

BID PROPOSAL INSTRUCTIONS

ABOUT IDOT PROPOSALS: All proposals are potential bidding proposals. Each proposal contains all certifications and affidavits, a proposal signature sheet and a proposal bid bond.

PREQUALIFICATION

Any contractor who desires to become pre-qualified to bid on work advertised by IDOT must submit the properly completed pre-qualification forms to the Bureau of Construction no later than 4:30 p.m. prevailing time twenty-one days prior to the letting of interest. This pre-qualification requirement applies to first time contractors, contractors renewing expired ratings, contractors maintaining continuous pre-qualification or contractors requesting revised ratings. To be eligible to bid, existing pre-qualification ratings must be effective through the date of letting.

WHO CAN BID ?

Bids will be accepted from only those companies that request and receive written Authorization to Bid from IDOT's Central Bureau of Construction.

REQUESTS FOR AUTHORIZATION TO BID

Contractors wanting to bid on items included in a particular letting must submit the properly completed "Request for Authorization to Bid/or Not For Bid Status" (BDE 124) and the ORIGINAL "Affidavit of Availability" (BC 57) to the proper office no later than 4:30 p.m. prevailing time, three (3) days prior to the letting date.

WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID?

When a prospective prime bidder submits a "Request for Authorization to Bid/or Not For Bid Status"(BDE 124) he/she must indicate at that time which items are being requested For Bidding purposes. Only those items requested For Bidding will be analyzed. After the request has been analyzed, the bidder will be issued an **Authorization to Bid or Not for Bid Report**, approved by the Central Bureau of Construction and the Chief Procurement Officer that indicates which items have been approved For Bidding. If **Authorization to Bid** cannot be approved, the **Authorization to Bid or Not for Bid Report** will indicate the reason for denial.

ABOUT AUTHORIZATION TO BID

Firms that have not received an Authorization to Bid or Not For Bid Report within a reasonable time of complete and correct original document submittal should contact the Department as to the status. Firms unsure as to authorization status should call the Prequalification Section of the Bureau of Construction at the number listed at the end of these instructions.

ADDENDA AND REVISIONS

It is the bidder's responsibility to determine which, if any, addenda or revisions pertain to any project they may be bidding. Failure to incorporate all relevant addenda or revisions may cause the bid to be declared unacceptable.

Each addendum or revision will be included with the Electronic Plans and Proposals. Addenda and revisions will also be placed on the Addendum/Revision Checklist and each subscription service subscriber will be notified by e-mail of each addendum and revision issued.

The Internet is the Department's primary way of doing business. The subscription service emails are an added courtesy the Department provides. It is suggested that bidders check IDOT's website at <http://www.idot.illinois.gov/doing-business/procurements/construction-services/construction-bulletins/transportation-bulletin/index#TransportationBulletin> before submitting final bid information.

IDOT IS NOT RESPONSIBLE FOR ANY E-MAIL FAILURES.

Addenda questions may be directed to the Contracts Office at (217)782-7806 or DOT.D&Econtracts@illinois.gov

Technical questions about downloading these files may be directed to Tim Garman at (217)524-1642 or Timothy.Garman@illinois.gov.

STANDARD GUIDELINES FOR SUBMITTING BIDS

- All pages should be single sided.
- Use the Cover Page that is provided in the Bid Proposal (posted on the IDOT Web Site) as the first page of your submitted bid. It has the item number in large bold type in the upper left-hand corner and lines provided for your company name and address in the upper right-hand corner.
- Do not use report covers, presentation folders or special bindings and do not staple multiple times on left side like a book. Use only 1 staple in the upper left hand corner. Make sure all elements of your bid are stapled together including the bid bond or guaranty check (if required).
- **Do not include any certificates of eligibility, your authorization to bid, Addendum Letters or affidavit of availability.**
- Do not include the Subcontractor Documentation with your bid (pages i – iii and pages a – g). This documentation is required only if you are awarded the project.
- Use the envelope cover sheet (provided with the proposal) as the cover for the proposal envelope.
- Do not rely on overnight services to deliver your proposal prior to 10 AM on letting day. It will not be read if it is delivered after 10 AM.
- Do not submit your Substance Abuse Prevention Program (SAPP) with your bid. If you are awarded the contract this form is to be submitted to the district engineer at the pre-construction conference.

BID SUBMITTAL CHECKLIST

- Cover page** (the sheet that has the item number on it) – This should be the first page of your bid proposal, **followed by your bid (the Schedule of Prices/Pay Items)**. If you are using special software or CBID to generate your schedule of prices, do not include the blank pages of the schedule of prices that came with the proposal package.
- Page 4 (Item 9)** – Check “YES” if you will use a subcontractor(s) with an annual value over \$50,000. Include the subcontractor(s) name, address, general type of work to be performed and the dollar amount. If you will use subcontractor(s) but are uncertain who or the dollar amount; check “YES” but leave the lines blank.
- After page 4** – Insert the following documents: Cost Adjustments for Steel, Bituminous and Fuel (if applicable) and the Contractor Letter of Assent (if applicable). The general rule should be, if you don’t know where it goes, put it after page 4.
- Page 10 (Paragraph J)** – Check “YES” or “NO” whether your company has any business in Iran.
- Page 10 (Paragraph K)** – (Not applicable to federally funded projects) List the name of the apprenticeship and training program sponsor holding the certificate of registration from the US Department of Labor. If no applicable program exists, please indicate the work/job category. Do not include certificates with your bid. Keep the certificates in your office in case they are requested by IDOT.
- Page 11 (Paragraph L)** – A copy of your State Board of Elections certificate of registration is no longer required with your bid.
- Page 11 (Paragraph M)** – Indicate if your company has hired a lobbyist in connection with the job for which you are submitting the bid proposal.
- Page 12 (Paragraph C)** – This is a work sheet to determine if a completed Form A is required. It is not part of the form and you do not need to make copies for each completed Form A.
- Pages 14-17 (Form A)** – One Form A (4 pages) is required for each applicable person in your company. Copies of the forms can be used and only need to be changed when the information changes. The certification signature and date must be original for each letting. **Do not staple the forms together.** If you answered “NO” to all of the questions in Paragraph C (page 12), complete the first section (page 14) with your company information and then sign and date the Not Applicable statement on page 17.
- Page 18 (Form B)** - If you check “YES” to having other current or pending contracts it is acceptable to use the phrase, “See Affidavit of Availability on file”. **Ownership Certification** (at the bottom of the page) - Check N/A if the Form A(s) you submitted accounts for 100 percent of the company ownership. Check YES if any percentage of ownership falls outside of the parameters that require reporting on the Form A. Checking NO indicates that the Form A(s) you submitted is not correct and you will be required to submit a revised Form A.
- Page 20 (Workforce Projection)** – Be sure to include the Duration of the Project. It is acceptable to use the phrase “Per Contract Specifications”.

Proposal Bid Bond – (Insert after the proposal signature page) Submit your proposal Proposal Bid Bond (if applicable) using the current Proposal Bid Bond form provided in the proposal package. The Power of Attorney page should be stapled to the Proposal Bid Bond. If you are using an electronic bond, include your bid bond number on the Proposal Bid Bond and attach the Proof of Insurance printed from the Surety’s Web Site.

Disadvantaged Business Utilization Plan and/or Good Faith Effort – The last items in your bid should be the DBE Utilization Plan (SBE 2026), followed by the DBE Participation Statement (SBE 2025) and supporting paperwork. If you have documentation of a Good Faith Effort, it is to follow the SBE Forms.

The Bid Letting is now available in streaming Audio/Video from the IDOT Web Site. A link to the stream will be placed on the main page of the current letting on the day of the Letting. The stream will not begin until 10 AM. The actual reading of the bids does not begin until approximately 10:30 AM.

Following the Letting, the As-Read Tabulation of Bids will be posted by the end of the day. You will find the link on the main Web page for the current letting.

QUESTIONS: pre-letting up to execution of the contract

| | |
|------------------------------------------------------------------|--------------|
| Contractor pre-qualification | 217-782-3413 |
| Small Business, Disadvantaged Business Enterprise (DBE) | 217-785-4611 |
| Contracts, Bids, Letting process or Internet downloads | 217-782-7806 |
| Estimates Unit..... | 217-785-3483 |
| Aeronautics..... | 217-785-8515 |
| IDNR (Land Reclamation, Water Resources, Natural Resources)..... | 217-782-6302 |

QUESTIONS: following contract execution

| | |
|---------------------------------------------|--------------|
| Subcontractor documentation, payments | 217-782-3413 |
| Railroad Insurance | 217-785-0275 |

56

RETURN WITH BID

| |
|-----------------------|
| Proposal Submitted By |
| Name |
| Address |
| City |

Letting March 4, 2016

NOTICE TO PROSPECTIVE BIDDERS

This proposal can be used for bidding purposes by only those companies that request and receive written AUTHORIZATION TO BID from IDOT's Central Bureau of Construction.

BIDDERS NEED NOT RETURN THE ENTIRE PROPOSAL

Notice to Bidders, Specifications, Proposal, Contract and Contract Bond



**Illinois Department
of Transportation**

Springfield, Illinois 62764

**Contract No. 72113
LOGAN County
Section D6 2015-7 HSRR
Route FAS 1771A
Project HSR-1771(002)
District 6 Construction Funds**

PLEASE MARK THE APPROPRIATE BOX BELOW:

- A Bid Bond is included.
- A Cashier's Check or a Certified Check is included
- An Annual Bid Bond is included or is on file with IDOT.

Prepared by

Checked by

F

(Printed by authority of the State of Illinois)

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RETURN WITH BID



PROPOSAL

TO THE DEPARTMENT OF TRANSPORTATION

1. Proposal of _____

Taxpayer Identification Number (Mandatory) _____

For the improvement identified and advertised for bids in the Invitation for Bids as:

**Contract No. 72113
LOGAN County
Section D6 2015-7 HSRR
Project HSR-1771(002)
Route FAS 1771A
District 6 Construction Funds**

This project consists of pavement removal, earthwork, reconstruction and widening to provide safety improvements for the railroad crossing south of the City of Lincoln near the intersection of Old Route 66 and Business 55 (Lincoln Parkway).

2. The undersigned bidder will furnish all labor, material and equipment to complete the above described project in a good and workmanlike manner as provided in the contract documents provided by the Department of Transportation. This proposal will become part of the contract and the terms and conditions contained in the contract documents will govern performance and payments.

RETURN WITH BID

3. **ASSURANCE OF EXAMINATION AND INSPECTION/WAIVER.** The undersigned bidder further declares that he/she has carefully examined the proposal, plans, specifications, addenda form of contract and contract bond, and special provisions, and that he/she has inspected in detail the site of the proposed work, and that he/she has familiarized themselves with all of the local conditions affecting the contract and the detailed requirements of construction, and understands that in making this bid proposal he/she waives all right to plead any misunderstanding regarding the same.

4. **EXECUTION OF CONTRACT AND CONTRACT BOND.** The undersigned bidder further agrees to execute a contract for this work and present the same to the department within fifteen (15) days after the contract has been mailed to him/her. The undersigned further agrees that he/she and his/her surety will execute and present within fifteen (15) days after the contract has been mailed to him/her contract bond satisfactory to and in the form prescribed by the Department of Transportation, in the penal sum of the full amount of the contract, or as specified in the special provisions, guaranteeing the faithful performance of the work in accordance with the terms of the contract.

5. **PROPOSAL GUARANTY.** Accompanying this proposal is either a bid bond on the department form, executed by a corporate surety company satisfactory to the department, or a proposal guaranty check consisting of a bank cashier's check or a properly certified check for not less than 5 per cent of the amount bid or for the amount specified in the following schedule:

| <u>Amount of Bid</u> | | <u>Proposal Guaranty</u> | <u>Amount of Bid</u> | | <u>Proposal Guaranty</u> | |
|----------------------|----------------------|--------------------------|----------------------|----|--------------------------|-------------|
| Up to | \$5,000 | \$150 | \$2,000,000 | to | \$3,000,000 | \$100,000 |
| \$5,000 | to \$10,000 | \$300 | \$3,000,000 | to | \$5,000,000 | \$150,000 |
| \$10,000 | to \$50,000 | \$1,000 | \$5,000,000 | to | \$7,500,000 | \$250,000 |
| \$50,000 | to \$100,000 | \$3,000 | \$7,500,000 | to | \$10,000,000 | \$400,000 |
| \$100,000 | to \$150,000 | \$5,000 | \$10,000,000 | to | \$15,000,000 | \$500,000 |
| \$150,000 | to \$250,000 | \$7,500 | \$15,000,000 | to | \$20,000,000 | \$600,000 |
| \$250,000 | to \$500,000 | \$12,500 | \$20,000,000 | to | \$25,000,000 | \$700,000 |
| \$500,000 | to \$1,000,000 | \$25,000 | \$25,000,000 | to | \$30,000,000 | \$800,000 |
| \$1,000,000 | to \$1,500,000 | \$50,000 | \$30,000,000 | to | \$35,000,000 | \$900,000 |
| \$1,500,000 | to \$2,000,000 | \$75,000 | over | | \$35,000,000 | \$1,000,000 |

Bank cashier's checks or properly certified checks accompanying bid proposals will be made payable to the Treasurer, State of Illinois.

If a combination bid is submitted, the proposal guaranties which accompany the individual bid proposals making up the combination will be considered as also covering the combination bid.

The amount of the proposal guaranty check is _____ \$(_____). If this proposal is accepted and the undersigned will fail to execute a contract bond as required herein, it is hereby agreed that the amount of the proposal guaranty will become the property of the State of Illinois, and shall be considered as payment of damages due to delay and other causes suffered by the State because of the failure to execute said contract and contract bond; otherwise, the bid bond will become void or the proposal guaranty check will be returned to the undersigned.

Attach Cashier's Check or Certified Check Here

In the event that one proposal guaranty check is intended to cover two or more bid proposals, the amount must be equal to the sum of the proposal guaranties which would be required for each individual bid proposal. If the guaranty check is placed in another bid proposal, state below where it may be found.

The proposal guaranty check will be found in the bid proposal for:

Item _____

Section No. _____

County _____

Mark the proposal cover sheet as to the type of proposal guaranty submitted.

RETURN WITH BID

6. **COMBINATION BIDS.** The undersigned bidder further agrees that if awarded the contract for the sections contained in the following combination, he/she will perform the work in accordance with the requirements of each individual contract comprising the combination bid specified in the schedule below, and that the combination bid shall be prorated against each section in proportion to the bid submitted for the same. If an error is found to exist in the gross sum bid for one or more of the individual sections included in a combination, the combination bid shall be corrected as provided in the specifications.

When a combination bid is submitted, the schedule below must be completed in each proposal comprising the combination.

If alternate bids are submitted for one or more of the sections comprising the combination, a combination bid must be submitted for each alternate.

Schedule of Combination Bids

| Combination No. | Sections Included in Combination | Combination Bid | |
|-----------------|----------------------------------|-----------------|-------|
| | | Dollars | Cents |
| | | | |
| | | | |
| | | | |
| | | | |

7. **SCHEDULE OF PRICES.** The undersigned bidder submits herewith, in accordance with the rules and instructions, a schedule of prices for the items of work for which bids are sought. The unit prices bid are in U.S. dollars and cents, and all extensions and summations have been made. The bidder understands that the quantities appearing in the bid schedule are approximate and are provided for the purpose of obtaining a gross sum for the comparison of bids. If there is an error in the extension of the unit prices, the unit prices will govern. Payment to the contractor awarded the contract will be made only for actual quantities of work performed and accepted or materials furnished according to the contract. The scheduled quantities of work to be done and materials to be furnished may be increased, decreased or omitted as provided elsewhere in the contract.
8. **AUTHORITY TO DO BUSINESS IN ILLINOIS.** Section 20-43 of the Illinois Procurement Code (the Code) (30 ILCS 500/20-43) provides that a person (other than an individual acting as a sole proprietor) must be a legal entity authorized to transact business or conduct affairs in the State of Illinois prior to submitting the bid.
9. **EXECUTION OF CONTRACT:** The Department of Transportation will, in accordance with the rules governing Department procurements, execute the contract and shall be the sole entity having the authority to accept performance and make payments under the contract. Execution of the contract by the Chief Procurement Officer (CPO) or the State Purchasing Officer (SPO) is for approval of the procurement process and execution of the contract by the Department. Neither the CPO nor the SPO shall be responsible for administration of the contract or determinations respecting performance or payment there under except as otherwise permitted in the Code.
10. **The services of a subcontractor will be used.**

Check box Yes
 Check box No

For known subcontractors with subcontracts with an annual value of more than \$50,000, the contract shall include their name, address, general type of work to be performed, and the dollar allocation for each subcontractor.
 (30 ILCS 500/20-120)

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT
 NUMBER -

72113

State Job # - C-96-026-16

Project Number
 HSR-1771/002/

Route
 FAS 1771A

County Name - LOGAN - -

Code - 107 - -

District - 6 - -

Section Number - D6 2015-7 HSRR

| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|-------------|-----------------------|-----------------|------------|---|------------|---|-------------|
| X7010216 | TRAF CONT & PROT SPL | L SUM | 1.000 | | | | |
| Z0013798 | CONSTRUCTION LAYOUT | L SUM | 1.000 | | | | |
| Z0022800 | FENCE REMOVAL | FOOT | 549.000 | | | | |
| Z0030850 | TEMP INFO SIGNING | SQ FT | 84.000 | | | | |
| Z0048665 | RR PROT LIABILITY INS | L SUM | 1.000 | | | | |
| 20100110 | TREE REMOV 6-15 | UNIT | 90.000 | | | | |
| 20100500 | TREE REMOV ACRES | ACRE | 1.500 | | | | |
| 20200100 | EARTH EXCAVATION | CU YD | 18,946.000 | | | | |
| 20201200 | REM & DISP UNS MATL | CU YD | 7,011.000 | | | | |
| 20400800 | FURNISHED EXCAVATION | CU YD | 46,869.000 | | | | |
| 20800150 | TRENCH BACKFILL | CU YD | 292.000 | | | | |
| 21101615 | TOPSOIL F & P 4 | SQ YD | 44,575.000 | | | | |
| 23101052 | EXPLOR TRENCH 52 | FOOT | 1,200.000 | | | | |
| 25000200 | SEEDING CL 2 | ACRE | 9.500 | | | | |
| 25000400 | NITROGEN FERT NUTR | POUND | 836.000 | | | | |
| 25000500 | PHOSPHORUS FERT NUTR | POUND | 836.000 | | | | |

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|-------------|-----------------------|-----------------|------------|---|------------|---|-------------|
| 25000600 | POTASSIUM FERT NUTR | POUND | 836.000 | | | | |
| 25100115 | MULCH METHOD 2 | ACRE | 8.000 | | | | |
| 25100630 | EROSION CONTR BLANKET | SQ YD | 6,221.000 | | | | |
| 28000250 | TEMP EROS CONTR SEED | POUND | 927.000 | | | | |
| 28000305 | TEMP DITCH CHECKS | FOOT | 735.000 | | | | |
| 28000400 | PERIMETER EROS BAR | FOOT | 11,511.000 | | | | |
| 28000500 | INLET & PIPE PROTECT | EACH | 2.000 | | | | |
| 28100107 | STONE RIPRAP CL A4 | SQ YD | 235.000 | | | | |
| 28200200 | FILTER FABRIC | SQ YD | 235.000 | | | | |
| 30300112 | AGG SUBGRADE IMPR 12 | SQ YD | 21,305.000 | | | | |
| 35101800 | AGG BASE CSE B 6 | SQ YD | 587.000 | | | | |
| 40200800 | AGG SURF CSE B | TON | 59.000 | | | | |
| 40201000 | AGGREGATE-TEMP ACCESS | TON | 240.000 | | | | |
| 40600275 | BIT MATLS PR CT | POUND | 97,680.000 | | | | |
| 40603080 | HMA BC IL-19.0 N50 | TON | 447.000 | | | | |

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|-------------|----------------------|-----------------|------------|---|------------|---|-------------|
| 40603230 | P HMA BC IL19.0 N50 | TON | 130.000 | | | | |
| 40603510 | P HMA SC "C" N50 | TON | 116.000 | | | | |
| 40701856 | HMA PAVT FD 8 3/4 | SQ YD | 8,757.000 | | | | |
| 40701916 | HMA PAVT FD 11 3/4 | SQ YD | 9,607.000 | | | | |
| 40800050 | INCIDENTAL HMA SURF | TON | 34.000 | | | | |
| 42001300 | PROTECTIVE COAT | SQ YD | 184.000 | | | | |
| 44000100 | PAVEMENT REM | SQ YD | 14,533.000 | | | | |
| 44000500 | COMB CURB GUTTER REM | FOOT | 212.000 | | | | |
| 44004250 | PAVED SHLD REMOVAL | SQ YD | 822.000 | | | | |
| 48101500 | AGGREGATE SHLDS B 6 | SQ YD | 2,176.000 | | | | |
| 48203021 | HMA SHOULDERS 6 | SQ YD | 4,529.000 | | | | |
| 48203045 | HMA SHOULDERS 12 | SQ YD | 395.000 | | | | |
| 50105220 | PIPE CULVERT REMOV | FOOT | 538.000 | | | | |
| 50800105 | REINFORCEMENT BARS | POUND | 47,480.000 | | | | |
| 54002020 | EXPAN BOLTS 3/4 | EACH | 22.000 | | | | |

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|-------------|-----------------------|-----------------|----------|---|------------|---|-------------|
| 54003000 | CONC BOX CUL | CU YD | 251.000 | | | | |
| 542A0241 | P CUL CL A 1 36 | FOOT | 86.000 | | | | |
| 542A1087 | P CUL CL A 2 42 | FOOT | 131.000 | | | | |
| 542A1933 | P CUL CL A 3 48 | FOOT | 152.000 | | | | |
| 542A5485 | P CUL CL A 1 EQRS 30 | FOOT | 55.000 | | | | |
| 542C0223 | P CUL CL C 1 18 | FOOT | 108.000 | | | | |
| 542C1075 | P CUL CL C 2 30 | FOOT | 117.000 | | | | |
| 54213471 | END SECTIONS 36 | EACH | 1.000 | | | | |
| 54213681 | PRC FLAR END SEC 36 | EACH | 1.000 | | | | |
| 54213687 | PRC FLAR END SEC 42 | EACH | 2.000 | | | | |
| 54213693 | PRC FLAR END SEC 48 | EACH | 2.000 | | | | |
| 54214305 | END SEC EQV R-S 30 | EACH | 1.000 | | | | |
| 54214515 | PRC FL END S EQ RS 30 | EACH | 1.000 | | | | |
| 54215553 | MET END SEC 18 | EACH | 6.000 | | | | |
| 54215565 | MET END SEC 30 | EACH | 4.000 | | | | |

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|-------------|-----------------------|-----------------|----------|---|------------|---|-------------|
| 54260311 | TRAVERS PIPE GRATE | FOOT | 30.000 | | | | |
| 550A0340 | STORM SEW CL A 2 12 | FOOT | 18.000 | | | | |
| 55100500 | STORM SEWER REM 12 | FOOT | 66.000 | | | | |
| 60201330 | CB TA 4 DIA T23F&G | EACH | 1.000 | | | | |
| 60206600 | CB TB T7G | EACH | 1.000 | | | | |
| 60207605 | CB TC T8G | EACH | 1.000 | | | | |
| 60500040 | REMOV MANHOLES | EACH | 1.000 | | | | |
| 60500060 | REMOV INLETS | EACH | 2.000 | | | | |
| 60608582 | COMB CC&G TM4.24 | FOOT | 70.000 | | | | |
| 60622320 | CONC MED TSM4.24 | SQ FT | 108.000 | | | | |
| 63000001 | SPBGR TY A 6FT POSTS | FOOT | 800.000 | | | | |
| 63100167 | TR BAR TRM T1 SPL TAN | EACH | 2.000 | | | | |
| 67000400 | ENGR FIELD OFFICE A | CAL MO | 11.000 | | | | |
| 67000600 | ENGR FIELD LAB | CAL MO | 7.000 | | | | |
| 67100100 | MOBILIZATION | L SUM | 1.000 | | | | |

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|-------------|-----------------------|-----------------|------------|---|------------|---|-------------|
| 70100310 | TRAF CONT-PROT 701421 | L SUM | 1.000 | | | | |
| 70100500 | TRAF CONT-PROT 701326 | L SUM | 1.000 | | | | |
| 70103815 | TR CONT SURVEILLANCE | CAL DA | 20.000 | | | | |
| 70106800 | CHANGEABLE MESSAGE SN | CAL MO | 16.000 | | | | |
| 70300220 | TEMP PVT MK LINE 4 | FOOT | 6,010.000 | | | | |
| 70301000 | WORK ZONE PAVT MK REM | SQ FT | 1,376.000 | | | | |
| 72000100 | SIGN PANEL T1 | SQ FT | 144.000 | | | | |
| 72400310 | REMOV SIGN PANEL T1 | SQ FT | 144.000 | | | | |
| 72400710 | RELOC SIGN PANEL T1 | SQ FT | 23.000 | | | | |
| 72800100 | TELES STL SIN SUPPORT | FOOT | 47.000 | | | | |
| 72900100 | METAL POST TY A | FOOT | 178.000 | | | | |
| 72900200 | METAL POST TY B | FOOT | 157.000 | | | | |
| 78004200 | PREF PL PM TB INL L&S | SQ FT | 458.000 | | | | |
| 78004280 | PREF PL PM TB INL L24 | FOOT | 298.000 | | | | |
| 78009005 | MOD URETH PM LINE 5 | FOOT | 24,135.000 | | | | |

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Section Number - D6 2015-7 HSRR

Project Number
 HSR-1771/002/

Route
 FAS 1771A

| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|-------------|----------------------|-----------------|-----------|---|------------|---|-------------|
| 78009006 | MOD URETH PM LINE 6 | FOOT | 1,823.000 | | | | |
| 78009008 | MOD URETH PM LINE 8 | FOOT | 526.000 | | | | |
| 78009012 | MOD URETH PM LINE 12 | FOOT | 761.000 | | | | |
| 78100100 | RAISED REFL PAVT MKR | EACH | 228.000 | | | | |
| 78200300 | PRISMATIC CURB REFL | EACH | 33.000 | | | | |
| 78200410 | GUARDRAIL MKR TYPE A | EACH | 12.000 | | | | |
| 78201000 | TERMINAL MARKER - DA | EACH | 2.000 | | | | |

CONTRACT NUMBER

72113

THIS IS THE TOTAL BID

\$ _____

NOTES:

1. Each PAY ITEM should have a UNIT PRICE and a TOTAL PRICE.
2. The UNIT PRICE shall govern if no TOTAL PRICE is shown or if there is a discrepancy between the product of the UNIT PRICE multiplied by the QUANTITY.
3. If a UNIT PRICE is omitted, the TOTAL PRICE will be divided by the QUANTITY in order to establish a UNIT PRICE.
4. A bid may be declared UNACCEPTABLE if neither a unit price nor a total price is shown.

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STATE REQUIRED ETHICAL STANDARDS GOVERNING CONTRACT PROCUREMENT: ASSURANCES, CERTIFICATIONS AND DISCLOSURES

I. GENERAL

A. Article 50 of the Code establishes the duty of all State CPOs, SPOs, and their designees to maximize the value of the expenditure of public moneys in procuring goods, services, and contracts for the State of Illinois and to act in a manner that maintains the integrity and public trust of State government. In discharging this duty, they are charged by law to use all available information, reasonable efforts, and reasonable actions to protect, safeguard, and maintain the procurement process of the State of Illinois.

B. In order to comply with the provisions of Article 50 and to carry out the duty established therein, all bidders are to adhere to ethical standards established for the procurement process, and to make such assurances, disclosures and certifications required by law. Except as otherwise required in subsection III, paragraphs J-M, by execution of the Proposal Signature Sheet, the bidder indicates that each of the mandated assurances have been read and understood, that each certification is made and understood, and that each disclosure requirement has been understood and completed.

C. In addition to all other remedies provided by law, failure to comply with any assurance, failure to make any disclosure or the making of a false certification shall be grounds for the CPO to void the contract, and may result in the suspension or debarment of the bidder or subcontractor. If a false certification is made by a subcontractor the contractor's submitted bid and the executed contract may not be declared void unless the contractor refuses to terminate the subcontract upon the State's request after a finding that the subcontractor's certification was false.

I acknowledge, understand and accept these terms and conditions.

II. ASSURANCES

The assurances hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder.

A. Conflicts of Interest

Section 50-13. Conflicts of Interest.

(a) Prohibition. It is unlawful for any person holding an elective office in this State, holding a seat in the General Assembly, or appointed to or employed in any of the offices or agencies of state government and who receives compensation for such employment in excess of 60% of the salary of the Governor of the State of Illinois, or who is an officer or employee of the Capital Development Board or the Illinois State Toll Highway Authority, or who is the spouse or minor child of any such person to have or acquire any contract, or any direct pecuniary interest in any contract therein, whether for stationery, printing, paper, or any services, materials, or supplies, that will be wholly or partially satisfied by the payment of funds appropriated by the General Assembly of the State of Illinois or in any contract of the Capital Development Board or the Illinois State Toll Highway Authority.

(b) Interests. It is unlawful for any firm, partnership, association or corporation, in which any person listed in subsection (a) is entitled to receive (i) more than 7 1/2% of the total distributable income or (ii) an amount in excess of the salary of the Governor, to have or acquire any such contract or direct pecuniary interest therein.

(c) Combined interests. It is unlawful for any firm, partnership, association, or corporation, in which any person listed in subsection (a) together with his or her spouse or minor children is entitled to receive (i) more than 15%, in the aggregate, of the total distributable income or (ii) an amount in excess of 2 times the salary of the Governor, to have or acquire any such contract or direct pecuniary interest therein.

(d) Securities. Nothing in this Section invalidates the provisions of any bond or other security previously offered or to be offered for sale or sold by or for the State of Illinois.

(e) Prior interests. This Section does not affect the validity of any contract made between the State and an officer or employee of the State or member of the General Assembly, his or her spouse, minor child or any combination of those persons if that contract was in existence before his or her election or employment as an officer, member, or employee. The contract is voidable, however, if it cannot be completed within 365 calendar days after the officer, member, or employee takes office or is employed. The current salary of the Governor is \$177,412.00. Sixty percent of the salary is \$106,447.20.

RETURN WITH BID

The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-13, or that an effective exemption has been issued by the Board of Ethics to any individual subject to the Section 50-13 prohibitions pursuant to the provisions of Section 50-20 of the Code. Information concerning the exemption process is available from the Department upon request.

B. Negotiations

Section 50-15. Negotiations.

It is unlawful for any person employed in or on a continual contractual relationship with any of the offices or agencies of State government to participate in contract negotiations on behalf of that office or agency with any firm, partnership, association, or corporation with whom that person has a contract for future employment or is negotiating concerning possible future employment.

The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-15, and that the bidder has no knowledge of any facts relevant to the kinds of acts prohibited therein.

C. Inducements

Section 50-25. Inducement.

Any person who offers or pays any money or other valuable thing to any person to induce him or her not to provide a submission to a vendor portal or to bid for a State contract or as recompense for not having bid on a State contract is guilty of a Class 4 felony. Any person who accepts any money or other valuable thing for not bidding for a State contract, not making a submission to a vendor portal, or who withholds a bid or submission to a vendor portal in consideration of the promise for the payment of money or other valuable thing is guilty of a Class 4 felony.

The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-25, and that the bidder has no knowledge of any facts relevant to the kinds of acts prohibited therein.

D. Revolving Door Prohibition

Section 50-30. Revolving door prohibition.

CPOs, SPOs, procurement compliance monitors, their designees whose principal duties are directly related to State procurement, and executive officers confirmed by the Senate are expressly prohibited for a period of 2 years after terminating an affected position from engaging in any procurement activity relating to the State agency most recently employing them in an affected position for a period of at least 6 months. The prohibition includes, but is not limited to: lobbying the procurement process; specifying; bidding; proposing bid, proposal, or contract documents; on their own behalf or on behalf of any firm, partnership, association, or corporation. This Section applies only to persons who terminate an affected position on or after January 15, 1999.

The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-30, and that the bidder has no knowledge of any facts relevant to the kinds of acts prohibited therein.

E. Reporting Anticompetitive Practices

Section 50-40. Reporting anticompetitive practices.

When, for any reason, any vendor, bidder, contractor, CPO, SPO, designee, elected official, or State employee suspects collusion or other anticompetitive practice among any bidders, offerors, contractors, proposers, or employees of the State, a notice of the relevant facts shall be transmitted to the Attorney General and the CPO.

The bidder assures the Department that it has not failed to report any relevant facts concerning the practices addressed in Section 50-40 which may involve the contract for which the bid or submission to a vendor portal is submitted.

F. Confidentiality

Section 50-45. Confidentiality.

Any CPO, SPO, designee, or executive officer who willfully uses or allows the use of specifications, competitive bid documents, proprietary competitive information, proposals, contracts, or selection information to compromise the fairness or integrity of the procurement, bidding, or contract process shall be subject to immediate dismissal, regardless of the Personnel code, any contract, or any collective bargaining agreement, and may in addition be subject to criminal prosecution.

The bidder assures the Department that it has no knowledge of any fact relevant to the practices addressed in Section 50-45 which may involve the contract for which the bid is submitted.

RETURN WITH BID

G. Insider Information

Section 50-50. Insider information.

It is unlawful for any current or former elected or appointed State official or State employee to knowingly use confidential information available only by virtue of that office or employment for actual or anticipated gain for themselves or another person.

The bidder assures the Department that it has no knowledge of any facts relevant to the practices addressed in Section 50-50 which may involve the contract for which the bid is submitted.

I acknowledge, understand and accept these terms and conditions for the above assurances.

III. CERTIFICATIONS

The certifications hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder. Section 50-2 of the Code provides that every person that has entered into a multi-year contract and every subcontractor with a multi-year subcontract shall certify, by July 1 of each fiscal year covered by the contract after the initial fiscal year, to the responsible CPO whether it continues to satisfy the requirements of Article 50 pertaining to the eligibility for a contract award. If a contractor or subcontractor is not able to truthfully certify that it continues to meet all requirements, it shall provide with its certification a detailed explanation of the circumstances leading to the change in certification status. A contractor or subcontractor that makes a false statement material to any given certification required under Article 50 is, in addition to any other penalties or consequences prescribed by law, subject to liability under the Whistleblower Reward and Protection Act for submission of a false claim.

A. Bribery

Section 50-5. Bribery.

(a) Prohibition. No person or business shall be awarded a contract or subcontract under this Code who:

(1) has been convicted under the laws of Illinois or any other state of bribery or attempting to bribe an officer or employee of the State of Illinois or any other state in that officer's or employee's official capacity; or

(2) has made an admission of guilt of that conduct that is a matter of record but has not been prosecuted for that conduct.

(b) Businesses. No business shall be barred from contracting with any unit of State or local government, or subcontracting under such a contract, as a result of a conviction under this Section of any employee or agent of the business if the employee or agent is no longer employed by the business and:

(1) the business has been finally adjudicated not guilty; or

(2) the business demonstrates to the governmental entity with which it seeks to contract, or which is signatory to the contract which the subcontract relates, and that entity finds that the commission of the offense was not authorized, requested, commanded, or performed by a director, officer, or high managerial agent on behalf of the business as provided in paragraph (2) of subsection (a) of Section 5-4 of the Criminal Code of 2012.

(c) Conduct on behalf of business. For purposes of this Section, when an official, agent, or employee of a business committed the bribery or attempted bribery on behalf of the business and in accordance with the direction or authorization of a responsible official of the business, the business shall be chargeable with the conduct.

(d) Certification. Every bid submitted to and contract executed by the State, and every subcontract subject to Section 20-120 of the Code shall contain a certification by the contractor or the subcontractor, respectively, that the contractor or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the CPO may declare the related contract void if any certifications required by this Section are false. A contractor who makes a false statement, material to the certification, commits a Class 3 felony.

The contractor or subcontractor certifies that it is not barred from being awarded a contract under Section 50-5.

B. Felons

Section 50-10. Felons.

(a) Unless otherwise provided, no person or business convicted of a felony shall do business with the State of Illinois or any State agency, or enter into a subcontract, from the date of conviction until 5 years after the date of completion of the sentence for that felony, unless no person held responsible by a prosecutorial office for the facts upon which the conviction was based continues to have any involvement with the business.

(b) Certification. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the Code and every vendor's submission to a vendor portal shall contain a certification by the bidder or contractor or subcontractor, respectively, that the bidder, contractor, or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the CPO may declare the related contract void if any of the certifications required by this Section are false.

RETURN WITH BID

C. Debt Delinquency

Section 50-11 and 50-12. Debt Delinquency.

The contractor or bidder or subcontractor, respectively, certifies that it, or any affiliate, is not barred from being awarded a contract or subcontract under the Code. Section 50-11 prohibits a person from entering into a contract with a State agency, or entering into a subcontract, if it knows or should know that it, or any affiliate, is delinquent in the payment of any debt to the State as defined by the Debt Collection Board. Section 50-12 prohibits a person from entering into a contract with a State agency, or entering into a subcontract, if it, or any affiliate, has failed to collect and remit Illinois Use Tax on all sales of tangible personal property into the State of Illinois in accordance with the provisions of the Illinois Use Tax Act. The bidder or contractor or subcontractor, respectively, further acknowledges that the CPO may declare the related contract void if this certification is false or if the bidder, contractor, or subcontractor, or any affiliate, is determined to be delinquent in the payment of any debt to the State during the term of the contract.

D. Prohibited Bidders, Contractors and Subcontractors

Section 50-10.5 and 50-60(c). Prohibited bidders, contractors and subcontractors.

The bidder or contractor or subcontractor, respectively, certifies in accordance with Section 50-10.5 that no officer, director, partner or other managerial agent of the contracting business has been convicted of a felony under the Sarbanes-Oxley Act of 2002 or a Class 3 or Class 2 felony under the Illinois Securities Law of 1953 or if in violation of Subsection (c) for a period of five years from the date of conviction. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the Code shall contain a certification by the bidder, contractor, or subcontractor, respectively, that the bidder, contractor, or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the CPO shall declare the related contract void if any of the certifications completed pursuant to this Section are false.

E. Section 42 of the Environmental Protection Act

Section 50-14 Environmental Protection Act violations.

The bidder or contractor or subcontractor, respectively, certifies in accordance with Section 50-14 that the bidder, contractor, or subcontractor, is not barred from being awarded a contract or entering into a subcontract under this Section which prohibits the bidding on or entering into contracts with the State of Illinois or a State agency, or entering into any subcontract, that is subject to the Code by a person or business found by a court or the Pollution Control Board to have committed a willful or knowing violation of Section 42 of the Environmental Protection Act for a period of five years from the date of the order. The bidder or contractor or subcontractor, respectively, acknowledges that the CPO may declare the contract void if this certification is false.

F. Educational Loan

Section 3 of the Educational Loan Default Act, 5 ILCS 385/3.

Pursuant to the Educational Loan Default Act no State agency shall contract with an individual for goods or services if that individual is in default on an educational loan.

The bidder, if an individual as opposed to a corporation, partnership or other form of business organization, certifies that the bidder is not in default on an educational loan as provided in Section 3 of the Act.

G. Bid-Rigging/Bid Rotating

Section 33E-11 of the Criminal Code of 2012, 720 ILCS 5/3BE-11.

(a) Every bid submitted to and public contract executed pursuant to such bid by the State or a unit of local government shall contain a certification by the prime contractor that the prime contractor is not barred from contracting with any unit of State or local government as a result of a violation of either Section 33E-3 or 33E-4 of this Article.

(b) A contractor who makes a false statement, material to the certification, commits a Class 3 felony.

A violation of Section 33E-3 would be represented by a conviction of the crime of bid-rigging which, in addition to Class 3 felony sentencing, provides that any person convicted of this offense or any similar offense of any state or the United States which contains the same elements as this offense shall be barred for 5 years from the date of conviction from contracting with any unit of State or local government. No corporation shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of such corporation if the employee so convicted is no longer employed by the corporation and: (1) it has been finally adjudicated not guilty or (2) if it demonstrates to the governmental entity with which it seeks to contract and that entity finds that the commission of the offense was neither authorized, requested, commanded, nor performed by a director, officer or a high managerial agent in behalf of the corporation.

The bidder certifies that it is not barred from contracting with the Department by reason of a violation of either Section 33E-3 or Section 33E-4.

RETURN WITH BID

H. International Anti-Boycott

Section 5 of the International Anti-Boycott Certification Act provides every contract entered into by the State of Illinois for the manufacture, furnishing, or purchasing of supplies, material, or equipment or for the furnishing of work, labor, or services, in an amount exceeding the threshold for small purchases according to the purchasing laws of this State or \$10,000.00, whichever is less, shall contain certification, as a material condition of the contract, by which the contractor agrees that neither the contractor nor any substantially-owned affiliated company is participating or shall participate in an international boycott in violation of the provisions of the U.S. Export Administration Act of 1979 or the regulations of the U.S. Department of Commerce promulgated under that Act.

The bidder makes the certification set forth in Section 5 of the Act.

I. Drug Free Workplace

The Illinois "Drug Free Workplace Act" applies to this contract and it is necessary to comply with the provisions of the "Act" if the contractor is a corporation, partnership, or other entity (including a sole proprietorship) which has 25 or more employees.

The bidder certifies that if awarded a contract in excess of \$5,000 it will provide a drug free workplace in compliance with the provisions of the Act.

J. Disclosure of Business Operations in Iran

Section 50-36 of the Code provides that each bid, offer, or proposal submitted for a State contract shall include a disclosure of whether or not the Company acting as the bidder, offeror, or proposing entity, or any of its corporate parents or subsidiaries, within the 24 months before submission of the bid, offer, or proposal had business operations that involved contracts with or provision of supplies or services to the Government of Iran, companies in which the Government of Iran has any direct or indirect equity share, consortiums or projects commissioned by the Government of Iran, or companies involved in consortiums or projects commissioned by the Government of Iran and either of the following conditions apply:

- (1) More than 10% of the Company's revenues produced in or assets located in Iran involve oil-related activities or mineral-extraction activities; less than 75% of the Company's revenues produced in or assets located in Iran involve contracts with or provision of oil-related or mineral-extraction products or services to the Government of Iran or a project or consortium created exclusively by that government; and the Company has failed to take substantial action.
- (2) The Company has, on or after August 5, 1996, made an investment of \$20 million or more, or any combination of investments of at least \$10 million each that in the aggregate equals or exceeds \$20 million in any 12-month period, which directly or significantly contributes to the enhancement of Iran's ability to develop petroleum resources of Iran.

The terms "Business operations", "Company", "Mineral-extraction activities", "Oil-related activities", "Petroleum resources", and "Substantial action" are all defined in the Code.

Failure to make the disclosure required by the Code may cause the bid, offer or proposal to be considered not responsive. The disclosure will be considered when evaluating the bid or awarding the contract. The name of each Company disclosed as doing business or having done business in Iran will be provided to the State Comptroller.

Check the appropriate statement:

Company has no business operations in Iran to disclose.

Company has business operations in Iran as disclosed on the attached document.

RETURN WITH BID

K. Apprenticeship and Training Certification (Does not apply to federal aid projects)

In accordance with the provisions of Section 30-22 (6) of the Code, the bidder certifies that it is a participant, either as an individual or as part of a group program, in the approved apprenticeship and training programs applicable to each type of work or craft that the bidder will perform with its own forces. The bidder further certifies for work that will be performed by subcontract that each of its subcontractors submitted for approval either (a) is, at the time of such bid, participating in an approved, applicable apprenticeship and training program; or (b) will, prior to commencement of performance of work pursuant to this contract, begin participation in an approved apprenticeship and training program applicable to the work of the subcontract. The Department, at any time before or after award, may require the production of a copy of each applicable Certificate of Registration issued by the United States Department of Labor evidencing such participation by the contractor and any or all of its subcontractors. Applicable apprenticeship and training programs are those that have been approved and registered with the United States Department of Labor. The bidder shall list in the space below, the official name of the program sponsor holding the Certificate of Registration for all of the types of work or crafts in which the bidder is a participant and that will be performed with the bidder's forces. Types of work or craft work that will be subcontracted shall be included and listed as subcontract work. The list shall also indicate any type of work or craft job category that does not have an applicable apprenticeship or training program. **The bidder is responsible for making a complete report and shall make certain that each type of work or craft job category that will be utilized on the project as reported on the Construction Employee Workforce Projection (Form BC-1256) and returned with the bid is accounted for and listed.**

Additionally, Section 30-22 of the Code requires that the bidder certify that an Illinois office be maintained as the primary place of employment for persons employed for this contract.

NA-FEDERAL

The requirements of these certifications and disclosures are a material part of the contract, and the contractor shall require these certification provisions to be included in all approved subcontracts. In order to fulfill this requirement, it shall not be necessary that an applicable program sponsor be currently taking, or that it will take applications for apprenticeship, training or employment during the performance of the work of this contract.

RETURN WITH BID

L. Political Contributions and Registration with the State Board of Elections

Sections 20-160 and 50-37 of the Code regulate political contributions from business entities and any affiliated entities or affiliated persons bidding on or contracting with the state. Generally under Section 50-37, any business entity, and any affiliated entity or affiliated person of the business entity, whose current year contracts with all state agencies exceed an awarded value of \$50,000, are prohibited from making any contributions to any political committees established to promote the candidacy of the officeholder responsible for the awarding of the contracts or any other declared candidate for that office for the duration of the term of office of the incumbent officeholder or a period 2 years after the termination of the contract, whichever is longer. Any business entity and affiliated entities or affiliated persons whose state contracts in the current year do not exceed an awarded value of \$50,000, but whose aggregate pending bids and proposals on state contracts exceed \$50,000, either alone or in combination with contracts not exceeding \$50,000, are prohibited from making any political contributions to any political committee established to promote the candidacy of the officeholder responsible for awarding the pending contract during the period beginning on the date the invitation for bids or request for proposals or any other procurement opportunity is issued and ending on the day after the date of award or selection if the entity was not awarded or selected. Section 20-160 requires certification of registration of affected business entities in accordance with procedures found in Section 9-35 of The Election Code.

By submission of a bid, the contractor business entity acknowledges and agrees that it has read and understands Sections 20-160 and 50-37 of the Code, and that it makes the following certification:

The undersigned bidder certifies that it has registered as a business with the State Board of Elections and acknowledges a continuing duty to update the registration in accordance with the above referenced statutes. If the business entity is required to register, the CPO shall verify that it is in compliance on the date the bid or proposal is due. The CPO shall not accept a bid or proposal if the business entity is not in compliance with the registration requirements.

These requirements and compliance with the above referenced statutory sections are a material part of the contract, and any breach thereof shall be cause to void the contract under Section 50-60 of the Code. This provision does not apply to Federal-aid contracts.

M. Lobbyist Disclosure

Section 50-38 of the Code requires that any bidder or offeror on a State contract that hires a person required to register under the Lobbyist Registration Act to assist in obtaining a contract shall:

- (i) Disclose all costs, fees, compensation, reimbursements, and other remunerations paid or to be paid to the lobbyist related to the contract,
- (ii) Not bill or otherwise cause the State of Illinois to pay for any of the lobbyist's costs, fees, compensation, reimbursements, or other remuneration, and
- (iii) Sign a verification certifying that none of the lobbyist's costs, fees, compensation, reimbursements, or other remuneration were billed to the State.

This information, along with all supporting documents, shall be filed with the agency awarding the contract and with the Secretary of State. The CPO shall post this information, together with the contract award notice, in the online Procurement Bulletin.

Pursuant to Subsection (c) of this Section, no person or entity shall retain a person or entity to attempt to influence the outcome of a procurement decision made under the Code for compensation contingent in whole or in part upon the decision or procurement. Any person who violates this subsection is guilty of a business offense and shall be fined not more than \$10,000.

Bidder acknowledges that it is required to disclose the hiring of any person required to register pursuant to the Illinois Lobbyist Registration Act (25 ILCS 170) in connection with this contract.

Bidder has not hired any person required to register pursuant to the Illinois Lobbyist Registration Act in connection with this contract.

Or

Bidder has hired the following persons required to register pursuant to the Illinois Lobbyist Registration Act in connection with the contract:

Name and address of person: _____
All costs, fees, compensation, reimbursements and other remuneration paid to said person: _____

I acknowledge, understand and accept these terms and conditions for the above certifications.

RETURN WITH BID

IV. DISCLOSURES

- A. The disclosures hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder. The bidder further certifies that the Department has received the disclosure forms for each bid.

The CPO may void the bid, or contract, respectively, if it is later determined that the bidder or subcontractor rendered a false or erroneous disclosure. A contractor or subcontractor may be suspended or debarred for violations of the Code. Furthermore, the CPO may void the contract and the surety providing the performance bond shall be responsible for completion of the contract.

B. Financial Interests and Conflicts of Interest

1. Section 50-35 of the Code provides that all bids of more than \$50,000 and all submissions to a vendor portal shall be accompanied by disclosure of the financial interests of the bidder. This disclosed information for the successful bidder, will be maintained as public information subject to release by request pursuant to the Freedom of Information Act, filed with the Procurement Policy Board, and shall be incorporated as a material term of the contract. Furthermore, pursuant to Section 5-5, the Procurement Policy Board may review a proposal, bid, or contract and issue a recommendation to void a contract or reject a proposal or bid based on any violation of the Code or the existence of a conflict of interest as provided in subsections (b) and (d) of Section 50-35.

The financial interests to be disclosed shall include ownership or distributive income share that is in excess of 5%, or an amount greater than 60% of the annual salary of the Governor, of the bidding entity or its parent entity, whichever is less, unless the contractor or bidder is a publicly traded entity subject to Federal 10K reporting, in which case it may submit its 10K disclosure in place of the prescribed disclosure. If a bidder is a privately held entity that is exempt from Federal 10K reporting, but has more than 100 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any individual or entity holding any ownership share that is in excess of 5%. The disclosure shall include the names, addresses, and dollar or proportionate share of ownership of each individual making the disclosure, their instrument of ownership or beneficial relationship, and notice of any potential conflict of interest resulting from the current ownership or beneficial interest of each individual making the disclosure having any of the relationships identified in Section 50-35 and on the disclosure form.

The current annual salary of the Governor is \$177,412.00.

In addition, all disclosures shall indicate any other current or pending contracts, proposals, leases, or other ongoing procurement relationships the bidding entity has with any other unit of state government and shall clearly identify the unit and the contract, proposal, lease, or other relationship.

2. Disclosure Forms. Disclosure Form A is attached for use concerning the individuals meeting the above ownership or distributive share requirements. A separate Disclosure Form A must be submitted with the bid for each individual meeting the above requirements. In addition, a second form (Disclosure Form B) provides for the disclosure of current or pending procurement relationships with other (non-IDOT) state agencies and a total ownership certification. **The forms must be included with each bid.**

C. Disclosure Form Instructions

Form A Instructions for Financial Information & Potential Conflicts of Interest

If the bidder is a publicly traded entity subject to Federal 10K reporting, the 10K Report may be submitted to meet the requirements of Form A. If a bidder is a privately held entity that is exempt from Federal 10K reporting, but has more than 100 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any individual or entity holding any ownership share that is in excess of 5%. If a bidder is not subject to Federal 10K reporting, the bidder must determine if any individuals are required by law to complete a financial disclosure form. To do this, the bidder should answer each of the following questions. A "YES" answer indicates Form A must be completed. If the answer to each of the following questions is "NO", then the NOT APPLICABLE STATEMENT on Form A must be signed and dated by an individual that is authorized to execute contracts for the bidding company. Note: These questions are for assistance only and are not required to be completed.

1. Does anyone in your organization have a direct or beneficial ownership share of greater than 5% of the bidding entity or parent entity? YES ___ NO ___
2. Does anyone in your organization have a direct or beneficial ownership share of less than 5%, but which has a value greater than 60% of the annual salary of the Governor? YES ___ NO ___
3. Does anyone in your organization receive more than 60% of the annual salary of the Governor of the bidding entity's or parent entity's distributive income? YES ___ NO ___
4. Does anyone in your organization receive greater than 5% of the bidding entity's or parent entity's total distributive income, but which is less than 60% of the annual salary of the Governor? YES ___ NO ___

(Note: Only one set of forms needs to be completed per individual per bid even if a specific individual would require a yes answer to more than one question.)

A "YES" answer to any of these questions requires the completion of Form A. The bidder must determine each individual in the bidding entity or the bidding entity's parent company that would cause the questions to be answered "Yes". Each form must be signed and dated by an individual that is authorized to execute contracts for your organization. The individual signing can be, but does not have to be, the individual for which the form is being completed. The bidder is responsible for the accuracy of any information provided.

If the answer to each of the above questions is "NO", then the NOT APPLICABLE STATEMENT of Form A must be signed and dated by an individual that is authorized to execute contracts for your company.

RETURN WITH BID

Form B: Instructions for Identifying Other Contracts & Procurement Related Information

Disclosure Form B must be completed for each bid submitted by the bidding entity. *Note: Checking the NOT APPLICABLE STATEMENT on Form A does not allow the bidder to ignore Form B. Form B must be completed, checked, and dated or the bidder may be considered nonresponsive and the bid will not be accepted.*

The Bidder shall identify, by checking Yes or No on Form B, whether it has any pending contracts (including leases), bids, proposals, or other ongoing procurement relationship with any other (non-IDOT) State of Illinois agency. If "No" is checked, the bidder only needs to complete the check box on the bottom of Form B. If "Yes" is checked, the bidder must do one of the following:

Option I: If the bidder did not submit an Affidavit of Availability to obtain authorization to bid, the bidder must list all non-IDOT State of Illinois agency pending contracts, leases, bids, proposals, and other ongoing procurement relationships. These items may be listed on Form B or on an attached sheet(s). Do not include IDOT contracts. Contracts with cities, counties, villages, etc. are not considered State of Illinois agency contracts and are not to be included. Contracts with other State of Illinois agencies such as the Department of Natural Resources or the Capital Development Board must be included. Bidders who submit Affidavits of Availability are suggested to use Option II.

Option II: If the bidder is required and has submitted an Affidavit of Availability in order to obtain authorization to bid, the bidder may write or type "See Affidavit of Availability" which indicates that the Affidavit of Availability is incorporated by reference and includes all non-IDOT State of Illinois agency pending contracts, leases, bids, proposals, and other ongoing procurement relationships. For any contracts that are not covered by the Affidavit of Availability, the bidder must identify them on Form B or on an attached sheet(s). These might be such things as leases.

RETURN WITH BID

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**Form A
Financial Information &
Potential Conflicts of Interest
Disclosure**

| | | |
|------------------|---------------|---------------------------|
| Contractor Name | | |
| Legal Address | | |
| City, State, Zip | | |
| Telephone Number | Email Address | Fax Number (if available) |

Disclosure of the information contained in this Form is required by Section 50-35 of the Code (30 ILCS 500). Vendors desiring to enter into a contract with the State of Illinois must disclose the financial information and potential conflict of interest information as specified in this Disclosure Form. This information shall become part of the publicly available contract file. This Form A must be completed for bids in excess of \$50,000, and for all open-ended contracts. **A publicly traded company may submit a 10K disclosure (or equivalent if applicable) in satisfaction of the requirements set forth in Form A. See Disclosure Form Instructions.**

The current annual salary of the Governor is \$177,412.00.

DISCLOSURE OF FINANCIAL INFORMATION

- 1. Disclosure of Financial Information.** The individual named below has an interest in the BIDDER (or its parent) in terms of ownership or distributive income share in excess of 5%, or an interest which has a value of more than 60% of the annual salary of the Governor. **(Make copies of this form as necessary and attach a separate Disclosure Form A for each individual meeting these requirements)**

| | |
|--------------------------------------------------------------|-------------------------------------------|
| FOR INDIVIDUAL (type or print information) | |
| NAME: | _____ |
| ADDRESS | _____ |
| Type of ownership/distributable income share: | |
| stock _____ | sole proprietorship _____ |
| Partnership _____ | other: (explain on separate sheet): _____ |
| % or \$ value of ownership/distributable income share: _____ | |

- 2. Disclosure of Potential Conflicts of Interest.** Check "Yes" or "No" to indicate which, if any, of the following potential conflict of interest relationships apply. If the answer to any question is "Yes", please attach additional pages and describe.

- (a) State employment, currently or in the previous 3 years, including contractual employment of services.
Yes ___ No ___

If your answer is yes, please answer each of the following questions.

- Are you currently an officer or employee of either the Capitol Development Board or the Illinois State Toll Highway Authority? Yes ___ No ___
- Are you currently appointed to or employed by any agency of the State of Illinois? If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor provide the name the State agency for which you are employed and your annual salary. _____

RETURN WITH BID

3. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor, are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of 100% of the annual salary of the Governor? Yes ___ No ___
4. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor, are you and your spouse or minor children entitled to receive (i) more than 15% in aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of two times the salary of the Governor? Yes ___ No ___

(b) State employment of spouse, father, mother, son, or daughter, including contractual employment for services in the previous 2 years.

Yes ___ No ___

If your answer is yes, please answer each of the following questions.

1. Is your spouse or any minor children currently an officer or employee of the Capitol Development Board or the Illinois State Toll Highway Authority? Yes ___ No ___
2. Is your spouse or any minor children currently appointed to or employed by any agency of the State of Illinois? If your spouse or minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, provide the name of the spouse and/or minor children, the name of the State agency for which he/she is employed and his/her annual salary. _____
-
3. If your spouse or any minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess 100% of the annual salary of the Governor? Yes ___ No ___
4. If your spouse or any minor children are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, are you and your spouse or any minor children entitled to receive (i) more than 15% in the aggregate of the total distributable income from your firm, partnership, association or corporation, or (ii) an amount in excess of two times the salary of the Governor? Yes ___ No ___

(c) Elective status; the holding of elective office of the State of Illinois, the government of the United States, any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois currently or in the previous 3 years. Yes ___ No ___

(d) Relationship to anyone holding elective office currently or in the previous 2 years; spouse, father, mother, son, or daughter. Yes ___ No ___

(e) Appointive office; the holding of any appointive government office of the State of Illinois, the United State of America, or any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois, which office entitles the holder to compensation in excess of the expenses incurred in the discharge of that office currently or in the previous 3 years. Yes ___ No ___

(f) Relationship to anyone holding appointive office currently or in the previous 2 years; spouse, father, mother, son, or daughter. Yes ___ No ___

(g) Employment, currently or in the previous 3 years, as or by any registered lobbyist of the State government. Yes ___ No ___

RETURN WITH BID

(h) Relationship to anyone who is or was a registered lobbyist in the previous 2 years; spouse, father, mother, son, or daughter. Yes ___ No ___

(i) Compensated employment, currently or in the previous 3 years, by any registered election or reelection committee registered with the Secretary of State or any county clerk of the State of Illinois, or any political action committee registered with either the Secretary of State or the Federal Board of Elections. Yes ___ No ___

(j) Relationship to anyone; spouse, father, mother, son, or daughter; who was a compensated employee in the last 2 years by any registered election or re-election committee registered with the Secretary of State or any county clerk of the State of Illinois, or any political action committee registered with either the Secretary of State or the Federal Board of Elections. Yes ___ No ___

3. Communication Disclosure.

Disclose the name and address of each lobbyist and other agent of the bidder or offeror who is not identified in Section 2 of this form, who is has communicated, is communicating, or may communicate with any State officer or employee concerning the bid or offer. This disclosure is a continuing obligation and must be promptly supplemented for accuracy throughout the process and throughout the term of the contract. If no person is identified, enter "None" on the line below:

Name and address of person(s): _____

RETURN WITH BID

4. Suspension or Debarment Disclosure. For each of the persons identified under Sections 2 and 3 of this form, disclose whether any of the following has occurred within the previous 10 years: suspension or debarment from contracting with any governmental entity; professional licensure discipline; bankruptcies; adverse civil judgments and administrative findings; and criminal felony convictions. This disclosure is a continuing obligation and must be promptly supplemented for accuracy throughout the procurement process and term of the contract. If no person is identified, enter "None" on the line below:

Name of person(s): _____

Nature of disclosure: _____

APPLICABLE STATEMENT

This Disclosure Form A is submitted on behalf of the INDIVIDUAL named on previous page. Under penalty of perjury, I certify the contents of this disclosure to be true and accurate to the best of my knowledge.

Completed by: _____ Date _____
Signature of Individual or Authorized Representative

NOT APPLICABLE STATEMENT

Under penalty of perjury, I have determined that no individuals associated with this organization meet the criteria that would require the completion of this Form A.

This Disclosure Form A is submitted on behalf of the CONTRACTOR listed on the previous page.

_____ Date _____
Signature of Authorized Representative

The bidder has a continuing obligation to supplement these disclosures under Sec. 50-35 of the Code.

RETURN WITH BID

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form B Other Contracts & Financial Related Information Disclosure

Contractor Name, Legal Address, City, State, Zip, Telephone Number, Email Address, Fax Number (if available)

Disclosure of the information contained in this Form is required by Section 50-35 of the Code (30 ILCS 500). This information shall become part of the publicly available contract file. This Form B must be completed for all bids.

DISCLOSURE OF OTHER CONTRACTS AND PROCUREMENT RELATED INFORMATION

1. Identifying Other Contracts & Procurement Related Information. The BIDDER shall identify whether it has any pending contracts (including leases), bids, proposals, or other ongoing procurement relationship with any other State of Illinois agency: Yes ___ No ___

If "No" is checked, the bidder only needs to complete the signature box on this page.

2. If "Yes" is checked. Identify each such relationship by showing State of Illinois agency name and other descriptive information such as bid or project number (attach additional pages as necessary). SEE DISCLOSURE FORM INSTRUCTIONS:

THE FOLLOWING STATEMENT MUST BE CHECKED

Signature of Authorized Representative, Date

OWNERSHIP CERTIFICATION

Please certify that the following statement is true if the individuals for all submitted Form A disclosures do not total 100% of ownership.

Any remaining ownership interest is held by individuals receiving less than \$106,447.20 of the bidding entity's or parent entity's distributive income or holding less than a 5% ownership interest.

Yes No N/A (Form A disclosure(s) established 100% ownership)

RETURN WITH BID

SPECIAL NOTICE TO CONTRACTORS

The following requirements of the Illinois Department of Human Rights Act are applicable to bidders on all construction contracts advertised by the Illinois Department of Transportation:

CONSTRUCTION EMPLOYEE UTILIZATION PROJECTION

- (a) All bidders on construction contracts shall complete and submit, along with and as part of their bids, a Bidder's Employee Utilization Form (Form BC-1256) setting forth a projection and breakdown of the total workforce intended to be hired and/or allocated to such contract work by the bidder including a projection of minority and female employee utilization in all job classifications on the contract project.
- (b) The Department of Transportation shall review the Employee Utilization Form, and workforce projections contained therein, of the contract awardee to determine if such projections reflect an underutilization of minority persons and/or women in any job classification in accordance with the Equal Employment Opportunity Clause and Title 44, Illinois Administrative Code, Section 750.120. If it is determined that the contract awardee's projections reflect an underutilization of minority persons and/or women in any job classification, it shall be advised in writing of the manner in which it is underutilizing and such awardee shall be considered to be in breach of the contract unless, prior to commencement of work on the contract project, it submits revised satisfactory projections or an acceptable written affirmative action plan to correct such underutilization including a specific timetable geared to the completion stages of the contract.
- (c) The Department of Transportation shall provide to the Department of Human Rights a copy of the contract awardee's Employee Utilization Form, a copy of any required written affirmative action plan, and any written correspondence related thereto. The Department of Human Rights may review and revise any action taken by the Department of Transportation with respect to these requirements.

RETURN WITH BID

**Contract No. 72113
LOGAN County
Section D6 2015-7 HSRR
Project HSR-1771(002)
Route FAS 1771A
District 6 Construction Funds**

PART II. WORKFORCE PROJECTION - continued

- B. Included in "Total Employees" under Table A is the total number of **new hires** that would be employed in the event the undersigned bidder is awarded this contract.

The undersigned bidder projects that: (number) _____ new hires would be recruited from the area in which the contract project is located; and/or (number) _____ new hires would be recruited from the area in which the bidder's principal office or base of operation is located.

- C. Included in "Total Employees" under Table A is a projection of numbers of persons to be employed directly by the undersigned bidder as well as a projection of numbers of persons to be employed by subcontractors.

The undersigned bidder estimates that (number) _____ persons will be directly employed by the prime contractor and that (number) _____ persons will be employed by subcontractors.

PART III. AFFIRMATIVE ACTION PLAN

- A. The undersigned bidder understands and agrees that in the event the foregoing minority and female employee utilization projection included under **PART II** is determined to be an underutilization of minority persons or women in any job category, and in the event that the undersigned bidder is awarded this contract, he/she will, prior to commencement of work, develop and submit a written Affirmative Action Plan including a specific timetable (geared to the completion stages of the contract) whereby deficiencies in minority and/or female employee utilization are corrected. Such Affirmative Action Plan will be subject to approval by the contracting agency and the **Illinois Department of Human Rights**.
- B. The undersigned bidder understands and agrees that the minority and female employee utilization projection submitted herein, and the goals and timetable included under an Affirmative Action Plan if required, are deemed to be part of the contract specifications.

Company _____ Telephone Number _____

Address _____

NOTICE REGARDING SIGNATURE

The Bidder's signature on the Proposal Signature Sheet will constitute the signing of this form. The following signature block needs to be completed only if revisions are required.

Signature: _____ Title: _____ Date: _____

- Instructions: All tables must include subcontractor personnel in addition to prime contractor personnel.
- Table A - Include both the number of employees that would be hired to perform the contract work and the total number currently employed (Table B) that will be allocated to contract work, and include all apprentices and on-the-job trainees. The "Total Employees" column should include all employees including all minorities, apprentices and on-the-job trainees to be employed on the contract work.
 - Table B - Include all employees currently employed that will be allocated to the contract work including any apprentices and on-the-job trainees currently employed.
 - Table C - Indicate the racial breakdown of the total apprentices and on-the-job trainees shown in Table A.

RETURN WITH BID

ADDITIONAL FEDERAL REQUIREMENTS

In addition to the Required Contract Provisions for Federal-Aid Construction Contracts (FHWA 1273), all bidders make the following certifications.

- A. By the execution of this proposal, the signing bidder certifies that the bidding entity has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with the submitted bid. This statement made by the undersigned bidder is true and correct under penalty of perjury under the laws of the United States.
- B. CERTIFICATION, EQUAL EMPLOYMENT OPPORTUNITY:
1. Have you participated in any previous contracts or subcontracts subject to the equal opportunity clause. YES _____ NO _____
 2. If answer to #1 is yes, have you filed with the Joint Reporting Committee, the Director of OFCC, any Federal agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements of those organizations? YES _____ NO _____

RETURN WITH BID

**Contract No. 72113
LOGAN County
Section D6 2015-7 HSRR
Project HSR-1771(002)
Route FAS 1771A
District 6 Construction Funds**

PROPOSAL SIGNATURE SHEET

The undersigned bidder hereby makes and submits this bid on the subject Proposal, thereby assuring the Department that all requirements of the Invitation for Bids and rules of the Department have been met, that there is no misunderstanding of the requirements of paragraph 3 of this Proposal, and that the contract will be executed in accordance with the rules of the Department if an award is made on this bid.

(IF AN INDIVIDUAL)

Firm Name _____
Signature of Owner _____
Business Address _____

(IF A CO-PARTNERSHIP)

Firm Name _____
By _____
Business Address _____
Name and Address of All Members of the Firm: _____

(IF A CORPORATION)

Corporate Name _____
By _____
Signature of Authorized Representative _____
Typed or printed name and title of Authorized Representative _____

(IF A JOINT VENTURE, USE THIS SECTION FOR THE MANAGING PARTY AND THE SECOND PARTY SHOULD SIGN BELOW)

Attest _____
Signature _____
Business Address _____

(IF A JOINT VENTURE)

Corporate Name _____
By _____
Signature of Authorized Representative _____
Typed or printed name and title of Authorized Representative _____

Attest _____
Signature _____
Business Address _____

If more than two parties are in the joint venture, please attach an additional signature sheet.



This Annual Proposal Bid Bond shall become effective at 12:01 AM (CDST) on _____ and shall be valid until _____ 11:59 PM (CDST).

KNOW ALL PERSONS BY THESE PRESENTS, That We _____

as PRINCIPAL, and _____

as SURETY, and held jointly, severally and firmly bound unto the STATE OF ILLINOIS in the penal sum of 5 percent of the total bid price, or for the amount specified in the bid proposal under "Proposal Guaranty" in effect on the date of the Invitation for Bids, whichever is the lesser sum, well and truly to be paid unto said STATE OF ILLINOIS, for the payment of which we bind ourselves, our heirs, executors, administrators, successors and assigns.

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH that whereas, the PRINCIPAL may submit bid proposal(s) to the STATE OF ILLINOIS, acting through the Department of Transportation, for various improvements published in the Transportation Bulletin during the effective term indicated above.

NOW, THEREFORE, if the Department shall accept the bid proposal(s) of the PRINCIPAL; and if the PRINCIPAL shall, within the time and as specified in the bidding and contract documents; and if, after award by the Department, the PRINCIPAL shall enter into a contract in accordance with the terms of the bidding and contract documents including evidence of the required insurance coverages and providing such bond as specified with good and sufficient surety for the faithful performance of such contract and for the prompt payment of labor and material furnished in the prosecution thereof; or if, in the event of the failure of the PRINCIPAL to enter into such contract and to give the specified bond, the PRINCIPAL pays to the Department the difference not to exceed the penalty hereof between the amount specified in the bid proposal and such larger amount for which the Department may contract with another party to perform the work covered by said bid proposal, then this obligation shall be null and void, otherwise, it shall remain in full force and effect.

IN THE EVENT the Department determines the PRINCIPAL has failed to comply with any requirement as set forth in the preceding paragraph, then Surety shall pay the penal sum to the Department within fifteen (15) days of written demand therefor. If Surety does not make full payment within such period of time, the Department may bring an action to collect the amount owed. Surety is liable to the Department for all its expenses, including attorney's fees, incurred in any litigation in which it prevails either in whole or in part.

In TESTIMONY WHEREOF, the said PRINCIPAL has caused this instrument to be signed by its officer _____ day of _____ A.D., _____

In TESTIMONY WHEREOF, the said SURETY has caused this instrument to be signed by its officer _____ day of _____ A.D., _____

(Company Name)

(Company Name)

By _____
(Signature and Title)

By _____
(Signature of Attorney-in-Fact)

Notary for PRINCIPAL

Notary for SURETY

STATE OF _____
COUNTY OF _____

STATE OF _____
COUNTY OF _____

Signed and attested before me on _____ (date)

Signed and attested before me on _____ (date)

by _____
(Name of Notary Public)

by _____
(Name of Notary Public)

(Seal) _____
(Signature of Notary Public)

(Seal) _____
(Signature of Notary Public)

(Date Commission Expires)

(Date Commission Expires)

In lieu of completing the above section of the Annual Proposal Bid Bond form, the Principal may file an Electronic Bid Bond. By signing the proposal(s) the Principal is ensuring the identified electronic bid bond has been executed and the Principal and Surety are firmly bound unto the State of Illinois under the conditions of the bid bond as shown above.

| Electronic Bid Bond ID # | Company/Bidder Name | Signature and Title |
|--------------------------|---------------------|---------------------|
|--------------------------|---------------------|---------------------|

This bond may be terminated, at Surety's request, upon giving not less than thirty (30) days prior written notice of the cancellation/termination of the bond. Said written notice shall be issued to the Illinois Department of Transportation, Chief Contracts Official, 2300 South Dirksen Parkway, Springfield, Illinois, 62764, and shall be served in person, by receipted courier delivery or certified or registered mail, return receipt requested. Said notice period shall commence on the first calendar day following the Department's receipt of written cancellation/termination notice. Surety shall remain firmly bound to all obligations herein for proposals submitted prior to the cancellation/termination. Surety shall be released and discharged from any obligation(s) for proposals submitted for any letting or date after the effective date of cancellation/termination.



Item No. _____

Letting Date _____

KNOW ALL PERSONS BY THESE PRESENTS, That We _____

as PRINCIPAL, and _____

as SURETY, and held jointly, severally and firmly bound unto the STATE OF ILLINOIS in the penal sum of 5 percent of the total bid price, or for the amount specified in the bid proposal under "Proposal Guaranty" in effect on the date of the Invitation for Bids, whichever is the lesser sum, well and truly to be paid unto said STATE OF ILLINOIS, for the payment of which we bind ourselves, our heirs, executors, administrators, successors and assigns.

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH that whereas, the PRINCIPAL has submitted a bid proposal to the STATE OF ILLINOIS, acting through the Department of Transportation, for the improvement designated by the Transportation Bulletin Item Number and Letting Date indicated above.

NOW, THEREFORE, if the Department shall accept the bid proposal of the PRINCIPAL; and if the PRINCIPAL shall, within the time and as specified in the bidding and contract documents; and if, after award by the Department, the PRINCIPAL shall enter into a contract in accordance with the terms of the bidding and contract documents including evidence of the required insurance coverages and providing such bond as specified with good and sufficient surety for the faithful performance of such contract and for the prompt payment of labor and material furnished in the prosecution thereof; or if, in the event of the failure of the PRINCIPAL to enter into such contract and to give the specified bond, the PRINCIPAL pays to the Department the difference not to exceed the penalty hereof between the amount specified in the bid proposal and such larger amount for which the Department may contract with another party to perform the work covered by said bid proposal, then this obligation shall be null and void, otherwise, it shall remain in full force and effect.

IN THE EVENT the Department determines the PRINCIPAL has failed to comply with any requirement as set forth in the preceding paragraph, then Surety shall pay the penal sum to the Department within fifteen (15) days of written demand therefor. If Surety does not make full payment within such period of time, the Department may bring an action to collect the amount owed. Surety is liable to the Department for all its expenses, including attorney's fees, incurred in any litigation in which it prevails either in whole or in part.

In TESTIMONY WHEREOF, the said PRINCIPAL has caused this instrument to be signed by its officer _____ day of _____ A.D., _____.

In TESTIMONY WHEREOF, the said SURETY has caused this instrument to be signed by its officer _____ day of _____ A.D., _____.

(Company Name)

(Company Name)

By _____
(Signature and Title)

By _____
(Signature of Attorney-in-Fact)

Notary for PRINCIPAL

Notary for SURETY

STATE OF _____
COUNTY OF _____

STATE OF _____
COUNTY OF _____

Signed and attested before me on _____ (date)
by _____

Signed and attested before me on _____ (date)
by _____

(Name of Notary Public)

(Name of Notary Public)

(Seal) _____
(Signature of Notary Public)

(Seal) _____
(Signature of Notary Public)

(Date Commission Expires)

(Date Commission Expires)

In lieu of completing the above section of the Proposal Bid Bond form, the Principal may file an Electronic Bid Bond. By signing the proposal the Principal is ensuring the identified electronic bid bond has been executed and the Principal and Surety are firmly bound unto the State of Illinois under the conditions of the bid bond as shown above.

Electronic Bid Bond ID # _____ Company/Bidder Name _____ Signature and Title _____

(1) Policy

It is public policy that disadvantageded businesses as defined in 49 CFR Part 26 and the Special Provision shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with Federal or State funds. Consequently the requirements of 49 CFR Part 26 apply to this contract.

(2) Obligation

The contractor agrees to ensure that disadvantageded businesses as defined in 49 CFR Part 26 and the Special Provision have the maximum opportunity to participate in the performance of contracts or subcontracts financed in whole or in part with Federal or State funds. The contractor shall take all necessary and reasonable steps in accordance with 49 CFR Part 26 and the Special Provision to ensure that said businesses have the maximum opportunity to compete for and perform under this contract. The contractor shall not discriminate on the basis of race, color, national origin or sex in the award and performance of contracts.

(3) Project and Bid Identification

Complete the following information concerning the project and bid:

| | |
|------------------------|------------------------------------------------------------|
| Route _____ | Total Bid _____ |
| Section _____ | Contract DBE Goal _____ (Percent) _____ (Dollar Amount) |
| Project _____ | |
| County _____ | |
| Letting Date _____ | |
| Contract No. _____ | |
| Letting Item No. _____ | |

(4) Assurance

I, acting in my capacity as an officer of the undersigned bidder (or bidders if a joint venture), hereby assure the Department that on this project my company : (check one)

- Meets or exceeds contract award goals and has provided documented participation as follows:
Disadvantaged Business Participation _____ percent

Attached are the signed participation statements, forms SBE 2025, required by the Special Provision evidencing availability and use of each business participating in this plan and assuring that each business will perform a commercially useful function in the work of the contract.

- Failed to meet contract award goals and has included good faith effort documentation to meet the goals and that my company has provided participation as follows:

Disadvantaged Business Participation _____ percent

The contract goals should be accordingly modified or waived. Attached is all information required by the Special Provision in support of this request including good faith effort. Also attached are the signed participation statements, forms SBE 2025, required by the Special Provision evidencing availability and use of each business participating in this plan and assuring that each business will perform a commercially useful function in the work of the contract.

Company

By _____

Title _____

Date _____

The "as read" Low Bidder is required to comply with the Special Provision.

Submit only one utilization plan for each project. The utilization plan shall be submitted in accordance with the special provision.

Bureau of Small Business Enterprises
2300 South Dirksen Parkway
Springfield, Illinois 62764

Local Let Projects
Submit forms to the
Local Agency

The Department of Transportation is requesting disclosure of information that is necessary to accomplish the purpose as outlined under State and Federal law. Disclosure of this information is **REQUIRED**. Failure to provide any information will result in the contract not being awarded. This form has been approved by the State Forms Manager Center.

PROPOSAL ENVELOPE



PROPOSALS

for construction work advertised for bids by the
Illinois Department of Transportation

| Item No. | Item No. | Item No. |
|----------|----------|----------|
| | | |
| | | |
| | | |
| | | |

Submitted By:

| |
|-----------|
| Name: |
| Address: |
| |
| |
| Phone No. |

Bidders should use an IDOT proposal envelope or affix this form to the front of a 10" x 13" envelope for the submittal of bids. If proposals are mailed, they should be enclosed in a second or outer envelope addressed to:

Engineer of Design and Environment - Room 326
Illinois Department of Transportation
2300 South Dirksen Parkway
Springfield, Illinois 62764

NOTICE

Individual bids, including Bid Bond and/or supplemental information if required, should be securely stapled.

CONTRACTOR OFFICE COPY OF CONTRACT SPECIFICATIONS

NOTICE

None of the following material needs to be returned with the bid package unless the special provisions require documentation and/or other information to be submitted.

**Contract No. 72113
LOGAN County
Section D6 2015-7 HSRR
Project HSR-1771(002)
Route FAS 1771A
District 6 Construction Funds**



Illinois Department of Transportation

SUBCONTRACTOR DOCUMENTATION

Public Acts 96-0795, 96-0920, and 97-0895 enacted substantial changes to the provisions of the Code (30 ILCS 500). Among the changes are provisions affecting subcontractors. The Contractor awarded this contract will be required as a material condition of the contract to implement and enforce the contract requirements applicable to subcontractors that entered into a contractual agreement with a total value of \$50,000 or more with a person or entity who has a contract subject to the Code and approved in accordance with article 108.01 of the Standard Specifications for Road and Bridge Construction.

If the Contractor seeks approval of subcontractors to perform a portion of the work, and approval is granted by the Department, the Contractor shall provide a copy of the subcontract to the Illinois Department of Transportation's CPO upon request within 15 calendar days after execution of the subcontract.

Financial disclosures required pursuant to Sec. 50-35 of the Code must be submitted for all applicable subcontractors. The subcontract shall contain the certifications required to be made by subcontractors pursuant to Article 50 of the Code. This Notice to Bidders includes a document incorporating all required subcontractor certifications and disclosures for use by the Contractor in compliance with this mandate. The document is entitled State Required Ethical Standards Governing Subcontractors.

RETURN WITH SUBCONTRACT

STATE ETHICAL STANDARDS GOVERNING SUBCONTRACTORS

Article 50 of the Code establishes the duty of all State CPOs, SPOs, and their designees to maximize the value of the expenditure of public moneys in procuring goods, services, and contracts for the State of Illinois and to act in a manner that maintains the integrity and public trust of State government. In discharging this duty, they are charged by law to use all available information, reasonable efforts, and reasonable actions to protect, safeguard, and maintain the procurement process of the State of Illinois.

The certifications hereinafter made by the subcontractor are each a material representation of fact upon which reliance is placed should the Department approve the subcontractor. The CPO may terminate or void the contract approval if it is later determined that the bidder or subcontractor rendered a false or erroneous certification. If a false certification is made by a subcontractor the contractor's submitted bid and the executed contract may not be declared void unless the contractor refuses to terminate the subcontract upon the State's request after a finding that the subcontractor's certification was false.

Section 50-2 of the Code provides that every person that has entered into a multi-year contract and every subcontractor with a multi-year subcontract shall certify, by July 1 of each fiscal year covered by the contract after the initial fiscal year, to the responsible CPO whether it continues to satisfy the requirements of Article 50 pertaining to the eligibility for a contract award. If a contractor or subcontractor is not able to truthfully certify that it continues to meet all requirements, it shall provide with its certification a detailed explanation of the circumstances leading to the change in certification status. A contractor or subcontractor that makes a false statement material to any given certification required under Article 50 is, in addition to any other penalties or consequences prescribed by law, subject to liability under the Whistleblower Reward and Protection Act for submission of a false claim.

A. Bribery

Section 50-5. Bribery.

(a) Prohibition. No person or business shall be awarded a contract or subcontract under this Code who:

(1) has been convicted under the laws of Illinois or any other state of bribery or attempting to bribe an officer or employee of the State of Illinois or any other state in that officer's or employee's official capacity; or

(2) has made an admission of guilt of that conduct that is a matter of record but has not been prosecuted for that conduct.

(b) Businesses. No business shall be barred from contracting with any unit of State or local government, or subcontracting under such a contract, as a result of a conviction under this Section of any employee or agent of the business if the employee or agent is no longer employed by the business and:

(1) the business has been finally adjudicated not guilty; or

(2) the business demonstrates to the governmental entity with which it seeks to contract, or which is signatory to the contract to which the subcontract relates, and that entity finds that the commission of the offense was not authorized, requested, commanded, or performed by a director, officer, or high managerial agent on behalf of the business as provided in paragraph (2) of subsection (a) of Section 5-4 of the Criminal Code of 2012.

(c) Conduct on behalf of business. For purposes of this Section, when an official, agent, or employee of a business committed the bribery or attempted bribery on behalf of the business and in accordance with the direction or authorization of a responsible official of the business, the business shall be chargeable with the conduct.

(d) Certification. Every bid submitted to and contract executed by the State, and every subcontract subject to Section 20-120 of the Code shall contain a certification by the contractor or the subcontractor, respectively, that the contractor or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the CPO may declare the related contract void if any certifications required by this Section are false. A contractor who makes a false statement, material to the certification, commits a Class 3 felony.

The contractor or subcontractor certifies that it is not barred from being awarded a contract under Section 50-5.

B. Felons

Section 50-10. Felons.

(a) Unless otherwise provided, no person or business convicted of a felony shall do business with the State of Illinois or any State agency, or enter into a subcontract, from the date of conviction until 5 years after the date of completion of the sentence for that felony, unless no person held responsible by a prosecutorial office for the facts upon which the conviction was based continues to have any involvement with the business.

(b) Certification. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the Code shall contain a certification by the bidder or contractor or subcontractor, respectively, that the bidder, contractor, or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the CPO may declare the related contract void if any of the certifications required by this Section are false.

RETURN WITH SUBCONTRACT

C. Debt Delinquency

Section 50-11 and 50-12. Debt Delinquency.

The contractor or bidder or subcontractor, respectively, certifies that it, or any affiliate, is not barred from being awarded a contract or subcontract under the Code. Section 50-11 prohibits a person from entering into a contract with a State agency, or entering into a subcontract, if it knows or should know that it, or any affiliate, is delinquent in the payment of any debt to the State as defined by the Debt Collection Board. Section 50-12 prohibits a person from entering into a contract with a State agency, or entering into a subcontract, if it, or any affiliate, has failed to collect and remit Illinois Use Tax on all sales of tangible personal property into the State of Illinois in accordance with the provisions of the Illinois Use Tax Act. The bidder or contractor or subcontractor, respectively, further acknowledges that the CPO may declare the related contract void if this certification is false or if the bidder, contractor, or subcontractor, or any affiliate, is determined to be delinquent in the payment of any debt to the State during the term of the contract.

D. Prohibited Bidders, Contractors and Subcontractors

Section 50-10.5 and 50-60(c). Prohibited bidders, contractors and subcontractors.

The bidder or contractor or subcontractor, respectively, certifies in accordance with 30 ILCS 500/50-10.5 that no officer, director, partner or other managerial agent of the contracting business has been convicted of a felony under the Sarbanes-Oxley Act of 2002 or a Class 3 or Class 2 felony under the Illinois Securities Law of 1953 or if in violation of Subsection (c) for a period of five years from the date of conviction. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the Code shall contain a certification by the bidder, contractor, or subcontractor, respectively, that the bidder, contractor, or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the CPO shall declare the related contract void if any of the certifications completed pursuant to this Section are false.

E. Section 42 of the Environmental Protection Act

The bidder or contractor or subcontractor, respectively, certifies in accordance with 30 ILCS 500/50-14 that the bidder, contractor, or subcontractor, is not barred from being awarded a contract or entering into a subcontract under this Section which prohibits the bidding on or entering into contracts with the State of Illinois or a State agency, or entering into any subcontract, that is subject to the Code by a person or business found by a court or the Pollution Control Board to have committed a willful or knowing violation of Section 42 of the Environmental Protection Act for a period of five years from the date of the order. The bidder or contractor or subcontractor, respectively, acknowledges that the CPO may declare the contract void if this certification is false.

The undersigned, on behalf of the subcontracting company, has read and understands the above certifications and makes the certifications as required by law.

| | | |
|-----------------------------------------|---------------|--|
| _____ Name of Subcontracting Company | | |
| _____ Authorized Officer | _____ Date | |

RETURN WITH SUBCONTRACT
SUBCONTRACTOR DISCLOSURES

I. DISCLOSURES

- A.** The disclosures hereinafter made by the subcontractor are each a material representation of fact upon which reliance is placed. The subcontractor further certifies that the Department has received the disclosure forms for each subcontract.

The CPO may void the bid, contract, or subcontract, respectively, if it is later determined that the bidder or subcontractor rendered a false or erroneous disclosure. A contractor or subcontractor may be scuspended or debarred for violations of the Code. Furthermore, the CPO may void the contract.

B. Financial Interests and Conflicts of Interest

1. Section 50-35 of the Code provides that all subcontracts with a total value of \$50,000 or more, from subcontractors identified in Section 20-120 of the Code, shall be accompanied by disclosure of the financial interests of the subcontractor. This disclosed information for the subcontractor, will be maintained as public information subject to release by request pursuant to the Freedom of Information Act, filed with the Procurement Policy Board, and shall be incorporated as a material term of the Prime Contractor's contract. Furthermore, pursuant to this Section, the Procurement Policy Board may recommend to allow or void a contract or subcontract based on a potential conflict of interest.

The financial interests to be disclosed shall include ownership or distributive income share that is in excess of 5%, or an amount greater than 60% of the annual salary of the Governor, of the subcontracting entity or its parent entity, whichever is less, unless the subcontractor is a publicly traded entity subject to Federal 10K reporting, in which case it may submit its 10K disclosure in place of the prescribed disclosure. If a subcontractor is a privately held entity that is exempt from Federal 10K reporting, but has more than 100 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any individual or entity holding any ownership share that is in excess of 5%. The disclosure shall include the names, addresses, and dollar or proportionate share of ownership of each individual making the disclosure, their instrument of ownership or beneficial relationship, and notice of any potential conflict of interest resulting from the current ownership or beneficial interest of each individual making the disclosure having any of the relationships identified in Section 50-35 and on the disclosure form.

The current annual salary of the Governor is \$177,412.00.

In addition, all disclosures shall indicate any other current or pending contracts, subcontracts, proposals, leases, or other ongoing procurement relationships the subcontracting entity has with any other unit of state government and shall clearly identify the unit and the contract, subcontract, proposal, lease, or other relationship.

2. Disclosure Forms. Disclosure Form A is attached for use concerning the individuals meeting the above ownership or distributive share requirements. A separate Disclosure Form A must be submitted with the bid for each individual meeting the above requirements. In addition, a second form (Disclosure Form B) provides for the disclosure of current or pending procurement relationships with other (non-IDOT) state agencies and a total ownership certification.

C. Disclosure Form Instructions

Form A Instructions for Financial Information & Potential Conflicts of Interest

If the subcontractor is a publicly traded entity subject to Federal 10K reporting, the 10K Report may be submitted to meet the requirements of Form A. If a subcontractor is a privately held entity that is exempt from Federal 10K reporting, but has more than 100 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any individual or entity holding any ownership share that is in excess of 5%. If a subcontractor is not subject to Federal 10K reporting, the subcontractor must determine if any individuals are required by law to complete a financial disclosure form. To do this, the subcontractor should answer each of the following questions. A "YES" answer indicates Form A must be completed. If the answer to each of the following questions is "NO", then the NOT APPLICABLE STATEMENT on the second page of Form A must be signed and dated by an individual that is authorized to execute contracts for the subcontracting company. Note: These questions are for assistance only and are not required to be completed.

1. Does anyone in your organization have a direct or beneficial ownership share of greater than 5% of the bidding entity or parent entity? YES ___ NO ___
2. Does anyone in your organization have a direct or beneficial ownership share of less than 5%, but which has a value greater than 60% of the annual salary of the Governor? YES ___ NO ___
3. Does anyone in your organization receive more than 60% of the annual salary of the Governor of the subcontracting entity's or parent entity's distributive income? YES ___ NO ___

(Note: Distributive income is, for these purposes, any type of distribution of profits. An annual salary is not distributive income.)

4. Does anyone in your organization receive greater than 5% of the subcontracting entity's or parent entity's total distributive income, but which is less than 60% of the annual salary of the Governor? YES ___ NO ___

(Note: Only one set of forms needs to be completed per individual per subcontract even if a specific individual would require a yes answer to more than one question.)

A "YES" answer to any of these questions requires the completion of Form A. The subcontractor must determine each individual in the subcontracting entity or the subcontracting entity's parent company that would cause the questions to be answered "Yes". Each form must be signed and dated by an individual that is authorized to execute contracts for your organization. The individual signing can be, but does not have to be, the individual for which the form is being completed. The subcontractor is responsible for the accuracy of any information provided.

If the answer to each of the above questions is "NO", then the NOT APPLICABLE STATEMENT on page 2 of Form A must be signed and dated by an individual that is authorized to execute contracts for your company.

RETURN WITH SUBCONTRACT

Form B: Instructions for Identifying Other Contracts & Procurement Related Information

Disclosure Form B must be completed for each subcontract submitted by the subcontracting entity. *Note: Checking the NOT APPLICABLE STATEMENT on Form A does not allow the subcontractor to ignore Form B. Form B must be completed, checked, and dated or the subcontract will not be approved.*

The Subcontractor shall identify, by checking Yes or No on Form B, whether it has any pending contracts, subcontracts, leases, bids, proposals, or other ongoing procurement relationship with any other (non-IDOT) State of Illinois agency. If "No" is checked, the subcontractor only needs to complete the check box on the bottom of Form B. If "Yes" is checked, the subcontractor must list all non-IDOT State of Illinois agency pending contracts, subcontracts, leases, bids, proposals, and other ongoing procurement relationships. These items may be listed on Form B or on an attached sheet(s). Contracts with cities, counties, villages, etc. are not considered State of Illinois agency contracts and are not to be included. Contracts or subcontracts with other State of Illinois agencies such as the Department of Natural Resources or the Capital Development Board must be included.

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**Form A
Subcontractor: Financial
Information & Potential Conflicts
of Interest Disclosure**

| | | |
|--------------------|---------------|---------------------------|
| Subcontractor Name | | |
| Legal Address | | |
| City, State, Zip | | |
| Telephone Number | Email Address | Fax Number (if available) |

Disclosure of the information contained in this Form is required by Section 50-35 of the Code (30 ILCS 500). Subcontractors desiring to enter into a subcontract of a State of Illinois contract must disclose the financial information and potential conflict of interest information as specified in this Disclosure Form. This information shall become part of the publicly available contract file. This Form A must be completed for subcontracts with a total value of \$50,000 or more, from subcontractors identified in Section 20-120 of the Code, and for all open-ended contracts. **A publicly traded company may submit a 10K disclosure (or equivalent if applicable) in satisfaction of the requirements set forth in Form A. See Disclosure Form Instructions.**

The current annual salary of the Governor is \$177,412.00.

DISCLOSURE OF FINANCIAL INFORMATION

1. Disclosure of Financial Information. The individual named below has an interest in the SUBCONTRACTOR (or its parent) in terms of ownership or distributive income share in excess of 5%, or an interest which has a value of more than 60% of the annual salary of the Governor. **(Make copies of this form as necessary and attach a separate Disclosure Form A for each individual meeting these requirements)**

| | |
|---------------------------------------------------------------------------------------------|-------|
| FOR INDIVIDUAL (type or print information) | |
| NAME: | _____ |
| ADDRESS | _____ |
| Type of ownership/distributable income share: | |
| stock _____ sole proprietorship _____ Partnership _____ other: (explain on separate sheet): | |
| % or \$ value of ownership/distributable income share: | _____ |

2. Disclosure of Potential Conflicts of Interest. Check "Yes" or "No" to indicate which, if any, of the following potential conflict of interest relationships apply. If the answer to any question is "Yes", please attach additional pages and describe.

(a) State employment, currently or in the previous 3 years, including contractual employment of services.

Yes ___ No ___

If your answer is yes, please answer each of the following questions.

1. Are you currently an officer or employee of either the Capitol Development Board or the Illinois State Toll Highway Authority? Yes ___ No ___

2. Are you currently appointed to or employed by any agency of the State of Illinois? If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor, provide the name the State agency for which you are employed and your annual salary. _____

RETURN WITH SUBCONTRACT

3. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor, are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of 100% of the annual salary of the Governor?
Yes ___ No ___

4. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor, are you and your spouse or minor children entitled to receive (i) more than 15 % in the aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of two times the salary of the Governor?
Yes ___ No ___

(b) State employment of spouse, father, mother, son, or daughter, including contractual employment services in the previous 2 years.

Yes ___ No ___

If your answer is yes, please answer each of the following questions.

1. Is your spouse or any minor children currently an officer or employee of the Capitol Development Board or the Illinois State Toll Highway Authority?
Yes ___ No ___

2. Is your spouse or any minor children currently appointed to or employed by any agency of the State of Illinois? If your spouse or minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, provide the name of your spouse and/or minor children, the name of the State agency for which he/she is employed and his/her annual salary. _____

3. If your spouse or any minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of 100% of the annual salary of the Governor?
Yes ___ No ___

4. If your spouse or any minor children are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, are you and your spouse or minor children entitled to receive (i) more than 15 % in the aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of two times the salary of the Governor?
Yes ___ No ___

(c) Elective status; the holding of elective office of the State of Illinois, the government of the United States, any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois currently or in the previous 3 years.
Yes ___ No ___

(d) Relationship to anyone holding elective office currently or in the previous 2 years; spouse, father, mother, son, or daughter.
Yes ___ No ___

(e) Appointive office; the holding of any appointive government office of the State of Illinois, the United States of America, or any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois, which office entitles the holder to compensation in excess of the expenses incurred in the discharge of that office currently or in the previous 3 years.
Yes ___ No ___

(f) Relationship to anyone holding appointive office currently or in the previous 2 years; spouse, father, mother, son, or daughter.
Yes ___ No ___

(g) Employment, currently or in the previous 3 years, as or by any registered lobbyist of the State government.
Yes ___ No ___

RETURN WITH SUBCONTRACT

(h) Relationship to anyone who is or was a registered lobbyist in the previous 2 years; spouse, father, mother, son, or daughter. Yes ___ No ___

(i) Compensated employment, currently or in the previous 3 years, by any registered election or reelection committee registered with the Secretary of State or any county clerk of the State of Illinois, or any political action committee registered with either the Secretary of State or the Federal Board of Elections. Yes ___ No ___

(j) Relationship to anyone; spouse, father, mother, son, or daughter; who was a compensated employee in the last 2 years by any registered election or re-election committee registered with the Secretary of State or any county clerk of the State of Illinois, or any political action committee registered with either the Secretary of State or the Federal Board of Elections. Yes ___ No ___

3 Communication Disclosure.

Disclose the name and address of each lobbyist and other agent of the bidder or offeror who is not identified in Section 2 of this form, who is has communicated, is communicating, or may communicate with any State officer or employee concerning the bid or offer. This disclosure is a continuing obligation and must be promptly supplemented for accuracy throughout the process and throughout the term of the contract. If no person is identified, enter "None" on the line below:

Name and address of person(s): _____

RETURN WITH SUBCONTRACT

4. Suspension or Debarment Disclosure. For each of the persons identified under Sections 2 and 3 of this form, disclose whether any of the following has occurred within the previous 10 years: suspension or debarment from contracting with any governmental entity; professional licensure discipline; bankruptcies; adverse civil judgments and administrative findings; and criminal felony convictions. This disclosure is a continuing obligation and must be promptly supplemented for accuracy throughout the procurement process and term of the contract. If no person is identified, enter "None" on the line below:

Name of person(s): _____

Nature of disclosure: _____

APPLICABLE STATEMENT

This Disclosure Form A is submitted on behalf of the INDIVIDUAL named on previous page. Under penalty of perjury, I certify the contents of this disclosure to be true and accurate to the best of my knowledge.

Completed by: _____ Date _____
Signature of Individual or Authorized Officer

NOT APPLICABLE STATEMENT

Under penalty of perjury, I have determined that no individuals associated with this organization meet the criteria that would require the completion of this Form A.

This Disclosure Form A is submitted on behalf of the SUBCONTRACTOR listed on the previous page.

_____ Date _____
Signature of Authorized Officer

RETURN WITH SUBCONTRACT

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form B Subcontractor: Other Contracts & Financial Related Information Disclosure

Form with fields: Subcontractor Name, Legal Address, City, State, Zip, Telephone Number, Email Address, Fax Number (if available)

Disclosure of the information contained in this Form is required by Section 50-35 of the Code (30 ILCS 500). This information shall become part of the publicly available contract file. This Form B must be completed for subcontracts with a total value of \$50,000 or more, from subcontractors identified in Section 20-120 of the Code, and for all open-ended contracts.

DISCLOSURE OF OTHER CONTRACTS, SUBCONTRACTS, AND PROCUREMENT RELATED INFORMATION

1. Identifying Other Contracts & Procurement Related Information. The SUBCONTRACTOR shall identify whether it has any pending contracts, subcontracts, including leases, bids, proposals, or other ongoing procurement relationship with any other State of Illinois agency: Yes ___ No ___

If "No" is checked, the subcontractor only needs to complete the signature box on this page.

2. If "Yes" is checked. Identify each such relationship by showing State of Illinois agency name and other descriptive information such as bid or project number (attach additional pages as necessary). SEE DISCLOSURE FORM INSTRUCTIONS:

THE FOLLOWING STATEMENT MUST BE CHECKED

Signature box with fields: Signature of Authorized Officer, Date

OWNERSHIP CERTIFICATION

Please certify that the following statement is true if the individuals for all submitted Form A disclosures do not total 100% of ownership

Any remaining ownership interest is held by individuals receiving less than \$106,447.20 of the bidding entity's or parent entity's distributive income or holding less than a 5% ownership interest.

Yes No N/A (Form A disclosure(s) established 100% ownership)



NOTICE TO BIDDERS

- 1. TIME AND PLACE OF OPENING BIDS.** Sealed proposals for the improvement described herein will be received by the Department of Transportation. Electronic bids are to be submitted to the electronic bidding system (iCX-Integrated Contractors Exchange). Paper-based bids are to be submitted to the Chief Procurement Officer for the Department of Transportation in care of the Chief Contracts Official at the Harry R. Hanley Building, 2300 South Dirksen Parkway, in Springfield, Illinois until 10:00 a.m. March 4, 2016. All bids will be gathered, sorted, publicly opened and read in the auditorium at the Department of Transportation's Harry R. Hanley Building shortly after 10:00 a.m.
- 2. DESCRIPTION OF WORK.** The proposed improvement is identified and advertised for bids in the Invitation for Bids as:

**Contract No. 72113
LOGAN County
Section D6 2015-7 HSRR
Project HSR-1771(002)
Route FAS 1771A
District 6 Construction Funds**

This project consists of pavement removal, earthwork, reconstruction and widening to provide safety improvements for the railroad crossing south of the City of Lincoln near the intersection of Old Route 66 and Business 55 (Lincoln Parkway).

- 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, 2015

This index contains a listing of SUPPLEMENTAL SPECIFICATIONS, frequently used RECURRING SPECIAL PROVISIONS, and LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS.

ERRATA Standard Specifications for Road and Bridge Construction (Adopted 1-1-12) (Revised 1-1-15)

SUPPLEMENTAL SPECIFICATIONS

| <u>Std. Spec. Sec.</u> | <u>Page No.</u> |
|----------------------------------------------------------------------------------------------------------------------------|-----------------|
| 101 Definition of Terms | 1 |
| 102 Advertisement, Bidding, Award, and Contract Execution | 2 |
| 105 Control of Work | 3 |
| 106 Control of Materials | 5 |
| 107 Legal Regulations and Responsibility to Public | 6 |
| 108 Prosecution and Progress | 14 |
| 109 Measurement and Payment | 15 |
| 202 Earth and Rock Excavation | 17 |
| 211 Topsoil and Compost | 19 |
| 250 Seeding | 20 |
| 253 Planting Woody Plants | 21 |
| 280 Temporary Erosion and Sediment Control | 23 |
| 312 Stabilized Subbase | 24 |
| 406 Hot-Mix Asphalt Binder and Surface Course | 25 |
| 407 Hot-Mix Asphalt Pavement (Full-Depth) | 28 |
| 420 Portland Cement Concrete Pavement | 32 |
| 424 Portland Cement Concrete Sidewalk | 34 |
| 440 Removal of Existing Pavement and Appurtenances | 35 |
| 502 Excavation for Structures | 36 |
| 503 Concrete Structures | 37 |
| 504 Precast Concrete Structures | 40 |
| 506 Cleaning and Painting New Steel Structures | 41 |
| 512 Piling | 42 |
| 516 Drilled Shafts | 43 |
| 521 Bearings | 44 |
| 540 Box Culverts | 45 |
| 588 Bridge Relief Joint System | 46 |
| 589 Elastic Joint Sealer | 48 |
| 602 Catch Basin, Manhole, Inlet, Drainage Structure, and Valve Vault Construction, Adjustment, and Reconstruction | 49 |
| 603 Adjusting Frames and Grates of Drainage and Utility Structures | 50 |
| 606 Concrete Gutter, Curb, Median, and Paved Ditch | 52 |
| 610 Shoulder Inlets with Curb | 53 |
| 639 Precast Prestressed Concrete Sight Screen | 54 |
| 642 Shoulder Rumble Strips | 55 |
| 643 Impact Attenuators | 56 |
| 644 High Tension Cable Median Barrier | 58 |
| 669 Removal and Disposal of Regulated Substances | 60 |
| 670 Engineer's Field Office and Laboratory | 64 |
| 701 Work Zone Traffic Control and Protection | 65 |
| 706 Impact Attenuators, Temporary | 68 |
| 707 Movable Traffic Barrier | 71 |
| 708 Temporary Water Filled Barrier | 73 |
| 730 Wood Sign Support | 75 |
| 780 Pavement Striping | 76 |
| 816 Unit Duct | 81 |
| 836 Pole Foundation | 82 |

FAS Route 1771A (Old Route 66)
 Project HSR-1771(002)
 Section D6 2015-7 HSRR
 Logan County
 Contract No. 72113

| | | |
|------|------------------------------------------------------|-----|
| 860 | Master Controller | 83 |
| 1001 | Cement | 84 |
| 1003 | Fine Aggregates | 85 |
| 1004 | Coarse Aggregates | 87 |
| 1006 | Metals | 91 |
| 1011 | Mineral Filler | 93 |
| 1017 | Packaged, Dry, Combined Materials for Mortar | 94 |
| 1018 | Packaged Rapid Hardening Mortar or Concrete | 95 |
| 1019 | Controlled Low-Strength Material (CLSM) | 96 |
| 1020 | Portland Cement Concrete | 97 |
| 1024 | Grout and Nonshrink Grout | 136 |
| 1030 | Hot-Mix Asphalt | 137 |
| 1040 | Drain Pipe, Tile, Drainage Mat, and Wall Drain | 142 |
| 1042 | Precast Concrete Products | 143 |
| 1069 | Pole and Tower | 144 |
| 1070 | Foundation and Breakaway Devices | 145 |
| 1073 | Controller | 146 |
| 1081 | Materials for Planting | 147 |
| 1082 | Preformed Bearing Pads | 148 |
| 1083 | Elastomeric Bearings | 149 |
| 1088 | Wireway and Conduit System | 150 |
| 1095 | Pavement Markings | 152 |
| 1101 | General Equipment | 155 |
| 1102 | Hot-Mix Asphalt Equipment | 157 |
| 1103 | Portland Cement Concrete Equipment | 159 |
| 1105 | Pavement Marking Equipment | 160 |
| 1106 | Work Zone Traffic Control Devices | 161 |

RECURRING SPECIAL PROVISIONS

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

| <u>CHECK SHEET #</u> | <u>PAGE NO.</u> |
|--------------------------------------------------------------------------------|-----------------|
| 1 X Additional State Requirements for Federal-Aid Construction Contracts | 163 |
| 2 X Subletting of Contracts (Federal-Aid Contracts) | 166 |
| 3 X EEO | 167 |
| 4 Specific EEO Responsibilities Non Federal-Aid Contracts | 177 |
| 5 Required Provisions - State Contracts | 182 |
| 6 Asbestos Bearing Pad Removal | 188 |
| 7 Asbestos Waterproofing Membrane and Asbestos HMA Surface Removal | 189 |
| 8 Temporary Stream Crossings and In-Stream Work Pads | 190 |
| 9 Construction Layout Stakes Except for Bridges | 191 |
| 10 X Construction Layout Stakes | 194 |
| 11 Use of Geotextile Fabric for Railroad Crossing | 197 |
| 12 Subsealing of Concrete Pavements | 199 |
| 13 Hot-Mix Asphalt Surface Correction | 203 |
| 14 Pavement and Shoulder Resurfacing | 205 |
| 15 Reserved | 206 |
| 16 Patching with Hot-Mix Asphalt Overlay Removal | 207 |
| 17 Polymer Concrete | 208 |
| 18 PVC Pipeliner | 210 |
| 19 Pipe Underdrains | 211 |
| 20 X Guardrail and Barrier Wall Delineation | 212 |
| 21 Bicycle Racks | 216 |
| 22 Reserved | 218 |
| 23 Temporary Portable Bridge Traffic Signals | 219 |
| 24 Work Zone Public Information Signs | 221 |
| 25 Nighttime Inspection of Roadway Lighting | 222 |
| 26 English Substitution of Metric Bolts | 223 |
| 27 English Substitution of Metric Reinforcement Bars | 224 |
| 28 Calcium Chloride Accelerator for Portland Cement Concrete | 225 |
| 29 Reserved | 226 |
| 30 X Quality Control of Concrete Mixtures at the Plant | 227 |
| 31 Quality Control/Quality Assurance of Concrete Mixtures | 235 |
| 32 Digital Terrain Modeling for Earthwork Calculations | 251 |
| 33 Pavement Marking Removal | 253 |
| 34 Preventive Maintenance – Bituminous Surface Treatment | 254 |
| 35 Preventive Maintenance – Cape Seal | 260 |
| 36 Preventive Maintenance – Micro-Surfacing | 275 |
| 37 Preventive Maintenance – Slurry Seal | 286 |
| 38 Temporary Raised Pavement Markers | 296 |
| 39 Restoring Bridge Approach Pavements Using High-Density Foam | 297 |

TABLE OF CONTENTS

| | |
|--------------------------------------------------------------------------------------------------------------------------------------|----|
| LOCATION OF PROJECT | 1 |
| DESCRIPTION OF PROJECT | 1 |
| MAINTENANCE OF ROADWAYS | 1 |
| FAILURE TO COMPLETE THE WORK ON TIME | 2 |
| COMPLETION DATE PLUS WORKING DAYS | 2 |
| STATUS OF UTILITIES TO BE ADJUSTED: | 3 |
| TRAFFIC CONTROL PLAN | 5 |
| TRAFFIC CONTROL AND PROTECTION (SPECIAL)..... | 6 |
| RESTRICTION ON ROAD CLOSURE | 7 |
| TEMPORARY INFORMATION SIGNING | 8 |
| CHANGEABLE MESSAGE SIGN | 8 |
| DUST CONTROL--HAULING EARTH, GRANULAR MATERIALS OR WASTE MATERIAL..... | 9 |
| EMBANKMENT | 9 |
| UNPUBLISHED TELEPHONE NUMBERS FOR ENGINEER'S FIELD OFFICE | 11 |
| CONTRACTOR ACCESS | 11 |
| RAILROAD PROTECTIVE LIABILITY INSURANCE (5 AND 10) (BDE) | 11 |
| AGGREGATE SUBGRADE IMPROVEMENT (BDE)..... | 13 |
| COARSE AGGREGATE QUALITY (BDE)..... | 16 |
| CONCRETE BOX CULVERTS WITH SKEWS > 30 DEGREES AND DESIGN FILLS ≤ 5 FEET (BDE) | 17 |
| CONCRETE BOX CULVERTS WITH SKEWS ≤ 30 DEGREES REGARDLESS OF DESIGN FILL AND SKEWS > 30 DEGREES WITH DESIGN FILLS > 5 FEET (BDE)..... | 37 |
| CONCRETE END SECTIONS FOR PIPE CULVERTS (BDE) | 37 |
| CONCRETE GUTTER, CURB, MEDIAN, AND PAVED DITCH (BDE) | 39 |
| CONTRACT CLAIMS (BDE)..... | 40 |
| DBE ENCOURAGEMENT | 41 |
| DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)..... | 42 |
| EQUAL EMPLOYMENT OPPORTUNITY (BDE)..... | 53 |
| FRICTION AGGREGATE (BDE) | 56 |
| HOT-MIX ASPHALT - DENSITY TESTING OF LONGITUDINAL JOINTS (BDE)..... | 59 |
| HOT-MIX ASPHALT – MIXTURE DESIGN COMPOSITION AND VOLUMETRIC REQUIREMENTS (BDE) | 60 |

| | |
|-------------------------------------------------------------------------|-----|
| HOT-MIX ASPHALT – MIXTURE DESIGN VERIFICATION AND PRODUCTION (BDE)..... | 71 |
| HOT MIX ASPHALT – PRIME COAT (BDE) | 74 |
| LRFD PIPE CULVERT BURIAL TABLES (BDE)..... | 78 |
| LRFD STORM SEWER BURIAL TABLES (BDE)..... | 97 |
| PAVED SHOULDER REMOVAL (BDE) | 106 |
| PAVEMENT STRIPING - SYMBOLS (BDE)..... | 107 |
| PROGRESS PAYMENTS (BDE)..... | 108 |
| RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (BDE)..... | 109 |
| REINFORCEMENT BARS (BDE) | 119 |
| STEEL SLAG IN TRENCH BACKFILL (BDE)..... | 120 |
| TRACKING THE USE OF PESTICIDES (BDE)..... | 120 |
| TRAVERSABLE PIPE GRATE (BDE) | 121 |
| WARM MIX ASPHALT (BDE) | 122 |
| WEEKLY DBE TRUCKING REPORTS (BDE)..... | 124 |
| BITUMINOUS MATERIALS COST ADJUSTMENTS (BDE) (RETURN FORM WITH BID)..... | 124 |
| FUEL COST ADJUSTMENT (BDE) (RETURN FORM WITH BID)..... | 127 |
| STEEL COST ADJUSTMENT (BDE) (RETURN FORM WITH BID)..... | 131 |
| STORM WATER POLLUTION PREVENTION PLAN | 135 |

STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction, Adopted January 1, 2012", 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 FAS Route 1771A (Old Route 66), Project HSR-1771(002), Section D6 2015-7 HSRR, Logan County, Contract No. 72113 and in case of conflict with any part, or parts, of said Specifications, the said Special Provisions shall take precedence and shall govern.

LOCATION OF PROJECT

The project site is located south of the City of Lincoln, Logan County, Illinois, south of the intersection of Old Route 66 (Frontage Road) and Business Route 55 Lincoln Parkway.

Project is located in Broadwell Township, Logan County, Illinois,
SE 1/4 of Section 10 and W 1/2 of Section 11, T19N, R3W, of the 3rd P.M.
Latitude: N 40°06'39"
Longitude: W 89°24'23"

DESCRIPTION OF PROJECT

This project consists of roadway construction (reconstruction, rehabilitation, and widening) the existing roadway to provide a safety improvement for the railroad crossing. Work shall include: pavement removal and replacement; earthwork grading and embankment; open drainage system and drainage system improvements; landscaping; maintenance of traffic; and erosion control, and all other appurtenant and collateral work, as shown in the plans and as required by the Special Provisions.

MAINTENANCE OF ROADWAYS

Beginning on the date that work begins on this project, the Contractor shall assume responsibility for normal maintenance of all existing roadways within the limits of the improvement. This normal maintenance shall include all repair work deemed necessary by the Engineer, but shall not include snow removal operations. Traffic control and protection for maintenance of roadways will be provided by the Contractor as required by the Engineer.

FAILURE TO COMPLETE THE WORK ON TIME

Should the Contractor fail to complete the work on or before the completion date as specified in the Special Provision for "Completion Date Plus Working Days", or within such extended time as may have been allowed by the Department, the Contractor shall be liable to the Department in the amount of \$1,425, not as a penalty but as liquidated damages, for each calendar day or a portion thereof of overrun in the contract time or such extended time as may have been allowed.

In fixing the damages as set out herein, the desire is to establish a certain mode of calculation for the work since the Department's actual loss, in the event of delay, cannot be predetermined, would be difficult of ascertainment, and a matter of argument and unprofitable litigation. This said mode is an equitable rule for measurement of the Department's actual loss and fairly takes into account the loss of use of the roadway if the project is delayed in completion. The Department shall not be required to provide any actual loss in order to recover these liquidated damages provided herein, as said damages are very difficult to ascertain. Furthermore, no provision of this clause shall be construed as a penalty, as such is not the intention of the parties.

A calendar day is every day shown on the calendar and starts at 12:00 midnight and ends at the following 12:00 midnight, twenty-four hours later.

COMPLETION DATE PLUS WORKING DAYS

Revise Article 108.05 (b) of the Standard Specifications as follows:

"When a completion date plus working days is specified, the Contractor shall complete all contract items and safely open all roadways to traffic by 11:59 PM on, November 1, 2016 except as specified herein.

The Contractor will be allowed to complete all clean-up work and punch list items within 10 working days after the completion date for opening the roadway to traffic. Under extenuating circumstances the Engineer may direct that certain items of work, not affecting the safe opening of the roadway to traffic, may be completed within the working days allowed for clean up work and punch list items. Temporary lane closures for this work may be allowed at the discretion of the Engineer."

Article 108.09 or the Special Provision for "Failure to Complete the Work on Time", if included in this contract, shall apply to both the completion date and the number of working days.

STATUS OF UTILITIES TO BE ADJUSTED:

Effective January 1, 2007

Revised January 24, 2011

| Name & Contact Information for Utility | Type | Conflict Description & Location | Estimated Date Relocation Complete |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| <p>Communication with Level 3 Communications and Sprint to be coordinated through Union Pacific Railroad Company.</p> <p><u>Union Pacific Railroad Company</u> Paul Pino, Project Engineer Mail Code: STOP 0640 1400 Douglas Street Omaha, Nebraska 68179 paulpino@up.com 402-544-3582 (W), 402-203-6021 (Cell)</p> <p><u>Union Pacific Railroad</u> Scott Haines, Manager Telecom OPS 3250 Kimzey Street Fort Worth, TX 76107 lshaines@up.com 817-353-7598 (Office) 817-371-5281 (Cell)</p> <p><u>Level 3 Communications</u> Tim Boykin 1025 Eldorado Blvd, Suite 43C-420 Broomfield, CO 80021 tim.boykin@level3.com 720-888-7280</p> <p><u>Sprint</u> James Burton Facility Engineering / OSP_East 5600 N. River Road, Suite 200 Rosemont, IL 60018 james.m.burton@sprint.com 708-955-6659</p> | <p>long distance underground telephone and fiber-optic parallel with the Union Pacific railroad tracks</p> | <p>Potential conflict to UPRR owned fiber optic due to pavement removal at the existing 1010th crossing of the UPRR tracks.</p> <p>Potential conflict to UPRR owned fiber optic due to new road construction and large amount of fill placement at the new road crossing and proposed culvert.</p> <p>Potential conflict with UPRR new fiber optic and proposed roadway improvements and proposed culvert.</p> | <p>Start 4/28/16 to Completion 7/27/16.</p> |

| Name & Contact Information for Utility | Type | Conflict Description & Location | Estimated Date Relocation Complete |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| Union Pacific Railroad IL HSR Program John R. Jerome Program Manager 600 Broadway, Suite 500 Kansas City, MO 64105 jrjerome@up.com 816-399-1760 (Office) | railroad signals | No conflicts with proposed improvements. | No relocation anticipated. |
| <u>Ameren Illinois</u> Darcy Conner 370 S. Main Street Decatur, Illinois 62523 dconner@ameren.com 217-424-6763 | overhead electric | <p>Conflict to Ameren utility pole due to new road construction at STA 202+84 19' LT. Also, new road construction will decrease the amount of vertical clearance between the overhead wires and the ground.</p> <p>Potential conflict to Ameren utility pole due to large amount of fill placement at pole at STA 364+67 31' LT & guy wire at STA 364+83 39' LT.</p> <p>Potential conflict to Ameren utility pole from proposed culvert and ditch grading at STA 371+50 49' LT.</p> <p>Ameren shall be notified if excavation or fill at a pole is to be greater than one foot.</p> | Start 4/28/16 to Completion 7/27/16. |

| Name & Contact Information for Utility | Type | Conflict Description & Location | Estimated Date Relocation Complete |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| <u>Frontier Communications</u> Tena Stoudt 117 W. Jefferson Street Mt. Pulaski, Illinois 62548 Tena.Stoudt@ftr.com 217-792-5732 (Office) 217-851-0036 (Cell) | underground telephone | <p>Potential conflict to Frontier underground fiber optic line along the west side of Old Route 66 due to proposed roadside ditch construction between STA 101+50, LT to 113+00, RT.</p> <p>Potential conflict to Frontier underground fiber optic line at Old Route 66 due to proposed roadway and slope grading between STA 124+43 9' RT to STA 125+82, 60' RT.</p> <p>Potential conflict between Frontier underground fiber optic and proposed culvert at STA 375+96 22' LT.</p> | Start 4/28/16 to Completion 7/27/16. |

TRAFFIC CONTROL PLAN

Revised July 3, 2013

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

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

Standard Specifications:

- Section 701 - Work Zone Traffic Control and Protection
- Section 702 - Nighttime Work Zone Lighting
- Section 703 - Work Zone Pavement Marking
- Section 783 - Pavement Marking and Marker Removal
- Section 1106 – Work Zone Traffic Control Devices

ERRATA Standard Specifications for Road and Bridge Construction

Supplemental Specifications:

- Section 701 – Work Zone Traffic Control and Protection
- Section 780 – Pavement Striping
- Section 1106 – Work Zone Traffic Control Devices

Highway Standards:

- 701006 – Off-Road Operations, 2L, 2W, 15' (4.5 M) to 24" (600 mm) from Pavement Edge
- 701301 – Lane Closure, 2L, 2W, Short Time Operations
- 701326 – Lane Closure, 2L, 2W, Pavement Widening, for Speeds > 45 mph
- 701421 – Lane Closure, Multilane, Day Operations Only, for Speeds > 45 mph to 55 mph
- 701901 – Traffic Control Devices

In Addition, The Following Also Relate To Traffic Control For This Project:

SPECIAL PROVISIONS

- Pavement Marking Removal/Work Zone Pavement Marking Removal
- Traffic Control and Protection (Special)

TRAFFIC CONTROL SURVEILLANCE: In addition to the Standard Specifications for Article 701.10 Surveillance, this item will be required when Highway Standards 701601, 701701 and 701801 are in place.

TRAFFIC CONTROL AND PROTECTION (SPECIAL)

Specific traffic control plan details and Special Provisions have been prepared for this contract. This work shall include all labor, materials, transportation, handling and incidental work necessary to furnish, install, maintain and remove all traffic control devices required as indicated in the plans and as approved by the Engineer.

When traffic is to be directed over a detour route, the Contractor shall furnish, erect, maintain and remove all applicable traffic control devices along the detour route according to the details shown in the plans.

Anytime the pavement width provided during stage construction is less than 12', Width Restriction Signing will be required and a marked a detour route will be provided. The cost for the signing will be included in the cost for TRAFFIC CONTROL AND PROTECTION (SPECIAL) and no additional compensation will be allowed.

Highway Standard 701006 shall be utilized when construction activities and utility work occur more than 15-feet from the travel lane and no other work is being performed in that area.

Highway Standard 701301 shall be utilized during short duration work within one-lane and construction staking operations.

Highway Standard 701326 shall be utilized for the auxiliary lane work along Business Route 55 (Lincoln Parkway) for the turn lane and median work at Old Route 66 (Frontage Road), and for the removal of the auxiliary lanes, median crossing and median grading at 1010th Avenue.

Highway Standard 701421 shall be utilized for the auxiliary lane work along Business Route 55 (Lincoln Parkway) for the turn lane and median work at Old Route 66 (Frontage Road), and for the removal of the auxiliary lanes, median crossing and median grading at 1010th Avenue. This standard may also be utilized for final pavement marking on all roads.

Method of Measurement: Traffic control and protection required under standards 701326 and standard 701421 will be measured for payment on a lump sum basis. All other traffic control (except temporary pavement markings and changeable message signs) indicated on the traffic control plan details and specified in the Special Provisions will be measured for payment on a lump sum basis.

Basis of Payment: Traffic control and protection required under standards 701326 and standard 701421 will be paid for at the lump sum price for TRAFFIC CONTROL AND PROTECTION, STANDARD 701326 or TRAFFIC CONTROL AND PROTECTION, STANDARD 701421. All other traffic control and protection will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION (SPECIAL).

Temporary pavement markings and changeable message signs will be paid for separately.

RESTRICTION ON ROAD CLOSURE

Streets and Roadways shall remain open to traffic at all times during construction and access must be maintained at all times, with no exceptions, to the Logan Correctional Center located on 1350th Street east of 1010th Avenue, and to the Edward R. Madigan State Fish & Wildlife Area (Railsplitter State Park) located on 1010th Avenue. Road Closures will be allowed only on the following streets/roadways within this project area:

Frontage Road (Historic US Route 66)
1000th Avenue / 1010th Avenue

Add the following paragraphs after the second paragraph of Article 108.02; "The Contractor shall identify the approximate closure date at the beginning of the contract and coordinate the sequence and timing of their execution and completion with the Engineer. Work on each separate street or roadway shall be identified as separate line items in the Contractor's proposed Construction Progress Schedule. The contractor shall advise the Resident Engineer at least three (3) weeks prior to the exact closure date.

The contractor shall complete all work items on Frontage Road (Historic US Route 66), except landscaping, and reopen the roadway to traffic within 90 consecutive calendar days of the closure date.

The contractor will not be allowed to close Frontage Road (Historic US Route 66) and 1000th Avenue / 1010th Avenue at the same time. During closure of the streets/roadways, the contractor shall stage their operations such that driveway access shall remain open at all times. The Contractor shall furnish, erect, maintain and remove all applicable traffic control devices along the detour route according to the details shown in the plans for the duration of the detour.

Method of Measurement and Basis of Payment: All traffic control for streets/roadways closure construction (including those closed to traffic and detoured) shall not be paid for separately but included in the lump sum price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

Failure to Open Frontage Road (Historic US Route 66) to Traffic: Should the Contractor fail to completely open and keep open all the traffic lanes to traffic on Frontage Road (Historic US Route 66) within 90 consecutive calendar days in accordance with the limitations specified above, the Contractor shall be liable and shall pay to the Department the amount of \$5,000 per calendar day, not as a penalty but as liquidated and ascertained damages, for each day or a portion thereof that Frontage Road (Historic US Route 66) is closed outside the allowable time limitations. The Department may deduct such damages from any monies due the Contractor.

TEMPORARY INFORMATION SIGNING

Effective May 15, 2013

Revised September 24, 2013

Description. This work shall consist of the furnishing, installation, maintenance, and removal of temporary information signs.

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

Construction Requirements. The temporary information signs shall be in place at least one week prior to the beginning of construction activities that impact traffic flow and shall remain in place until the completion of the project. If all lanes are open for an extended period of time during the project, such as a winter shutdown, the Contractor shall cover the signs until lane closures resume.

Signs shall be installed according to the requirements of Section 701.

Method of Measurement: This work will be measured for payment in square feet in place. The auxiliary sign panel will not be measured for payment.

Basis of Payment. This work will be paid for at the contract unit price per square foot for TEMPORARY INFORMATION SIGNING.

CHANGEABLE MESSAGE SIGN

Effective December 1, 1999

Revised August 7, 2008

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

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

Effective November 16, 1993

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

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

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

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

No additional compensation will be allowed for dust alleviation.

EMBANKMENT

6M3 06/27/13

Embankments shall be constructed according to Section 205 of the Standard Specifications, except as modified by this Special Provision.

When embankments are to be constructed on hillsides or existing slopes which are steeper than 3H:1V, steps shall be cut into the existing slope as shown in the plans or as directed by the Engineer.

All material proposed for use in embankment construction shall be approved by the Engineer. Soils exhibiting the following properties shall not be allowed:

- Standard Dry Density (AASHTO T 99) less than 90 pcf.
- Organic Content (AASHTO T 194) greater than 10 percent.
- Liquid Limit (AASHTO T 89) greater than 60.

Soils exhibiting the following properties shall be restricted to the interior of the embankment:

- Less than 35% passing the #200 sieve.
- Liquid Limit (AASHTO T 89) greater than 50 but less than 60.
- Plasticity Index (AASHTO T 90) less than 12.

The Engineer may restrict or prohibit the use of materials other than those identified above, which exhibit potential for significant erosion or excessive volume change.

Restricted soils shall be encapsulated by 6 to 8 ft, measured horizontally, of unrestricted soil as shown in the plans or directed by the Engineer. The encapsulation shall be placed concurrently with restricted soils. The difference in elevation between the restricted soil and encapsulation shall not exceed 3 ft without the Engineer's approval. Topsoil or rip rap shall not be included in the encapsulation.

The quantity and size of stones or rock fragments incorporated with soil materials shall not prevent placement in the required lift thickness, disking, or achieving uniform compaction. If the Engineer determines the rock material quantity and gradation minimizes potential void formation and the soil quantity is insufficient to affect performance, the material may be considered rock embankment. Rock embankment shall be placed in 12 inch lifts. Lifts shall be compacted or seated using a method approved by the Engineer. Shale shall be placed, broken down, and compacted in the same manner as soil. The addition of water may be required to break down shale.

Where lime modified soil is shown on the plans, materials placed in the top 2 ft of embankments shall have a clay content greater than or equal to 15% over the width of improved subgrade. Clay is defined according to AASHTO M 145. Clay content shall be determined according to AASHTO T 88. In addition to the clay content requirement, no rock, stones or broken concrete more than 2 inches in largest dimension shall be allowed in the top 2 ft.

Where subbase granular material is shown in the plans, the top 1 ft of embankments shall have an immediate bearing value (IBV) of 6 or greater within the limits of the subbase granular material. IBV will be determined using a dynamic cone penetrometer according to Illinois Test Procedure 501. When an embankment is constructed of granular materials, the IBV requirement shall not apply.

All embankment lifts shall be compacted to not less than 95% of the standard laboratory density. The standard laboratory density shall be the maximum dry density determined according to Illinois Modified AASHTO T 99 (Method C) or Illinois Modified AASHTO T 272.

If embankment lifts are unstable after achieving the required density, the Contractor shall reprocess and compact the unstable material as directed by the Engineer. The Engineer may determine a maximum moisture content to correct or prevent stability problems during embankment construction.

This work will not be paid for separately, but shall be considered included in the unit prices for Earth Excavation, Borrow, and/or Furnished Excavation.

UNPUBLISHED TELEPHONE NUMBERS FOR ENGINEER'S FIELD OFFICE

Effective March 21, 2002

Revised January 1, 2012

Add the following sentence to the end of Paragraphs 670.02(i)(2) and 670.04(f)(2):

All of the telephone lines provided shall have unpublished numbers.

CONTRACTOR ACCESS

Revised August 15, 2005

Revised January 1, 2008

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

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

RAILROAD PROTECTIVE LIABILITY INSURANCE (5 AND 10) (BDE)

Effective: January 1, 2006

Description. Railroad Protective Liability and Property Damage Liability Insurance shall be carried according to Article 107.11 of the Standard Specifications, except the limits shall be a minimum of \$5,000,000 combined single limit per occurrence for bodily injury liability and property damage liability with an aggregate limit of \$10,000,000 over the life of the policy. A separate policy is required for each railroad unless otherwise noted.

Special Union Pacific Railroad requirements as follows:

1. Contractor's Commercial General Liability Insurance shall carry the following endorsements:

- A. The employee and workers compensation related exclusions in the above policy apply only to contractor's employees.**
- B. The exclusion for railroads (except where the job site is more than 50' from any railroad including but not limited to tracks, bridges, trestles, roadbeds, terminals, underpasses or crossings) and explosion, collapse, and underground hazard shall be removed.**
- C. Waiver of subrogation.**

**2. Railroad Protective Liability Insurance can be obtained at the following:
www.uprr.com/reus/rrinsure/insurovr.shtml.**

| <u>NAMED INSURED & ADDRESS</u> | <u>NUMBER & SPEED OF PASSENGER TRAINS</u> | <u>NUMBER & SPEED OF FREIGHT TRAINS</u> |
|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|---------------------------------------------|
| Union Pacific Railroad Company 1400 Douglas Street Omaha, NE 68179-1870 | 10 Amtrak per day at 79 MPH 110 MPH (HSR) Union Pacific RR Track Lincoln IL, MP 159.81 | 4 Freights per day at 79 MPH |
| DOT/AAR No.: 294 260E RR Division: | RR Mile Post: 159.81 RR Sub-Division: | |
| For Freight/Passenger Information Contact: Richard Ellison richardellison@up.com | | Phone: 312-777-2048 |
| For Insurance Information Contact: Bill Smith or Donna McLaughlin william.j.smith@marsh.com or donna.mclaughlin@marsh.com | | Phone: 800-729-7001 |

Approval of Insurance. The original and one certified copy of each required policy shall be submitted to the following address for approval:

Illinois Department of Transportation
Bureau of Design and Environment
2300 South Dirksen Parkway, Room 326
Springfield, Illinois 62764

The Contractor will be advised when the Department has received approval of the insurance from the railroad(s). Before any work begins on railroad right-of-way, the Contractor shall submit to the Engineer evidence that the required insurance has been approved by the railroad(s). The Contractor shall also provide the Engineer with the expiration date of each required policy.

Basis of Payment. Providing Railroad Protective Liability and Property Damage Liability Insurance will be paid for at the contract unit price per Lump Sum for RAILROAD PROTECTIVE LIABILITY INSURANCE.

AGGREGATE SUBGRADE IMPROVEMENT (BDE)

Effective: April 1, 2012

Revised: January 1, 2016

Add the following Section to the Standard Specifications:

“SECTION 303. AGGREGATE SUBGRADE IMPROVEMENT

303.01 Description. This work shall consist of constructing an aggregate subgrade improvement.

303.02 Materials. Materials shall be according to the following.

| Item | Article/Section |
|----------------------------------------------------------------|-----------------|
| (a) Coarse Aggregate | 1004.06 |
| (b) Reclaimed Asphalt Pavement (RAP) (Notes 1, 2, and 3) | 1031 |

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

Note 2. RAP having 100 percent passing the 1 1/2 in. (37.5 mm) sieve and being well graded, may be used as capping aggregate in the top 3 in. (75 mm) when aggregate gradations CS 01, CS 02, or RR 01 are used in lower lifts.

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

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

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

303.05 Placing Aggregate. The maximum nominal lift thickness of aggregate gradations CA 02, CA 06, or CA 10 shall be 12 in. (300 mm). The maximum nominal lift thickness of aggregate gradations CS 01, CS 02, and RR 01 shall be 24 in. (600 mm).

303.06 Capping Aggregate. The top surface of the aggregate subgrade shall consist of a minimum 3 in. (75 mm) of aggregate gradations CA 06 or CA 10. When the contract specifies that a granular subbase is to be placed on the aggregate subgrade improvement, the 3 in. (75 mm) of capping aggregate shall be the same gradation and may be placed with the underlying aggregate subgrade improvement material.

303.07 Compaction. All aggregate lifts shall be compacted to the satisfaction of the Engineer. If the moisture content of the material is such that compaction cannot be obtained, sufficient water shall be added so that satisfactory compaction can be obtained.

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

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

303.10 Basis of Payment. This work will be paid for at the contract unit price per cubic yard (cubic meter) or ton (metric ton) for AGGREGATE SUBGRADE IMPROVEMENT or at the contract unit price per square yard (square meter) for AGGREGATE SUBGRADE IMPROVEMENT, of the thickness specified.”

Add the following to Section 1004 of the Standard Specifications:

“**1004.06 Coarse Aggregate for Aggregate Subgrade Improvement.** The aggregate shall be according to Article 1004.01 and the following.

- (a) Description. The coarse aggregate shall be crushed gravel, crushed stone, or crushed concrete. In applications where greater than 24 in. (600 mm) of subgrade material is required, gravel may be used below the first 12 in (300 mm) of subgrade.
- (b) Quality. The coarse aggregate shall consist of sound durable particles reasonably free of deleterious materials.

(c) Gradation.

- (1) The coarse aggregate gradation for total subgrade thickness less than or equal to 12 in. (300 mm) shall be CA 2, CA 6, CA 10, or CS 01.

The coarse aggregate gradation for total subgrade thickness more than 12 in. (300 mm) shall be CS 01, CS 02 or RR 01(see Article 1005.01(c)).

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

| COARSE AGGREGATE SUBGRADE GRADATIONS (Metric) | | | | | |
|-----------------------------------------------|--------------------------------|--------|---------|---------|---------|
| Grad No. | Sieve Size and Percent Passing | | | | |
| | 200 mm | 150 mm | 100 mm | 50 mm | 4.75 mm |
| CS 01 | 100 | 97 ± 3 | 90 ± 10 | 45 ± 25 | 20 ± 20 |
| CS 02 | | 100 | 80 ± 10 | 25 ± 15 | |

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

COARSE AGGREGATE QUALITY (BDE)

Effective: July 1, 2015

Revise Article 1004.01(b) of the Standard Specifications to read:

“(b) Quality. The coarse aggregate shall be according to the quality standards listed in the following table.

| COARSE AGGREGATE QUALITY | | | | |
|----------------------------------------------------------------------------------------|-------------------|------------------|--------------------|------------------|
| QUALITY TEST | CLASS | | | |
| | A | B | C | D |
| Na ₂ SO ₄ Soundness 5 Cycle, ITP 104 ^{1/} , % Loss max. | 15 | 15 | 20 | 25 ^{2/} |
| Los Angeles Abrasion, ITP 96 ^{11/} , % Loss max. | 40 ^{3/} | 40 ^{4/} | 40 ^{5/} | 45 |
| Minus No. 200 (75 μm) Sieve Material, ITP 11 | 1.0 ^{6/} | --- | 2.5 ^{7/} | --- |
| Deleterious Materials ^{10/} | | | | |
| Shale, % max. | 1.0 | 2.0 | 4.0 ^{8/} | --- |
| Clay Lumps, % max. | 0.25 | 0.5 | 0.5 ^{8/} | --- |
| Coal & Lignite, % max. | 0.25 | --- | --- | --- |
| Soft & Unsound Fragments, % max. | 4.0 | 6.0 | 8.0 ^{8/} | --- |
| Other Deleterious, % max. | 4.0 ^{9/} | 2.0 | 2.0 ^{8/} | --- |
| Total Deleterious, % max. | 5.0 | 6.0 | 10.0 ^{8/} | --- |
| Oil-Stained Aggregate ^{10/} , % max | 5.0 | --- | --- | |

1/ Does not apply to crushed concrete.

2/ For aggregate surface course and aggregate shoulders, the maximum percent loss shall be 30.

3/ For portland cement concrete, the maximum percent loss shall be 45.

4/ Does not apply to crushed slag or crushed steel slag.

5/ For hot-mix asphalt (HMA) binder mixtures, except when used as surface course, the maximum percent loss shall be 45.

6/ For crushed aggregate, if the material finer than the No. 200 (75 μm) sieve consists of the dust from fracture, essentially free from clay or silt, this percentage may be increased to 2.5.

7/ Does not apply to aggregates for HMA binder mixtures.

- 8/ Does not apply to Class A seal and cover coats.
- 9/ Includes deleterious chert. In gravel and crushed gravel aggregate, deleterious chert shall be the lightweight fraction separated in a 2.35 heavy media separation. In crushed stone aggregate, deleterious chert shall be the lightweight fraction separated in a 2.55 heavy media separation. Tests shall be run according to ITP 113.
- 10/ Test shall be run according to ITP 203.
- 11/ Does not apply to crushed slag.

All varieties of chert contained in gravel coarse aggregate for portland cement concrete, whether crushed or uncrushed, pure or impure, and irrespective of color, will be classed as chert and shall not be present in the total aggregate in excess of 25 percent by weight (mass).

Aggregates used in Class BS concrete (except when poured on subgrade), Class PS concrete, and Class PC concrete (bridge superstructure products only, excluding the approach slab) shall contain no more than two percent by weight (mass) of deleterious materials. Deleterious materials shall include substances whose disintegration is accompanied by an increase in volume which may cause spalling of the concrete.”

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

Effective: April 1, 2012

Revised: April 1, 2015

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 feet 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|-------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in. / ft. | | | | | | | | "M", in. |
|-------------------------|---------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 ft x 7 ft x 8 in.

| Design Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 |

8 ft x 4 ft x 8 in.

| Design Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 ft x 5 ft x 8 in.

| Design Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in. / ft. | | | | | | | | "M", in. |
|-------------------------|---------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in. / ft. | | | | | | | | "M", in. |
|-------------------------|---------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in. / ft. | | | | | | | | "M", in. |
|-------------------------|---------------------------------------------------|------|------|------|------|------|------|------|----------|
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in. / ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 6 ft x 11 in. | | | | | | | | | |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| Design Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 8 ft x 11 in. | | | | | | | | | |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| Design Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 10 ft x 11 in. | | | | | | | | | |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| Design Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 6 ft x 12 in. | | | | | | | | | |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| Design Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 8 ft x 12 in. | | | | | | | | | |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| Design Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 10 ft x 12 in. | | | | | | | | | |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| Design Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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 12 ft x 12 in. | | | | | | | | | |
|-------------------------|--------------------------------------------------|------|------|------|------|------|------|------|----------|
| Design Earth Cover, ft. | Circumferential Reinforcement Areas, sq in./ ft. | | | | | | | | "M", in. |
| | As1 | As2 | As3 | As4 | As5 | As6 | As7 | As8 | |
| 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" |

CONCRETE BOX CULVERTS WITH SKEWS ≤ 30 DEGREES REGARDLESS OF DESIGN FILL AND SKEWS > 30 DEGREES WITH DESIGN FILLS > 5 FEET (BDE)

Effective: April 1, 2012

Revised: April 1, 2014

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.”

CONCRETE END SECTIONS FOR PIPE CULVERTS (BDE)

Effective: January 1, 2013

Description. This work shall consist of constructing cast-in-place concrete and precast concrete end sections for pipe culverts. These end sections are shown on the plans as Highway Standard 542001, 542006, 542011, or 542016. This work shall be according to Section 542 of the Standard Specifications except as modified herein.

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

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

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

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

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

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

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

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

CONSTRUCTION REQUIREMENTS

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

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

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

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

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

Basis of Payment. This work will be paid for at the contract unit price per each for CONCRETE END SECTION, STANDARD 542001; CONCRETE END SECTION, STANDARD 542006; CONCRETE END SECTION, 542011; or CONCRETE END SECTION, 542016, of the pipe diameter and slope specified.

CONCRETE GUTTER, CURB, MEDIAN, AND PAVED DITCH (BDE)

Effective: April 1, 2014

Revised: August 1, 2014

Add the following to Article 606.02 of the Standard Specifications:

“(i) Polyurethane Joint Sealant 1050.04”

Revise the fifth paragraph of Article 606.07 of the Standard Specifications to read:

“Transverse contraction and longitudinal construction joints shall be sealed according to Article 420.12, except transverse joints in concrete curb and gutter shall be sealed with polysulfide or polyurethane joint sealant.”

Add the following to Section 1050 of the Standard Specifications:

“1050.04 Polyurethane Joint Sealant. The joint sealant shall be a polyurethane sealant, Type S, Grade NS, Class 25 or better, Use T (T₁ or T₂), according to ASTM C 920.”

CONTRACT CLAIMS (BDE)

Effective: April 1, 2014

Revise the first paragraph of Article 109.09(a) of the Standard Specifications to read:

“(a) Submission of Claim. All claims filed by the Contractor shall be in writing and in sufficient detail to enable the Department to ascertain the basis and amount of the claim. As a minimum, the following information must accompany each claim submitted.”

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

“(e) Procedure. The Department provides two administrative levels for claims review.

Level I Engineer of Construction
Level II Chief Engineer/Director of Highways or Designee

- (1) Level I. All claims shall first be submitted at Level I. Two copies each of the claim and supporting documentation shall be submitted simultaneously to the District and the Engineer of Construction. The Engineer of Construction, in consultation with the District, will consider all information submitted with the claim and render a decision on the claim within 90 days after receipt by the Engineer of Construction. Claims not conforming to this Article will be returned without consideration. The Engineer of Construction may schedule a claim presentation meeting if in the Engineer of Construction’s judgment such a meeting would aid in resolution of the claim, otherwise a decision will be made based on the claim documentation submitted. If a Level I decision is not rendered within 90 days of receipt of the claim, or if the Contractor disputes the decision, an appeal to Level II may be made by the Contractor.
- (2) Level II. An appeal to Level II shall be made in writing to the Engineer of Construction within 45 days after the date of the Level I decision. Review of the claim at Level II shall be conducted as a full evaluation of the claim. A claim presentation meeting may be scheduled if the Chief Engineer/Director of Highways determines that such a meeting would aid in resolution of the claim, otherwise a decision will be made based on the claim documentation submitted. A Level II final decision will be rendered within 90 days of receipt of the written request for appeal.

Full compliance by the Contractor with the provisions specified in this Article is a contractual condition precedent to the Contractor’s right to seek relief in the Court of Claims. The Director’s written decision shall be the final administrative action of the Department. Unless the Contractor files a claim for adjudication by the Court of Claims within 60 days after the date of the written decision, the failure to file shall constitute a release and waiver of the claim.”

DBE ENCOURAGEMENT

RETURN WITH BID

Participation by Disadvantaged Business Enterprises. In accordance with FRA funding requirements, IDOT encourages bidders to utilize Disadvantaged Business Enterprises (DBEs) as defined under 49 CFR Part 26 on this contract. Visit <https://webapps.dot.illinois.gov/UCP/ExternalSearch> for the Illinois Unified Certification Program (IL-UCP) Directory for a list of firms. The Contractor will document whether an Illinois certified DBE firm is being utilized on the Request for Approval of Subcontractor, form BC 260A and/or form SBE 2025.

The services of a DBE will be used.

- Yes
- Yes (but not known)
- No

For EBidding please upload this page to Miscellaneous Documents.

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)

Effective: September 1, 2000

Revised: January 2, 2016

FEDERAL OBLIGATION. The Department of Transportation, as a recipient of federal financial assistance, is required to take all necessary and reasonable steps to ensure nondiscrimination in the award and administration of contracts. Consequently, the federal regulatory provisions of 49 CFR Part 26 apply to this contract concerning the utilization of disadvantaged business enterprises. For the purposes of this Special Provision, a disadvantaged business enterprise (DBE) means a business certified by the Department in accordance with the requirements of 49 CFR Part 26 and listed in the Illinois Unified Certification Program (IL UCP) DBE Directory.

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

CONTRACTOR ASSURANCE. The Contractor makes the following assurance and agrees to include the assurance in each subcontract 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 0.00% of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will only award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. 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.

DBE LOCATOR REFERENCES. Bidders shall consult the IL UCP DBE Directory as a reference source for DBE-certified companies. In addition, the Department maintains a letting and item specific DBE locator information system whereby DBE companies can register their interest in providing quotes on particular bid items advertised for letting. Information concerning DBE companies willing to quote work for particular contracts may be obtained by contacting the Department's Bureau of Small Business Enterprises at telephone number (217) 785-4611, or by visiting the Department's website at:

<http://www.idot.illinois.gov/doing-business/certifications/disadvantaged-business-enterprise-certification/il-ucp-directory/index>.

BIDDING PROCEDURES. Compliance with this Special Provision is 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 Disadvantaged Business 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.
 - (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 original certified mail receipt from the U.S. Postal Service or the receipt issued by a delivery service. 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 or to extend the time for award.

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

CALCULATING DBE PARTICIPATION. The Utilization Plan values represent work anticipated to be performed and paid for upon satisfactory completion. The Department is only able to count toward the achievement of the overall goal and the contract goal the value of payments made for the work actually performed by DBE companies. In addition, a DBE must perform a commercially useful function on the contract to be counted. A commercially useful function is generally performed when the DBE is responsible for the work and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. The Department and Contractor are governed by the provisions of 49 CFR Part 26.55(c) on questions of commercially useful functions as it affects the work. Specific counting guidelines are provided in 49 CFR Part 26.55, the provisions of which govern over the summary contained herein.

- (a) DBE as the Contractor: 100 percent goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE does not count toward the DBE goals.
- (b) DBE as a joint venture Contractor: 100 percent goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.
- (c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the 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 it receives as a result of the lease arrangement.
- (e) DBE as a material supplier:
 - (1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.
 - (2) 100 percent goal credit for the cost of materials or supplies obtained from a DBE manufacturer.
 - (3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a DBE regular dealer or DBE manufacturer.

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

- (a) NO AMENDMENT. No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be 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) CHANGES TO WORK. Any deviation from the DBE condition-of-award or contract plans, specifications, or special provisions must be approved, in writing, by the Department as provided elsewhere in the Contract. The Contractor shall notify affected DBEs in writing of any changes in the scope of work which result in a reduction in the dollar amount condition-of-award to the contract. Where the revision includes work committed to a new DBE subcontractor, not previously involved in the project, then a Request for Approval of Subcontractor, Department form BC 260A or AER 260A, must be signed and submitted. If the commitment of work is in the form of additional tasks assigned to an existing subcontract, then 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) SUBCONTRACT. 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) ALTERNATIVE WORK METHODS. In addition to the above requirements for reductions in the condition of award, additional requirements apply to the two cases of Contractor-initiated work substitution proposals. Where the contract allows alternate work methods which serve to delete or create underruns in condition of award DBE work, and the Contractor selects that alternate method or, where the Contractor proposes a substitute work method or material that serves to diminish or delete work committed to a DBE and replace it with other work, then the Contractor must demonstrate one of the following:

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

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

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

- (1) The listed DBE subcontractor fails or refuses to execute a written contract;
- (2) The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the 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 contractor 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) PAYMENT RECORDS. The Contractor shall maintain a record of payments for work performed to the DBE participants. The records shall be made available to the Department for inspection upon request. 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) ENFORCEMENT. The Department reserves the right to withhold payment to the Contractor to enforce the provisions of this Special Provision. Final payment shall not be made on the contract until such time as the Contractor submits sufficient documentation demonstrating achievement of the goal in accordance with this Special Provision or after liquidated damages have been determined and collected.
- (h) RECONSIDERATION. Notwithstanding any other provision of the contract, including but not limited to Article 109.09 of the Standard Specifications, the Contractor may request administrative reconsideration of a decision to deduct the amount of the goal not achieved as liquidated damages. A request to reconsider shall be delivered to the Contract Compliance Section and shall be handled and considered in the same manner as set forth in paragraph (c) of "Good Faith Effort Procedures" of this Special Provision, except a final decision that a good faith effort was not made during contract performance to achieve the goal agreed to in the Utilization Plan shall be the final administrative decision of the Department. The result of the reconsideration process is not administratively appealable to the U.S. Department of Transportation.

EQUAL EMPLOYMENT OPPORTUNITY (BDE)

Effective: April 1, 2015

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

"EQUAL EMPLOYMENT OPPORTUNITY

In the event of the Contractor's noncompliance with the provisions of this Equal Employment Opportunity Clause, the Illinois Human Rights Act, or the Illinois Department of Human Rights Rules and Regulations, the Contractor may be declared ineligible for future contracts or subcontracts with the State of Illinois or any of its political sub-divisions or municipal corporations, and the contract may be cancelled or voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation.

During the performance of this Contract, the Contractor agrees as follows:

- (1) That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, marital status, order of protection status, national origin or ancestry, citizenship status, age, physical or mental disability unrelated to ability, military status, or an unfavorable discharge from military service; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.
- (2) That, if it hires additional employees in order to perform this contract or any portion hereof, it will determine the availability (according to the Illinois Department of Human Rights Rules and Regulations) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.
- (3) That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, sexual orientation, marital status, order of protection status, national origin or ancestry, citizenship status, age, physical or mental disability unrelated to ability, military status or an unfavorable discharge from military service.

- (4) That it will send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the Contractor's obligations under the Illinois Human Rights Act and the Illinois Department of Human Rights Rules and Regulations. If any labor organization or representative fails or refuses to cooperate with the Contractor in its efforts to comply with such Act and Rules and Regulations, the Contractor will promptly so notify the Illinois Department of Human Rights and IDOT and will recruit employees from other sources when necessary to fulfill its obligations thereunder.
- (5) That it will submit reports as required by the Illinois Department of Human Rights Rules and Regulations, furnish all relevant information as may from time to time be requested by the Illinois Department of Human Rights or IDOT, and in all respects comply with the Illinois Human Rights Act and the Illinois Department of Human Rights Rules and Regulations.
- (6) That it will permit access to all relevant books, records, accounts, and work sites by personnel of IDOT and the Illinois Department of Human Rights for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and the Illinois Department of Human Rights Rules and Regulations.
- (7) That it will include verbatim or by reference the provisions of this clause in every subcontract it awards under which any portion of the contract obligations are undertaken or assumed, so that the provisions will be binding upon the subcontractor. In the same manner as with other provisions of this contract, the Contractor will be liable for compliance with applicable provisions of this clause by subcontractors; and further it will promptly notify IDOT and the Illinois Department of Human Rights in the event any subcontractor fails or refuses to comply with these provisions. In addition, the Contractor will not utilize any subcontractor declared by the Illinois Human Rights Commission to be ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations."

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

"II. EQUAL EMPLOYMENT OPPORTUNITY

In the event of the Contractor's noncompliance with the provisions of this Equal Employment Opportunity Clause, the Illinois Human Rights Act or the Illinois Department of Human Rights Rules and Regulations, the Contractor may be declared ineligible for future contracts or subcontracts with the State of Illinois or any of its political sub-divisions or municipal corporations, and the contract may be cancelled or voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation.

During the performance of this Contract, the Contractor agrees as follows:

1. That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, marital status, order of protection status, national origin or ancestry, citizenship status, age, physical or mental disability unrelated to ability, military status, or an unfavorable discharge from military service; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.
2. That, if it hires additional employees in order to perform this contract or any portion hereof, it will determine the availability (according to the Illinois Department of Human Rights Rules and Regulations) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.
3. That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, sexual orientation, marital status, order of protection status, national origin or ancestry, citizenship status, age, physical or mental disability unrelated to ability, military status, or an unfavorable discharge from military service.
4. That it will send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the Contractor's obligations under the Illinois Human Rights Act and the Illinois Department of Human Rights Rules and Regulations. If any labor organization or representative fails or refuses to cooperate with the Contractor in its efforts to comply with such Act and Rules and Regulations, the Contractor will promptly so notify the Illinois Department of Human Rights and IDOT and will recruit employees from other sources when necessary to fulfill its obligations thereunder.
5. That it will submit reports as required by the Illinois Department of Human Rights Rules and Regulations, furnish all relevant information as may from time to time be requested by the Illinois Department of Human Rights or IDOT, and in all respects comply with the Illinois Human Rights Act and the Illinois Department of Human Rights Rules and Regulations.
6. That it will permit access to all relevant books, records, accounts and work sites by personnel of IDOT and the Illinois Department of Human Rights for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and the Illinois Department of Human Rights Rules and Regulations.

7. That it will include verbatim or by reference the provisions of this clause in every subcontract it awards under which any portion of the contract obligations are undertaken or assumed, so that the provisions will be binding upon the subcontractor. In the same manner as with other provisions of this contract, the Contractor will be liable for compliance with applicable provisions of this clause by subcontractors; and further it will promptly notify IDOT and the Illinois Department of Human Rights in the event any subcontractor fails or refuses to comply with these provisions. In addition, the Contractor will not utilize any subcontractor declared by the Illinois Human Rights Commission to be ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.”

FRICITION AGGREGATE (BDE)

Effective: January 1, 2011

Revised: November 1, 2014

Revise Article 1004.01(a)(4) of the Standard Specifications to read:

- “(4) Crushed Stone. Crushed stone shall be the angular fragments resulting from crushing undisturbed, consolidated deposits of rock by mechanical means. Crushed stone shall be divided into the following, when specified.
- a. Carbonate Crushed Stone. Carbonate crushed stone shall be either dolomite or limestone. Dolomite shall contain 11.0 percent or more magnesium oxide (MgO). Limestone shall contain less than 11.0 percent magnesium oxide (MgO).
 - b. Crystalline Crushed Stone. Crystalline crushed stone shall be either metamorphic or igneous stone, including but is not limited to, quartzite, granite, rhyolite and diabase.”

Revise Article 1004.03(a) of the Standard Specifications to read:

“**1004.03 Coarse Aggregate for Hot-Mix Asphalt (HMA).** The aggregate shall be according to Article 1004.01 and the following.

- (a) Description. The coarse aggregate for HMA shall be according to the following table.

| Use | Mixture | Aggregates Allowed |
|---------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Class A | Seal or Cover | <u>Allowed Alone or in Combination</u> ^{5/} : Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag Crushed Concrete |

| Use | Mixture | Aggregates Allowed | |
|------------------------------|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| HMA Low ESAL | Stabilized Subbase or Shoulders | <u>Allowed Alone or in Combination</u> ^{5/} : Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{1/} Crushed Concrete | |
| HMA High ESAL Low ESAL | Binder IL-19.0 or IL-19.0L SMA Binder | <u>Allowed Alone or in Combination</u> ^{5/} : Crushed Gravel Carbonate Crushed Stone ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Concrete ^{3/} | |
| HMA High ESAL Low ESAL | C Surface and Leveling Binder IL-9.5 or IL-9.5L SMA Ndesign 50 Surface | <u>Allowed Alone or in Combination</u> ^{5/} : Crushed Gravel Carbonate Crushed Stone ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{4/} Crushed Concrete ^{3/} | |
| HMA High ESAL | D Surface and Leveling Binder IL-9.5 SMA Ndesign 50 Surface | <u>Allowed Alone or in Combination</u> ^{5/} : Crushed Gravel Carbonate Crushed Stone (other than Limestone) ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{4/} Crushed Concrete ^{3/} | |
| | | <u>Other Combinations Allowed:</u> | |
| | | <i>Up to...</i> | <i>With...</i> |
| | | 25% Limestone | Dolomite |
| | | 50% Limestone | Any Mixture D aggregate other than Dolomite |
| 75% Limestone | Crushed Slag (ACBF) or Crushed Sandstone | | |

| Use | Mixture | Aggregates Allowed | |
|---------------------------------------------------------|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| HMA High ESAL | E Surface IL-9.5 SMA Ndesign 80 Surface | <u>Allowed Alone or in Combination</u> ^{5/} : | |
| | | Crushed Gravel Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag Crushed Concrete ^{3/} No Limestone. | |
| | | <u>Other Combinations Allowed:</u> | |
| | | <i>Up to...</i> | <i>With...</i> |
| | | 50% Dolomite ^{2/} | Any Mixture E aggregate |
| 75% Dolomite ^{2/} | Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone | | |
| 75% Crushed Gravel or Crushed Concrete ^{3/} | Crushed Sandstone, Crystalline Crushed Stone, Crushed Slag (ACBF), or Crushed Steel Slag | | |
| HMA High ESAL | F Surface IL-9.5 SMA Ndesign 80 Surface | <u>Allowed Alone or in Combination</u> ^{5/} : | |
| | | Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag No Limestone. | |
| | | <u>Other Combinations Allowed:</u> | |
| | | <i>Up to...</i> | <i>With...</i> |
| | | 50% Crushed Gravel, Crushed Concrete ^{3/} , or Dolomite ^{2/} | Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone |

- 1/ Crushed steel slag allowed in shoulder surface only.
 2/ Carbonate crushed stone shall not be used in SMA Ndesign 80. In SMA Ndesign 50, carbonate crushed stone shall not be blended with any of the other aggregates allowed alone in Ndesign 50 SMA binder or Ndesign 50 SMA surface.

- 3/ Crushed concrete will not be permitted in SMA mixes.
- 4/ Crushed steel slag shall not be used as leveling binder.
- 5/ When combinations of aggregates are used, the blend percent measurements shall be by volume.”

HOT-MIX ASPHALT - DENSITY TESTING OF LONGITUDINAL JOINTS (BDE)

Effective: January 1, 2010

Revised: April 1, 2012

Description. This work shall consist of testing the density of longitudinal joints as part of the quality control/quality assurance (QC/QA) of hot-mix asphalt (HMA). Work shall be according to Section 1030 of the Standard Specifications except as follows.

Quality Control/Quality Assurance (QC/QA). Delete the second and third sentence of the third paragraph of Article 1030.05(d)(3) of the Standard Specifications.

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

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

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

Revise the Density Control Limits table in Article 1030.05(d)(4) of the Standard Specifications to read:

| "Mixture Composition | Parameter | Individual Test (includes confined edges) | Unconfined Edge Joint Density Minimum |
|----------------------------|-------------------|-------------------------------------------|---------------------------------------|
| IL-4.75 | Ndesign = 50 | 93.0 – 97.4% | 91.0% |
| IL-9.5, IL-12.5 | Ndesign ≥ 90 | 92.0 – 96.0% | 90.0% |
| IL-9.5, IL-9.5L, IL-12.5 | Ndesign < 90 | 92.5 – 97.4% | 90.0% |
| IL-19.0, IL-25.0 | Ndesign ≥ 90 | 93.0 – 96.0% | 90.0% |
| IL-19.0, IL-19.0L, IL-25.0 | Ndesign < 90 | 93.0 – 97.4% | 90.0% |
| SMA | Ndesign = 50 & 80 | 93.5 – 97.4% | 91.0% |
| All Other | Ndesign = 30 | 93.0 - 97.4% | 90.0%” |

HOT-MIX ASPHALT – MIXTURE DESIGN COMPOSITION AND VOLUMETRIC REQUIREMENTS (BDE)

Effective: November 1, 2013

Revised: November 1, 2014

Revise the last sentence of the first paragraph of Article 312.05 of the Standard Specifications to read:

“The minimum compacted thickness of each lift shall be according to Article 406.06(d).”

Delete the minimum compacted lift thickness table in Article 312.05 of the Standard Specifications.

Revise the second paragraph of Article 355.02 of the Standard Specifications to read:

“The mixture composition used shall be IL-19.0.”

Revise Article 355.05(a) of the Standard Specifications to read:

“(a) The top lift thickness shall be 2 1/4 in. (60 mm) for mixture composition IL-19.0.”

Revise the Leveling Binder table and second paragraph of Article 406.05(c) of the Standard Specifications to read:

| "Leveling Binder | |
|---------------------------------------------------------|-----------------------------|
| Nominal, Compacted, Leveling Binder Thickness, in. (mm) | Mixture Composition |
| ≤ 1 1/4 (32) | IL-4.75, IL-9.5, or IL-9.5L |
| > 1 1/4 to 2 (32 to 50) | IL-9.5 or IL-9.5L |

The density requirements of Article 406.07(c) shall apply for leveling binder, machine method, when the nominal compacted thickness is: 3/4 in. (19 mm) or greater for IL-4.75 mixtures; and 1 1/4 in. (32 mm) or greater for IL-9.5 and IL-9.5L mixtures."

Revise the table in Article 406.06(d) of the Standard Specifications to read:

| "MINIMUM COMPACTED LIFT THICKNESS | |
|-----------------------------------|---------------------|
| Mixture Composition | Thickness, in. (mm) |
| IL-4.75 | 3/4 (19) |
| IL-9.5, IL-9.5L | 1 1/4 (32) |
| SMA-12.5 | 2 (51) |
| IL-19.0, IL-19.0L | 2 1/4 (57)" |

Revise the ninth paragraph of Article 406.14 of the Standard Specifications to read:

"Test strip mixture will be evaluated at the contract unit price according to the following."

Revise Article 406.14(a) of the Standard Specifications to read:

"(a) If the HMA placed during the initial test strip is determined to be acceptable the mixture will be paid for at the contract unit price."

Revise Article 406.14(b) of the Standard Specifications to read:

"(b) If the HMA placed during the initial test strip (1) is determined to be unacceptable to remain in place by the Engineer, and (2) was not produced within 2.0 to 6.0 percent air voids or within the individual control limits of the JMF according to the Department's test results, the mixture will not be paid for and shall be removed at the Contractor's expense. An additional test strip shall be constructed and the mixture will be paid for in full, if produced within 2.0 to 6.0 percent air voids and within the individual control limits of the JMF."

Revise Article 406.14(c) of the Standard Specifications to read:

“(c) If the HMA placed during the initial test strip (1) is determined to be unacceptable to remain in place by the Engineer, and (2) was produced within 2.0 to 6.0 percent air voids and within the individual control limits of the JMF according to the Department’s test results, the mixture shall be removed. Removal will be paid according to Article 109.04. This initial mixture will be paid for at the contract unit price. An additional test strip shall be constructed and the mixture will be paid for in full, if produced within 2.0 to 6.0 percent air voids and within the individual control limits of the JMF.”

Delete Article 406.14(d) of the Standard Specifications.

Delete Article 406.14(e) of the Standard Specifications.

Delete the last sentence of Article 407.06(c) of the Standard Specifications.

Revise Note 2. of Article 442.02 of the Standard Specifications to read:

“Note 2. The mixture composition of the HMA used shall be IL-19.0 binder, designed with the same Ndesign as that specified for the mainline pavement.”

Delete the second paragraph of Article 482.02 of the Standard Specifications.

Revise the first sentence of the sixth paragraph of Article 482.05 of the Standard Specifications to read:

“When the mainline HMA binder and surface course mixture option is used on resurfacing projects, shoulder resurfacing widths of 6 ft (1.8 m) or less may be placed simultaneously with the adjacent traffic lane for both the binder and surface courses.”

Revise the second sentence of the fourth paragraph of Article 601.04 of the Standard Specifications to read:

“The top 5 in. (125 mm) of the trench shall be backfilled with an IL-19.0L Low ESAL mixture meeting the requirements of Section 1030 and compacted to a density of not less than 90 percent of the theoretical density.”

Revise the second sentence of the fifth paragraph of Article 601.04 of the Standard Specifications to read:

“The top 8 in. (200 mm) of the trench shall be backfilled with an IL-19.0L Low ESAL mixture meeting the requirements of Section 1030 and compacted to a density of not less than 90 percent of the theoretical density.”

Revise Article 1003.03(c) of the Standard Specifications to read:

“(c) Gradation. The fine aggregate gradation for all HMA shall be FA 1, FA 2, FA 20, FA 21, or FA 22. The fine aggregate gradation for SMA shall be FA/FM 20.

For mixture IL-4.75 and surface mixtures with an Ndesign = 90, at least 50 percent of the required fine aggregate fraction shall consist of either stone sand, slag sand, or steel slag meeting the FA 20 gradation.

For mixture IL-19.0, Ndesign = 90 the fine aggregate fraction shall consist of at least 67 percent manufactured sand meeting FA 20 or FA 22 gradation. For mixture IL-19.0, Ndesign = 50 or 70 the fine aggregate fraction shall consist of at least 50 percent manufactured sand meeting FA 20 or FA 22 gradation. The manufactured sand shall be stone sand, slag sand, steel slag sand, or combinations thereof.

Gradation FA 1, FA 2, or FA 3 shall be used when required for prime coat aggregate application for HMA.”

Remove footnote 3/ from the tables and at the end of the tables in Article 1004.01(c) of the Standard Specifications.

Delete the last sentence of the first paragraph of Article 1004.03(b) of the Standard Specifications.

Revise the table in Article 1004.03(c) of the Standard Specifications to read:

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

1/ CA 16 or CA 13 may be blended with the gradations listed.”

Revise the nomenclature table in Article 1030.01 of the Standard Specifications to read:

| | |
|------------|--------------------------------------------------------------------------------------------------------------|
| “High ESAL | IL-19.0 binder; IL-9.5 surface |
| Low ESAL | IL-19.0L binder; IL-9.5L surface; Stabilized Subbase (HMA) ^{1/} ; HMA Shoulders ^{2/} |

1/ Uses 19.0L binder mix.

2/ Uses 19.0L for lower lifts and 9.5L for surface lift.”

Revise Article 1030.02 of the Standard Specifications and Supplemental Specifications to read:

“**1030.02 Materials.** Materials shall be according to the following.

| Item | Article/Section |
|------------------------------------------------------|-----------------|
| (a) Coarse Aggregate | 1004.03 |
| (b) Fine Aggregate | 1003.03 |
| (c) RAP Material | 1031 |
| (d) Mineral Filler | 1011 |
| (e) Hydrated Lime | 1012.01 |
| (f) Slaked Quicklime (Note 1) | |
| (g) Performance Graded Asphalt Binder (Note 2) | 1032 |
| (h) Fibers (Note 3) | |
| (i) Warm Mix Asphalt (WMA) Technologies (Note 4) | |

Note 1. Slaked quicklime shall be according to ASTM C 5.

Note 2. The asphalt binder shall be an SBS PG 76-28 when the SMA is used on a full-depth asphalt pavement and SBS PG 76-22 when used as an overlay.

Note 3. A stabilizing additive such as cellulose or mineral fiber shall be added to the SMA mixture according to Illinois Modified AASHTO M 325. The stabilizing additive shall meet the Fiber Quality Requirements listed in Illinois Modified AASHTO M 325. Prior to approval and use of fibers, the Contractor shall submit a notarized certification by the producer of these materials stating they meet these requirements.

Note 4. Warm mix additives or foaming processes shall be selected from the current Bureau of Materials and Physical Research Approved List, “Warm Mix Asphalt Technologies”.

Revise Article 1030.04(a)(1) of the Standard Specifications and the Supplemental Specifications to read:

“(1) High ESAL Mixtures. The Job Mix Formula (JMF) shall fall within the following limits.

| High ESAL, MIXTURE COMPOSITION (% PASSING) ^{1/} | | | | | | | | |
|----------------------------------------------------------|------------|-----|------------------------|--------------------|-----------|------------------|------------|-------------------|
| Sieve Size | IL-19.0 mm | | SMA 12.5 ^{4/} | | IL-9.5 mm | | IL-4.75 mm | |
| | min | max | min | max | min | max | min | max |
| 1 1/2 in. (37.5 mm) | | | | | | | | |
| 1 in. (25 mm) | | 100 | | | | | | |
| 3/4 in. (19 mm) | 90 | 100 | | 100 | | | | |
| 1/2 in. (12.5 mm) | 75 | 89 | 90 | 99 | | 100 | | 100 |
| 3/8 in. (9.5 mm) | | | 50 | 85 | 90 | 100 | | 100 |
| #4 (4.75 mm) | 40 | 60 | 20 | 40 | 32 | 69 | 90 | 100 |
| #8 (2.36 mm) | 26 | 42 | 16 | 24 ^{5/} | 32 | 52 ^{2/} | 70 | 90 |
| #16 (1.18 mm) | 15 | 30 | | | 10 | 32 | 50 | 65 |
| #50 (300 μm) | 6 | 15 | | | 4 | 15 | 15 | 30 |
| #100 (150 μm) | 4 | 9 | | | 3 | 10 | 10 | 18 |
| #200 (75 μm) | 3 | 6 | 8.0 | 11.0 ^{3/} | 4 | 6 | 7 | 9 |
| Ratio Dust/Asphalt Binder | | 1.0 | | | | 1.0 | | 1.0 ^{3/} |

1/ Based on percent of total aggregate weight.

2/ The mixture composition shall not exceed 44 percent passing the #8 (2.36 mm) sieve for surface courses with Ndesign = 90.

3/ Additional minus No. 200 (0.075 mm) material required by the mix design shall be mineral filler, unless otherwise approved by the Engineer.

4/ The maximum percent passing the #635 (20 μm) sieve shall be ≤ 3 percent.

5/ When establishing the Adjusted Job Mix Formula (AJMF) the percent passing the #8 (2.36 mm) sieve shall not be adjusted above 24 percent.”

Delete Article 1030.04(a)(3) of the Standard Specifications.

Delete Article 1030.04(a)(4) of the Standard Specifications.

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

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

1/ Maximum Draindown for IL-4.75 shall be 0.3 percent

2/ VFA for IL-4.75 shall be 76-83 percent"

Revise the table in Article 1030.04(b)(2) of the Standard Specifications to read:

| "VOLUMETRIC REQUIREMENTS Low ESAL | | | | |
|--------------------------------------|--------------------------|---------------------------|----------------------------------------------|-------------------------------------------|
| Mixture Composition | Design Compactive Effort | Design Air Voids Target % | VMA (Voids in the Mineral Aggregate), % min. | VFA (Voids Filled with Asphalt Binder), % |
| IL-9.5L | N _{DES} =30 | 4.0 | 15.0 | 65-78 |
| IL-19.0L | N _{DES} =30 | 4.0 | 13.5 | N/A" |

Replace Article 1030.04(b)(3) of the Standard Specifications with the following:

"(3) SMA Mixtures.

| ESALs (million) | Ndesign | Design Air Voids Target % | Voids in the Mineral Aggregate (VMA), % min. | Voids Filled with Asphalt (VFA), % |
|-----------------|---------|---------------------------|----------------------------------------------|------------------------------------|
| ≤ 10 | 50 | 4.0 | 16.0 | 75 – 80 |
| > 10 | 80 | 4.0 | 17.0 | 75 – 80" |

Delete Article 1030.04(b)(4) of the Standard Specifications.

Delete Article 1030.04(b)(5) from the Supplemental Specifications.

Revise the table in Article 1030.05(d)(2)a. of the Standard Specifications to read:

| "Parameter | Frequency of Tests | | Test Method See Manual of Test Procedures for Materials |
|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------------------------------------------------------|
| | High ESAL Mixture | Low ESAL Mixture | |
| Aggregate Gradation % passing sieves: 1/2 in. (12.5 mm), No. 4 (4.75 mm), No. 8 (2.36 mm), No. 30 (600 µm) No. 200 (75 µm) | 1 washed ignition oven test on the mix per half day of production | Note 3. | Illinois Procedure |
| Asphalt Binder Content by Ignition Oven Note 1. | 1 per half day of production | | Illinois-Modified AASHTO T 308 |
| VMA Note 2. | Day's production ≥ 1200 tons: 1 per half day of production | | Illinois-Modified AASHTO R 35 |
| | Day's production < 1200 tons: 1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day) | | |
| Air Voids Bulk Specific Gravity of Gyratory Sample Note 4. | Day's production ≥ 1200 tons: 1 per half day of production | | Illinois-Modified AASHTO T 312 |
| | Day's production < 1200 tons: 1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day) | | |
| Maximum Specific Gravity of Mixture | Day's production ≥ 1200 tons: 1 per half day of production | | Illinois-Modified AASHTO T 209 |
| | Day's production < 1200 tons: 1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day) | | |

Note 1. The Engineer may waive the ignition oven requirement for asphalt binder content if the aggregates to be used are known to have ignition asphalt binder content calibration factors which exceed 1.5 percent. If the ignition oven requirement is waived, other Department approved methods shall be used to determine the asphalt binder content.

Note 2. The G_{sb} used in the voids in the mineral aggregate (VMA) calculation shall be the same average G_{sb} value listed in the mix design.

Note 3. The Engineer reserves the right to require additional hot bin gradations for batch plants if control problems are evident.

Note 4. The WMA compaction temperature for mixture volumetric testing shall be 270 ± 5 °F (132 ± 3 °C) for quality control testing. The WMA compaction temperature for quality assurance testing will be 270 ± 5 °F (132 ± 3 °C) if the mixture is not allowed to cool to room temperature. If the mixture is allowed to cool to room temperature, it shall be reheated to standard HMA compaction temperatures.”

Revise the table in Article 1030.05(d)(2)b. of the Standard Specifications to read:

| “Parameter | High ESAL Mixture Low ESAL Mixture |
|------------------------------|---------------------------------------|
| Ratio Dust/Asphalt Binder | 0.6 to 1.2 |
| Moisture | 0.3 %” |

Revise the Article 1030.05(d)(4) of the Supplemental Specifications to read:

“(4) Control Limits. Target values shall be determined by applying adjustment factors to the AJMF where applicable. The target values shall be plotted on the control charts within the following control limits.

| CONTROL LIMITS | | | | | | |
|---------------------------------------|-----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Parameter | High ESAL Low ESAL | | SMA | | IL-4.75 | |
| | Individual Test | Moving Avg. of 4 | Individual Test | Moving Avg. of 4 | Individual Test | Moving Avg. of 4 |
| % Passing: ^{1/} | | | | | | |
| 1/2 in. (12.5 mm) | ± 6 % | ± 4 % | ± 6 % | ± 4 % | | |
| 3/8 in. (9.5mm) | | | ± 4 % | ± 3 % | | |
| No. 4 (4.75 mm) | ± 5 % | ± 4 % | ± 5 % | ± 4 % | | |
| No. 8 (2.36 mm) | ± 5 % | ± 3 % | ± 4 % | ± 2 % | | |
| No. 16 (1.18 mm) | | | ± 4 % | ± 2 % | ± 4 % | ± 3 % |
| No. 30 (600 µm) | ± 4 % | ± 2.5 % | ± 4 % | ± 2.5 % | | |
| Total Dust Content No. 200 (75 µm) | ± 1.5 % | ± 1.0 % | | | ± 1.5 % | ± 1.0 % |
| Asphalt Binder Content | ± 0.3 % | ± 0.2 % | ± 0.2 % | ± 0.1 % | ± 0.3 % | ± 0.2 % |
| Voids | ± 1.2 % | ± 1.0 % | ± 1.2 % | ± 1.0 % | ± 1.2 % | ± 1.0 % |
| VMA | -0.7 % ^{2/} | -0.5 % ^{2/} | -0.7 % ^{2/} | -0.5 % ^{2/} | -0.7 % ^{2/} | -0.5 % ^{2/} |

1/ Based on washed ignition oven

2/ Allowable limit below minimum design VMA requirement

| DENSITY CONTROL LIMITS | | |
|------------------------|-------------------------------|-----------------------------|
| Mixture Composition | Parameter | Individual Test |
| IL-4.75 | N _{design} = 50 | 93.0 - 97.4 % ^{1/} |
| IL-9.5 | N _{design} = 90 | 92.0 - 96.0 % |
| IL-9.5,IL-9.5L | N _{design} < 90 | 92.5 - 97.4 % |
| IL-19.0 | N _{design} = 90 | 93.0 - 96.0 % |
| IL-19.0, IL-19.0L | N _{design} < 90 | 93.0 ^{2/} - 97.4 % |
| SMA | N _{design} = 50 & 80 | 93.5 - 97.4 % |

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

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

Revise the table in Article 1030.05(d)(5) of the Supplemental Specifications to read:

| "CONTROL CHART REQUIREMENTS | High ESAL, Low ESAL, SMA & IL-4.75 |
|----------------------------------|---------------------------------------------------------------------------------------------------------------|
| Gradation ^{1/3/} | % Passing Sieves: 1/2 in. (12.5 mm) ^{2/} No. 4 (4.75 mm) No. 8 (2.36 mm) No. 30 (600 µm) |
| Total Dust Content ^{1/} | No. 200 (75 µm) |
| | Asphalt Binder Content |
| | Bulk Specific Gravity |
| | Maximum Specific Gravity of Mixture |
| | Voids |
| | Density |
| | VMA |

1/ Based on washed ignition oven.

2/ Does not apply to IL-4.75.

3/ SMA also requires the 3/8 in. (9.5 mm) sieve."

Delete Article 1030.05(d)(6)a.1.(b.) of the Standard Specifications.

Delete Article 1030.06(b) of the Standard Specifications.

Delete Article 1102.01(e) of the Standard Specifications.

HOT-MIX ASPHALT – MIXTURE DESIGN VERIFICATION AND PRODUCTION (BDE)

Effective: November 1, 2013

Revised: November 1, 2014

Description. This special provision provides the requirements for Hamburg Wheel and tensile strength testing for High ESAL, IL-4.75, and Stone Matrix Asphalt (SMA) hot-mix asphalt (HMA) mixes during mix design verification and production. This special provision also provides the plant requirements for hydrated lime addition systems used in the production of High ESAL, IL-4.75, and SMA mixes.

Mix Design Testing. Add the following below the referenced AASHTO standards in Article 1030.04 of the Standard Specifications:

AASHTO T 324 Hamburg Wheel Test

AASHTO T 283 Tensile Strength Test

Add the following to Article 1030.04 of the Standard Specifications:

“(d) Verification Testing. High ESAL, IL-4.75, and SMA mix designs submitted for verification will be tested to ensure that the resulting mix designs will pass the required criteria for the Hamburg Wheel Test (Illinois Modified AASHTO T 324) and the Tensile Strength Test (Illinois Modified AASHTO T 283). The Department will perform a verification test on gyratory specimens compacted by the Contractor. If the mix fails the Department’s verification test, the Contractor shall make necessary changes to the mix and provide passing Hamburg Wheel and tensile strength test results from a private lab. The Department will verify the passing results.

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

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

Illinois Modified AASHTO T 324 Requirements ^{1/}

| PG Grade | Number of Passes |
|----------------------|------------------|
| PG 58-xx (or lower) | 5,000 |
| PG 64-xx | 7,500 |
| PG 70-xx | 15,000 |
| PG 76-xx (or higher) | 20,000 |

1/ When produced at temperatures of 275 ± 5 °F (135 ± 3 °C) or less, loose Warm Mix Asphalt shall be oven aged at 270 ± 5 °F (132 ± 3 °C) for two hours prior to gyratory compaction of Hamburg Wheel specimens.

- (2) Tensile Strength Criteria. The minimum allowable conditioned tensile strength shall be 60 psi (415 kPa) for non-polymer modified performance graded (PG) asphalt binder and 550 kPa (80 psi) for polymer modified PG asphalt binder. The maximum allowable unconditioned tensile strength shall be 200 psi (1380 kPa).”

Production Testing. Revise Article 1030.06(a) of the Standard Specifications to read:

- “(a) High ESAL, IL-4.75, WMA, and SMA Mixtures. For each contract, a 300 ton (275 metric tons) test strip will be required at the beginning of HMA production for each mixture with a quantity of 3000 tons (2750 metric tons) or more according to the Manual of Test Procedures for Materials “Hot Mix Asphalt Test Strip Procedures”.

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

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

The limitations between the JMF and AJMF are as follows.

| Parameter | Adjustment |
|------------------------|------------|
| 1/2 in. (12.5 mm) | ± 5.0 % |
| No. 4 (4.75 mm) | ± 4.0 % |
| No. 8 (2.36 mm) | ± 3.0 % |
| No. 30 (600 µm) | * |
| No. 200 (75 µm) | * |
| Asphalt Binder Content | ± 0.3 % |

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

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

Mixture sampled to represent the test strip shall include additional material sufficient for the Department to conduct Hamburg Wheel testing according to Illinois Modified AASHTO T324 (approximately 60 lb (27 kg) total).

The Contractor shall immediately cease production upon notification by the Engineer of failing Hamburg Wheel test. All prior produced material may be paved out provided all other mixture criteria is being met. No additional mixture shall be produced until the Engineer receives passing Hamburg Wheel tests.

The Department may conduct additional Hamburg Wheel tests on production material as determined by the Engineer.”

Revise the title of Article 1030.06(b) of the Standard Specifications to read:

“(b) Low ESAL Mixtures.”

System for Hydrated Lime Addition. Revise the fourth sentence of the third paragraph of Article 1030.04(c) of the Standard Specifications to read:

“The method of application shall be according to Article 1102.01(a)(10).”

Replace the first three sentences of the second paragraph of Article 1102.01(a)(10) of the Standard Specifications to read:

“When hydrated lime is used as the anti-strip additive, a separate bin or tank and feeder system shall be provided to store and accurately proportion the lime onto the aggregate either as a slurry, as dry lime applied to damp aggregates, or as dry lime injected onto the hot aggregates prior to adding the liquid asphalt cement. If the hydrated lime is added either as a slurry or as dry lime on damp aggregates, the lime and aggregates shall be mixed by a power driven pugmill to provide a uniform coating of the lime prior to entering the dryer. If dry hydrated lime is added to the hot dry aggregates in a dryer-drum plant, the lime shall be added in such a manner that the lime will not become entrained into the air stream of the dryer-drum and that thorough dry mixing shall occur prior to the injection point of the liquid asphalt. When a batch plant is used, the hydrated lime shall be added to the mixture in the weigh hopper or as approved by the Engineer.”

Basis of Payment. Replace the seventh paragraph of Article 406.14 of the Standard Specifications with the following:

“For mixes designed and verified under the Hamburg Wheel criteria, the cost of furnishing and introducing anti-stripping additives in the HMA will not be paid for separately, but shall be considered as included in the contract unit price of the HMA item involved.

If an anti-stripping additive is required for any other HMA mix, the cost of the additive will be paid for according to Article 109.04. The cost incurred in introducing the additive into the HMA will not be paid for separately, but shall be considered as included in the contract unit price of the HMA item involved.

No additional compensation will be awarded to the Contractor because of reduced production rates associated with the addition of the anti-stripping additive.”

HOT MIX ASPHALT – PRIME COAT (BDE)

Effective: November 1, 2014

Revise Note 1 of Article 406.02 of the Standard Specifications to read:

“Note 1. The bituminous material used for prime coat shall be one of the types listed in the following table.

When emulsified asphalts are used, any dilution with water shall be performed by the emulsion producer. The emulsified asphalt shall be thoroughly agitated within 24 hours of application and show no separation of water and emulsion.

| Application | Bituminous Material Types |
|---------------------------------------------|----------------------------------------------------------------------------------------------|
| Prime Coat on Brick, Concrete, or HMA Bases | SS-1, SS-1h, SS-1hP, SS-1vh, RS-1, RS-2, CSS-1, CSS-1h, CSS-1hp, CRS-1, CRS-2, HFE-90, RC-70 |
| Prime Coat on Aggregate Bases | MC-30, PEP” |

Add the following to Article 406.03 of the Standard Specifications.

- “(i) Vacuum Sweeper 1101.19
- “(j) Spray Paver 1102.06”

Revise Article 406.05(b) of the Standard Specifications to read:

“(b) Prime Coat. The bituminous material shall be prepared according to Article 403.05 and applied according to Article 403.10. The use of RC-70 shall be limited to air temperatures less than 60 °F (15 °C).

- (1) Brick, Concrete or HMA Bases. The base shall be cleaned of all dust, debris and any substance that will prevent the prime coat from adhering to the base. Cleaning shall be accomplished by sweeping to remove all large particles and air blasting to remove dust. As an alternative to air blasting, a vacuum sweeper may be used to accomplish the dust removal. The base shall be free of standing water at the time of application. The prime coat shall be applied uniformly and at a rate that will provide a residual asphalt rate on the prepared surface as specified in the following table.

| Type of Surface to be Primed | Residual Asphalt Rate lb/sq ft (kg/sq m) |
|----------------------------------------------------------------------------------------|---------------------------------------------|
| Milled HMA, Aged Non-Milled HMA, Milled Concrete, Non-Milled Concrete & Tined Concrete | 0.05 (0.244) |
| Fog Coat between HMA Lifts, IL-4.75 & Brick | 0.025 (0.122) |

The bituminous material for the prime coat shall be placed one lane at a time. If a spray paver is not used, the primed lane shall remain closed until the prime coat is fully cured and does not pickup under traffic. When placing prime coat through an intersection where it is not possible to keep the lane closed, the prime coat may be covered immediately following its application with fine aggregate mechanically spread at a uniform rate of 2 to 4 lb/sq yd (1 to 2 kg/sq m).

- (2) Aggregate Bases. The prime coat shall be applied uniformly and at a rate that will provide a residual asphalt rate on the prepared surface of 0.25 lb/sq ft \pm 0.01 (1.21 kg/sq m \pm 0.05).

The prime coat shall be permitted to cure until the penetration has been approved by the Engineer, but at no time shall the curing period be less than 24 hours for MC-30 or four hours for PEP. Pools of prime occurring in the depressions shall be broomed or squeegeed over the surrounding surface the same day the prime coat is applied.

The base shall be primed 1/2 width at a time. The prime coat on the second half/width shall not be applied until the prime coat on the first half/width has cured so that it will not pickup under traffic.

The residual asphalt rate will be verified a minimum of once per type of surface to be primed as specified herein for which at least 2000 tons (1800 metric tons) of HMA will be placed. The test will be according to the "Determination of Residual Asphalt in Prime and Tack Coat Materials" test procedure.

Prime coat shall be fully cured prior to placement of HMA to prevent pickup by haul trucks or paving equipment. If pickup occurs, paving shall cease in order to provide additional cure time, and all areas where the pickup occurred shall be repaired.

If after five days, loss of prime coat is evident prior to covering with HMA, additional prime coat shall be placed as determined by the Engineer at no additional cost to the Department."

Revise the last sentence of the first paragraph of Article 406.13(b) of the Standard Specifications to read:

"Water added to emulsified asphalt, as allowed in Article 406.02, will not be included in the quantities measured for payment."

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

"Aggregate for covering prime coat will not be measured for payment."

Revise the first paragraph of Article 406.14 of the Standard Specifications to read:

406.14 Basis of Payment. Prime Coat will be paid for at the contract unit price per pound (kilogram) of residual asphalt applied for BITUMINOUS MATERIALS (PRIME COAT), or POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT)."

Revise Article 407.02 of the Standard Specifications to read:

“407.02 Materials. Materials shall be according to Article 406.02, except as follows.

| Item | Article/Section |
|-------------------------------------------------------|-----------------|
| (a) Packaged Rapid Hardening Mortar or Concrete | 1018” |

Revise Article 407.06(b) of the Standard Specifications to read:

“(b) A bituminous prime coat shall be applied between each lift of HMA according to Article 406.05(b).”

Delete the second paragraph of Article 407.12 of the Standard Specifications.

Revise the first paragraph of Article 408.04 of the Standard Specifications to read:

“408.04 Method of Measurement. Bituminous priming material will be measured for payment according to Article 406.13.”

Revise the first paragraph of Article 408.05 of the Standard Specifications to read:

“408.05 Basis of Payment. This work will be paid for at the contract unit price per pound (kilogram) of residual asphalt applied for BITUMINOUS MATERIALS (PRIME COAT) or POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT) and at the contract unit price per ton (metric ton) for INCIDENTAL HOT-MIX ASPHALT SURFACING.”

Revise Article 1032.02 of the Standard Specifications to read:

“1032.02 Measurement. Asphalt binders, emulsified asphalts, rapid curing liquid asphalt, medium curing liquid asphalts, slow curing liquid asphalts, asphalt fillers, and road oils will be measured by weight.”

A weight ticket for each truck load shall be furnished to the inspector. The truck shall be weighed at a location approved by the Engineer. The ticket shall show the weight of the empty truck (the truck being weighed each time before it is loaded), the weight of the loaded truck, and the net weight of the bituminous material.

When an emulsion or cutback is used for prime coat, the percentage of asphalt residue of the actual certified product shall be shown on the producer’s bill of lading or attached certificate of analysis. If the producer adds extra water to an emulsion at the request of the purchaser, the amount of water shall also be shown on the bill of lading.

Payment will not be made for bituminous materials in excess of 105 percent of the amount specified by the Engineer.”

Add the following to the table in Article 1032.04 of the Standard Specifications.

| | | |
|-------------|---------|--------|
| "SS-1vh | 160-180 | 70-80 |
| RS-1, CRS-1 | 75-130 | 25-55" |

Add the following to Article 1032.06 of the Standard Specifications.

"(g) Non Tracking Emulsified Asphalt SS-1vh shall be according to the following.

| Requirements for SS-1vh | | | |
|---------------------------------------|-----|-----------|--------------------|
| Test | | SPEC | AASHTO Test Method |
| Saybolt Viscosity @ 25C, | SFS | 20-200 | T 72 |
| Storage Stability, 24hr., | % | 1 max. | T 59 |
| Residue by Evaporation, | % | 50 min. | T 59 |
| Sieve Test, | % | 0.3 max. | T 59 |
| Tests on Residue from Evaporation | | | |
| Penetration @25°C, 100g., 5 sec., dmm | | 20 max. | T 49 |
| Softening Point, | °C | 65 min. | T 53 |
| Solubility, | % | 97.5 min. | T 44 |
| Orig. DSR @ 82°C, | kPa | 1.00 min. | T 315" |

Revise the last table in Article 1032.06(f)(2)d. of the Standard Specifications to read:

| "Grade | Use |
|---------------------------------------------------------------------------------------|------------------------------------|
| SS-1, SS-1h, RS-1, RS-2, CSS-1, CRS-1, CRS-2, CSS-1h, HFE-90, SS-1hP, CSS-1hP, SS-1vh | Prime or fog seal |
| PEP | Bituminous surface treatment prime |
| RS-2, HFE-90, HFE-150, HFE- 300, CRSP, HFP, CRS-2, HFRS-2 | Bituminous surface treatment |
| CSS-1h Latex Modified | Microsurfacing" |

Add the following to Article 1101 of the Standard Specifications.

"1101.19 Vacuum Sweeper. The vacuum sweeper shall have a minimum sweeping path of 52 in. (1.3 m) and a minimum blower rating of 20,000 cu ft per minute (566 cu m per minute)."

Add the following to Article 1102 of the Standard Specifications:

“1102.06 Spray Paver. The spreading and finishing machine shall be capable of spraying a rapid setting emulsion tack coat, paving a layer of HMA, and providing a smooth HMA mat in one pass. The HMA shall be spread over the tack coat in less than five seconds after the application of the tack coat during normal paving speeds. No wheel or other part of the paving machine shall come into contact with the tack coat before the HMA is applied. In addition to meeting the requirements of Article 1102.03, the spray paver shall also meet the requirements of Article 1102.05 for the tank, heating system, pump, thermometer, tachometer or synchronizer, and calibration. The spray bar shall be equipped with properly sized and spaced nozzles to apply a uniform application of tack coat at the specified rate for the full width of the mat being placed.”

LRFD PIPE CULVERT BURIAL TABLES (BDE)

Effective: November 1, 2013

Revised: April 1, 2015

Revise Article 542.02 of the Standard Specifications to read as follows:

| “Item | Article/Section |
|----------------------------------------------------------------------------------|-----------------|
| (a) Galvanized Corrugated Steel Pipe | 1006.01 |
| (b) Galvanized Corrugated Steel Pipe Arch | 1006.01 |
| (c) Bituminous Coated Corrugated Steel Pipe | 1006.01 |
| (d) Bituminous Coated Corrugated Steel Pipe Arch | 1006.01 |
| (e) Reserved | |
| (f) Aluminized Steel Type 2 Corrugated Pipe | 1006.01 |
| (g) Aluminized Steel Type 2 Corrugated Pipe Arch | 1006.01 |
| (h) Precoated Galvanized Corrugated Steel Pipe | 1006.01 |
| (i) Precoated Galvanized Corrugated Steel Pipe Arch | 1006.01 |
| (j) Corrugated Aluminum Alloy Pipe | 1006.03 |
| (k) Corrugated Aluminum Alloy Pipe Arch | 1006.03 |
| (l) Extra Strength Clay Pipe | 1040.02 |
| (m) Concrete Sewer, Storm Drain, and Culvert Pipe | 1042 |
| (n) Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe | 1042 |
| (o) Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe..... | 1042 |
| (p) Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe | 1042 |
| (q) Polyvinyl Chloride (PVC) Pipe | 1040.03 |
| (r) Corrugated Polyvinyl Chloride (PVC) Pipe with a Smooth Interior | 1040.03 |
| (s) Corrugated Polypropylene (CPP) pipe with smooth Interior | 1040.08 |
| (t) Corrugated Polyethylene (PE) Pipe with a Smooth Interior | 1040.04 |
| (u) Polyethylene (PE) Pipe with a Smooth Interior | 1040.04 |
| (v) Rubber Gaskets and Preformed Flexible Joint Sealants for Concrete Pipe | 1056 |
| (w) Mastic Joint Sealer for Pipe | 1055 |
| (x) External Sealing Band | 1057 |
| (y) Fine Aggregate (Note 1) | 1003.04 |
| (z) Coarse Aggregate (Note 2) | 1004.05 |

(aa) Packaged Rapid Hardening Mortar or Concrete 1018
 (bb) Nonshrink Grout 1024.02
 (cc) Reinforcement Bars and Welded Wire Fabric 1006.10
 (dd) Handling Hole Plugs 1042.16

Note 1. The fine aggregate shall be moist.

Note 2. The coarse aggregate shall be wet.”

Revise the table for permitted materials in Article 542.03 of the Standard Specifications as follows:

| "Class | Materials |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A | Rigid Pipes: Extra Strength Clay Pipe Concrete Sewer Storm Drain and Culvert Pipe, Class 3 Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe |
| C | Rigid Pipes: Extra Strength Clay Pipe Concrete Sewer Storm Drain and Culvert Pipe, Class 3 Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe Flexible Pipes: Aluminized Steel Type 2 Corrugated Pipe Aluminized Steel Type 2 Corrugated Pipe Arch Precoated Galvanized Corrugated Steel Pipe Precoated Galvanized Corrugated Steel Pipe Arch Corrugated Aluminum Alloy Pipe Corrugated Aluminum Alloy Pipe Arch Polyvinyl Chloride (PVC) Pipe Corrugated Polyvinyl Chloride (PVC) Pipe with a Smooth Interior Polyethylene (PE) Pipe with a Smooth Interior Corrugated Polypropylene (CPP) Pipe with Smooth Interior |
| D | Rigid Pipes: Extra Strength Clay Pipe Concrete Sewer Storm Drain and Culvert Pipe, Class 3 Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe Flexible Pipes: Galvanized Corrugated Steel Pipe Galvanized Corrugated Steel Pipe Arch Bituminous Coated Corrugated Steel Pipe Bituminous Coated Corrugated Steel Pipe Arch Aluminized Steel Type 2 Corrugated Pipe Aluminized Steel Type 2 Corrugated Pipe Arch Precoated Galvanized Corrugated Steel Pipe Precoated Galvanized Corrugated Steel Pipe Arch Corrugated Aluminum Alloy Pipe Corrugated Aluminum Alloy Pipe Arch Polyvinyl Chloride (PVC) Pipe Corrugated Polyvinyl Chloride (PVC) Pipe with a Smooth Interior Corrugated Polyethylene (PE) Pipe with a Smooth Interior Polyethylene (PE) Pipe with a Smooth Interior” Corrugated Polypropylene (CPP) Pipe with Smooth Interior |

Revise Articles 542.03(b) and (c) of the Standard Specifications to read:

- “(b) Extra strength clay pipe will only be permitted for pipe culverts Type 1, for 10 in., 12 in., 42 in. and 48 in. (250 mm, 300 mm, 1050 mm and 1200 mm), Types 2, up to and including 48 in. (1200 mm), Type 3, up to and including 18 in. (450 mm), Type 4 up to and including 10 in. (250 mm), for all pipe classes.
- (c) Concrete sewer, storm drain, and culvert pipe Class 3 will only be permitted for pipe culverts Type 1, up to and including 10 in (250 mm), Type 2, up to and including 30 in. (750 mm), Type 3, up to and including 15 in. (375 mm); Type 4, up to and including 10 in. (250 mm), for all pipe classes.”

Replace the pipe tables in Article 542.03 of the Standard Specifications with the following:

| "Table IA: Classes of Reinforced Concrete Pipe for the Respective Diameters of Pipe and Fill Heights over the Top of the Pipe | | | | | | | |
|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|---------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|
| Nominal Diameter in. | Type 1 | Type 2 | Type 3 | Type 4 | Type 5 | Type 6 | Type 7 |
| | Fill Height: 3' and less 1' min cover | Fill Height: Greater than 3' not exceeding 10' | Fill Height: Greater than 10' not exceeding 15' | Fill Height: Greater than 15' not exceeding 20' | Fill Height: Greater than 20' not exceeding 25' | Fill Height: Greater than 25' not exceeding 30' | Fill Height: Greater than 30' not exceeding 35' |
| 12 | IV | II | III | IV | IV | V | V |
| 15 | IV | II | III | IV | IV | V | V |
| 18 | IV | II | III | IV | IV | V | V |
| 21 | III | II | III | IV | IV | V | V |
| 24 | III | II | III | IV | IV | V | V |
| 30 | IV | II | III | IV | IV | V | V |
| 36 | III | II | III | IV | IV | V | V |
| 42 | II | II | III | IV | IV | V | V |
| 48 | II | II | III | IV | IV | V | V |
| 54 | II | II | III | IV | IV | V | V |
| 60 | II | II | III | IV | IV | V | V |
| 66 | II | II | III | IV | IV | V | V |
| 72 | II | II | III | IV | V | V | V |
| 78 | II | II | III | IV | 2020 | 2370 | 2730 |
| 84 | II | II | III | IV | 2020 | 2380 | 2740 |
| 90 | II | II | III | 1680 | 2030 | 2390 | 2750 |
| 96 | II | III | III | 1690 | 2040 | 2400 | 2750 |
| 102 | II | III | III | 1700 | 2050 | 2410 | 2760 |
| 108 | II | III | 1360 | 1710 | 2060 | 2410 | 2770 |

Notes:

A number indicates the D-Load for the diameter and depth of fill and that a special design is required.
 Design assumptions; Water filled pipe, Type 2 bedding and Class C Walls

Table IA: Classes of Reinforced Concrete Pipe
 for the Respective Diameters of Pipe and Fill Heights over the Top of the Pipe
 (Metric)

| Nominal Diameter mm | Type 1 | Type 2 | Type 3 | Type 4 | Type 5 | Type 6 | Type 7 |
|---------------------|----------------------------------------------|----------------------------------------------------|------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|-------------------------------------------------------|
| | Fill Height: 1 m and less 0.3 m min cover | Fill Height: Greater than 1 m not exceeding 3 m | Fill Height: Greater than 3 m not exceeding 4.5 m | Fill Height: Greater than 4.5 m not exceeding 6 m | Fill Height: Greater than 6 m not exceeding 7.5 m | Fill Height: Greater than 7.5 m not exceeding 9 m | Fill Height: Greater than 9 m not exceeding 10.5 m |
| 300 | IV | II | III | IV | IV | V | V |
| 375 | IV | II | III | IV | IV | V | V |
| 450 | IV | II | III | IV | IV | V | V |
| 525 | III | II | III | IV | IV | V | V |
| 600 | III | II | III | IV | IV | V | V |
| 750 | IV | II | III | IV | IV | V | V |
| 900 | III | II | III | IV | IV | V | V |
| 1050 | II | II | III | IV | IV | V | V |
| 1200 | II | II | III | IV | IV | V | V |
| 1350 | II | II | III | IV | IV | V | V |
| 1500 | II | II | III | IV | IV | V | V |
| 1650 | II | II | III | IV | IV | V | V |
| 1800 | II | II | III | IV | V | V | V |
| 1950 | II | II | III | IV | 100 | 110 | 130 |
| 2100 | II | II | III | IV | 100 | 110 | 130 |
| 2250 | II | II | III | 80 | 100 | 110 | 130 |
| 2400 | II | III | III | 80 | 100 | 110 | 130 |
| 2550 | II | III | III | 80 | 100 | 120 | 130 |
| 2700 | II | III | 70 | 80 | 100 | 120 | 130 |

Notes:

A number indicates the D-Load for the diameter and depth of fill and that a special design is required.

Design assumptions; Water filled pipe, Type 2 bedding and Class C Walls

TABLE IB: THICKNESS OF CORRUGATED STEEL PIPE
 FOR THE RESPECTIVE DIAMETER OF PIPE AND FILL HEIGHTS OVER THE TOP OF THE PIPE FOR 2 2/3"x1/2", 3"x1" AND 5"x1" CORRUGATIONS

| Nominal Diameter in.* | Type 1 | | | Type 2 | | | Type 3 | | | Type 4 | | | Type 5 | | | Type 6 | | | Type 7 | | |
|--------------------------|------------------------------|---------|----------|--------------------------------------|---------|---------|---------------------------------------|---------|---------|---------------------------------------|---------|---------|---------------------------------------|----------|---------|---------------------------------------|----------|----------|---------------------------------------|----------|----------|
| | Fill Height: | | | Fill Height: | | | Fill Height: | | | Fill Height: | | | Fill Height: | | | Fill Height: | | | Fill Height: | | |
| | 3' and less 1' min. cover | | | Greater than 3' not exceeding 10' | | | Greater than 10' not exceeding 15' | | | Greater than 15' not exceeding 20' | | | Greater than 20' not exceeding 25' | | | Greater than 25' not exceeding 30' | | | Greater than 30' not exceeding 35' | | |
| | 2 2/3" x 1/2" | 3"x1" | 5"x1" | 2 2/3" x 1/2" | 3"x1" | 5"x1" | 2 2/3" x 1/2" | 3"x1" | 5"x1" | 2 2/3" x 1/2" | 3"x1" | 5"x1" | 2 2/3" x 1/2" | 3"x1" | 5"x1" | 2 2/3" x 1/2" | 3"x1" | 5"x1" | 2 2/3" x 1/2" | 3"x1" | 5"x1" |
| 12 | 0.064 | | | 0.064 | | | 0.064 | | | 0.064 | | | 0.064 | | | 0.064 | | | 0.064 | | |
| 15 | 0.064 | | | 0.064 | | | 0.064 | | | 0.064 | | | 0.064 | | | 0.064 | | | 0.064 | | |
| 18 | (0.079) | | | 0.064 | | | 0.064 | | | 0.064 | | | 0.064 | | | (0.079) | | | (0.079) | | |
| 21 | (0.079) | | | 0.064 | | | 0.064 | | | 0.064 | | | (0.079) | | | (0.079) | | | (0.079) | | |
| 24 | (0.079) | | | 0.064 | | | 0.064 | | | 0.064 | | | (0.079) | | | (0.079) | | | (0.079) | | |
| 30 | (0.109E) | | | 0.064 | | | 0.064 | | | (0.079) | | | (0.079) | | | (0.109) | | | (0.109) | | |
| 36 | (0.109E) | | | 0.064 | | | (0.079) | | | (0.079) | | | (0.109) | | | 0.109 | | | (0.138E) | | |
| 42 | 0.079 | | | 0.064 | | | (0.079) | | | (0.079) | | | (0.109) | | | (0.109E) | | | (0.109E) | | |
| 48 | 0.109 | (0.109) | 0.109 | (0.109) | 0.079 | 0.079 | (0.109) | 0.079 | (0.109) | 0.109 | (0.109) | 0.109 | (0.138) | (0.109) | 0.109 | (0.138E) | 0.109 | 0.109 | (0.138E) | 0.109 | (0.138) |
| 54 | 0.109 | (0.109) | 0.109 | (0.109) | 0.079 | 0.079 | 0.109 | (0.109) | 0.109 | 0.109 | (0.109) | 0.109 | (0.138) | 0.109 | 0.109 | (0.138E) | 0.109 | (0.138) | (0.138E) | 0.138 | 0.138 |
| 60 | 0.109 | 0.109 | 0.109 | 0.109 | 0.079 | (0.109) | 0.109 | (0.109) | 0.109 | 0.109 | (0.109) | 0.109 | (0.138) | 0.109 | 0.109 | (0.138E) | (0.138) | (0.138) | 0.138E | (0.138E) | (0.138E) |
| 66 | (0.138) | 0.109 | 0.109 | 0.109 | 0.079 | (0.109) | 0.109 | (0.109) | 0.109 | 0.109 | (0.109) | 0.109 | (0.138) | 0.109 | (0.138) | (0.138E) | 0.138 | 0.138 | 0.138E | (0.138E) | 0.138E |
| 72 | 0.138 | 0.109 | (0.138) | 0.138 | (0.109) | (0.109) | 0.138 | (0.109) | 0.109 | 0.138 | 0.109 | 0.109 | 0.138 | (0.138) | (0.138) | (0.168E) | (0.138E) | 0.138E | (0.168E) | (0.138E) | 0.138E |
| 78 | 0.168 | 0.109 | (0.138) | 0.168 | (0.109) | 0.109 | 0.168 | 0.109 | 0.109 | 0.168 | 0.109 | (0.138) | 0.168 | (0.138) | (0.138) | H0.168E | (0.138E) | 0.138E | H0.168E | 0.138E | (0.168E) |
| 84 | 0.168 | (0.138) | (0.138) | 0.168 | (0.109) | 0.109 | 0.168 | 0.109 | 0.109 | 0.168 | 0.109 | (0.138) | 0.168 | (0.138) | 0.138 | H0.168E | (0.138E) | 0.138E | H0.168E | (0.168E) | (0.168E) |
| 90 | | (0.138) | (0.138) | | (0.109) | 0.109 | | 0.109 | 0.109 | | (0.138) | (0.138) | | (0.138) | 0.138 | | 0.138E | (0.168E) | | (0.168E) | (0.168E) |
| 96 | | (0.138) | (0.138) | | (0.109) | 0.109 | | 0.109 | 0.109 | | (0.138) | (0.138) | | (0.138) | 0.138 | | (0.168E) | (0.168E) | | (0.168E) | (0.168E) |
| 102 | | 0.109Z | 0.109Z | | (0.109) | 0.109 | | 0.109 | (0.138) | | (0.138) | (0.138) | | (0.138) | 0.138 | | (0.168E) | (0.168E) | | H0.138E | H0.168E |
| 108 | | 0.109Z | (0.138Z) | | 0.109 | 0.109 | | 0.109 | (0.138) | | (0.138) | 0.138 | | 0.138 | (0.168) | | (0.168E) | (0.168E) | | H0.138E | H0.168E |
| 114 | | 0.109Z | (0.138Z) | | 0.109 | 0.109 | | 0.109 | (0.138) | | (0.138) | 0.138 | | (0.168) | (0.168) | | (0.168E) | 0.168E | | H0.138E | H0.168E |
| 120 | | 0.109Z | (0.138Z) | | 0.109 | 0.109 | | 0.109 | (0.138) | | (0.138) | 0.138 | | (0.168) | (0.168) | | H0.138E | H0.168E | | H0.168E | H0.168E |
| 126 | | 0.138Z | 0.138Z | | 0.138 | 0.138 | | 0.138 | 0.138 | | 0.138 | (0.168) | | (0.168) | (0.168) | | H0.138E | H0.168E | | H0.168E | H0.168E |
| 132 | | 0.138Z | 0.138Z | | 0.138 | 0.138 | | 0.138 | 0.138 | | (0.168) | (0.168) | | 0.168 | 0.168 | | H0.138E | H0.168E | | H0.168E | H0.168E |
| 138 | | 0.138Z | 0.138Z | | 0.138 | 0.138 | | 0.138 | 0.138 | | (0.168) | (0.168) | | (0.168E) | H0.168E | | H0.168E | H0.168E | | H0.168E | H0.168E |
| 144 | | 0.168Z | 0.168Z | | 0.168 | 0.168 | | 0.168 | 0.168 | | 0.168 | 0.168 | | H0.168E | H0.168E | | H0.168E | H0.168E | | H0.168E | H0.168E |

Notes:

* Aluminized Type 2 Steel or Precoated Galvanized Steel shall be required for diameters up to 42" according to Article 1006.01, 1 1/2" x 1/4" corrugations shall be used for diameters less than 12".

Thicknesses are based on longitudinal riveted seam fabrication, values in "()" can be reduced by one gage thickness if helical seam fabrication is utilized.

A thickness preceded by "H" indicates only helical seam fabrication is allowed.

E Elongation according to Article 542.04(e)

Z 1'-6" Minimum fill

FAS Route 1771A (Old Route 66)
 Project HSR-1771(002)
 Section D6 2015-7 HSRR
 Logan County
 Contract No. 72113

| TABLE IB: THICKNESS OF CORRUGATED STEEL PIPE FOR THE RESPECTIVE DIAMETER OF PIPE AND FILL HEIGHTS OVER THE TOP OF THE PIPE FOR 68 mm x 13 mm, 75 mm x 25 mm AND 125 mm x 25 mm CORRUGATIONS (Metric) | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------|----------------|---------------------------------------|---------------|----------------|-----------------------------------------|---------------|----------------|-----------------------------------------|---------------|----------------|-----------------------------------------|---------------|----------------|-----------------------------------------|---------------|----------------|------------------------------------------|---------------|----------------|
| Nominal Diameter mm * | Type 1 | | | Type 2 | | | Type 3 | | | Type 4 | | | Type 5 | | | Type 6 | | | Type 7 | | |
| | Fill Height: | | | Fill Height: | | | Fill Height: | | | Fill Height: | | | Fill Height: | | | Fill Height: | | | Fill Height: | | |
| | 1 m and less 0.3 m min. cover | | | Greater than 1 m not exceeding 3 m | | | Greater than 3 m not exceeding 4.5 m | | | Greater than 4.5 m not exceeding 6 m | | | Greater than 6 m not exceeding 7.5 m | | | Greater than 7.5 m not exceeding 9 m | | | Greater than 9 m not exceeding 10.5 m | | |
| | 68 x 13 mm | 75 x 25 mm | 125 x 25 mm | 68 x 13 mm | 75 x 25 mm | 125 x 25 mm | 68 x 13 mm | 75 x 25 mm | 125 x 25 mm | 68 x 13 mm | 75 x 25 mm | 125 x 25 mm | 68 x 13 mm | 75 x 25 mm | 125 x 25 mm | 68 x 13 mm | 75 x 25 mm | 125 x 25 mm | 68 x 13 mm | 75 x 25 mm | 125 x 25 mm |
| 300 | 1.63 | | | 1.63 | | | 1.63 | | | 1.63 | | | 1.63 | | | 1.63 | | | 1.63 | | |
| 375 | 1.63 | | | 1.63 | | | 1.63 | | | 1.63 | | | 1.63 | | | 1.63 | | | 1.63 | | |
| 450 | (2.01) | | | 1.63 | | | 1.63 | | | 1.63 | | | 1.63 | | | 1.63 | | | (2.01) | | |
| 525 | (2.01) | | | 1.63 | | | 1.63 | | | 1.63 | | | (2.01) | | | (2.01) | | | (2.01) | | |
| 600 | (2.01) | | | 1.63 | | | 1.63 | | | 1.63 | | | (2.01) | | | (2.01) | | | (2.01) | | |
| 750 | (2.77E) | | | 1.63 | | | 1.63 | | | 1.63 | | | (2.01) | | | (2.01) | | | (2.77) | | |
| 900 | (2.77E) | | | 1.63 | | | (2.01) | | | (2.01) | | | (2.77) | | | 2.77 | | | (3.51E) | | |
| 1050 | 2.01 | | | 1.63 | | | (2.01) | | | (2.01) | | | (2.77) | | | (2.77E) | | | (2.77E) | | |
| 1200 | 2.77 | (2.77) | 2.77 | (2.77) | 2.01 | 2.01 | (2.77) | 2.01 | (2.77) | 2.77 | (2.77) | 2.77 | (3.51) | (2.77) | 2.77 | (3.51E) | 2.77 | 2.77 | (3.51E) | 2.77 | (3.51) |
| 1350 | 2.77 | (2.77) | 2.77 | (2.77) | 2.01 | 2.01 | 2.77 | (2.77) | 2.77 | 2.77 | (2.77) | 2.77 | (3.51) | 2.77 | 2.77 | (3.51E) | 2.77 | (3.51) | (3.51E) | 3.51 | 3.51 |
| 1500 | 2.77 | 2.77 | 2.77 | 2.77 | 2.01 | (2.77) | 2.77 | (2.77) | 2.77 | 2.77 | (2.77) | 2.77 | (3.51) | 2.77 | 2.77 | (3.51E) | (3.51) | (3.51) | 3.51E | (3.51E) | (3.51E) |
| 1650 | (3.51) | 2.77 | 2.77 | 2.77 | 2.01 | (2.77) | 2.77 | (2.77) | 2.77 | 2.77 | 2.77 | 2.77 | (3.51) | 2.77 | (3.51) | (3.51E) | 3.51 | 3.51 | 3.51E | (3.51E) | 3.51E |
| 1800 | 3.51 | 2.77 | (3.51) | 3.51 | (2.77) | (2.77) | 3.51 | (2.77) | 2.77 | 3.51 | 2.77 | 2.77 | 3.51 | (3.51) | (3.51) | (4.27E) | (3.51E) | 3.51E | (4.27E) | (3.51E) | 3.51E |
| 1950 | 4.27 | 2.77 | (3.51) | 4.27 | (2.77) | 2.77 | 4.27 | 2.77 | 2.77 | 4.27 | 2.77 | (3.51) | 4.27 | (3.51) | (3.51) | H 4.27E | (3.51E) | 3.51E | H 4.27E | 3.51E | (4.27E) |
| 2100 | 4.27 | (3.51) | (3.51) | 4.27 | (2.77) | 2.77 | 4.27 | 2.77 | 2.77 | 4.27 | 2.77 | (3.51) | 4.27 | (3.51) | 3.51 | H 4.27E | (3.51E) | 3.51E | H 4.27E | (4.27E) | (4.27E) |
| 2250 | | (3.51) | (3.51) | | (2.77) | 2.77 | | 2.77 | 2.77 | | (3.51) | (3.51) | | (3.51) | 3.51 | | 3.51E | (4.27E) | | (4.27E) | (4.27E) |
| 2400 | | (3.51) | (3.51) | | (2.77) | 2.77 | | 2.77 | 2.77 | | (3.51) | (3.51) | | (3.51) | 3.51 | | (4.27E) | (4.27E) | | (4.27E) | (4.27E) |
| 2550 | | 2.77Z | 2.77Z | | (2.77) | 2.77 | | 2.77 | (3.51) | | (3.51) | (3.51) | | (3.51) | 3.51 | | (4.27E) | (4.27E) | | H 3.51E | H 4.27E |
| 2700 | | 2.77Z | (3.51Z) | | 2.77 | 2.77 | | 2.77 | (3.51) | | (3.51) | 3.51 | | 3.51 | (4.27) | | (4.27E) | (4.27E) | | H 3.51E | H 4.27E |
| 2850 | | 2.77Z | (3.51Z) | | 2.77 | 2.77 | | 2.77 | (3.51) | | (3.51) | 3.51 | | (4.27) | (4.27) | | (4.27E) | 4.27E | | H 3.51E | H 4.27E |
| 3000 | | 2.77Z | (3.51Z) | | 2.77 | 2.77 | | (3.51) | (3.51) | | (3.51) | 3.51 | | (4.27) | (4.27) | | H 3.51E | H 4.27E | | H 4.27E | H 4.27E |
| 3150 | | 3.51Z | 3.51Z | | 3.51 | 3.51 | | 3.51 | 3.51 | | 3.51 | (4.27) | | (4.27) | (4.27) | | H 3.51E | H 4.27E | | H 4.27E | H 4.27E |
| 3300 | | 3.51Z | 3.51Z | | 3.51 | 3.51 | | 3.51 | 3.51 | | (4.27) | (4.27) | | 4.27 | 4.27 | | H 3.51E | H 4.27E | | H 4.27E | H 4.27E |
| 3450 | | 3.51Z | 3.51Z | | 3.51 | 3.51 | | 3.51 | 3.51 | | (4.27) | (4.27) | | (4.27E) | H 4.27E | | H 4.27E | H 4.27E | | H 4.27E | |
| 3600 | | 4.27Z | 4.27Z | | 4.27 | 4.27 | | 4.27 | 4.27 | | 4.27 | 4.27 | | H 4.27E | H 4.27E | | H 4.27E | H 4.27E | | H 4.27E | |

Notes:
 * Aluminized Type 2 Steel or Precoated Galvanized Steel shall be required for diameters up to 1050 mm according to Article 1006.01, 38 mm x 6.5 mm corrugations shall be used for diameters less than 300 mm. Thicknesses are based on longitudinal riveted seam fabrication, values in "()" can be reduced by one gage thickness if helical seam fabrication is utilized.
 A thickness preceded by an "H" indicates only helical seam fabrication is allowed.
 E Elongation according to Article 542.04(e)
 Z 450 mm Minimum Fill

TABLE IC: THICKNESS OF CORRUGATED ALUMINUM ALLOY PIPE
 FOR THE RESPECTIVE DIAMETER OF PIPE AND FILL HEIGHTS OVER THE TOP OF THE PIPE FOR 2 2/3"x1/2" AND 3"x1" CORRUGATIONS

| Nominal Diameter in. | Type 1 | | Type 2 | | Type 3 | | Type 4 | | Type 5 | | Type 6 | | Type 7 | |
|-------------------------|----------------------------------------------|----------|------------------------------------------------------|---------|-------------------------------------------------------|---------|-------------------------------------------------------|---------|-------------------------------------------------------|---------|-------------------------------------------------------|----------|-------------------------------------------------------|----------|
| | Fill Height: 3' and less 1' min. cover | | Fill Height: Greater than 3' not exceeding 10' | | Fill Height: Greater than 10' not exceeding 15' | | Fill Height: Greater than 15' not exceeding 20' | | Fill Height: Greater than 20' not exceeding 25' | | Fill Height: Greater than 25' not exceeding 30' | | Fill Height: Greater than 30' not exceeding 35' | |
| | 2 2/3"x1/2" | 3"x1" | 2 2/3"x1/2" | 3"x1" | 2 2/3"x1/2" | 3"x1" | 2 2/3"x1/2" | 3"x1" | 2 2/3"x1/2" | 3"x1" | 2 2/3"x1/2" | 3"x1" | 2 2/3"x1/2" | 3"x1" |
| 12 | (0.075) | | 0.060 | | 0.060 | | 0.060 | | 0.060 | | 0.060 | | 0.060 | |
| 15 | (0.075) | | 0.060 | | 0.060 | | 0.060 | | 0.060 | | 0.060 | | (0.075) | |
| 18 | (0.075) | | 0.060 | | 0.060 | | 0.060 | | 0.060 | | (0.075) | | H 0.060 | |
| 21 | H 0.060E | | 0.060 | | 0.060 | | 0.060 | | (0.075) | | H 0.060 | | H 0.060E | |
| 24 | (0.105E) | | 0.060 | | 0.060 | | (0.075) | | (0.105) | | (0.105) | | (0.105E) | |
| 30 | H 0.075E | H 0.060 | 0.075 | H 0.060 | 0.075 | H 0.060 | (0.105) | H 0.060 | (0.105) | H 0.060 | H 0.075E | H 0.060 | H 0.075E | H 0.060 |
| 36 | (0.135E) | H 0.060E | 0.075 | H 0.060 | (0.105) | H 0.060 | (0.105) | H 0.060 | (0.135) | H 0.060 | H 0.075E | H 0.060 | H 0.075E | H 0.060E |
| 42 | 0.105E | (0.075) | 0.105 | 0.060 | 0.105 | 0.060 | 0.105 | 0.060 | 0.105 | (0.075) | 0.105E | 0.105 | 0.105E | (0.105E) |
| 48 | 0.105E | (0.075) | 0.105 | 0.060 | 0.105 | 0.060 | 0.105 | (0.075) | 0.105 | (0.105) | 0.105E | (0.105E) | 0.105E | (0.135E) |
| 54 | 0.105E | (0.105) | 0.105 | 0.060 | 0.105 | 0.060 | 0.105 | (0.075) | 0.105 | (0.105) | 0.105E | (0.105E) | (0.135E) | (0.135E) |
| 60 | 0.135E | (0.105) | 0.135 | 0.060 | 0.135 | (0.075) | 0.135 | (0.105) | 0.135 | (0.105) | 0.135E | (0.135E) | (0.164E) | (0.135E) |
| 66 | 0.164E | (0.105) | 0.164 | 0.060 | 0.164 | (0.075) | 0.164 | (0.105) | 0.164 | (0.135) | 0.164E | (0.135E) | H 0.164E | (0.135E) |
| 72 | 0.164E | (0.105) | 0.164 | 0.060 | 0.164 | (0.075) | 0.164 | (0.105) | 0.164 | (0.135) | H 0.164E | (0.135E) | H 0.164E | (0.164E) |
| 78 | | (0.135) | | 0.075 | | (0.105) | | (0.105) | | (0.135) | | (0.135E) | | (0.164E) |
| 84 | | (0.135) | | 0.105 | | 0.105 | | (0.135) | | (0.135) | | (0.164E) | | (0.164E) |
| 90 | | (0.135) | | 0.105 | | 0.105 | | (0.135) | | (0.135) | | (0.164E) | | (0.164E) |
| 96 | | (0.135) | | 0.105 | | 0.105 | | (0.135) | | (0.135) | | (0.164E) | | H 0.135E |
| 102 | | 0.135Z | | 0.135 | | 0.135 | | 0.135 | | (0.164) | | (0.164E) | | H 0.135E |
| 108 | | 0.135Z | | 0.135 | | 0.135 | | 0.135 | | (0.164) | | (0.164E) | | H 0.164E |
| 114 | | 0.164Z | | 0.164 | | 0.164 | | 0.164 | | 0.164 | | H 0.164E | | H 0.164E |
| 120 | | 0.164Z | | 0.164 | | 0.164 | | 0.164 | | 0.164 | | H 0.164E | | H 0.164E |

Notes:

Thicknesses are based on longitudinal riveted seam fabrication, values in "()" can be reduced by one gage thickness if helical seam fabrication is utilized.

A thickness preceded by an "H" indicates only helical seam fabrication is allowed.

E Elongation according to Article 542.04(e), the elongation requirement for Type 1 fill heights may be eliminated for fills above 1'-6"

Z 1'-6" Minimum fill

TABLE IC: THICKNESS OF CORRUGATED ALUMINUM ALLOY PIPE
 FOR THE RESPECTIVE DIAMETER OF PIPE AND FILL HEIGHTS OVER THE TOP OF THE PIPE
 FOR 68 mm x 13 mm AND 75 mm x 25 mm CORRUGATIONS
 (Metric)

| Nominal Diameter mm | Type 1 | | Type 2 | | Type 3 | | Type 4 | | Type 5 | | Type 6 | | Type 7 | |
|------------------------|--------------------------------------------------|---------------|-------------------------------------------------------|---------------|---------------------------------------------------------|---------------|---------------------------------------------------------|---------------|---------------------------------------------------------|---------------|---------------------------------------------------------|---------------|----------------------------------------------------------|---------------|
| | Fill Height: 1 m and less 0.3 m min. cover | | Fill Height: Greater than 1 m not exceeding 3 m | | Fill Height: Greater than 3 m not exceeding 4.5 m | | Fill Height: Greater than 4.5 m not exceeding 6 m | | Fill Height: Greater than 6 m not exceeding 7.5 m | | Fill Height: Greater than 7.5 m not exceeding 9 m | | Fill Height: Greater than 9 m not exceeding 10.5 m | |
| | 68 x 13 mm | 75 x 25 mm | 68 x 13 mm | 75 x 25 mm | 68 x 13 mm | 75 x 25 mm | 68 x 13 mm | 75 x 25 mm | 68 x 13 mm | 75 x 25 mm | 68 x 13 mm | 75 x 25 mm | 68 x 13 mm | 75 x 25 mm |
| 300 | (1.91) | | 1.52 | | 1.52 | | 1.52 | | 1.52 | | 1.52 | | 1.52 | |
| 375 | (1.91) | | 1.52 | | 1.52 | | 1.52 | | 1.52 | | 1.52 | | (1.91) | |
| 450 | (1.91) | | 1.52 | | 1.52 | | 1.52 | | 1.52 | | (1.91) | | H 1.52 | |
| 525 | H 1.52E | | 1.52 | | 1.52 | | 1.52 | | (1.91) | | H 1.52 | | H 1.52E | |
| 600 | (2.67E) | | 1.52 | | 1.52 | | (1.91) | | (2.67) | | (2.67) | | (2.67E) | |
| 750 | H 1.91E | H 1.52 | 1.91 | H 1.52 | 1.91 | H 1.52 | (2.67) | H 1.52 | (2.67) | H 1.52 | H 1.91E | H 1.52 | H 1.91E | H 1.52 |
| 900 | (3.43E) | H 1.52E | 1.91 | H 1.52 | (2.67) | H 1.52 | (2.67) | H 1.52 | (3.43) | H 1.52 | H 1.91E | H 1.52 | H 1.91E | H 1.52E |
| 1050 | 2.67E | (1.91) | 2.67 | 1.52 | 2.67 | 1.52 | 2.67 | 1.52 | 2.67 | (1.91) | 2.67E | 2.67 | 2.67E | (2.67E) |
| 1200 | 2.67E | (1.91) | 2.67 | 1.52 | 2.67 | 1.52 | 2.67 | (1.91) | 2.67 | (2.67) | 2.67E | (2.67E) | 2.67E | (3.43E) |
| 1350 | 2.67E | (2.67) | 2.67 | 1.52 | 2.67 | 1.52 | 2.67 | (1.91) | 2.67 | (2.67) | 2.67E | (2.67E) | (3.43E) | (3.43E) |
| 1500 | 3.43E | (2.67) | 3.43 | 1.52 | 3.43 | (1.91) | 3.43 | (2.67) | 3.43 | (2.67) | 3.43E | (3.43E) | (4.17E) | (3.43E) |
| 1650 | 4.17E | (2.67) | 4.17 | 1.52 | 4.17 | (1.91) | 4.17 | (2.67) | 4.17 | (3.43) | 4.17E | (3.43E) | H 4.17E | (3.43E) |
| 1800 | 4.17E | (2.67) | 4.17 | 1.52 | 4.17 | (1.91) | 4.17 | (2.67) | 4.17 | (3.43) | H 4.17E | (3.43E) | H 4.17E | (4.17E) |
| 1950 | | (3.43) | | 1.91 | | (2.67) | | (2.67) | | (3.43) | | (3.43E) | | (4.17E) |
| 2100 | | (3.43) | | 2.67 | | 2.67 | | (3.43) | | (3.43) | | (4.17E) | | (4.17E) |
| 2250 | | (3.43) | | 2.67 | | 2.67 | | (3.43) | | (3.43) | | (4.17E) | | (4.17E) |
| 2400 | | (3.43) | | 2.67 | | 2.67 | | (3.43) | | (3.43) | | (4.17E) | | H 3.43E |
| 2550 | | 3.43Z | | 3.43 | | 3.43 | | 3.43 | | (4.17) | | (4.17E) | | H 3.43E |
| 2700 | | 3.43Z | | 3.43 | | 3.43 | | 3.43 | | (4.17) | | (4.17E) | | H 4.17E |
| 2850 | | 4.17Z | | 4.17 | | 4.17 | | 4.17 | | 4.17 | | H 4.17E | | H 4.17E |
| 3000 | | 4.17Z | | 4.17 | | 4.17 | | 4.17 | | 4.17 | | H 4.17E | | H 4.17E |

Notes:

Thicknesses are based on longitudinal riveted seam fabrication, values in “()” can be reduced by one gage thickness if helical seam fabrication is utilized.

A thickness preceded by an “H” indicates only helical seam fabrication is allowed.

E Elongation according to Article 542.04(e), the elongation requirement for Type 1 fill heights may be eliminated for fills above 450 mm.

Z 450 mm Minimum fill

Table IIA: THICKNESS FOR CORRUGATED STEEL PIPE ARCHES AND CORRUGATED ALUMINUM ALLOY PIPE ARCHES
 FOR THE RESPECTIVE EQUIVALENT ROUND SIZE OF PIPE AND FILL HEIGHTS OVER THE TOP OF PIPE

| Equivalent Round Size in. | Corrugated Steel & Aluminum Pipe Arch 2 2/3" x 1/2" | | Corrugated Steel & Aluminum Pipe Arch 3" x 1" | | Corrugated Steel Pipe Arch 5" x 1" | | Min. Cover | Type 1 | | | | | | Type 2 | | | | | | Type 3 | | | | | | | | | |
|---------------------------|-----------------------------------------------------|------------|-----------------------------------------------|------------|------------------------------------|------------|------------|------------------|------------------------------------|---------|---------------|----------|---------|---------------|--------------|---------|---------------|----------|---------|---------------|--------------|---------|---------------|---------|---------|---------------|---------|---------|---------|
| | Span Rise (in.)* | | Span Rise (in.) | | Span Rise (in.) | | | Steel & Aluminum | Fill Height: | | | | | | Fill Height: | | | | | | Fill Height: | | | | | | | | |
| | 3" and less | | Greater than 3' not exceeding 10' | | | | | | Greater than 10' not exceeding 15' | | | | | | | | | | | | | | | | | | | | |
| | Steel | | | Aluminum | | | | | Steel | | | Aluminum | | | Steel | | | Aluminum | | | | | | | | | | | |
| Span (in.) | Rise (in.) | Span (in.) | Rise (in.) | Span (in.) | Rise (in.) | Span (in.) | Rise (in.) | 2 2/3" x 1/2" | 3"x1" | 5" x 1" | 2 2/3" x 1/2" | 3"x1" | 5" x 1" | 2 2/3" x 1/2" | 3"x1" | 5" x 1" | 2 2/3" x 1/2" | 3"x1" | 5" x 1" | 2 2/3" x 1/2" | 3"x1" | 5" x 1" | 2 2/3" x 1/2" | 3"x1" | 5" x 1" | 2 2/3" x 1/2" | 3"x1" | 5" x 1" | |
| 15 | 17 | 13 | | | | | 1'-6" | 0.064 | | | 0.060 | | | 0.064 | | | 0.060 | | | 0.064 | | | 0.060 | | | 0.060 | | | |
| 18 | 21 | 15 | | | | | 1'-6" | 0.064 | | | 0.060 | | | 0.064 | | | 0.060 | | | 0.064 | | | 0.060 | | | 0.060 | | | |
| 21 | 24 | 18 | | | | | 1'-6" | 0.064 | | | (0.075) | | | 0.064 | | | 0.060 | | | 0.064 | | | 0.060 | | | 0.060 | | | |
| 24 | 28 | 20 | | | | | 1'-6" | (0.079) | | | (0.105) | | | 0.064 | | | 0.075 | | | 0.064 | | | 0.075 | | | 0.075 | | | |
| 30 | 35 | 24 | | | | | 1'-6" | (0.079) | | | (0.105) | | | 0.064 | | | 0.075 | | | 0.064 | | | (0.079) | | | (0.105) | | | |
| 36 | 42 | 29 | | | | | 1'-6" | (0.079) | | | 0.105 | | | 0.064 | | | 0.105 | | | 0.064 | | | 0.105 | | | 0.105 | | | |
| 42 | 49 | 33 | | | | | 1'-6" | 0.109 | | | 0.105 | | | (0.109) | | | 0.105 | | | (0.109) | | | 0.105 | | | 0.105 | | | |
| 48 | 57 | 38 | 53 | 41 | 53 | 41 | 1'-6" | 0.109 | (0.109) | (0.109) | 0.135 | 0.060 | 0.109 | 0.079 | 0.079 | 0.135 | 0.060 | 0.109 | 0.079 | (0.109) | 0.079 | (0.109) | 0.135 | 0.060 | 0.109 | 0.079 | (0.109) | 0.135 | 0.060 |
| 54 | 64 | 43 | 60 | 46 | 60 | 46 | 1'-6" | 0.109 | (0.109) | (0.109) | 0.164 | (0.075) | 0.109 | 0.079 | 0.079 | 0.164 | 0.060 | 0.109 | 0.079 | (0.109) | 0.079 | (0.109) | 0.164 | 0.060 | 0.109 | 0.079 | (0.109) | 0.164 | (0.075) |
| 60 | 71 | 47 | 66 | 51 | 66 | 51 | 1'-6" | 0.138 | (0.109) | 0.109 | 0.164 | (0.075) | 0.138 | 0.079 | (0.109) | 0.164 | 0.060 | 0.138 | (0.109) | 0.109 | 0.164 | (0.075) | 0.138 | (0.109) | 0.109 | 0.164 | (0.075) | | |
| 66 | 77 | 52 | 73 | 55 | 73 | 55 | 1'-6" | 0.168 | (0.109) | 0.109 | | 0.075 | 0.168 | 0.079 | (0.109) | | 0.075 | 0.168 | (0.109) | 0.109 | | 0.075 | 0.168 | (0.109) | 0.109 | | 0.075 | | |
| 72 | 83 | 57 | 81 | 59 | 81 | 59 | 1'-6" | 0.168 | (0.109) | 0.109 | | 0.105 | 0.168 | 0.079 | (0.109) | | 0.105 | 0.168 | (0.109) | 0.109 | | 0.105 | 0.168 | (0.109) | 0.109 | | 0.105 | | |
| 78 | | | 87 | 63 | 87 | 63 | 1'-6" | | 0.109 | 0.109 | | 0.105 | | (0.109) | 0.109 | | 0.105 | | (0.109) | 0.109 | | 0.105 | | 0.109 | 0.109 | | 0.105 | | |
| 84 | | | 95 | 67 | 95 | 67 | 1'-6" | | 0.109 | 0.109 | | 0.105 | | (0.109) | 0.109 | | 0.105 | | (0.109) | 0.109 | | 0.105 | | 0.109 | 0.109 | | 0.105 | | |
| 90 | | | 103 | 71 | 103 | 71 | 1'-6" | | 0.109 | 0.109 | | 0.135 | | (0.109) | 0.109 | | 0.135 | | (0.109) | 0.109 | | 0.135 | | 0.109 | 0.109 | | 0.135 | | |
| 96 | | | 112 | 75 | 112 | 75 | 1'-6" | | 0.109 | (0.138) | | 0.164 | | 0.109 | 0.109 | | 0.164 | | 0.109 | (0.138) | | 0.164 | | 0.109 | (0.138) | | 0.164 | | |
| 102 | | | 117 | 79 | 117 | 79 | 1'-6" | | 0.109 | (0.138) | | 0.164 | | 0.109 | 0.109 | | 0.164 | | 0.109 | (0.138) | | 0.164 | | 0.109 | (0.138) | | 0.164 | | |
| 108 | | | 128 | 83 | 128 | 83 | 1'-6" | | 0.138 | 0.138 | | | | 0.138 | 0.138 | | | | 0.138 | 0.138 | | | | 0.138 | 0.138 | | | | |
| 114 | | | 137 | 87 | 137 | 87 | 1'-6" | | 0.138 | 0.138 | | | | 0.138 | 0.138 | | | | 0.138 | 0.138 | | | | 0.138 | 0.138 | | | | |
| 120 | | | 142 | 91 | 142 | 91 | 1'-6" | | 0.168 | 0.168 | | | | 0.168 | 0.168 | | | | 0.168 | 0.168 | | | | 0.168 | 0.168 | | | | |

Notes:

* Aluminized Type 2 Steel or Precoated Galvanized Steel shall be required for steel spans up to 42" according to Article 1006.01.
 Thicknesses are based on longitudinal riveted seam fabrication, values in "()" can be reduced by one gage thickness if helical seam fabrication is utilized.
 The Type 1 corrugated steel or aluminum pipe arches shall be placed on soil having a minimum bearing capacity of 3 tons per square foot.
 The Type 2 and 3 corrugated steel or aluminum pipe arches shall be placed on soil having a minimum bearing capacity of 2 tons per square foot.
 This minimum bearing capacity will be determined by the Engineer in the field.

Table IIA: THICKNESS FOR CORRUGATED STEEL PIPE ARCHES AND CORRUGATED ALUMINUM ALLOY PIPE ARCHES
 FOR THE RESPECTIVE EQUIVALENT ROUND SIZE OF PIPE AND FILL HEIGHTS OVER THE TOP OF PIPE
 (Metric)

| Equivalent Round Size (mm) | Corrugated Steel & Aluminum Pipe Arch 68 x 13 mm | | Corrugated Steel & Aluminum Pipe Arch 75 x 25 mm | | Corrugated Steel Pipe Arch 125 x 25 mm | | Min. Cover | Type 1 | | | | | Type 2 | | | | | Type 3 | | | | | |
|-------------------------------|-----------------------------------------------------|------------|-----------------------------------------------------|-------------|-------------------------------------------|------------|------------|----------------------------------|------------|-------------|------------|------------|--------------------------------------------------------|------------|-------------|------------|------------|----------------------------------------------------------|------------|------------|--------|--------|------|
| | Span Rise (mm)* (mm) | | Span Rise (mm) (mm) | | Span Rise (mm) (mm) | | | Fill Height: 1 m and less | | | | | Fill Height: Greater than 1 m not exceeding 3 m | | | | | Fill Height: Greater than 3 m not exceeding 4.5 m | | | | | |
| | Steel & Aluminum | Steel | | Aluminum | | Steel | | Aluminum | | Steel | | Aluminum | | Steel | | Aluminum | | | | | | | |
| | | 68 x 13 mm | 75 x 25 mm | 125 x 25 mm | 68 x 13 mm | 75 x 25 mm | | 68 x 13 mm | 75 x 25 mm | 125 x 25 mm | 68 x 13 mm | 75 x 25 mm | 68 x 13 mm | 75 x 25 mm | 125 x 25 mm | 68 x 13 mm | 75 x 25 mm | 125 x 25 mm | 68 x 13 mm | 75 x 25 mm | | | |
| 375 | 430 | 330 | | | | | 0.5 m | 1.63 | | | 1.52 | | 1.63 | | | 1.52 | | 1.63 | | | 1.52 | | |
| 450 | 530 | 380 | | | | | 0.5 m | 1.63 | | | 1.52 | | 1.63 | | | 1.52 | | 1.63 | | | 1.52 | | |
| 525 | 610 | 460 | | | | | 0.5 m | 1.63 | | | (1.91) | | 1.63 | | | 1.52 | | 1.63 | | | 1.52 | | |
| 600 | 710 | 510 | | | | | 0.5 m | (2.01) | | | (2.67) | | 1.63 | | | 1.91 | | 1.63 | | | 1.91 | | |
| 750 | 870 | 630 | | | | | 0.5 m | (2.01) | | | (2.67) | | 1.63 | | | 1.91 | | (2.01) | | | (2.67) | | |
| 900 | 1060 | 740 | | | | | 0.5 m | (2.01) | | | 2.67 | | 1.63 | | | 2.67 | | 1.63 | | | 2.67 | | |
| 1050 | 1240 | 840 | | | | | 0.5 m | 2.77 | | | 2.67 | | (2.77) | | | 2.67 | | (2.77) | | | 2.67 | | |
| 1200 | 1440 | 970 | 1340 | 1050 | 1340 | 1050 | 0.5 m | 2.77 | (2.77) | (2.77) | 3.43 | 1.52 | 2.77 | 2.01 | 2.01 | 3.43 | 1.52 | 2.77 | 2.01 | (2.77) | 3.43 | 1.52 | |
| 1350 | 1620 | 1100 | 1520 | 1170 | 1520 | 1170 | 0.5 m | 2.77 | (2.77) | 2.77 | 4.17 | (1.91) | 2.77 | 2.01 | 2.01 | 4.17 | 1.52 | 2.77 | (2.77) | 2.77 | 4.17 | (1.91) | |
| 1500 | 1800 | 1200 | 1670 | 1300 | 1670 | 1300 | 0.5 m | 3.51 | (2.77) | 2.77 | 4.17 | (1.91) | 3.51 | 2.01 | (2.77) | 4.17 | 1.52 | 3.51 | (2.77) | 2.77 | 4.17 | (1.91) | |
| 1650 | 1950 | 1320 | 1850 | 1400 | 1850 | 1400 | 0.5 m | 4.27 | (2.77) | 2.77 | | 1.91 | 4.27 | 2.01 | (2.77) | | 1.91 | 4.27 | (2.77) | 2.77 | | 1.91 | |
| 1800 | 2100 | 1450 | 2050 | 1500 | 2050 | 1500 | 0.5 m | 4.27 | (2.77) | 2.77 | | 2.67 | 4.27 | 2.01 | (2.77) | | 2.67 | 4.27 | (2.77) | 2.77 | | 2.67 | |
| 1950 | | | 2200 | 1620 | 2200 | 1620 | 0.5 m | | | 2.77 | | 2.67 | | (2.77) | 2.77 | | 2.67 | | 2.77 | 2.77 | | 2.67 | |
| 2100 | | | 2400 | 1720 | 2400 | 1720 | 0.5 m | | | 2.77 | | 2.67 | | (2.77) | 2.77 | | 2.67 | | 2.77 | 2.77 | | 2.67 | |
| 2250 | | | 2600 | 1820 | 2600 | 1820 | 0.5 m | | | 2.77 | | 3.43 | | (2.77) | 2.77 | | 3.43 | | 2.77 | 2.77 | | 3.43 | |
| 2400 | | | 2840 | 1920 | 2840 | 1920 | 0.5 m | | | 2.77 | (3.51) | | 4.17 | | 2.77 | 2.77 | | 4.17 | | 2.77 | (3.51) | | 4.17 |
| 2550 | | | 2970 | 2020 | 2970 | 2020 | 0.5 m | | | 2.77 | (3.51) | | 4.17 | | 2.77 | 2.77 | | 4.17 | | 2.77 | (3.51) | | 4.17 |
| 2700 | | | 3240 | 2120 | 3240 | 2120 | 0.5 m | | | 3.51 | 3.51 | | | | 3.51 | 3.51 | | | | 3.51 | 3.51 | | |
| 2850 | | | 3470 | 2220 | 3470 | 2220 | 0.5 m | | | 3.51 | 3.51 | | | | 3.51 | 3.51 | | | | 3.51 | 3.51 | | |
| 3000 | | | 3600 | 2320 | 3600 | 2320 | 0.5 m | | | 4.27 | 4.27 | | | | 4.27 | 4.27 | | | | 4.27 | 4.27 | | |

Notes:

- * Aluminized Type 2 Steel or Precoated Galvanized Steel shall be required for steel spans up to 1060 mm according to Article 1006.01.
- Thicknesses are based on longitudinal riveted seam fabrication, values in "()" can be reduced by one gage thickness if helical seam fabrication is utilized.
- The Type 1 corrugated steel or aluminum pipe arches shall be placed on soil having a minimum bearing capacity of 290 kN per square meter.
- The Type 2 and 3 corrugated steel or aluminum pipe arches shall be placed on soil having a minimum bearing capacity of 192 kN per square meter.
- This minimum bearing capacity will be determined by the Engineer in the field.

| Table IIB: CLASSES OF REINFORCED CONCRETE ELLIPTICAL AND REINFORCED CONCRETE ARCH PIPE FOR THE RESPECTIVE EQUIVALENT ROUND SIZE OF PIPE AND FILL HEIGHTS OVER THE TOP OF PIPE | | | | | | | | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|------|-------------------------------------|---------|------------------------------|--------------------------|-------|------------------------------------------------|-------|-------------------------------------------------|------|
| Equivalent Round Size (in.) | Reinforced Concrete Elliptical pipe (in.) | | Reinforced Concrete Arch pipe (in.) | | Minimum Cover RCCP HE & A | Type 1 | | Type 2 | | Type 3 | |
| | Span | Rise | Span | Rise | | Fill Height: 3' and less | | Fill Height: Greater than 3' not exceeding 10' | | Fill Height: Greater than 10' not exceeding 15' | |
| | | | | | HE | Arch | HE | Arch | HE | Arch | |
| 15 | 23 | 14 | 18 | 11 | 1' -0" | HE-III | A-III | HE-III | A-III | HE-IV | A-IV |
| 18 | 23 | 14 | 22 | 13 1/2 | 1' -0" | HE-III | A-III | HE-III | A-III | HE-IV | A-IV |
| 21 | 30 | 19 | 26 | 15 1/2 | 1' -0" | HE-III | A-III | HE-III | A-III | HE-IV | A-IV |
| 24 | 30 | 19 | 28 1/2 | 18 | 1' -0" | HE-III | A-III | HE-III | A-III | HE-IV | A-IV |
| 27 | 34 | 22 | 36 1/4 | 22 1/2 | 1' -0" | HE-III | A-III | HE-III | A-III | HE-IV | A-IV |
| 30 | 38 | 24 | 36 1/4 | 22 1/2 | 1' -0" | HE-III | A-III | HE-III | A-III | HE-IV | A-IV |
| 36 | 45 | 29 | 43 3/4 | 26 5/8 | 1' -0" | HE-II | A-II | HE-III | A-III | HE-IV | A-IV |
| 42 | 53 | 34 | 51 1/8 | 31 5/16 | 1' -0" | HE-I | A-II | HE-III | A-III | HE-IV | A-IV |
| 48 | 60 | 38 | 58 1/2 | 36 | 1' -0" | HE-I | A-II | HE-III | A-III | 1460 | 1450 |
| 54 | 68 | 43 | 65 | 40 | 1' -0" | HE-I | A-II | HE-III | A-III | 1460 | 1460 |
| 60 | 76 | 48 | 73 | 45 | 1' -0" | HE-I | A-II | HE-III | A-III | 1460 | 1470 |
| 66 | 83 | 53 | 88 | 54 | 1' -0" | HE-I | A-II | HE-III | A-III | 1470 | 1480 |
| 72 | 91 | 58 | 88 | 54 | 1' -0" | HE-I | A-II | HE-III | A-III | 1470 | 1480 |

Notes:

A number indicates the D-Load for the diameter and depth of fill and that a special design is required.

Design assumptions; Water filled pipe, AASHTO Type 2 installation per AASHTO LRFD Table 12.10.2.1-1

Table IIB: CLASSES OF REINFORCED CONCRETE ELLIPTICAL AND REINFORCED CONCRETE ARCH PIPE FOR THE RESPECTIVE EQUIVALENT ROUND SIZE OF PIPE AND FILL HEIGHTS OVER THE TOP OF PIPE (Metric)

| Equivalent Round Size (mm) | Reinforced Concrete Elliptical pipe (mm) | | Reinforced Concrete Arch pipe (mm) | | Minimum Cover | Type 1 | | Type 2 | | Type 3 | |
|----------------------------|------------------------------------------|------|------------------------------------|------|---------------|-------------|---------------------------|--------|-------------------------------------------------|--------|---------------------------------------------------|
| | Span | Rise | Span | Rise | | RCCP HE & A | Fill Height: 1 m and less | | Fill Height: Greater than 1 m not exceeding 3 m | | Fill Height: Greater than 3 m not exceeding 4.5 m |
| | | | | | HE | | Arch | HE | Arch | HE | Arch |
| 375 | 584 | 356 | 457 | 279 | 0.3 m | HE-III | A-III | HE-III | A-III | HE-IV | A-IV |
| 450 | 584 | 356 | 559 | 343 | 0.3 m | HE-III | A-III | HE-III | A-III | HE-IV | A-IV |
| 525 | 762 | 483 | 660 | 394 | 0.3 m | HE-III | A-III | HE-III | A-III | HE-IV | A-IV |
| 600 | 762 | 483 | 724 | 457 | 0.3 m | HE-III | A-III | HE-III | A-III | HE-IV | A-IV |
| 686 | 864 | 559 | 921 | 572 | 0.3 m | HE-III | A-III | HE-III | A-III | HE-IV | A-IV |
| 750 | 965 | 610 | 921 | 572 | 0.3 m | HE-III | A-III | HE-III | A-III | HE-IV | A-IV |
| 900 | 1143 | 737 | 1111 | 676 | 0.3 m | HE-II | A-II | HE-III | A-III | HE-IV | A-IV |
| 1050 | 1346 | 864 | 1299 | 795 | 0.3 m | HE-I | A-II | HE-III | A-III | HE-IV | A-IV |
| 1200 | 1524 | 965 | 1486 | 914 | 0.3 m | HE-I | A-II | HE-III | A-III | 70 | 70 |
| 1350 | 1727 | 1092 | 1651 | 1016 | 0.3 m | HE-I | A-II | HE-III | A-III | 70 | 70 |
| 1500 | 1930 | 1219 | 1854 | 1143 | 0.3 m | HE-I | A-II | HE-III | A-III | 70 | 70 |
| 1676 | 2108 | 1346 | 2235 | 1372 | 0.3 m | HE-I | A-II | HE-III | A-III | 70 | 70 |
| 1800 | 2311 | 1473 | 2235 | 1372 | 0.3 m | HE-I | A-II | HE-III | A-III | 70 | 70 |

Notes:
 A number indicates the D-Load for the diameter and depth of fill and that a special design is required.
 Design assumptions; Water filled pipe, AASHTO Type 2 installation per AASHTO LRFD Table 12.10.2.1-1

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

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

Notes:

- PVC Polyvinyl Chloride (PVC) pipe with a smooth interior
- CPVC Corrugated Polyvinyl Chloride (CPVC) pipe with a smooth interior
- PE Polyethylene (PE) pipe with a smooth interior
- CPE Corrugated Polyethylene (PE) pipe with a smooth interior
- CPP Corrugated Polypropylene (CPP) pipe with a smooth interior
- X This material may be used for the given pipe diameter and fill height
- NA Not Available

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

| Nominal Diameter (mm) | Type 1 | | | | | Type 2 | | | | | Type 3 | | | | | Type 4 | | | |
|-----------------------|--------------------------------------------------|------|----|-----|-----|--------------------------------------------------|------|----|-----|-----|----------------------------------------------------|------|----|-----|-----|----------------------------------------------------|------|----|-----|
| | Fill Height: 1 m and less, with 0.3 m min. cover | | | | | Fill Height: Greater than 1 m, not exceeding 3 m | | | | | Fill Height: Greater than 3 m, not exceeding 4.5 m | | | | | Fill Height: Greater than 4.5 m, not exceeding 6 m | | | |
| | PVC | CPVC | PE | CPE | CPP | PVC | CPVC | PE | CPE | CPP | PVC | CPVC | PE | CPE | CPP | PVC | CPVC | PE | CPP |
| 250 | X | X | X | X | NA | X | X | X | X | NA | X | X | X | X | NA | X | X | X | NA |
| 300 | X | X | X | X | X | X | X | X | X | X | X | X | X | NA | X | X | X | X | NA |
| 375 | X | X | NA | X | X | X | X | NA | X | X | X | X | NA | NA | X | X | X | NA | X |
| 450 | X | X | X | X | X | X | X | X | X | X | X | X | X | NA | X | X | X | X | NA |
| 525 | X | X | NA | NA | NA | X | X | NA | NA | NA | X | X | NA | NA | NA | X | X | NA | NA |
| 600 | X | X | X | X | X | X | X | X | X | X | X | X | NA | NA | NA | X | X | X | NA |
| 750 | X | X | X | X | X | X | X | X | X | X | X | X | X | NA | X | X | X | X | NA |
| 900 | X | X | X | X | X | X | X | X | X | X | X | X | X | NA | NA | X | X | X | NA |
| 1000 | X | NA | X | X | NA | X | NA | X | NA | NA | X | NA | X | NA | NA | X | NA | X | NA |
| 1200 | X | NA | X | X | X | X | NA | X | NA | NA | X | NA | X | NA | NA | X | NA | X | NA |

Notes:

- PVC Polyvinyl Chloride (PVC) pipe with a smooth interior
- CPVC Corrugated Polyvinyl Chloride (CPVC) pipe with a smooth interior
- PE Polyethylene (PE) pipe with a smooth interior
- CPE Corrugated Polyethylene (PE) pipe with a smooth interior
- CPP Corrugated Polypropylene (CPP) pipe with a smooth interior
- X This material may be used for the given pipe diameter and fill height
- NA Not Available

| TABLE IIIB: PLASTIC PIPE PERMITTED | | | | | | | | |
|--------------------------------------------------------------------|--------------------------------------------------|------|--|--------------------------------------------------|------|--|--------------------------------------------------|--|
| FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE | | | | | | | | |
| Nominal Diameter (in.) | Type 5 | | | Type 6 | | | Type 7 | |
| | Fill Height: Greater than 20', not exceeding 25' | | | Fill Height: Greater than 25', not exceeding 30' | | | Fill Height: Greater than 30', not exceeding 35' | |
| | PVC | CPVC | | PVC | CPVC | | CPVC | |
| 10 | X | X | | X | X | | X | |
| 12 | X | X | | X | X | | X | |
| 15 | X | X | | X | X | | X | |
| 18 | X | X | | X | X | | X | |
| 21 | X | X | | X | X | | X | |
| 24 | X | X | | X | X | | X | |
| 30 | X | X | | X | X | | X | |
| 36 | X | X | | X | X | | X | |
| 42 | X | NA | | X | NA | | NA | |
| 48 | X | NA | | X | NA | | NA | |

Notes:
 PVC Polyvinyl Chloride (PVC) pipe with a smooth interior
 CPVC Corrugated Polyvinyl Chloride (CPVC) pipe with a smooth interior
 X This material may be used for the given pipe diameter and fill height
 NA Not Available

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

| Nominal Diameter (mm) | Type 5 | | | Type 6 | | | Type 7 | |
|-----------------------|----------------------------------------------------|------|--|----------------------------------------------------|------|--|-----------------------------------------------------|--|
| | Fill Height: Greater than 6 m, not exceeding 7.5 m | | | Fill Height: Greater than 7.5 m, not exceeding 9 m | | | Fill Height: Greater than 9 m, not exceeding 10.5 m | |
| | PVC | CPVC | | PVC | CPVC | | CPVC | |
| 250 | X | X | | X | X | | X | |
| 300 | X | X | | X | X | | X | |
| 375 | X | X | | X | X | | X | |
| 450 | X | X | | X | X | | X | |
| 525 | X | X | | X | X | | X | |
| 600 | X | X | | X | X | | X | |
| 750 | X | X | | X | X | | X | |
| 900 | X | X | | X | X | | X | |
| 1000 | X | NA | | X | NA | | NA | |
| 1200 | X | NA | | X | NA | | NA | |

- Notes:
- PVC Polyvinyl Chloride (PVC) pipe with a smooth interior
 - CPVC Corrugated Polyvinyl Chloride (CPVC) pipe with a smooth interior
 - PE Polyethylene (PE) pipe with a smooth interior
 - X This material may be used for the given pipe diameter and fill height
 - NA Not Available"

Revise the first sentence of the first paragraph of Article 542.04(c) of the Standard Specifications to read:

“Compacted aggregate, at least 4 in. (100 mm) in depth below the pipe culvert, shall be placed the entire width of the trench and for the length of the pipe culvert, except compacted impervious material shall be used for the outer 3 ft (1 m) at each end of the pipe culvert.”

Revise the seventh paragraph of Article 542.04(d) of the Standard Specifications to read:

“PVC, PE and CPP pipes shall be joined according to the manufacturer’s specifications.”

Replace the third sentence of the first paragraph of Article 542.04(h) of the Standard Specifications with the following:

“The total cover required for various construction loadings shall be the responsibility of the Contractor.”

Delete “Table IV : Wheel Loads and Total Cover” in Article 542.04(h) of the Standard Specifications.

Revise the first and second paragraphs of Article 542.04(i) of the Standard Specifications to read:

“(i) Deflection Testing for Pipe Culverts. All PE, PVC and CPP pipe culverts shall be tested for deflection not less than 30 days after the pipe is installed and the backfill compacted. The testing shall be performed in the presence of the Engineer.

For PVC, PE, and CPP pipe culverts with diameters 24 in. (600 mm) or smaller, a mandrel drag shall be used for deflection testing. For PVC, PE, and CPP pipe culverts with diameters over 24 in. (600 mm), deflection measurements other than by a mandrel shall be used.”

Revise Articles 542.04(i)(1) and (2) of the Standard Specifications to read:

“(1) For all PVC pipe: as defined using ASTM D 3034 methodology.

(2) For all PE and CPP pipe: the average inside diameter based on the minimum and maximum tolerances specified in the corresponding ASTM or AASHTO material specifications.”

Revise the second sentence of the second paragraph of Article 542.07 of the Standard Specifications to read:

“When a prefabricated end section is used, it shall be of the same material as the pipe culvert, except for polyethylene (PE), polyvinylchloride (PVC), and polypropylene (PP) pipes which shall have metal end sections.”

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

“1040.03 Polyvinyl Chloride (PVC) Pipe. Acceptance testing of PVC pipe and fittings shall be accomplished during the same construction season in which they are installed. The section properties shall be according to the manufacturer pre-submitted geometric properties on file with the Department. The manufacturer shall submit written certification that the material meets those properties. The pipe shall meet the following additional requirements.”

Delete Articles 1040.03(e) and (f) of the Standard Specifications.

Revise Articles 1040.04(c) and (d) of the Standard Specifications to read:

“(c) PE Profile Wall Pipe for Insertion Lining. The pipe shall be according to ASTM F 894. When used for insertion lining of pipe culverts, the pipe liner shall have a minimum pipe stiffness of 46 psi (317 kPa) at five percent deflection for nominal inside diameters of 42 in. (1050 mm) or less. For nominal inside diameters of greater than 42 in. (1050 mm), the pipe liner shall have a minimum pipe stiffness of 32.5 psi (225 kPa) at five percent deflection. All sizes shall have wall construction that presents essentially smooth internal and external surfaces.

(d) PE Pipe with a Smooth Interior. The pipe shall be according to ASTM F 714 (DR 32.5) with a minimum cell classification of PE 335434 as defined in ASTM D 3350. The section properties shall be according to the manufacturer pre-submitted geometric properties on file with the Department. The manufacturer shall submit written certification that the material meets those properties and the resin used to manufacture the pipe meets or exceeds the minimum cell classification requirements.”

Add the following to Section 1040 of the Standard Specifications:

“1040.08 Polypropylene (PP) Pipe. Storage and handling shall be according to the manufacturer's recommendations, except in no case shall the pipe be exposed to direct sunlight for more than six months. Acceptance testing of the pipe shall be accomplished during the same construction season in which it is installed. The section properties shall be according to the manufacturer pre-submitted geometric properties on file with the Department. The manufacturer shall submit written certification that the material meets those properties. The pipe shall meet the following additional requirements.

(a) Corrugated PP Pipe with a Smooth Interior. The pipe shall be according to AAHSTO M 330 (nominal size – 12 to 60 in. (300 to 1500 mm)). The pipe shall be Type S or D.

(b) Perforated Corrugated PP Pipe with A Smooth Interior. The pipe shall be according to AASHTO M 330 (nominal size – 12 to 60 in. (300 to 1500 mm)). The pipe shall be Type SP. In addition, the top centerline of the pipe shall be marked so that it is readily visible from the top of the trench before backfilling, and the upper ends of the slot perforations shall be a minimum of ten degrees below the horizontal.”

LRFD STORM SEWER BURIAL TABLES (BDE)

Effective: November 1, 2013

Revised: April 1, 2015

Revise Article 550.02 of the Standard Specifications to read as follows:

| “Item | Article Section |
|----------------------------------------------------------------------------------------|-----------------|
| (a) Clay Sewer Pipe | 1040.02 |
| (b) Extra Strength Clay Pipe | 1040.02 |
| (c) Concrete Sewer, Storm Drain, and Culvert Pipe | 1042 |
| (d) Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe | 1042 |
| (e) Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe (Note 1) | 1042 |
| (f) Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe (Note 1) | 1042 |
| (g) Polyvinyl Chloride (PVC) Pipe | 1040.03 |
| (h) Corrugated Polyvinyl Chloride (PVC) Pipe with a Smooth Interior | 1040.03 |
| (i) Corrugated Polypropylene (CPP) Pipe with Smooth Interior | 1040.08 |
| (j) Rubber Gaskets and Preformed Flexible Joint Sealants for Concrete Pipe | 1056 |
| (k) Mastic Joint Sealer for Pipe | 1055 |
| (l) External Sealing Band | 1057 |
| (m) Fine Aggregate (Note 2) | 1003.04 |
| (n) Coarse Aggregate (Note 3) | 1004.05 |
| (o) Reinforcement Bars and Welded Wire Fabric | 1006.10 |
| (p) Handling Hole Plugs | 1042.16 |
| (q) Polyethylene (PE) Pipe with a Smooth Interior | 1040.04 |
| (r) Corrugated Polyethylene (PE) Pipe with a Smooth Interior | 1040.04 |

Note 1. The class of elliptical and arch pipe used for various storm sewer sizes and heights of fill shall conform to the requirements for circular pipe.

Note 2. The fine aggregate shall be moist.

Note 3. The coarse aggregate shall be wet.”

Revise the table for permitted materials in Article 550.03 of the Standard Specifications as follows:

| "Class | Materials |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A | Rigid Pipes: Clay Sewer Pipe Extra Strength Clay Pipe Concrete Sewer, Storm Drain, and Culvert Pipe Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe |
| B | Rigid Pipes: Clay Sewer Pipe Extra Strength Clay Pipe Concrete Sewer, Storm Drain, and Culvert Pipe Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe Flexible Pipes: Polyvinyl Chloride (PVC) Pipe Corrugated Polyvinyl Chloride Pipe (PVC) with a Smooth Interior Polyethylene (PE) Pipe with a Smooth Interior Corrugated Polyethylene (PE) Pipe with a Smooth Interior Corrugated Polypropylene (CPP) Pipe with a Smooth Interior" |

Replace the storm sewers tables in Article 550.03 of the Standard Specifications with the following:

| STORM SEWERS KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE | | | | | | | | | | | | | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-----|------|-----|------|----|-----|-----|---------------------------------------------------|-----|------|-----|------|----|-----|-----|
| Nominal Diameter in. | Type 1 | | | | | | | | Type 2 | | | | | | | |
| | Fill Height: 3' and less With 1' minimum cover | | | | | | | | Fill Height: Greater than 3' not exceeding 10' | | | | | | | |
| | RCCP | CSP | ESCP | PVC | CPVC | PE | CPE | CPP | RCCP | CSP | ESCP | PVC | CPVC | PE | CPE | CPP |
| 10 | NA | 3 | X | X | X | X | X | NA | NA | 1 | *X | X | X | X | X | NA |
| 12 | IV | NA | X | X | X | X | X | X | II | 1 | *X | X | X | X | X | X |
| 15 | IV | NA | NA | X | X | NA | X | X | II | 1 | *X | X | X | NA | X | X |
| 18 | IV | NA | NA | X | X | X | X | X | II | 2 | X | X | X | X | X | X |
| 21 | III | NA | NA | X | X | NA | NA | NA | II | 2 | X | X | X | NA | NA | NA |
| 24 | III | NA | NA | X | X | X | X | X | II | 2 | X | X | X | X | X | X |
| 27 | III | NA | NA | NA | NA | NA | NA | NA | II | 3 | X | NA | NA | NA | NA | NA |
| 30 | IV | NA | NA | X | X | X | X | X | II | 3 | X | X | X | X | X | X |
| 33 | III | NA | NA | NA | NA | NA | NA | NA | II | NA | X | NA | NA | NA | NA | NA |
| 36 | III | NA | NA | X | X | X | X | X | II | NA | X | X | X | X | X | X |
| 42 | II | NA | X | X | NA | X | X | NA | II | NA | X | X | NA | X | NA | NA |
| 48 | II | NA | X | X | NA | X | X | X | II | NA | X | X | NA | X | NA | NA |
| 54 | II | NA | NA | NA | NA | NA | NA | NA | II | NA | NA | NA | NA | NA | NA | NA |
| 60 | II | NA | NA | NA | NA | NA | NA | X | II | NA | NA | NA | NA | NA | NA | X |
| 66 | II | NA | NA | NA | NA | NA | NA | NA | II | NA | NA | NA | NA | NA | NA | NA |
| 72 | II | NA | NA | NA | NA | NA | NA | NA | II | NA | NA | NA | NA | NA | NA | NA |
| 78 | II | NA | NA | NA | NA | NA | NA | NA | II | NA | NA | NA | NA | NA | NA | NA |
| 84 | II | NA | NA | NA | NA | NA | NA | NA | II | NA | NA | NA | NA | NA | NA | NA |
| 90 | II | NA | NA | NA | NA | NA | NA | NA | II | NA | NA | NA | NA | NA | NA | NA |
| 96 | II | NA | NA | NA | NA | NA | NA | NA | III | NA | NA | NA | NA | NA | NA | NA |
| 102 | II | NA | NA | NA | NA | NA | NA | NA | III | NA | NA | NA | NA | NA | NA | NA |
| 108 | II | NA | NA | NA | NA | NA | NA | NA | III | NA | NA | NA | NA | NA | NA | NA |

- RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
- CSP Concrete Sewer, Storm drain, and Culvert Pipe
- PVC Polyvinyl Chloride Pipe
- CPVC Corrugated Polyvinyl Chloride Pipe
- ESCP Extra Strength Clay Pipe
- PE Polyethylene Pipe with a Smooth Interior
- CPE Corrugated Polyethylene Pipe with a Smooth Interior
- CPP Corrugated Polypropylene pipe with a Smooth Interior
- X This material may be used for the given pipe diameter and fill height.
- NA This material is Not Acceptable for the given pipe diameter and fill height.
- * May also use Standard Strength Clay Pipe

| STORM SEWERS (Metric) | | | | | | | | | | | | | | | | |
|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----|------|-----|------|----|-----|-----|----------------------------------------------------|-----|------|-----|------|----|-----|-----|
| KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE | | | | | | | | | | | | | | | | |
| Nominal Diameter in. | Type 1 | | | | | | | | Type 2 | | | | | | | |
| | Fill Height: 1 m and less With 300 mm minimum cover | | | | | | | | Fill Height: Greater than 1 m not exceeding 3 m | | | | | | | |
| | RCCP | CSP | ESCP | PVC | CPVC | PE | CPE | CPP | RCCP | CSP | ESCP | PVC | CPVC | PE | CPE | CPP |
| 250 | NA | 3 | X | X | X | X | X | NA | NA | 1 | *X | X | X | X | X | NA |
| 300 | IV | NA | X | X | X | X | X | X | II | 1 | *X | X | X | X | X | X |
| 375 | IV | NA | NA | X | X | NA | X | X | II | 1 | *X | X | X | NA | X | X |
| 450 | IV | NA | NA | X | X | X | X | X | II | 2 | X | X | X | X | X | X |
| 525 | III | NA | NA | X | X | NA | NA | NA | II | 2 | X | X | X | NA | NA | NA |
| 600 | III | NA | NA | X | X | X | X | X | II | 2 | X | X | X | X | X | X |
| 675 | III | NA | NA | NA | NA | NA | NA | NA | II | 3 | X | NA | NA | NA | NA | NA |
| 750 | IV | NA | NA | X | X | X | X | X | II | 3 | X | X | X | X | X | X |
| 825 | III | NA | NA | NA | NA | NA | NA | NA | II | NA | X | NA | NA | NA | NA | NA |
| 900 | III | NA | NA | X | X | X | X | X | II | NA | X | X | X | X | X | X |
| 1050 | II | NA | X | X | NA | X | X | NA | II | NA | X | X | NA | X | NA | NA |
| 1200 | II | NA | X | X | NA | X | X | X | II | NA | X | X | NA | X | NA | NA |
| 1350 | II | NA | NA | NA | NA | NA | NA | NA | II | NA | NA | NA | NA | NA | NA | NA |
| 1500 | II | NA | NA | NA | NA | NA | NA | X | II | NA | NA | NA | NA | NA | NA | X |
| 1650 | II | NA | NA | NA | NA | NA | NA | NA | II | NA | NA | NA | NA | NA | NA | NA |
| 1800 | II | NA | NA | NA | NA | NA | NA | NA | II | NA | NA | NA | NA | NA | NA | NA |
| 1950 | II | NA | NA | NA | NA | NA | NA | NA | II | NA | NA | NA | NA | NA | NA | NA |
| 2100 | II | NA | NA | NA | NA | NA | NA | NA | II | NA | NA | NA | NA | NA | NA | NA |
| 2250 | II | NA | NA | NA | NA | NA | NA | NA | II | NA | NA | NA | NA | NA | NA | NA |
| 2400 | II | NA | NA | NA | NA | NA | NA | NA | III | NA | NA | NA | NA | NA | NA | NA |
| 2550 | II | NA | NA | NA | NA | NA | NA | NA | III | NA | NA | NA | NA | NA | NA | NA |
| 2700 | II | NA | NA | NA | NA | NA | NA | NA | III | NA | NA | NA | NA | NA | NA | NA |

- RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
- CSP Concrete Sewer, Storm drain, and Culvert Pipe
- PVC Polyvinyl Chloride Pipe
- CPVC Corrugated Polyvinyl Chloride Pipe
- ESCP Extra Strength Clay Pipe
- PE Polyethylene Pipe with a Smooth Interior
- CPE Corrugated Polyethylene Pipe with a Smooth Interior
- CPP Corrugated Polypropylene pipe with a Smooth Interior
- X This material may be used for the given pipe diameter and fill height.
- NA This material is Not Acceptable for the given pipe diameter and fill height.
- * May also use Standard Strength Clay Pipe

| STORM SEWERS KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE | | | | | | | | | | | | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-----|------|-----|------|----|-----|-----|----------------------------------------------------|-----|------|-----|------|----|-----|
| Nominal Diameter in. | Type 3 | | | | | | | | Type 4 | | | | | | |
| | Fill Height: Greater than 10' not exceeding 15' | | | | | | | | Fill Height: Greater than 15' not exceeding 20' | | | | | | |
| | RCCP | CSP | ESCP | PVC | CPVC | PE | CPE | CPP | RCCP | CSP | ESCP | PVC | CPVC | PE | CPP |
| 10 | NA | 2 | X | X | X | X | X | NA | NA | 3 | X | X | X | X | NA |
| 12 | III | 2 | X | X | X | X | NA | X | IV | NA | NA | X | X | X | NA |
| 15 | III | 3 | X | X | X | NA | NA | X | IV | NA | NA | X | X | NA | X |
| 18 | III | NA | X | X | X | X | NA | X | IV | NA | NA | X | X | X | NA |
| 21 | III | NA | NA | X | X | NA | NA | NA | IV | NA | NA | X | X | NA | NA |
| 24 | III | NA | NA | X | X | X | NA | NA | IV | NA | NA | X | X | X | NA |
| 27 | III | NA | NA | NA | NA | NA | NA | NA | IV | NA | NA | NA | NA | NA | NA |
| 30 | III | NA | NA | X | X | X | NA | X | IV | NA | NA | X | X | X | NA |
| 33 | III | NA | NA | NA | NA | NA | NA | NA | IV | NA | NA | NA | NA | NA | NA |
| 36 | III | NA | NA | X | X | X | NA | NA | IV | NA | NA | X | X | X | NA |
| 42 | III | NA | NA | X | NA | X | NA | NA | IV | NA | NA | X | NA | X | NA |
| 48 | III | NA | NA | X | NA | X | NA | NA | IV | NA | NA | X | NA | X | NA |
| 54 | III | NA | NA | NA | NA | NA | NA | NA | IV | NA | NA | NA | NA | NA | NA |
| 60 | III | NA | NA | NA | NA | NA | NA | NA | IV | NA | NA | NA | NA | NA | NA |
| 66 | III | NA | NA | NA | NA | NA | NA | NA | IV | NA | NA | NA | NA | NA | NA |
| 72 | III | NA | NA | NA | NA | NA | NA | NA | IV | NA | NA | NA | NA | NA | NA |
| 78 | III | NA | NA | NA | NA | NA | NA | NA | IV | NA | NA | NA | NA | NA | NA |
| 84 | III | NA | NA | NA | NA | NA | NA | NA | IV | NA | NA | NA | NA | NA | NA |
| 90 | III | NA | NA | NA | NA | NA | NA | NA | 1680 | NA | NA | NA | NA | NA | NA |
| 96 | III | NA | NA | NA | NA | NA | NA | NA | 1690 | NA | NA | NA | NA | NA | NA |
| 102 | III | NA | NA | NA | NA | NA | NA | NA | 1700 | NA | NA | NA | NA | NA | NA |
| 108 | 1360 | NA | NA | NA | NA | NA | NA | NA | 1710 | NA | NA | NA | NA | NA | NA |

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe

CSP Concrete Sewer, Storm drain, and Culvert Pipe

PVC Polyvinyl Chloride Pipe

CPVC Corrugated Polyvinyl Chloride Pipe

ESCP Extra Strength Clay Pipe

PE Polyethylene Pipe with a Smooth Interior

CPE Corrugated Polyethylene Pipe with a Smooth Interior

CPP Corrugated Polypropylene pipe with a Smooth Interior

X This material may be used for the given pipe diameter and fill height.

NA This material is Not Acceptable for the given pipe diameter and fill height.

* May also use Standard Strength Clay Pipe

Note RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the D-load to produce a 0.01 in crack.

| STORM SEWERS (metric) KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE | | | | | | | | | | | | | | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-----|------|-----|------|----|-----|-----|---------------------------------------------------|-----|------|-----|------|----|-----|--|
| Nominal Diameter in. | Type 3 | | | | | | | | Type 4 | | | | | | | |
| | Fill Height: Greater than 3 m not exceeding 4.5 m | | | | | | | | Fill Height: Greater than 4.5 m not exceeding 6 m | | | | | | | |
| | RCCP | CSP | ESCP | PVC | CPVC | PE | CPE | CPP | RCCP | CSP | ESCP | PVC | CPVC | PE | CPP | |
| 250 | NA | 2 | X | X | X | X | X | NA | NA | 3 | X | X | X | X | NA | |
| 300 | III | 2 | X | X | X | X | NA | X | IV | NA | NA | X | X | X | NA | |
| 375 | III | 3 | X | X | X | NA | NA | X | IV | NA | NA | X | X | NA | X | |
| 450 | III | NA | X | X | X | X | NA | X | IV | NA | NA | X | X | X | NA | |
| 525 | III | NA | NA | X | X | NA | NA | NA | IV | NA | NA | X | X | NA | NA | |
| 600 | III | NA | NA | X | X | X | NA | NA | IV | NA | NA | X | X | X | NA | |
| 675 | III | NA | NA | NA | NA | NA | NA | NA | IV | NA | NA | NA | NA | NA | NA | |
| 750 | III | NA | NA | X | X | X | NA | X | IV | NA | NA | X | X | X | NA | |
| 825 | III | NA | NA | NA | NA | NA | NA | NA | IV | NA | NA | NA | NA | NA | NA | |
| 900 | III | NA | NA | X | X | X | NA | NA | IV | NA | NA | X | X | X | NA | |
| 1050 | III | NA | NA | X | NA | X | NA | NA | IV | NA | NA | X | NA | X | NA | |
| 1200 | III | NA | NA | X | NA | X | NA | NA | IV | NA | NA | X | NA | X | NA | |
| 1350 | III | NA | NA | NA | NA | NA | NA | NA | IV | NA | NA | NA | NA | NA | NA | |
| 1500 | III | NA | NA | NA | NA | NA | NA | NA | IV | NA | NA | NA | NA | NA | NA | |
| 1650 | III | NA | NA | NA | NA | NA | NA | NA | IV | NA | NA | NA | NA | NA | NA | |
| 1800 | III | NA | NA | NA | NA | NA | NA | NA | IV | NA | NA | NA | NA | NA | NA | |
| 1950 | III | NA | NA | NA | NA | NA | NA | NA | IV | NA | NA | NA | NA | NA | NA | |
| 2100 | III | NA | NA | NA | NA | NA | NA | NA | IV | NA | NA | NA | NA | NA | NA | |
| 2250 | III | NA | NA | NA | NA | NA | NA | NA | 80 | NA | NA | NA | NA | NA | NA | |
| 2400 | III | NA | NA | NA | NA | NA | NA | NA | 80 | NA | NA | NA | NA | NA | NA | |
| 2550 | III | NA | NA | NA | NA | NA | NA | NA | 80 | NA | NA | NA | NA | NA | NA | |
| 2700 | 70 | NA | NA | NA | NA | NA | NA | NA | 80 | NA | NA | NA | NA | NA | NA | |

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe

CSP Concrete Sewer, Storm drain, and Culvert Pipe

PVC Polyvinyl Chloride Pipe

CPVC Corrugated Polyvinyl Chloride Pipe

ESCP Extra Strength Clay Pipe

PE Polyethylene Pipe with a Smooth Interior

CPE Corrugated Polyethylene Pipe with a Smooth Interior

CPP Corrugated Polypropylene pipe with a Smooth Interior

X This material may be used for the given pipe diameter and fill height.

NA This material is Not Acceptable for the given pipe diameter and fill height.

* May also use Standard Strength Clay Pipe

Note RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the metric D-load to produce a 25.4 micro-meter crack.

| STORM SEWERS KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE | | | | | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-----|------|----------------------------------------------------|-----|------|----------------------------------------------------|------|
| Nominal Diameter in. | Type 5 | | | Type 6 | | | Type 7 | |
| | Fill Height: Greater than 20' not exceeding 25' | | | Fill Height: Greater than 25' not exceeding 30' | | | Fill Height: Greater than 30' not exceeding 35' | |
| | RCCP | PVC | CPVC | RCCP | PVC | CPVC | RCCP | CPVC |
| 10 | NA | X | X | NA | X | X | NA | X |
| 12 | IV | X | X | V | X | X | V | X |
| 15 | IV | X | X | V | X | X | V | X |
| 18 | IV | X | X | V | X | X | V | X |
| 21 | IV | X | X | V | X | X | V | X |
| 24 | IV | X | X | V | X | X | V | X |
| 27 | IV | NA | NA | V | NA | NA | V | NA |
| 30 | IV | X | X | V | X | X | V | X |
| 33 | IV | NA | NA | V | NA | NA | V | NA |
| 36 | IV | X | X | V | X | X | V | X |
| 42 | IV | X | NA | V | X | NA | V | NA |
| 48 | IV | X | NA | V | X | NA | V | NA |
| 54 | IV | NA | NA | V | NA | NA | V | NA |
| 60 | IV | NA | NA | V | NA | NA | V | NA |
| 66 | IV | NA | NA | V | NA | NA | V | NA |
| 72 | V | NA | NA | V | NA | NA | V | NA |
| 78 | 2020 | NA | NA | 2370 | NA | NA | 2730 | NA |
| 84 | 2020 | NA | NA | 2380 | NA | NA | 2740 | NA |
| 90 | 2030 | NA | NA | 2390 | NA | NA | 2750 | NA |
| 96 | 2040 | NA | NA | 2400 | NA | NA | 2750 | NA |
| 102 | 2050 | NA | NA | 2410 | NA | NA | 2760 | NA |
| 108 | 2060 | NA | NA | 2410 | NA | NA | 2770 | NA |

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe

PVC Polyvinyl Chloride Pipe

CPVC Corrugated Polyvinyl Chloride Pipe

ESCP Extra Strength Clay Pipe

X This material may be used for the given pipe diameter and fill height.

NA This material is Not Acceptable for the given pipe diameter and fill height.

Note RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the D-load to produce a 0.01 in crack.

| STORM SEWERS (metric) KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE | | | | | | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-----|------|----------------------------------------------------|-----|------|----------------------------------------------------|------|
| Nominal Diameter in. | Type 5 | | | Type 6 | | | Type 7 | |
| | Fill Height: Greater than 20' not exceeding 25' | | | Fill Height: Greater than 25' not exceeding 30' | | | Fill Height: Greater than 30' not exceeding 35' | |
| | RCCP | PVC | CPVC | RCCP | PVC | CPVC | RCCP | CPVC |
| 250 | NA | X | X | NA | X | X | NA | X |
| 300 | IV | X | X | V | X | X | V | X |
| 375 | IV | X | X | V | X | X | V | X |
| 450 | IV | X | X | V | X | X | V | X |
| 525 | IV | X | X | V | X | X | V | X |
| 600 | IV | X | X | V | X | X | V | X |
| 675 | IV | NA | NA | V | NA | NA | V | NA |
| 750 | IV | X | X | V | X | X | V | X |
| 825 | IV | NA | NA | V | NA | NA | V | NA |
| 900 | IV | X | X | V | X | X | V | X |
| 1050 | IV | X | NA | V | X | NA | V | NA |
| 1200 | IV | X | NA | V | X | NA | V | NA |
| 1350 | IV | NA | NA | V | NA | NA | V | NA |
| 1500 | IV | NA | NA | V | NA | NA | V | NA |
| 1650 | IV | NA | NA | V | NA | NA | V | NA |
| 1800 | V | NA | NA | V | NA | NA | V | NA |
| 1950 | 100 | NA | NA | 110 | NA | NA | 130 | NA |
| 2100 | 100 | NA | NA | 110 | NA | NA | 130 | NA |
| 2250 | 100 | NA | NA | 110 | NA | NA | 130 | NA |
| 2400 | 100 | NA | NA | 120 | NA | NA | 130 | NA |
| 2550 | 100 | NA | NA | 120 | NA | NA | 130 | NA |
| 2700 | 100 | NA | NA | 120 | NA | NA | 130 | NA |

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe

PVC Polyvinyl Chloride Pipe

CPVC Corrugated Polyvinyl Chloride Pipe

ESCP Extra Strength Clay Pipe

X This material may be used for the given pipe diameter and fill height.

NA This material is Not Acceptable for the given pipe diameter and fill height.

Note RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the metric D-load to produce a 25.4 micro-meter crack.

Revise the sixth paragraph of Article 550.06 of the Standard Specifications to read:

“PVC, PE and CPP pipes shall be joined according to the manufacturer’s specifications.”

Revise the first and second paragraphs of Article 550.08 of the Standard Specifications to read:

“**550.08 Deflection Testing for Storm Sewers.** All PVC, PE, and CPP storm sewers shall be tested for deflection not less than 30 days after the pipe is installed and the backfill compacted. The testing shall be performed in the presence of the Engineer.

For PVC, PE, and CPP storm sewers with diameters 24 in. (600 mm) or smaller, a mandrel drag shall be used for deflection testing. For PVC, PE, and CPP storm sewers with diameters over 24 in. (600 mm), deflection measurements other than by a mandrel shall be used.”

Revise the fifth paragraph of Article 550.08 to read as follows.

“The outside diameter of the mandrel shall be 95 percent of the base inside diameter. For all PVC pipe the base inside diameter shall be defined using ASTM D 3034 methodology. For all PE and CPP pipe, the base inside diameter shall be defined as the average inside diameter based on the minimum and maximum tolerances specified in the corresponding ASTM or AASHTO material specifications.”

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

“**1040.03 Polyvinyl Chloride (PVC) Pipe.** Acceptance testing of PVC pipe and fittings shall be accomplished during the same construction season in which they are installed. The section properties shall be according to the manufacturer pre-submitted geometric properties on file with the Department. The manufacturer shall submit written certification that the material meets those properties. The pipe shall meet the following additional requirements.”

Delete Articles 1040.03(e) and (f) of the Standard Specifications.

Revise Articles 1040.04(c) and (d) of the Standard Specifications to read:

“(c) PE Profile Wall Pipe for Insertion Lining. The pipe shall be according to ASTM F 894. When used for insertion lining of pipe culverts, the pipe liner shall have a minimum pipe stiffness of 46 psi (317 kPa) at five percent deflection for nominal inside diameters of 42 in. (1050 mm) or less. For nominal inside diameters of greater than 42 in. (1050 mm), the pipe liner shall have a minimum pipe stiffness of 32.5 psi (225 kPa) at five percent deflection. All sizes shall have wall construction that presents essentially smooth internal and external surfaces.

(d) PE Pipe with a Smooth Interior. The pipe shall be according to ASTM F 714 (DR 32.5) with a minimum cell classification of PE 335434 as defined in ASTM D 3350. The section properties shall be according to the manufacturer pre-submitted geometric properties on file with the Department. The manufacturer shall submit written certification that the material meets those properties and the resin used to manufacture the pipe meets or exceeds the minimum cell classification requirements.”

Add the following to Section 1040 of the Standard Specifications:

“1040.08 Polypropylene (PP) Pipe. Storage and handling shall be according to the manufacturer’s recommendations, except in no case shall the pipe be exposed to direct sunlight for more than six months. Acceptance testing of the pipe shall be accomplished during the same construction season in which it is installed. The section properties shall be according to the manufacturer pre-submitted geometric properties on file with the Department. The manufacturer shall submit written certification that the material meets those properties. The pipe shall meet the following additional requirements.

- (a) Corrugated PP Pipe with a Smooth Interior. The pipe shall be according to AAHSTO M 330 (nominal size – 12 to 60 in. (300 to 1500 mm)). The pipe shall be Type S or D.
- (b) Perforated Corrugated PP Pipe with A Smooth Interior. The pipe shall be according to AASHTO M 330 (nominal size – 12 to 60 in. (300 to 1500 mm)). The pipe shall be Type SP. In addition, the top centerline of the pipe shall be marked so that it is readily visible from the top of the trench before backfilling, and the upper ends of the slot perforations shall be a minimum of ten degrees below the horizontal.”

PAVED SHOULDER REMOVAL (BDE)

Effective: April 1, 2014

Revise the first paragraph of Article 440.07(b) of the Standard Specifications to read:

“(b) Measured Quantities. Pavement removal, driveway pavement removal, and paved shoulder removal will be measured for payment in place and the area computed in square yards (square meters).”

Revise Article 440.07(c) of the Standard Specifications to read:

“(c) Adjustment of Quantities. The quantity of pavement removal and paved shoulder removal will be adjusted if their respective thickness varies more than 15 percent from that shown on the plans. The quantity will be either increased or decreased according to the following table.

| % change of thickness | % change of quantity |
|-----------------------|----------------------|
| 0 to less than 15 | 0 |
| 15 to less than 20 | 10 |
| 20 to less than 30 | 15 |
| 30 to less than 50 | 20 |

If the thickness of the existing pavement varies by 50 percent or more from that shown on the plans, the character of the work will be considered significantly changed and an adjustment to the contract will be made according to Article 104.02.

When an adjustment is made for variations in pavement or shoulder thickness a resulting adjustment will also be made in the earthwork quantities when applicable.

No adjustment will be made for variations in the amount of reinforcement.”

PAVEMENT STRIPING - SYMBOLS (BDE)

Effective: January 1, 2015

Revise the Symbol Table of Article 780.14 of the Supplemental Specifications to read:

“SYMBOLS

| Symbol | Large Size sq ft (sq m) | Small Size sq ft (sq m) |
|----------------------------------------------------|----------------------------|----------------------------|
| Through Arrow | 11.5 (1.07) | 6.5 (0.60) |
| Left or Right Arrow | 15.6 (1.47) | 8.8 (0.82) |
| 2 Arrow Combination Left (or Right) and Through | 26.0 (2.42) | 14.7 (1.37) |
| 3 Arrow Combination Left, Right, and Through | 38.4 (3.56) | 20.9 (1.94) |
| Lane Drop Arrow | 41.5 (3.86) | -- |
| Wrong Way Arrow | 24.3 (2.26) | -- |
| Railroad "R" 6 ft (1.8 m) | 3.6 (0.33) | -- |
| Railroad "X" 20 ft (6.1 m) | 54.0 (5.02) | -- |
| International Symbol of Accessibility | 3.1 (0.29) | -- |
| Bike Symbol | 4.7 (0.44) | -- |
| Shared Lane Symbol | 8.0 (0.74) | --“ |

PROGRESS PAYMENTS (BDE)

Effective: November 2, 2013

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

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

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

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

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

RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (BDE)

Effective: November 1, 2012

Revise: January 2, 2015

Revise Section 1031 of the Standard Specifications to read:

“SECTION 1031. RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES

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

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

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

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

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

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

| Mixture FRAP will be used in: | Sieve Size that 100% of FRAP Shall Pass |
|-------------------------------|-----------------------------------------|
| IL-25.0 | 2 in. (50 mm) |
| IL-19.0 | 1 1/2 in. (40 mm) |
| IL-12.5 | 1 in. (25 mm) |
| IL-9.5 | 3/4 in. (20 mm) |
| IL-4.75 | 1/2 in. (13 mm) |

- (2) Homogeneous. Homogeneous RAP stockpiles shall consist of RAP from Class I, HMA (High and Low ESAL) mixtures and represent: 1) the same aggregate quality, but shall be at least C quality; 2) the same type of crushed aggregate (either crushed natural aggregate, ACBF slag, or steel slag); 3) similar gradation; and 4) similar asphalt binder content. If approved by the Engineer, combined single pass surface/binder millings may be considered "homogenous" with a quality rating dictated by the lowest coarse aggregate quality present in the mixture.
- (3) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I, HMA (High and Low ESAL) mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate RAP shall be processed prior to testing by crushing to where all RAP shall pass the 5/8 in. (16 mm) or smaller screen. Conglomerate RAP stockpiles shall not contain steel slag.
- (4) Conglomerate "D" Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP from Class I, HMA (High or Low ESAL), or "All Other" (as defined by Article 1030.04(a)(3)) mixtures. The coarse aggregate in this RAP may be crushed or round but shall be at least D quality. This RAP may have an inconsistent gradation and/or asphalt binder content. Conglomerate DQ RAP stockpiles shall not contain steel slag.
- (5) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as "Non-Quality".

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

| Parameter | FRAP/Homogeneous /Conglomerate | Conglomerate "D" Quality |
|-----------------------------|--------------------------------|--------------------------|
| 1 in. (25 mm) | | $\pm 5 \%$ |
| 1/2 in. (12.5 mm) | $\pm 8 \%$ | $\pm 15 \%$ |
| No. 4 (4.75 mm) | $\pm 6 \%$ | $\pm 13 \%$ |
| No. 8 (2.36 mm) | $\pm 5 \%$ | |
| No. 16 (1.18 mm) | | $\pm 15 \%$ |
| No. 30 (600 μm) | $\pm 5 \%$ | |
| No. 200 (75 μm) | $\pm 2.0 \%$ | $\pm 4.0 \%$ |
| Asphalt Binder | $\pm 0.4 \%$ ^{1/} | $\pm 0.5 \%$ |
| G_{mm} | ± 0.03 | |

1/ The tolerance for FRAP shall be $\pm 0.3 \%$.

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

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

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

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

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

1031.05 Quality Designation of Aggregate in RAP/FRAP.

- (a) RAP. The aggregate quality of the RAP for homogenous, conglomerate, and conglomerate "D" quality stockpiles shall be set by the lowest quality of coarse aggregate in the RAP stockpile and are designated as follows.
- (1) RAP from Class I, Superpave/HMA (High ESAL), or (Low ESAL) IL-9.5L surface mixtures are designated as containing Class B quality coarse aggregate.
 - (2) RAP from Superpave/HMA (Low ESAL) IL-19.0L binder mixture is designated as Class D quality coarse aggregate.
 - (3) RAP from Class I, Superpave/HMA (High ESAL) binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate.
 - (4) RAP from bituminous stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate.
- (b) FRAP. If the Engineer has documentation of the quality of the FRAP aggregate, the Contractor shall use the assigned quality provided by the Engineer.

If the quality is not known, the quality shall be determined as follows. Coarse and fine FRAP stockpiles containing plus #4 (4.75 mm) sieve coarse aggregate shall have a maximum tonnage of 5,000 tons (4,500 metric tons). The Contractor shall obtain a representative sample witnessed by the Engineer. The sample shall be a minimum of 50 lb (25 kg). The sample shall be extracted according to Illinois Modified AASHTO T 164 by a consultant prequalified by the Department for the specified testing. The consultant shall submit the test results along with the recovered aggregate to the District Office. The cost for this testing shall be paid by the Contractor. The District will forward the sample to the BMPR Aggregate Lab for MicroDeval Testing, according to Illinois Modified AASHTO T 327. A maximum loss of 15.0 percent will be applied for all HMA applications.

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

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

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

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

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

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

RAP/RAS Maximum Asphalt Binder Replacement (ABR) Percentage

| HMA Mixtures ^{1/, 2/} | RAP/RAS Maximum ABR % | | |
|--------------------------------|------------------------|---------|------------------|
| Ndesign | Binder/Leveling Binder | Surface | Polymer Modified |
| 30 | 30 | 30 | 10 |
| 50 | 25 | 15 | 10 |
| 70 | 15 | 10 | 10 |
| 90 | 10 | 10 | 10 |
| 105 | 10 | 10 | 10 |

1/ For HMA “All Other” (shoulder and stabilized subbase) N-30, the RAP/RAS ABR shall not exceed 50 percent of the mixture.

2/ When RAP/RAS ABR exceeds 20 percent, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent ABR would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28). If warm mix asphalt (WMA) technology is utilized, and production temperatures do not exceed 275 °F (135 °C) the high and low virgin asphalt binder grades shall each be reduced by one grade when RAP/RAS ABR exceeds 25 percent (i.e. 26 percent RAP/RAS ABR would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

(2) FRAP/RAS. When FRAP is used alone or FRAP is used in conjunction with RAS, the percentage of virgin asphalt binder replacement shall not exceed the amounts listed in the FRAP/RAS table listed below for the given N design.

FRAP/RAS Maximum Asphalt Binder Replacement (ABR) Percentage

| HMA Mixtures ^{1/, 2/} | FRAP/RAS Maximum ABR % | | |
|--------------------------------|------------------------|---------|------------------------------------|
| Ndesign | Binder/Leveling Binder | Surface | Polymer Modified ^{3/, 4/} |
| 30 | 50 | 40 | 10 |
| 50 | 40 | 35 | 10 |
| 70 | 40 | 30 | 10 |
| 90 | 40 | 30 | 10 |
| 105 | 40 | 30 | 10 |

- 1/ For HMA "All Other" (shoulder and stabilized subbase) N30, the FRAP/RAS ABR shall not exceed 50 percent of the mixture.
- 2/ When FRAP/RAS ABR exceeds 20 percent for all mixes the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent ABR would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28). If warm mix asphalt (WMA) technology is utilized, and production temperatures do not exceed 275 °F (135 °C) the high and low virgin asphalt binder grades shall each be reduced by one grade when FRAP/RAS ABR exceeds 25 percent (i.e. 26 percent ABR would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).
- 3/ For SMA the FRAP/RAS ABR shall not exceed 20 percent.
- 4/ For IL-4.75 mix the FRAP/RAS ABR shall not exceed 30 percent.

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

- (a) RAP/FRAP and/or RAS. RAP/FRAP and/or RAS mix designs shall be submitted for verification. If additional RAP/FRAP stockpiles are tested and found that no more than 20 percent of the results, as defined under "Testing" herein, are outside of the control tolerances set for the original RAP/FRAP stockpile and HMA mix design, and meets all of the requirements herein, the additional RAP/FRAP stockpiles may be used in the original mix design at the percent previously verified.
- (b) RAS. Type 1 and Type 2 RAS are not interchangeable in a mix design. A RAS stone bulk specific gravity (Gsb) of 2.300 shall be used for mix design purposes.

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

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

To remove or reduce agglomerated material, a scalping screen, gator, crushing unit, or comparable sizing device approved by the Engineer shall be used in the RAP feed system to remove or reduce oversized material. If material passing the sizing device adversely affects the mix production or quality of the mix, the sizing device shall be set at a size specified by the Engineer.

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

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

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

(1) Dryer Drum Plants.

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

(2) Batch Plants.

- a. Date, month, year, and time to the nearest minute for each print.
- b. HMA mix number assigned by the Department.
- c. Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).
- d. Mineral filler weight to the nearest pound (kilogram).

- e. RAP/FRAP/RAS weight to the nearest pound (kilogram).
- f. Virgin asphalt binder weight to the nearest pound (kilogram).
- g. Residual asphalt binder in the RAP/FRAP/RAS material as a percent of the total mix to the nearest 0.1 percent.

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

1031.09 RAP in Aggregate Surface Course and Aggregate Shoulders. The use of RAP in aggregate surface course (temporary access entrances only) and aggregate wedge shoulders Type B shall be as follows.

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

REINFORCEMENT BARS (BDE)

Effective: November 1, 2013

Revise the first and second paragraphs of Article 508.05 of the Standard Specifications to read:

“508.05 Placing and Securing. All reinforcement bars shall be placed and tied securely at the locations and in the configuration shown on the plans prior to the placement of concrete. Manual welding of reinforcement may only be permitted or precast concrete products as indicated in the current Bureau of Materials and Physical Research Policy Memorandum “Quality Control / Quality Assurance Program for Precast Concrete Products”, and for precast prestressed concrete products as indicated in the Department’s current “Manual for Fabrication of Precast Prestressed Concrete Products”. Reinforcement bars shall not be placed by sticking or floating into place or immediately after placement of the concrete.

Bars shall be tied at all intersections, except where the center to center dimension is less than 1 ft (300 mm) in each direction, in which case alternate intersections shall be tied. Molded plastic clips may be used in lieu of wire to secure bar intersections, but shall not be permitted in horizontal bar mats subject to construction foot traffic or to secure longitudinal bar laps. Plastic clips shall adequately secure the reinforcement bars, and shall permit the concrete to flow through and fully encase the reinforcement. Plastic clips may be recycled plastic, and shall meet the approval of the Engineer. The number of ties as specified shall be doubled for lap splices at the stage construction line of concrete bridge decks when traffic is allowed on the first completed stage during the pouring of the second stage.”

Revise the fifth paragraph of Article 508.05 of the Standard Specifications to read:

“Supports for reinforcement in bridge decks shall be metal. For all other concrete construction the supports shall be metal or plastic. Metal bar supports shall be made of cold-drawn wire, or other approved material and shall be either epoxy coated, galvanized or plastic tipped. When the reinforcement bars are epoxy coated, the metal supports shall be epoxy coated. Plastic supports may be recycled plastic. Supports shall be provided in sufficient number and spaced to provide the required clearances. Supports shall adequately support the reinforcement bars, and shall permit the concrete to flow through and fully encase the reinforcement. The legs of supports shall be spaced to allow an opening that is a minimum 1.33 times the nominal maximum aggregate size used in the concrete. Nominal maximum aggregate size is defined as the largest sieve which retains any of the aggregate sample particles. All supports shall meet the approval of the Engineer.”

Revise the first sentence of the eighth paragraph of Article 508.05 of the Standard Specifications to read:

“Epoxy coated reinforcement bars shall be tied with plastic coated wire, epoxy coated wire, or molded plastic clips where allowed.”

Add the following sentence to the end of the first paragraph of Article 508.06(c) of the Standard Specifications:

“ In addition, the total slip of the bars within the splice sleeve of the connector after loading in tension to 30 ksi (207 MPa) and relaxing to 3 ksi (20.7 MPa) shall not exceed 0.01 in. (254 microns).”

Revise Article 1042.03(d) of the Standard Specifications to read:

“(d) Reinforcement and Accessories: The concrete cover over all reinforcement shall be within $\pm 1/4$ in. (± 6 mm) of the specified cover.

Welded wire fabric shall be accurately bent and tied in place.

Miscellaneous accessories to be cast into the concrete or for forming holes and recesses shall be carefully located and rigidly held in place by bolts, clamps, or other effective means. If paper tubes are used for vertical dowel holes, or other vertical holes which require grouting, they shall be removed before transportation to the construction site.”

STEEL SLAG IN TRENCH BACKFILL (BDE)

Effective: January 1, 2016

Revise the second sentence of Article 1003.01(a)(8) of the Standard Specifications to read:

“Crushed steel slag shall be the nonmetallic product which is developed in a molten condition simultaneously with steel in an open hearth, basic oxygen, or electric arc furnace.”

Revise Article 1003.04(a) of the Standard Specifications to read:

“(a) Description. The fine aggregate shall consist of sand, stone sand, chats, wet bottom boiler slag, slag sand, or granulated slag sand. Crushed concrete sand, construction and demolition debris sand, and steel slag sand produced from an electric arc furnace may be used in lieu of the above for trench backfill.”

TRACKING THE USE OF PESTICIDES (BDE)

Effective: August 1, 2012

Add the following paragraph after the first paragraph of Article 107.23 of the Standard Specifications:

“Within 48 hours of the application of pesticides, including but not limited to herbicides, insecticides, algacides, and fungicides, the Contractor shall complete and return to the Engineer, Operations form “OPER 2720”.”

TRAVERSABLE PIPE GRATE (BDE)

Effective: January 1, 2013

Revised: April 1, 2014

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

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

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

Note 1. All steel pipe shall be according to ASTM A 53 (Type E or S), Grade B, or ASTM A 500 Grade B, standard weight (SCH. 40). Structural steel shapes and plates shall be according to AASHTO M270 Grade 50 (M 270M Grade 345) and the requirements of Article 1006.04 of the Standard Specifications. All steel components of the grating system shall be galvanized according to AASHTO M 111 or M 232 as applicable.

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

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

CONSTRUCTION REQUIREMENTS

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

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

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

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

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

WARM MIX ASPHALT (BDE)

Effective: January 1, 2012

Revised: November 1, 2014

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

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

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

Equipment.

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

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

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

“(13) Equipment for Warm Mix Technologies.

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

Mix Design Verification.

Add the following to Article 1030.04 of the Standard Specifications.

“(e) Warm Mix Technologies.

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

Construction Requirements.

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

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

Basis of Payment.

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

WEEKLY DBE TRUCKING REPORTS (BDE)

Effective: June 2, 2012

Revised: April 2, 2015

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

The report shall be submitted to the Engineer on Department form "SBE 723" within ten business days following the reporting period. The reporting period shall be Monday through Sunday for each week reportable trucking activities occur.

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

BITUMINOUS MATERIALS COST ADJUSTMENTS (BDE) (RETURN FORM WITH BID)

Effective: November 2, 2006

Revised: July 1, 2015

Description. Bituminous material cost adjustments will be made to provide additional compensation to the Contractor, or credit to the Department, for fluctuations in the cost of bituminous materials when optioned by the Contractor. The bidder shall indicate on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form, or failure to fill out the form completely, shall make this contract exempt of bituminous materials cost adjustments.

The adjustments shall apply to permanent and temporary hot-mix asphalt (HMA) mixtures, bituminous surface treatments (cover and seal coats), and preventative maintenance type surface treatments that are part of the original proposed construction, or added as extra work and paid for by agreed unit prices. The adjustments shall not apply to bituminous prime coats, tack coats, crack filling/sealing, joint filling/sealing, or extra work paid for at a lump sum price or by force account.

Method of Adjustment. Bituminous materials cost adjustments will be computed as follows.

$$CA = (BPI_P - BPI_L) \times (\%AC_V / 100) \times Q$$

- Where: CA = Cost Adjustment, \$.
 BPI_P = Bituminous Price Index, as published by the Department for the month the work is performed, \$/ton (\$/metric ton).
 BPI_L = Bituminous Price Index, as published by the Department for the month prior to the letting for work paid for at the contract price; or for the month the agreed unit price letter is submitted by the Contractor for extra work paid for by agreed unit price, \$/ton (\$/metric ton).
 %AC_V = Percent of virgin Asphalt Cement in the Quantity being adjusted. For HMA mixtures, the % AC_V will be determined from the adjusted job mix formula. For bituminous materials applied, a performance graded or cutback asphalt will be considered to be 100% AC_V and undiluted emulsified asphalt will be considered to be 65% AC_V.
 Q = Authorized construction Quantity, tons (metric tons) (see below).

For HMA mixtures measured in square yards: $Q, \text{ tons} = A \times D \times (G_{mb} \times 46.8) / 2000$. For HMA mixtures measured in square meters: $Q, \text{ metric tons} = A \times D \times (G_{mb} \times 1) / 1000$. When computing adjustments for full-depth HMA pavement, separate calculations will be made for the binder and surface courses to account for their different G_{mb} and % AC_V.

For bituminous materials measured in gallons: $Q, \text{ tons} = V \times 8.33 \text{ lb/gal} \times SG / 2000$
 For bituminous materials measured in liters: $Q, \text{ metric tons} = V \times 1.0 \text{ kg/L} \times SG / 1000$

- Where: A = Area of the HMA mixture, sq yd (sq m).
 D = Depth of the HMA mixture, in. (mm).
 G_{mb} = Average bulk specific gravity of the mixture, from the approved mix design.
 V = Volume of the bituminous material, gal (L).
 SG = Specific Gravity of bituminous material as shown on the bill of lading.

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

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

Bituminous materials cost adjustments will be calculated for each calendar month in which applicable bituminous material is placed; and will be paid or deducted when all other contract requirements for the work placed during the month are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Return With Bid

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**OPTION FOR
BITUMINOUS MATERIALS COST ADJUSTMENTS**

The bidder shall submit this completed form with his/her bid. Failure to submit the form, or failure to fill out the form completely, shall make this contract exempt of bituminous materials cost adjustments. After award, this form, when submitted, shall become part of the contract.

Contract No.: _____

Company Name: _____

Contractor's Option:

Is your company opting to include this special provision as part of the contract?

Yes No

Signature: _____ **Date:** _____

FUEL COST ADJUSTMENT (BDE) (RETURN FORM WITH BID)

Effective: April 1, 2009

Revised: July 1, 2015

Description. Fuel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in fuel prices when optioned by the Contractor. The bidder shall indicate on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form or failure to indicate contract number, company name and sign and date the form shall make this contract exempt of fuel cost adjustments for all categories of work. Failure to indicate "Yes" for any category of work will make that category of work exempt from fuel cost adjustment.

General. The fuel cost adjustment shall apply to contract pay items as grouped by category. The adjustment shall only apply to those categories of work checked "Yes", and only when the cumulative plan quantities for a category exceed the required threshold. Adjustments to work items in a category, either up or down, and extra work paid for by agreed unit price will be subject to fuel cost adjustment only when the category representing the added work was subject to the fuel cost adjustment. Extra work paid for at a lump sum price or by force account will not be subject to fuel cost adjustment. Category descriptions and thresholds for application and the fuel usage factors which are applicable to each are as follows:

(a) Categories of Work.

- (1) Category A: Earthwork. Contract pay items performed under Sections 202, 204, and 206 including any modified standard or nonstandard items where the character of the work to be performed is considered earthwork. The cumulative total of all applicable item plan quantities shall exceed 25,000 cu yd (20,000 cu m). Included in the fuel usage factor is a weighted average 0.10 gal/cu yd (0.50 liters/cu m) factor for trucking.
- (2) Category B: Subbases and Aggregate Base Courses. Contract pay items constructed under Sections 311, 312 and 351 including any modified standard or nonstandard items where the character of the work to be performed is considered construction of a subbase or aggregate, stabilized or modified base course. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is a 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.
- (3) Category C: Hot-Mix Asphalt (HMA) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 355, 406, 407 and 482 including any modified standard or nonstandard items where the character of the work to be performed is considered HMA bases, pavements and shoulders. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.

- (4) Category D: Portland Cement Concrete (PCC) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 353, 420, 421 and 483 including any modified standard or nonstandard items where the character of the work to be performed is considered PCC base, pavement or shoulder. The cumulative total of all applicable item plan quantities shall exceed 7500 sq yd (6000 sq m). Included in the fuel usage factor is 1.20 gal/cu yd (5.94 liters/cu m) factor for trucking.
- (5) Category E: Structures. Structure items having a cumulative bid price that exceeds \$250,000 for pay items constructed under Sections 502, 503, 504, 505, 512, 516 and 540 including any modified standard or nonstandard items where the character of the work to be performed is considered structure work when similar to that performed under these sections and not included in categories A through D.

(b) Fuel Usage Factors.

| English Units | | |
|----------------------------------------|--------|--------------|
| Category | Factor | Units |
| A - Earthwork | 0.34 | gal / cu yd |
| B – Subbase and Aggregate Base courses | 0.62 | gal / ton |
| C – HMA Bases, Pavements and Shoulders | 1.05 | gal / ton |
| D – PCC Bases, Pavements and Shoulders | 2.53 | gal / cu yd |
| E – Structures | 8.00 | gal / \$1000 |

| Metric Units | | |
|----------------------------------------|--------|---------------------|
| Category | Factor | Units |
| A - Earthwork | 1.68 | liters / cu m |
| B – Subbase and Aggregate Base courses | 2.58 | liters / metric ton |
| C – HMA Bases, Pavements and Shoulders | 4.37 | liters / metric ton |
| D – PCC Bases, Pavements and Shoulders | 12.52 | liters / cu m |
| E – Structures | 30.28 | liters / \$1000 |

(c) Quantity Conversion Factors.

| Category | Conversion | Factor |
|----------|--------------------|--------------------------------------|
| B | sq yd to ton | 0.057 ton / sq yd / in depth |
| | sq m to metric ton | 0.00243 metric ton / sq m / mm depth |
| C | sq yd to ton | 0.056 ton / sq yd / in depth |
| | sq m to metric ton | 0.00239 m ton / sq m / mm depth |
| D | sq yd to cu yd | 0.028 cu yd / sq yd / in depth |
| | sq m to cu m | 0.001 cu m / sq m / mm depth |

Method of Adjustment. Fuel cost adjustments will be computed as follows.

$$CA = (FPI_P - FPI_L) \times FUF \times Q$$

Where: CA = Cost Adjustment, \$
FPI_P = Fuel Price Index, as published by the Department for the month the work is performed, \$/gal (\$/liter)
FPI_L = Fuel Price Index, as published by the Department for the month prior to the letting for work paid for at the contract price; or for the month the agreed unit price letter is submitted by the Contractor for extra work paid for by agreed unit price, \$/gal (\$/liter)
FUF = Fuel Usage Factor in the pay item(s) being adjusted
Q = Authorized construction Quantity, tons (metric tons) or cu yd (cu m)

The entire FUF indicated in paragraph (b) will be used regardless of use of trucking to perform the work.

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

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

Fuel cost adjustments will be calculated for each calendar month in which applicable work is performed; and will be paid or deducted when all other contract requirements for the items of work are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Return With Bid

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**OPTION FOR
FUEL COST ADJUSTMENT**

The bidder shall submit this completed form with his/her bid. Failure to submit the form or properly complete contract number, company name, and sign and date the form shall make this contract exempt of fuel cost adjustments in all categories. Failure to indicate "Yes" for any category of work at the time of bid will make that category of work exempt from fuel cost adjustment. After award, this form, when submitted shall become part of the contract.

Contract No.: _____

Company Name: _____

Contractor's Option:

Is your company opting to include this special provision as part of the contract plans for the following categories of work?

- | | | |
|------------------------------------------------|-----|--------------------------|
| Category A Earthwork. | Yes | <input type="checkbox"/> |
| Category B Subbases and Aggregate Base Courses | Yes | <input type="checkbox"/> |
| Category C HMA Bases, Pavements and Shoulders | Yes | <input type="checkbox"/> |
| Category D PCC Bases, Pavements and Shoulders | Yes | <input type="checkbox"/> |
| Category E Structures | Yes | <input type="checkbox"/> |

Signature: _____ **Date:** _____

STEEL COST ADJUSTMENT (BDE) (RETURN FORM WITH BID)

Effective: April 2, 2004

Revised: July 1, 2015

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 on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form or failure to indicate contract number, company name, and sign and date the form shall make this contract exempt of steel cost adjustments for all items of steel. Failure to indicate "Yes" for any item of work will make that item of steel exempt from steel cost adjustment.

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

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

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

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

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

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

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

$$SCA = Q \times D$$

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

$$D = MPI_M - MPI_L$$

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

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

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

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

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

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

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

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

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

Attachment

| Item | Unit Mass (Weight) |
|-----------------------------------------------------------------------------------|--------------------------------|
| Metal Piling (excluding temporary sheet piling) | |
| Furnishing Metal Pile Shells 12 in. (305 mm), 0.179 in. (3.80 mm) wall thickness) | 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) |

Return With Bid

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**OPTION FOR
STEEL COST ADJUSTMENT**

The bidder shall submit this completed form with his/her bid. Failure to submit the form or properly complete contract number, company name, and sign and date the form shall make this contract exempt of steel cost adjustments for all items of steel. Failure to indicate "Yes" for any item of work will make that item of steel exempt from steel cost adjustment. After award, this form, when submitted shall become part of the contract.

Contract No.: _____

Company Name: _____

Contractor's Option:

Is your company opting to include this special provision as part of the contract plans for the following items of work?

- | | | |
|------------------------------------------------------------|-----|--------------------------|
| Metal Piling | Yes | <input type="checkbox"/> |
| Structural Steel | Yes | <input type="checkbox"/> |
| Reinforcing Steel | Yes | <input type="checkbox"/> |
| Dowel Bars, Tie Bars and Mesh Reinforcement | Yes | <input type="checkbox"/> |
| Guardrail | Yes | <input type="checkbox"/> |
| Steel Traffic Signal and Light Poles, Towers and Mast Arms | Yes | <input type="checkbox"/> |
| Metal Railings (excluding wire fence) | Yes | <input type="checkbox"/> |
| Frames and Grates | Yes | <input type="checkbox"/> |

Signature: _____ **Date:** _____

STORM WATER POLLUTION PREVENTION PLAN



Storm Water Pollution Prevention Plan



| | | |
|--------------------------|----------------------------------------------|--------------------------|
| Route FAS Route 1771A | Marked Route Old Route 66 / Frontage Road | Section D6 2015-7HSRR |
| Project Number | County Logan | Contract Number 72113 |

This plan has been prepared to comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Permit No. ILR10 (Permit ILR10), issues by the Illinois Environmental Protection Agency (IEPA) for storm water discharges from construction site activities.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

| | | |
|------------------------------------|----------------------------|--------------------|
| Print Name ROGER L. DEISKELL | Title REGION 4 ENGINEER | Agency IDOT |
| Signature Roger L. Deiskell JRN | | Date 12/22/2015 |

I. Site Description

A. Provide a description of the project location (include latitude and longitude):

The project site is located south of the City of Lincoln, Logan County, Illinois, south of the intersection of Old Route 66 (Frontage Road) and Business Route 55 (Lincoln Parkway).

Project is located in Broadwell Township, Logan County, Illinois,
 SE 1/4 of Section 10 and W 1/2 of Section 11, T19N, R3W, of the 3rd P.M.
 Latitude: N 40°06'39"
 Longitude: W 89°24'23"

The design, installation, and maintenance of BMPs at these locations are within an area where annual erosivity (R value) is less than or equal to 160. Erosivity is less than 5 in all two-week periods between October 12 and April 15, which would qualify for a construction rainfall erosivity waiver under the US Construction General Permit requirements. At these locations, erosivity is highest in spring to autumn, April 16 - October 11.

B. Provide a description of the construction activity which is subject of this plan:

This project consists of roadway construction (reconstruction, rehabilitation, and widening) the existing roadway to provide a safety improvement for the railroad crossing. Work will include: pavement removal and replacement; earthwork grading and embankment; enclosed drainage system and drainage system improvements; landscaping; maintenance of traffic; and erosion control.

C. Provide the estimated duration of this project:

4 months

D. The total area of the construction site is estimated to be 30 acres.

The total area of the site estimated to be disturbed by excavation, grading or other activities is 14 acres.

E. The following is a weighted average of the runoff coefficient for this project after construction activities are completed:

0.53

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

K Factor, Whole Soil— Summary by Map Unit — Livingston County, Illinois (IL105)

| Map symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
|-----------------------------|-----------------------------------------------------|--------|--------------|----------------|
| 43A | Ipava silt loam, 0 to 2 percent slopes | 0.32 | 3.4 | 24.4% |
| 68A | Sable silty clay loam, 0 to 2 percent slopes | 0.24 | 7.1 | 50.2% |
| 148C2 | Proctor silt loam 5 to 10 percent slopes, eroded | 0.37 | 0.6 | 4.0% |
| 159B | Pillot silt loam, 2 to 5 percent slopes | 0.28 | 1.1 | 7.7% |
| 159C2 | Pillot silt loam, 5 to 10 percent slopes, eroded | 0.37 | 0.0 | 0.3% |
| 737B | Tama silt loam 2 to 5 percent slopes | 0.28 | 1.9 | 13.4% |
| Totals for Area of Interest | | | 14.1 | 100.0% |

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

G. Provide an aerial extent of wetland acreage at the site:

Approximately 0.37 acre site of freshwater emergent wetland (coded as PEMAX under the National Wetland Inventory) exists in the NorthEast quadrant of Old Route 66 and Business 55 (Lincoln Highway) that will not be disturbed as part of the project improvements. This existing wetland will be protected by constructing 2 rows of perimeter erosion barrier between the construction work area and the wetland along with preserving existing vegetation to the extent practical.

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

Initial removal of topsoil and existing vegetation to grade new embankment throughout project will provide areas of non stabilized soil requiring erosion control measures.

I. The following is a description of soil disturbing activities by stages, their locations, and their erosive factors (e.g. steepness of slopes, length of scopes, etc.):

New embankments will be constructed with longitudinal slopes not exceeding 5% and side slopes will be limited to small localized areas not exceeding a 3:1 (horizontal:vertical) slope. Open areas under proposed pavement will be covered with aggregate relatively quickly. The relative short time required for the improvement will replace all areas with new pavement or new vegetation (seeding) minimizing the potential for minimal erosion.

J. See the erosion control plans and/or drainage plans for this contract for information regarding drainage patterns, approximate slopes anticipated before and after major grading activities, locations where vehicles enter or exit the site and controls to prevent off site sediment tracking (to be added after contractor identifies locations), areas of soil disturbance, the location of major structural and non-structural controls identified in the plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands) and locations where storm water is discharged to surface water including wetlands.

K. Identify who owns the drainage system (municipality or agency) this project will drain into:

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

M. The following is a list of receiving water(s) and the ultimate receiving water(s) for this site. The location of the receiving waters can be found on the erosion and sediment control plans:

Tributary to Kickapoo Creek, feeding to Salt Creek located approximately 1 mile north and 2.5 miles west of the intersection of Business 55 (Lincoln Parkway) and Old Route 66 (Frontage Road).

N. Describe areas of the site that are to be protected or remain undisturbed. These areas may include steep slopes, highly erodible soils, streams, stream buffers, specimen trees, natural vegetation, nature preserves, etc.

All current established vegetation outside of the project area will be maintained.

O. The following sensitive environmental resources are associated with this project, and may have the potential to be impacted by the proposed development:

- Floodplain
- Wetland Riparian
- Threatened and Endangered Species
- Historic Preservation
- 303(d) Listed receiving waters for suspended solids, turbidity, or siltation
- Receiving waters with Total Maximum Daily Load (TMDL) for sediment, total suspended solids, turbidity, or siltation
- Applicable Federal, Tribal, State or Local Programs
- Other

1. 303(d) Listed receiving waters (fill out this section if checked above):

a. The name(s) of the listed water body, and identification of all pollutants causing impairment:

b. Provide a description of how erosion and sediment control practices will prevent a discharge of sediment resulting from a storm event equal to or greater than a twenty-five (25) year, twenty-four (24) hour rainfall event:

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

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

2. TMDL (fill out this section if checked above)

a. The name(s) of the listed water body:

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

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

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

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

II. Controls

This section of the plan addresses the controls that will be implemented for each of the major construction activities described in I.C. above and for all use areas, borrow sites, and waste sites. For each measure discussed, the Contractor will be responsible for its implementation as indicated. The Contractor shall provide to the Resident Engineer a plan for the implementation of the measures indicated. The Contractor and subcontractors, will notify the Resident Engineer of any proposed changes, maintenance, or modifications to keep construction activities compliant with the Permit ILR10. Each such Contractor has signed the required certification on forms which are attached to, and are a part of, this plan:

A. **Erosion and Sediment Controls:** At a minimum, controls must be coordinated, installed, and maintained to:

1. Minimize the amount of soil exposed during construction activity;
2. Minimize the disturbance of steep slopes;
3. Maintain natural buffers around surface waters, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration, unless infeasible;
4. Minimize soil compaction and, unless infeasible, preserve topsoil.

B. **Stabilization Practices:** Provided below is a description of interim and permanent stabilization practices, including site- specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices may include but are not limited to: temporary seeding, permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided below in II(B)(1) and II(B)(2), stabilization measures shall be initiated **immediately** where construction activities have temporarily or permanently ceased, but in no case more than **one (1) day** after the construction activity in that portion of the site has temporarily or permanently ceases on all disturbed portions of the site where construction will not occur for a period of fourteen (14) or more calendar days.

1. Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable.
2. On areas where construction activity has temporarily ceased and will resume after fourteen (14) days, a temporary stabilization method can be used.

The following stabilization practices will be used for this project:

- | | |
|-----------------------------------------------------------------------|----------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Preservation of Mature Vegetation | <input checked="" type="checkbox"/> Erosion Control Blanket / Mulching |
| <input type="checkbox"/> Vegetated Buffer Strips | <input type="checkbox"/> Sodding |
| <input checked="" type="checkbox"/> Protection of Trees | <input type="checkbox"/> Geotextiles |
| <input checked="" type="checkbox"/> Temporary Erosion Control Seeding | <input checked="" type="checkbox"/> Other (specify) <u>Mulch, Method 2</u> |

- | | |
|-----------------------------------------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> Temporary Turf (Seeding, Class 7) | <input type="checkbox"/> Other (specify) _____ |
| <input checked="" type="checkbox"/> Temporary Mulching | <input type="checkbox"/> Other (specify) _____ |
| <input checked="" type="checkbox"/> Permanent Seeding | <input type="checkbox"/> Other (specify) _____ |

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

All sediment and erosion control measures will be installed per IDOT standard section 280 as specified in the IDOT's standard specifications, Adopted January 1, 2012. All construction activities will be in accordance with the national pollution discharge elimination system storm water permit ILR40.

Erosion control will be provided in accordance with the sequence of construction staging. Sediment and erosion control devices will be functional before the project site is disturbed. All disturbed areas will be seeded or sodded as soon as practical after construction activities in that area have concluded. Temporary erosion control measures consist of perimeter erosion barrier (silt fencing), inlet filters, temporary seeding, and erosion control blankets. Settling basin/tank or dewatering filter bag may be used if an area requires dewatering. All erosion control measures will be kept operational and maintained continuously throughout the period of land disturbance until permanent sediment and erosion control measures are operational.

Stabilization controls runoff volume and velocity, peak runoff rates and volumes of discharge to minimize exposed soil, disturbed slopes, sediment discharges from construction, and provides for natural buffers and minimization of soil compaction. Existing vegetated areas where disturbance can be avoided will not require stabilization.

Erosion control measures will be inspected by the engineer periodically and within 24 hours of any storm exceeding ½ inch precipitation. Damaged and ineffective erosion control measures will be repaired or replaced within 72 hours.

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

All temporary erosion control measures will be removed after permanent turf has been established throughout the project area.

- C. **Structural Practices:** Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include but are not limited to: perimeter erosion barrier, earth dikes, drainage swales, sediment traps, ditch checks, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. The installation of these devices may be subject to Section 404 of the Clean Water Act.

The following stabilization practices will be used for this project:

- | | |
|------------------------------------------------------------------|--------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Perimeter Erosion Barrier | <input type="checkbox"/> Rock Outlet Protection |
| <input checked="" type="checkbox"/> Temporary Ditch Check | <input type="checkbox"/> Riprap |
| <input checked="" type="checkbox"/> Storm Drain Inlet Protection | <input type="checkbox"/> Gabions |
| <input type="checkbox"/> Sediment Trap | <input type="checkbox"/> Slope Mattress |
| <input type="checkbox"/> Temporary Pipe Slope Drain | <input type="checkbox"/> Retaining Walls |
| <input type="checkbox"/> Temporary Sediment Basin | <input type="checkbox"/> Slope Walls |
| <input type="checkbox"/> Temporary Stream Crossing | <input type="checkbox"/> Concrete Revetment Mats |
| <input type="checkbox"/> Stabilized Construction Exits | <input type="checkbox"/> Level Spreaders |
| <input type="checkbox"/> Turf Reinforcement Mats | <input checked="" type="checkbox"/> Other (specify) Stabilized Flow Line |
| <input type="checkbox"/> Permanent Check Dams | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Permanent Sediment Basin | <input type="checkbox"/> Other (specify) _____ |

1. Such practices may include but are not limited to: storm water detention structures (including wet ponds), storm water retention structures, flow attenuation by use of open vegetated swales and natural depressions, infiltration of runoff on site, and sequential systems (which combine several practices).

The practices selected for implementation were determined on the basis of the technical guidance in Chapter 41 (Construction Site Storm Water Pollution Control) of the IDOT Bureau of Design & Environment Manual. If practices other than those discussed in Chapter 41 are selected for implementation or if practices are applied to situations different from those covered in Chapter 41, the technical basis for such decisions will be explained below.

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

Description of permanent storm water management controls:

The proposed ditching design supplements an existing open ditch system that drains storm waters away from the project site. Throughout the improvement, all non-paved areas will be constructed to provide permanent turf which will facilitate cleaner runoff to the storm water receiving areas.

- F. **Approved State or Local Laws:** The management practices, controls, and provisions contained in this plan will be in accordance with IDOT specifications, which are at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Illinois Urban Manual. Procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials shall be described or incorporated by reference in the space provided below. Requirements specified in sediment and erosion site plans, site permits, storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI, to be authorized to discharge under the Permit ILR10 incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

Description of procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials:

All management practices, controls, and other provisions provided in this project are in accordance with IDOT Standard Specifications for Road and Bridge Construction adopted January 1, 2016, and the project special provisions.

- G. **Contractor Required Submittals:** Prior to conducting any professional services at the site covered by this plan, the Contractor and each subcontractor responsible for compliance with the permit shall submit to the Resident Engineer a Contractor Certification Statement, BDE 2342a.

1. The Contractor shall provide a construction schedule containing an adequate level of detail to show major activities with implementation of pollution prevention BMPs, including the following items:
 - Approximate duration of the project, including each stage of the project
 - Rainy season, dry season, and winter shutdown dates
 - Temporary stabilization measures to be employed by contract phases
 - Mobilization time frame
 - Mass clearing and grubbing/roadside clearing dates
 - Deployment of Erosion Control Practices
 - Deployment of Sediment Control Practices (including stabilized construction entrances/exits)
 - Deployment of Construction Site Management Practices (including concrete washout facilities, chemical storage, refueling locations, etc.)
 - Paving, saw-cutting, and any other pavement related operations
 - Major planned stockpiling operations
 - Time frame for other significant long-term operations or activities that may plan non-storm water discharges such as dewatering, grinding, etc.
 - Permanent stabilization activities for each area of the project
2. The Contractor and each subcontractor shall provide, as an attachment to their signed Contractor Certification Statement, a discussion of how they will comply with the requirements of the permit in regard to the following items and provide a graphical representation showing location and type of BMPs to be used when applicable:

- Vehicle Entrances and Exits - Identify type and location of stabilized construction entrances and exits to be used and how they will be maintained.
- Material delivery, Storage, and Use - Discuss where and how materials including chemicals, concrete curing compounds, petroleum products, etc. will be stored for this project.
- Stockpile Management - Identify the location of both on-site and off-site stockpiles. Discuss what BMPs will be used to prevent pollution of storm water from stockpiles.
- Waste Disposal - Discuss methods of waste disposal that will be used for this project.
- Spill Prevention and Control - Discuss steps that will be taken in the event of a material spill (chemicals, concrete curing compounds, petroleum, etc.).
- Concrete Residuals and Washout Wastes - Discuss the location and type of concrete washout facilities to be used on this project and how they will be signed and maintained.
- Litter Management - Discuss how litter will be maintained for this project (education of employees, number of dumpsters, frequency of dumpster pick-up, etc.).
- Vehicle and Equipment Cleaning and Maintenance - Identify where equipment cleaning and maintenance locations for this project and what BMPs will be used to ensure containment and spill prevention.
- Dewatering Activities - Identify the controls which will be used during dewatering operations to ensure sediments will not leave the construction site.
- Polymer Flocculants and Treatment Chemicals - Identify the use and dosage of treatment chemicals and provide the Resident Engineer with Material Safety Data Sheets. Describe procedures on how the chemicals will be used and identify who will be responsible for the use and application of these chemicals. The selected individual must be trained on the established procedures.
- Additional measures indicated in the plan.

III. Maintenance

When requested by the Contractor, the Resident Engineer will provide general maintenance guides to the Contractor for the practices associated with this project. The following additional procedures will be used to maintain, in good and effective operating conditions, the vegetation, erosion and sediment control measures and other protective measures identified in this plan. It will be Contractor's responsibility to attain maintenance guidelines for any manufactured BMPs which are to be installed and maintained per manufacture's specifications.

The IDOT Erosion and Sediment Control Field Guide for Construction Inspection and IDOT's Best Management Practices – Maintenance Guide per the new website. They can be found at:

<http://www.idot.illinois.gov/transportation-system/environment/erosion-and-sediment-control>

Information on maintenance procedures including but not limited to:

- A list of all ESC measures that will be inspected – perimeter erosion barrier, storm drain inlet protection, riprap, erosion control blanket/temporary mulching, permanent seeding, temporary erosion control seeding, temporary ditch checks, stabilized construction entrance, etc
- Text describing how all items will be checked for structural integrity, sediment accumulation and functionality. Also note that any damaged or undermining shall be immediately repaired. Include specifics on how repairs will be made i.e. accumulated sediment should be removed and properly disposed of as required, stone at riprap aprons will be replaced due to washout, etc.

IV. Inspections

Qualified personnel shall inspect disturbed areas of the construction site which have not yet been finally stabilized, structural control measures, and locations where vehicles and equipment enter and exit the site using IDOT Storm Water Pollution Prevention Plan Erosion Control Inspection Report (BC 2259). Such inspections shall be conducted at least once every seven (7) calendar days and within twenty-four (24) hours of the end of a storm or by the end of the following business or work day that is 0.5 inch or greater or equivalent snowfall.

Inspections may be reduced to once per month when construction activities have ceased due to frozen conditions. Weekly inspections will recommence when construction activities are conducted, or if there is 0.5" or greater rain event, or a discharge due to snowmelt occurs.

If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer shall notify the appropriate IEPA Field Operations Section office by e-mail at: epa.swnoncomp@illinois.gov, telephone or fax within twenty-four (24) hours of the incident. The Resident Engineer shall then complete and submit an "Incidence of Non-Compliance" (ION) report for the identified violation within five (5) days of the incident. The Resident Engineer shall use forms provided by IEPA and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of non-compliance shall be signed by a responsible authority in accordance with Part VI. G of the Permit ILR10.

The Incidence of Non-Compliance shall be mailed to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Compliance Assurance Section
1021 North Grand East
Post Office Box 19276
Springfield, Illinois 62794-9276

Additional Inspections Required:

All offsite Borrow, Waste and Use areas are part of the construction site and are to be inspected according to the language in this section.

V. Failure to Comply

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of a National Pollutant Discharge Elimination System/Erosion and Sediment Control Deficiency Deduction against the Contractor and/or penalties under the Permit ILR10 which could be passed on to the Contractor.



Contractor Certification Statement



Prior to conducting any professional services at the site covered by this contract, the Contractor and every subcontractor must complete and return to the Resident Engineer the following certification. A separate certification must be submitted by each firm. Attach to this certification all items required by Section II.G of the Storm Water Pollution Prevention Plan (SWPPP) which will be handled by the Contractors/subcontractor completing this form.

| | | |
|--------------------------|----------------------------------------------|--------------------------|
| Route FAP Route 1771A | Marked Route Old Route 66 (Frontage Road) | Section D6 2015-7HSRR |
| Project Number | County Logan | Contract Number 72113 |

This certification statement is a part of SWPPP for the project described above, in accordance with the General NPDES Permit No. ILR10 issued by the Illinois Environmental Protection Agency.

I certify under penalty of law that I understand the terms of the Permit No. ILR10 that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

In addition, I have read and understand all of the information and requirements stated in SWPPP for the above mentioned project; I have received copies of all appropriate maintenance procedures; and, I have provided all documentation required to be in compliance with the Permit ILR10 and SWPPP and will provide timely updates to these documents as necessary.

- Contractor
- Sub-Contractor

| | |
|----------------|----------------|
| Print Name | Signature |
| Title | Date |
| Name of Firm | Telephone |
| Street Address | City/State/Zip |

Items which the Contractor/subcontractor will be responsible for as required in Section II.G. of SWPPP:

FEDERAL COMPLIANCE REQUIREMENTS

(a) The flowdown provision requirements stated in IDOT's high speed rail grant from the FRA, which are referenced in this Contract, apply to subcontracts entered into solely in connection with the Project after the date of the execution and delivery of this Contract.

(b) Contractor shall comply with the provisions of 49 USC §24405(c)(2) with respect to the payment of prevailing wages with respect to the Project consistent with the provisions of 49 USC §24312. Prevailing wage rates are established for purposes of this Contract pursuant to the rates provided by the Department of Labor and certain applicable regulations. Any charge for prevailing wage adjustments shall be deemed appropriate and acceptable as a Project cost unless the Illinois Department of Transportation ("IDOT") or any authorized auditor of the Project objects to such charge within 10 business days of receipt by IDOT of an invoice for such charge.

(c) Contractor shall comply with respect to the Project with the Buy America provisions set forth in 49 USC §24405(a), with respect to the use of steel, iron, and manufactured goods produced in the United States, subject to the conditions therein set forth.

(d) Contractor agrees to comply with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, 42 USC §§ 4601 et seq.; and U.S. DOT regulations, "Uniform Relocation and Real Property Acquisition for Federal and Federally Assisted Programs," 49 C.F.R. Part 24, with respect to the Project.

(e) Contractor agrees to comply with the flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973, 42 USC § 4012 (a) with respect to the Project.

(f) Contractor agrees to obtain certifications on debarment and suspension from its third party contractors and subgrantees and otherwise comply with U.S. DOT regulations, "Nonprocurement Suspension and Debarment," 2 C.F.R. Part 1200, and "Government wide Requirements for Drug-Free Workplace (Grants)," 49 C.F.R. Part 32 with respect to the Project.

(g) Contractor agrees to comply with all civil rights laws and regulations, in accordance with applicable Federal directives, except to the extent that the FRA determines otherwise, in writing, with respect to the Project. These include, but are not limited to, the following: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) (as implemented by 49 C.F.R. Part 21), which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§ 1681- 1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§ 1601-1607), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the

Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§ 523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§ 290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§ 3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) 49 U.S.C. § 306, which prohibits discrimination on the basis of race, color, national origin, or sex in railroad financial assistance programs; (j) E.O. 11246 as amended by E.O. 11375, and as supplemented by regulations at 41 CFR part 60, which ensures that all business organizations receive fair and equal consideration and prohibits discrimination against any employee; (k) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance was made; and (l) the requirements of any other nondiscrimination statute(s) which may apply to Contractor with respect to the Project. Contractor shall include a provision that requires compliance with E.O. 11246 as amended by E.O. 11375, and as supplemented by regulations at 41 CFR part 60 in all lower tier contracts entered into by Contractor solely in connection with the Project after the date of the execution and delivery of the Contract.

(h) Contractor agrees to utilize funds provided under this Contract in a manner consistent with the requirements of the Americans with Disabilities Act of 1990, as amended (42 U.S.C. § 12101 et seq.).

(i) Environmental Provisions.

(1) Contractor will conduct work under this Contract, and will require that work that it causes to be conducted as a result of this Contract, be in compliance with the following provisions, as modified from time to time, all of which are incorporated herein by reference: section 114 of the Clean Air Act, 42 U.S.C. 7414, and section 308 of the Federal Water Pollution Control Act, 33 U.S.C. 1318, and all regulations issued thereunder. Contractor certifies that no facilities that will be used to perform work under this Contract are listed on the EPA's List of Violating Facilities maintained by the Environmental Protection Agency (EPA). Contractor will notify IDOT as soon as it or any contractor or subcontractor engaged by it receives any communication from the EPA indicating that any facility which will be used to perform work pursuant to this Contract is under consideration to be listed on the EPA's List of Violating Facilities; *provided, however*, that Contractor's duty of notification hereunder shall extend only to those communications of which it is aware, or should reasonably have been aware. Contractor shall include in each contract or subcontract exceeding \$50,000 entered into by Contractor solely in connection with the Project after the date of the execution and delivery of the Contract: (1) the environmental criteria and requirements of this section (i) and (2) an affirmative covenant requiring such contractor or subcontractor to immediately inform Contractor upon the receipt of a communication from the Environmental Protection Agency ("EPA") regarding the EPA's List of Violating Facilities.

(2) Contractor shall use the Project property, equipment, and supplies acquired with the proceeds of Federal funds provided under this Contract for the provision of the Project activity for the duration of their useful life. The project property, equipment, and supplies

financed with Federal funds are subject to the property management standards, including disposition, of 49 CFR Part 18.

(3) Contractor may not expend any of the funds provided in this Contract on construction or other activities that represent an irretrievable commitment of resources to a particular course of action affecting the environment until after all environmental and historic preservation analyses required by the National Environmental Policy Act (42 U.S.C. 4332)(NEPA), the National Historic Preservation Act (16 U.S.C. 470(f)(NHPA), and related laws and regulations have been completed.

(4) The Contractor shall assist IDOT with the provisions of NEPA, the Council on Environmental Quality's regulations Implementing NEPA (40 C.F.R. Part 1500 et seq.), FRA's "Procedures for Considering Environmental Impacts (45 Fed. Reg. 40854, June 16, 1980), as revised May 26, 1999, 64 Fed. Reg. 285-45), Section 106 of NHPA, and related environmental and historic preservation statutes and regulations. As a condition of receiving Federal funds under this Contract, the Contractor may be required to conduct certain environmental analyses and to assist IDOT in preparing and submitting to FRA draft documents required under NEPA, NHPA, and related statutes and regulations including draft environmental assessments and proposed draft and final environmental impact statements.

(5) No publicly owned land from a park, recreational area, or wildlife or waterfowl refuge of national, state, or local significance as determined by Federal, State, or local officials having jurisdiction thereof, or any land from an historic site of national, state, or local significance as so determined by such officials shall be used by the Contractor without the prior written concurrence of FRA. Contractor shall assist IDOT in complying with the requirements of 49 U.S.C. 303(c).

(6) All facilities that will be used to perform work under this Contract shall not be so used unless the facilities are designed and equipped to limit water and air pollution in accordance with all applicable local, state and Federal standards.

(j) Project costs will only be reimbursed if such costs are considered allowable pursuant to OMB Circular A-87, 'Cost Principles for State, Local, and Indian Tribal Governments' (codified at 2 CFR Part 225). The Project performance will be "governed by and in compliance with the following Administrative and Cost Principles: 49 C.F.R. Part 18; 49 C.F.R. Part 19; OMB Circular A-21, 'Cost Principles for Educational Institutions;' OMB Circular A-122, 'Cost Principles for Nonprofit Organizations;' and FAR, 48 C.F.R. Chapter I, Subpart 31.2." Funds used for management and administrative costs will be reimbursable if reasonable, allocable, and in accordance with applicable OMB cost principles. Contractor shall comply with all circulars that replace any of the foregoing circulars.

(k) Contractor shall comply with 46 U.S.C. § 1241(b), and the regulations issued thereunder (46 CFR Part 381).

(l) The foregoing provisions must be included in all subcontracts entered into by Contractor solely in connection with the Project after the date of the execution and delivery of this Contract.

ARRA REQUIREMENTS

Authority of the U.S. Comptroller General. Section 902 of ARRA requires that each contract awarded using ARRA funds allow the U.S. Comptroller General and his representatives to:

1. Examine, copy, and/or audit any records of CONTRACTOR or any of its subcontractors, or any State or local agency administering such contract, that directly pertain to, and involve transactions relating to, the contract or subcontract; and
2. Interview any officer or employee of CONTRACTOR or any of its subcontractors, or of any State or local government agency administering the contract, regarding such transactions.

Authorized representatives of the Illinois Department of Transportation ("IDOT"), FRA, and U.S. DOT shall have the same rights afforded to the Comptroller General and his representatives under Section 902 of ARRA. Accordingly, the Comptroller General and his representatives shall have the authority and rights as provided under Section 902 of ARRA with respect to the Contract, which is funded with funds made available under ARRA. Section 902 further states that nothing in this section shall be interpreted to limit or restrict in any way any existing authority of the Comptroller General. In connection with audit and inspection activities, CONTRACTOR shall provide authorized representatives of IDOT, FRA, U.S. DOT, and the U.S. Comptroller General 1) access to CONTRACTOR's facilities and to contract work and/or deliverables in progress and 2) adequate and appropriate workspace. CONTRACTOR shall include these ARRA Requirements in every material subcontract (e.g., exceeding \$100,000) entered into by CONTRACTOR solely in connection with the Project after the date of the execution and delivery of the Contract, as well as a provision requiring all subcontractors to include these provisions in any lower tier subcontracts.

Authority of the Inspector General. Section 1515(a) of ARRA provides authority for any representatives of the Inspector General to examine any records or interview any employee or officers working on the Project. CONTRACTOR is advised that representatives of the Inspector General have the authority to examine any record and interview any employee or officer of CONTRACTOR, its subcontractors or other firms working on the Project. Section 1515(b) further provides that nothing in these Requirements shall be interpreted to limit or restrict in any way any existing authority of the Inspector General.

Prohibited Activities. CONTRACTOR agrees that in no event shall proceeds of ARRA funds be used for any casino or other gaming establishment, aquarium, zoo, golf course or swimming pool.

Violations of Law. CONTRACTOR shall report to the U.S. DOT Inspector General or other appropriate Inspector General any credible evidence that a principal, employee, agent, contractor, subcontractor, or other person has submitted a false claim under the False Claims

Act, 31 U.S.C. §§ 3729 et seq., or has committed a criminal or civil violation of law pertaining to fraud, conflict of interest, bribery, gratuity, or similar misconduct involving ARRA funds.

Whistleblower Protections. IDOT and CONTRACTOR shall comply with the State, local government, and contractor whistleblower protections of ARRA Section 1553.

Integrity. CONTRACTOR agrees that all data it submits to IDOT in compliance with ARRA requirements will be accurate, objective, and of the highest integrity.

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.