

**If you plan to submit a bid directly to the Department of Transportation**

**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.

**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 124INT) 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.

**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.

**WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID?:** When a prospective prime bidder submits a "Request for Authorization to Bid/or Not For Bid Status"(BDE 124INT) 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 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 form within a reasonable time of complete and correct original document submittal should contact the department as to status. This is critical in the week before the letting. These documents must be received three days before the letting date. 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 contractor'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 will be placed with the contract number. 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 server e-mails are an added courtesy the Department provides. It is suggested that bidders check IDOT's website at <http://www.dot.il.gov/desenv/delett.html> 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 [D&Econtracts@dot.il.gov](mailto:D&Econtracts@dot.il.gov)

Technical Questions about downloading these files may be directed to Tim Garman (217)524-1642 or [Timothy.Garman@illinois.gov](mailto:Timothy.Garman@illinois.gov).

**WHAT MUST BE INCLUDED WHEN BIDS ARE SUBMITTED?:** Bidders need not return the entire proposal when bids are submitted. That portion of the proposal that must be returned includes the following:

1. All documents from the Proposal Cover Sheet through the Proposal Bid Bond
2. Other special documentation and/or information that may be required by the contract special provisions

All proposal documents, including Proposal Guaranty Checks or Proposal Bid Bonds, should be stapled together to prevent loss when bids are processed by IDOT personnel.

**ABOUT SUBMITTING BIDS:** It is recommended that bidders deliver bids in person to insure they arrive at the proper location prior to the time specified for the receipt of bids. Any bid received at the place of letting after the time specified will not be accepted.

**WHO SHOULD BE CALLED IF ASSISTANCE IS NEEDED?**

<b>Questions Regarding</b>	<b>Call</b>
Prequalification and/or Authorization to Bid	217/782-3413
Preparation and submittal of bids	217/782-7806
Mailing of plans and proposals	217/782-7806

**ADDENDUMS AND REVISIONS TO THE PROPOSAL FORMS**

Planholders should verify that they have received and incorporated any addendum and/or revision prior to submitting their bid. Failure by the bidder to include an addendum or revision could result in a bid being rejected as irregular.

# 250

RETURN WITH BID

Proposal Submitted By
Name
Address
City

Letting April 23, 2010

**BIDDERS NEED NOT RETURN THE ENTIRE PROPOSAL**  
(See instructions inside front cover)

### 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.

(SEE INSTRUCTIONS ON THE INSIDE OF COVER)

# Notice To Bidders, Specifications, Proposal, Contract and Contract Bond



**Illinois Department  
of Transportation**

Springfield, Illinois 62764

Contract No. 66A08  
LASALLE-GRUNDY Counties  
Section (50-5,6 & 32-1,2)RS-3  
Route FAI 80  
Project ACIM-080-3(132)097  
District 3 Construction Funds

PLEASE MARK THE APPROPRIATE BOX BELOW:

- A Bid Bond is included.
- A Cashier's Check or a Certified Check is included

Prepared by

Checked by

F

(Printed by authority of the State of Illinois)

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## INSTRUCTIONS

**ABOUT IDOT PROPOSALS:** All proposals issued by IDOT are potential bidding proposals. Each proposal contains all Certifications and Affidavits, a Proposal Signature Sheet and a Proposal Bid Bond required for Prime Contractors to submit a bid after written **Authorization to Bid** has been issued by IDOT's Central Bureau of Construction.

**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. To request authorization, a potential bidder must complete and submit Part B of the Request for Authorization to Bid/or Not For Bid Status form (BDE 124 INT) and submit an original Affidavit of Availability (BC 57).

**WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID?:** When a prospective prime bidder submits a "Request for Authorization to Bid/or Not For Bid" form, 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 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. If a contractor has requested to bid but has not received a **Authorization to Bid or Not for Bid Report**, they should contact the Central Bureau of Construction in advance of the letting date.

**WHAT MUST BE INCLUDED WHEN BIDS ARE SUBMITTED?:** Bidders need not return the entire proposal when bids are submitted. That portion of the proposal that must be returned includes the following:

1. All documents from the Proposal Cover Sheet through the Proposal Bid Bond
2. Other special documentation and/or information that may be required by the contract special provisions

All proposal documents, including Proposal Guaranty Checks or Proposal Bid Bonds, should be stapled together to prevent loss when bids are processed by IDOT personnel.

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### WHO SHOULD BE CALLED IF ASSISTANCE IS NEEDED?

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Prequalification and/or Authorization to Bid	217/782-3413
Preparation and submittal of bids	217/782-7806

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. 66A08  
LASALLE-GRUNDY Counties  
Section (50-5,6 & 32-1,2)RS-3  
Project ACIM-080-3(132)097  
Route FAI 80  
District 3 Construction Funds**

**8.87 miles of pavement patching, milling and resurfacing, including the installation of high tension cable median barrier on I-80 between the Marseilles interchange and the Seneca interchange.**

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 shall govern performance and payments.



**RETURN WITH BID**

6. **COMBINATION BIDS.** The undersigned 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 proposal 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 shall 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. **CERTIFICATE OF AUTHORITY.** The undersigned bidder, if a business organized under the laws of another State, assures the Department that it will furnish a copy of its certificate of authority to do business in the State of Illinois with the return of the executed contract and bond. Failure to furnish the certificate within the time provided for execution of an awarded contract may be cause for cancellation of the award and forfeiture of the proposal guaranty to the State.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT  
 NUMBER -

66A08

State Job # - C-93-081-10  
 PPS NBR - 3-08050-0080  
 County Name - GRUNDY- LASALLE-  
 Code - 63 - 99 -  
 District - 3 - 3 -  
 Section Number - (50-5,6&32-1,2)RS-3

Project Number  
 ACIM-0803/132/097

Route  
 FAI 80

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
X0300780	PIEZO ELE SEN CBL CON	FOOT	416.000				
X0320157	CLEAN UNDERDR OUTLET	EACH	236.000				
X0322729	MATL TRANSFER DEVICE	TON	110,945.000				
X0323014	EC C CONOGA 30003	FOOT	780.000				
X0323015	PIEZO E AXL SEN CL 2	FOOT	44.000				
X0325231	CABLE GUARD MARKER	EACH	1,170.000				
X0325279	CLASS SI CONC (MISC)	CU YD	3.200				
X0325345	REALIGN EX ATTENUATOR	SQ YD	26.000				
X0325589	HT CBL MEDIAN BARRIER	FOOT	46,100.000				
X0325590	HT CBL MED BAR TERM	EACH	12.000				
X0325606	HT CBL MED BAR DEMO	EACH	1.000				
X0325702	NIGHT WORK ZONE LIGHT	L SUM	1.000				
X0325969	PORT VHMNT CH MSS BRD	CAL DA	100.000				
X0326725	WET REF PREFRM PPM L6	FOOT	23,416.000				
X0326867	RADAR SPEED TRAILER	CAL MO	7.000				

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 ACIM-0803/132/097

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
X0326868	WET REF THERMPL PM L4	FOOT	187,328.000				
X0326869	WET REF THERMPL PM L8	FOOT	5,490.000				
X0326870	WET REF THERMP PM L12	FOOT	1,014.000				
X0326871	SOLAR EQUIPMENT	L SUM	1.000				
X6013820	P UNDR OUTLET EXT SPL	EACH	20.000				
X7010805	TR C-PROT 701401 SPL	L SUM	1.000				
X7011008	TC-PROT ALT ROUTE SN	CAL MO	7.000				
X7030070	GRV RCSD PVT MRKG 5	FOOT	187,329.000				
X7030076	GRV RCSD PVT MRKG 9	FOOT	5,490.000				
Z0012800	CONC PAVT SCAR	SQ YD	2,379.000				
Z0017100	DOWEL BARS	EACH	1,684.000				
Z0029999	IMPACT ATTENUATOR REM	EACH	4.000				
Z0030150	IMPACT ATTEN NRD TL3	EACH	4.000				
Z0030390	IMP ATTN REPL NRD TL3	EACH	15.000				
Z0062000	SAW CUTTING	FOOT	3,754.000				

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Z0075300	TIE BARS	EACH	216.000				
Z0077800	WOOD POST	EACH	100.000				
20200100	EARTH EXCAVATION	CU YD	5,483.000				
20400800	FURNISHED EXCAVATION	CU YD	4,868.000				
25000210	SEEDING CL 2A	ACRE	25.400				
25000400	NITROGEN FERT NUTR	POUND	2,286.000				
25000500	PHOSPHORUS FERT NUTR	POUND	2,286.000				
25000600	POTASSIUM FERT NUTR	POUND	2,286.000				
25100630	EROSION CONTR BLANKET	SQ YD	122,936.000				
28000250	TEMP EROS CONTR SEED	POUND	4,760.000				
28000305	TEMP DITCH CHECKS	FOOT	1,336.000				
28000500	INLET & PIPE PROTECT	EACH	59.000				
40600115	P BIT MATLS PR CT	GALLON	68,602.000				
40600895	CONSTRUC TEST STRIP	EACH	4.000				
40600982	HMA SURF REM BUTT JT	SQ YD	2,601.000				

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40600990	TEMPORARY RAMP	SQ YD	2,695.000				
40603245	P HMA BC IL19.0 N105	TON	64,113.000				
40603310	HMA SC "C" N50	TON	11,661.000				
40603575	P HMA SC "E" N105	TON	35,171.000				
40800050	INCIDENTAL HMA SURF	TON	133.000				
42001200	PAVEMENT FABRIC	SQ YD	632.000				
44000153	HMA SURF REM 1	SQ YD	92,331.000				
44000163	HMA SURF REM 3 1/2	SQ YD	31,373.000				
44000169	HMA SURF REM 5	SQ YD	228,810.000				
44004250	PAVED SHLD REMOVAL	SQ YD	49,878.000				
44200970	CL B PATCH T2 10	SQ YD	22.000				
44200976	CL B PATCH T4 10	SQ YD	87.000				
44201031	CL B PATCH T2 15	SQ YD	628.000				
44201035	CL B PATCH T3 15	SQ YD	64.000				
44201037	CL B PATCH T4 15	SQ YD	429.000				

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Route  
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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
48101200	AGGREGATE SHLDS B	TON	8,744.000				
48203021	HMA SHOULDERS 6	SQ YD	2,518.000				
48203037	HMA SHOULDERS 10	SQ YD	64,220.000				
50105220	PIPE CULVERT REMOV	FOOT	47.000				
50300225	CONC STRUCT	CU YD	68.000				
50800105	REINFORCEMENT BARS	POUND	421.000				
50800205	REINF BARS, EPOXY CTD	POUND	8,547.000				
54002020	EXPAN BOLTS 3/4	EACH	36.000				
542A0220	P CUL CL A 1 15	FOOT	84.000				
542A0229	P CUL CL A 1 24	FOOT	26.000				
54213660	PRC FLAR END SEC 15	EACH	6.000				
54244405	FL INLT BX MED 542546	EACH	1.000				
54248510	CONCRETE COLLAR	CU YD	2.000				
63000001	SPBGR TY A 6FT POSTS	FOOT	5,675.000				
63000025	SPBGR ATTACH TO STR	FOOT	200.000				

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63100045	TRAF BAR TERM T2	EACH	15.000				
63100070	TRAF BAR TERM T5	EACH	3.000				
63100089	TRAF BAR TERM T6B	EACH	14.000				
63100167	TR BAR TRM T1 SPL TAN	EACH	24.000				
63200310	GUARDRAIL REMOV	FOOT	7,995.000				
63500105	DELINEATORS	EACH	242.000				
63500120	DELINEATOR REMOVAL	EACH	242.000				
64200105	SHOULDER RUMBLE STRIP	FOOT	183,329.000				
66500105	WOV W FENCE 4	FOOT	7,800.000				
66502300	WOV W FENCE REMOV	FOOT	7,800.000				
67000400	ENGR FIELD OFFICE A	CAL MO	12.000				
67100100	MOBILIZATION	L SUM	1.000				
70100420	TRAF CONT-PROT 701411	EACH	8.000				
70100825	TRAF CONT-PROT 701456	L SUM	1.000				
70103815	TR CONT SURVEILLANCE	CAL DA	32.000				

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70106800	CHANGEABLE MESSAGE SN	CAL MO	14.000				
70300220	TEMP PVT MK LINE 4	FOOT	187,328.000				
70300240	TEMP PVT MK LINE 6	FOOT	23,416.000				
70300250	TEMP PVT MK LINE 8	FOOT	5,490.000				
70300260	TEMP PVT MK LINE 12	FOOT	1,014.000				
70300505	PAVT MARK TAPE T3 SPL	FOOT	24,364.000				
70301000	WORK ZONE PAVT MK REM	SQ FT	8,121.000				
78100100	RAISED REFL PAVT MKR	EACH	2,480.000				
78200405	GUARDRAIL MARKERS	EACH	105.000				
78201000	TERMINAL MARKER - DA	EACH	24.000				
78202000	TERMINAL MARKER - PM	EACH	4.000				
78300200	RAISED REF PVT MK REM	EACH	2,058.000				
81012400	CON T 1 1/4 PVC	FOOT	106.000				
81012800	CON T 3 PVC	FOOT	35.000				
81021350	CON P 3 PVC	FOOT	46.000				

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81400200	HD HANDHOLE	EACH	3.000				
81900200	TR & BKFIL F ELECT WK	FOOT	125.000				
86300305	CONT CAB TYPE III SPL	EACH	1.000				
87800200	CONC FDN TY D	FOOT	3.000				
87900200	DRILL EX HANDHOLE	EACH	3.000				
88600100	DET LOOP T1	FOOT	304.000				
89502350	REM & RE ELCBL FR CON	FOOT	113.000				
89502380	REMOV EX HANDHOLE	EACH	1.000				
89502385	REMOV EX CONC FDN	EACH	1.000				

**CONTRACT NUMBER**

**66A08**

**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.**

## RETURN WITH BID

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

#### **I. GENERAL**

A. Article 50 of the Illinois Procurement Code establishes the duty of all State chief procurement officers, State purchasing officers, 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. By execution of the Proposal Signature Sheet, the bidder indicates that each of the mandated assurances has 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 termination of the contract and the suspension or debarment of the bidder.

#### **II. ASSURANCES**

A. 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. The Department may terminate the contract if it is later determined that the bidder rendered a false or erroneous assurance, and the surety providing the performance bond shall be responsible for the completion of the contract.

##### **B. Felons**

1. The Illinois Procurement Code provides:

Section 50-10. Felons. Unless otherwise provided, no person or business convicted of a felony shall do business with the State of Illinois or any state agency 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.

2. The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-10.

##### **C. Conflicts of Interest**

1. The Illinois Procurement Code provides in pertinent part:

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 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 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 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

2. 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 and Executive Order Number 3 (1998). Information concerning the exemption process is available from the Department upon request.

### **D. Negotiations**

1. The Illinois Procurement Code provides in pertinent part:

Section 50-15. Negotiations.

(a) 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.

2. 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.

### **E. Inducements**

1. The Illinois Procurement Code provides:

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 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 or who withholds a bid in consideration of the promise for the payment of money or other valuable thing is guilty of a Class 4 felony.

2. 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.

### **F. Revolving Door Prohibition**

1. The Illinois Procurement Code provides:

Section 50-30. Revolving door prohibition. Chief procurement officers, associate procurement officers, State purchasing officers, 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.

2. 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.

### **G. Reporting Anticompetitive Practices**

1. The Illinois Procurement Code provides:

Section 50-40. Reporting anticompetitive practices. When, for any reason, any vendor, bidder, contractor, chief procurement officer, State purchasing officer, 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 chief procurement officer.

2. 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 is submitted.

### **H. Confidentiality**

1. The Illinois Procurement Code provides:

Section 50-45. Confidentiality. Any chief procurement officer, State purchasing officer, 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.

2. 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

### **I. Insider Information**

1. The Illinois Procurement Act provides:

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.

2. 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.

### **III. CERTIFICATIONS**

**A.** 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. The Department may terminate the contract if it is later determined that the bidder rendered a false or erroneous certification, and the surety providing the performance bond shall be responsible for completion of the contract.

#### **B. Bribery**

1. The Illinois Procurement Code provides:

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 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, 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 1961.

- (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 shall contain a certification by the contractor that the contractor is not barred from being awarded a contract or subcontract under this Section. A contractor who makes a false statement, material to the certification, commits a Class 3 felony.

2. The bidder certifies that it is not barred from being awarded a contract under Section 50.5.

#### **C. Educational Loan**

1. Section 3 of the Educational Loan Default Act provides:

§ 3. No State agency shall contract with an individual for goods or services if that individual is in default, as defined in Section 2 of this Act, on an educational loan. Any contract used by any State agency shall include a statement certifying that the individual is not in default on an educational loan as provided in this Section.

2. 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.

#### **D. Bid-Rigging/Bid Rotating**

1. Section 33E-11 of the Criminal Code of 1961 provides:

§ 33E-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. The State and units of local government shall provide the appropriate forms for such certification.

## RETURN WITH BID

(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.

A violation of Section 33E-4 would be represented by a conviction of the crime of bid-rotating which, in addition to Class 2 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 permanently barred 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.

2. 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.

### **E. International Anti-Boycott**

1. Section 5 of the International Anti-Boycott Certification Act provides:

§ 5. State contracts. 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.

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

### **F. Drug Free Workplace**

1. 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.

2. The bidder certifies that if awarded a contract in excess of \$5,000 it will provide a drug free workplace by:

(a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance, including cannabis, is prohibited in the contractor's workplace; specifying the actions that will be taken against employees for violations of such prohibition; and notifying the employee that, as a condition of employment on such contract, the employee shall abide by the terms of the statement, and notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction.

(b) Establishing a drug free awareness program to inform employees about the dangers of drug abuse in the workplace; the contractor's policy of maintaining a drug free workplace; any available drug counseling, rehabilitation, and employee assistance programs; and the penalties that may be imposed upon employees for drug violations.

(c) Providing a copy of the statement required by subparagraph (1) to each employee engaged in the performance of the contract and to post the statement in a prominent place in the workplace.

(d) Notifying the Department within ten (10) days after receiving notice from an employee or otherwise receiving actual notice of the conviction of an employee for a violation of any criminal drug statute occurring in the workplace.

(e) Imposing or requiring, within 30 days after receiving notice from an employee of a conviction or actual notice of such a conviction, an appropriate personnel action, up to and including termination, or the satisfactory participation in a drug abuse assistance or rehabilitation program approved by a federal, state or local health, law enforcement or other appropriate agency.

(f) Assisting employees in selecting a course of action in the event drug counseling, treatment, and rehabilitation is required and indicating that a trained referral team is in place.

(g) Making a good faith effort to continue to maintain a drug free workplace through implementation of the actions and efforts stated in this certification.

## RETURN WITH BID

### **G. Debt Delinquency**

1. The Illinois Procurement Code provides:

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

The contractor or bidder certifies that it, or any affiliate, is not barred from being awarded a contract under 30 ILCS 500. Section 50-11 prohibits a person from entering into a contract with a State agency 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 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 contractor further acknowledges that the contracting State agency may declare the contract void if this certification is false or if the contractor, or any affiliate, is determined to be delinquent in the payment of any debt to the State during the term of the contract.

### **H. Sarbanes-Oxley Act of 2002**

1. The Illinois Procurement Code, Section 50-60(c), provides:

The contractor 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 for a period of five years prior to the date of the bid or contract. The contractor acknowledges that the contracting agency shall declare the contract void if this certification is false.

### **I. Addenda**

The contractor or bidder certifies that all relevant addenda have been incorporated in to this contract. Failure to do so may cause the bid to be declared unacceptable.

### **J. Section 42 of the Environmental Protection Act**

The contractor certifies in accordance with 30 ILCS 500/50-12 that the bidder or contractor is not barred from being awarded a contract under this Section which prohibits the bidding on or entering into contracts with the State of Illinois or a State agency 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 contractor acknowledges that the contracting agency may declare the contract void if this certification is false.

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

In accordance with the provisions of Section 30-22 (6) of the Illinois Procurement 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.**

**NA - FEDERAL**

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The requirements of this certification and disclosure are a material part of the contract, and the contractor shall require this certification provision 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.

### **L. Executive Order Number 1 (2007) Regarding Lobbying on Government Procurements**

The bidder hereby warrants and certifies that they have complied and will comply with the requirements set forth in this Order. The requirements of this warrant and certification are a material part of the contract, and the contractor shall require this warrant and certification provision to be included in all approved subcontracts.

## RETURN WITH BID

### M. Disclosure of Business Operations in Iran

Section 50-36 of the Illinois Procurement Code, 30ILCS 500/50-36 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, offer or, 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 shall cause the bid, offer or proposal to be considered not responsive. The disclosure will be considered when evaluating the bid, offer, or proposal 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 the attached document.

### N. Political Contributions and Registration with the State Board of Elections

Sections 20-160 and 50-37 of the Illinois Procurement 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 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 Illinois Procurement Code, and that it makes the following certification:

**The undersigned business entity 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. A copy of the certificate of registration shall be submitted with the bid. The bidder is cautioned that the Department will not award a contract without submission of the certificate of registration.**

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 Illinois Procurement Code. This provision does not apply to Federal-aid contracts.

**TO BE RETURNED 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 Department may terminate the contract if it is later determined that the bidder rendered a false or erroneous disclosure, 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 Illinois Procurement Code provides that all bids of more than \$10,000 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.

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 400 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person 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 person 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 person making the disclosure having any of the relationships identified in Section 50-35 and on the disclosure form.

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. Subject individuals should be covered each by one form. In addition, a second form (Disclosure Form B) provides for the disclosure of current or pending procurement relationships with other (non-IDOT) state agencies. **The forms must be included with each bid or incorporated by reference.**

**C. Disclosure Form Instructions**

**Form A: For bidders that have previously submitted the information requested in Form A**

The Department has retained the Form A disclosures submitted by all bidders responding to these requirements for the April 24, 1998 or any subsequent letting conducted by the Department. The bidder has the option of submitting the information again or the bidder may check the following certification statement indicating that the information previously submitted by the bidder is, as of the date of submission, current and accurate. Before checking this certification, the bidder should carefully review its prior submissions to ensure the Certification is correct. If the Bidder checks the Certification, the Bidder should proceed to Form B instructions.

**CERTIFICATION STATEMENT**

**I have determined that the Form A disclosure information previously submitted is current and accurate, and all forms are hereby incorporated by reference in this bid. Any necessary additional forms or amendments to previously submitted forms are attached to this bid.**

\_\_\_\_\_  
(Bidding Company)



\_\_\_\_\_  
Signature of Authorized Representative

\_\_\_\_\_  
Date

**Form A: For bidders who have NOT previously submitted the information requested in Form A**

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 400 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person 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 the second page of Form A must be signed and dated by a person 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 \$102,600.00? YES \_\_\_ NO \_\_\_
3. Does anyone in your organization receive more than \$106,447.20 of the bidding entity's or parent entity's distributive income? (Note: Distributive income is, for these purposes, any type of distribution of profits. An annual salary is not 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 \$106,447.20? YES \_\_\_ NO \_\_\_  
(Note: Only one set of forms needs to be completed per person 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 a person that is authorized to execute contracts for your organization. **Photocopied or stamped signatures are not acceptable.** The person signing can be, but does not have to be, the person 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 on page 2 of Form A must be signed and dated by a person that is authorized to execute contracts for your company.

**Form B: 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.

**D. Bidders Submitting More Than One Bid**

Bidders submitting multiple bids may submit one set of forms consisting of all required Form A disclosures and one Form B for use with all bids. Please indicate in the space provided below the bid item that contains the original disclosure forms and the bid items which incorporate the forms by reference.

- The bid submitted for letting item \_\_\_\_\_ contains the Form A disclosures or Certification Statement and the Form B disclosures. The following letting items incorporate the said forms by reference:

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RETURN WITH BID/OFFER

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 the Section 50-35 of the Illinois Procurement 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 \$10,000, 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.

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 \$106,447.20 (60% of the Governor's salary as of 3/1/09). (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 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 \$106,447.20, (60% of the Governor's salary as of 3/1/09) provide the name the State agency for which you are employed and your annual salary. \_\_\_\_\_

**RETURN WITH BID/OFFER**

- 3. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds \$106,447.20, (60% of the Governor's salary as of 3/1/09) 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 the 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 \$106,447.20, (60% of the Governor's salary as of 3/1/09) 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 2 times the salary of the Governor? Yes \_\_\_ No \_\_\_

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(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 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 \$106,447.20, (60% of the Governor's salary as of 3/1/09) 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 \$106,447.20.00, (60% of the salary of the Governor as of 3/1/09) 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 the 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 \$106,447.20, (60% of the Governor's salary as of 3/1/09) 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 2 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/OFFER**

(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 \_\_\_

**APPLICABLE STATEMENT**

**This Disclosure Form A is submitted on behalf of the INDIVIDUAL named on previous page.**

Completed by:  \_\_\_\_\_ Date \_\_\_\_\_  
Signature of Individual or Authorized Representative

**NOT APPLICABLE STATEMENT**

**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

RETURN WITH BID/OFFER

**ILLINOIS DEPARTMENT  
OF TRANSPORTATION**

**Form B  
Other Contracts &  
Procurement 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 the Section 50-35 of the Illinois Procurement Act (30 ILCS 500). This information shall become part of the publicly available contract file. This Form B must be completed for bids in excess of \$10,000, and for all open-ended contracts.

**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 the bottom of 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**

<input type="checkbox"/>	_____	_____
	Signature of Authorized Representative	Date

## **RETURN WITH BID**

### **SPECIAL NOTICE TO CONTRACTORS**

The following requirements of the Illinois Department of Human Rights' Rules and Regulations 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 Section 7.2 of the Illinois Department of Human Rights' Rules and Regulations for Public Contracts adopted as amended on September 17, 1980. 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. 66A08  
LASALLE-GRUNDY Counties  
Section (50-5,6 & 32-1,2)RS-3  
Project ACIM-080-3(132)097  
Route FAI 80  
District 3 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 **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. 66A08  
LASALLE-GRUNDY Counties  
Section (50-5,6 & 32-1,2)RS-3  
Project ACIM-080-3(132)097  
Route FAI 80  
District 3 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.



Return with Bid

Division of Highways
Proposal Bid Bond
(Effective November 1, 1992)

Item No. \_\_\_\_\_

Letting Date \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS, That We \_\_\_\_\_

as PRINCIPAL, and \_\_\_\_\_

\_\_\_\_\_ as SURETY, are 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 Article 102.09 of the "Standard Specifications for Road and Bridge Construction" in effect on the date of 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, submit a DBE Utilization Plan that is accepted and approved by the Department; 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 make the required DBE submission or 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 and the said SURETY have caused this instrument to be signed by

their respective officers this \_\_\_\_\_ day of \_\_\_\_\_ A.D., \_\_\_\_\_ .

PRINCIPAL

SURETY

\_\_\_\_\_  
(Company Name)

\_\_\_\_\_  
(Company Name)

By \_\_\_\_\_  
(Signature & Title)

By: \_\_\_\_\_  
(Signature of Attorney-in-Fact)

Notary Certification for Principal and Surety

STATE OF ILLINOIS,  
County of \_\_\_\_\_

I, \_\_\_\_\_, a Notary Public in and for said County, do hereby certify that

\_\_\_\_\_ and \_\_\_\_\_  
(Insert names of individuals signing on behalf of PRINCIPAL & SURETY)

who are each personally known to me to be the same persons whose names are subscribed to the foregoing instrument on behalf of PRINCIPAL and SURETY, appeared before me this day in person and acknowledged respectively, that they signed and delivered said instrument as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this \_\_\_\_\_ day of \_\_\_\_\_ A.D. \_\_\_\_\_

My commission expires \_\_\_\_\_

Notary Public

In lieu of completing the above section of the Proposal Bid Form, the Principal may file an Electronic Bid Bond. By signing the proposal and marking the check box next to the Signature and Title line below, 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 \_\_\_\_\_

# 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. 66A08  
LASALLE-GRUNDY Counties  
Section (50-5,6 & 32-1,2)RS-3  
Project ACIM-080-3(132)097  
Route FAI 80  
District 3 Construction Funds**



**Illinois Department of Transportation**



## 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 at the Harry R. Hanley Building, 2300 South Dirksen Parkway, in Springfield, Illinois until 10:00 o'clock a.m., April 23, 2010. 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 the 10:00 a.m. cut off time.
- 2. DESCRIPTION OF WORK.** The proposed improvement is identified and advertised for bids in the Invitation for Bids as:

**Contract No. 66A08  
LASALLE-GRUNDY Counties  
Section (50-5,6 & 32-1,2)RS-3  
Project ACIM-080-3(132)097  
Route FAI 80  
District 3 Construction Funds**

**8.87 miles of pavement patching, milling and resurfacing, including the installation of high tension cable median barrier on I-80 between the Marseilles interchange and the Seneca interchange.**

- 3. INSTRUCTIONS TO BIDDERS.** (a) This Notice, the invitation for bids, proposal and letter of award shall, together with all other documents in accordance with Article 101.09 of the Standard Specifications for Road and Bridge Construction, become part of the contract. Bidders are cautioned to read and examine carefully all documents, to make all required inspections, and to inquire or seek explanation of the same prior to submission of a bid.  
  
(b) State law, and, if the work is to be paid wholly or in part with Federal-aid funds, Federal law requires the bidder to make various certifications as a part of the proposal and contract. By execution and submission of the proposal, the bidder makes the certification contained therein. A false or fraudulent certification shall, in addition to all other remedies provided by law, be a breach of contract and may result in termination of the contract.
- 4. AWARD CRITERIA AND REJECTION OF BIDS.** This contract will be awarded to the lowest responsive and responsible bidder considering conformity with the terms and conditions established by the Department in the rules, Invitation for Bids and contract documents. The issuance of plans and proposal forms for bidding based upon a prequalification rating shall not be the sole determinant of responsibility. The Department reserves the right to determine responsibility at the time of award, to reject any or all proposals, to readvertise the proposed improvement, and to waive technicalities.

By Order of the  
Illinois Department of Transportation

Gary Hannig,  
Secretary

INDEX  
 FOR  
 SUPPLEMENTAL SPECIFICATIONS  
 AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2010

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

ERRATA            Standard Specifications for Road and Bridge Construction (Adopted 1-1-07) (Revised 1-1-10)

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## STATE OF ILLINOIS

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### SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction," adopted January 1, 2007, the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," and the "Manual of Test Procedures for Materials" in effect on the date of invitation for bids, and the Supplemental Specifications and Recurring Special Provisions indicated on the Check Sheet included herein which apply to and govern the construction of FAI 80 (I-80), Project ACIM-080-3 (132), Section (50-5, 6 & 32-1, 2)RS-3, LaSalle and Grundy Counties, Contract 66A08 and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

#### CONTRACT 66A08

#### LOCATION OF PROJECT

This project is located on Interstate 80 in LaSalle and Grundy Counties approximately from mile post 97 to mile post 105 (from the west edge of the Marseilles interchange east to the east edge of the Seneca interchange).

#### DESCRIPTION OF PROJECT

This project includes all labor, materials, and equipment to remove all existing HMA overlays off the original 10" concrete pavement and replace it with 6" of new polymerized binder and surface courses.

Work includes providing traffic control. Night work is required. Other work includes Class B pavement patching, removing and upgrading the existing guardrail and connections at the structures, fence repair, replacing delineators and raised pavement markers, replacing damaged attenuator barrels, installing HTC median barrier, replacing traffic counter loops, and other collateral work.

#### STAGE CONSTRUCTION REQUIREMENTS

The Contractor shall submit his proposed sequence of operations for approval prior to beginning work. The following items shall be incorporated into his plan.

1. The Contractor shall incorporate the stage construction of paving and milling shown in the plans into his sequence of operations. Sub-stage work denoted with letter "A" or "B" shall be completed in the same lane closure period.
2. Lane Closure Periods - The Contractor is allowed to close a lane in the following time periods:

- East Bound I-80 - 12 noon to 5 a.m. the next day.
  - West Bound I-80 - 8 p.m. to 12 noon the next day.
3. Failure to restore all lanes to traffic by the end time listed above shall be an immediate traffic control deficiency as specified in Article 105.03.
  4. A weekend period is from 3 p.m. on Friday to midnight Sunday. All lanes must remain open during the weekend period.
  5. Access to the ramps at the Seneca interchange (MP 105) and Marseilles interchange (MP 97) shall remain open at all times.

### **STATUS OF UTILITIES TO BE ADJUSTED**

No conflicts anticipated.

### **FURNISHED EXCAVATION**

Effective July 1, 1990;

Revised January 1, 2007

This work shall consist of excavating, hauling, and placing suitable materials obtained from locations approved by the Engineer from outside the limits of the right of way.

The embankment shall be constructed according to Section 205 of the Standard Specifications except that the embankment material shall not be placed and compacted at moisture contents in excess of 110 percent of optimum moisture unless authorized in writing by the Engineer.

The final surface of all embankment areas shall be seeded. The top 4 in. (100 mm) of the seeded areas shall be vegetation sustaining soil subject to the approval of the Engineer. The cost of shaping the slopes and providing vegetation sustaining soil will not be paid for separately but shall be included in the cost of FURNISHED EXCAVATION.

Method of Measurement. Furnished excavation will be measured per cubic yard (cubic meter) and shall be measured by truck volume methods at the point of unloading. The Engineer and the Contractor shall agree upon the volume of each truck before hauling begins.

Basis of Payment. This work will be paid for at the contract unit price per cubic yard (cubic meter) for FURNISHED EXCAVATION.

### **HOT-MIX ASPHALT SURFACE COURSE, CUT OFF DATE**

Effective January 1, 2007

Placement of Hot-Mix Asphalt Surface Course will not be permitted after October 15 unless approved, in writing, by the Engineer.

**PRIMING**

Effective July 1, 1990;

Revised September 3, 2009

Bituminous Materials (Prime Coat) used on brick, concrete, or HMA bases shall be RC-70.  
Polymerized Bituminous Materials (Prime Coat) used on brick, concrete, or HMA bases shall be SS1-hP.

When more than one HMA lift is proposed, additional prime shall be applied for the subsequent lifts at the lesser rate (fog coat) shown on the plans.

**HOT MIX ASPHALT – DENSITY TESTING OF LONGITUDINAL JOINTS**

Effective: January 1, 2007;

Revised: October 1, 2009

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). This work shall be according to Section 1030 of the Standard Specifications except as follows.

Quality Control/Quality Assurance (QC/QA):

1030.05(d)(3) Add the following paragraphs:

“Longitudinal joint density testing shall be performed at each random density test location. Longitudinal joint testing along edges of pavement which are unconfined and adjacent to the shoulder shall be located at a distance of 4 inches away from the edge of mat. One value shall be obtained at three locations spaced approximately 10 feet apart with the center location at the specified random station. These values are to be averaged. Longitudinal joint testing along a confined edge or unconfined and not along the shoulder (i.e. the centerline of the roadway) shall be located at a distance equal to the lift thickness, or a minimum of 2 inches away from the edge of the mat. One value shall be obtained at three locations spaced approximately 10 feet apart with the center location at the specified random station. These values are to be averaged.

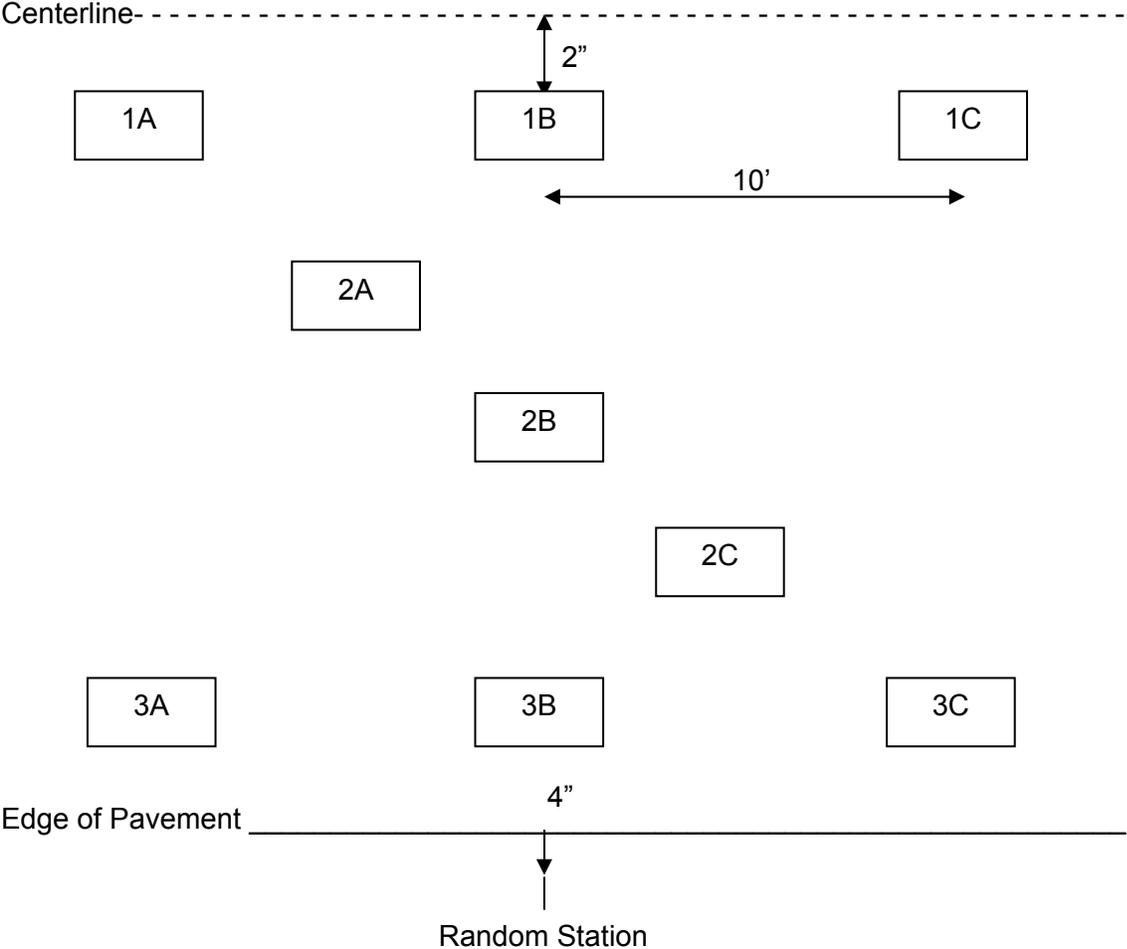
The joint density value shall be determined using either a correlated nuclear gauge or cores. When using a correlated nuclear gauge, one one-minute density readings shall be taken at the given density test site.

In performing the longitudinal joint density testing, the outside two testing locations of the five total testing locations spread across the entire mat specified in the QC/QA document, “Illinois-Modified ASTM D 2950, Standard Test Method for Determination of Density of Bituminous Concrete In-Place by Nuclear Method” shall be omitted, leaving three testing locations that are to be averaged and meet the requirements located in the table in Article 1030.05(d)(4).”

1030.05(d)(4) Replace the density control limits table with the following:

DENSITY CONTROL LIMITS				
Mixture Composition	Parameter	Individual Test	Confined Edge	Unconfined Edge
IL-9.5, IL-12.5	$N_{design} \geq 90$	92.0 – 96.0%	92.0 – 96.0%	90.0%
IL-9.5, IL-9.5L, IL-12.5	$N_{design} < 90$	92.5 – 97.4%	92.5 – 97.4%	90.0%
IL-19.0, IL-25.0	$N_{design} \geq 90$	93.0 – 96.0%	93.0 – 96.0%	90.0%
IL-19.0, IL-19.0L, IL-25.0	$N_{design} < 90$	93.0 – 97.4%	93.0 – 97.4%	90.0%
SMA	$N_{design} = 50 \text{ \& } 80$	93.5 – 97.4%	93.5 – 97.4%	91.0%
All Other	$N_{design} = 30$	93.0 - 97.4%	93.0 - 97.4%	90.0%

Diagram of Testing Locations



## **PATCHING JOINTED CONCRETE PAVEMENT**

Effective July 25, 1991

Revised January 1, 2006

Add the following paragraph to Article 442.05(b) of the Standard Specifications:

As an alternate, the contractor may use an approved wheel saw to make transverse saw cuts.

## **CLASS B PATCHING EXPANSION JOINT**

The Contractor is advised of two patches at the Seneca interchange which require expansion joints in accordance with Standard 442101. All additional materials necessary to perpetuate the expansion joints will not be paid for separately, but will be included in the contract unit price per square yard for CLASS B PATCHING 10”.

## **HOT-MIX ASPHALT – START-UP PROCEDURES (DISTRICT 3)**

Effective January 12, 2010

This special provision modifies the start-up procedures for hot-mix asphalt placement. In addition, the Hot-Mix Asphalt QC/QA Start-Up Procedures Appendix B4 D. Start-Up Methods and G. Nuclear/Core Correlation of the Manual of Test Procedures for Materials shall be revised accordingly.

Replace Article 1030.06 (a) High ESAL Mixture and Low ESAL Mixture of the Standard Specifications with the following:

- (a) High ESAL Mixture and Low ESAL Mixture. During the mixture start-up the Contractor shall follow the QC/QA document “Hot-Mix Asphalt QC/QA Start-Up Procedures” with the following modifications.

At the start of HMA production, QC/QA mixture start-up will be required for all situations specified by the Engineer.

The final determination for test strip procedures shall be discussed at the Resident Engineer’s pre-laydown meeting.

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.

In the field, slight adjustments to the JMF or minor changes in cold-feed/hot-bin blends may be necessary to obtain the desired air voids, density, uniformity, and constructability. 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
½ 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.

A test strip consisting of 350 tons shall be constructed in one continuous lift during the first day of production. The test strip area shall be located on a relatively flat portion of the roadway. Descending/ascending grades, ramps, super elevations, etc. shall be avoided. After 350 tons has been produced for the purpose of constructing a test strip, plant production shall cease until the following has been completed.

A test strip shall consist of two growth curve areas, a normal rolling pattern location, and one set of plant samples. After the Contractor has produced and placed approximately 150 tons of mix, paving shall cease and the first growth curve shall be constructed. After completion of the first growth curve, paving shall resume until the Contractor has produced and placed an additional 100 tons of mix. At this time paving shall cease and the second growth curve shall be constructed. The Contractor shall use normal rolling procedures for all portions of the test strip except for the growth curve areas which shall be compacted solely with a vibratory roller as directed by the QC Manager. After completion of the second growth curve, paving shall resume until the Contractor has produced and placed an additional 100 tons of mix. At this time paving shall cease and the normal rolling pattern location shall be constructed.

One set of plant samples, as specified in Article 1030.05(d)(2)f. HMA Sampling of the Standard Specifications, shall be taken between the two growth curve areas.

Upon completion of the growth curves, normal rolling pattern location, and plant tests, the Engineer will determine if the test strip is acceptable. If the Contractor or Engineer deems the test strip unacceptable, corrective action shall be taken and a new test strip shall be constructed.

If the test strip is deemed acceptable by the Engineer, production and paving can resume for the remainder of the first production day on the condition cores will be used for density acceptance. All core holes shall be filled with non-shrink grout.

A nuclear/core correlation, if required by the Engineer, shall follow the QC/QA document "Standard Test Method for Correlating Nuclear Gauge Densities with Core Densities" and shall be performed by the Contractor during the first production day. Three locations shall be selected from the first acceptable test strip. Two sites shall be located on the two growth curve locations and one site on the normal rolling pattern location. All core holes shall be filled with non-shrink grout.

The next day's production shall not resume until all test results, including an acceptable nuclear/core correlation (if required), are available and an AJMF is agreed upon by the Contractor and Engineer.

### **COMPUTER CABINET**

Effective April 1, 1996;

Revised March 12, 2009

In addition to the required equipment cabinet, the Contractor shall provide a computer cabinet for the Engineer's field office. The computer cabinet shall meet the requirements of the equipment cabinet as specified in Article 670.02(f) or as approved by the Engineer.

The computer cabinet will not be paid for separately but shall be included in the cost of the ENGINEER'S FIELD OFFICE , TYPE A.

### **UNPUBLISHED TELEPHONE NUMBERS FOR ENGINEER'S FIELD OFFICE**

Effective March 21, 2002;

Revised January 1, 2007

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

All of the telephone lines provided shall have unpublished numbers.

### **TRAFFIC CONTROL PLAN**

Revised August 15, 2005;

Revised January 1, 2010

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 703 - Work Zone Pavement Marking
- Section 781 - Raised Reflective Pavement Markers
- Section 783 - Pavement Marking and Marker Removal

ERRATA Standard Specifications for Road and Bridge Construction

Supplemental Specifications:

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

Highway Standards:

701101 701106 701401 701411 701456 701426 701901

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

**RECURRING SPECIAL PROVISIONS**

Work Zone Public Information Signs

**SPECIAL PROVISIONS**

- Pavement Marking Tape, Type III Special
- Work Zone Pavement Marking Removal/Pavement Marking Tape Type III
- Changeable Message Sign
- Equipment Illumination
- Nighttime Work Zone Lighting (BDE)
- Partial Exit Ramp Closure for Freeway/Expressway (BDE)
- Pavement Marking Removal/Work Zone Pavement Marking Removal
- Personal Protective Equipment (BDE)
- Plastic Drums
- Portable Vehicle Mounted Changeable Message Board
- Public Convenience and Safety (BDE)
- Radar Speed Trailer
- Reflective Sheeting on Channelizing Devices (BDE)
- Traffic Control and Protection for Alternate Route Signing
- Traffic Control and Protection, Standards 701400 (Special) and 701401 (Special)
- Truck Mounted/Trailer Mounted Attenuators (BDE)
- Vehicle Parking
- Wet Reflective Preformed Plastic Pavement Markings

**VEHICLE PARKING**

Revised January 1, 2007

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

**EQUIPMENT ILLUMINATION**

Revised January 26, 1998;

Revised January 1, 2007

The Contractor shall equip all machinery and vehicles with a flashing amber dome light, installed so the illumination is visible from all directions.

**PAVEMENT MARKING TAPE, TYPE III SPECIAL**

Effective December 14, 2009

Description. This work shall consist of furnishing, installing, and maintaining temporary pavement marking tape for wet conditions according to Section 703 of the Standard Specifications and as shown in the plans.

Materials. In addition to the requirements of Article 1095.06 of the Standard Specifications, the marking tape shall maintain its reflective properties when submerged in water. The wet reflective properties shall be verified by a visual inspection method performed by the Department. The surface of the material shall provide an average skid resistance of 50 BPN when tested according to ASTM E 303.

General. Prior to application, a surface preparation adhesive shall be applied to the clean, dry road surface.

Basis of Payment. This work will be paid for at the contract unit price per foot (meter) for PAVEMENT MARKING TAPE, TYPE III SPECIAL of the line width specified.

**WORK ZONE PAVEMENT MARKING REMOVAL/ PAVEMENT MARKING TAPE, TYPE III SPECIAL**

The contractor is advised all PAVEMENT MARKING TAPE, TYPE III SPECIAL placed on binder courses shall be removed prior to subsequent resurfacing.

Basis of Payment. This work will be paid for at the contract unit price per square foot for WORK ZONE PAVEMENT MARKING REMOVAL.

**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.

**UNEVEN LANES**

Effective July 24, 2000,

Revised December 14, 2009

Two "UNEVEN LANES" signs (W8-11(FO)) shall be installed at intervals not greater than 2 miles and on all entrance ramps when work creates a difference in elevation between lanes that will be open to traffic. These signs shall be removed or covered when the lanes are returned to the same elevation. These signs will not be paid for separately, but shall be included in the cost of the applicable traffic control items.

**PAVEMENT MARKING REMOVAL/WORK ZONE PAVEMENT MARKING REMOVAL**

Effective August 15, 2005;

Revised January 1, 2009

All permanent and work zone pavement markings shall be removed according to Article 1101.12 Water Blaster with Vacuum Recovery and the applicable portions of Sections 703 and 783 of the Standard Specifications and as described herein. Pavement marking tape type III may be peeled or burned off, however, all remnants or burn marks shall be hydro-blasted.

Add the following paragraph to Article 1101.12 of the Standard Specifications.

For the high pressure water spray, the pressure at the nozzle shall be approximately 25,000 psi (172,000 kPa) with maximum flow rate of 15 gal/min (56 L/min). The nozzle shall be in close proximity to the pavement surface.

**PLASTIC DRUMS**

Effective August 15, 2005;

Revised January 1, 2008

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

**RADAR SPEED TRAILER**

Effective January 1, 2010

Description. This work shall consist of the furnishing, installation, maintenance, relocation, and removal of radar speed trailers.

Construction Requirements. Radar speed trailers shall be installed in addition to the standard construction speed limit signs. These units will be deployed as directed by the Engineer. Construction speed limit signs will still be required, at the locations shown on the plans.

Whenever the trailers are in use, they shall be considered traffic control devices and when they are not required for this use, they shall be considered non-operating equipment and shall be stored according to Article 701.11 of the Standard Specifications. The trailers shall meet the applicable requirements of Section 701 of the Standard Specifications.

Equipment. The radar speed trailer shall consist of a LED speed indicator display with self-contained, one-direction radar mounted on an orange see-through trailer. It shall also include an attached speed limit sign, with changeable digits, above the speed indicator display. The height of the display and radar shall be such that it will function and be visible when located behind concrete barrier.

The speed measurement shall be by radar and provide a minimum detection distance of one thousand (1000) feet. The radar shall have an accuracy of  $\pm 1$  mile per hour.

The speed indicator display shall face approaching traffic and shall have a sign legend of "YOUR SPEED" immediately above or below the speed display. The digital speed display shall show two digits (00 to 99) in m.p.h. The color of the changeable message legend shall be a yellow legend on a black background. The minimum height of the numerals shall be eighteen (18) inches, and the nominal legibility distance shall be at least 750 feet.

The attached speed limit sign shall be a R2-1 meeting minimum size requirements of 36x48. The sign shall be according to the applicable portions of Sections 1090 and 1091 of the Standard Specifications and shall have Type A Sheeting or better.

The speed indicator display shall be equipped with a violation alert that flashes the displayed detected speed when the posted limit is exceeded. The speed indicator shall have a maximum speed cutoff. The display shall include automatic dimming for nighttime operation.

The speed indicator measurement and display functions shall be equipped with the power supply capable of providing 24 hours of uninterrupted service.

The Contractor shall provide all preventive maintenance efforts deemed necessary to achieve uninterrupted service. If service is interrupted for any cause and not restored within 24 hours, the Engineer will cause such work to be performed as may be necessary to provide this service and the cost of such work will be deducted from compensation due or which may become due the Contractor under the contract.

Method of Measurement. This work will be measured on a calendar month basis.

Basis of Payment. This work will be paid for at the contract unit price per calendar month for each trailer as RADAR SPEED TRAILER.

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

Effective August 7, 2008

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

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

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

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

Basis of Payment. This work will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, STANDARD 701401 (SPECIAL).

#### **PORTABLE VEHICLE MOUNTED CHANGEABLE MESSAGE BOARD**

Effective August 7, 2008;

Revised October 16, 2009

Description. This item shall consist of one heavy duty vehicle fitted with a truck mounted attenuator and with a permanently mounted changeable message sign. The vehicle mounted message sign shall be required when Traffic Control and Protection, Standard 701401 (Special) is in place and the Contractor is working.

The vehicle mounted message sign shall also be required when high volumes of traffic occur such as on weekends and holidays. Specific times will be determined by the Engineer.

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

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

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

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

The message sign shall meet the applicable requirements of Article 1106.02(i) of the Standard Specifications.

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

The person provided by the Contractor to operate the truck and message sign will not be paid for separately.

Basis of Payment. The vehicle and portable changeable message sign will be paid for at the contract unit price per calendar day or fraction thereof for PORTABLE VEHICLE MOUNTED CHANGEABLE MESSAGE BOARD.

## **TRAFFIC CONTROL AND PROTECTION FOR ALTERNATE ROUTE SIGNING**

Description. This work shall consist of the furnishing, installation, maintaining, and removing (if required) signing for an alternate route for Interstate 80 as shown on the plans. The alternate route bypasses the work area using Illinois 71 (the Case 1 route) to go north to US 52, then east to Illinois 47, then Illinois 47 south to I-80. It is likely that an adjacent June letting project on I-80 will use Illinois 23 as part of the alternate route. When notified by the Engineer, the Case I signs shall be removed or covered.

At the end of this project, the signs designated Case 1 on the detail shall be removed. The remaining signs (on US 52 and Illinois 47) may become the property of the state and left in place. Any signs to remain shall be in accordance with article 701.15 at the time of possession.

This work includes supplying and maintaining the alternate route signing using Case 1 as shown on the plan detail called TRAFFIC CONTROL AND PROTECTION FOR ALTERNATE ROUTE SIGNING.

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

Construction Requirements. The alternate route signing shall be in place prior to beginning construction on Interstate 80 and shall remain in place until the completion of the project. If all lanes of the Interstate are to remain 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.

Method of Measurement. Traffic control and protection for alternate route signing will be measured on a calendar month basis.

Basis of Payment. This work will be paid for at the contract unit price per calendar month, or fraction thereof, for TRAFFIC CONTROL AND PROTECTION FOR ALTERNATE ROUTE SIGNING.

### **IMPACT ATTENUATORS, REPLACEMENT (NON-REDIRECTIVE) TEST LEVEL 3**

This item shall consist of removing existing damaged attenuators at the locations shown on the plans and replacing it with new attenuators. Each barrel replacement will be paid for separately.

This item shall be paid for at the contract unit price per each for IMPACT ATTENUATOR REPLACEMENT (NON-REDIRECTIVE) TEST LEVEL 3.

### **REALIGN EXISTING ATTENUATORS**

This work shall consist of realigning the existing attenuator array at the locations shown on the plans. At this location, the existing base is in good condition and will not require any work.

The work includes the realignment of all the barrels in the westbound direction at structure number 032-0114. Any barrels damaged by the contractor during the realignment process will be replaced at the Contractor's expense.

This item shall be paid for at the contract unit price per square yard for REALIGN EXISTING ATTENUATORS and shall include everything as outlined above.

### **GROOVING FOR RECESSED PAVEMENT MARKING**

Effective: July 31, 2009

Description. This work shall consist of the grooving of an existing pavement surface in preparation for the application recessed pavement marking lines.

Equipment. The grooving equipment shall be equipped with a free-floating cutting or grinding head. The grinding or cutting head shall be equipped with diamond saw blades, steel star cutters and/or carbide tipped star cutters. A grinder head configuration may be used on hot-mix asphalt (HMA) surfaces to achieve a rough surface texture in the bottom of the groove. Diamond saw blades shall be used on the cutting head when a smooth surface in the bottom of the groove is required by the Engineer, or contract specifications, or pavement marking material manufacturer's recommendations.

## CONSTRUCTION REQUIREMENTS

Pavement Grooving Methods. The grooves for recessed pavement markings shall be constructed using the following methods.

- a) Wet Saw Blade Operation. When water is required or used to cool the saw blades, such as during a continuous edge line grooving operation, the groove shall be flushed with high pressure water immediately following the cut to avoid build up and hardening of slurry in the groove. The pavement surface shall be allowed to dry for 24 hours prior to the application of the pavement markings following a wet saw blade operation.
- b) Dry Saw Blade Operation. If the grooving is done with dry saw blades, the groove shall be flushed with high-pressure air to remove debris and dust generated during the cutting operation.

Pavement Grooving. Grooves shall be cut into the pavement prior to the application of the pavement marking. The grooves shall be cut such that the width is 1 in. (25 mm) wider than that of the line to be placed. Grooves for letters and symbols shall be cut in a shape so that the entire marking will fit. The position of the edge of the grooves shall be a minimum of 2 in. (50 mm) from the edge of concrete joints or HMA paving seams along edge or centerlines. The depth of the groove shall not be less than the manufacturer's recommendations for the marking material specified, but shall be installed to a minimum depth of 100 mils (2.54 mm) +/- 10 mils for pavement marking tapes and 40 mils (1.02 mm) +/- 10 mils for liquid markings.

On new HMA surfaces the Engineer shall determine if the new HMA has achieved the necessary strength and hardness to support grooving prior to the start of a grooving operation. Some HMA mixes may require 14 or more days to achieve adequate hardness to support a grooving operation. On existing HMA surfaces some existing HMA pavements may not be strong enough to support a grooving operation. For existing HMA pavements the Engineer shall determine if the existing HMA has the necessary strength and hardness to support grooving prior to the start of a grooving operation.

Cleaning. Immediately prior to the application of the pavement markings the groove shall be cleaned with high-pressure air blast.

Method of Measurement. This work will be measured for payment in place, in linear feet (meter) of the pavement marking lines applied and accepted, for the groove width specified.

Grooving for letters, numbers and symbols will be measured in square feet (square meters) as specified in the plans.

Basis of Payment. This work will be paid for at the contract unit price per foot (meter) for GROOVING FOR RECESSED PAVEMENT MARKING of the groove width specified.

## **WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS – LINE 4”, 8”, OR 12”**

### Description

This work shall consist of furnishing and applying thermoplastic pavement marking for wet and dry conditions according to the applicable portions of Sections 780 and 1095 of the Standard Specifications and as specified herein.

Ingredient Materials

The thermoplastic material shall be homogeneously composed of pigment, binder, glass beads and bonded core elements.

The binder shall be based on maleic modified rosin ester resin and high boiling plasticizer. The binder shall be a minimum of 50% maleic modified rosin ester.

The pigment beads and filler shall be well dispersed in the resin.

The reflective media shall be made up of reflective bonded core elements and glass beads and shall conform to the following requirements:

Glass Beads - The glass beads retained on the #40 US Mesh sieve (425 microns) shall have minimum crush strength of 30 lbs (13.6 kg) according to ASTM D 1213.

Glass beads (*pre-mix*) - The *pre-mix* beads shall conform to AASHTO M 247 (Type I) and FP96 (Type III) and do not require surface treatment.

Glass beads (*surface-drop*) - The Type 3 and Type P glass spheres used for surface drop shall conform to AASHTO M 247 and FP96. Glass spheres in the size range of Type 3 or larger shall be surface treated with an adhesion coating. Glass beads in approximately the size range of Type I may be dual coated.

Bonded Core Elements (*pre-mix and surface-drop*) - The bonded core reflective elements shall contain either clear or yellow tinted microcrystalline ceramic beads bonded to the core. All “dry-performing” microcrystalline ceramic beads bonded to the core shall have a minimum index of refraction of 1.7 when tested using the liquid oil immersion method. All “wet performing” microcrystalline ceramic beads bonded to the core shall have a minimum index of refraction of 2.30 when tested using the liquid oil immersion method described in Appendix A.

Requirements

Thermoplastic materials shall have the following characteristics:

Composition

The pigment, beads and filler shall be uniformly dispersed in the resin. The thermoplastic shall comply with requirements according to Table 1.

Table 1 – COMPOSITION All Weather Thermoplastic with Elements		
Component	Weight Percent	
	White	Yellow
Binder	20% minimum	20% minimum
Type I Glass Spheres	20% minimum	20% minimum
Type III Glass Spheres	15% minimum	15% minimum
90S Bonded Core Elements	5% minimum	None
91S Bonded Core Elements	None	5% minimum
TiO2, Type II Rutile	10% minimum	As needed
Pigment Yellow 83 (Lead Free)	None	See Note 1
Calcium Carbonate and Inert Filler (No. 200 (75 µm) sieve)	30% maximum	See Note 1

Note 1- The amount of yellow pigment, calcium carbonate and inert fillers shall be at the option of the manufacturer, providing all other requirements of this specification are met.

The thermoplastic material shall be produced without the use of lead chromate or arsenic.

The thermoplastic shall contain clear glass beads as described herein. The thermoplastic shall contain microcrystalline ceramic beads as described herein for Bonded Core Elements.

The finished line is not slippery when wet.

The thermoplastic line shall be homogenous with even distribution of pigments, beads and elements throughout the plastic matrix.

#### Physical Characteristics

- a) Impact Resistance - After heating the thermoplastic for 240+/-5 minutes at 425 +/-3° F (218 +/- 2° C) and making test specimens and testing per ASTM 256, Method A (un-notched), the impact resistance shall be a minimum of 8.8 inch-lbs (1.0 J) Ref: (AASHTO T-250-04 section 14)
- b) Flowability - After heating the thermoplastic for 240+/-5 minutes at 425 +/-3° F (218 +/- 2° C) and testing for flowability, the white thermoplastic shall have a maximum percent residue of 18 and the yellow thermoplastic shall have a maximum percent residue of 21. Ref: (AASHTO T-250-04 section 11)
- c) Flowability with Extended Heating - After heating the thermoplastic for 8.0 +/- 0.5 hrs at 425 +/-3° F (218 +/- 2° C), with stirring the last 6 hrs, and testing for flowability, the thermoplastic shall have a maximum percent residue of 28. Ref: (AASHTO T-250-04 section 17)
- d) Flash Point – When tested in accordance with ASTM D 92 the thermoplastic will have a flash point not less than 475° F (248° C).
- e) Indentation Resistance – Test according to ASTM D 2240 Shore Durometer, A2. Durometer and panel at 110° F (43.3° C) with a 4.4 lb load applied. Measurement is taken after 15 seconds. The thermoplastic should have a minimum value of 40 and a maximum value of 75. Note: Extra care should be taken to ensure the intermix is thoroughly mixed and uniform in the test samples. A non-uniform sample will result in erratic measurement values.

Note: During measurement of thermoplastic containing large elements and or glass beads the durometer probe may impact a large bead or large element during the test resulting in a much higher than expected result. If the value is unreasonably high, it may be necessary to retest in another location on the sample.

#### Retroreflectance of Finished Traffic Marking

Typical initial retroreflectance are shown in the table below. Typical retroreflectivity averaged over many readings as millicandelas/footcandle/sq ft (millicandelas/lux/sq m).

Retroreflective Performance	White	Yellow
Dry (ASTM E1710)	400	325
Wet Recovery (ASTM 2177)	350	275
Wet Continuous (ASTM 2176)	100	75

The initial retroreflectance of a single installation shall be the average value determined to the measurement and sampling procedures outlined in ASTM D 6359, using a 100 feet (30 meter) retroreflectometer. RL shall be expressed in units of millicandelas/footcandle/sq ft (millicandelas/lux/sq m).

Wet retroreflectance values measured under a “condition of continuous wetting” (simulated rain) shall be in accordance with ASTM E2176, and to reduce variability between measurements, the test method shall be performed in a controlled laboratory environment while the marking is positioned with a 3 to 5 degree lateral slope. Measurements shall be reported as the average of the minimum of three locations. Samples of the completed finished product shall be applied to flat panels during application and brought back to the lab for testing.

Initial performance of pavement marking shall be measured within 7 days after application.

Application Requirements

Equipment

- a) Equipment shall be capable of providing uniform heating of striping materials to temperatures exceeding 390° F (199° C)
- b) Equipment shall be capable of mixing and agitating the molten thermoplastic to provide a homogenous mixture.
- c) Equipment shall be capable of maintaining the thermoplastic striping material in a plastic state in all mixing and conveying parts, including the line dispensing device until applied.
- d) Mobile truck mounted applicators shall be capable of traveling at a uniform, predetermined speed over variable road grades to produce uniform application of striping material, following straight lines and making normal curves in a true arc. The equipment shall be capable of air-blasting the pavement, applying the thermoplastic stripe and immediately dropping the *bonded core elements and glass beads* in a single pass at speeds up to 8 mph.
- e) Hand cart applicators shall be capable of uniform application of striping material at walking speeds, following straight lines and making tight turns symbols and legends. Mobile equipment must be available to air blast the areas immediately prior to hand cart application of thermoplastic. The hand cart shall be capable of applying the thermoplastic stripe and immediately dropping the *bonded core elements and glass beads in a single pass at walking speeds*.
- f) The equipment shall be capable of application of bonded core elements and glass beads to the surface of the pavement marking by double drop application.

The element dispenser for the first drop shall be attached to the striping machine in such a manner that the elements are dispensed closely behind the thermoplastic application device (ribbon gun, screed, and spray gun). The bead dispenser for the second drop shall be attached to the striping machine in such a manner that the beads are dispensed immediately after the first drop (bonded core elements).

- g) The applicator for the *bonded core elements and glass beads* shall be equipped with an automatic cut-off control that is synchronized with the cut-off of the thermoplastic material.
  - 1) The applicator for the *bonded core elements and glass beads* shall be capable of delivering a uniform drop rate at variable thermoplastic application speeds.
  - 2) The bonded core elements and glass spheres are applied such that they appear uniform on the entire traffic stripe and markings.
  - 3) The bonded core elements and glass beads are applied such that they are embedded 50%-60% for adhesion to the thermoplastic marking.
  - 4) The melt kettle must be equipped with an automatic temperature control device and thermometer to thermostatically control the temperature and prevent overheating of the thermoplastic material.

Application Conditions

Moisture – The markings shall only be applied during conditions of dry weather and when the pavement surface is dry and free of moisture.

Air temperature and humidity – The markings shall only be applied when road and air temperatures are not less than 50° F 10° C) and the relative humidity is less than 85 %.

Application Plan

- a) Reflective media application – The specified reflective media shall be dropped at rates to achieve the following coating weights.

Reflective Media Drop Rates	Glass beads	Bonded Core Elements
Pounds per 4-inch foot	.026 lbs/4-inch ft	0.011 lbs/4-inch ft
Grams per 100-mm m	45 grams/100-mm m	15 grams/100-mm m
Pounds per 100 Square Feet	12.5 lbs /100 sq ft	3.3 lbs / 100 sq ft
Grams Per Square Meter	468 grams / sq m	162 grams / sq m

- b) Adhesion – The Contractor shall ensure that the thermoplastic marking is well adhered to the road surface, and that the glass spheres and bonded core elements are well adhered to the binder with 50% to 60% embedment.
- c) Retroreflectivity – The Contractor shall ensure that the reflectorized thermoplastic pavement marking meets the following performance criteria:

Retroreflective Performance	White	Yellow
Dry (ASTM E 1710)	400	325
Wet recovery (ASTM E2177)	350	275
Wet Continuous (SSTM E2176)	100	75

- d) The average initial retroreflectance shall be determined according to the measurement and sampling procedures outlined in ASTM D 6359, using a 30 meter retroreflector. The 30 meter retroreflector shall measure the coefficient of retroreflected luminance, RL, at observation angle of 10.5 degrees and an entrance angle of 88.76 degrees. RL shall be expressed in units of millicandelas per square foot per foot-candle.  $[(mcd(ft^{-2})(fc^{-1}))]$ . The metric equivalent shall be expressed in units of millicandelas per square meter per lux  $[(mcd(m^{-2})(lux^{-1}))]$ .
- e) Initial performance of the pavement markings shall be measured within 7 days after application.
- f) Wet retroreflectance values measured under a “condition of continuous wetting” (simulated rain) shall be in accordance with ASTM E2176, and to reduce variability between measurements, the test method shall be performed in a controlled laboratory environment while the marking is positioned with a 3 to 5 degree lateral slope. Measurements shall be reported as an average of a minimum of three locations. A sample of the complete finished product shall be applied to flat panels during application and brought back to the lab for testing.

Inspection And Testing

At any time throughout the duration of the project, the Contractor shall provide free access to his application equipment for inspection by the Engineer, his authorized representative, or a materials representative.

During the application of the thermoplastic marking, the Engineer may request the following tests to verify application to the parameters required in this specification.

- a) Thickness – During appropriate locations along the alignment of the project site the Engineer may obtain a sample of the molten thermoplastic onto a test panel of aluminum for the purposes of checking of proper film thickness. The thermoplastic shall be applied without bonded core elements or glass spheres. Upon hardening, the thickness shall be verified by the Engineer to meet the requirements of the plan. The Contractor shall provide to the Engineer the application speed of the equipment during the time of the sample.
- b) Reflective media – When required by the Engineer, the Contractor shall demonstrate to the Engineer the proper calibration of reflective elements and glass beads compared with the manufacturer’s requirement and may be conducted by one of the two methods.
  - 1) Pressurized delivery systems - The calibration shall be conducted with a graduated cylinder or other similar device. Reflective elements or glass beads shall be collected from the reflective element and glass bead guns for a timed period. The volume of the reflective elements and glass beads shall be measured and compared with the manufacturer’s requirements.

- 2) Non-pressurized delivery systems – The calibration shall be conducted with catch pans of known geometry, sufficiently wide to capture the width of the drop. The pans are positioned in the marking application path on the road. Then, separately for each glass spheres and bonded core elements, with the thermoplastic applicator off, the applicator is passed over the catch pan at the appropriate speed and drop rate. The catch is then weighed and the drop area is calculated from the length of the pan and the width of the drop. Drop rate = drop capture weight / ((drop width) X (drop length))
- c) Application Panel – The Contractor shall provide to the Engineer at least one representative sample coated onto an aluminum panel or equivalent. This panel will serve as a record of the project output and application conditions and settings.

#### Basis For Payment

This work will be paid for at the contract unit price per foot (meter) of applied line width, as specified, for WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS – LINE.

#### APPENDIX A

##### Refractive Index of Beads by Liquid Immersion Test

###### Equipment:

- Microscope (minimum 100X magnification)
- Light source-preferably sodium light or other monochromatic source, but not absolutely essential.
- Refractive index liquids.
- Microscope slide and slide cover
- Mortar and pestle

###### Procedure:

- Using the mortar and pestle, crush a few representative beads and place a few of these crushed particles on a microscope slide.
- Place a drop of a refractive index liquid, with an index as close to that of the crushed particles as can be estimated, on the particles.
- Cover the slide with a microscope slide cover and view the crushed particles by transmitted light normal to the slide surface (illuminated from the bottom).
- Adjust the microscope mirror to allow a minimum light intensity for viewing. This is particularly important if sodium light is not used.
- Bring a relatively flat and transparent particle into focus by slightly raising and lowering the objective (microscope tube), look for one or both of the following:
  - Becke Line – This light line will appear to move either into the particle or away from it. In general, if the objective is lowered, the line will move toward the material of lower index.
  - Variation in Particle Brightness – When raising the objective from a sharp focus, the particle will appear to get brighter or darker than the surrounding field. If it becomes brighter, the particles have a higher refractive index than the liquid. If it becomes darker, the glass has a lower refractive index than the liquid. In both cases, the opposite will be true if the objectives lowered.
- This test can confirm that the beads are above or below a specified index. It can also give an accurate determination of the index (+ or – 0.001). This is done by using several refractive index liquids until a match or near match of indices occurs. The index of the glass will equal that of the liquid when no becke line and no variation in bed brightness is observed.

**Acid Resistance Test**

A sample of bonded core reflective elements supplied by the manufacturer shall show resistance to corrosion of their surface after exposure to a 1% solution (by weight) of sulfuric acid. The 1% acid solution shall be made by adding 5.7 cc of concentrated acid into 1000 cc of distilled water. CAUTION: Always add the concentrated acid into the water, not the reverse.

**WET REFLECTIVE PREFORMED PLASTIC PAVEMENT MARKINGS**

Effective February 8, 2010

**Description.** This work shall consist of furnishing and applying inlaid preformed plastic pavement marking, Type B for wet and dry conditions on new HMA surfaces according to the applicable portions of Section 780 of the Standard Specifications and as specified herein.

**Application.** The pavement marking shall be applied according to the requirements of Article 780.07 (a) Type B – Inlaid Application.

**Materials.** The preformed patterned markings shall consist of white or yellow films with clear microcrystalline ceramic beads incorporated to provide immediate and continuing retroreflection during both wet and dry conditions. This film shall be manufactured without the use of lead chromate pigments or other similar, lead-containing chemicals.

**Composition.** The retroreflective pliant polymer pavement markings shall consist of a mixture of high-quality polymeric materials, pigments and glass beads distributed throughout its base cross-sectional area, with a reflective layer of microcrystalline ceramic beads bonded to a durable polyurethane topcoat surface. The patterned surface shall have approximately 50% ± 15% of the surface area raised and presenting a near vertical face to traffic from any direction. The channels between the raised areas shall be substantially free of exposed beads or particles.

**Retroreflectance.** The white and yellow markings shall have the initial retroreflectance values as shown in Table 1 under dry, wet, and rainy conditions. The photometric quantity to be measured shall be coefficient of retroreflected luminance ( $R_L$ ) and shall be expressed as millicandelas/footcandle/sq ft (millicandelas/lux/sq m).

Retroreflectance values shall be measured under dry conditions according to the testing procedures of ASTM D4061.

Retroreflectance values shall be measured under wet conditions according to ASTM E2176 or ASTM E2177. Wet retroreflectance values measured under a “condition of continuous wetting” (simulated rain) shall be according to ASTM E2176. Wet retroreflectance values measured under a “condition of wetness” shall be according to ASTM E2177.

**Table 1**  
**Expected Initial  $R_L$  under dry, wet, and rainy conditions**

	Dry	Wet & Rainy
Entrance Angle	88.76°	88.76°
Observation Angle	1.05°	1.05°
$R_L$ for White	500	250
$R_L$ for Yellow	300	250

Note: The test instrument shall use an Entrance Angle of 88.76° and Observation Angle of 1.05°, which represent a simulated driver viewing geometry at a 100 foot (30 meter) distance.

Index of Refraction. All “dry-performing” microcrystalline ceramic beads bonded to the polyurethane-coated, patterned surface of the material shall have a minimum index of refraction of 1.70 when tested using the liquid oil immersion method. All “wet-performing” microcrystalline ceramic beads bonded to the polyurethane-coated, patterned surface of the material shall have a minimum index of refraction of 2.30 when tested using the liquid oil immersion method. The glass beads mixed into the pliant polymer shall have a minimum index of refraction of 1.5 when tested by the liquid oil immersion method.

Acid Resistance. The beads shall show resistance to corrosion of their surface after exposure to a 1% solution (by weight) of sulfuric acid. The 1% acid solution shall be made by adding 5.7 cc of concentrated acid into 1000 cc of distilled water. CAUTION: Always add the concentrated acid into the water, not the reverse. The test shall be performed as follows:

Take a 1 in. x 2 in. (25 mm x 50 mm) sample, adhere it to the bottom of a glass tray and place just enough acid solution to completely immerse the sample. Cover the tray with a piece of glass to prevent evaporation and allow the sample to be exposed for 24 hours under these conditions. Then decant the acid solution (do not rinse, touch or otherwise disturb the bead surfaces) and dry the sample while adhered to the glass tray in a 150° F. (66° C.) oven for approximately 15 minutes.

Microscopic examination (20X) shall show no more than 15% of the beads having a formation of a very distinct opaque white (corroded) layer on their entire surface.

Color. The preformed markings shall consist of white film with pigments selected and blended to conform to standard highway colors.

Prior to approval and use of the preformed pavement marking materials, the manufacturer shall submit a notarized certification of an independent laboratory, together with the results of all tests, stating these materials meet the requirements as set forth herein. The certification test report shall state the lot tested, manufacturer’s name, and date of manufacture.

After approval by the Department, certification by the manufacturer shall be submitted for each batch used. All costs of testing (other than tests conducted by the Department) shall be borne by the manufacturer.

Basis of Payment. This work will be paid for at the contract unit price per foot (meter) of applied line width, as specified, for WET REFLECTIVE PREFORMED PLASTIC PAVEMENT MARKINGS – LINE and/or per square foot (square meter) for WET REFLECTIVE PREFORMED PLASTIC PAVEMENT MARKINGS – LETTERS AND SYMBOLS.

## **HIGH TENSION CABLE MEDIAN BARRIER (WITH DRIVEN LINE POSTS)**

Description. This work shall consist of furnishing and installing a high tension cable (HTC) median barrier with terminals/end anchorages.

Materials. Materials shall be according to the following.

Item	Article/Section
(a) Reinforcement Bars .....	1006.10(a)
(b) Portland Cement Concrete (Note 1) .....	1020
(c) Wire Rope (Cable) and Fittings (Note 2)	

Note 1. The portland cement concrete shall be Class SI.

Note 2. The wire rope (cable) shall be according to AASHTO M 30, Type 1 with Class A coating, of the diameter shown in the manufacturer’s specifications. Additionally, the wire rope shall be prestretched and shall have a breaking strength of 39,285 lbs (175 kN) for 3/4 in. (19 mm) wire rope (individual wire strength equivalent to 174,000 psi (1200 N/mm)) and the prestretched wire rope shall have a minimum modulus of elasticity of 11,805,000 psi (8300 kg/mm).

The barrier shall be tested and accepted under the National Cooperative Highway Research Program (NCHRP) Report 350 for the required test level and be on the Department’s approved list. Barriers installed on front slope grades of 1:6 or flatter shall be Test Level 4. Barriers installed on front slope grades steeper than 1:6 but 1:4 or flatter shall be Test Level 3.

The barrier shall include four longitudinal cables, each separated vertically from adjacent cable(s) by a minimum of 4 in. (100 mm), and according to the specific acceptance document issued by FHWA. Each cable shall run to a point of anchorage at the terminal without connection to any other cable. The maximum spacing for line posts in the cable barrier system shall be no more than shown in the specific document issued by FHWA, or 15 ft (4.6 m), whichever is less.

The terminals/end anchorages shall be tested and accepted under NCHRP Report 350 Test Level 3 and be on the Department’s approved list.

Equipment. Equipment shall be according to the barrier manufacturer’s specifications.

### Construction Requirements

General. The HTC median barrier shall be constructed to the lines and grades shown on the plans and according to the manufacturer’s specifications except as modified by the contracts documents.

Line Post Foundations. Line posts for the HTC median barrier shall be driven. Concrete foundations for line posts are not required.

End Anchorages. The Contractor shall submit shop drawings and calculations to the Engineer prepared and sealed by an Illinois Licensed Structural Engineer detailing the required end anchorage foundation system at each location. The system shall utilize drilled shaft foundation of a diameter, depth, reinforcement, and cable connection determined by the supplier. The design shall utilize Broms method utilizing a minimum factor of safety of 1.5. The design loadings shall consist of the theoretical cumulative cable tension expected for temperature fluctuations to -10 °F (-23 °C). The dynamic vehicle impact loading shall not be added to the cable temperature loading for the analysis. The foundation soils shall be assumed to be submerged granular material with a friction angle of 30 degrees or clay soils with a cohesive intercept of 1.0 kip/sq ft (48 kPa), unless site specific soil parameters are specified.

Tensioning. Prior to acceptance of the work, the tension of the HTC median barrier shall be checked, and adjusted as necessary, according to the manufacturer's temperature/tension chart or relationship.

Hands-On Demonstration. When included in the contract, a hands-on demonstration(s) of maintenance/repair procedures, recommendations and discussion of vehicle recovery, and provisions for emergency openings in the barrier shall be conducted. These demonstrations shall be for emergency responders, maintenance personnel, and others invited by the Engineer and shall either be conducted either at the job-site or at another agreed to meeting facility. Up to 30 attendees shall be accommodated at each demonstration.

Method of Measurement. HTC median barrier will be measured for payment in feet (meters) along the top cable between terminals. Terminals shall be defined as the end anchorages and other components from the extreme ends of a run to a point 50 ft (15.2 m) into the run. This definition of the terminal applies regardless of the length of need point, transitions from anchorage to full height cable, or other features that may vary between systems.

Basis of Payment. This work will be paid for at the contract unit price per foot (meter) for HIGH TENSION CABLE MEDIAN BARRIER.

The terminals/end anchorages and demonstrations will be paid for at the contract per each for HIGH TENSION CABLE MEDIAN BARRIER TERMINALS and HIGH TENSION CABLE MEDIAN BARRIER DEMONSTRATION respectively.

## **CABLE GUARD MARKER**

Material: The material shall be in accordance with Section 1090 and 1091 of the Standard Specifications and the reflective sheeting shall meeting Type AP or greater in reflectivity.

Construction Requirements: The reflective sheeting shall be installed directly on the cable posts. The reflective sheeting shall be installed as shown in the plans. The surface of the post shall be cleaned of all contaminants prior to the installation of the reflective sheeting. The surface shall be cleaned using a 5-8 percent phosphoric acid solution and rinsed with clean water or as recommended by the manufacturer of the reflective sheeting and as approved by the engineer.

Basis of Payment: This work will be paid for at the contract unit price each for CABLE GUARD MARKER.

## **WOOD POST**

This shall consist of furnishing and installing wood posts to prevent illegal median crossovers as shown in the plan detail. Work shall be in accordance with Section 634 except the tops of the posts do not have to be rounded. Work also includes the removal of any broken posts. The exact location of each post shall be determined by the engineer

This work shall be paid for at the contract unit price each for WOOD POST.

## **PIPE UNDERDRAIN OUTLET EXTENSION SPECIAL**

Description: This work shall consist of extending existing pipe underdrain outlets with additional pipe underdrain material and relocating the headwall as necessary.

Materials: The materials used shall be in accordance with Article 601.02 of the Standard Specifications

Construction Requirements: The existing concrete headwalls are to be removed and reinstalled after the pipe underdrain outlet is extended. Care shall be taken not to damage the headwall or the pipe underdrain to remain in place. Any damage to the pipe underdrain or concrete headwalls caused by the Contractor's operations will need to be replaced with similar material at the Contractor's expense.

The existing pipe underdrain outlets shall be extended with pipe underdrain material of the same diameter (4"). The additional pipe shall be installed in accordance with the applicable portions of 601 of the Standard Specifications. The average anticipated length of pipe at each location is 6 feet. Connections to the existing pipe underdrain outlet shall be as specified by the Engineer. The existing concrete headwall will be relocated as necessary and reattached in accordance with the applicable portions of Section 601.

Basis of Payment: This work will be paid for at the contract unit price per each for PIPE UNDERDRAIN OUTLET EXTENSION SPECIAL.

## **TEMPORARY RAMPS**

Temporary ramps are required as part of the work for each stage.

Any longitudinal temporary ramps required by the Contractor's operations (Article 406.08) shall be made with a paving machine with a 40' per 1 inch (H:V) taper rate.

This work shall be paid for at the contract unit price per square yard for TEMPORARY RAMPS.

## **SALVAGE**

During removal operations, the Engineer may elect to salvage up to 23 old attenuator barrels and up to 200' of old guardrail. The Engineer will be the sole judge as to which pieces are selected. The salvaged material shall be delivered to the Morris or Ottawa yards.

## **CLEANING PIPE UNDERDRAIN OUTLETS**

This work consist of cleaning the outlet headwall and no more than 3' of the outlet pipe drain of the existing pipe underdrains using a water jet or any means approved by the Engineer.

This work shall be paid for at the contract unit price each for CLEANING UNDERDRAIN OUTLETS. Work includes removing and replacing the rodent shield, if necessary. If the rodent shield is missing, one shall be furnished.

## **HMA SURFACE REMOVAL**

The Contactor is advised of the variable thicknesses of existing HMA on this project, especially under overhead structures. Also, the result of constructing straight pavement slopes on a circular cross section itself produces a variable depth of existing HMA laterally across the pavement. The results of pavement cores have been included in the plans for the Contractor's information. Pay items for removal in the plans are based on a weighted average of core results and department experience in the field.

The surface removal operations are required to roughen or "dimple" the existing concrete surface to facilitate bonding to the proposed binder course. At least 50 percent of the surface shall be roughened or dimpled, as approved by the Engineer, prior to priming. The bare concrete pavement surface shall also be cleaned of all existing HMA by scraping or other approved method. The pavement shall then be cleaned of any remaining loose material by power brooming followed by blowing with compressed air and vacuumed as required at the edges.

The contractor is advised of an existing traffic counter with detector loops in the pavement about three miles east of Marseilles Road at Station 987+60. The contractor shall give the engineer 48 hours prior notice before milling through the existing traffic loops. Mr. Ramon Taylor of IDOT, telephone (217) 782-2065, will be notified at this time.

Payment for surface removal will be based on the HMA surface removal schedule in the plans. Variations in existing HMA thicknesses shall not result in an adjustment in payment.

Payment shall be made at the contract unit price per square yard for HMA SURFACE REMOVAL of the depth specified.

## **CONCRETE PAVEMENT SCARIFICATION**

This work consists of furnishing all labor and equipment to scarify PC concrete pavement at the locations and to the lines and depths shown in the plans. Work shall be in accordance with the applicable portions of Section 440.

Measurement for payment shall be in square yards. Payment shall be made at the contract unit price per square yard of CONCRETE PAVEMENT SCARIFICATION to the depths shown in the plans.

## **PREPARATION OF BASE**

Effective January 29, 2010

Add the following to Article 406.05(a) of the Standard Specifications:

Fine particulate shall be removed from all milled pavement by sweeping, vacuuming, or another method approved by the Engineer and then air blasting prior to the placement of prime coat.

## **WOVEN WIRE FENCE AND WOVEN WIRE FENCE REMOVAL**

This work consists of furnishing all labor, equipment, and materials to erect woven wire fence at locations shown in the plans. Work shall be done in accordance with section 665, Standard 665001, and this special provision.

Payment shall be made at the contract unit price per meter (foot) for WOVEN WIRE FENCE AND WOVEN WIRE FENCE REMOVAL which price includes all clearing of conflicting vegetation.

## **SOLAR POWER SYSTEM**

### Description

The solar power system shall consist of the solar panel (collector) all necessary mounting hardware, post, voltage regulator, and Concord battery Model No. PVC-1280H or equivalent with wing nut terminals. This battery shall be a 12 volt, 80 ampere hour absorbed electrolyte type battery. It shall have a completely sealed, valve regulated construction. The battery shall be provided with an attached handle for carrying. The systems must be of the following capacity: All continuous vehicle ATRs shall be equipped with 18-20 watt solar panels. The system's capacity should enable it to operate the equipment for thirty (30) consecutive days of heavily overcast weather without the power level of the battery dropping to a point at which it would no longer power or operate the equipment.

The department's representative, Mr. Ramon Taylor, phone (217) 782-2065, will supervise salvaging the necessary hardware from the existing traffic counter box and installing the same in the new Controller Cabinet. The old solar panel shall be salvaged and delivered to the District 3 headquarters in Ottawa. Call Kathy Bishop (815) 433-7102 to arrange delivery. Removal of items not salvaged is required.

### Material

The solar panel and all necessary mounting hardware shall be constructed of maintenance free materials which will not require painting. The solar panel surface shall be mounted at an angle of 65° referenced to the south horizon for maximum efficiency in this geographic region. Mounting height shall be a minimum of 9 feet above ground on a pressure-treated 4 inch x 6 inch post. Mounting in any other fashion will be as specified by the Engineer. A pull box shall be installed in the conduit on the wood post approximately 3 feet above grade level to facilitate splicing the power wires to the solar panel.

### Basis for Payment

This work will be paid for at the lump sum price for SOLAR EQUIPMENT mounted on a new post which shall be payment in full for furnishing the post, the voltage regulator, the battery and the conduit with electric cable attached to the post. Work includes the removal of the old system with salvage of the solar panel.

### **CONTROLLER CABINET TYPE III, SPECIAL**

This work consists of furnishing all labor, materials and equipment to provide a CONTROLLER CABINET TYPE III, SPECIAL. The cabinet will house the equipment from an existing solar powered traffic counter located approximately three miles east of the Marseilles interchange on the south side of the interstate at approximately Station 687+60.

The controller cabinet shall be furnished empty, without the controller or peripheral equipment. It shall provide a secure place and guard against inclement weather, have two shelves and a vertical panel to hang components from the traffic counter.

The cabinet shall be in accordance with 1074.03(a)(1) Cabinet, (a)(2) Weather Resistant Requirements, and (a)(3) Cabinet Design.

### **DETECTOR LOOP, TYPE I**

#### Description

This item shall consist of furnishing, installing and testing 6' X 8' rectangular detector loops at the locations shown on the plans. The detector loops shall be installed in accordance with all details shown on the plans and applicable portions of Section 886 of the Standard Specifications. All saw cutting, detector loop installation, joint sealing, lead-ins, and testing necessary to complete the installation shall conform to the following requirements:

#### Materials

The cable used for detector loop shall be #14-7 strand XHHW XLP-600V, encased in orange Detecta-duct tubing as manufactured by Kris-Tech Wire Company, Inc. or equivalent. All loop wire shall be UL listed. Lead-ins shall be Conoga-30003 cable or equivalent from the hand hole to the cabinet. The jacket shall be made of high-density polyethylene.

At ambient air temperatures above 50 degrees F, joint sealer having a minimum tensile strength of 100 P.I.E. when tested by ASTM Method D638-58T shall be used. The sealer shall have sufficient strength and resiliency to withstand stresses caused by vibrations, and pavement expansion and contraction due to temperature changes. Adhesion of the sealer to Portland cement concrete shall be at least equal to the tensile strength of the concrete. The joint sealer shall have a maximum cure time of 30 minutes. Curing shall be defined as the capability of withstanding normal traffic loads without degradation. The sealer shall meet or exceed the specifications of OZ GEDNEY DOZSeal 230 filling compound.

If the ambient air temperature is below 50 degrees F, a hard asphalt-base filling and insulating compound having a high softening point and a high pouring temperature shall be used. The filling compound shall have a softening point of not less than 235 degrees F, a summer pouring temperature of 375 degrees F, and a winter pouring temperature of 425 degrees F.

#### Installation Details

The Engineer shall be contacted regarding proposed changes in loop locations necessitated by badly deteriorated pavement.

The Engineer may relocate such loops. Detector loops may not be installed before permanent striping is completed on a newly resurfaced section of road.

Slots in the pavement shall be cut with a concrete sawing machine in accordance with the applicable portions of Section 420.05 of the Standard Specifications. The slot must be clean, dry, and oil-free. Wire shall be inserted in the pavement slot with a blunt tool which will not damage the insulation. Loops shall not be dry cut. Loops shall not be installed at an outside temperature below 50° F unless directed by Engineer.

All excess joint sealer shall be removed so that the level of the sealer in the saw cut is at the same level as the adjoining pavement.

Plastic sleeving shall be used to insulate the wire where loop wire crosses cracks and joints in the pavement. The sleeving shall be properly sealed with electrical tape to prevent joint sealer from entering sleeves. Sleeving shall extend a minimum of 8 inches each side of joint.

Detector loops shall be centered in all traffic lanes unless designated otherwise on the plans or by the Engineer. Traffic lanes shall be referred to by number, and loop wire shall be color-coded and labeled accordingly. Lane #1 shall be the southbound (westernmost) or westbound (northernmost) outside lane. Subsequent lanes are to be coded sequentially towards the opposite outside shoulder. A chart which shows the coding for each installation shall be included in each cabinet. Core holes will not be allowed at corners of loops. Saw cuts for all detector loops and lead-ins shall not be greater than 2 3/4 inches in depth.

All detector loops shall contain four (4) turns of #14 wire. Detector loops shall not be connected in series with other loops. Each detector loop shall have its own lead-in cable to the cabinet when said detector loop is over 150 feet from the cabinet. The loop lead-in shall be a Canoga 30003 cable or equivalent. Loop and lead-in wires shall be free from kinks or any insulation abrasions. Lead-ins shall be twisted in such a manner so as to prevent mechanical movement between the individual cables. Lead-in cable shall be brought into a cabinet or hand hole at the time the detector loop is placed in the pavement.

Where lead-in runs are less than 150 feet, the loop wire shall be utilized as lead-in to the point of termination without splices, being twisted 5 turns per foot. The loop wire will be paid for as lead-in from the hand hole to the point of termination in the cabinet.

Loop lead-ins placed in hand holes shall be coiled, taped and secured to the upper portion of the hand hole to protect against water damage. The excess coiled wire should not exceed 6' in length. Any other method of installation will require prior written approval of the Engineer. Each loop lead-in shall be color coded and tagged at each angled drilled hole, hand hole, and junction box through which it passes and at the termination point in the cabinet.

Saw cuts for loop lead-ins will not be allowed in shoulders, or through the edge of pavement. Loop lead-ins shall not be installed in the curb and gutter section. An angled hole shall be drilled at least 12 inches in from the edge of pavement through which the 1 1/4 inch PVC conduit containing the loop lead-in cable shall be installed (see plan detail).

The loop shall be spliced to the lead-in wire with a barrel sleeve, crimped and soldered. Adhesive-lined heat shrink tubing shall be used to provide waterproof protection for the splice.

The soldered connection shall be made with a soldering iron or soldering gun. No other method will be acceptable, i.e. the use of a torch to solder will not be acceptable. The heat shrink tubing shall be shrunk with a heat gun. No other method will be acceptable, i.e. the use of a torch will not be acceptable. No burrs shall be left on the wire when soldering is finished. Cold solder joints will not be acceptable.

The Traffic Count Detector Loop color code shall be as follows:

LOOP #1	GRAY
LOOP #2	ORANGE
LOOP #3	PURPLE
LOOP #4	BLUE
LOOP #5	GREEN
LOOP #6	YELLOW
LOOP #7	BROWN
LOOP #8	WHITE

At locations where there are more than eight loops , loops number nine through number sixteen shall repeat the same color code, but all loops shall additionally be marked to identify the lane.

In addition to color codes each loop shall be identified with a written label attached to the loop wire, or lead-in wire. The tags shall be Panduit #MP250W175-C or equivalent. All wires and cables shall be identified in each hand hole or cabinet the cable passes through, or terminates in. The labels shall be attached to the cable by use of two cable ties.

#### Protection of Work

Electrical work, equipment and appurtenances shall be protected from damage during construction until final acceptance. Electrical duct openings shall be capped or sealed to prevent the entrance of water and dirt. Wiring shall be protected from mechanical injury.

#### Standards of Installation

Electrical work shall be completed in a neat and workmanlike manner in accordance with the best practices of the trade. Unless otherwise indicated, materials and equipment shall be new and installed in accordance with the manufacturer's recommendations.

Except as specified elsewhere herein, materials and equipment shall be in conformance with the requirements of Section 106 of the Standard Specifications.

#### Testing

Detector loops shall be tested immediately upon installation at each automated traffic recording station and again at the time of final acceptance inspection in the presence of the Engineer. Items which fail to test satisfactorily shall be repaired or replaced before final acceptance.

An electronic test instrument capable of measuring large values of electrical resistance, such as a megger, shall be used to measure the resistance of the detector loop and its lead-in. The resistance of the loop and its lead-in shall be a minimum of 100 megohms above ground under any conditions of weather or moisture.

The resistance tests and all electronic tests shall be performed in the presence of the Engineer any number of times as specified by the Engineer. The loop and loop lead-in shall have an inductance between 100 microhenries and 350 microhenries. The continuity test of the loop and loop lead-in shall not indicate a resistance greater than two (2) ohms. The Contractor shall conduct all testing in the presence of the Engineer and all readings will be recorded by the Engineer. Testing shall be done with an approved loop tester.

#### Method of Measurement

The detector loop measurement shall be the length of saw cut in the pavement which contains loop wire. The actual length of wire used in the saw cut shall not be considered in any measurement.

#### Basis for Payment

This item will be paid at the contract unit price per lineal foot for DETECTOR LOOP, TYPE I.

### **DETECTOR LOOP LEAD-IN CABLE IN CONDUIT, CONOGA-30003**

#### Description

This work consists of furnishing and installing loop detector lead-in cables or interconnect cables of the number of pairs specified in the conduit in accordance with the requirements of the Standard Specifications, Section 886 and the following exceptions or additions:

#### Materials

The Traffic Count Detector Loop Lead-in Cable shall be Canoga 30003 or equivalent.

#### Installation

Each end of the cable shall be identified with wire markers as directed by the Engineer.

The drain wire of each pair shall be grounded to chassis ground in the cabinet only for interference suppression.

The electrical values of the cable shall be metered by the Contractor, in the presence of the Engineer, after they are spliced to the detector loop. Acceptance of the cable as metered shall be determined by the Engineer.

#### Basis for Payment

This work shall be paid for at the contract unit price per lineal foot for ELECTRIC CABLE IN CONDUIT, CONOGA-30003.

## **PIEZO AXLE SENSORS, CLASS-II**

### Description

This item consists of installing one Class II Piezo Axle Sensor (AMP Model No. 0-1004673-0 BLC Sensor Class II or equivalent), in each lane indicated on the plans.

The use of Global Resin Epoxy or equivalent is necessary for proper bonding. A minimum of ten (10) days cure time for new asphalt is required before the epoxy is used for bonding. To accelerate cure time of the epoxy at temperatures below 50°F an epoxy heater will be furnished by IDOT. The Contractor shall provide a 240V generator capable of providing at least 3,600 watts of power.

Piezo axle sensors may not be installed before permanent striping is completed on a newly resurfaced section of road. Installation of an automated traffic recorder must be completed no later than sixty (60) days after installation is begun.

### Material

The four (4) Class II axle sensors, necessary RG58C/U transmission cable and Global Epoxy or equivalent for encapsulating sensors shall be furnished by the Contractor. ROADTRAX BLC Traffic Sensors manufactured by AMP Incorporated or equivalent shall be installed at this location. The axle sensor shall be flexible along its longitudinal axis to allow the sensor to easily conform to the profile of the lane in which it is being installed. Class II axle sensors shall be manufactured with suitable lengths of RG58C/U transmission cable for continuous run from axle sensor through the hand hole to the cabinet. Splicing of transmission cable to axle sensor shall not be permitted unless approved in advance and supervised by Mr. Ramon Taylor of the Illinois Department of Transportation.

### Installation

Installation shall be in accordance with the attached instructions. The Engineer should be advised at least three days prior to installation. Mr. Ramon Taylor of the Illinois Department of Transportation, telephone (217) 782-2065, must be present to supervise installation of the axle sensors.

Heated loop sealers shall not be used to seal the RG58C/U transmission cable in the pavement saw cut. Sealex or equivalent loop sealant shall be used.

### Testing

Piezo axle sensors shall be tested immediately upon installation and again at the time of final acceptance inspection in the presence of the Engineer. The tests shall be performed utilizing an oscilloscope to ensure acceptable, clean signals of proper amplitude and polarity. Sensors that fail to test satisfactorily shall be repaired or replaced before final acceptance.

### Basis for Payment

This work shall be paid for at the contract unit price per lineal foot for PIEZO AXLE SENSOR, CLASS II, measured along the saw cut in the pavement containing the axle sensor and lead-in.

## **INSTALLATION INSTRUCTIONS FOR THE ROADTRAX BL TRAFFIC SENSORS (OR APPROVED EQUIVALENT)**

### Equipment Required

The sensors should be supplied with sufficient lengths of lead-in cable to avoid splicing. The lead-in cable length should not exceed 300 feet without consulting the manufacturer. Installation brackets are included when the sensors are shipped from the manufacturer. If splicing is required, only similar grades of RG-58 cable should be used. Splices must be soldered and an approved splice kit used to waterproof the splice.

The following tools and accessories are required for sensor installation:

- A heavy duty (at least 35 horsepower) self-propelled concrete cutting saw equipped with a 3/4" diamond blade. If a blade of this width is not available, multiple blades can be used to form a dado.
- A water supply for blade cooling and slot washing.
- A 1/2 inch electric or air hammer drill, 1/2 inch masonry bit, hand sledge hammer and one inch chisel.
- Air compressor with hose and nozzle for cleaning and drying the slot and to power any air tools used.
- Straight edge, chalk line, minimum 1/8" diameter cord or rope for laying out the lines, upside-down pavement fluorescent spray paint, wax crayon, measuring tape to mark locations of saw cuts to be made for sensor(s) and lead-in wire.
- One half inch variable speed drill, industrial grade mixing paddles (one for mixing sensor grout and hardener and one for mixing loop sealant and hardener. Do not cross contaminate sensor grout and loop sealant by using the same mixing paddles.
- Wire Strippers. Knife type blade strippers, pliers and diagonal cutters.
- Disk grinder or heavy duty sander to remove high spots of epoxy after installation and curing.
- Wire brush to remove any remaining debris from the sawed slot and to rough up the sides of the slot after the saw cuts are completed.
- Broom to keep work area clear of debris.
- Clean rags and Isopropyl Alcohol to clean and prime concrete surface of the sawed slots.
- Plumbers putty or duct seal to form dams at the end of the sensor slot to contain the resin (grout).

- PU 200 Resin (or approved equal) for encapsulating the sensors ( one can for every six feet of sensor )
- Two part cold mix loop sealant for encapsulating the loop and lead wire(s). Hot tar is not acceptable.
- Duct tape (2" minimum width) to protect the pavement edge from excess resin end loop sealant along edges of sawed slots during installation of sensors and lead wire.
- Putty knives (3" to 4") to remove excess epoxy\_or work epoxy around sensor and small point trowel for putting resin (grout) into the slot if necessary.
- Sensor epoxy curing system (provided by the Illinois Department of Transportation hereafter known as IDOT) to allow sensor installation at temperatures lower than those normally recommended by the resin manufacturer. The maximum temperature allowed by IDOT for on the MSI-BL sensor is 120° F.
- One 4,000 watt, 240 volt generator (provided by the contractor) to provide a power source for the sensor curing system. Please contact Ramon Taylor at (217) 782-2065 to determine if the sensor heater will be used. If the use of a heater is not anticipated by Mr. Taylor, it will not be necessary for the contractor to provide one.
- The contractor must provide\_a generator suitable for any power tools since AC power is not available at most traffic count stations.
- One hundred foot fish tape.
- Heavy duty extension cord.
- Chemical proof rubber work gloves, heavy duty work gloves , dust filter mask and goggles and safety glasses for eye protection.
- Trenching equipment as required to bury conduit.
- Cleaning materials for hands and equipment.
- All necessary instructions.
- All necessary safety data (MSDS, etc.).

#### Method of Installation

1. Mark the position of the sensor slots to be cut, perpendicular to the traffic flow. Cable runs on the pavement should also be clearly marked using wax crayons or line and fluorescent pavement paint.
2. Cut a slot 3/4" wide ( $\pm 1/16"$ ) and 7/8" deep ( $\pm 1/8"$ ). The slot should be 6" longer than the sensor. The lead out should be centered on the slot.

3. The slot must be cut in one pass using one (1) 3/4" wide diamond blade or two (2) 3/8" blades may be ganged together. The slot should be wet cut to minimize damage to the roadway surface.
  4. Cut the cable slots to the edge of the roadway.
  5. Clear away debris and wash the slots thoroughly. Use air supply to dry. The slots and surrounding surface must be completely clean and dry before any adhesive is poured.
  6. Apply two layers of 2" duct tape on the pavement along the perimeter of the slot.
  7. Position the sensor on the duct tape next to the slot. Ensure that the sensor is straight and flat. Place the clips on the sensor, about every 8" .
  8. Place the sensor in the slot, with the brass element about 1/4" below the road surface and the top of the brackets about 1/8" below the road surface. Ensure the ends of the sensors are pushed down sufficiently.
  9. Block the ends of the slot using plumbers putty or duct seal . Ensure that there are adequate 'dams' at both ends so that the encapsulation material (P5G Resin or approved equal) does not flow out. On the passive cable end, dam should be about 3 1/2" past the end of the lead attachment area.
  10. Ensure that you are wearing rubber gloves suitable for this type of application. The sealant should not come in contact with the skin.
  11. Mix the grout according to the manufacturer's instructions. Be sure to pre-mix the resin before combining the two parts since the filled materials have a tendency to settle. Fill the slot full of the encapsulation material. Using a trowel, distribute the encapsulation material along the sensor. Approved Installation Epoxies are-ECM P5G and Global Resin PU 200. Remove the tape on the sides of the slot as soon as the adhesive starts to cure.
  12. Carefully remove the plumbers putty or duct seal used to form the dams at both ends of the sensor.
  13. Route the lead in cable through the slot cut for it and cover with loop sealant. Hot tar must not be used since the temperature is difficult to control and it can burn the cable. Scatter clean dry sand to prevent sticking.
- Note: The lead-in cable slot shall run to the edge of pavement.
14. When the encapsulation material is fully cured (see manufacturer's recommended cure time), grind the top of the encapsulation material flush with the road using an angle grinder. The profile should be flat or with a slight 'mound', provided that there is no concave portion to the curve.
  15. Remove all work related debris from the site. When the encapsulation material is fully cured, lanes may be opened to traffic.

16. Follow the manufacturer's recommended cure time.

**ALKALI-SILICA REACTION FOR CAST-IN-PLACE CONCRETE (BDE)**

Effective: August 1, 2007

Revised: January 1, 2009

Description. This special provision is intended to reduce the risk of a deleterious alkali-silica reaction in concrete exposed to humid or wet conditions.

The special provision is not intended or adequate for concrete exposed to potassium acetate, potassium formate, sodium acetate or sodium formate. The special provision shall not apply to the dry environment (humidity less than 60 percent) found inside buildings for residential or commercial occupancy. The special provision shall also not apply to precast products or precast prestressed products.

Aggregate Expansion Values. Each coarse and fine aggregate will be tested by the Department for alkali reaction according to ASTM C 1260. The test will be performed with Type I or II cement having a total equivalent alkali content ( $Na_2O + 0.658K_2O$ ) of 0.90 percent or greater. The Engineer will determine the assigned expansion value for each aggregate, and these values will be made available on the Department's Alkali-Silica Potential Reactivity Rating List. The Engineer may differentiate aggregate based on ledge, production method, gradation number, or other factors. An expansion value of 0.05 percent will be assigned to limestone or dolomite coarse aggregates and 0.03 percent to limestone or dolomite fine aggregates (manufactured stone sand); however the Department reserves the right to perform the ASTM C 1260 test.

Aggregate Groups. Each combination of aggregates used in a mixture will be assigned to an aggregate group. The point at which the coarse aggregate and fine aggregate expansion values intersect in the following table will determine the group.

AGGREGATE GROUPS			
Coarse Aggregate or Coarse Aggregate Blend ASTM C 1260 Expansion	Fine Aggregate or Fine Aggregate Blend ASTM C 1260 Expansion		
	≤ 0.16%	> 0.16% - 0.27%	> 0.27%
≤ 0.16%	Group I	Group II	Group III
> 0.16% - 0.27%	Group II	Group II	Group III
> 0.27%	Group III	Group III	Group IV

Mixture Options. Based upon the aggregate group, the following mixture options shall be used; however, the Department may prohibit a mixture option if field performance shows a deleterious alkali-silica reaction or Department testing indicates the mixture may experience a deleterious alkali-silica reaction.

- Group I - Mixture options are not applicable. Use any cement or finely divided mineral.
- Group II - Mixture options 1, 2, 3, 4, or 5 shall be used.
- Group III - Mixture options 1, 2 and 3 combined, 4, or 5 shall be used.
- Group IV - Mixture options 1, 2 and 4 combined, or 5 shall be used.

For Class PP-3 concrete the mixture options are not applicable, and any cement may be used with the specified finely divided minerals.

- a) Mixture Option 1. The coarse or fine aggregates shall be blended to place the material in a group that will allow the selected cement or finely divided mineral to be used.

When a coarse or fine aggregate is blended, the weighted expansion value shall be calculated separately for the coarse and fine aggregate as follows:

$$\text{Weighted Expansion Value} = (a/100 \times A) + (b/100 \times B) + (c/100 \times C) + \dots$$

Where: a, b, c... = percentage of aggregate in the blend;  
A, B, C...= expansion value for that aggregate.

- b) Mixture Option 2. A finely divided mineral shall be used as described in 1), 2), 3), or 4) that follow. The replacement ratio is defined as “finely divided mineral:portland cement”.

1) Class F Fly Ash. For Class PV, BS, MS, DS, SC, and SI concrete and cement aggregate mixture II (CAM II), Class F fly ash shall replace 15 percent of the portland cement at a minimum replacement ratio of 1.5:1.

2) Class C Fly Ash. For Class PV, MS, SC, and SI Concrete, Class C fly ash with 18 percent to less than 26.5 percent calcium oxide content, and less than 2.0 percent loss on ignition, shall replace 20 percent of the portland cement at a minimum replacement ratio of 1:1; or at a minimum replacement ratio of 1.25:1 if the loss on ignition is 2.0 percent or greater. Class C fly ash with less than 18 percent calcium oxide content shall replace 20 percent of the portland cement at a minimum replacement ratio of 1.25:1.

For Class PP-1, RR, BS, and DS concrete and CAM II, Class C fly ash with less than 26.5 percent calcium oxide content shall replace 15 percent of the portland cement at a minimum replacement ratio of 1.5:1.

3) Ground Granulated Blast-Furnace Slag. For Class PV, BS, MS, SI, DS, and SC concrete, ground granulated blast-furnace slag shall replace 25 percent of the portland cement at a minimum replacement ratio of 1:1.

For Class PP-1 and RR concrete, ground granulated blast-furnace slag shall replace 15 percent of the portland cement at a minimum replacement ratio of 1.5:1.

For Class PP-2, ground granulated blast-furnace slag shall replace 25 to 30 percent of the portland cement at a minimum replacement ratio of 1:1.

4) Microsilica or High Reactivity Metakaolin. Microsilica solids or high reactivity metakaolin shall be added to the mixture at a minimum 25 lb/cu yd (15 kg/cu m) or 27 lb/cu yd (16 kg/cu m) respectively.

- c) Mixture Option 3. The cement used shall have a maximum total equivalent alkali content ( $\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$ ) of 0.60 percent. When aggregate in Group II is involved, any finely divided mineral may be used with a portland cement.

- d) Mixture Option 4. The cement used shall have a maximum total equivalent alkali content ( $\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$ ) of 0.45 percent. When aggregate in Group II or III is involved, any finely divided mineral may be used with a portland cement.
- e) Mixture Option 5. The proposed cement or finely divided mineral may be used if the ASTM C 1567 expansion value is  $\leq 0.16$  percent when performed on the aggregate in the concrete mixture with the highest ASTM C 1260 test result. The ASTM C 1567 test will be valid for two years, unless the Engineer determines the materials have changed significantly. For latex concrete, the ASTM C 1567 test shall be performed without the latex. The 0.20 percent autoclave expansion limit in ASTM C 1567 shall not apply.

If during the two year time period the Contractor needs to replace the cement, and the replacement cement has an equal or lower total equivalent alkali content ( $\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$ ), a new ASTM C 1567 test will not be required.

Testing. If an individual aggregate has an ASTM C 1260 expansion value  $> 0.16$  percent, an ASTM C 1293 test may be performed by the Contractor to evaluate the Department's ASTM C 1260 test result. The ASTM C 1293 test shall be performed with Type I or II cement having a total equivalent alkali content ( $\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$ ) of 0.80 percent or greater. The interior vertical wall of the ASTM C 1293 recommended container (pail) shall be half covered with a wick of absorbent material consisting of blotting paper. If the testing laboratory desires to use an alternate container or wick of absorbent material, ASTM C 1293 test results with an alkali-reactive aggregate of known expansion characteristics shall be provided to the Engineer for review and approval. If the expansion is less than 0.040 percent after one year, the aggregate will be assigned an ASTM C 1260 expansion value of 0.08 percent that will be valid for two years, unless the Engineer determines the aggregate has changed significantly.

The Engineer reserves the right to verify a Contractor's ASTM C 1293 or 1567 test result. The Engineer will not accept the result if the precision and bias for the test methods are not met.

The laboratory performing the ASTM C 1567 test shall either be accredited by the AASHTO Materials Reference Laboratory (AMRL) for ASTM C 227 under Portland Cement Concrete or Aggregate; or shall be inspected for Hydraulic Cement - Physical Tests by the Cement and Concrete Reference Laboratory (CCRL) and shall be approved by the Department. The laboratory performing the ASTM C 1293 test shall be inspected for Portland Cement Concrete by CCRL and shall be approved by the Department.

#### **APPROVAL OF PROPOSED BORROW AREAS, USE AREAS, AND/OR WASTE AREAS INSIDE ILLINOIS STATE BORDERS (BDE)**

Effective: November 1, 2008

Revise the title of Article 107.22 of the Standard Specifications to read:

**"107.22 Approval of Proposed Borrow Areas, Use Areas, and/or Waste Areas Inside Illinois State Borders."**

Add the following sentence to the end of the first paragraph of Article 107.22 of the Standard Specifications:

“Proposed borrow areas, use areas, and/or waste areas outside of Illinois shall comply with Article 107.01.”

## **CEMENT (BDE)**

Effective: January 1, 2007

Revised: April 1, 2009

Revise Section 1001 of the Standard Specifications to read:

### **“SECTION 1001. CEMENT**

**1001.01 Cement Types.** Cement shall be according to the following.

- (a) Portland Cement. Acceptance of portland cement shall be according to the current Bureau of Materials and Physical Research’s Policy Memorandum, “Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants”.

Portland cement shall be according to ASTM C 150, and shall meet the standard physical and chemical requirements. Type I or Type II may be used for cast-in-place, precast, and precast prestressed concrete. Type III may be used according to Article 1020.04, or when approved by the Engineer. All other cements referenced in ASTM C 150 may be used when approved by the Engineer.

The total of all organic processing additions shall be a maximum of 1.0 percent by weight (mass) of the cement. The total of all inorganic processing additions shall be a maximum of 4.0 percent by weight (mass) of the cement. However, a cement kiln dust inorganic processing addition shall be limited to a maximum of 1.0 percent. Organic processing additions shall be limited to grinding aids that improve the flowability of cement, reduce pack set, and improve grinding efficiency. Inorganic processing additions shall be limited to granulated blast-furnace slag according to the chemical requirements of AASHTO M 302, Class C fly ash according to the chemical requirements of AASHTO M 295, and cement kiln dust.

- (b) Portland-Pozzolan Cement. Acceptance of portland-pozzolan cement shall be according to the current Bureau of Materials and Physical Research’s Policy Memorandum, “Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants”.

Portland-pozzolan cement shall be according to ASTM C 595 and shall meet the standard physical and chemical requirements. Type IP may be used for cast-in-place, precast, and precast prestressed concrete, except when Class PP concrete is used. The pozzolan constituent for Type IP shall be a maximum of 21 percent of the weight (mass) of the portland-pozzolan cement.

For cast-in-place construction, portland-pozzolan cement shall not be used in concrete mixtures when the air temperature is below 40 °F (4 °C) without permission of the Engineer. If permission is given, the mix design strength requirement may require the Contractor to increase the cement or eliminate the cement factor reduction for a water-reducing or high range water-reducing admixture which is permitted according to Article 1020.05(b).

The total of all organic processing additions shall be a maximum of 1.0 percent by weight (mass) of the cement. Organic processing additions shall be limited to grinding aids as defined in (a) above. Inorganic processing additions shall be limited to cement kiln dust at a maximum of 1.0 percent.

- (c) Portland Blast-Furnace Slag Cement. Acceptance of portland blast-furnace slag cement shall be according to the current Bureau of Materials and Physical Research's Policy Memorandum, "Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants".

Portland blast-furnace slag cement shall be according to ASTM C 595 and shall meet the standard physical and chemical requirements. Type IS portland blast-furnace slag cement may be used for cast-in-place, precast, and precast prestressed concrete, except when Class PP concrete is used. The blast-furnace slag constituent for Type IS shall be a maximum of 25 percent of the weight (mass) of the portland blast-furnace slag cement.

For cast-in-place construction, portland blast-furnace slag cement shall not be used in concrete mixtures when the air temperature is below 40 °F (4 °C) without permission of the Engineer. If permission is given, the mix design strength requirement may require the Contractor to increase the cement or eliminate the cement factor reduction for a water-reducing or high range water-reducing admixture which is permitted according to Article 1020.05(b).

The total of all organic processing additions shall be a maximum of 1.0 percent by weight (mass) of the cement. Organic processing additions shall be limited to grinding aids as defined in (a) above. Inorganic processing additions shall be limited to cement kiln dust at a maximum of 1.0 percent.

- (d) Rapid Hardening Cement. Rapid hardening cement shall be used according to Article 1020.04 or when approved by the Engineer. The cement shall be on the Department's current "Approved List of Packaged, Dry, Rapid Hardening Cementitious Materials for Concrete Repairs", and shall be according to the following.

- (1) The cement shall have a maximum final set of 25 minutes, according to Illinois Modified ASTM C 191.
- (2) The cement shall have a minimum compressive strength of 2000 psi (13,800 kPa) at 3.0 hours, 3200 psi (22,100 kPa) at 6.0 hours, and 4000 psi (27,600 kPa) at 24.0 hours, according to Illinois Modified ASTM C 109.
- (3) The cement shall have a maximum drying shrinkage of 0.050 percent at seven days, according to Illinois Modified ASTM C 596.
- (4) The cement shall have a maximum expansion of 0.020 percent at 14 days, according to Illinois Modified ASTM C 1038.

(5) The cement shall have a minimum 80 percent relative dynamic modulus of elasticity; and shall not have a weight (mass) gain in excess of 0.15 percent or a weight (mass) loss in excess of 1.0 percent, after 100 cycles, according to AASHTO T 161, Procedure B.

(e) Calcium Aluminate Cement. Calcium aluminate cement shall be used only where specified by the Engineer. The cement shall meet the standard physical requirements for Type I cement according to ASTM C 150, except the time of setting shall not apply. The chemical requirements shall be determined according to ASTM C 114 and shall be as follows: minimum 38 percent aluminum oxide ( $Al_2O_3$ ), maximum 42 percent calcium oxide (CaO), maximum 1 percent magnesium oxide (MgO), maximum 0.4 percent sulfur trioxide ( $SO_3$ ), maximum 1 percent loss on ignition, and maximum 3.5 percent insoluble residue.

**1001.02 Uniformity of Color.** Cement contained in single loads or in shipments of several loads to the same project shall not have visible differences in color.

**1001.03 Mixing Brands and Types.** Different brands or different types of cement from the same manufacturing plant, or the same brand or type from different plants shall not be mixed or used alternately in the same item of construction unless approved by the Engineer.

**1001.04 Storage.** Cement shall be stored and protected against damage, such as dampness which may cause partial set or hardened lumps. Different brands or different types of cement from the same manufacturing plant, or the same brand or type from different plants shall be kept separate.”

## **CONCRETE ADMIXTURES (BDE)**

Effective: January 1, 2003

Revised: April 1, 2009

Replace the first paragraph of Article 1020.05(b) of the Standard Specifications to read:

“(b) Admixtures. The use of admixtures to increase the workability or to accelerate the hardening of the concrete will be permitted when approved by the Engineer. Admixture dosages shall result in the mixture meeting the specified plastic and hardened properties. The Department will maintain an Approved List of Corrosion Inhibitors. Corrosion inhibitor dosage rates shall be according to Article 1020.05(b)(12). The Department will also maintain an Approved List of Concrete Admixtures, and an admixture technical representative shall be consulted when determining an admixture dosage from this list. The dosage shall be within the range indicated on the approved list unless the influence by other admixtures, jobsite conditions (such as a very short haul time), or other circumstances warrant a dosage outside the range. The Engineer shall be notified when a dosage is proposed outside the range. To determine an admixture dosage, air temperature, concrete temperature, cement source and quantity, finely divided mineral sources(s) and quantity, influence of other admixtures, haul time, placement conditions, and other factors as appropriate shall be considered. The Engineer may request the Contractor to have a batch of concrete mixed in the lab or field to verify the admixture dosage is correct. An admixture dosage or combination of admixture dosages shall not delay the initial set of concrete by more than one hour.

When a retarding admixture is required or appropriate for a bridge deck or bridge deck overlay pour, the initial set time shall be delayed until the deflections due to the concrete dead load are no longer a concern for inducing cracks in the completed work. However, a retarding admixture shall not be used to further extend the pour time and justify the alteration of a bridge deck pour sequence.

When determining water in admixtures for water/cement ratio, the Contractor shall calculate 70 percent of the admixture dosage as water, except a value of 50 percent shall be used for a latex admixture used in bridge deck latex concrete overlays.”

Revise Section 1021 of the Standard Specifications to read:

### **“SECTION 1021. CONCRETE ADMIXTURES**

**1021.01 General.** Admixtures shall be furnished in liquid form ready for use. The admixtures shall be delivered in the manufacturer's original containers, bulk tank trucks or such containers or tanks as are acceptable to the Engineer. Delivery shall be accompanied by a ticket which clearly identifies the manufacturer and trade name of the material. Containers shall be readily identifiable as to manufacturer and trade name of the material they contain.

Corrosion inhibitors will be maintained on the Department's Approved List of Corrosion Inhibitors. All other concrete admixture products will be maintained on the Department's Approved List of Concrete Admixtures. For the admixture submittal, a report prepared by an independent laboratory accredited by the AASHTO Materials Reference Laboratory (AMRL) for Portland Cement Concrete shall be provided. The report shall show the results of physical tests conducted no more than five years prior to the time of submittal, according to applicable specifications. However, for corrosion inhibitors the ASTM G 109 test information specified in ASTM C 1582 is not required to be from an independent lab. All other information in ASTM C 1582 shall be from an independent lab.

Tests shall be conducted using materials and methods specified on a "test" concrete and a "reference" concrete, together with a certification that no changes have been made in the formulation of the material since the performance of the tests. Per the manufacturer's option, the cement content for all required tests shall either be according to applicable specifications or 5.65 cwt/cu yd (335 kg/cu m). Compressive strength test results for six months and one year will not be required.

Prior to the approval of an admixture, the Engineer reserves the right to request a sample for testing. The test and reference concrete mixtures tested by the Engineer will contain a cement content of 5.65 cwt/cu yd (335 kg/cu m). For freeze-thaw testing, the Department will perform the test according to AASHTO T 161, Procedure B. The flexural strength test will be performed according to AASHTO T 177. If the Engineer decides to test the admixture, the manufacturer shall submit AASHTO T 197 water content and set time test results on the standard cement used by the Department. The test and reference concrete mixture shall contain a cement content of 5.65 cwt/cu yd (335 kg/cu m). The manufacturer may select their lab or an independent lab to perform this testing. The laboratory is not required to be accredited by AASHTO.

The manufacturer shall include in the submittal the following admixture information: the manufacturing range for specific gravity, the midpoint and manufacturing range for residue by oven drying, and the manufacturing range for pH. The submittal shall also include an infrared spectrophotometer trace no more than five years old.

For air-entraining admixtures according to Article 1021.02, the specific gravity allowable manufacturing range shall be established by the manufacturer and the test method shall be according to ASTM C 494. For residue by oven drying and pH, the allowable manufacturing range and test methods shall be according to ASTM C 260.

For admixtures according to Articles 1021.03, 1021.04, 1021.05, 1021.06, and 1021.07, the pH allowable manufacturing range shall be established by the manufacturer and the test method shall be according to ASTM E 70. For specific gravity and residue by oven drying, the allowable manufacturing range and test methods shall be according to ASTM C 494.

When test results are more than seven years old, the manufacturer shall re-submit the infrared spectrophotometer trace and the report prepared by an independent laboratory accredited by AASHTO.

All admixtures, except chloride-based accelerators, shall contain a maximum of 0.3 percent chloride by weight (mass).

Random field samples may be taken by the Department to verify an admixture meets specification. A split sample will be provided to the manufacturer if requested. Admixtures that do not meet specification requirements or an allowable manufacturing range established by the manufacturer shall be replaced with new material.

**1021.02 Air-Entraining Admixtures.** Air-entraining admixtures shall be according to AASHTO M 154.

**1021.03 Retarding and Water-Reducing Admixtures.** The admixture shall be according to the following.

- (a) The retarding admixture shall be according to AASHTO M 194, Type B (retarding) or Type D (water-reducing and retarding).
- (b) The water-reducing admixture shall be according to AASHTO M 194, Type A.
- (c) The high range water-reducing admixture shall be according to AASHTO M 194, Type F (high range water-reducing) or Type G (high range water-reducing and retarding).

**1021.04 Accelerating Admixtures.** The admixture shall be according to AASHTO M 194, Type C (accelerating) or Type E (water reducing and accelerating).

**1021.05 Self-Consolidating Admixtures.** The self-consolidating admixture system shall consist of either a high range water-reducing admixture only or a high range water-reducing admixture combined with a separate viscosity modifying admixture. The one or two component admixture system shall be capable of producing a concrete mixture that can flow around reinforcement and consolidate under its own weight without additional effort and without segregation.

The high range water-reducing admixture shall be according to AASHTO M 194, Type F.

The viscosity modifying admixture shall be according to ASTM C 494, Type S (specific performance).

**1021.06 Rheology-Controlling Admixture.** The rheology-controlling admixture shall be capable of producing a concrete mixture with a lower yield stress that will consolidate easier for slipform applications used by the Contractor. The rheology-controlling admixture shall be according to ASTM C 494, Type S (specific performance).

**1021.07 Corrosion Inhibitor.** The corrosion inhibitor shall be according to one of the following.

- (a) Calcium Nitrite. The corrosion inhibitor shall contain a minimum 30 percent calcium nitrite by weight (mass) of solution, and shall comply with the requirements of AASHTO M 194, Type C (accelerating).
- (b) Other Materials. The corrosion inhibitor shall be according to ASTM C 1582.”

#### **CONSTRUCTION AIR QUALITY - DIESEL VEHICLE EMISSIONS CONTROL (BDE)**

Effective: April 1, 2009

Revised: July 1, 2009

Diesel Vehicle Emissions Control. The reduction of construction air emissions shall be accomplished by using cleaner burning diesel fuel. The term “equipment” refers to any and all diesel fuel powered devices rated at 50 hp and above, to be used on the project site in excess of seven calendar days over the course of the construction period on the project site (including any “rental” equipment).

All equipment on the jobsite, with engine ratings of 50 hp and above, shall be required to: use Ultra Low Sulfur Diesel fuel (ULSD) exclusively (15 ppm sulfur content or less).

Diesel powered equipment in non-compliance will not be allowed to be used on the project site, and is also subject to a notice of non-compliance as outlined below.

The Contractor shall submit copies of monthly summary reports and include certified copies of the ULSD diesel fuel delivery slips for diesel fuel delivered to the jobsite for the reporting time period, noting the quantity of diesel fuel used.

If any diesel powered equipment is found to be in non-compliance with any portion of this specification, the Engineer will issue the Contractor a notice of non-compliance and identify an appropriate period of time, as outlined below under environmental deficiency deduction, in which to bring the equipment into compliance or remove it from the project site.

Any costs associated with bringing any diesel powered equipment into compliance with these diesel vehicle emissions controls shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed. The Contractor's compliance with this notice and any associated regulations shall also not be grounds for a claim.

Environmental Deficiency Deduction. When the Engineer is notified, or determines that an environmental control deficiency exists, he/she will notify the Contractor in writing, and direct the Contractor to correct the deficiency within a specified time period. The specified time-period, which begins upon Contractor notification, will be from 1/2 hour to 24 hours long, based on the urgency of the situation and the nature of the deficiency. The Engineer shall be the sole judge regarding the time period.

The deficiency will be based on lack of repair, maintenance and diesel vehicle emissions control.

If the Contractor fails to correct the deficiency within the specified time frame, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency continues to exist. The calendar day(s) will begin when the time period for correction is exceeded and end with the Engineer's written acceptance of the correction. The daily monetary deduction will be \$1,000.00 for each deficiency identified.

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

#### **CONSTRUCTION AIR QUALITY - IDLING RESTRICTIONS (BDE)**

Effective: April 1, 2009

Idling Restrictions. The Contractor shall establish truck-staging areas for all diesel powered vehicles that are waiting to load or unload material at the jobsite. Staging areas shall be located where the diesel emissions from the equipment will have a minimum impact on adjacent sensitive receptors. The Department will review the selection of staging areas, whether within or outside the existing highway right-of-way, to avoid locations near sensitive areas or populations to the extent possible. Sensitive receptors include, but are not limited to, hospitals, schools, residences, motels, hotels, daycare facilities, elderly housing and convalescent facilities. Diesel powered engines shall also be located as far away as possible from fresh air intakes, air conditioners, and windows. The Engineer will approve staging areas before implementation.

Diesel powered vehicle operators may not cause or allow the motor vehicle, when it is not in motion, to idle for more than a total of 10 minutes within any 60 minute period, except under any of the following circumstances:

- 1) The motor vehicle has a gross vehicle weight rating of less than 8000 lb (3630 kg).
- 2) The motor vehicle idles while forced to remain motionless because of on-highway traffic, an official traffic control device or signal, or at the direction of a law enforcement official.
- 3) The motor vehicle idles when operating defrosters, heaters, air conditioners, or other equipment solely to prevent a safety or health emergency.
- 4) A police, fire, ambulance, public safety, other emergency or law enforcement motor vehicle, or any motor vehicle used in an emergency capacity, idles while in an emergency or training mode and not for the convenience of the vehicle operator.

- 5) The primary propulsion engine idles for maintenance, servicing, repairing, or diagnostic purposes if idling is necessary for such activity.
- 6) A motor vehicle idles as part of a government inspection to verify that all equipment is in good working order, provided idling is required as part of the inspection.
- 7) When idling of the motor vehicle is required to operate auxiliary equipment to accomplish the intended use of the vehicle (such as loading, unloading, mixing, or processing cargo; controlling cargo temperature; construction operations, lumbering operations; oil or gas well servicing; or farming operations), provided that this exemption does not apply when the vehicle is idling solely for cabin comfort or to operate non-essential equipment such as air conditioning, heating, microwave ovens, or televisions.
- 8) When the motor vehicle idles due to mechanical difficulties over which the operator has no control.
- 9) The outdoor temperature is less than 32 °F (0 °C) or greater than 80 °F (26 °C).

When the outdoor temperature is greater than or equal to 32 °F (0 °C) or less than or equal to 80 °F (26 °C), a person who operates a motor vehicle operating on diesel fuel shall not cause or allow the motor vehicle to idle for a period greater than 30 minutes in any 60 minute period while waiting to weigh, load, or unload cargo or freight, unless the vehicle is in a line of vehicles that regularly and periodically moves forward.

The above requirements do not prohibit the operation of an auxiliary power unit or generator set as an alternative to idling the main engine of a motor vehicle operating on diesel fuel.

Environmental Deficiency Deduction. When the Engineer is notified, or determines that an environmental control deficiency exists based on non-compliance with the idling restrictions, he/she will notify the Contractor, and direct the Contractor to correct the deficiency.

If the Contractor fails to correct the deficiency a monetary deduction will be imposed. The monetary deduction will be \$1,000.00 for each deficiency identified.

## **DETERMINATION OF THICKNESS (BDE)**

Effective: April 1, 2009

Revise Articles 353.12 and 353.13 of the Standard Specifications to Articles 353.13 and 353.14 respectively.

Add the following Article to the Standard Specifications:

**“353.12 Tolerance in Thickness.** The thickness of base course pay items that individually contain at least 1000 sq yd (840 sq m) of contiguous area, except for temporary construction, bike paths, and individual locations less than 500 ft (150 m) long, will be evaluated. Temporary construction is defined as those areas constructed and removed under the same contract. If the base course cannot be cored for thickness prior to placement of the cover layer(s), the Engineer will determine the thickness of the cover layer(s), and subtract them from the measured core thickness to determine the base course thickness.

The procedure described in Article 407.10(b) will be followed, except the option of correcting deficient pavement with additional lift(s) shall not apply.”

Revise Article 354.09 of the Standard Specifications to read:

**“354.09 Tolerance in Thickness.** The thickness of base course widening pay items that individually contain at least 1000 sq yd (840 sq m) of contiguous area, except for temporary construction; bike paths and individual locations less than 3 ft (1 m) wide or 1000 ft (300 m) long, will be evaluated. Temporary construction is defined as those areas constructed and removed under the same contract. If the base course widening cannot be cored for thickness prior to placement of the cover layer(s), the Engineer will determine the thickness of the cover layer(s), and subtract them from the measured core thickness to determine the base course widening thickness.

The procedure described in Article 407.10(b) will be followed, except:

- (a) The width of a unit shall be the width of the widening along one edge of the pavement.
- (b) The length of the unit shall be 1000 ft (300 m).
- (c) The option of correcting deficient pavement with additional lift(s) shall not apply.”

Revise Article 355.09 of the Standard Specifications to read:

**“355.09 Tolerance in Thickness.** The thickness of HMA base course pay items that individually contain at least 1000 sq yd (840 sq m) of contiguous area, except for temporary construction; bike paths and individual locations less than 500 ft (150 m) long, will be evaluated according to Article 407.10(b). Temporary construction is defined as those areas constructed and removed under the same contract. If the base course cannot be cored for thickness prior to placement of the cover layer(s), the Engineer will determine the thickness of the cover layer(s), and subtract them from the measured core thickness to determine the base course thickness.”

Revise Article 356.07 of the Standard Specifications to read:

**“356.07 Tolerance in Thickness.** The thickness of HMA base course widening pay items that individually contain at least 1000 sq yd (840 sq m) of contiguous area, except for temporary construction; bike paths and individual locations less than 3 ft (1 m) wide or 1000 ft (300 m) long, will be evaluated according to Article 407.10(b) except, the width of a unit shall be the width of the widening along one edge of the pavement and the length of a unit shall be 1000 ft (300 m). Temporary locations are defined as those constructed and removed under the same contract. If the base course widening cannot be cored for thickness prior to placement of the cover layer(s), the Engineer will determine the thickness of the cover layer(s) and subtract them from the measured core thickness to determine the base course widening thickness.”

Revise Article 407.10 of the Standard Specifications to read:

**“407.10 Tolerance in Thickness.** Determination of pavement thickness shall be performed after the pavement surface tests and corrective action have been completed according to Article 407.09. Pay adjustments made for pavement thickness will be in addition to and independent of those made for pavement smoothness. Pavement pay items that individually contain at least 1000 sq yd (840 sq m) of contiguous pavement shall be evaluated with the following exclusions: temporary pavements; variable width pavements; radius returns; short lengths of contiguous pavements less than 500 ft (125 m) in length; and constant width portions of turn lanes less than 500 ft (125 m) in length.

Temporary pavements are defined as pavements constructed and removed under the same contract.

The method described in Article 407.10(a), shall be used except for those pavements constructed in areas where access to side streets and entrances necessitates construction in segments less than 1000 ft (300 m). The method described in Article 407.10(b) shall be used in areas where access to side streets and entrances necessitates construction in segments less than 1000 ft (300 m).

(a) Percent Within Limits. The percent within limits (PWL) method shall be as follows.

- (1) Lots and Sublots. The pavement will be divided into approximately equal lots of not more than 5000 ft (1500 m) in length. When the length of a continuous strip of pavement is 500 ft (150 m) or greater but less than 5000 ft (1500 m), these short lengths of pavement, ramps, turn lanes, and other short sections of continuous pavement will be grouped together to form lots approximately 5000 ft (1500 m) in length. Short segments between structures will be measured continuously with the structure segments omitted. Each lot will be subdivided into ten equal sublots. The width of a subplot and lot will be the width from the pavement edge to the adjacent lane line, from one lane line to the next, or between pavement edges for single-lane pavements.
- (2) Cores. Cores 2 in. (50 mm) in diameter shall be taken from the pavement by the Contractor, at locations selected by the Engineer. The exact location for each core will be selected at random, but will result in one core per subplot. Core locations will be specified prior to beginning the coring operations.

The Contractor and the Engineer shall witness the coring operations, as well as the measuring and recording of the core lengths. The cores will be measured with a device supplied by the Department immediately upon removal from the core bit and prior to moving to the next core location. Upon concurrence of the length, the core samples shall be disposed of according to Article 202.03.

Upon completion of each core, all water shall be removed from the hole and the hole then filled with a rapid hardening mortar or concrete. The material shall be mixed in a separate container, placed in the hole, consolidated by rodding, and struck-off flush with the adjacent pavement.

- (3) Deficient Sublot. When the length of the core in a subplot is deficient by more than ten percent of plan thickness, the Contractor may take three additional cores within that subplot at locations selected at random by the Engineer. If the Contractor chooses not to take additional cores, the pavement in that subplot shall be removed and replaced.

When the three additional cores are taken, the length of those cores will be averaged with the original core length. If the average shows the subplot to be deficient by ten percent or less, no additional action is necessary.

If the average shows the subplot to be deficient by more than ten percent, the pavement in that subplot shall be removed and replaced; however, when requested in writing by the Contractor, the Engineer may permit in writing such deficient sublots to remain in place. For deficient sublots allowed to remain in place, additional lift(s) may be placed, at no additional cost to the Department, to bring the deficient pavement to plan thickness when the Engineer determines grade control conditions will permit such lift(s). The area(s) to be overlaid, material to be used, thickness(es) of the lift(s), and method of placement will be approved by the Engineer.

When a deficient subplot is removed and replaced, or additional lifts are placed, the corrected subplot shall be retested for thickness. The length of the new core taken in the subplot will be used in determining the PWL for the lot.

When a deficient subplot is left in place, and no additional lift(s) are placed, no payment will be made for the deficient subplot. The length of the original core taken in the subplot will be used in determining the PWL for the lot.

- (4) Deficient Lot. After addressing deficient sublots, the PWL for each lot will be determined. When the PWL of a lot is 60 percent or less, the pavement in that lot shall be removed and replaced; however, when requested in writing by the Contractor, the Engineer may permit in writing such deficient lots to remain in place. For deficient lots allowed to remain in place, additional lift(s) may be placed, at no additional cost to the Department, to bring the deficient pavement to plan thickness when the Engineer determines grade control conditions will permit such lift(s). The area(s) to be overlaid, material to be used, thickness(es) of the lift(s), and method of placement will be approved by the Engineer.

When a deficient lot is removed and replaced, or additional lifts are placed, the corrected lot shall be retested for thickness. The PWL for the lot will then be recalculated based upon the new cores; however, the pay factor for the lot shall be a maximum of 100 percent.

When a deficient lot is left in place, and no additional lift(s) are placed, the PWL for the lot will not be recalculated.

- (5) Right of Discovery. When the Engineer has reason to believe the random core selection process will not accurately represent the true conditions of the work, he/she may order additional cores. The additional cores shall be taken at specific locations determined by the Engineer. The Engineer will provide notice to the Contractor containing an explanation of the reasons for his/her action. The need for, and location of, additional cores will be determined prior to commencement of coring operations.

When the additional cores show the pavement to be deficient by more than ten percent of plan thickness, more additional cores shall be taken to determine the limits of the deficient pavement and that area shall be removed and replaced; however, when requested in writing by the Contractor, the Engineer may permit in writing such areas of deficient pavement to remain in place.

The area of deficient pavement will be defined using the length between two acceptable cores and the full width of the subplot. An acceptable core is a core with a length of at least 90 percent of plan thickness.

For deficient areas allowed to remain in place, additional lift(s) may be placed, at no additional cost to the Department, to bring the deficient pavement to plan thickness when the Engineer determines grade control conditions will permit such lift(s). The area(s) to be overlaid, material to be used, thickness(es) of the lift(s), and method of placement will be approved by the Engineer.

When an area of deficient pavement is removed and replaced, or additional lifts are placed, the corrected pavement shall be retested for thickness.

When an area of deficient pavement is left in place, and no additional lift(s) are placed, no payment will be made for the deficient pavement.

When the additional cores show the pavement to be at least 90 percent of plan thickness, the additional cores will be paid for according to Article 109.04.

(6) Profile Index Adjustment. After any area of pavement is removed and replaced or any additional lifts are placed, the corrected areas shall be retested for pavement smoothness and any necessary profile index adjustments and/or corrections will be made based on these final profile readings prior to retesting for thickness.

(7) Determination of PWL. The PWL for each lot will be determined as follows.

Definitions:

- $x_i$  = Individual values (core lengths) under consideration
- $n$  = Number of individual values under consideration (10 per lot)
- $\bar{x}$  = Average of the values under consideration
- LSL = Lower Specification Limit (98% of plan thickness)
- $Q_L$  = Lower Quality Index
- $s$  = Sample Standard Deviation
- PWL = Percent Within Limits

Determine  $\bar{x}$  for the lot to the nearest two decimal places.

Determine  $s$  for the lot to the nearest three decimal places using:

$$s = \sqrt{\frac{\sum(x_i - \bar{x})^2}{n - 1}} \quad \text{where} \quad \sum(x_i - \bar{x})^2 = (x_1 - \bar{x})^2 + (x_2 - \bar{x})^2 + \dots + (x_{10} - \bar{x})^2$$

Determine  $Q_L$  for the lot to the nearest two decimal places using:

$$Q_L = \frac{(\bar{x} - LSL)}{s}$$

Determine PWL for the lot using the  $Q_L$  and the following table. For  $Q_L$  values less than zero the value shown in the table must be subtracted from 100 to obtain PWL.

- (8) Pay Factors. The pay factor (PF) for each lot will be determined, to the nearest two decimal places, using:

$$PF \text{ (in percent)} = 55 + 0.5 (PWL)$$

If  $\bar{x}$  for a lot is less than the plan thickness, the maximum PF for that lot shall be 100 percent.

- (9) Payment. Payment of incentive or disincentive for pay items subject to the PWL method will be calculated using:

$$\text{Payment} = (((TPF/100)-1) \times CUP) \times (TOTPAVT - DEFPAVT)$$

TPF = Total Pay Factor

CUP = Contract Unit Price

TOTPAVT = Area of Pavement Subject to Coring

DEFPAVT = Area of Deficient Pavement

The TPF for the pavement shall be the average of the PF for all the lots; however, the TPF shall not exceed 102 percent.

Area of Deficient pavement (DEFPAVT) is defined as an area of pavement represented by a subplot deficient by more than ten percent which is left in place with no additional thickness added.

Area of Pavement Subject to Coring (TOTPAVT) is defined as those pavement areas included in lots for pavement thickness determination.

PERCENT WITHIN LIMITS							
Quality Index (Q <sub>L</sub> )*	Percent Within Limits (PWL)	Quality Index (Q <sub>L</sub> )*	Percent Within Limits (PWL)	Quality Index (Q <sub>L</sub> )*	Percent Within Limits (PWL)	Quality Index (Q <sub>L</sub> )*	Percent Within Limits (PWL)
0.00	50.00	0.40	65.07	0.80	78.43	1.20	88.76
0.01	50.38	0.41	65.43	0.81	78.72	1.21	88.97
0.02	50.77	0.42	65.79	0.82	79.02	1.22	89.17
0.03	51.15	0.43	66.15	0.83	79.31	1.23	89.38
0.04	51.54	0.44	66.51	0.84	79.61	1.24	89.58
0.05	51.92	0.45	66.87	0.85	79.90	1.25	89.79
0.06	52.30	0.46	67.22	0.86	80.19	1.26	89.99
0.07	52.69	0.47	67.57	0.87	80.47	1.27	90.19
0.08	53.07	0.48	67.93	0.88	80.76	1.28	90.38
0.09	53.46	0.49	68.28	0.89	81.04	1.29	90.58
0.10	53.84	0.50	68.63	0.90	81.33	1.30	90.78
0.11	54.22	0.51	68.98	0.91	81.61	1.31	90.96
0.12	54.60	0.52	69.32	0.92	81.88	1.32	91.15
0.13	54.99	0.53	69.67	0.93	82.16	1.33	91.33
0.14	55.37	0.54	70.01	0.94	82.43	1.34	91.52
0.15	55.75	0.55	70.36	0.95	82.71	1.35	91.70
0.16	56.13	0.56	70.70	0.96	82.97	1.36	91.87
0.17	56.51	0.57	71.04	0.97	83.24	1.37	92.04
0.18	56.89	0.58	71.38	0.98	83.50	1.38	92.22
0.19	57.27	0.59	71.72	0.99	83.77	1.39	92.39
0.20	57.65	0.60	72.06	1.00	84.03	1.40	92.56
0.21	58.03	0.61	72.39	1.01	84.28	1.41	92.72
0.22	58.40	0.62	72.72	1.02	84.53	1.42	92.88
0.23	58.78	0.63	73.06	1.03	84.79	1.43	93.05
0.24	59.15	0.64	73.39	1.04	85.04	1.44	93.21
0.25	59.53	0.65	73.72	1.05	85.29	1.45	93.37
0.26	59.90	0.66	74.04	1.06	85.53	1.46	93.52
0.27	60.28	0.67	74.36	1.07	85.77	1.47	93.67
0.28	60.65	0.68	74.69	1.08	86.02	1.48	93.83
0.29	61.03	0.69	75.01	1.09	86.26	1.49	93.98
0.30	61.40	0.70	75.33	1.10	86.50	1.50	94.13
0.31	61.77	0.71	75.64	1.11	86.73	1.51	94.27
0.32	62.14	0.72	75.96	1.12	86.96	1.52	94.41
0.33	62.51	0.73	76.27	1.13	87.20	1.53	94.54
0.34	62.88	0.74	76.59	1.14	87.43	1.54	94.68
0.35	63.25	0.75	76.90	1.15	87.66	1.55	94.82
0.36	63.61	0.76	77.21	1.16	87.88	1.56	94.95
0.37	63.98	0.77	77.51	1.17	88.10	1.57	95.08
0.38	64.34	0.78	77.82	1.18	88.32	1.58	95.20
0.39	64.71	0.79	78.12	1.19	88.54	1.59	95.33

\*For Q<sub>L</sub> values less than zero, subtract the table value from 100 to obtain PWL

PERCENT WITHIN LIMITS (continued)					
Quality Index (Q <sub>L</sub> )*	Percent Within Limits (PWL)	Quality Index (Q <sub>L</sub> )*	Percent Within Limits (PWL)	Quality Index (Q <sub>L</sub> )*	Percent Within Limits (PWL)
1.60	95.46	2.00	98.83	2.40	99.89
1.61	95.58	2.01	98.88	2.41	99.90
1.62	95.70	2.02	98.92	2.42	99.91
1.63	95.81	2.03	98.97	2.43	99.91
1.64	95.93	2.04	99.01	2.44	99.92
1.65	96.05	2.05	99.06	2.45	99.93
1.66	96.16	2.06	99.10	2.46	99.94
1.67	96.27	2.07	99.14	2.47	99.94
1.68	96.37	2.08	99.18	2.48	99.95
1.69	96.48	2.09	99.22	2.49	99.95
1.70	96.59	2.10	99.26	2.50	99.96
1.71	96.69	2.11	99.29	2.51	99.96
1.72	96.78	2.12	99.32	2.52	99.97
1.73	96.88	2.13	99.36	2.53	99.97
1.74	96.97	2.14	99.39	2.54	99.98
1.75	97.07	2.15	99.42	2.55	99.98
1.76	97.16	2.16	99.45	2.56	99.98
1.77	97.25	2.17	99.48	2.57	99.98
1.78	97.33	2.18	99.50	2.58	99.99
1.79	97.42	2.19	99.53	2.59	99.99
1.80	97.51	2.20	99.56	2.60	99.99
1.81	97.59	2.21	99.58	2.61	99.99
1.82	97.67	2.22	99.61	2.62	99.99
1.83	97.75	2.23	99.63	2.63	100.00
1.84	97.83	2.22	99.66	2.64	100.00
1.85	97.91	2.25	99.68	≥ 2.65	100.00
1.86	97.98	2.26	99.70		
1.87	98.05	2.27	99.72		
1.88	98.11	2.28	99.73		
1.89	98.18	2.29	99.75		
1.90	98.25	2.30	99.77		
1.91	98.31	2.31	99.78		
1.92	98.37	2.32	99.80		
1.93	98.44	2.33	99.81		
1.94	98.50	2.34	99.83		
1.95	98.56	2.35	99.84		
1.96	98.61	2.36	99.85		
1.97	98.67	2.37	99.86		
1.98	98.72	2.38	99.87		
1.99	98.78	2.39	99.88		

\*For Q<sub>L</sub> values less than zero, subtract the table value from 100 to obtain PWL

(b) Minimum Thickness. The minimum thickness method shall be as follows.

- (1) Length of Units. The length of a unit will be a continuous strip of pavement 500 ft (150 m) in length.
- (2) Width of Units. The width of a unit will be the width from the pavement edge to the adjacent lane line, from one lane line to the next, or between pavement edges for single-lane pavements.
- (3) Thickness Measurements. Pavement thickness will be based on 2 in. (50 mm) diameter cores.

Cores shall be taken from the pavement by the Contractor at locations selected by the Engineer. When determining the thickness of a unit, one core shall be taken in each unit.

The Contractor and the Engineer shall witness the coring operations, as well as the measuring and recording of the cores. Core measurements will be determined immediately upon removal from the core bit and prior to moving to the next core location. Upon concurrence of the length, the core samples may be disposed of according to Article 202.03.

Upon completion of each core, all water shall be removed from the hole and the hole then filled with a rapid hardening mortar or concrete. The material shall be mixed in a separate container, placed in the hole, consolidated by rodding, and struck-off flush with the adjacent pavement.

- (4) Unit Deficient in Thickness. In considering any portion of the pavement that is deficient, the entire limits of the unit will be used in computing the deficiency or determining the remedial action required.
- (5) Thickness Equals or Exceeds Specified Thickness. When the thickness of a unit equals or exceeds the specified plan thickness, payment will be made at the contract unit price per square yard (square meter) for the specified thickness.
- (6) Thickness Deficient by Ten Percent or Less. When the thickness of a unit is less than the specified plan thickness by ten percent or less, a deficiency deduction will be assessed against payment for the item involved. The deficiency will be a percentage of the contract unit price as given in the following table.

Percent Deficiency (of Plan Thickness)	Percent Deduction (of Contract Unit Price)
0.0 to 2.0	0
2.1 to 3.0	20
3.1 to 4.0	28
4.1 to 5.0	32
5.1 to 7.5	43
7.6 to 10.0	50

- (7) Thickness Deficient by More than Ten Percent. When a core shows the pavement to be deficient by more than ten percent of plan thickness, additional cores shall be taken on each side of the deficient core, at stations selected by the Contractor and offsets selected by the Engineer, to determine the limits of the deficient pavement. No core shall be located within 5 ft (1.5 m) of a previous core obtained for thickness determination. The first acceptable core obtained on each side of a deficient core will be used to determine the length of the deficient pavement. An acceptable core is a core with a thickness of at least 90 percent of plan thickness. The area of deficient pavement will be defined using the length between two acceptable cores and the full width of the unit. The area of deficient pavement shall be removed and replaced; however, when requested in writing by the Contractor, the Engineer may permit in writing such areas of deficient pavement to remain in place. For deficient areas allowed to remain in place, additional lift(s) may be placed, at no additional cost to the Department, to bring the deficient pavement to plan thickness when the Engineer determines grade control conditions will permit such lift(s). The area(s) to be overlaid, material to be used, thickness(es) of the lift(s), and method of placement will be approved by the Engineer.

When an area of deficient pavement is removed and replaced, or additional lifts are placed, the corrected pavement shall be retested for thickness. The thickness of the new core will be used to determine the pay factor for the corrected area.

When an area of deficient pavement is left in place, and no additional lift(s) are placed, no payment will be made for the deficient pavement. In addition, an amount equal to two times the contract cost of the deficient pavement will be deducted from the compensation due the Contractor.

The thickness of the first acceptable core on each side of the core more than ten percent deficient will be used to determine any needed pay adjustments for the remaining areas on each side of the area deficient by more than ten percent. The pay adjustment will be determined according to Article 407.10(b)(6).

- (8) Right of Discovery. When the Engineer has reason to believe any core location does not accurately represent the true conditions of the work, he/she may order additional cores. These additional cores shall be taken at specific locations determined by the Engineer. The Engineer will provide notice to the Contractor containing an explanation of the reasons for his/her action.

When the additional cores show the pavement to be deficient by more than ten percent of plan thickness, the procedures outlined in Article 407.10(b)(7) shall be followed, except the Engineer will determine the additional core locations.

When the additional cores, ordered by the Engineer, show the pavement to be at least 90 percent of plan thickness, the additional cores will be paid for according to Article 109.04.

- (9) Profile Index Adjustment. After any area of pavement is removed and replaced or any additional lifts are added, the corrected areas shall be retested for pavement smoothness and any necessary profile index adjustments and/or corrections will be made based on these final profile readings prior to retesting for thickness.”

Revise Article 482.06 of the Standard Specifications to read:

**“482.06 Tolerance in Thickness.** The shoulder shall be constructed to the thickness shown on the plans. When the contract includes square yards (square meters) as the unit of measurement for HMA shoulder, thickness determinations shall be made according to Article 407.10(b)(3) and the following.

- (a) Length of the Units. The length of a unit shall be a continuous strip of shoulder 2500 ft (750 m) long.
- (b) Width of the Units. The width of the unit shall be the full width of the shoulder.
- (c) Thickness Deficient by More than Ten Percent. When a core shows the shoulder to be deficient by more than ten percent of plan thickness, additional cores shall be taken on each side of the deficient core, at stations selected by the Contractor and offsets selected by the Engineer, to determine the limits of the deficient shoulder. No core shall be located within 5 ft (1.5 m) of a previous core obtained for thickness determination. The first acceptable core obtained on each side of a deficient core will be used to determine the length of the deficient shoulder. An acceptable core is a core with a thickness of at least 90 percent of plan thickness. The area of deficient shoulder will be defined using the length between two acceptable cores and the full width of the unit. The area of deficient shoulder shall be brought to specified thickness by the addition of the applicable mixture, at no additional cost to the Department and subject to the lift thickness requirements of Article 312.05, or by removal and replacement with a new mixture. However, the surface elevation of the completed shoulder shall not exceed by more than 1/8 in. (3 mm) the surface elevation of the adjacent pavement. When requested in writing by the Contractor, the Engineer may permit in writing such thin shoulder to remain in place. When an area of thin shoulder is left in place, and no additional lift(s) are placed, no payment will be made for the thin shoulder. In addition, an amount equal to two times the contract unit price of the shoulder will be deducted from the compensation due the Contractor.

When an area of deficient shoulder is removed and replaced, or additional lifts are placed, the corrected pavement shall be retested for thickness.

- (d) Right of Discovery. When the Engineer has reason to believe any core location does not accurately represent the true conditions of the work, he/she may order additional cores. When the additional cores, ordered by the Engineer, show the shoulder to be at least 90 percent of plan thickness, the additional cores will be paid for according to Article 109.04. When the additional core shows the shoulder to be less than 90 percent of plan thickness, the procedure in (c), above shall be followed.”

Revise Article 483.07 of the Standard Specifications to read:

**“483.07 Tolerance in Thickness.** The shoulder shall be constructed to the thickness shown on the plans. Thickness determinations shall be made according to Article 482.06 except the option of correcting deficient pavement with additional lift(s) shall not apply.”

**DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)**

Effective: September 1, 2000

Revised: January 1, 2010

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.

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.

This 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 **6.0%** 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 forth 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 may 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 web site at [www.dot.il.gov](http://www.dot.il.gov).

BIDDING PROCEDURES. Compliance with this Special Provision is a material bidding requirement. The failure of the bidder to comply will render the bid not responsive.

- (a) The bidder shall submit a Disadvantaged Business Utilization Plan on Department forms SBE 2025 and 2026 with the bid.
- (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 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 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 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.

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 the good faith efforts of the bidder 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 commits sufficient commercially useful DBE work performance 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 commit 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.

(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 and 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 why good faith efforts have not been found.

(c) The bidder may request administrative reconsideration of a determination adverse to the bidder within the five working days after 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 and/or argument concerning the issue of whether an adequate good faith effort was made to meet the contract goal. 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 whether the bidder made a good faith effort to meet the goal. After the review by the Reconsideration Officer, the bidder will be sent a written decision within ten working days after receipt of the request for reconsideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid not responsive.

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

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

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

(c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the 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 regular dealer or 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.

(a) 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) The Contractor must notify and obtain written approval from the Department's Bureau of Small Business Enterprises prior to replacing a DBE or making any change in the participation of a DBE. Approval for replacement will be granted only if it is demonstrated that the DBE is unable or unwilling to perform. The Contractor must make every good faith effort to find another certified DBE subcontractor to substitute for the original DBE. The good faith efforts shall be directed at finding another DBE to perform at least the same amount of work under the contract as the original DBE, to the extent needed to meet the contract goal.

(c) Any deviation from the DBE condition-of-award or contract specifications must be approved, in writing, by the Department. 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.

(d) 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 reasonably 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) 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, must be signed and submitted.

(f) 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.

(g) All work indicated for performance by an approved DBE shall be performed, managed, and supervised by the DBE executing the Participation Statement. The Contractor shall not terminate for convenience a DBE listed in the Utilization Plan and then perform the work of the terminated DBE with its own forces, those of an affiliate or those of another subcontractor, whether DBE or not, without first obtaining the written consent of the Bureau of Small Business Enterprises to amend the Utilization Plan. The Contractor shall notify the Bureau of Small Business Enterprises of any termination for reasons other than convenience, and shall obtain approval for inclusion of the substitute DBE in the Utilization Plan. If good faith efforts following a termination of a DBE for cause are not successful, the Contractor shall contact the Bureau of Small Business Enterprises and provide a full accounting of the efforts undertaken to obtain substitute DBE participation. The Bureau of Small Business Enterprises will evaluate the good faith efforts in light of all circumstances surrounding the performance status of the contract, and determine whether the contract goal should be amended.

(h) 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 Regional 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 (j) of this part.

(i) 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.

(j) 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.

#### **DOWEL BARS (BDE)**

Effective: April 1, 2007

Revised: January 1, 2008

Revise the fifth and sixth sentences of Article 1006.11(b) of the Standard Specifications to read:

"The bars shall be epoxy coated according to AASHTO M 284, except the thickness of the epoxy shall be 7 to 12 mils (0.18 to 0.30 mm) and patching of the ends will not be required. The epoxy coating applicator shall be certified according to the current Bureau of Materials and Physical Research Policy Memorandum, "Epoxy Coating Plant Certification Procedure". The Department will maintain an approved list."

#### **ENGINEER'S FIELD OFFICE TYPE A (BDE)**

Effective: April 1, 2007

Revised: August 1, 2008

Revise Article 670.02 of the Standard Specifications to read:

**“670.02 Engineer's Field Office Type A.** Type A field offices shall have a minimum ceiling height of 7 ft (2 m) and a minimum floor space 450 sq ft (42 sq m). The office shall be provided with sufficient heat, natural and artificial light, and air conditioning.

The office shall have an electronic security system that will respond to any breach of exterior doors and windows. Doors and windows shall be equipped with locks. Doors shall also be equipped with dead bolt locks or other secondary locking device.

Windows shall be equipped with exterior screens to allow adequate ventilation. All windows shall be equipped with interior shades, curtains, or blinds. Adequate all-weather parking space shall be available to accommodate a minimum of ten vehicles.

Suitable on-site sanitary facilities meeting Federal, State, and local health department requirements shall be provided, maintained clean and in good working condition, and shall be stocked with lavatory and sanitary supplies at all times.

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

In addition, the following furniture and equipment shall be furnished.

- (a) Four desks with minimum working surface 42 x 30 in. (1.1 m x 750 mm) each and five non-folding chairs with upholstered seats and backs.
- (b) One desk with minimum working surface 48 x 72 in. (1.2 x 1.8 m) with height adjustment of 23 to 30 in. (585 to 750 mm).
- (c) One four-post drafting table with minimum top size of 37 1/2 x 48 in. (950 mm x 1.2 m). The top shall be basswood or equivalent and capable of being tilted through an angle of 50 degrees. An adjustable height drafting stool with upholstered seat and back shall also be provided.
- (d) Two free standing four drawer legal size file cabinet with lock and an underwriters' laboratories insulated file device 350 degrees one hour rating.
- (e) One 6 ft (1.8 m) folding table with six folding chairs.
- (f) One equipment cabinet of minimum inside dimension of 44 in. (1100 mm) high x 24 in. (600 mm) wide x 30 in. (750 mm) deep with lock. The walls shall be of steel with a 3/32 in. (2 mm) minimum thickness with concealed hinges and enclosed lock constructed in such a manner as to prevent entry by force. The cabinet assembly shall be permanently attached to a structural element of the field office in a manner to prevent theft of the entire cabinet.
- (g) One refrigerator with a minimum size of 16 cu ft (0.45 cu m) with a freezer unit.

- (h) One electric desk type tape printing calculator.
- (i) A minimum of two communication paths. The configuration shall include:
  - (1) Internet Connection. An internet service connection using telephone DSL, cable broadband, or CDMA wireless technology. Additionally, an 802.11g/N wireless router shall be provided, which will allow connection by the Engineer and up to four Department staff.
  - (2) Telephone Lines. Three separate telephone lines.
- (j) One plain paper copy machine capable of reproducing prints up to 11 x 17 in. (280 x 432 mm) with an automatic feed tray capable of storing 30 sheets of paper. Letter size and 11 x 17 in. (280 x 432 mm) paper shall be provided.
- (k) One plain paper fax machine with paper.
- (l) Two telephones, with touch tone, where available, and a digital telephone answering machine, for exclusive use by the Engineer.
- (m) One electric water cooler dispenser.
- (n) One first-aid cabinet fully equipped.
- (o) One microwave oven, 1 cu ft (0.03 cu m) minimum capacity.
- (p) One fire-proof safe, 0.5 cu ft (0.01 cu m) minimum capacity.
- (q) One electric paper shredder.
- (r) One post mounted rain gauge, located on the project site for each 5 miles (8 km) of project length.”

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

“The building or buildings fully equipped as specified will be paid for on a monthly basis until the building or buildings are released by the Engineer.”

Revise the last sentence of the first paragraph of Article 670.07 of the Standard Specifications to read:

“This price shall include all utility costs and shall reflect the salvage value of the building or buildings, equipment, and furniture which become the property of the Contractor after release by the Engineer, except that the Department will pay that portion of the monthly long distance telephone bills that, when combined, exceed \$150.”

**EQUIPMENT RENTAL RATES (BDE)**

Effective: August 2, 2007

Revised: January 2, 2008

Replace the second and third paragraphs of Article 105.07(b)(4)a. of the Standard Specifications with the following:

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

Replace Article 109.04(b)(4) of the Standard Specifications with the following:

“(4) Equipment. Equipment used for extra work shall be authorized by the Engineer. The equipment shall be specifically described, be of suitable size and capacity for the work to be performed, and be in good operating condition. For such equipment, the Contractor will be paid as follows.

- a. Contractor Owned Equipment. Contractor owned equipment will be paid for by the hour using the applicable FHWA hourly rate from the “Equipment Watch Rental Rate Blue Book” (Blue Book) in effect when the force account work begins. The FHWA hourly rate is calculated as follows.

$$\text{FHWA hourly rate} = (\text{monthly rate}/176) \times (\text{model year adj.}) \times (\text{Illinois adj.}) + \text{EOC}$$

Where: EOC = Estimated Operating Costs per hour (from the Blue Book)

The time allowed will be the actual time the equipment is operating on the extra work. For the time required to move the equipment to and from the site of the extra work and any authorized idle (standby) time, payment will be made at the following hourly rate:  $0.5 \times (\text{FHWA hourly rate} - \text{EOC})$ .

All time allowed shall fall within the working hours authorized for the extra work.

The rates above include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs, overhaul and maintenance of any kind, depreciation, storage, overhead, profits, insurance, and all incidentals. The rates do not include labor.

The Contractor shall submit to the Engineer sufficient information for each piece of equipment and its attachments to enable the Engineer to determine the proper equipment category. If a rate is not established in the Blue Book for a particular piece of equipment, the Engineer will establish a rate for that piece of equipment that is consistent with its cost and use in the industry.

- b. Rented Equipment. Whenever it is necessary for the Contractor to rent equipment to perform extra work, the rental and transportation costs of the equipment plus five percent for overhead will be paid. In no case shall the rental rates exceed those of established distributors or equipment rental agencies.

All prices shall be agreed to in writing before the equipment is used.”

**HIGH TENSION CABLE MEDIAN BARRIER (BDE)**

Effective: January 1, 2007

Revised: April 1, 2009

Description. This work shall consist of furnishing and installing a high tension cable (HTC) median barrier with terminals/end anchorages.

Materials. Materials shall be according to the following.

Item	Article/Section
(a) Reinforcement Bars	1006.10(a)
(b) Portland Cement Concrete (Note 1)	1020
(c) Wire Rope (Cable) and Fittings (Note 2)	

Note 1. The portland cement concrete shall be Class SI.

Note 2. The wire rope (cable) shall be according to AASHTO M 30, Type 1 with Class A coating, of the diameter shown in the manufacturer's specifications. Additionally, the wire rope shall be prestretched and shall have a breaking strength of 39,285 lbs (175 kN) for 3/4 in. (19 mm) wire rope (individual wire strength equivalent to 174,000 psi (1200 N/mm)) and the prestretched wire rope shall have a minimum modulus of elasticity of 11,805,000 psi (8300 kg/mm).

The barrier shall be tested and accepted under the National Cooperative Highway Research Program (NCHRP) Report 350 for the required test level and be on the Department's approved list. Barriers installed on front slope grades of 1:6 or flatter shall be Test Level 4. Barriers installed on front slope grades steeper than 1:6 but 1:4 or flatter shall be Test Level 3.

The barrier shall include four longitudinal cables, each separated vertically from adjacent cable(s) by a minimum of 4 in. (100 mm), and according to the specific acceptance document issued by FHWA. Each cable shall run to a point of anchorage at the terminal without connection to any other cable. The maximum spacing for line posts in the cable barrier system shall be no more than shown in the specific document issued by FHWA, or 15 ft (4.6 m), whichever is less.

The terminals/end anchorages shall be tested and accepted under NCHRP Report 350 Test Level 3 and be on the Department's approved list.

Equipment. Equipment shall be according to the barrier manufacturer's specifications.

Construction Requirements

General. The HTC median barrier shall be constructed to the lines and grades shown on the plans and according to the manufacturer's specifications except as modified by the contracts documents.

Line Post Foundations. Line posts for the HTC median barrier shall be placed in concrete socket foundations. The minimum depth of the foundations shall be as shown on the plans. The minimum diameter for the foundations shall be 12 in. (300 mm) and the tops of the foundations shall be crowned 1/2 in. (13 mm).

When the barrier is to be placed within paved shoulders or mow strips, the paved area(s) shall be constructed first and the concrete foundations placed in cored or formed holes.

End Anchorages. The Contractor shall submit shop drawings and calculations to the Engineer prepared and sealed by an Illinois Licensed Structural Engineer detailing the required end anchorage foundation system at each location. The system shall utilize drilled shaft foundation of a diameter, depth, reinforcement, and cable connection determined by the supplier. The design shall utilize Broms method utilizing a minimum factor of safety of 1.5. The design loadings shall consist of the theoretical cumulative cable tension expected for temperature fluctuations to -10 °F (-23 °C). The dynamic vehicle impact loading shall not be added to the cable temperature loading for the analysis. The foundation soils shall be assumed to be submerged granular material with a friction angle of 30 degrees or clay soils with a cohesive intercept of 1.0 kip/sq ft (48 kPa), unless site specific soil parameters are specified.

Tensioning. Prior to acceptance of the work, the tension of the HTC median barrier shall be checked, and adjusted as necessary, according to the manufacturer's temperature/tension chart or relationship.

Hands-On Demonstration. When included in the contract, a hands-on demonstration(s) of maintenance/repair procedures, recommendations and discussion of vehicle recovery, and provisions for emergency openings in the barrier shall be conducted. These demonstrations shall be for emergency responders, maintenance personnel, and others invited by the Engineer and shall either be conducted either at the job-site or at another agreed to meeting facility. Up to 30 attendees shall be accommodated at each demonstration.

Method of Measurement. HTC median barrier will be measured for payment in feet (meters) along the top cable between terminals. Terminals shall be defined as the end anchorages and other components from the extreme ends of a run to a point 50 ft (15.2 m) into the run. This definition of the terminal applies regardless of the length of need point, transitions from anchorage to full height cable, or other features that may vary between systems.

Basis of Payment. This work will be paid for at the contract unit price per foot (meter) for HIGH TENSION CABLE MEDIAN BARRIER.

The terminals/end anchorages and demonstrations will be paid for at the contract per each for HIGH TENSION CABLE MEDIAN BARRIER TERMINALS and HIGH TENSION CABLE MEDIAN BARRIER DEMONSTRATION respectively.

## **HOT-MIX ASPHALT – ANTI-STRIPPING ADDITIVE (BDE)**

Effective: November 1, 2009

Revise the first and second paragraphs of Article 1030.04(c) of the Standard Specifications to read:

- “(c) Determination of Need for Anti-Stripping Additive. The mixture designer shall determine if an additive is needed in the mix to prevent stripping. The determination will be made on the basis of tests performed according to Illinois Modified AASHTO T 283.

To be considered acceptable by the Department as a mixture not susceptible to stripping, the conditioned to unconditioned split tensile strength ratio (TSR) shall be equal to or greater than 0.85 for 6 in. (150 mm) specimens. Mixtures, either with or without an additive, with TSRs less than 0.85 for 6 in. (150 mm) specimens will be considered unacceptable. Also, the conditioned tensile strength for mixtures containing an anti-strip additive shall not be lower than the original conditioned tensile strength determined for the same mixture without the anti-strip additive.

If it is determined that an additive is required, the additive may be hydrated lime, slaked quicklime, or a liquid additive, at the Contractor's option.”

**HOT-MIX ASPHALT – DROP-OFFS (BDE)**

Effective: January 1, 2010

Revise the third paragraph of Article 701.07 of the Standard Specifications to read:

“At locations where construction operations result in a differential in elevation exceeding 3 in. (75 mm) between the edge of pavement or edge of shoulder within 3 ft (900 mm) of the edge of the pavement and the earth or aggregate shoulders, Type I or II barricades or vertical panels shall be placed at 100 ft (30 m) centers on roadways where the posted speed limit is 45 mph or greater and at 50 ft (15 m) centers on roadways where the posted speed limit is less than 45 mph.”

**HOT-MIX ASPHALT - FINE AGGREGATE (BDE)**

Effective: April 1, 2010

Add the following to the gradation tables of Article 1003.01(c) of the Standard Specifications:

“FINE AGGREGATE GRADATIONS					
Grad No.	Sieve Size and Percent Passing				
	3/8	No. 4	No. 8	No. 16	No. 200
FA 22	100	6/	6/	8±8	2±2

FINE AGGREGATE GRADATIONS (Metric)					
Grad No.	Sieve Size and Percent Passing				
	9.5 mm	4.75 mm	2.36 mm	1.18 mm	75 µm
FA 22	100	6/	6/	8±8	2±2

6/ For the fine aggregate gradation FA 22, the aggregate producer shall set the midpoint percent passing, and the Department will apply a range of ± ten percent. The midpoint shall not be changed without Department approval.”

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

“(a) Description. Fine aggregate for HMA shall consist of sand, stone sand, chats, slag sand, or steel slag sand. For gradation FA 22, uncrushed material will not be permitted.”

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.

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

**HOT-MIX ASPHALT – PLANT TEST FREQUENCY (BDE)**

Effective: April 1, 2008

Revised: January 1, 2010

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

"Parameter	Frequency of Tests	Frequency of Tests	Test Method See Manual of Test Procedures for Materials
	High ESAL Mixture Low ESAL Mixture	All Other Mixtures	
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)  Note 1.	1 washed ignition oven test on the mix per half day of production  Note 4.	1 washed ignition oven test on the mix per day of production  Note 4.	Illinois Procedure
Asphalt Binder Content by Ignition Oven  Note 2.	1 per half day of production	1 per day	Illinois-Modified AASHTO T 308
VMA  Note 3.	Day's production ≥ 1200 tons:  1 per half day of production  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)	N/A	Illinois Modified AASHTO R 35
Air Voids  Bulk Specific Gravity of Gyrotory Sample	Day's production ≥ 1200 tons:  1 per half day of production  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)	1 per day	Illinois-Modified AASHTO T 312

Maximum Specific Gravity of Mixture	Day's production $\geq$ 1200 tons: 1 per half day of production	1 per day	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 No. 8 (2.36 mm) and No. 30 (600  $\mu$ m) sieves are not required for All Other Mixtures.

Note 2. 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 3. 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 4. The Engineer reserves the right to require additional hot bin gradations for batch plants if control problems are evident.”

**HOT-MIX ASPHALT – QC/QA ACCEPTANCE CRITERIA (BDE)**

Effective: January 1, 2010

Revise Article 1030.05(f)(3) of the Standard Specifications to read:

“(3) Department assurance tests for voids, field VMA, and density.”

**HOT-MIX ASPHALT – TRANSPORTATION (BDE)**

Effective: April 1, 2008

Revise Article 1030.08 of the Standard Specifications to read:

**“1030.08 Transportation.** Vehicles used in transporting HMA shall have clean and tight beds. The beds shall be sprayed with asphalt release agents from the Department’s approved list. In lieu of a release agent, the Contractor may use a light spray of water with a light scatter of manufactured sand (FA 20 or FA 21) evenly distributed over the bed of the vehicle. After spraying, the bed of the vehicle shall be in a completely raised position and it shall remain in this position until all excess asphalt release agent or water has been drained.

When the air temperature is below 60 °F (15 °C), the bed, including the end, endgate, sides and bottom shall be insulated with fiberboard, plywood or other approved insulating material and shall have a thickness of not less than 3/4 in (20 mm). When the insulation is placed inside the bed, the insulation shall be covered with sheet steel approved by the Engineer. Each vehicle shall be equipped with a cover of canvas or other suitable material meeting the approval of the Engineer which shall be used if any one of the following conditions is present.

- (a) Ambient air temperature is below 60 °F (15 °C).
- (b) The weather is inclement.

(c) The temperature of the HMA immediately behind the paver screed is below 250 °F (120 °C).

The cover shall extend down over the sides and ends of the bed for a distance of approximately 12 in. (300 mm) and shall be fastened securely. The covering shall be rolled back before the load is dumped into the finishing machine.”

**LIQUIDATED DAMAGES (BDE)**

Effective: April 1, 2009

Revise the table in Article 108.09 of the Standard Specifications to read:

“Schedule of Deductions for Each Day of Overrun in Contract Time			
Original Contract Amount		Daily Charges	
From More Than	To and Including	Calendar Day	Work Day
\$ 0	\$ 100,000	\$ 375	\$ 500
100,000	500,000	625	875
500,000	1,000,000	1,025	1,425
1,000,000	3,000,000	1,125	1,550
3,000,000	5,000,000	1,425	1,950
5,000,000	10,000,000	1,700	2,350
10,000,000	And over	3,325	4,650”

**METAL HARDWARE CAST INTO CONCRETE (BDE)**

Effective: April 1, 2008

Revised: April 1, 2009

Add the following to Article 503.02 of the Standard Specifications:

“(g) Metal Hardware Cast into Concrete ..... 1006.13”

Add the following to Article 504.02 of the Standard Specifications:

“(j) Metal Hardware Cast into Concrete ..... 1006.13”

Revise Article 1006.13 of the Standard Specifications to read:

**“1006.13 Metal Hardware Cast into Concrete.** Unless otherwise noted, all steel hardware cast into concrete, such as inserts, brackets, cable clamps, metal casings for formed holes, and other miscellaneous items, shall be galvanized according to AASHTO M 232 or AASHTO M 111. Aluminum inserts will not be allowed. Zinc alloy inserts shall be according to ASTM B 86, Alloys 3, 5, or 7.

The inserts shall be UNC threaded type anchorages having the following minimum certified proof load.

Insert Diameter	Proof Load
5/8 in. (16 mm)	6600 lb (29.4 kN)
3/4 in. (19 mm)	6600 lb (29.4 kN)
1 in. (25 mm)	9240 lb (41.1 kN)”

**MONTHLY EMPLOYMENT REPORT (BDE)**

Effective: April 1, 2009

Revised: January 1, 2010

In addition to any other reporting required by the contract, the Contractor shall provide to the Engineer an employment summary for all employees working on the contract from the contract execution date to the last full pay period each month for the duration of the contract. The report may include but is not limited to:

- a) Total number of employees.
- b) The total hours worked.
- c) Total payroll.

The report shall be completed by the Contractor. The Contractor shall also report for each subcontractor. Employee hours worked from home office or other off-site office hours worked related directly to this contract shall be included. Engineering consulting firms performing construction layout and material testing for the Contractor shall also be included.

Hours worked for material suppliers, services provided by purchase orders, Department employees or consulting firms performing inspection or testing for the Department shall not be included in the report.

The report shall contain all hours worked under the contract from the start of the month to the last full pay period each month and shall be submitted no later than five business days after the end of each month.

The report shall be submitted electronically by accessing the Department's website (<http://www.dot.il.gov/stimulus/index.html>).

Any costs associated with complying with this provision shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed.

**MULTILANE PAVEMENT PATCHING (BDE)**

Effective: November 1, 2002

Pavement broken and holes opened for patching shall be completed prior to weekend or holiday periods. Should delays of any type or for any reason prevent the completion of the work, temporary patches shall be constructed. Material able to support the average daily traffic and meeting the approval of the Engineer shall be used for the temporary patches. The cost of furnishing, placing, maintaining, removing and disposing of the temporary work, including traffic control, shall be the responsibility of the Contractor.

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM / EROSION AND SEDIMENT CONTROL DEFICIENCY DEDUCTION (BDE)**

Effective: April 1, 2007

Revised: November 1, 2009

Revise Article 105.03(a) of the Standard Specifications to read:

“(a) National Pollutant Discharge Elimination System (NPDES) / Erosion and Sediment Control Deficiency Deduction When the Engineer is notified or determines an erosion and/or sediment control deficiency(s) exists, or the Contractor’s activities represents a violation of the Department’s NPDES permits, the Engineer will notify and direct the Contractor to correct the deficiency within a specified time. The specified time, which begins upon notification to the Contractor, will be from 1/2 hour to 1 week based on the urgency of the situation and the nature of the work effort required. The Engineer will be the sole judge.

A deficiency may be any lack of repair, maintenance, or implementation of erosion and/or sediment control devices included in the contract, or any failure to comply with the conditions of the Department’s NPDES permits. A deficiency may also be applied to situations where corrective action is not an option such as the failure to participate in a jobsite inspection of the project, failure to install required measures prior to initiating earth moving operations, disregard of concrete washout requirements, or other disregard of the NPDES permit.

If the Contractor fails to correct a deficiency within the specified time, a daily monetary deduction will be imposed for each calendar day or portion of a calendar day until the deficiency is corrected to the satisfaction of the Engineer. The calendar day(s) will begin with notification to the Contractor and end with the Engineer’s acceptance of the correction. The base value of the daily monetary deduction is \$1000.00 and will be applied to each location for which a deficiency exists. The value of the deficiency deduction assessed for each infraction will be determined by multiplying the base value by a Gravity Adjustment Factor provided in Table A. Except for failure to participate in a required jobsite inspection of the project prior to initiating earthmoving operations which will be based on the total acreage of planned disturbance at the following multipliers: <5 Acres: 1; 5-10 Acres: 2; >10-25 Acres: 3; >25 Acres: 5. For those deficiencies where corrective action was not an option, the monetary deduction will be immediate and will be valued at one calendar day multiplied by a Gravity Adjustment Factor.

Table A Deficiency Deduction Gravity Adjustment Factors				
Types of Violations	Soil Disturbed and Not Permanently Stabilized At Time of Violation			
	< 5 Acres	5 - 10 Acres	>10 - 25 Acres	> 25 Acres
Failure to Install or Properly Maintain BMP	0.1 - 0.5	0.2 - 1.0	0.5 - 2.5	1.0 - 5
Careless Destruction of BMP	0.2 - 1	0.5 - 2.5	1.0 - 5.	1.0 - 5
Intrusion into Protected Resource	1.0 - 5	1.0 - 5	2.0 - 10	2.0 - 10
Failure to properly manage Chemicals, Concrete Washouts or Residuals, Litter or other Wastes	0.2 - 1	0.2 - 1	0.5 - 2.5	1.0 - 5
Improper Vehicle and Equipment Maintenance, Fueling or Cleaning	0.1 - 0.5	0.2 - 1	0.2 - 1	0.5 - 2.5
Failure to Provide or Update Written or Graphic Plans Required by SWPPP	0.2 - 1	0.5 - 2.5	1.0 - 5	1.0 - 5
Failure to comply with Other Provisions of the NPDES Permit	0.1 - 0.5	0.2 - 1	0.2 - 1	0.5 - 2.5”

## **NIGHTTIME WORK ZONE LIGHTING (BDE)**

Effective: November 1, 2008

Description. This work shall consist of furnishing, installing, maintaining, moving, and removing lighting for nighttime work zones. Nighttime shall be defined as occurring shortly before sunset until after sunrise.

Materials. The lighting shall consist of mobile and/or stationary lighting systems as required herein for the specific type of construction. Mobile lighting systems shall consist of luminaires attached to construction equipment or moveable carts. Stationary lighting systems shall consist of roadway luminaires mounted on temporary poles or trailer mounted light towers at fixed locations. Some lighting systems, such as balloon lights, may be adapted to both mobile and stationary applications.

Equipment. The Contractor shall furnish an illuminance meter for use by the Engineer. The meter shall have a digital display calibrated to NIST standards, shall be cosine and color corrected, and shall have an accuracy of  $\pm$  five percent. The sensor shall have a level indicator to ensure measurements are taken in a horizontal plane.

### CONSTRUCTION REQUIREMENTS

General. At the preconstruction conference, the Contractor shall submit the type(s) of lighting system to be used and the locations of all devices.

Before nighttime construction may begin, the lighting system shall be demonstrated as being operational.

Nighttime Flagging. The requirements for nighttime flagging shall be according to Article 701.13 of the Standard Specifications and the glare control requirements contained herein.

Lighting System Design. The lighting system shall be designed to meet the following.

- (a) Lighting Levels. The lighting system shall provide a minimum of 5 foot candles (54 lux) throughout the work area. For mobile operations, the work area shall be defined as 25 ft (9 m) in front of and behind moving equipment. For stationary operations, the work area shall be defined as the entire area where work is being performed.

Lighting levels will be measured with an illuminance meter. Readings will be taken in a horizontal plane 3 ft (1 m) above the pavement or ground surface.

- (b) Glare Control. The lighting system shall be designed and operated so as to avoid glare that interferes with traffic, workers, or inspection personnel. Lighting systems with flood, spot, or stadium type luminaires shall be aimed downward at the work and rotated outward no greater than 30 degrees from nadir (straight down). Balloon lights shall be positioned at least 12 ft (3.6 m) above the roadway.

As a large component of glare, the headlights of construction vehicles and equipment shall not be operated within the work zone except as allowed for specific construction operations. Headlights shall never be used when facing oncoming traffic.

- (c) Light Trespass. The lighting system shall be designed to effectively light the work area without spilling over to adjoining property. When, in the opinion of the Engineer, the lighting is disturbing adjoining property, the Contractor shall modify the lighting arrangement or add hardware to shield the light trespass.

Construction Operations. The lighting design required above shall be provided at any location where construction equipment is operating or workers are present on foot. When multiple operations are being carried on simultaneously, lighting shall be provided at each separate work area.

The lighting requirements for specific construction operations shall be as follows.

- (a) Installation or Removal of Work Zone Traffic Control. The required lighting level shall be provided at each truck and piece of equipment used during the installation or removal of work zone traffic control. Headlights may be operated in the work zone.
- (b) Milling and Paving. The required lighting level shall be provided by mounting a minimum of one balloon light to each piece of mobile construction equipment used in the work zone. This would include milling machines, mechanical sweepers, material transfer devices, spreading and finishing machines, and rollers; but not include trucks used to transport materials and personnel or other vehicles that are continuously moving in and out of the work zone. The headlights of construction equipment shall not be operated within the work zone.
- (c) Patching. The required lighting level shall be provided at each patching location where work is being performed.
- (d) Pavement Marking and Raised Reflective Pavement Marker Removal/Installation. The striping truck and the attenuator/arrow board trucks may be operated by headlights alone; however, additional lighting may be necessary for the operator of the striping truck to perform the work.

For raised reflective pavement marker removal and installation and other pavement marking operations where workers are on foot, the required lighting level shall be provided at each truck and piece of equipment.

- (e) Layout, Testing, and Inspection. The required lighting level shall be provided for each active area of construction layout, material testing, and inspection. The work area shall be defined as 15 ft (7.6 m) in front and back of the individual(s) performing the tasks.

Basis of Payment. This work will be paid for at the contract lump sum price for NIGHTTIME WORK ZONE LIGHTING.

### **PARTIAL EXIT RAMP CLOSURE FOR FREEWAY/EXPRESSWAY (BDE)**

Effective: January 1, 2009

Description. This work shall consist of furnishing and installing traffic control for the partial closure of exit ramps on a freeway/expressway. Work shall be according to Section 701 except as modified herein.

Add the following after the fourth paragraph of Article 701.07 of the Standard Specifications:

“Drop-offs at the edge of pavement greater than 1 1/2 in. (40 mm) caused by the Contractor’s operations will be allowed only on one side of the ramp at a time.”

Delete the third paragraph of Article 701.17(e)(1) of the Standard Specifications.

Delete the third paragraph of Article 701.18(e)(3) of the Standard Specifications.

Revise the first sentence of Article 701.19(c) of the Standard Specifications to read:

“Traffic control and protection required under Standards 701201, 701206, 701306, 701326, 701336, 701406, 701421, 701456, 701501, 701502, 701601, 701602, 701606, 701701 and 701801 will be measured for payment on a lump sum basis.”

Add the following to the first paragraph of Article 701.20(b) of the Standard Specifications:

“TRAFFIC CONTROL AND PROTECTION STANDARD 701456;”

#### **PAVEMENT MARKING REMOVAL (BDE)**

Effective: April 1, 2009

Add the following to the end of the first paragraph of Article 783.03(a) of the Standard Specifications:

“The use of grinders will not be allowed on new surface courses.”

#### **PAVEMENT PATCHING (BDE)**

Effective: January 1, 2010

Revise the first sentence of the second paragraph of Article 701.17(e)(1) of the Standard Specifications to read:

“In addition to the traffic control and protection shown elsewhere in the contract for pavement, two devices shall be placed immediately in front of each open patch, open hole, and broken pavement where temporary concrete barriers are not used to separate traffic from the work area.”

#### **PAYMENTS TO SUBCONTRACTORS (BDE)**

Effective: June 1, 2000

Revised: January 1, 2006

Federal regulations found at 49 CFR §26.29 mandate the Department to establish a contract clause to require Contractors to pay subcontractors for satisfactory performance of their subcontracts and to set the time for such payments.

State law also addresses the timing of payments to be made to subcontractors and material suppliers.

Section 7 of the Prompt Payment Act, 30 ILCS 540/7, requires that when a Contractor receives any payment from the Department, the Contractor shall make corresponding, proportional payments to each subcontractor and material supplier performing work or supplying material within 15 calendar days after receipt of the Department payment. Section 7 of the Act further provides that interest in the amount of two percent per month, in addition to the payment due, shall be paid to any subcontractor or material supplier by the Contractor if the payment required by the Act is withheld or delayed without reasonable cause. The Act also provides that the time for payment required and the calculation of any interest due applies to transactions between subcontractors and lower-tier subcontractors and material suppliers throughout the contracting chain.

This Special Provision establishes the required federal contract clause, and adopts the 15 calendar day requirement of the State Prompt Payment Act for purposes of compliance with the federal regulation regarding payments to subcontractors. This contract is subject to the following payment obligations.

When progress payments are made to the Contractor according to Article 109.07 of the Standard Specifications, the Contractor shall make a corresponding payment to each subcontractor and material supplier in proportion to the work satisfactorily completed by each subcontractor and for the material supplied to perform any work of the contract. The proportionate amount of partial payment due to each subcontractor and material supplier throughout the contracting chain shall be determined by the quantities measured or otherwise determined as eligible for payment by the Department and included in the progress payment to the Contractor. Subcontractors and material suppliers shall be paid by the Contractor within 15 calendar days after the receipt of payment from the Department. The Contractor shall not hold retainage from the subcontractors. These obligations shall also apply to any payments made by subcontractors and material suppliers to their subcontractors and material suppliers; and to all payments made to lower tier subcontractors and material suppliers throughout the contracting chain. Any payment or portion of a payment subject to this provision may only be withheld from the subcontractor or material supplier to whom it is due for reasonable cause.

This Special Provision does not create any rights in favor of any subcontractor or material supplier against the State or authorize any cause of action against the State on account of any payment, nonpayment, delayed payment, or interest claimed by application of the State Prompt Payment Act. The Department will not approve any delay or postponement of the 15 day requirement except for reasonable cause shown after notice and hearing pursuant to Section 7(b) of the State Prompt Payment Act. State law creates other and additional remedies available to any subcontractor or material supplier, regardless of tier, who has not been paid for work properly performed or material furnished. These remedies are a lien against public funds set forth in Section 23(c) of the Mechanics Lien Act, 770 ILCS 60/23(c), and a recovery on the Contractor's payment bond according to the Public Construction Bond Act, 30 ILCS 550.

#### **PERSONAL PROTECTIVE EQUIPMENT (BDE)**

Effective: November 1, 2008

Revise the first sentence of Article 701.12 of the Standard Specifications to read:

“All personnel on foot, excluding flaggers, within the highway right-of-way shall wear a fluorescent orange, fluorescent yellow/green, or a combination of fluorescent orange and fluorescent yellow/green vest meeting the requirements of ANSI/ISEA 107-2004 for Conspicuity Class 2 garments.”

**PIPE CULVERTS (BDE)**

Effective: April 1, 2009

Revised: April 1, 2010

Revise Tables IIIA, IIIB, and IIIC of Article 542.03 of the Standard Specifications to read:

"PIPE CULVERT TABLE IIIA PLASTIC PIPE PERMITTED FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE														
Nom. Dia.  in.	Type 1 Fill Height: 3' and less with 1' minimum cover							Type 2 Fill Height: Greater than 3', not exceeding 10'						
	PVC	CPVC	PVCPW -794	PVCPW -304	PE	CPE	PEPW	PVC	CPVC	PVCPW -794	PVCPW -304	PE	CPE	PEPW
10	X	NA	NA	NA	X	NA	NA	X	*	NA	NA	X	NA	NA
12	X	X	X	X	X	X	NA	X	X	X	X	X	X	NA
15	X	X	X	X	X	X	NA	X	X	X	X	X	X	NA
18	X	X	X	X	X	X	X	X	X	X	X	X	X	X
21	X	X	X	X	NA	NA	X	X	X	X	X	NA	NA	X
24	X	X	X	X	X	X	X	X	X	X	X	X	X	X
30	X	X	X	X	X	X	X	X	X	X	X	X	X	X
36	X	X	X	X	X	X	X	X	X	X	X	X	X	X
42	NA	NA	X	X	X	X	X	NA	NA	X	X	X	X	X
48	NA	NA	X	X	X	X	X	NA	NA	X	X	X	X	X

PIPE CULVERT TABLE IIIA (metric) PLASTIC PIPE PERMITTED FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE														
Nom. Dia.  mm	Type 1 Fill Height: 1 m and less with 0.3 m minimum cover							Type 2 Fill Height: Greater than 1 m, not exceeding 3 m						
	PVC	CPVC	PVCPW -794	PVCPW -304	PE	CPE	PEPW	PVC	CPVC	PVCPW -794	PVCPW -304	PE	CPE	PEPW
250	X	NA	NA	NA	X	NA	NA	X	*	NA	NA	X	NA	NA
300	X	X	X	X	X	X	NA	X	X	X	X	X	X	NA
375	X	X	X	X	X	X	NA	X	X	X	X	X	X	NA
450	X	X	X	X	X	X	X	X	X	X	X	X	X	X
525	X	X	X	X	NA	NA	X	X	X	X	X	NA	NA	X
600	X	X	X	X	X	X	X	X	X	X	X	X	X	X
750	X	X	X	X	X	X	X	X	X	X	X	X	X	X
900	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1000	NA	NA	X	X	X	X	X	NA	NA	X	X	X	X	X
1200	NA	NA	X	X	X	X	X	NA	NA	X	X	X	X	X

- PVC Polyvinyl Chloride (PVC) Pipe
- CPVC Corrugated Polyvinyl Chloride (PVC) Pipe with a Smooth Interior
- PVCPW-794 Polyvinyl Chloride (PVC) Profile Wall Pipe-794
- PVCPW-304 Polyvinyl Chloride (PVC) Profile Wall Pipe-304
- PE Polyethylene (PE) Pipe with a Smooth Interior
- CPE Corrugated Polyethylene (PE) Pipe with a Smooth Interior
- PEPW Polyethylene (PE) Profile Wall 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.
- \* May be used if Bureau of Materials and Physical Research approves and with manufacturer's certification.

PIPE CULVERT TABLE IIIB PLASTIC PIPE PERMITTED FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE											
Nom. Dia.  in.	Type 3 Fill Height: Greater than 10', not exceeding 15'						Type 4 Fill Height: Greater than 15', not exceeding 20'				
	PVC	CPVC	PVCPW -794	PVCPW -304	PE	PEPW	PVC	CPVC	PVCPW -794	PVCPW -304	
10	X	*	NA	NA	X	NA	X	*	NA	NA	
12	X	X	X	X	X	NA	X	X	X	X	
15	X	X	X	X	X	NA	X	X	X	X	
18	X	X	X	X	X	X	X	X	X	X	
21	X	X	X	X	NA	X	X	X	X	X	
24	X	X	X	X	X	X	X	X	X	X	
30	X	X	X	X	X	X	X	X	X	X	
36	X	X	X	X	X	X	X	X	X	X	
42	NA	NA	X	X	X	X	NA	NA	X	X	
48	NA	NA	X	X	X	X	NA	NA	X	X	

PIPE CULVERT TABLE IIIB (metric) PLASTIC PIPE PERMITTED FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE											
Nom. Dia.  mm	Type 3 Fill Height: Greater than 3 m, not exceeding 4.5 m						Type 4 Fill Height: Greater than 4.5 m, not exceeding 6 m				
	PVC	CPVC	PVCPW -794	PVCPW -304	PE	PEPW	PVC	CPVC	PVCPW -794	PVCPW -304	
250	X	*	NA	NA	X	NA	X	*	NA	NA	
300	X	X	X	X	X	NA	X	X	X	X	
375	X	X	X	X	X	NA	X	X	X	X	
450	X	X	X	X	X	X	X	X	X	X	
525	X	X	X	X	NA	X	X	X	X	X	
600	X	X	X	X	X	X	X	X	X	X	
750	X	X	X	X	X	X	X	X	X	X	
900	X	X	X	X	X	X	X	X	X	X	
1000	NA	NA	X	X	X	X	NA	NA	X	X	
1200	NA	NA	X	X	X	X	NA	NA	X	X	

- PVC Polyvinyl Chloride (PVC) Pipe
- CPVC Corrugated Polyvinyl Chloride (PVC) Pipe with a Smooth Interior
- PVCPW-794 Polyvinyl Chloride (PVC) Profile Wall Pipe-794
- PVCPW-304 Polyvinyl Chloride (PVC) Profile Wall Pipe-304
- PE Polyethylene (PE) Pipe with a Smooth Interior
- PEPW Polyethylene (PE) Profile Wall 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.
- \* May be used if Bureau of Materials and Physical Research approves and with manufacturer's certification.

PIPE CULVERT TABLE IIIC										
PLASTIC PIPE PERMITTED FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE										
Nom. Dia. in.	Type 5 Fill Height: Greater Than 20', not exceeding 25'				Type 6 Fill Height: Greater than 25', not exceeding 30'				Type 7 Fill Height: Greater than 30', not exceeding 35'	
	PVC	CPVC	PVCPW -794	PVCPW -304	PVC	CPVC	PVCPW -794	PVCPW -304	PVC	
10	X	*	NA	NA	X	*	NA	NA	X	
12	X	X	X	X	X	X	X	X	X	
15	X	X	X	X	X	NA	NA	NA	X	
18	X	X	X	X	X	NA	NA	NA	X	
21	X	X	X	X	X	NA	NA	NA	X	
24	X	X	X	X	X	NA	NA	NA	X	
30	X	NA	NA	NA	X	NA	NA	NA	X	
36	X	NA	NA	NA	X	NA	NA	NA	X	
42	NA	NA	NA	NA	NA	NA	NA	NA	NA	
48	NA	NA	NA	NA	NA	NA	NA	NA	NA	

PIPE CULVERT TABLE IIIC (metric)										
PLASTIC PIPE PERMITTED FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE										
Nom. Dia. mm	Type 5 Fill Height: Greater Than 6 m, not exceeding 7.5 m				Type 6 Fill Height: Greater Than 7.5 m, not exceeding 9 m				Type 7 Fill Height: Greater Than 9 m, not exceeding 10.5 m	
	PVC	CPVC	PVCPW -794	PVCPW -304	PVC	CPVC	PVCPW -794	PVCPW -304	PVC	
250	X	*	NA	NA	X	*	NA	NA	X	
300	X	X	X	X	X	X	X	X	X	
375	X	X	X	X	X	NA	NA	NA	X	
450	X	X	X	X	X	NA	NA	NA	X	
525	X	X	X	X	X	NA	NA	NA	X	
600	X	X	X	X	X	NA	NA	NA	X	
750	X	NA	NA	NA	X	NA	NA	NA	X	
900	X	NA	NA	NA	X	NA	NA	NA	X	
1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1200	NA	NA	NA	NA	NA	NA	NA	NA	NA	

- PVC Polyvinyl Chloride (PVC) Pipe
- CPVC Corrugated Polyvinyl Chloride (PVC) Pipe with a Smooth Interior
- PVCPW-794 Polyvinyl Chloride (PVC) Profile Wall Pipe-794
- PVCPW-304 Polyvinyl Chloride (PVC) Profile Wall Pipe-304
- 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 be used if Bureau of Materials and Physical Research approves and with manufacturer's certification."

Add the following paragraph to the end of Article 542.04(d) of the Standard Specifications:

"PVC and PE pipes shall be joined according to the manufacturer's specifications."

Revise the second paragraph of Article 542.04(f) of the Standard Specifications to read:

"When using flexible pipe, as listed in the first table of Article 542.03, the aggregate shall be continued to a height of at least 1 ft (300 mm) above the top of the pipe and compacted to a minimum of 95 percent of standard lab density by mechanical means."

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

“(i) Deflection Testing for Pipe Culverts. All PE and PVC 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.”

Revise the ninth paragraph of Article 542.11 of the Standard Specifications to read:

“End sections for polyvinylchloride (PVC) and polyethylene (PE) culvert pipes will be paid for at the contract unit price per each for METAL END SECTIONS, of the diameter specified.”

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

“(b) Corrugated PE Pipe with a Smooth Interior. The pipe shall be according to AASHTO M 294 (nominal size – 12 to 48 in. (300 to 1200 mm)). The pipe shall be Type S or D.”

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

“(c) PE Profile Wall Pipe. The pipe shall be according to ASTM F 894 and shall have a minimum ring stiffness constant of 160. The pipe shall also have a minimum cell classification of PE 334433C as defined in ASTM D 3350.”

#### **PUBLIC CONVENIENCE AND SAFETY (BDE)**

Effective: January 1, 2000

Add the following paragraph after the fourth paragraph of Article 107.09 of the Standard Specifications.

“On weekends, excluding holidays, roadways with Average Daily Traffic of 25,000 or greater, all lanes shall be open to traffic from 3:00 P.M. Friday to midnight Sunday except where structure construction or major rehabilitation makes it impractical.”

#### **RAISED REFLECTIVE PAVEMENT MARKERS (BDE)**

Effective: November 1, 2009

Revised: April 1, 2010

Revise the first sentence of the second paragraph of Article 781.03(a) of the Standard Specifications to read:

“The pavement shall be cut to match the bottom contour of the marker using a concrete saw fitted with 18 and 20 in. (450 and 500 mm) diameter blades.”

#### **RECLAIMED ASPHALT PAVEMENT (RAP) (BDE)**

Effective: January 1, 2007

Revised: January 1, 2010

In Article 1030.02(g), delete the last sentence of the first paragraph in (Note 2).

Revise Section 1031 of the Standard Specifications to read:

**“SECTION 1031. RECLAIMED ASPHALT PAVEMENT**

**1031.01 Description.** Reclaimed asphalt pavement (RAP) is reclaimed asphalt pavement resulting from cold milling or crushing of an existing dense graded 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.

**1031.02 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 to provide verification of the quality of the RAP to clarify appropriate stockpile.

- (a) Fractionated RAP (FRAP). FRAP shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent 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 in the coarse fraction shall pass one sieve size larger than the maximum sieve size specified for the mix the RAP will be used in.
- (b) Homogeneous. Homogeneous RAP stockpiles shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent 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.
- (c) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent 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 or other expansive material as determined by the Department.
- (d) Conglomerate “D” Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP from Class I, Superpave (High or Low ESAL), HMA (High or Low ESAL), or equivalent 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 or other expansive material as determined by the Department.

(e) 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.

**1031.03 Testing.** When used in HMA, the RAP/FRAP shall be sampled and tested either during or after 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).

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.

Before extraction, each field sample shall be split to obtain two 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.

**Evaluation of 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)		± 5 %
1/2 in. (12.5 mm)	± 8 %	± 15 %
No. 4 (4.75 mm)	± 6 %	± 13 %
No. 8 (2.36 mm)	± 5 %	
No. 16 (1.18 mm)		± 15 %
No. 30 (600 μm)	± 5 %	
No. 200 (75 μm)	± 2.0 %	± 4.0 %
Asphalt Binder	± 0.4 % <sup>1/</sup>	± 0.5 %
$G_{mm}$	± 0.03	

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

If more than 20 percent of the individual sieves are out of the gradation tolerances, or if more than 20 percent of the asphalt binder content test results fall outside the appropriate 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)".

**1031.04 Quality Designation of Aggregate in RAP/FRAP.**

(a) 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 (High ESAL)/HMA (High ESAL), or HMA (Low ESAL) IL-9.5L surface mixtures are designated as containing Class B quality coarse aggregate.

(2) RAP from Superpave (Low ESAL)/HMA (Low ESAL) IL-19.0L binder mixture is designated as Class D quality coarse aggregate.

(3) RAP from Class I, Superpave (High ESAL), or 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) The aggregate quality of FRAP shall be determined as follows.

Fractionated stockpiles containing plus #4 (4.75 mm) sieve coarse aggregate shall have a maximum tonnage of 5000 tons (4500 metric tons). The Contractor shall obtain a representative sample witnessed by the Engineer. The sample shall be a minimum of 50 lb (25 kg). The sample shall be extracted according to Illinois Modified AASHTO T 164 by a consultant 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 BMRP 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."

**1031.05 Use of RAP/FRAP in HMA.** The use of RAP/FRAP shall be a Contractor's option when constructing HMA in all contracts. The use of RAP/FRAP in HMA shall be as follows.

(a) 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.

(b) Steel Slag Stockpiles. RAP stockpiles containing steel slag or other expansive material, as determined by the Department, shall be homogeneous and will be approved for use in HMA (High ESAL and Low ESAL) surface mixtures only.

(c) 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.

- (d) 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.
- (e) 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.
- (f) When the Contractor chooses the RAP option, the percentage of RAP shall not exceed the amounts indicated in the table below for a given N Design.

Max RAP Percentage

HMA Mixtures <sup>1/, 3/</sup>	Maximum % RAP		
	Binder/Leveling Binder	Surface	Polymer Modified
Ndesign			
30	30	30	10
50	25	15	10
70	15 / 25 <sup>2/</sup>	10 / 15 <sup>2/</sup>	10
90	10	10	10
105	10	10	10

- 1/ For HMA shoulder and stabilized subbase (HMA) N-30, the amount of RAP shall not exceed 50% of the mixture.
- 2/ Value of Max % RAP if homogeneous RAP stockpile of IL-9.5 RAP is utilized.
- 3/ When RAP exceeds 20 percent, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent RAP 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 grades shall be reduced as follows:

Overlays:

When WMA contains between 20 and 30 percent RAP the high temperature shall be reduced by one grade (i.e. 25 percent RAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-22). When WMA contains 30 percent or more RAP the high and low temperature grades shall each be reduced by one grade (i.e. 35 percent RAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

Full Depth:

When WMA contains between 20 and 30 percent RAP, the low temperature shall be reduced by one grade (i.e. 25 percent RAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG64-28). When the WMA contains 30 percent or more RAP the high and low temperature grades shall each be reduced by one grade (i.e. 35 percent RAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

(g) When the Contractor chooses the FRAP option, the percentage of FRAP shall not exceed the amounts indicated in the table below for a given N Design.

Max FRAP Percentage				
HMA Mixtures <sup>1/, 2/</sup>	Maximum % FRAP			
	Ndesign	Binder/Leveling Binder	Surface	Polymer Modified
	30	35	35	10
	50	30	25	10
	70	25	20	10
	90	20	15	10
	105	10	10	10

- 1/ For HMA shoulder and stabilized subbase (HMA) N30, the amount of FRAP shall not exceed 50 percent of the mixture.
- 2/ When FRAP exceeds 20 percent, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent FRAP 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 grades shall be reduced as follows:

Overlays:

When WMA contains between 20 and 30 percent FRAP the high temperature shall be reduced by one grade (i.e. 25 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-22). When WMA contains 30 percent or more FRAP the high and low temperature grades shall each be reduced by one grade (i.e. 35 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

Full Depth:

When WMA contains between 20 and 30 percent FRAP, the low temperature shall be reduced by one grade (i.e. 25 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG64-28). When the WMA contains 30 percent or more FRAP the high and low temperature grades shall each be reduced by one grade (i.e. 35 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

**1031.06 HMA Mix Designs.** At the Contractor’s option, HMA mixtures may be constructed utilizing RAP/FRAP material meeting the above detailed requirements.

RAP/FRAP designs shall be submitted for volumetric 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.

**1031.07 HMA Production.** The coarse aggregate in all RAP 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.

HMA plants utilizing RAP/FRAP shall be capable of automatically recording and printing the following information.

(a) Dryer Drum Plants.

- (1) Date, month, year, and time to the nearest minute for each print.
- (2) HMA mix number assigned by the Department.
- (3) Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- (4) Accumulated dry weight of RAP/FRAP in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- (5) Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.
- (6) Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.
- (7) Residual asphalt binder in the RAP/FRAP material as a percent of the total mix to the nearest 0.1 percent.
- (8) 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.)

(b) Batch Plants.

- (1) Date, month, year, and time to the nearest minute for each print.
- (2) HMA mix number assigned by the Department.
- (3) Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).
- (4) Mineral filler weight to the nearest pound (kilogram).
- (5) RAP/FRAP weight to the nearest pound (kilogram).

- (6) Virgin asphalt binder weight to the nearest pound (kilogram).
- (7) Residual asphalt binder in the RAP/FRAP 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.

**1031.08 RAP in Aggregate Surface Course and Aggregate Shoulders.** The use of RAP in aggregate surface course and aggregate shoulders 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.
- (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.”

**REFLECTIVE SHEETING ON CHANNELIZING DEVICES (BDE)**

Effective: April 1, 2007

Revised: November 1, 2008

Revise the seventh paragraph of Article 1106.02 of the Standard Specifications to read:

“At the time of manufacturing, the retroreflective prismatic sheeting used on channelizing devices shall meet or exceed the initial minimum coefficient of retroreflection as specified in the following table. Measurements shall be conducted according to ASTM E 810, without averaging. Sheeting used on cones, drums and flexible delineators shall be reboundable as tested according to ASTM D 4956. Prestriped sheeting for rigid substrates on barricades shall be white and orange. *The sheeting shall be uniform in color and devoid of streaks throughout the length of each roll. The color shall conform to the latest appropriate standard color tolerance chart issued by the U.S. Department of Transportation, Federal Highway Administration, and to the daytime and nighttime color requirements of ASTM D 4956.*

Initial Minimum Coefficient of Retroreflection candelas/foot candle/sq ft (candelas/lux/sq m) of material				
Observation Angle (deg.)	Entrance Angle (deg.)	White	Orange	Fluorescent Orange
0.2	-4	365	160	150
0.2	+30	175	80	70
0.5	-4	245	100	95
0.5	+30	100	50	40”

Revise the first sentence of the first paragraph of Article 1106.02(c) of the Standard Specifications to read:

“Barricades and vertical panels shall have alternating white and orange stripes sloping downward at 45 degrees toward the side on which traffic will pass.”

Revise the third sentence of the first paragraph of Article 1106.02(d) of the Standard Specifications to read:

“The bottom panels shall be 8 x 24 in. (200 x 600 mm) with alternating white and orange stripes sloping downward at 45 degrees toward the side on which traffic will pass.”

**REINFORCEMENT BARS - STORAGE AND PROTECTION (BDE)**

Effective: August 1, 2008

Revised: April 1, 2009

Revise Article 508.03 of the Standard Specifications to read:

**“508.03 Storage and Protection.** Reinforcement bars shall be stored off the ground using platforms, skids, or other supports; and shall be protected from mechanical injury and from deterioration by exposure. Epoxy coated bars shall be stored on wooden or padded steel cribbing and all systems for handling shall have padded contact areas. The bars or bundles shall not be dragged or dropped.

When epoxy coated bars are stored in a manner where they will be exposed to the weather more than 60 days prior to use, they shall be protected from deterioration such as that caused by sunlight, salt spray, and weather exposure. The protection shall consist of covering with opaque polyethylene sheeting or other suitable opaque material. The covering shall be secured and allow for air circulation around the bars to minimize condensation under the cover.

Covering of the epoxy coated bars will not be required when the bars are installed and tied, or when they are partially incorporated into the concrete.”

**SEEDING (BDE)**

Effective: July 1, 2004

Revised: January 1, 2010

Revise the following seeding mixtures shown in Table 1 of Article 250.07 of the Standard Specifications to read:

“Table 1 - SEEDING MIXTURES		
Class – Type	Seeds	lb/acre (kg/hectare)
1A Salt Tolerant Lawn Mixture 7/	Bluegrass	60 (70)
	Perennial Ryegrass	20 (20)
	Red Fescue (Audubon, Sea Link, or Epic)	20 (20)
	Hard Fescue (Rescue 911, Spartan II, or Reliant IV)	20 (20)
	Fults Salt Grass 1/ or Salty Alkaligrass	60 (70)
2 Roadside Mixture 7/	Tall Fescue (Inferno, Tarheel II, Quest, Blade Runner, or Falcon IV)	100 (110)
	Perennial Ryegrass	50 (55)
	Creeping Red Fescue	40 (50)
	Red Top	10 (10)

2A Salt Tolerant Roadside Mixture 7/	Tall Fescue (Inferno, Tarheel II, Quest, Blade Runner, or Falcon IV) Perennial Ryegrass Red Fescue (Audubon, Sea Link, or Epic) Hard Fescue (Rescue 911, Spartan II, or Reliant IV) Fulfs Salt Grass 1/ or Salty Alkaligrass	60 (70) 20 (20) 30 (20) 30 (20) 60 (70)
3 Northern Illinois Slope Mixture 7/	Elymus Canadensis (Canada Wild Rye) Perennial Ryegrass Alsike Cover 2/ Desmanthus Illinoensis (Illinois Bundleflower) 2/, 5/ Andropogon Scoparius (Little Bluestem) 5/ Bouteloua Curtipendula (Side-Oats Grama) Fulfs Salt Grass 1/ or Salty Alkaligrass Oats, Spring Slender Wheat Grass 5/ Buffalo Grass (Cody or Bowie) 4/, 5/, 9/	5 (5) 20 (20) 5 (5) 2 (2) 12 (12) 10 (10) 30 (35) 50 (55) 15 (15) 5 (5)
6A Salt Tolerant Conservation Mixture	Andropogon Scoparius (Little Bluestem) 5/ Elymus Canadensis (Canada Wild Rye) 5/ Buffalo Grass (Cody or Bowie) 4/, 5/, 9/ Vernal Alfalfa 2/ Oats, Spring Fulfs Salt Grass 1/ or Salty Alkaligrass	5 (5) 2 (2) 5 (5) 15 (15) 48 (55) 20 (20)"

Revise Note 7 of Table 1 – Seeding Mixtures of Article 250.07 of the Standard Specifications to read:

“7/ In Districts 1 through 6, the planting times shall be April 1 to June 15 and August 1 to November 1. In Districts 7 through 9, the planting times shall be March 1 to June 1 and August 1 to November 15. Seeding may be performed outside these dates provided the Contractor guarantees a minimum of 75 percent uniform growth over the entire seeded area(s) after a period of establishment. Inspection dates for the period of establishment will be as follows: Seeding conducted in Districts 1 through 6 between June 16 and July 31 will be inspected after April 15 and seeding conducted between November 2 and March 31 will be inspected after September 15. Seeding conducted in Districts 7 through 9 between June 2 and July 31 will be inspected after April 15 and seeding conducted between November 16 and February 28 will be inspected after September 15. The guarantee shall be submitted to the Engineer in writing prior to performing the work. After the period of establishment, areas not exhibiting 75 percent uniform growth shall be interseeded or reseeded, as determined by the Engineer, at no additional cost to the Department.”

Revise the first paragraph of Article 1081.04(a) of the Standard Specifications to read:

“(a) Sampling and Testing. Each lot of seed furnished shall be tested by a State Agriculture Department (including other States) or by land grant college or university agricultural sections or by a Registered Seed Technologist. Testing of seed shall be accomplished within the 12 months prior to the seed being installed on the project.”

Delete the last sentence of the first paragraph of Article 1081.04(c)(2) of the Standard Specifications.

Revise Table II of Article 1081.04(c)(6) of the Standard Specifications to read:

TABLE II						
Variety of Seeds	Hard Seed %	Purity %	Pure Live Seed %	Weed %	Secondary * Noxious Weeds No. per oz (kg)	Notes
	Max.	Min.	Min.	Max.	Max. Permitted	
Alfalfa	20	92	89	0.50	6 (211)	1/
Clover, Alsike	15	92	87	0.30	6 (211)	2/
Red Fescue, Audubon	0	97	82	0.10	3 (105)	-
Red Fescue, Creeping	-	97	82	1.00	6 (211)	-
Red Fescue, Epic	-	98	83	0.05	1 (35)	-
Red Fescue, Sea Link	-	98	83	0.10	3 (105)	-
Tall Fescue, Blade Runner	-	98	83	0.10	2 (70)	-
Tall Fescue, Falcon IV	-	98	83	0.05	1 (35)	-
Tall Fescue, Inferno	0	98	83	0.10	2 (70)	-
Tall Fescue, Tarheel II	-	97	82	1.00	6 (211)	-
Tall Fescue, Quest	0	98	83	0.10	2 (70)	-
Fults Salt Grass	0	98	85	0.10	2 ( 70)	-
Salty Alkaligrass	0	98	85	0.10	2 (70)	-
Kentucky Bluegrass	-	97	80	0.30	7 (247)	4/
Oats	-	92	88	0.50	2 ( 70)	3/
Redtop	-	90	78	1.80	5 (175)	3/
Ryegrass, Perennial, Annual	-	97	85	0.30	5 (175)	3/
Rye, Grain, Winter	-	92	83	0.50	2 ( 70)	3/
Hard Fescue, Reliant IV	-	98	83	0.05	1 (35)	-
Hard Fescue, Rescue 911	0	97	82	0.10	3 (105)	-
Hard Fescue, Spartan II	-	98	83	0.10	3 (105)	-
Timothy	-	92	84	0.50	5 (175)	3/
Wheat, hard Red Winter	-	92	89	0.50	2 ( 70)	3/”

Revise the first sentence of the first paragraph of Article 1081.04(c)(7) of the Standard Specifications to read:

“The seed quantities indicated per acre (hectare) for Prairie Grass Seed in Classes 3, 3A, 4, 4A, 6, and 6A in Article 250.07 shall be the amounts of pure, live seed per acre (hectare) for each species listed.”

**SELF-CONSOLIDATING CONCRETE FOR CAST-IN-PLACE CONSTRUCTION (BDE)**

Effective: November 1, 2005

Revised: January 1, 2009

Definition. Self-consolidating concrete is a flowable mixture that does not require mechanical vibration for consolidation.

Usage. Self-consolidating concrete may be used for cast-in-place concrete construction items involving Class MS, DS, and SI concrete.

Materials. Materials shall be according to Section 1021 of the Standard Specifications.

Mix Design Criteria. Article 1020.04 of the Standard Specifications shall apply, except as follows:

- (a) The cement factor shall be according to Article 1020.04 of the Standard Specifications. If the maximum cement factor is not specified, it shall not exceed 7.05 cwt/cu yd (418 kg/cu m). The cement factor shall not be reduced if a water-reducing, retarding, or high range water-reducing admixture is used.
- (b) The maximum allowable water/cement ratio shall be according to Article 1020.04 of the Standard Specifications or 0.44, whichever is lower.
- (c) The slump requirements shall not apply.
- (d) The coarse aggregate gradations shall be CA 13, CA 14, CA 16, or a blend of these gradations. CA 11 may be used when the Contractor provides satisfactory evidence to the Engineer that the mix will not segregate. The fine aggregate proportion shall be a maximum 50 percent by weight (mass) of the total aggregate used.
- (e) The slump flow range shall be  $\pm 2$  in. ( $\pm 50$  mm) of the Contractor target value, and within the overall Department range of 20 in. (510 mm) minimum to 28 in. (710 mm) maximum.
- (f) The visual stability index shall be a maximum of 1.
- (g) The J-ring value shall be a maximum of 4 in. (100 mm). The Contractor may specify a lower maximum in the mix design.
- (h) The L-box blocking ratio shall be a minimum of 60 percent. The Contractor may specify a higher minimum in the mix design.
- (i) The column segregation index shall be a maximum 15 percent.
- (j) The hardened visual stability index shall be a maximum of 1.

Test Methods. Illinois Test Procedures SCC-1, SCC-2, SCC-3, SCC-4, SCC-5, SCC-6, and Illinois Modified AASHTO T 22, 23, 121, 126, 141, 152, 177, 196, and 309 shall be used for testing of self-consolidating concrete mixtures.

Mix Design Submittal. The Contractor's Level III PCC Technician shall submit a mix design according to the "Portland Cement Concrete Level III Technician" course manual, except target slump information is not applicable and will not be required. However, a slump flow target range shall be submitted. In addition, the design mortar factor may exceed 1.10 and durability test data will be waived.

A J-ring value shall be submitted if a lower mix design maximum will apply. An L-box blocking ratio shall be submitted if a higher mix design minimum will apply. The Contractor shall also indicate applicable construction items for the mix design.

Trial mixture information will be required by the Engineer. A trial mixture is a batch of concrete tested by the Contractor to verify the Contractor's mix design will meet specification requirements. Trial mixture information shall include test results as specified in the "Portland Cement Concrete Level III Technician" course manual. Test results shall also include slump flow, visual stability index, J-ring value, L-box blocking ratio, column segregation index, and hardened visual stability index. For the trial mixture, the slump flow shall be near the midpoint of the proposed slump flow target range.

Trial Batch. A minimum 2 cu yd (1.5 cu m) trial batch shall be produced, and the self-consolidating concrete admixture dosage proposed by the Contractor shall be used. The slump flow shall be within 1.0 in. (25 mm) of the maximum slump flow range specified by the Contractor, and the air content shall be within the top half of the allowable specification range.

The trial batch shall be scheduled a minimum of 21 calendar days prior to anticipated use and shall be performed in the presence of the Engineer.

The Contractor shall provide the labor, equipment, and materials to test the concrete. The mixture will be evaluated by the Engineer for strength, air content, slump flow, visual stability index, J-ring value, L-box blocking ratio, column segregation index, and hardened visual stability index.

Upon review of the test data from the trial batch, the Engineer will verify or deny the use of the mix design and notify the Contractor. Verification by the Engineer will include the Contractor's target slump flow range. If applicable, the Engineer will verify the Contractor's maximum J-ring value and minimum L-box blocking ratio.

A new trial batch will be required whenever there is a change in the source of any component material, proportions beyond normal field adjustments, dosage of the self-consolidating concrete admixture, batch sequence, mixing speed, mixing time, or as determined by the Engineer. The testing criteria for the new trial batch will be determined by the Engineer.

When necessary, the trial batches shall be disposed of according to Article 202.03 of the Standard Specifications.

Mixing Portland Cement Concrete. In addition to Article 1020.11 of the Standard Specifications, the mixing time for central-mixed concrete shall not be reduced as a result of a mixer performance test. Truck-mixed or shrink-mixed concrete shall be mixed in a truck mixer for a minimum of 100 revolutions.

Wash water, if used, shall be completely discharged from the drum or container before the succeeding batch is introduced.

The batch sequence, mixing speed, and mixing time shall be appropriate to prevent cement balls and mix foaming for central-mixed, truck-mixed, and shrink-mixed concrete.

Falsework and Forms. In addition to Articles 503.05 and 503.06 of the Standard Specifications, the Contractor shall ensure the design of the falsework and forms is adequate for the additional form pressure caused by the fluid concrete. Forms shall be tight to prevent leakage of fluid concrete.

When the form height for placing the self-consolidating concrete is greater than 10.0 ft (3.0 m), direct monitoring of form pressure shall be performed according to Illinois Test Procedure SCC-10. The monitoring requirement is a minimum, and the Contractor shall remain responsible for adequate design of the falsework and forms. A minimum of one sensor will be required below each point of concrete placement to measure the maximum pressure. The first sensor below the point of concrete placement shall be approximately 12 in. (300 mm) above the base of the formwork. Additional sensors shall be installed above the bottom sensor when the form height is greater than 10.0 ft (3.0 m) above the bottom sensor. The additional sensors shall be installed at a maximum vertical spacing of 10.0 ft (3.0 m). The Contractor shall record the formwork pressure during concrete placement. This information shall be used by the Contractor to prevent the placement rate from exceeding the maximum formwork pressure allowed, to monitor the thixotropic change in the concrete during the pour, and to make appropriate adjustments to the mix design. This information shall be provided to the Engineer during the pour.

Placing and Consolidating. Concrete placement and consolidation shall be according to Article 503.07 of the Standard Specifications, except as follows:

Revise the third paragraph of Article 503.07 of the Standard Specifications to read:

“Open troughs and chutes shall extend as nearly as practicable to the point of deposit. The drop distance of concrete shall not exceed 5 ft (1.5 m). If necessary, a tremie shall be used to meet this requirement. The maximum distance of horizontal flow from the point of deposit shall be 25 ft (7.6 m), unless approved otherwise by the Engineer. For drilled shafts, free fall placement will not be permitted.”

Delete the seventh, eighth, ninth, and tenth paragraphs of Article 503.07 of the Standard Specifications.

Add to the end of the eleventh paragraph of Article 503.07 of the Standard Specifications the following:

“Concrete shall be rodded with a piece of lumber, conduit, or vibrator if the material has lost its fluidity prior to placement of additional concrete. The vibrator shall be the pencil head type with a maximum diameter or width of 1 in. (25 mm). Any other method for restoring the fluidity of the concrete shall be approved by the Engineer.”

Quality Control by Contractor at Plant. The specified test frequencies for aggregate gradation, aggregate moisture, air content, unit weight/yield, and temperature shall be performed as indicated in the contract.

Slump flow, visual stability index, and J-ring or L-box tests shall be performed as needed to control production. The column segregation index test and hardened visual stability index test will not be required to be performed at the plant.

Quality Control by Contractor at Jobsite. The specified test frequencies for air content, strength, and temperature shall be performed as indicated in the contract.

Slump flow, visual stability index, and J-ring or L-box tests shall be performed on the first two truck deliveries of the day, and every 50 cu yd (40 cu m) thereafter. The Contractor shall select either the J-ring or L-box test for jobsite testing.

The column segregation index test will not be required to be performed at the jobsite. The hardened visual stability index test shall be performed on the first truck delivery of the day, and every 300 cu yd (230 cu m) thereafter. Slump flow, visual stability index, J-ring value or L-box blocking ratio, air content, and concrete temperature shall be recorded for each hardened visual stability index test.

The Contractor shall retain all hardened visual stability index cut cylinder specimens until the Engineer notifies the Contractor that the specimens may be discarded.

If mix foaming or other potential detrimental material is observed during placement or at the completion of the pour, the material shall be removed while the concrete is still plastic.

Quality Assurance by Engineer at Plant. For air content and aggregate gradation, quality assurance independent sample testing and split sample testing will be performed as indicated in the contract.

For slump flow, visual stability index, and J-ring or L-box tests, quality assurance independent sample testing and split sample testing will be performed as determined by the Engineer.

Quality Assurance by Engineer at Jobsite. For air content and strength, quality assurance independent sample testing and split sample testing will be performed as indicated in the contract.

For slump flow, visual stability index, J-ring or L-box, and hardened visual stability index tests, quality assurance independent sample testing will be performed as determined by the Engineer.

For slump flow and visual stability index quality assurance split sample testing, the Engineer will perform tests at the beginning of the project on the first three tests performed by the Contractor. Thereafter, a minimum of ten percent of total tests required of the Contractor will be performed per plant, which will include a minimum of one test per mix design. The acceptable limit of precision will be 1.5 in. (40 mm) for slump flow and a limit of precision will not apply to the visual stability index.

For the J-ring or the L-box quality assurance split sample testing, a minimum of 80 percent of the total tests required of the Contractor will be witnessed by the Engineer per plant, which will include a minimum of one witnessed test per mix design. The Engineer reserves the right to conduct quality assurance split sample testing. The acceptable limit of precision will be 1.5 in. (40 mm) for the J-ring value and ten percent for the L-box blocking ratio.

For each hardened visual stability index test performed by the Contractor, the cut cylinders shall be presented to the Engineer for determination of the rating. The Engineer reserves the right to conduct quality assurance split sample testing. A limit of precision will not apply to the hardened visual stability index.

## **SELF-CONSOLIDATING CONCRETE FOR PRECAST PRODUCTS (BDE)**

Effective: July 1, 2004

Revised: January 1, 2007

Definition. Self-consolidating concrete is a flowable mixture that does not require mechanical vibration for consolidation.

Usage. Self-consolidating concrete may be used for precast concrete products.

Materials. Materials shall be according to Section 1021 of the Standard Specifications.

Mix Design Criteria. The mix design criteria shall be as follows:

- (a) The minimum cement factor shall be according to Article 1020.04 of the Standard Specifications. If the maximum cement factor is not specified, it shall not exceed 7.05 cwt/cu yd (418 kg/cu m).
- (b) The maximum allowable water/cement ratio shall be according to Article 1020.04 of the Standard Specifications or 0.44, whichever is lower.
- (c) The slump requirements of Article 1020.04 of the Standard Specifications shall not apply.
- (d) The coarse aggregate gradations shall be CA 13, CA 14, CA 16, or a blend of these gradations. CA 11 may be used when the Contractor provides satisfactory evidence to the Engineer that the mix will not segregate. The fine aggregate proportion shall be a maximum 50 percent by weight (mass) of the total aggregate used.
- (e) The slump flow range shall be  $\pm 2$  in. ( $\pm 50$  mm) of the Contractor target value, and within the overall Department range of 20 in. (510 mm) minimum to 28 in. (710 mm) maximum.
- (f) The visual stability index shall be a maximum of 1.
- (g) The J-ring value shall be a maximum of 4 in. (100 mm). The Contractor may specify a lower maximum in the mix design.
- (h) The L-box blocking ratio shall be a minimum of 60 percent. The Contractor may specify a higher minimum in the mix design.
- (i) The column segregation index shall be a maximum 15 percent.
- (j) The hardened visual stability index shall be a maximum of 1.

Placing and Consolidating. The maximum distance of horizontal flow from the point of deposit shall be 25 ft (7.6 m), unless approved otherwise by the Engineer.

Concrete shall be rodded with a piece of lumber, conduit, or vibrator if the material has lost its fluidity prior to placement of additional concrete. The vibrator shall be the pencil head type with a maximum diameter or width of 1 in. (25 mm). Any other method for restoring the fluidity of the concrete shall be approved by the Engineer.

Mix Design Approval. The Contractor shall obtain mix design approval according to the Department's Policy Memorandum "Quality Control/Quality Assurance Program for Precast Concrete Products".

**SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)**

Effective: April 2, 2005

To account for the preparatory work and operations necessary for the movement of subcontractor personnel, equipment, supplies, and incidentals to the project site and for all other work or operations that must be performed or costs incurred when beginning work approved for subcontracting in accordance with Article 108.01 of the Standard Specifications, the Contractor shall make a mobilization payment to each subcontractor.

This mobilization payment shall be made at least 14 days prior to the subcontractor starting work. The amount paid shall be equal to 3 percent of the amount of the subcontract reported on form BC 260A submitted for the approval of the subcontractor's work.

This provision shall be incorporated directly or by reference into each subcontract approved by the Department.

**SURFACE TESTING OF PAVEMENTS (BDE)**

Effective: April 1, 2002

Revised: January 1, 2007

**Hot-Mix Asphalt (HMA) Overlays**

Revise Article 406.03(h) of the Standard Specifications to read:

"(h) Pavement Surface Test Equipment ..... 1101.10"

Revise Article 406.11 of the Standard Specifications to read:

**"406.11 Surface Tests.** The finished surface of the pavement shall be tested for smoothness within three days of paving. Testing shall be performed in the presence of the Engineer.

Prior to testing, a copy of the approval letter and recorded settings from the Profile Equipment Verification (PEV) Program shall be submitted to the Engineer; and all objects and debris shall be removed from the pavement.

(a) Test Sections/Equipment.

- (1) High-Speed Mainline Pavement. High-speed mainline pavement shall consist of pavements, ramps, and loops with a posted speed greater than 45 mph. These sections shall be tested using a profile testing device.
- (2) Low-Speed Mainline Pavement. Low-speed mainline pavement shall consist of pavements, ramps, and loops with a posted speed of 45 mph or less. These sections shall be tested using a profile testing device.

(3) Miscellaneous Pavement. Miscellaneous pavement shall consist of:

- a. pavement on horizontal curves with a centerline radius of curvature of less than or equal to 1000 ft (300 m) and pavement within the superelevation transition of such curves;
- b. pavement on vertical curves having a length of less than or equal to 200 ft (60 m) in combination with an algebraic change in tangent grades greater than or equal to three percent, as may occur on urban ramps or other constricted-space facilities;
- c. the first or last 15 ft (4.5 m) of a pavement section where the Contractor is not responsible for the adjoining surface;
- d. intersections;
- e. variable width pavements;
- f. side street returns;
- g. crossovers;
- h. connector pavement from mainline pavement expansion joint to the bridge approach pavement;
- i. bridge approach pavement; and
- j. other miscellaneous pavement surfaces (i.e. a turn lane) as determined by the Engineer.

Miscellaneous pavement shall be tested using a 16 ft (5 m) straightedge set to a 3/8 in. (10 mm) tolerance.

(b) Lots/Sublots. Mainline pavement test sections will be divided into lots and sublots.

(1) Lots. A lot will be defined as a continuous strip of pavement 1 mile (1600 m) long and one lane wide. When the length of a continuous strip of pavement is less than 1 mile (1600 m), that pavement will be included in an adjacent lot. Structures will be omitted when measuring pavement length.

(2) Sublots. Lots will be divided into 0.1 mile (160 m) sublots. A partial subplot greater than or equal to 250 ft (76 m) resulting from an interruption in the pavement will be subject to the same evaluation as a whole subplot. Partial sublots less than 250 ft (76 m) shall be included with the previous subplot for evaluation purposes.

(c) Testing Procedure. One wheel track shall be tested per lane. Testing shall be performed 3 ft (1 m) from and parallel to the edge of the lane away from traffic. A guide shall be used to maintain the proper distance.

The profile trace generated shall have stationing indicated every 500 ft (150 m) at a minimum. Both ends of the profile trace shall be labeled with the following information: contract number, beginning and ending stationing, which direction is up on the trace, which direction the data was collected, and the device operator name(s). The top portion of the Department supplied form, "Profile Report of Pavement Smoothness" shall be completed and secured around the trace roll.

Although surface testing of intermediate lifts will not be required, they may be performed at the Contractor's option. When this option is chosen, the testing shall be performed and the profile traces shall be generated as described above.

The Engineer may perform his/her own testing at any time for monitoring and comparison purposes.

- (d) Trace Reduction and Bump Locating Procedure. All traces shall be reduced. Traces produced by a mechanical recorder shall be reduced using an electronic scanner and computer software. This software shall calculate the profile index of each subplot in in./mile (mm/km) and indicate any high points (bumps) in excess of 0.30 in. (8 mm) with a line intersecting the profile on the printout. Computerized recorders shall provide the same information.

The profile index of each track, average profile index of each subplot, average profile index of the lot and locations of bumps shall be recorded on the form.

All traces and reports shall be provided within two working days of completing the testing to the Engineer for the project file. Traces from either a computerized profile testing device or analysis software used with a manual profile testing device shall display the settings used for the data reduction. The Engineer will compare these settings with the approved settings from the PEV Program. If the settings do not match, the results will be rejected and the section shall be retested/reanalyzed with the appropriate settings.

The Engineer will use the results of the testing to evaluate paving methods and equipment. If the average profile index of a lot exceeds 40.0 in./mile (635 mm/km) for high-speed mainline pavement or 65.0 in./mile (1025 mm/km) for low-speed mainline pavement, the paving operation will be suspended until corrective action is taken by the Contractor.

- (e) Corrective Work. All bumps in excess of 0.30 in. (8 mm) in a length of 25 ft (8 m) or less shall be corrected. If the bump is greater than 0.50 in. (13 mm), the pavement shall be removed and replaced. The minimum length of pavement to be removed shall be 3 ft (900 mm).
- (1) High-Speed Mainline Pavement. Any subplot having a profile index within the range of, greater than 30.0 to 40.0 in./mile (475 to 635 mm/km) including bumps, shall be corrected to reduce the profile index to 30.0 in./mile (475 mm/km) or less on each trace. Any subplot having a profile index greater than 40.0 in./mile (635 mm/km) including bumps, shall be corrected to reduce the profile index to 30.0 in./mile (475 mm/km) or less on each trace, or replaced at the Contractor's option.

- (2) Low-Speed Mainline Pavement. Any subplot having a profile index within the range of, greater than 45.0 to 65.0 in./mile (710 to 1025 mm/km) including bumps, shall be corrected to reduce the profile index to 45.0 in./mile (710 mm/km) or less on each trace. Any subplot having a profile index greater than 65.0 in./mile (1025 mm/km) including bumps, shall be corrected to reduce the profile index to 45.0 in./mile (710 mm/km) or less on each trace, or replaced at the Contractor's option.
- (3) Miscellaneous Pavement. Surface variations which exceed the 3/8 in. (10 mm) tolerance will be marked by the Engineer and shall be corrected by the Contractor.

Corrective work shall be completed using either an approved grinding device consisting of multiple saws or by removing and replacing the pavement. Corrective work shall be applied to the full lane width. When completed, the corrected area shall have uniform texture and appearance, with the beginning and ending of the corrected area squared normal to the centerline of the paved surface.

Upon completion of the corrective work, the surface of the subplot(s) shall be retested. The Contractor shall furnish the profile tracing(s) and the completed form(s) to the Engineer within two working days after corrections are made. If the profile index and/or bumps still do not meet the requirements, additional corrective work shall be performed.

Corrective work shall be at no additional cost to the Department.

- (f) Smoothness Assessments. Assessments will be paid to or deducted from the Contractor for each subplot of mainline pavement, per the Smoothness Assessment Schedule. Assessments will be based on the average profile index of each subplot prior to performing any corrective work unless the Contractor has chosen to remove and replace the subplot. For sublots that are replaced, assessments will be based on the profile index determined after replacement.

Assessments will not be paid or deducted until all other contract requirements for the pavement are satisfied. Pavement that is corrected or replaced for reasons other than smoothness, shall be retested as stated herein.

SMOOTHNESS ASSESSMENT SCHEDULE (HMA Overlays)		
High-Speed Mainline Pavement Average Profile Index in./mile (mm/km)	Low-Speed Mainline Pavement Average Profile Index in./mile (mm/km)	Assessment per subplot
6.0 (95) or less	15.0 (240) or less	+\$150.00
>6.0 (95) to 10.0 (160)	>15.0 (240) to 25.0 (400)	+\$80.00
>10.0 (160) to 30.0 (475)	>25.0 (400) to 45.0 (710)	+\$0.00
>30.0 (475) to 40.0 (635)	>45.0 (710) to 65.0 (1025)	+\$0.00
Greater than 40.0 (635)	Greater than 65.0 (1025)	-\$300.00

Smoothness assessments will not be applied to miscellaneous pavement sections.”

**Hot-Mix Asphalt (HMA) Pavement (Full-Depth)**

Revise Article 407.09 of the Standard Specifications to read:

**“407.09 Surface Tests.** The finished surface of the pavement shall be tested for smoothness according to Article 406.11, except as follows:

Two wheel tracks shall be tested per lane. Testing shall be performed 3 ft (1 m) from and parallel to each lane edge.

SMOOTHNESS ASSESSMENT SCHEDULE (Full-Depth HMA)		
High-Speed Mainline Pavement Average Profile Index in./mile (mm/km)	Low-Speed Mainline Pavement Average Profile Index in./mile (mm/km)	Assessment per subplot
6.0 (95) or less		+\$800.00
>6.0 (95) to 11.0 (175)	15.0 (240) or less	+\$550.00
>11.0 (175) to 17.0 (270)	>15.0 (240) to 25.0 (400)	+\$350.00
>17.0 (270) to 30.0 (475)	>25.0 (400) to 45.0 (710)	+\$0.00
>30.0 (475) to 40.0 (635)	>45.0 (710) to 65.0 (1025)	+\$0.00
Greater than 40.0 (635)	Greater than 65.0 (1025)	-\$500.00”

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

**Portland Cement Concrete Pavement**

Revise Article 420.10 of the Standard Specifications to read:

**“420.10 Surface Tests.** The finished surface of the pavement shall be tested for smoothness according to Article 406.11, except as follows:

The finished surface of the pavement shall be tested for smoothness once the pavement has attained a flexural strength of 550 psi (3800 kPa) or a compressive strength of 3000 psi (20,700 kPa).

Two wheel tracks shall be tested per lane. Testing shall be performed 3 ft (1 m) from and parallel to each lane edge.

Membrane curing damaged during testing shall be repaired as directed by the Engineer at no additional cost to the Department.

No further texturing for skid resistance will be required for areas corrected by grinding. Protective coat shall be reapplied to ground areas according to Article 420.18 at no additional cost to the Department.

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

SMOOTHNESS ASSESSMENT SCHEDULE (PCC)		
High-Speed Mainline Pavement Average Profile Index in./mile (mm/km)	Low-Speed Mainline Pavement Average Profile Index in./mile (mm/km)	Assessment per subplot
6.0 (95) or less		+\$1200.00
>6.0 (95) to 11.0 (175)	15.0 (240) or less	+\$950.00
>11.0 (175) to 17.0 (270)	>15.0 (240) to 25.0 (400)	+\$600.00
>17.0 (270) to 30.0 (475)	>25.0 (400) to 45.0 (710)	+\$0.00
>30.0 (475) to 40.0 (635)	>45.0 (710) to 65.0 (1025)	+\$0.00
Greater than 40.0 (635)	Greater than 65.0 (1025)	-\$750.00"

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

### Testing Equipment

Revise Article 1101.10 of the Standard Specifications to read:

**“1101.10 Pavement Surface Test Equipment.** Required surface testing and analysis equipment and their jobsite transportation shall be provided by the Contractor.

- (a) 16 ft (5 m) Straightedge. The 16 ft (5 m) straightedge shall consist of a metal I-beam mounted between two wheels spaced 16 ft (5 m) between the axles. Scratcher bolts which can be easily and accurately adjusted, shall be set at the 1/4, 1/2, and 3/4 points between the axles. A handle suitable for pushing and guiding shall be attached to the straightedge.
- (b) Profile Testing Device. The profile testing device shall have a decal displayed to indicate it has been tested through the Profile Equipment Verification (PEV) Program administered by the Department.
  - (1) California Profilograph. The California Profilograph shall be either computerized or manual and have a frame 25 ft (8 m) in length supported upon multiple wheels at either end. The profile shall be recorded from the vertical movement of a wheel attached to the frame at mid point.

The California Profilograph shall be calibrated according to the manufacturer’s recommendations and California Test 526. All calibration traces and calculations shall be submitted to the Engineer for the project file.

- (2) Inertial Profiler. The inertial profiler shall be either an independent device or a system that can be attached to another vehicle using one or two non-contact sensors to measure the pavement profile.

The inertial profiler shall be capable of performing a simulation of the California Profilograph to provide results in the Profile Index format.

The inertial profiler shall be calibrated according to the manufacturer's recommendations. All calibration traces and calculations shall be submitted to the Engineer for the project file.

- (3) Trace Analysis. The Contractor shall reduce/evaluate these traces using a 0.00 in. (0.0 mm) blanking band and determine a Profile Index in in./mile (mm/km) for each section of finished pavement surface. Traces produced using a computerized profile testing device will be evaluated without further reduction. When using a manual profile testing device, the Contractor shall provide an electronic scanner, a computer, and software to reduce the trace. All analysis equipment (electronic scanner, computerized recorder, etc.) shall be able to accept 0.00 in. (0.0 mm) for the blanking band.

All traces from pavement sections tested with the profile testing device shall be recorded on paper with scales of 300:1 longitudinally and 1:1 vertically. Equipment and software settings of the profile testing device and analysis equipment shall be set to those values approved through the PEV Program.

The Engineer may retest the pavement at any time to verify the accuracy of the equipment.”

**TEMPORARY EROSION CONTROL (BDE)**

Effective: November 1, 2002

Revised: January 1, 2010

Add the following to Article 280.02 of the Standard Specifications to read:

“(k) Filter Fabric ..... 1080.03”

Revise the third paragraph of Article 280.03 of the Standard Specifications to read:

“Erosion control systems shall be installed prior to beginning any activities which will potentially create erodible conditions. Erosion control systems for areas outside the limits of construction such as storage sites, plant sites, waste sites, haul roads, and Contractor furnished borrow sites shall be installed prior to beginning soil disturbing activities at each area. These offsite systems shall be designed by the Contractor and be subject to the approval of the Engineer.”

Add the following paragraph after the third paragraph of Article 280.03 of the Standard Specifications:

“The temporary erosion and sediment control systems shown on the plans represent the minimum systems anticipated for the project. Conditions created by the Contractor's operations, or for the Contractor's convenience, which are not covered by the plans, shall be protected as directed by the Engineer at no additional cost to the Department.

Revisions or modifications of the erosion and sediment control systems shall have the Engineer's written approval."

Revise Article 280.04(a) of the Standard Specifications to read:

"(a) Temporary Ditch Checks. This system consists of the construction of temporary ditch checks to prevent siltation, erosion, or scour of ditches and drainage ways. Temporary ditch checks shall be constructed with rolled excelsior, products from the Department's approved list, or with aggregate placed on filter fabric when specified. Filter fabric shall be installed according to the requirements of Section 282. Riprap shall be placed according to Article 281.04. Manufactured ditch checks shall be installed according to the manufacturer's specifications. Spacing of ditch checks shall be such that the low point in the center of one ditch check is at the same elevation as the base of the ditch check immediately upstream. Temporary ditch checks shall be sufficiently long enough that the top of the device in the middle of the ditch is lower than the bottom of the terminating ends of the ditch side slopes."

Revise the last sentence of the first paragraph of Article 280.04(g) of the Standard Specifications to read:

"The temporary mulch cover shall be according to either Article 251.03 or 251.04 except for any reference to seeding."

Revise Article 280.07(b) of the Standard Specifications to read:

"(b) Temporary Ditch Checks. This work will be measured for payment along the long axis of the device in place in feet (meters) except for aggregate ditch checks which will be measured for payment in tons (metric tons). Payment will not be made for aggregate in excess of 108 percent of the amount specified by the Engineer."

Revise Article 280.07(f) of the Standard Specifications to read:

"(f) Temporary Mulch. This work will be measured for payment according to Article 251.05(b)."

Add the following paragraph after the ninth paragraph of Article 280.07 of the Standard Specifications:

"Temporary or permanent erosion control systems required for areas outside the limits of construction will not be measured for payment."

Revise Article 280.08(b) of the Standard Specifications to read:

"(b) Temporary Ditch Checks. This work will be paid for at the contract unit price per foot (meter) for TEMPORARY DITCH CHECKS except for aggregate ditch checks which will be paid for at the contract unit price per ton (metric ton) for AGGREGATE DITCH CHECKS."

Revise Article 280.08(f) of the Standard Specifications to read:

“(f) Temporary Mulch. Temporary Mulch will be paid for according to Article 251.06.”

Delete the tenth (last) paragraph of Article 280.08 of the Standard Specifications.

Revise the second sentence of the first paragraph of Article 1081.015(e) of the Standard Specifications to read:

“The upstream facing of the aggregate ditch check shall be constructed of gradation CA 3. The remainder of the ditch check shall be constructed of gradation RR 3.”

### **TRAFFIC BARRIER TERMINAL, TYPE 6 (BDE)**

Effective: January 1, 2010

Delete the fourth paragraph of Article 631.07 of the Standard Specifications.

### **TRAINING SPECIAL PROVISIONS**

This Training Special Provision supersedes Section 7b of the Special Provision entitled “Specific Equal Employment Opportunity Responsibilities,” and is in implementation of 23 U.S.C. 140(a).

As part of the contractor’s equal employment opportunity affirmative action program, training shall be provided as follows:

The contractor shall provide on-the-job training aimed at developing full journeyman in the type of trade or job classification involved. The number of trainees to be trained under this contract will be 5. In the event the contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this Training Special Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the contractor’s needs and the availability of journeymen in the various classifications within the reasonable area of recruitment. Prior to commencing construction, the contractor shall submit to the Illinois Department of Transportation for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the contractor shall specify the starting time for training in each of the classifications. The contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision.

Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g. by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent such persons are available within a reasonable area of recruitment. The contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a journeyman. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used the contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the contractor and approved by the Illinois Department of Transportation and the Federal Highway Administration. The Illinois Department of Transportation and the Federal Highway Administration shall approve a program, if it is reasonably calculated to meet the equal employment opportunity obligations of the contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved by not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the Illinois Department of Transportation and the Federal Highway Administration. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the contractor will be reimbursed 80 cents per hour of training given an employee on this contract in accordance with an approved training program. As approved by the Engineer, reimbursement will be made for training of persons in excess of the number specified herein. This reimbursement will be made even though the contractor receives additional training program funds from other sources, provided such other source does not specifically prohibit the contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the contractor where he does one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the offsite training period.

No payment shall be made to the contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the contractor and evidences a lack of good faith on the part of the contractor in meeting the requirement of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program.

It is not required that all trainees be on board for the entire length of the contract. A contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The contractor shall furnish the trainee a copy of the program he will follow in providing the training. The contractor shall provide each trainee with a certification showing the type and length of training satisfactorily complete.

The contractor will provide for the maintenance of records and furnish periodic reports documenting his performance under this Training Special Provision.

METHOD OF MEASUREMENT The unit of measurement is in hours.

BASIS OF PAYMENT This work will be paid for at the contract unit price of 80 cents per hour for TRAINEES. The estimated total number of hours, unit price and total price have been included in the schedule of prices.

**TRUCK MOUNTED/TRAILER MOUNTED ATTENUATORS (BDE)**

Effective: January 1, 2010

Revise Article 701.03(k) of the Standard Specifications to read:

“(k) Truck Mounted/Trailer Mounted Attenuators ..... 1106.02”

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

“(h) Truck Mounted/Trailer Mounted Attenuators (TMA). TMA units shall have a roll ahead distance in the event of an impact. The TMA shall be between 100 and 200 ft (30 and 60 m) behind the vehicle ahead or the workers. This distance may be extended by the Engineer.

TMA host vehicles shall have the parking brake engaged when stationary.

The driver and passengers of the TMA host vehicle should exit the vehicle if the TMA is to remain stationary for 15 minutes or more in duration.”

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

“(g) Truck Mounted/Trailer Mounted Attenuators. The attenuator shall be a NCHRP 350 approved unit for Test Level 3. Test Level 2 may be used as directed by the Engineer for normal posted speeds less than or equal to 45 mph.”

### **WORKING DAYS (BDE)**

Effective: January 1, 2002

The Contractor shall complete the work within **95** working days.

### **BITUMINOUS MATERIALS COST ADJUSTMENTS (BDE) (RETURN FORM WITH BID)**

Effective: November 2, 2006

Revised: April 1, 2009

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 adjustments shall apply to permanent and temporary hot-mix asphalt (HMA) mixtures, bituminous surface treatments (cover and seal coats), and pavement preservation type surface treatments. The adjustments shall not apply to bituminous prime coats, tack coats, crack filling/sealing, or joint filling/sealing.

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.

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<sub>P</sub> = Bituminous Price Index, as published by the Department for the month the work is performed, \$/ton (\$/metric ton).

BPI<sub>L</sub> = Bituminous Price Index, as published by the Department for the month prior to the letting, \$/ton (\$/metric ton).

%AC<sub>V</sub> = Percent of virgin Asphalt Cement in the Quantity being adjusted. For HMA mixtures, the % AC<sub>V</sub> 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<sub>V</sub> and undiluted emulsified asphalt will be considered to be 65% AC<sub>V</sub>.

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:  $Q, \text{ metric tons} = A \times D \times (G_{mb} \times 24.99) / 1000$ . 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, 2009

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 work added by adjusted unit price will be subject to fuel cost adjustment only when the category representing the added work was subject to the fuel cost adjustment. Added work paid for by time and materials 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<sub>P</sub> = Fuel Price Index, as published by the Department for the month the work is performed, \$/gal (\$/liter)  
FPI<sub>L</sub> = Fuel Price Index, as published by the Department for the month prior to the letting, \$/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.

Progress Payments. 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.

Final Quantities. Upon completion of the work and determination of final pay quantities, an adjustment will be prepared to reconcile any differences between estimated quantities previously paid and the final quantities. The value for the balancing adjustment will be based on a weighted average of FPI<sub>P</sub> and Q only for those months requiring the cost adjustment. The cost adjustment will be applicable to the final measured quantities of all applicable pay items.

Basis of Payment. Fuel cost adjustments may be positive or negative but will only be made when there is a difference between the FPI<sub>L</sub> and FPI<sub>P</sub> in excess of five percent, as calculated by:

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

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: April 1, 2009

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 has a contract value of \$10,000 or greater.

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. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

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

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

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

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

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

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

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

**Attachment**

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

**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
- Structural Steel Yes
- Reinforcing Steel Yes
- Dowel Bars, Tie Bars and Mesh Reinforcement Yes
- Guardrail Yes
- Steel Traffic Signal and Light Poles, Towers and Mast Arms Yes
- Metal Railings (excluding wire fence) Yes
- Frames and Grates Yes

**Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**STORM WATER POLLUTION PREVENTION PLAN**



**Storm Water Pollution Prevention Pla**

Route	<u>FAI 80</u>	Marked Rte.	<u>I 80</u>
Section	<u>(50-5,6 &amp; 32-1,2)RS-3</u>	Project No.	<u>C-93-081-10</u>
County	<u>LaSalle &amp; Grundy Counties</u>	Contract No.	<u>66A08</u>

This plan has been prepared to comply with the provisions of the NPDES Permit Number ILR10, issued by the Illinois Environmental Protection Agency 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.

George F. Ryan PE  
 Print Name  
Region 2 Engineer  
 Title  
Illinois Department of Transportation  
 Agency

*George Ryan P.E.*  
 Signature  
3/12/10  
 Date

**I. Site Description:**

A. The following is a description of the project location:

On Interstate 80 from the Marseilles interchange east to the Walker's Corner interchange (Mile Post 97 to Mile Post 105) in LaSalle and Grundy Counties. Earthwork is in the median for the length of the job and on the foreslope behind guardrail installations.

B. The following is a description of the construction activity which is the subject of this plan:

The work is installing 7.79 miles of median cable guard along the median side of I-80. Other work includes replacing the median side shoulders (8' HMA in the EBL 4' WB) and correcting the side slopes of the median to 4:1.

C. The following is a description of the intended sequence of major activities which will disturb soils for major portions of the construction site, such as grubbing, excavation and grading:

The median sideslopes will be corrected to 4:1. The outside shoulder excavation will be placed on the foreslope. Any materials placed on the shoulders will be disced into the existing slope. Cohesive soil will be added in if necessary.

D. The total area of the construction site is estimated to be 215 acres.

The total area of the site that is estimated will be disturbed by excavation, grading or other activities is 39.9 acres.

E. The following is a weighted average of the runoff coefficient for this project after construction activities are completed:

0.62

- F. The following is a description of the soil types found at the project site followed by information regarding their erosivity:

356A Elpaso silty clay loam, poorly drained, moderately permeable. This soil has a less than moderate susceptibility to erosion on slopes that are 0 to 2%.

223C2 Varna silt loam, moderately well drained, permeable. The soil is very erosive to wind and water on slopes 4 to 6%.

614A Chenoa silty clay loam and 614B Chenoa silty clay loam, both somewhat poorly drained, permeable. Both soils are slightly erosive to wind and water on slopes 0 to 2% or slopes 2 to 5%

802B Orthents, loamy, undulating, well drained, slightly permeable. The soil is moderately erosive to water and very erosive to wind.

152A Drummer Silty Clay Loam, poorly drained, permeable. Slightly erosive to water and very erosive to wind on slopes that are 0 to 2%.

149A Brenton silt loam, somewhat poorly drained, permeable. Slightly erosive to water and very erosive to wind on slopes that are 0 to 2%.

146B Elliot Silt Loam, somewhat poorly drained, permeable. Slightly erosive to water and very erosive to wind on slopes that are 2 to 4%.

232A Ashkum silty clay loam, poorly drained, somewhat permeable. Moderately erosive to wind, slightly erosive to water on 0 to 2% slopes.

- G. The following is a description of potentially erosive areas associated with this project:

The area between the east bound edge of pavement and the west bound edge of pavement will at times be exposed. These areas have slightly steeper than 4:1 slopes that meet in a ditch that has 0 to 2% longitudinal slopes. The areas behind the guardrail on the outside of the EB and WB lanes may have exposed slopes at times. The sideslopes were originally 4:1 fifty years ago but now show signs of erosion and settlement. They generally slope to a ditch or away from the road. Slopes are generally 0 to 2%.

- H. The following is a description of soil disturbing activities, their locations, and their erosive factors (e.g. steepness of slopes, length of slopes, etc):

Excavations for the EB & WB median side 4' shoulders will be milled out and the aggregate spoils will be trucked offsite. Excavation for the remaining 4' of EB inside shoulder will be bladed off to the EB foreslope where it will be disced up and incorporated into the EB foreslope. The foreslope on the WB lanes will receive clean fill with the material blended with existing. Both slopes will be graded and shaped as required to achieve 4:1 slopes. Longitudinal ditch grades are flat, generally 0 to 2%. Sideslopes in back of guardrail will be shaped and graded.

- I. See the erosion control plans and/or drainage plans for this contract for information regarding drainage patterns, approximate slopes anticipated before and after major grading activities, locations where vehicles enter or exit the site and controls to prevent offsite sediment tracking (to be added after contractor identifies locations), areas of soil disturbance, the location of major structural and non-structural controls identified in the plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands) and locations where storm water is discharged to surface water including wetlands.

- J. The following is a list of receiving water(s) and the ultimate receiving water(s), and areal extent of wetland acreage at the site. The location of the receiving waters can be found on the erosion and sediment control plans:

From West to East:  
The Walbridge Creek  
Kickapoo Creek  
Stanton Creek  
Nettle Creek

An unnamed drainage channel  
 Long Point Creek  
 Ultimate receiving water is the Illinois River

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

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Soil Sediment             | <input checked="" type="checkbox"/> Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids) |
| <input checked="" type="checkbox"/> Concrete                  | <input checked="" 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 checked="" type="checkbox"/> Other (specify) HMA  |
| <input checked="" 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 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. 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**

1. **Stabilized 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(A)(1)(a) and II(A)(3), stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days 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 14 or more calendar days.

- a. Where the initiation of stabilization measures by the 7<sup>th</sup> day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable thereafter.

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 type="checkbox"/> Protection of Trees                          | <input type="checkbox"/> Geotextiles                                       |
| <input checked="" type="checkbox"/> Temporary Erosion Control Seeding | <input checked="" type="checkbox"/> Other (specify) Sequence of operations |
| <input type="checkbox"/> Temporary Turf (Seeding, Class 7)            | <input type="checkbox"/> Other (specify)                                   |
| <input 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:

1. Temporary/Permanent Erosion Control Seeding--Seed mixture will depend on the time of year it is applied. Seeding will be completed in accordance with IDOT Standard Specifications.
2. Erosion Control Blanket--Erosion Control Blanket will be installed on all disturbed slopes that have been brought to final grade and seeded to protect slopes from erosion and to allow seeds to germinate.
3. Mature vegetation beyond the construction limits will not be disturbed.

4. Minimize the amount of time earth bases are exposed for potential erosion and sediment tracking. Immediate grading and shaping to the final slopes will allow for the early placement of permanent or temporary seeding.

2. **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 Structural 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 type="checkbox"/> Other (specify)         |
| <input type="checkbox"/> Permanent Check Dams                    | <input type="checkbox"/> Other (specify)         |
| <input type="checkbox"/> Permanent Sediment Basin                | <input type="checkbox"/> Other (specify)         |
| <input type="checkbox"/> Aggregate Ditch                         | <input type="checkbox"/> Other (specify)         |
| <input type="checkbox"/> Paved Ditch                             | <input type="checkbox"/> Other (specify)         |

Describe how the Structural Practices listed above will be utilized:

1. Perimeter Erosion Barrier – Perimeter erosion barrier (silt fence) will be used in all areas where runoff from disturbed areas has the potential to travel offsite or into swales, ditches, ponds, wetlands or other natural water bodies. See Erosion Control on Plan Sheets.
2. Storm Drain Inlet Protection – Inlet filters will be used on all manholes and storm sewer inlets where runoff from disturbed areas is collected.
3. Temporary Ditch Checks - will be installed to IDOT specifications.

3. **Storm Water Management:** Provided below is a description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

- a. 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 Section 59-8 (Erosion and Sediment Control) in Chapter 59 (Landscape Design and Erosion Control) of the Illinois Department of Transportation Bureau of Design and Environment Manual. If practices other than those discussed in Section 59-8 are selected for implementation or if practices are applied to situations different from those covered in Section 59-8, the technical basis for such decisions will be explained below.

- b. 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 Storm Water Management Controls.

Work is contained entirely within the existing median of I-80. Some research of historical records and a field check revealed no apparent storm water management problems or erosion problems. No new outlets will be constructed and no outlets will be moved. Existing median outlets will be cleaned. The increase in runoff due to paving 4 more feet of shoulder is regarded as not significant to the overall runoff from this narrow, but long median. The existing profile grades of the median will remain flat, in the 0 to 2% range. Outlet velocities will also remain minimal. There is no apparent need for detention or velocity dissipation.

#### 4. Other Controls:

- a. Vehicle Entrances and Exits – Stabilized construction entrances and exits must be constructed to prevent tracking of sediments onto roadways.

The contractor will provide the resident engineer with a written plan identifying the location of stabilized entrances and exits and the procedures (s)he will use to construct and maintain them.

- b. Material Delivery, Storage, and Use – The following BMPs shall be implemented to help prevent discharges of construction materials during delivery, storage, and use:
- All products delivered to the project site must be properly labeled.
  - Water tight shipping containers and/or semi trailers shall be used to store hand tools, small parts, and most construction materials that can be carried by hand, such as paint cans, solvents, and grease.
  - A storage/containment facility should be chosen for larger items such as drums and items shipped or stored on pallets. Such material is to be covered by a tin roof or large sheets of plastic to prevent precipitation from coming in contact with the products being stored.
  - Large items such as light stands, framing materials and lumber shall be stored in the open in a general storage area. Such material shall be elevated with wood blocks to minimize contact with storm water runoff.
  - Spill clean-up materials, material safety data sheets, an inventory of materials, and emergency contact numbers shall be maintained and stored in one designated area and each Contractor is to inform his/her employees and the resident engineer of this location.
- c. Stockpile Management – BMPs shall be implemented to reduce or eliminate pollution of storm water from stockpiles of soil and paving materials such as but not limited to portland cement concrete rubble, asphalt concrete, asphalt concrete rubble, aggregate base, aggregate sub base, and pre-mixed aggregate. The following BMPs may be considered:
- Perimeter Erosion Barrier
  - Temporary Seeding
  - Temporary Mulch
  - Plastic Covers
  - Soil Binders
  - Storm Drain Inlet Protection

The contractor will provide the resident engineer with a written plan of the procedures (s)he will use on the project and how they will be maintained.

- d. Waste Disposal. No materials, including building materials, shall be discharged into Waters of the State, except as authorized by a Section 404 permit.
- e. The provisions of this plan shall ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.
- f. The contractor shall provide a written and graphic plan to the resident engineer identifying where each of the above areas will be located and how they are to be managed.

#### 5. 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, 1995. 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 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 the plan are in accordance with IDOT Standard Specifications and the Illinois Urban Manual.

### III. Maintenance:

The following is a description of procedures that 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. The resident engineer will provide maintenance guides to the contractor for the practices associated with this project.

During construction the contractor shall clean up and grade the work area to eliminate concentration of runoff, cover the openings of pipes in trenches and open inlets at the close of each working day. Maintain or replace (if specified by the Engineer) erosion and sediment control items. Prior to any landscaping/restoration work, the contractor shall remove and dispose of silt retained by temporary erosion barrier. Areas of erosion control blanket which fail will be repaired immediately. Temporary seeding shall be placed in accordance to the IDOT Standard Specifications.

All maintenance of erosion control systems will be the responsibility of the contractor. All locations where vehicles enter and exit the construction site and all other areas subject to erosion should also be inspected periodically. Inspection of these areas shall be made at least once every seven days and within 24 hours of the end of a storm that is 0.5 inches or greater rainfall, or an equivalent snowfall.

### 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. Such inspections shall be conducted at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater or equivalent snowfall.

- A. Disturbed areas, use areas (storage of materials, stockpiles, machine maintenance, fueling, etc.), borrow sites, and waste sites shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Discharge locations or points that are accessible, shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off site sediment tracking.
- B. Based on the results of the inspection, the description of potential pollutant sources identified in section I above and pollution prevention measures identified in section II above shall be revised as appropriate as soon as practicable after such inspection. Any changes to this plan resulting from the required inspections shall be implemented within ½ hour to 1 week based on the urgency of the situation. The resident engineer will notify the contractor of the time required to implement such actions through the weekly inspection report.
- C. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of this storm water pollution prevention plan, and actions taken in accordance with section IV(B) shall be made and retained as part of the plan for at least three (3) years after the date of the inspection. The report shall be signed in accordance with Part VI. G of the general permit.
- D. If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the resident engineer shall notify the appropriate IEPA Field Operations Section office by email at: [epa.swnoncomp@illinois.gov](mailto:epa.swnoncomp@illinois.gov), telephone or fax within 24 hours of the incident. The resident Engineer shall then

complete and submit an "Incidence of Noncompliance" (ION) report for the identified violation within 5 days of the incident. The resident engineer shall use forms provided by the Illinois Environmental Protection Agency 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 noncompliance shall be signed by a responsible authority in accordance with Part VI. G of the general permit.

The Incidence of Non-Compliance shall be mailed to the following address:

Illinois Environmental Protection Agency  
Division of Water Pollution Control  
Attn: Compliance Assurance Section  
1021 North Grand East  
Post Office Box 19276  
Springfield, Illinois 62794-9276

**V. Non-Storm Water Discharges:**

Except for flows from fire fighting activities, sources of non-storm water that is combined with storm water discharges associated with the industrial activity addressed in this plan must be described below. Appropriate pollution prevention measures, as described below, will be implemented for the non-storm water component(s) of the discharge.

- A. Spill Prevention and Control – BMPs shall be implemented to contain and clean-up spills and prevent material discharges to the storm drain system. The contractor shall produce a written plan stating how his/her company will prevent, report, and clean up spills and provide a copy to all of his/her employees and the resident engineer. The contractor shall notify all of his/her employees on the proper protocol for reporting spills. The contractor shall notify the resident engineer of any spills immediately.
- B. Concrete Residuals and Washout Wastes – The following BMPs shall be implemented to control residual concrete, concrete sediments, and rinse water:
- Temporary Concrete Washout Facilities shall be constructed for rinsing out concrete trucks. Signs shall be installed directing concrete truck drivers where designated washout facilities are located.
  - The contractor shall have the location of temporary concrete washout facilities approved by the resident engineer.
  - All temporary concrete washout facilities are to be inspected by the contractor after each use and all spills must be reported to the resident engineer and cleaned up immediately.
  - Concrete waste solids/liquids shall be disposed of properly.
- C. Litter Management – A proper number of dumpsters shall be provided on site to handle debris and litter associated with the project. The Contractor is responsible for ensuring his/her employees place all litter including marking paint cans, soda cans, food wrappers, wood lathe, marking ribbon, construction string, and all other construction related litter in the proper dumpsters.
- D. Vehicle and Equipment Cleaning – Vehicles and equipment are to be cleaned in designated areas only, preferably off site.
- E. Vehicle and Equipment Fueling – A variety of BMPs can be implemented during fueling of vehicles and equipment to prevent pollution. The contractor shall inform the resident engineer as to which BMPs will be used on the project. The contractor shall inform the resident engineer how (s)he will be informing his/her employees of these BMPs (i.e. signs, training, etc.). Below are a few examples of these BMPs:
- Containment
  - Spill Prevention and Control
  - Use of Drip Pans and Absorbents
  - Automatic Shut-Off Nozzles
  - Topping Off Restrictions
  - Leak Inspection and Repair
- F. Vehicle and Equipment Maintenance – On site maintenance must be performed in accordance with all environmental laws such as proper storage and no dumping of old engine oil or other fluids on site.

**VI. 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 NPDES permit which could be passed onto the contractor.



**Contractor Certification Statement**

The Resident Engineer is to make copies of this form and every contractor and sub-contractor will be required to complete their own separate form.

Route	<u>FAI 80</u>	Marked Rt.	<u>I-80</u>
Section	<u>(50-5,6 &amp; 32-1,2)RS-3</u>	Project No.	<u>C93-081-10</u>
County	<u>LaSalle &amp; Grundy</u>	Contract No.	<u>66A08</u>

This certification statement is part of the Storm Water Pollution Prevention Plan for the project described below, in accordance with 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 general National Pollutant Discharge Elimination System (NPDES) permit (ILR 10) 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 the Storm Water Pollution Prevention Plan for the above mentioned project; I have provided all documentation required to be in compliance with the ILR10 and Storm Water Pollution Prevention Plan 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

**IMPACT ATTENUATORS (BDE)**

Effective: November 1, 2003

Revised: November 1, 2008

Description. This work shall consist of furnishing and installing impact attenuators of the category and test level specified.

Materials. Materials shall meet the requirements of the impact attenuator manufacturer and the following:

Item	Article/Section
(a) Fine Aggregate (Note 1).....	1003.01
(b) Steel Posts, Structural Shapes, and Plates .....	1006.04
(c) Rail Elements, End Section Plates, and Splice Plates .....	1006.25
(d) Bolts, Nuts, Washers and Hardware .....	1006.25
(e) Hollow Structural Tubing .....	1006.27(b)
(f) Wood Posts and Wood Blockouts .....	1007.01, 1007.02, 1007.06
(g) Preservative Treatment.....	1007.12

Note 1. Fine aggregate shall be FA 1 or FA 2, Class A quality. The sand shall be unbagged and shall have a maximum moisture content of five percent.

**CONSTRUCTION REQUIREMENTS**

General. Impact attenuators shall meet the testing criteria contained in National Cooperative Highway Research Program (NCHRP) Report 350 for the test level specified and shall be on the Department's approved list. Fully redirective and partially redirective attenuators shall also be designed for bi-directional impacts.

Installation. Regrading of slopes or approaches for the installation shall be as shown on the plans.

Bases for impact attenuators, other than sand modules, shall be installed when required by the manufacturer. The bases shall be constructed on a prepared subgrade according to the manufacturer's specifications. The surface of the base shall be slightly sloped or crowned to facilitate drainage.

Bases for sand module impact attenuators will be required. The bases shall be constructed of either portland cement concrete or hot-mix asphalt (HMA). Portland cement concrete bases shall be 6 in. (150 mm) thick and be according to the applicable requirements of Section 424 of the Standard Specifications. HMA bases shall be 8 in. (200 mm) thick and be according to the applicable requirements of Section 408 of the Standard Specifications. The surface of the base shall be slightly sloped or crowned to facilitate drainage. The perimeter of each module and the specified weight (mass) of sand in each module shall be painted on the surface of the base.

Impact attenuators shall be installed according to the manufacturer's specifications and include all necessary transitions between the impact attenuator and the item to which it is attached.

Method of Measurement. This work will be measured for payment as each, where each is defined as one complete installation.

Contract quantities for sand module attenuator bases may be accepted according to Article 202.07(a) of the Standard Specifications. When measured, sand module attenuator bases will be measured in place and the dimensions used to calculate square yards (square meters) will not exceed those as shown on the plans.

Basis of Payment. This work, will be paid for at the contract unit price per each for IMPACT ATTENUATORS (FULLY REDIRECTIVE, NARROW); IMPACT ATTENUATORS (FULLY REDIRECTIVE, WIDE); IMPACT ATTENUATORS (FULLY REDIRECTIVE, RESETTABLE); IMPACT ATTENUATORS (SEVERE USE, NARROW); IMPACT ATTENUATORS (SEVERE USE, WIDE); IMPACT ATTENUATORS (PARTIALLY REDIRECTIVE); or IMPACT ATTENUATORS (NON-REDIRECTIVE), of the test level specified.

Sand module attenuator bases will be paid for at the contract unit price per square yard (square meter) for ATTENUATOR BASE.

Regrading of slopes or approaches will be paid for according to Section 202 and/or Section 204 of the Standard Specifications.

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

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**ATTACHMENTS**

**A. Employment Preference for Appalachian Contracts  
(included in Appalachian contracts only)**

**I. GENERAL**

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

- Section I, paragraph 2;
- Section IV, paragraphs 1, 2, 3, 4 and 7;
- Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6 and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

6. Selection of Labor: During the performance of this contract, the contractor shall not:

- a. Discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or

- b. Employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

**II. NONDISCRIMINATION**

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

**1. Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60 (and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

- a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.
- b. The contractor will accept as his operating policy the following statement: "It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job-training."

**2. EEO Officer:** The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for an must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

**3. Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

- a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.
- b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.
- c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.
- d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees,

applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

**4. Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employees referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish which such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

**5. Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

#### **6. Training and Promotion:**

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be

in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

**7. Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the SHA and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

**8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees.

Contractors shall obtain lists of DBE construction firms from SHA

personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

**9. Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;

(3) The progress and efforts being made in locating, hiring, training,

qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of

DBE subcontractors or subcontractors with meaningful minority and

female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

### III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

### IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located

on roadways classified as local roads or rural minor collectors, which are exempt.)

#### 1. General:

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

#### 2. Classification:

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the

contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the question, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advised the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

### 3. Payment of Fringe Benefits:

a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any cost reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

### 4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

#### a. Apprentices:

(1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any

employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid

the full amount of fringe benefits listed on the wage determination

for the applicable classification. If the Administrator for the Wage

and Hour Division determines that a different practice prevails for

the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

#### b. Trainees:

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

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which cases such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration

withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

**c. Helpers:**

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV. 2. Any worker listed on a payroll at a helper wage rate, who is not a helper under a approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

**5. Apprentices and Trainees (Programs of the U.S. DOT):**

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

**6. Withholding:**

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainee's and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

**7. Overtime Requirements:**

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

**8. Violation:**

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10 for each calendar day on which such employee was required or

permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

**9. Withholding for Unpaid Wages and Liquidated Damages:**

The SHA shall; upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

**V. STATEMENTS AND PAYROLLS**

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

**1. Compliance with Copeland Regulations (29 CFR 3):**

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

**2. Payrolls and Payroll Records:**

- a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.
- b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.
- c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely

all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for submitting payroll copies of all subcontractors.

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

- (1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;
- (2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;
- (3) that each laborer or mechanic has been paid not less than the applicable wage rate and fringe benefits or cash equivalent for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S. C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

## VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all federal-aid contracts on the national highway system, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:

- a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.
- b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.
- c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data

required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

## VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractors' own organization (23 CFR 635).

- a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.
- b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

## VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in

surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

#### **IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS**

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

##### **NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS**

18 U.S.C. 1020 reads as follows:

*“Whoever, being an officer, agent or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or*

*Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or*

*Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;*

*Shall be fined not more than \$10,000 or imprisoned not more than 5 years or both.”*

#### **X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT**

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more).

By submission of this bid or the execution of this contract, or

subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 *et seq.*, as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 *et seq.*, as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

#### **XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION**

1. Instructions for Certification - Primary Covered Transactions:

(Applicable to all Federal-aid contracts - 49 CFR 29)

- a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.
- c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.
- d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal

is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification in all lower tier covered transactions

and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded from Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

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#### **Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Primary Covered Transactions**

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and
- d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

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#### **2. Instructions for Certification - Lower Tier Covered Transactions:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealing.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

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2. Where the prospective primary participant is unable to certify

**Certification Regarding Debarment, Suspension, Ineligibility And  
Voluntary Exclusion-Lower Tier Covered Transactions:**

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

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**XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR  
LOBBYING**

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**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.

**NOTICE**

The most current **General Wage Determination Decisions** (wage rates) are available on the IDOT web site. They are located on the Letting and Bidding page at <http://www.dot.state.il.us/desenv/delett.html>.

In addition, ten (10) days prior to the letting, the applicable Federal wage rates will be e-mailed to subscribers. It is recommended that all contractors subscribe to the Federal Wage Rates List or the Contractor's Packet through IDOT's subscription service.

PLEASE NOTE: if you have already subscribed to the Contractor's Packet you will automatically receive the Federal Wage Rates.

The instructions for subscribing are at <http://www.dot.state.il.us/desenv/subsc.html>.

If you have any questions concerning the wage rates, please contact IDOT's Chief Contract Official at 217-782-7806.