---|------|------|------|------|------|------|------|----------|--|--|
| Design | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2 | 0.37 | 0.39 | 0.39 | 0.24 | 0.26 | 0.24 | 0.24 | 0.24 | | | |
| 2<3 | 0.49 | 0.51 | 0.52 | 0.24 | | | | | 52 | | |
| 3-5 | 0.35 | 0.36 | 0.38 | 0.24 | | | | | 52 | | |

| 10 ft x 6 ft x 10 in. | | | | | | | | | | | |
|-----------------------|---|------|------|------|------|------|------|------|----------|--|--|
| Design | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2 | 0.34 | 0.42 | 0.43 | 0.24 | 0.28 | 0.24 | 0.42 | 0.24 | | | |
| 2<3 | 0.45 | 0.55 | 0.57 | 0.24 | | | | | 56 | | |
| 3-5 | 0.33 | 0.40 | 0.41 | 0.24 | | | | | 52 | | |

| 10 ft x 7 ft x 10 in. | | | | | | | | | | | |
|-----------------------|---|------|------|------|------|------|------|------|----------|--|--|
| Design | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2 | 0.32 | 0.44 | 0.46 | 0.24 | 0.30 | 0.24 | 0.24 | 0.24 | | | |
| 2<3 | 0.42 | 0.59 | 0.62 | 0.24 | | | | | 59 | | |
| 3-5 | 0.31 | 0.42 | 0.45 | 0.24 | | | | | 56 | | |

| 10 ft x 8 ft x 10 in. | | | | | | | | | | | |
|-----------------------|--|------|------|------|------|------|------|------|----------|--|--|
| Design | Circumferential Reinforcement Areas, sq in. / ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2 | 0.30 | 0.47 | 0.50 | 0.24 | 0.31 | 0.24 | 0.24 | 0.24 | | | |
| 2<3 | 0.39 | 0.63 | 0.66 | 0.24 | | | | | 75 | | |
| 3-5 | 0.29 | 0.45 | 0.48 | 0.24 | | | | | 66 | | |

| 10 ft x 9 ft x 10 in. | | | | | | | | | | | |
|-----------------------|---|------|------|------|------|------|------|------|----------|--|--|
| Design | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2 | 0.28 | 0.49 | 0.53 | 0.24 | 0.33 | 0.24 | 0.24 | 0.24 | | | |
| 2<3 | 0.37 | 0.66 | 0.70 | 0.24 | | | | | 79 | | |
| 3-5 | 0.27 | 0.47 | 0.51 | 0.24 | | | | | 79 | | |

| 10 ft x 10 ft x 10 in. | | | | | | | | | | | |
|------------------------|---|------|------|------|------|------|------|------|----------|--|--|
| Design | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2 | 0.27 | 0.51 | 0.56 | 0.24 | 0.34 | 0.24 | 0.24 | 0.24 | | | |
| 2<3 | 0.35 | 0.69 | 0.74 | 0.24 | | | | | 79 | | |
| 3-5 | 0.26 | 0.50 | 0.54 | 0.24 | | | | | 79 | | |

| 11 ft x 2 ft x 11 in. | | | | | | | | | | | |
|-----------------------|---|------|------|------|------|------|------|------|----------|--|--|
| Design | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | Earth Cover, ft As1 As2 As3 As4 As5 As6 As7 As8 | | | | | | | | "M", in. | | |
| 0<2 | 0.50 | 0.27 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | | | |
| 2<3 | 0.73 | 0.35 | 0.35 | 0.26 | | | | | 67 | | |
| 3-5 | 0.52 | 0.26 | 0.26 | 0.26 | | | | | 63 | | |

| 11 ft x 3 ft x 11 in. | | | | | | | | | | | |
|-----------------------|---|------|------|------|------|------|------|------|----------|--|--|
| Design | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2 | 0.45 | 0.31 | 0.29 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | | | |
| 2<3 | 0.67 | 0.42 | 0.43 | 0.26 | | | | | 63 | | |
| 3-5 | 0.47 | 0.30 | 0.31 | 0.26 | | | | | 60 | | |

| 11 ft x 4 ft x 11 in. | | | | | | | | | | | |
|-----------------------|---|------|------|------|------|------|------|------|----------|--|--|
| Design | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2 | 0.41 | 0.34 | 0.33 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | | | |
| 2<3 | 0.61 | 0.48 | 0.49 | 0.26 | | | | | 60 | | |
| 3-5 | 0.43 | 0.35 | 0.35 | 0.26 | | | | | 56 | | |

| 11 ft x 5 ft x 11 in. | | | | | | | | | | | |
|-----------------------|---|------|------|------|------|------|------|------|----------|--|--|
| Design | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2 | 0.38 | 0.37 | 0.37 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | | | |
| 2<3 | 0.56 | 0.53 | 0.54 | 0.26 | | | | | 56 | | |
| 3-5 | 0.40 | 0.38 | 0.39 | 0.26 | | | | | 56 | | |

| | 11 ft x 6 ft x 11 in. | | | | | | | | | | | |
|--------------------|-----------------------|---|------|------|------|------|------|------|----------|--|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | | |
| 0<2 | 0.35 | 0.40 | 0.40 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | | | | |
| 2<3 | 0.52 | 0.58 | 0.60 | 0.26 | | | | | 56 | | | |
| 3-5 | 0.37 | 0.42 | 0.43 | 0.26 | | | | | 56 | | | |

| | 11 ft x 7 ft x 11 in. | | | | | | | | | | |
|--------------------|-----------------------|---|------|------|------|------|------|------|----------|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2 | 0.33 | 0.42 | 0.43 | 0.26 | 0.28 | 0.26 | 0.26 | 0.26 | | | |
| 2<3 | 0.48 | 0.62 | 0.64 | 0.26 | | | | | 60 | | |
| 3-5 | 0.35 | 0.44 | 0.47 | 0.26 | | | | | 56 | | |

| | 11 ft x 8 ft x 11 in. | | | | | | | | | | | |
|--------------------|-----------------------|---|------|------|------|------|------|------|----------|--|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | | |
| 0<2 | 0.31 | 0.45 | 0.47 | 0.26 | 0.30 | 0.26 | 0.26 | 0.26 | | | | |
| 2<3 | 0.45 | 0.66 | 0.69 | 0.26 | | | | | 67 | | | |
| 3-5 | 0.33 | 0.47 | 0.50 | 0.26 | | | | | 63 | | | |

| | 11 ft x 9 ft x 11 in. | | | | | | | | | | | |
|--------------------|-----------------------|---|------|------|------|------|------|------|----------|--|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | | |
| 0<2 | 0.30 | 0.47 | 0.50 | 0.26 | 0.31 | 0.26 | 0.26 | 0.26 | | | | |
| 2<3 | 0.43 | 0.69 | 0.73 | 0.26 | | | | | 85 | | | |
| 3-5 | 0.31 | 0.49 | 0.53 | 0.26 | | | | | 70 | | | |

| | 11 ft x 10 ft x 11 in. | | | | | | | | | | |
|--------------------|------------------------|---|------|------|------|------|------|------|----------|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | |
| 0<2 | 0.28 | 0.49 | 0.53 | 0.26 | 0.33 | 0.26 | 0.26 | 0.26 | | | |
| 2<3 | 0.41 | 0.73 | 0.77 | 0.26 | | | | | 86 | | |
| 3-5 | 0.30 | 0.52 | 0.56 | 0.26 | | | | | 86 | | |

| | 11 ft x 11 ft x 11 in. | | | | | | | | | | | |
|--------------------|------------------------|---|------|------|------|------|------|------|----|--|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As1 As2 As3 As4 As5 As6 As7 As8 "M", i | | | | | | | | | | |
| 0<2 | 0.27 | 0.51 | 0.56 | 0.26 | 0.34 | 0.26 | 0.26 | 0.26 | | | | |
| 2<3 | 0.39 | 0.76 | 0.81 | 0.26 | | | | | 86 | | | |
| 3-5 | 0.29 | 0.55 | 0.59 | 0.26 | | | | | 86 | | | |

| 12 ft x 2 ft x 12 in. | | | | | | | | | | | | |
|-----------------------|------|---|------|------|------|------|------|------|----------|--|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | | |
| 0<2 | 0.51 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | | | | |
| 2<3 | 0.81 | 0.37 | 0.37 | 0.29 | | | | | 71 | | | |
| 3-5 | 0.57 | 0.29 | 0.29 | 0.29 | | | | | 68 | | | |

| | 12 ft x 3 ft x 12 in. | | | | | | | | | | | |
|--------------------|-----------------------|---|------|------|------|------|------|------|----------|--|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | | |
| 0<2 | 0.46 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | | | | |
| 2<3 | 0.74 | 0.44 | 0.44 | 0.29 | | | | | 68 | | | |
| 3-5 | 0.53 | 0.32 | 0.32 | 0.29 | | | | | 64 | | | |

| | 12 ft x 4 ft x 12 in. | | | | | | | | | | | |
|--------------------|-----------------------|---|------|------|------|------|------|------|----|--|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As1 As2 As3 As4 As5 As6 As7 As8 "M", i | | | | | | | | | | |
| 0<2 | 0.42 | 0.33 | 0.31 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | | | | |
| 2<3 | 0.68 | 0.50 | 0.51 | 0.29 | | | | | 64 | | | |
| 3-5 | 0.49 | 0.36 | 0.37 | 0.29 | | | | | 60 | | | |

| | 12 ft x 5 ft x 12 in. | | | | | | | | | | | |
|--------------------|-----------------------|---|------|------|------|------|------|------|----------|--|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | | |
| 0<2 | 0.39 | 0.35 | 0.34 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | | | | |
| 2<3 | 0.63 | 0.55 | 0.56 | 0.29 | | | | | 64 | | | |
| 3-5 | 0.45 | 0.40 | 0.41 | 0.29 | | | | | 60 | | | |

| | 12 ft x 6 ft x 12 in. | | | | | | | | | | | |
|--------------------|-----------------------|---|------|------|------|------|------|------|----------|--|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. | | | |
| 0<2 | 0.36 | 0.38 | 0.38 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | | | | |
| 2<3 | 0.59 | 0.60 | 0.62 | 0.29 | | | | | 60 | | | |
| 3-5 | 0.42 | 0.44 | 0.45 | 0.29 | | | | | 56 | | | |

| | 12 ft x 7 ft x 11 in. | | | | | | | | | | | |
|--------------------|-----------------------|---|------|------|------|------|------|------|----|--|--|--|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | | | |
| Earth Cover, ft | As1 | As1 As2 As3 As4 As5 As6 As7 As8 "M", i | | | | | | | | | | |
| 0<2 | 0.34 | 0.41 | 0.42 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | | | | |
| 2<3 | 0.55 | 0.65 | 0.67 | 0.29 | | | | | 60 | | | |
| 3-5 | 0.40 | 0.47 | 0.49 | 0.29 | | | | | 60 | | | |

| | 12 ft x 8 ft x 12 in. | | | | | | | | |
|--------------------|-----------------------|---|------|------|------|------|------|------|----------|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. |
| 0<2 | 0.32 | 0.43 | 0.45 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | |
| 2<3 | 0.52 | 0.69 | 0.72 | 0.29 | | | | | 67 |
| 3-5 | 0.38 | 0.50 | 0.52 | 0.29 | | | | | 64 |

| | 12 ft x 9 ft x 12 in. | | | | | | | | |
|--------------------|-----------------------|---|------|------|------|------|------|------|----------|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. |
| 0<2 | 0.30 | 0.45 | 0.47 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | |
| 2<3 | 0.49 | 0.73 | 0.76 | 0.29 | | | | | 75 |
| 3-5 | 0.36 | 0.52 | 0.56 | 0.29 | | | | | 68 |

| 12 ft x 10 ft x 12 in. | | | | | | | | | |
|------------------------|---|------|------|------|------|------|------|------|----------|
| Design | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. |
| 0<2 | 0.29 | 0.48 | 0.50 | 0.29 | 0.30 | 0.29 | 0.29 | 0.29 | |
| 2<3 | 0.46 | 0.76 | 0.80 | 0.29 | | | | | 93 |
| 3-5 | 0.34 | 0.55 | 0.59 | 0.29 | | | | | 79 |

| | 12 ft x 11 ft x 12 in. | | | | | | | | |
|--------------------|------------------------|---|------|------|------|------|------|------|----------|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. |
| 0<2 | 0.29 | 0.50 | 0.53 | 0.29 | 0.32 | 0.29 | 0.29 | 0.29 | |
| 2<3 | 0.44 | 0.79 | 0.85 | 0.29 | | | | | 91 |
| 3-5 | 0.33 | 0.57 | 0.62 | 0.29 | | | | | 79 |

| | 12 ft x 12 ft x 12 in. | | | | | | | | |
|--------------------|------------------------|---|------|------|------|------|------|------|----------|
| Design | | Circumferential Reinforcement Areas, sq in./ ft | | | | | | | |
| Earth Cover, ft | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | "M", in. |
| 0<2 | 0.29 | 0.52 | 0.56 | 0.29 | 0.33 | 0.29 | 0.29 | 0.29 | |
| 2<3 | 0.43 | 0.83 | 0.89 | 0.29 | | | | | 93 |
| 3-5 | 0.32 | 0.60 | 0.65 | 0.29 | | | | | 93" |

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)

Effective: September 1, 2000 Revised: April 2, 2018

<u>FEDERAL OBLIGATION</u>. 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.

<u>CONTRACTOR ASSURANCE</u>. The Contractor makes the following assurance and agrees to include the assurance in each subcontract that 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 that 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 that, in the absence of unlawful discrimination, and in an arena of fair and open competition, DBE companies can be expected to perform 15.00% 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 that enough DBE participation has been obtained to meet the goal or,
- (b) The bidder documents that 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.

<u>DBE LOCATOR REFERENCES</u>. 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.

<u>BIDDING PROCEDURES</u>. Compliance with this Special Provision is required prior to the award of the contract and the failure of the low bidder to comply will render the bid not responsive.

In order to assure the timely award of the contract, the low bidder shall submit:

- (a) The bidder shall submit a DBE Utilization Plan on completed Department forms SBE 2025 and 2026.
 - (1) The final Utilization Plan must be submitted within five calendar days after the date of the letting in accordance with subsection (a)(2) of Bidding Procedures herein.
 - (2) To meet the five day requirement, the bidder may send the Utilization Plan electronically by scanning and sending to DOT.DBE.UP@illinois.gov or faxing to (217) 785-1524. The subject line must include the bid Item Number and the Letting date. The Utilization Plan should be sent as one .pdf file, rather than multiple files and emails for the same Item Number. It is the responsibility of the bidder to obtain confirmation of email or fax delivery.

Alternatively, the Utilization Plan may be sent by certified mail or delivery service within the five calendar day period. If a question arises concerning the mailing date of a Utilization Plan, the mailing date will be established by the U.S. Postal Service postmark on the certified mail receipt from the U.S. Postal Service or the receipt issued by a delivery service when the Utilization Plan is received by the Department. It is the responsibility of the bidder to ensure the postmark or receipt date is affixed within the five days if the bidder intends to rely upon mailing or delivery to satisfy the submission day requirement. The Utilization Plan is to be submitted to:

Illinois Department of Transportation Bureau of Small Business Enterprises Contract Compliance Section 2300 South Dirksen Parkway, Room 319 Springfield, Illinois 62764

The Department will not accept a Utilization Plan if it does not meet the five day submittal requirement and the bid will be declared not responsive. In the event the bid is declared not responsive due to a failure to submit a Utilization Plan or failure to comply with the bidding procedures set forth herein, 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. The Department reserves the right to invite any other bidder to submit a Utilization Plan at any time for award consideration.

- (b) The Utilization Plan shall indicate that the bidder either has obtained sufficient DBE participation commitments to meet the contract goal or has not obtained enough DBE participation commitments in spite of a good faith effort to meet the goal. The Utilization Plan shall further provide the name, telephone number, and telefax number of a responsible official of the bidder designated for purposes of notification of Utilization Plan approval or disapproval under the procedures of this Special Provision.
- (c) The Utilization Plan shall include a DBE Participation Commitment Statement, Department form SBE 2025, for each DBE proposed for the performance of work to achieve the contract goal. For bidding purposes, submission of the completed SBE 2025 forms, signed by the DBEs and scanned or faxed to the bidder will be acceptable as long as the original is available and provided upon request. All elements of information indicated on the said form shall be provided, including but not limited to the following:
 - (1) The names and addresses of DBE firms that will participate in the contract;
 - (2) A description, including pay item numbers, of the work each DBE will perform;
 - (3) The dollar amount of the participation of each DBE firm participating. The dollar amount of participation for identified work shall specifically state the quantity, unit price, and total subcontract price for the work to be completed by the DBE. If partial pay items are to be performed by the DBE, indicate the portion of each item, a unit price where appropriate and the subcontract price amount;
 - (4) DBE Participation Commitment Statements, form SBE 2025, signed by the bidder and each participating DBE firm documenting the commitment to use the DBE subcontractors whose participation is submitted to meet the contract goal;
 - (5) If the bidder is a joint venture comprised of DBE companies and non-DBE companies, the Utilization Plan must also include a clear identification of the portion of the work to be performed by the DBE partner(s); and,
 - (6) If the contract goal is not met, evidence of good faith efforts; 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.

GOOD FAITH EFFORT PROCEDURES. The contract will not be awarded until the Utilization Plan submitted by the apparent successful bidder is approved. All information submitted by the bidder must be complete, accurate and adequately document that enough DBE participation has been obtained or document that 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. The Utilization Plan will not be approved by the Department if the Utilization Plan does not document sufficient DBE participation to meet the contract goal unless the apparent successful bidder documented in the Utilization Plan that it made a good faith effort to meet the goal. This means that 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 that 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 prime 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 subsection (c)(6) of 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 that the apparent successful 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 that it is otherwise eligible for award. If the Department determines that 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 shall include a statement of reasons for the 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 in order to cure the deficiency.
- (c) The bidder may request administrative reconsideration of a determination adverse to the bidder within the five working days after the receipt of the notification date of the determination by delivering the request to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764 (Telefax: (217) 785-1524). Deposit of the request in the United States mail on or before the fifth business day shall not be deemed delivery. The determination shall become final if a request is not made and delivered. 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 forwarded to the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person in order 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.

<u>CALCULATING DBE PARTICIPATION</u>. 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 prime Contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE does not count toward the DBE goal.
- (d) DBE as a trucker: 100 percent goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed, and insured by the DBE must be used on the contract. Credit will be given for the following:
 - (1) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
 - (2) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission is receives as a result of the lease arrangement.
- (e) DBE as a material supplier:
 - (1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.
 - (2) 100 percent goal credit for the cost of materials of supplies obtained from a DBE manufacturer.
 - (3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a DBE regular dealer or DBE manufacturer.

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

- (a) <u>NO AMENDMENT</u>. 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 submitted to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764. Telephone number (217) 785-4611. Telefax number (217) 785-1524.
- (b) <u>CHANGES TO WORK</u>. 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, than a new Request for Approval of Subcontractor shall not be required. However, the Contractor must document efforts to assure that the existing DBE subcontractor is capable of performing the additional work and has agreed in writing to the change.
- (c) <u>SUBCONTRACT</u>. The Contractor must provide DBE subcontracts to IDOT 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) <u>ALTERNATIVE WORK METHODS</u>. In addition to the above requirements for reductions in the condition of award, additional requirements apply to the two cases of Contractorinitiated 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) That 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) That the DBE is aware that 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) That 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) <u>TERMINATION AND REPLACEMENT PROCEDURES</u>. 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 prime contractor;
- (3) The listed DBE subcontractor fails or refuses to meet the prime 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) You have determined that the listed DBE subcontractor is not a responsible contractor;
- (7) The listed DBE subcontractor voluntarily withdraws from the projects and provides to you written notice 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 prime Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the prime Contractor can self-perform the work for which the DBE contractor was engaged or so that the prime 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 shall 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 thirty 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 that 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) <u>ENFORCEMENT</u>. 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) <u>RECONSIDERATION</u>. Notwithstanding any other provision of the contract, including but not limited to Article 109.09 of the Standard Specifications, the Contractor my 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.

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."

LIGHTS ON BARRICADES (BDE)

Effective: January 1, 2018

Revise Article 701.16 of the Standard Specifications to read:

"**701.16 Lights.** Lights shall be used on devices as required in the plans, the traffic control plan, and the following table.

| Circumstance | Lights Required |
|---|-------------------------------------|
| Daylight operations | None |
| First two warning signs on each approach to the work involving a nighttime lane closure and "ROUGH GROOVED SURFACE" (W8-I107) signs | Flashing mono-directional lights |
| Devices delineating isolated obstacles, excavations, or hazards at night (Does not apply to patching) | Flashing bi-directional lights |
| Devices delineating obstacles, excavations, or hazards exceeding 100 ft (30 m) in length at night (Does not apply to widening) | Steady burn bi-directional lights |
| Channelizing devices for nighttime lane closures on two-lane roads | None |
| Channelizing devices for nighttime lane closures on multi-lane roads | None |
| Channelizing devices for nighttime lane closures on multi-lane roads separating opposing directions of traffic | None |
| Channelizing devices for nighttime along lane shifts on multilane roads | Steady burn mono-directional lights |
| Channelizing devices for night time along lane shifts on two lane roads | Steady burn bi-directional lights |
| Devices in nighttime lane closure tapers on Standards 701316 and 701321 | Steady burn bi-directional lights |
| Devices in nighttime lane closure tapers | Steady burn mono-directional lights |
| Devices delineating a widening trench | None |
| Devices delineating patches at night on roadways with an ADT less than 25,000 | None |
| Devices delineating patches at night on roadways with an ADT of 25,000 or more | None |

Batteries for the lights shall be replaced on a group basis at such times as may be specified by the Engineer."

Delete the fourth sentence of the first paragraph of Article 701.17(c)(2) of the Standard Specifications.

Revise the first paragraph of Article 603.07 of the Standard Specifications to read:

"603.07 Protection Under Traffic. After the casting has been adjusted and Class SI concrete has been placed, the work shall be protected by a barricade for at least 72 hours."

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

Effective: January 1, 2018 Revised: March 2, 2018

Description. Manholes, valve vaults, and flat slab tops manufactured according to the current or previous Highway Standards listed below will be accepted on this contract:

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

When manufacturing to the current standards, the following revisions to the Standard Specifications shall apply:

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

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:

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

Add the following paragraph after the first paragraph of Article 602.07 of the Standard Specifications:

"Threaded rods connecting precast sections shall be brought to a snug tight condition."

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 according to AASHTO M 199 (M 199M), except the minimum wall thickness shall be 3 in. (75 mm). 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."

PAVEMENT MARKING REMOVAL (BDE)

Effective: July 1, 2016

Revise Article 783.02 of the Standard Specifications to read:

"783.02 Equipment. Equipment shall be according to the following.

Note 1. Grinding equipment shall be approved by the Engineer."

Revise the first paragraph of Article 783.03 of the Standard Specifications to read:

"783.03 Removal of Conflicting Markings. Existing pavement markings that conflict with revised traffic patterns shall be removed. If darkness or inclement weather prohibits the removal operations, such operations shall be resumed the next morning or when weather permits. In the event of removal equipment failure, such equipment shall be repaired, replaced, or leased so removal operations can be resumed within 24 hours."

Revise the first and second sentences of the first paragraph of Article 783.03(a) of the Standard Specifications to read:

"The existing pavement markings shall be removed by the method specified and in a manner that does not materially damage the surface or texture of the pavement or surfacing. Small particles of tightly adhering existing markings may remain in place, if in the opinion of the Engineer, complete removal of the small particles will result in pavement surface damage."

Revise the first paragraph of Article 783.04 of the Standard Specifications to read:

"**783.04 Cleaning.** The roadway surface shall be cleaned of debris or any other deleterious material by the use of compressed air or water blast."

Revise the first paragraph of Article 783.06 of the Standard Specifications to read:

"783.06 Basis of Payment. This work will be paid for at the contract unit price per each for RAISED REFLECTIVE PAVEMENT MARKER REMOVAL, or at the contract unit price per square foot (square meter) for PAVEMENT MARKING REMOVAL – GRINDING and/or PAVEMENT MARKING REMOVAL – WATER BLASTING."

Delete Article 1101.13 from the Standard Specifications.

PAYMENTS TO SUBCONTRACTORS (BDE)

Effective: November 2, 2017

Add the following to the end of the fourth paragraph of Article 109.11 of the Standard Specifications:

"If reasonable cause is asserted, written notice shall be provided to the applicable subcontractor and/or material supplier and the Engineer within five days of the Contractor receiving payment. The written notice shall identify the contract number, the subcontract or material purchase agreement, a detailed reason for refusal, the value of payment being withheld, and the specific remedial actions required of the subcontractor and/or material supplier so that payment can be made."

PORTABLE CHANGEABLE MESSAGE SIGNS (BDE)

Effective: November 1, 2016 Revised: April 1, 2017

Revise the second paragraph of Article 701.20(h) of the Standard Specifications to read:

"For all other portable changeable message signs, this work will be paid for at the contract unit price per calendar day for each sign as CHANGEABLE MESSAGE SIGN."

Revise this second sentence of the first paragraph of Article 1106.02(i) of the Standard Specifications to read:

"The message panel shall be a minimum of 7 ft (2.1 m) above the edge of pavement in urban areas and a minimum of 5 ft (1.5 m) above the edge of pavement in rural areas, present a level appearance, and be capable of displaying up to eight characters in each of three lines at a time."

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 Bridge Deck Patching (10) | | | | |
| | PP-1 | | | | |
| | PP-2 | | | | |
| | PP-3 | 4.0 - 8.0" | | | |
| | PP-4 | 0.0 | | | |
| | 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 SIDEWALK (BDE)

Effective: August 1, 2017

Revise the first paragraph of Article 424.12 of the Standard Specifications to read:

"424.12 Method of Measurement. This work will be measured for payment in place and the area computed in square feet (square meters). Curb ramps, including side curbs and side flares, will be measured for payment as sidewalk. No deduction will be made for detectable warnings located within the ramp."

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."

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

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

"This mobilization payment shall be made at least 14 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%" |

TEMPORARY PAVEMENT MARKING (BDE)

Effective: April 1, 2012 Revised: April 1, 2017

Revise Article 703.02 of the Standard Specifications to read:

"703.02 Materials. Materials shall be according to the following.

| (a) | Pavement Marking Tape, Type I and Type III | 1095.06 |
|-----|--|----------|
| (b) | Paint Pavement Markings | 1095.02 |
| (c) | Pavement Marking Tape, Type IV | 1095.11" |

Revise the second paragraph of Article 703.05 of the Standard Specifications to read:

"Type I marking tape or paint shall be used at the option of the Contractor, except paint shall not be applied to the final wearing surface unless authorized by the Engineer for late season applications where tape adhesion would be a problem. Type III or Type IV marking tape shall be used on the final wearing surface when the temporary pavement marking will conflict with the permanent pavement marking such as on tapers, crossovers and lane shifts."

Revise Article 703.07 of the Standard Specifications to read:

"703.07 Basis of Payment. This work will be paid for as follows.

- a) Short Term Pavement Marking. Short term pavement marking will be paid for at the contract unit price per foot (meter) for SHORT TERM PAVEMENT MARKING. Removal of short term pavement markings will be paid for at the contract unit price per square foot (square meter) for SHORT TERM PAVEMENT MARKING REMOVAL.
- b) Temporary Pavement Marking. Where the Contractor has the option of material type, temporary pavement marking will be paid for at the contract unit price per foot (meter) for TEMPORARY PAVEMENT MARKING of the line width specified, and at the contract unit price per square foot (square meter) for TEMPORARY PAVEMENT MARKING LETTERS AND SYMBOLS.

Where the Department specifies the use of pavement marking tape, the Type III or Type IV temporary pavement marking will be paid for at the contract unit price per foot (meter) for PAVEMENT MARKING TAPE, TYPE III or PAVEMENT MARKING TAPE, TYPE IV of the line width specified and at the contract unit price per square feet (square meter) for PAVEMENT MARKING TAPE, TYPE III - LETTERS AND SYMBOLS or PAVEMENT MARKING TAPE, TYPE IV - LETTERS AND SYMBOLS.

Removal of temporary pavement markings will be paid for at the contract unit price per square foot (square meter) for TEMPORARY PAVEMENT MARKING REMOVAL.

When temporary pavement marking is shown on the Standard, the cost of the temporary pavement marking and its removal will be included in the cost of the Standard."

Add the following to Section 1095 of the Standard Specifications:

"1095.11 Pavement Marking Tape, Type IV. The temporary, preformed, patterned markings shall consist of a white or yellow tape with wet retroreflective media incorporated to provide immediate and continuing retroreflection during both wet and dry conditions. The tape shall be manufactured without the use of heavy metals including lead chromate pigments or other similar, lead-containing chemicals.

The white and yellow Type IV marking tape shall meet the Type III requirements of Article 1095.06 and the following.

- (a) Composition. The retroreflective pliant polymer pavement markings shall consist of a mixture of high-quality polymeric materials, pigments and glass beads distributed throughout its base cross-sectional area, with a layer of wet retroreflective media bonded to a durable polyurethane topcoat surface. The patterned surface shall have approximately 40% ± 10% of the surface area raised and presenting a near vertical face to traffic from any direction. The channels between the raised areas shall be substantially free of exposed beads or particles.
- (b) Retroreflectance. The white and yellow markings shall meet the following for initial dry and wet retroreflectance.
 - (1) Dry Retroreflectance. Dry retroreflectance shall be measured under dry conditions according to ASTM D 4061 and meet the values described in Article 1095.06 for Type III tape.
 - (2) Wet Retroreflectance. Wet retroreflectance shall be measured under wet conditions according to ASTM E 2177 and meet the values shown in the following table.

Wet Retroreflectance, Initial RL

| Color | R _L 1.05/88.76 |
|--------|---------------------------|
| White | 300 |
| Yellow | 200 |

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

| Color | Daylight Reflectance %Y |
|---------|-------------------------|
| White | 65 minimum |
| *Yellow | 36-59 |

*Shall match Federal 595 Color No. 33538 and the chromaticity limits as follows.

| Х | 0.490 | 0.475 | 0.485 | 0.530 |
|---|-------|-------|-------|-------|
| у | 0.470 | 0.438 | 0.425 | 0.456 |

- (d) Skid Resistance. The surface of the markings shall provide an average minimum skid resistance of 50 BPN when tested according to ASTM E 303.
- (e) Sampling, Testing, Acceptance, and Certification. Prior to approval and use of the wet reflective, temporary, removable pavement marking tape, the manufacturer shall submit a notarized certification from an independent laboratory, together with the results of all tests, stating that the material meets the requirements as set forth herein. The certification test report shall state the lot tested, manufacturer's name, and date of manufacture.

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

All costs of testing (other than tests conducted by the Department) shall be borne by the manufacturer."

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 **70** working days.

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 X D

Where: SCA = steel cost adjustment, in dollars

Q = quantity of steel incorporated into the work, in lb (kg)

D = price factor, in dollars per lb (kg)

 $D = MPI_M - MPI_L$

Where: $MPI_M =$ The Materials Cost Index for steel as published by the Engineering News-

Record for the month the steel is shipped from the mill. The indices will be

converted from dollars per 100 lb to dollars per lb (kg).

 $MPI_L =$ The Materials Cost Index for steel as published by the Engineering News-

Record for the month prior to the letting for work paid for at the contract price; or for the month the agreed unit price letter is submitted by the Contractor for extra work paid for by agreed unit price,. The indices will be converted from

dollars per 100 lb to dollars per lb (kg).

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

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

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

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

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

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- 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

 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).

- 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 nonminority 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 federallyassisted 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.
- (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 journeymen 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 contacting 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 of 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.

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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

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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.