## 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 that 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 downloading and/or ordering CD-ROM's and are 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, signed and notarized, "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 a **Proposal Denial and/or Authorization Form**, approved by the Central Bureau of Construction, that indicates which items have been approved For Bidding. If **Authorization to Bid** cannot be approved, the **Proposal Denial and/or Authorization Form** 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:** It is the contractor's responsibility to determine which, if any, addenda pertains to any project they may be bidding. Failure to incorporate all relevant addenda may cause the bid to be declared unacceptable.

Each addendum will be placed with the contract number. Addenda will also be placed on the Addendum/Revision Checksheet and each subscription service subscriber will be notified by e-mail of each addendum 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 bidder check IDOT's website http://www.dot.il.gov/desenv/delett.html before submitting final bid information.

**IDOT is not responsible for any e-mail related failures.**

Addenda Questions may be directed to the Contracts Office at (217)-782-7806 or D&Econtracts@dot.il.gov

Technical Questions about downloading these files may be directed to Roseanne Nance (217)-785-5875 or nancer@dot.il.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?**

| **Questions Regarding** | **Call** |
|---|---|
| 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 |
| Electronic plans and proposals | 217/785-5875 |

## ADDENDUMS TO THE PROPOSAL FORMS

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

RETURN WITH BID

4X

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

**Letting March 4, 2005**

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. 62113**
**COOK, IL-LAKE, IN Counties**
**Section 2626.2-R-1**
**District 1 Construction Funds**
**Route FAI 80**

PLEASE MARK THE APPROPRIATE BOX BELOW:

☐ A Bid Bond is included.

☐ A Cashier's Check or a Certified Check is included.

Prepared by

S

Checked by

(Printed by authority of the State of Illinois)

## 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 Proposal Forms and Plans" 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 a **Proposal Denial and/or Authorization Form**, approved by the Central Bureau of Construction, that indicates which items have been approved For Bidding. If **Authorization to Bid** cannot be approved, the **Proposal Denial and/or Authorization Form** will indicate the reason for denial. If a contractor has requested to bid but has not received a **Proposal Denial and/or Authorization Form**, 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?**

| **Questions Regarding** | **Call** |
|---|---|
| Prequalification and/or Authorization to Bid | 217/782-3413 |
| Preparation and submittal of bids | 217/782-7806 |
| Mailing of CD-ROMS | 217/782-7806 |

**RETURN WITH BID**

Illinois Department of Transportation

# PROPOSAL

TO THE DEPARTMENT OF TRANSPORTATION

1. Proposal of _____

   _____

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

   **Contract No. 62113**
   **COOK, IL-LAKE, IN Counties**
   **Section 2626.2-R-1**
   **Route FAI 80**
   **District 1 Construction Funds**

**2.58 km of variable width reinforced concrete pavement, shoulder widening, construction of retaining walls, milling and bituminous concrete surface along FAI Route 80/94/U.S. Route 6 (Kingery-Borman Expressway) from Burnam Road to U.S. Route 41 (Calumet Avenue) and construction of a bridge carrying I-80/94/U.S. Route 6 over Little Calumet River, all located in Lansing, Illinois, Hammond, Indiana, and Munster, Indiana.**

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**

3. **ASSURANCE OF EXAMINATION AND INSPECTION/WAIVER.** The undersigned further declares that he/she has carefully 7examined the proposal, plans, specifications, form of contract and contract bond, and special provisions, and that he/she has inspected in detail the site of the proposed work, and that he/she has familiarized themselves with all of the local conditions affecting the contract and the detailed requirements of construction, and understands that in making this proposal he/she waives all right to plead any misunderstanding regarding the same.

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

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

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

Bank cashier's checks or properly certified checks accompanying proposals shall be made payable to the Treasurer, State of Illinois, when the state is awarding authority; the county treasurer, when a county is the awarding authority; or the city, village, or town treasurer, when a city, village, or town is the awarding authority.

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

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

**Attach Cashier's Check or Certified Check Here**

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

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

Item _____

Section No. _____

County _____

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

BD 354 (Rev. 11/2001)

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 - 62113**

**State Job # -** C-91-019-01
**PPS NBR -** 1-76843-0300
**County Name -** COOK- -
**Code -** 31 - -
**District -** 1 - -
**Section Number -** 2626.2-R-1

**Project Number**

**Route**
FAI 80

| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| MX030128 | REM EX NOISE ABATE WL | SQ M | 4,883.000 | | | | |
| MX030144 | CB 1.2X0.9 SPL T20F&G | EACH | 12.000 | | | | |
| MX030199 | TEMP PAVEMENT | SQ M | 293.000 | | | | |
| MX030257 | ERECT F B G-EX 1250KN | EACH | 7.000 | | | | |
| MX030388 | CONC MED BAR/BASE REM | METER | 1,066.500 | | | | |
| MX030495 | SHORT-TRM PAVT SUP FD | SQ M | 22,124.000 | | | | |
| MX030510 | CON ATS 100 PVC S80 | METER | 320.000 | | | | |
| MX030511 | EXC FDN UNCLASS (IN.) | CU M | 10,188.000 | | | | |
| MX030512 | EXCAVATION WET (IN.) | CU M | 166.000 | | | | |
| MX030513 | EXCAVATION DRY (IN.) | CU M | 455.000 | | | | |
| MX030514 | STRUCT BACKFILL (IN.) | CU M | 153.000 | | | | |
| MX030515 | RIPRAP REVETMNT (IN.) | SQ M | 2,122.000 | | | | |
| MX030516 | TEST PILE 356MM (IN.) | EACH | 18.000 | | | | |
| MX030517 | PIL CSSE 6.35 356 IN. | METER | 15,489.500 | | | | |
| MX030518 | CONC A SUB-STR (IN.) | CU M | 4,564.300 | | | | |

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| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| MX030519 | CONC C SUP-STR (IN.) | CU M | 554.700 | | | | |
| MX030520 | REINF BARS E-CT (IN.) | KG | 386,360.000 | | | | |
| MX030521 | P UDR PRF 1.63 150 IN | METER | 580.000 | | | | |
| MX030522 | STR EXP JOINT SS IN. | METER | 43.700 | | | | |
| MX032178 | TEMP INFO SIGNING | SQ M | 50.000 | | | | |
| MX033226 | WHITEWASH CONC PAVT | SQ M | 3,106.000 | | | | |
| MX033269 | PIPE ELBOW 200 | EACH | 9.000 | | | | |
| MX033276 | TEMP SOIL RETEN SYSTM | SQ M | 328.000 | | | | |
| MX033290 | SED CONT SILT FENCE | METER | 356.000 | | | | |
| MX033291 | SED CON SILT FEN MAIN | METER | 712.000 | | | | |
| MX033292 | SED CON STAB CONST EN | SQ M | 265.000 | | | | |
| MX033303 | SED CON STAB CON EN M | SQ M | 265.000 | | | | |
| MX033407 | CON EMB STR 50 CNC | METER | 548.000 | | | | |
| MX406078 | P BCSC SUPER "F" N105 | M TON | 746.900 | | | | |
| MX406220 | BCBC SUP IL-19.0 N105 | M TON | 898.200 | | | | |

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| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| MX512010 | TEMP SHT PILING (RIP) | SQ M | 2,161.400 | | | | |
| MX704012 | TEMP CON BAR (IO) | METER | 4,463.000 | | | | |
| MZ013825 | CONTR LOW-STRENG MATL | CU M | 176.300 | | | | |
| MZ022800 | FENCE REMOVAL | METER | 495.000 | | | | |
| MZ047300 | PROTECTIVE SHIELD | SQ M | 800.000 | | | | |
| M2010110 | TREE REMOV 6-15 | UNIT | 184.000 | | | | |
| M2010210 | TREE REMOV OVER 15 | UNIT | 46.000 | | | | |
| M2010500 | TREE REMOV HECTARES | HA | 0.800 | | | | |
| M2020010 | EARTH EXCAVATION | CU M | 2,015.500 | | | | |
| M2020045 | EARTH EXCAVATION SPL | CU M | 1,833.400 | | | | |
| M2021200 | REM & DISP UNS MATL | CU M | 3,537.500 | | | | |
| M2040800 | FURNISHED EXCAV | CU M | 19,400.300 | | | | |
| M2080150 | TRENCH BACKFILL | CU M | 1,710.700 | | | | |
| M2101000 | GEOTECH FAB F/GR STAB | SQ M | 3,890.000 | | | | |
| M2113150 | TOPSOIL F & P 150 | SQ M | 3,726.000 | | | | |

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| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| M2113300 | TOPSOIL F & P 300 | SQ M | 2,412.000 | | | | |
| M2114100 | COMPOST F & P 100 | SQ M | 2,412.000 | | | | |
| M2130301 | EXPLOR TRENCH 3.1 | METER | 144.000 | | | | |
| M2500210 | SEEDING CL 2A | HA | 1.000 | | | | |
| M2500400 | NITROGEN FERT NUTR | KG | 61.100 | | | | |
| M2500500 | PHOSPHORUS FERT NUTR | KG | 61.100 | | | | |
| M2500600 | POTASSIUM FERT NUTR | KG | 61.100 | | | | |
| M2500750 | MOWING | HA | 0.700 | | | | |
| M2510630 | EROSION CONTR BLANKET | SQ M | 13,977.000 | | | | |
| M2520110 | SODDING SALT TOLERANT | SQ M | 2,411.900 | | | | |
| M2520200 | SUPPLE WATERING | UNIT | 78.000 | | | | |
| M2800250 | TEMP EROS CONTR SEED | KG | 137.000 | | | | |
| M3111300 | SUB GRAN MAT B 300 | SQ M | 3,890.000 | | | | |
| M3120150 | STAB SUB-BASE 150 | SQ M | 3,106.000 | | | | |
| M4210360 | CON REINF PCC PVT 360 | SQ M | 2,156.000 | | | | |

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|---|---|---|---|---|---|---|---|
| M4214360 | PVT REINFORCEMENT 360 | SQ M | 2,156.000 | | | | |
| M4400095 | BIT SURF REM 95 | SQ M | 3,881.000 | | | | |
| M4401000 | BIT SURF REM VAR DP | SQ M | 3,031.000 | | | | |
| M4402000 | PAVEMENT REM | SQ M | 93.000 | | | | |
| M4402010 | DRIVE PAVEMENT REM | SQ M | 68.100 | | | | |
| M4402040 | COMB CURB GUTTER REM | METER | 54.000 | | | | |
| M4402050 | SIDEWALK REM | SQ M | 40.000 | | | | |
| M4402060 | APPROACH SLAB REM | SQ M | 246.000 | | | | |
| M4402530 | PAVED SHLD REMOVAL | SQ M | 15,017.000 | | | | |
| M4428320 | CL D PATCH T3 200 | SQ M | 18.000 | | | | |
| M4428450 | CL D PATCH T4 350 | SQ M | 850.000 | | | | |
| M4820150 | BIT SHOULDERS 150 | SQ M | 394.000 | | | | |
| M4830360 | PCC SHOULDERS 360 | SQ M | 826.000 | | | | |
| M5010240 | CONC REM | CU M | 275.500 | | | | |
| M5010522 | PIPE CULVERT REMOV | METER | 4.000 | | | | |

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| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| M5020100 | STRUCTURE EXCAVATION | CU M | 5,423.000 | | | | |
| M5030350 | CONC STRUCT | CU M | 2,046.200 | | | | |
| M5030360 | CONC SUP-STR | CU M | 83.400 | | | | |
| M5030380 | RUSTICATION FINISH | SQ M | 3,679.000 | | | | |
| M5030450 | PROTECTIVE COAT | SQ M | 2,563.000 | | | | |
| M5050305 | ERECT STRUCT STEEL | L SUM | 1.000 | | | | |
| M5080205 | REINF BARS, EPOXY CTD | KG | 150,470.000 | | | | |
| M5120900 | TEMP SHT PILING | SQ M | 575.000 | | | | |
| M542B112 | R C PIPE ELBOW 300 | EACH | 7.000 | | | | |
| M542E112 | PRC FL-END SEC 300 | EACH | 2.000 | | | | |
| M542H020 | P CUL CL A 1 300 | METER | 13.000 | | | | |
| M5500620 | STORM SEW CL B 2 200 | METER | 65.000 | | | | |
| M5502840 | SS 1 RCP CL 4 300 | METER | 674.800 | | | | |
| M5502920 | SS 1 RCP CL 3 900 | METER | 4.500 | | | | |
| M5503050 | SS 2 RCP CL 3 300 | METER | 161.500 | | | | |

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| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| M5503060 | SS 2 RCP CL 3 375 | METER | 73.800 | | | | |
| M5503070 | SS 2 RCP CL 3 450 | METER | 147.600 | | | | |
| M5503090 | SS 2 RCP CL 3 600 | METER | 28.200 | | | | |
| M5510080 | STORM SEWER REM 900 | METER | 6.000 | | | | |
| M5510100 | STORM SEWER REM 1350 | METER | 100.000 | | | | |
| M5910100 | GEOCOMPOSITE WALL DR | SQ M | 3,608.000 | | | | |
| M6010610 | PIPE UNDERDRAINS 150 | METER | 275.300 | | | | |
| M6011105 | P UNDR - STRUCT 150 | METER | 441.500 | | | | |
| M6020105 | CB A 1.2M D T1F OL | EACH | 24.000 | | | | |
| M6020170 | CB A 1.2M D T20F&G | EACH | 4.000 | | | | |
| M6021605 | MAN A 1.5D T1F OL | EACH | 2.000 | | | | |
| M6021610 | MAN A 1.5D T1F CL | EACH | 4.000 | | | | |
| M6060070 | CONC CURB TB | METER | 9.500 | | | | |
| M6300100 | SPBGR TY A | METER | 138.200 | | | | |
| M6320030 | GUARDRAIL REMOV | METER | 950.000 | | | | |

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Route
FAI 80

| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| M6640100 | CH LK FENCE 1.2 | METER | 21.400 | | | | |
| M6643400 | TEMP FENCE | METER | 495.000 | | | | |
| M6690100 | BACKFILL PLUGS | CU M | 2.000 | | | | |
| M6690400 | SPL WAST GRD WAT DISP | LITER | 3,960.000 | | | | |
| M7030240 | TEMP PVT MK LINE 150 | METER | 4,908.000 | | | | |
| M7030520 | PAVT MARK TAPE T3 100 | METER | 1,779.800 | | | | |
| M7030530 | PAVT MARK TAPE T3 125 | METER | 446.800 | | | | |
| M7040100 | TEMP CONC BARRIER | METER | 1,013.000 | | | | |
| M7040200 | REL TEMP CONC BARRIER | METER | 3,029.000 | | | | |
| M7240330 | REMOV SIGN PANEL T3 | SQ M | 32.000 | | | | |
| M7800605 | EPOXY PVT MK LN 100 | METER | 12,521.800 | | | | |
| M7800610 | EPOXY PVT MK LN 125 | METER | 3,819.000 | | | | |
| M7800620 | EPOXY PVT MK LN 200 | METER | 1,763.000 | | | | |
| M7800625 | EPOXY PVT MK LN 300 | METER | 566.000 | | | | |
| M7830100 | PAVT MARKING REMOVAL | SQ M | 1,996.000 | | | | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 62113

State Job # - C-91-019-01
PPS NBR - 1-76843-0300
County Name - COOK- -
Code - 31 - -
District - 1 - -
Section Number - 2626.2-R-1

Project Number

Route
FAI 80

| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| M8120230 | CON EMB STR 50 PVC | METER | 75.000 | | | | |
| M8130203 | JBX SS AS 300X610X200 | EACH | 3.000 | | | | |
| M8131400 | JBX NM ES 525X275X200 | EACH | 7.000 | | | | |
| XX001443 | STL PLATE INST DR STR | EACH | 40.000 | | | | |
| XX003424 | CONN TO EXIST STRUCT | EACH | 14.000 | | | | |
| X0301229 | ACCID INVESTIGAT SITE | CAL MO | 7.000 | | | | |
| X0322463 | CONN TO EXIST SEWER | EACH | 9.000 | | | | |
| X0323426 | SED CONT DR ST INL CL | EACH | 672.000 | | | | |
| X0323879 | SERVICE PATROL | CAL DA | 716.000 | | | | |
| X0324045 | SED CON STAB CON EN R | EACH | 1.000 | | | | |
| X0324587 | NOIS AB WAL A-ROD ASY | EACH | 326.000 | | | | |
| X0324753 | IN ST LN RADIO TOW WK | L SUM | 1.000 | | | | |
| X0324754 | PS #I-80-1-8460 REM P | L SUM | 1.000 | | | | |
| X0324756 | THRD T-BAR AS E C IN. | EACH | 1,889.000 | | | | |
| X0324757 | SURFACE SEAL (IN.) | L SUM | 1.000 | | | | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
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Project Number

Route
FAI 80

| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| X0324758 | FW STUD SHR CON (IN.) | EACH | 10,464.000 | | | | |
| X0324759 | ANCHOR BOLT (IN.) | EACH | 154.000 | | | | |
| X0324776 | MASONRY COATING (IN.) | L SUM | 1.000 | | | | |
| X0324777 | FIELD OFFICE EQUIP | CAL MO | 15.000 | | | | |
| X4210390 | LUG SYSTEM COMPL SPL | EACH | 1.000 | | | | |
| X7011015 | TR C-PROT EXPRESSWAYS | L SUM | 1.000 | | | | |
| X7013820 | TR CONT SURVEIL EXPWY | CAL DA | 240.000 | | | | |
| X7015000 | CHANGEABLE MESSAGE SN | CAL MO | 15.000 | | | | |
| Z0002605 | BAR SPLICERS, SPECIAL | EACH | 36.000 | | | | |
| Z0013798 | CONSTRUCTION LAYOUT | L SUM | 1.000 | | | | |
| Z0018500 | DRAINAGE STR CLEANED | EACH | 12.000 | | | | |
| Z0030240 | IMP ATTN TEMP NRD TL2 | EACH | 2.000 | | | | |
| Z0030260 | IMP ATTN TEMP FRN TL3 | EACH | 2.000 | | | | |
| 28000300 | TEMP DITCH CHECKS | EACH | 41.000 | | | | |
| 28000510 | INLET FILTERS | EACH | 96.000 | | | | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 62113

State Job # - C-91-019-01
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Project Number

Route
FAI 80

| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| 40702700 | FURNISH PROFILOGRAPH | L SUM | 1.000 | | | | |
| 50300440 | ERECT ELAS BRG ASY T1 | EACH | 21.000 | | | | |
| 50300450 | ERECT ELAS BRG ASY T2 | EACH | 14.000 | | | | |
| 54248515 | CONCRETE COLLAR | EACH | 11.000 | | | | |
| 60207605 | CB TC T8G | EACH | 2.000 | | | | |
| 60208210 | CB TC T20F&G | EACH | 1.000 | | | | |
| 60234200 | INLETS TA T1F OL | EACH | 33.000 | | | | |
| 60236200 | INLETS TA T8G | EACH | 12.000 | | | | |
| 60250200 | CB ADJUST | EACH | 9.000 | | | | |
| 60257900 | MAN RECONST | EACH | 1.000 | | | | |
| 60405740 | FR & GRATES REMOVED | EACH | 40.000 | | | | |
| 60500050 | REMOV CATCH BAS | EACH | 5.000 | | | | |
| 60500070 | REMOV MAN - MAIN FLOW | EACH | 2.000 | | | | |
| 63100085 | TRAF BAR TERM T6 | EACH | 1.000 | | | | |
| 63100167 | TR BAR TRM T1 SPL TAN | EACH | 2.000 | | | | |

**ILLINOIS DEPARTMENT OF TRANSPORTATION**
**SCHEDULE OF PRICES**
**CONTRACT NUMBER - 62113**

**State Job # -** C-91-019-01
**PPS NBR -** 1-76843-0300
**County Name -** COOK- -
**Code -** 31 - -
**District -** 1 - -
**Section Number -** 2626.2-R-1

**Project Number**

**Route** FAI 80

| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| 63100169 | TR BAR TRM T1 SPL FLR | EACH | 3.000 | | | | |
| 66900450 | SPL WASTE PLNS/REPORT | L SUM | 1.000 | | | | |
| 66900530 | SOIL DISPOSAL ANALY | EACH | 1.000 | | | | |
| 67100100 | MOBILIZATION | L SUM | 1.000 | | | | |
| 70101800 | TRAF CONT & PROT SPL | L SUM | 1.000 | | | | |
| 73600100 | REMOV OH SIN STR-SPAN | EACH | 1.000 | | | | |
| 73600200 | REMOV OH SIN STR-CANT | EACH | 2.000 | | | | |
| 73600250 | REMOV OH SIN STR-BFLY | EACH | 1.000 | | | | |
| 73700100 | REM GR-MT SIN SUPPORT | EACH | 10.000 | | | | |
| 73700200 | REM CONC FDN-GR MT | EACH | 10.000 | | | | |
| 73700300 | REM CONC FDN-OVHD | EACH | 5.000 | | | | |
| 78200100 | MONODIR PRIS BAR REFL | EACH | 765.000 | | | | |
| 78200420 | GUARDRAIL MKR TYPE B | EACH | 14.000 | | | | |
| 78201000 | TERMINAL MARKER - DA | EACH | 5.000 | | | | |

**CONTRACT NUMBER** **62113**

**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 $150,700.00. Sixty percent of the salary is $90,420.00.

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.

(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.

**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 provides:

Section 50-60(c).

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 each of its subcontractors. Unless otherwise directed in writing by the Department, 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 may be indicated as to be subcontracted.

_____

_____

_____

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.

## 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 sign the following certification statement indicating that the information previously submitted by the bidder is, as of the date of signature, current and accurate. The Certification must be signed and dated by a person who is authorized to execute contracts for the bidding company. Before signing this certification, the bidder should carefully review its prior submissions to ensure the Certification is correct. If the Bidder signs 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)

_____ _____
Name of Authorized Representative (type or print) Title of Authorized Representative (type or print)

_____ _____
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 $90,420.00? YES ___ NO___
3. Does anyone in your organization receive more than $90,420.00 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 $90,420.00? 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. It must be signed by an individual who is authorized to execute contracts for the bidding entity. *Note: Signing the NOT APPLICABLE STATEMENT on Form A does not allow the bidder to ignore Form B. Form B must be completed, signed 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 signature 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:

_____

_____

**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 $90,420.00 (60% of the Governor's salary as of 7/1/01). **(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 $90,420.00, (60% of the Governor's salary as of 7/1/01) 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 $90,420.00, (60% of the Governor's salary as of 7/1/01) 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 $90,420.00, (60% of the Governor's salary as of 7/1/01) are you and your spouse or minor children entitled to receive (i) more than 15 % in the aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of 2 times the salary of the Governor? Yes ___No __

---

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

Yes ___No __

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

1. Is your spouse or any minor children currently an officer or employee of the Capitol Development Board or the Illinois 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 $90,420.00, (60 % of the Governor's salary as of 7/1/01) provide the name of your spouse and/or minor children, the name of the State agency for which he/she is employed and his/her annual salary. _____
_____

3. If your spouse or any minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds $90,420.00, (60% of the salary of the Governor as of 7/1/01) are you entitled to receive (i) more then 71/2% 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 $90,420.00, (60% of the Governor's salary as of 7/1/01) are you and your spouse or minor children entitled to receive (i) more than 15 % in the aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of 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 States of America, or any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois, which office entitles the holder to compensation in excess of the expenses incurred in the discharge of that office currently or in the previous 3 years. Yes ___No __

---

(f) Relationship to anyone holding appointive office currently or in the previous 2 years; spouse, father, mother, son, or daughter. Yes ___No __

---

(g) Employment, currently or in the previous 3 years, as or by any registered lobbyist of the State government.

Yes ___No __

---

(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: _____
Name of Authorized Representative (type or print)

Completed by: _____
Title of Authorized Representative (type or print)

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

**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.**

_____
Name of Authorized Representative (type or print)

_____
Title of Authorized Representative (type or print)

_____ _____
Signature of Authorized Representative — Date

**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 SIGNED**

Name of Authorized Representative (type or print)

Title of Authorized Representative (type or print)

Signature of Authorized Representative

Date

## 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**

Illinois Department of Transportation

**Contract No. 62113**
**COOK, IL-LAKE, IN Counties**
**Section 2626.2-R-1**
**Route FAI 80**
**District 1 Construction Funds**

**PART I. IDENTIFICATION**

Dept. Human Rights #_____ Duration of Project: _____

Name of Bidder: _____

**PART II. WORKFORCE PROJECTION**

A. The undersigned bidder has analyzed minority group and female populations, unemployment rates and availability of workers for the location in which this contract work is to be performed, and for the locations from which the bidder recruits employees, and hereby submits the following workforce projection including a projection for minority and female employee utilization in all job categories in the workforce to be allocated to this contract:

TABLE A

| TOTAL Workforce Projection for Contract | | | | | | | | | | | | | TABLE B: CURRENT EMPLOYEES TO BE ASSIGNED TO CONTRACT | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | MINORITY EMPLOYEES | | | | | | TRAINEES | | | | | | | |
| JOB CATEGORIES | TOTAL EMPLOYEES | | BLACK | | HISPANIC | | *OTHER MINOR. | | APPREN-TICES | | ON THE JOB TRAINEES | | TOTAL EMPLOYEES | | MINORITY EMPLOYEES | |
| | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F |
| OFFICIALS (MANAGERS) | | | | | | | | | | | | | | | | |
| SUPERVISORS | | | | | | | | | | | | | | | | |
| FOREMEN | | | | | | | | | | | | | | | | |
| CLERICAL | | | | | | | | | | | | | | | | |
| EQUIPMENT OPERATORS | | | | | | | | | | | | | | | | |
| MECHANICS | | | | | | | | | | | | | | | | |
| TRUCK DRIVERS | | | | | | | | | | | | | | | | |
| IRONWORKERS | | | | | | | | | | | | | | | | |
| CARPENTERS | | | | | | | | | | | | | | | | |
| CEMENT MASONS | | | | | | | | | | | | | | | | |
| ELECTRICIANS | | | | | | | | | | | | | | | | |
| PIPEFITTERS, PLUMBERS | | | | | | | | | | | | | | | | |
| PAINTERS | | | | | | | | | | | | | | | | |
| LABORERS, SEMI-SKILLED | | | | | | | | | | | | | | | | |
| LABORERS, UNSKILLED | | | | | | | | | | | | | | | | |
| TOTAL | | | | | | | | | | | | | | | | |

TABLE C

| TOTAL Training Projection for Contract | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| EMPLOYEES IN TRAINING | TOTAL EMPLOYEES | | BLACK | | HISPANIC | | *OTHER MINOR. | |
| | M | F | M | F | M | F | M | F |
| APPRENTICES | | | | | | | | |
| ON THE JOB TRAINEES | | | | | | | | |

FOR DEPARTMENT USE ONLY

*Other minorities are defined as Asians (A) or Native Americans (N).

Please specify race of each employee shown in Other Minorities column.

**Note: See instructions on the next page**

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IL 494-0454

**RETURN WITH BID**

**Contract No. 62113**
**COOK, IL-LAKE, IN Counties**
**Section 2626.2-R-1**
**Route FAI 80**
**District 1 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**

**Contract No. 62113**
**COOK, IL-LAKE, IN Counties**
**Section 2626.2-R-1**
**Route FAI 80**
**District 1 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)

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

Corporate Name _____

By _____
Signature of Authorized Representative

_____
Typed or printed name and title of Authorized Representative

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**

Illinois Department of Transportation

**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**

_____
(Company Name)

By: _____
(Signature & Title)

**SURETY**

_____
(Company Name)

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 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

Illinois Department of Transportation

# 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 323
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. 62113**
**COOK, IL-LAKE, IN Counties**
**Section 2626.2-R-1**
**Route FAI 80**
**District 1 Construction Funds**

Illinois Department of Transportation

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., March 4, 2005. 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. 62113**
   **COOK, IL-LAKE, IN Counties**
   **Section 2626.2-R-1**
   **Route FAI 80**
   **District 1 Construction Funds**

**2.58 km of variable width reinforced concrete pavement, shoulder widening, construction of retaining walls, milling and bituminous concrete surface along FAI Route 80/94/U.S. Route 6 (Kingery-Borman Expressway) from Burnam Road to U.S. Route 41 (Calumet Avenue) and construction of a bridge carrying I-80/94/U.S. Route 6 over Little Calumet River, all located in Lansing, Illinois, Hammond, Indiana, and Munster, Indiana.**

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

Timothy W. Martin, Secretary

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS
Adopted March 1, 2005

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

ERRATA Standard Specifications for Road and Bridge Construction (Adopted 1-1-02) (Revised 3-1-05)

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## GENERAL INFORMATION

## STATE OF ILLINOIS SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction", Adopted January 1, 2002, the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways", the "Manual of Test Procedures for Materials", in effect on the date of invitation for bids; the latest edition of the Indiana Department of Transportation Standard Specifications and supplements and the "Supplemental Specifications and Recurring Special Provisions" indicated on the Check Sheet included herein which apply to and govern the construction of I-80/94/US-6 Kingery-Borman Expressway from Burnham Road to US 41, Section (2626.2-R-1), in Cook County, Illinois and Lake County, Indiana. In case of conflict with any part, or parts, of said specifications, the said Special Provisions shall take precedence and shall govern.

**FAI-80/94 US-6 (Kingery-Borman Expressway)**

**SECTION: (2626.2-R-1)**

**COOK COUNTY, ILLINOIS**

**LAKE COUNTY, INDIANA**

**CONTRACT NO.: 62113**

## LOCATION OF PROJECT

The project begins at a point on the centerline of FAI-80/94 (Kingery-Borman Expressway) approximately 45 meters east of Burnham Road in Lansing, Illinois and extends in an easterly direction for a distance of 2580.6 meters to the end of the project approximately 25 meters east of Calumet Avenue in Hammond, Indiana.

The project is located in the Village of Lansing in the County of Cook, Illinois and in the City of Hammond and the Town of Munster in Lake County, Indiana.

## DESCRIPTION OF PROJECT

The project consists of bituminous concrete shoulder removal, milling and resurfacing existing shoulders and pavement, construction new bituminous pavement for future traffic lanes and removal of appurtenant roadway elements including guardrail, fence and storm sewers. Continuously Reinforced Concrete Pavement and Concrete Shoulders will be constructed between Burnham Road and Wentworth Avenue. The work will include removal and replacement of the eastbound outer lanes a multi-span structural steel bridge over the Little Calumet River. Structure work also includes longitudinal center joint closure on the three I-80/94 structures over Hohman Avenue, Little Calumet River and Harrison Avenue. The work will include retaining walls along the north and south side of the roadway and extending from Wentworth Avenue to Harrison Avenue on the south and from Wentworth Avenue to the State Line on the north. The work to be performed under this contract also includes earth excavation, furnished excavation, construction of storm sewers and drainage structures, pavement markings, landscaping, erosion control and all incidental and collateral work necessary to complete the project as shown on the plans and described herein.

## COMPLETION DATE PLUS GUARANTEED WORKING DAYS

When a completion date plus guaranteed working days is specified, the Contractor shall complete all contract items and safely open all roadways, in accordance with the final "Pavement Marking" plan as referenced in the contract documents to traffic by 11:59PM, October 30, 2005, except as specified herein.

The Contractor will be allowed to complete retaining wall construction of walls 016-W922, 016-W857, 016-W859 and associated restoration work for these walls within 90 consecutive calendar days after the completion date for opening the roadway to traffic.

The Contractor will be allowed to complete all clean-up work, punch list items, and landscaping within 10 guaranteed working days after the completion date for opening the roadway to traffic. Under extenuating circumstances, the Engineer may direct that certain items of work, not affecting the safe opening of the roadway to traffic, may be completed within the guaranteed working days allowed for clean-up work and punch list items. Temporary lane closures for this work may be allowed during the allowable hours as provided in the Special Provision "Keeping the Expressway Open to Traffic" at the discretion of the Engineer.

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

## COORDINATION WITH ADJACENT AND/OR OVERLAPPING CONTRACTS

This contract abuts and/or overlaps with other concurrent and future contracts as listed below. Each contract includes work items requiring close coordination between the various Contractors regarding the sequence and timing for execution of work items. This contract also includes critical work items that affect the future staging of traffic and the completion dates of other contracts. These critical items along with their completion dates are listed after each contract.

1. Contract #62350 - Reconstructing the local roads and constructing the retaining walls along I-80/94 from east of Torrence Ave. to Wentworth Ave.
   Critical Items affecting the above contract:
   A. None

2. Contract #62109 - Torrence Ave. over I-80/94 Bridge Reconstruction and Interchange improvement Project.
   Critical Items affecting the above contract:
   A. None

3. Contract #62110 - I-80/94 from west of Torrence Ave. to Burnham Ave. Mainline paving and bridge reconstruction during 2005.
   Critical Items affecting the above contract:
   A. None

4. INDOT Project – I-80/94 from Calumet Ave. (US 41) to Cline Ave. Mainline paving and bridge reconstruction project
   Critical Items affecting the above contract
   A. None

5. Contract #62743 – Beam fabrication contract for the I-80/94 bridge over the Little Calumet River, the I-94 WB bridge over Thorn Creek, and the I-80/94 bridge over Burnham Ave.
   Critical Items affecting the above contract
   A. See the Special Provision "Furnishing Structural Steel"

6. Contract #62664 Highway lighting and surveillance
   Critical Items affecting the above contract:
   A. The retaining walls and earthwork around the high mast towers between Wentworth Ave. and the State Line shall be completed a minimum of two months prior to beginning the Stage 2 median work.

The following contract also includes critical work items that affect the staging of traffic and the completion dates of this Contract #62113. These critical items are listed after each contract.

1. Contract #62350 - Reconstructing the local roads and constructing the retaining walls along I-80/94 from east of Torrence Ave. to Wentworth Ave.
   The following items between Burnham Ave. and Wentworth Ave will be under construction by others during construction of this contract #62113.
   A. Bernice Ave roadway and storm sewers.
   B. Retaining wall along I-80/94.

Add the following paragraph to the beginning of Article 105.08. "The Contractor shall identify all such work items (including the critical items listed above) at the beginning of the contract and coordinate the sequence and timing for their execution and completion with the other Contractors through the Engineer. All of these work items shall be identified as separate line items in the Contractor's proposed Construction Progress Schedule. Additional compensation or the extension of contract time will not be allowed for the progress of the work items affected by the lack of such coordination by the Contractor".

**FAILURE TO COMPLETE THE WORK ON TIME**

Should the Contractor fail to complete the work on or before the completion date or dates as specified in the Special Provision for "Completion Date Plus Guaranteed Working Days", or within such extended time as may have been allowed by the Department, the Contractor shall be liable to the Department in the amount of $16,000, not as a penalty but as liquidated damages, for each calendar day or a portion thereof of overrun in the contract time or such extended time as may have been allowed.

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

provision of this clause shall be construed as a penalty, as such is not the intention of the parties.

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

**INCENTIVE PAYMENT PLAN**

The Contractor shall be entitled to an incentive payment for completing all contract items and safely opening all roadways, in accordance with the final “Pavement Marking” plan as referenced in the contract documents to traffic in accordance with the requirements of the special provision "Completion Date Plus Guaranteed Working Days".

The incentive payment shall be paid at the rate of $16,000 per calendar day for completion of work, as specified above, each day prior to the completion date, as indicated in TABLE A. The maximum payment under this incentive plan will be limited to 30 calendar days.

TABLE A

| Date Completed | Incentive Payment | Cooperative Payment | Date Completed | Disincentive Deduction |
|---|---|---|---|---|
| October 30, 2005 | * | * | October 30, 2005 | * |
| October 29, 2005 | $16,000 | $16,000 | October 31, 2005 | $16,000 |
| October 28, 2005 | $32,000 | $32,000 | November 1, 2005 | $32,000 |
| October 27, 2005 | $48,000 | $48,000 | November 2, 2005 | $48,000 |
| October 26, 2005 | $64,000 | $64,000 | November 3, 2005 | $64,000 |
| October 25, 2005 | $80,000 | $80,000 | November 4, 2005 | $80,000 |
| October 24, 2005 | $96,000 | $96,000 | November 5, 2005 | $96,000 |
| October 23, 2005 | $112,000 | $112,000 | November 6, 2005 | $112,000 |
| October 22, 2005 | $128,000 | $128,000 | November 7, 2005 | $128,000 |
| October 21, 2005 | $144,000 | $144,000 | November 8, 2005 | $144,000 |
| October 20, 2005 | $160,000 | $160,000 | November 9, 2005 | $160,000 |
| October 19, 2005 | $176,000 | $176,000 | November 10, 2005 | $176,000 |
| October 18, 2005 | $192,000 | $192,000 | November 11, 2005 | $192,000 |
| October 17, 2005 | $208,000 | $208,000 | November 12, 2005 | $208,000 |
| October 16, 2005 | $224,000 | $224,000 | November 13, 2005 | $224,000 |
| October 15, 2005 | $240,000 | $240,000 | November 14, 2005 | $240,000 |
| October 14, 2005 | $256,000 | $256,000 | | ** |
| October 13, 2005 | $272,000 | $272,000 | | |
| October 12, 2005 | $288,000 | $288,000 | | |
| October 11, 2005 | $304,000 | $304,000 | | |
| October 10, 2005 | $320,000 | $320,000 | | |
| October 9, 2005 | $336,000 | $336,000 | | |
| October 8, 2005 | $352,000 | $352,000 | | |
| October 7, 2005 | $368,000 | $368,000 | | |
| October 6, 2005 | $384,000 | $384,000 | | |
| October 5, 2005 | $400,000 | $400,000 | | |
| October 4, 2005 | $416,000 | $416,000 | | |
| October 3, 2005 | $432,000 | $432,000 | | |
| October 2, 2005 | $448,000 | $448,000 | | |
| October 1, 2005 | $464,000 | $464,000 | | |
| September 30, 2005 | $480,000 | $480,000 | | |

* The completion date specified in the contract.
**The disincentive deduction shall be charged until work is completed.

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

Should the Contractor be delayed in the commencement, prosecution or completion of the work for any reason, there shall be no extension of the incentive payment completion date even though there may be granted an extension of time for completion of the work. No incentive will be paid if the Contractor fails to complete the work before the specified completion date. Failure by the Contractor to complete all work as specified above before October 30, 2005 shall release and discharge the State, the Department and all of its officers, agents and employees from any and all claims and demands for payment of any incentive amount or damages arising from the refusal to pay an incentive amount.

The Contractor and the Department recognize that the prosecution of work by other contractors may not be effectively under the control of the Contractor; however, it is also recognized and agreed that the nature of the project is such that use of the highway cannot safely and efficiently begin until all sections are completed.

Should work under this contract, as described above, and all work on the Department Contracts,
Section: (2425 & 2626) R-1
Section: (0203.1 & 0304) R-5
Section: 2425R-3 & 2425-711B
Section: (0203.1 & 0312-708W)
be completed, the Contractor shall be entitled to an additional $16,000 as a cooperative incentive payment for each calendar day of completion prior to October 30, 2005. No cooperative incentive payment will be made solely because the Contractor has finished early and no cooperative incentive payment will begin to accrue until the date of completion of work under this contract, as described above, and until the date of completion of all work on the Department Contract/s,
Section: (2425 & 2626) R-1
Section: (0203.1 & 0304) R-5
Section: 2425R-3 & 2425-711B
Section: (0203.1 & 0312-708W)
No cooperative incentive payment will be made should any work not be completed before October 30, 2005, regardless of any extension of time. Cooperative incentive payments shall in no event be paid for more than 30 calendar days.

**MAINTENANCE OF ROADWAYS**
Effective: September 30, 1985 Revised: November 1, 1996

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

If items of work have not been provided in the contract, or otherwise specified for payment, such items, including the accompanying traffic control and protection required by the Engineer, will be paid for in accordance with Article 109.04 of the Standard Specifications.

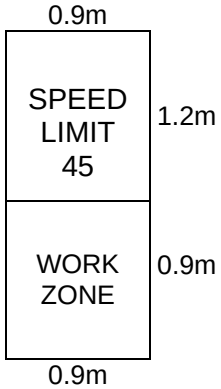
**SPECIAL SIGNING**

The Contractor shall furnish, install, maintain and relocate if necessary the work zone speed limit signs at the locations, which are shown on the table included herein. All signing work shall be performed and paid for in accordance with TEMPORARY INFORMATION SIGNING.

SIGN LOCATIONS REQUIRED

| | | | |
|---|---|---|---|
| I-80 | EB | RT | Sta. 7+250 |
| I-80 | EB | LT | Sta. 7+250 |
| I-80 | EB | RT | Sta. 7+950 |
| I-80 | EB | LT | Sta. 7+950 |
| I-80 | EB | RT | Sta.8+700 |
| I-80 | EB | LT | Sta.8+700 |
| I-80 | WB | RT | Sta. 7+250 |
| I-80 | WB | LT | Sta. 7+250 |
| I-80 | WB | RT | Sta. 7+950 |
| I-80 | WB | LT | Sta. 7+950 |
| I-80 | WB | RT | Sta.8+600 |
| I-80 | WB | LT | Sta.8+600 |
| I-80 | WB | RT | 100m west of Calumet Ave. |
| I-80 | WB | LT | 100m west of Calumet Ave. |
| I-80 | WB | RT | 1/2 mile east of Calumet Ave |
| I-80 | WB | LT | 1/2 mile east of Calumet Ave |

Sign legend and size:




**STATUS OF UTILITIES TO BE ADJUSTED**
Effective: January 30, 1987 Revised: July 1, 1994

Utility companies involved in this project have provided the following estimated dates:

| Name of Utility | Type | Location | Estimated Dates for Start and Completion of Relocation or Adjustments |
|---|---|---|---|
| Village of Lansing | Water Main | Crossing I-80/94/US 6 @ Walter St, Roy St and Henry St. | Water mains are abandoned. |
| Village of Lansing | Water Main | Crossing I-80 @ William St. | No Conflict |
| Village of Lansing | Water Main | Crossing I-80/94/US 6 west of Wentworth. | Water main is abandoned. |
| Village of Lansing | Storm Sewer | Crossing I-80/94/US 6 west of Wentworth. | No Conflict |

| | | | |
|---|---|---|---|
| Village of Lansing (MWRD) | Combined Sewer | East of and Parallel to Wentworth Avenue | No Conflict |
| Village of Lansing | Storm Sewer | Crossing I-80/94/US 6 50 M West of State Line | Provision to pass through Retaining Walls W855 & W856 |
| Village of Lansing | Storm Sewer | Crossing I-80/94/US 6 10 M West of State Line | Provision to pass through Retaining Walls W855 |
| Com Ed | Underground Cable | Crossing I-80/94 West of and parallel to Wentworth Ave | U.G. Cable @ 7+426.5 WB in conflict with interim drainage plan. |
| SBC | Underground Telephone Cable | East of Wentworth Ave, running south of and parallel to 174th Street. | Conflict with retaining wall excavation |
| NIPSCO | Gas | West of Forrest Ave | Abandoned |
| NIPSCO | Aerial Cable | Crossing I-80/94 along alley west of Forrest Avenue. | NIPSCO will remove the north pole and bury the crossing in a casing below the proposed spread footers. |
| Town of Munster | Water Main | Alley west of Forrest | To Be relocated & Abandoned |
| Town of Munster | Sewer | Alley west of Forrest | To Be Abandoned |
| Town of Munster | Sewer | Alley east of Forrest | To Be Abandoned |
| Town of Munster | Sewer | In Hohman Ave | No Conflict |
| Town of Munster | Water Main | Alley east of Forrest | Abandoned |
| Town of Munster | Water Main | East edge of Hohman | No Conflict |
| NIPSCO | Gas | In East Edge of Hohman | No Conflict |
| Town of Munster | Sewer | In Alley West of and Parallel to Kinsley | Gap in pile to avoid conflict. |
| City of Hammond | Sewer | Crossing I-80/94 Between Little Calumet River and RR | No Conflict with Proposed. Conflict with removal need to field locate and protect. |
| City of Hammond | Sewer | Crossing I-80/94 50 m West of Garfield | To Be Abandoned |
| City of Hammond | Sewer | Crossing I-80/94 50 m West of Harrison | To Be Abandoned |

| | | | |
|---|---|---|---|
| Cable TV | Underground Cable | West edge and parallel to Hohman | No Conflict |
| NIPSCO | Aerial Cable | Crossing I-80/94 between Little Calumet River and RR. | Clearance Issue – raise NIPSCO will relocate poles to ROW and raise. Prior to construction, contractor to notify for shut off during work activity. |
| City of Hammond | Water Main | In Harrison | No Conflict |
| City of Hammond | Sewer | Crossing I-80/94 East of RR | No Conflict |
| Cable | UG-CATV | 2-lines in Harrison | No Conflict |
| Fiber Optic | UG Cable (SBC) | In Harrison | No Conflict |
| NIPSCO | Gas | In Harrison | No Conflict |
| NIPSCO | Aerial | At Harrson | No Conflict |
| City of Hammond | Sewers | East of Harrison | No Conflict with any of the Sewers. |

The above represents the best information available to the Department and is included for the convenience of the bidder. The applicable portions of Articles 105.07 and 107.31 of the Standard Specifications shall apply.

**MAINTENANCE OF TRAFFIC**
**TRAFFIC CONTROL PLAN**
Effective: September 30, 1985 Revised: October 1, 1995

Traffic Control shall be in accordance with the applicable sections of the Standard Specifications, the Supplemental Specifications, the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways", any special details and Highway Standards contained in the plans, and the Special Provisions contained herein.

Special attention is called to Article 107.09 of the Standard Specifications and the following Highway Standards, Details, Quality Standard for Work Zone Traffic Control Devices, Recurring Special Provisions and Special Provisions contained herein, relating to traffic control.

The Contractor shall contact the District One Bureau of Traffic at least 72 hours in advance of beginning work.

STANDARDS:
701101, 701106, 701400, 701401, 701501, 701601, 701606, 701411, 701801, 702001 and 704001

DETAILS:
TRAFFIC CONTROL FOR STABILIZED CONSTRUCTION ENTRANCE/EXIT
TRAFFIC CONTROL DETAILS FOR FREEWAY SINGLE AND MULTILANE WEAVE
TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES PARTIAL RAMP CLOSURES

SIGNING FOR FLAGGING AT WORK ZONE OPENINGS
TEMPORARY INFORMATION SIGNING

SPECIAL PROVISIONS:

COMPLETION DATE PLUS GUARANTEED WORKING DAYS
COORDINATION WITH ADJACENT AND/OR OVERLAPPING CONTRACTS
FAILURE TO COMPLETE THE WORK ON TIME
FAILURE TO OPEN TRAFFIC LANES TO TRAFFIC
FLAGGER VESTS
IMPACT ATTENUATORS, TEMPORARY
INCENTIVE PAYMENT PLAN
MAINTENANCE OF ROADWAYS
PORTABLE CHANGEABLE MESSAGE SIGNS
KEEPING THE EXPRESSWAY OPEN TO TRAFFIC
STAGING AND INTERCHANGE RESTRICTIONS
TEMPORARY INFORMATION SIGNING
TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)
TRAFFIC CONTROL SURVEILLANCE (EXPRESSWAYS)
TRAFFIC CONTROL FOR WORK ZONE AREAS
WORK ZONE TRAFFIC CONTROL DEVICES
WORK ZONE TRAFFIC CONTROL
WORK ZONE SPEED LIMIT SIGNS
WORK ZONE PUBLIC INFORMATION SIGNS
WORK RESTRICTIONS
SERVICE PATROLS
ACCIDENT INVESTIGATION SITES
TEMPORARY CONCRETE BARRIER

**WORK RESTRICTIONS**

The Contractor shall not proceed with any construction operations, which would require permanent (24 hour per day) lane closures, lane shifts, and / or shoulder closures on the expressway, arterial routes and local streets prior to April 1, 2005.

The Engineer's written approval shall be obtained by the Contractor before proceeding with any work that interferes with traffic prior to the above date. Off-road work may proceed prior to the above date if approved by the Engineer.

The Contractor, the Erosion and Sediment Control Manager, and all sub-contractors are required to attend an Erosion and Sediment Control/Environmental Training meeting. The Department will present this meeting at the jobsite. No work shall be performed on the contract before this meeting has taken place and all erosion control and environmental issues have been completed to the satisfaction of the Engineer.

**ACCIDENT INVESTIGATION SITES**

**Description.** This item shall consist of furnishing and installing the necessary equipment and maintenance of accident investigation sites which are shown in the plans and listed below.

These sites are for the exclusive use of the Department, the State Police, and the motoring public. The Contractor is prohibited from parking any personnel vehicles or equipment at these locations. The Engineer will designate the location of the equipment and it shall be remain at the site until released by the Engineer.

The Contractor shall furnish and install a full water storage tank on a stand at each site. The tank shall have a minimum of 380 liter (100 gallon) capacity and shall have a tap with a hose for dispensing the water. The tap should be of a type that closes when not in use. A sign stating that the water is not for drinking should be predominantly placed at each tank. The tanks shall be checked weekly and even daily during hot weather and refilled with clean water when low.

Accident Investigation Sites are as follows:

| Expressway | Direction | Location |
|---|---|---|
| I-80/94/US 6 | RT | 7+441.80 TO 7+550.00 |

These Accident Investigation sites shall be ready to open for use by April 1, 2005. All work required to open the sites will be paid for under the appropriate pay items.

**Signing at each site.** The Contractor shall furnish the signs, which are shown on the table included herein and shall install them on posts or temporary stands at the locations specified by the Engineer. All signs shall be in place prior to opening the accident investigation site.

| LEGEND LAYOUT | SIZE (MM) | SIGN SIZE & COLOR LEGEND/BACKGROUND BORDER | TOTAL NUMBER OF SIGNS | LOCATION |
|---|---|---|---|---|
| STAY WITH<br>YOUR<br>DISABLED<br>VEHICLE | 100<br>100C<br>100<br>100C<br>100<br>100C<br>100<br>100C<br>100 | 900 MM X 900 MM<br>BLACK/WHITE<br>15 MM BORDER | 1 | ONE SIGN AT EACH SITE |
| ACCIDENT<br>INVESTIGATION<br>SITE<br>½ MILE | 125<br>150D<br>100<br>100C<br>125<br>150D<br>150<br>150D<br>150 | 1.2 M X 1.2 M<br>WHITE/BLUE<br>15 MM BORDER | with "1/2 MILE"<br>with "AHEAD"<br>with ARROW RIGHT | ONE SIGN IN ADVANCE OF EACH SITE<br>ONE SIGN IN ADVANCE OF EACH SITE<br>ONE SIGN AT EACH SITE |

½ MILE, AHEAD, ARROW RIGHT

**Basis Of Payment**. Each fully equipped site, as specified herein, will be paid for at the contract unit price per calendar month or fraction there of, for ACCIDENT INVESTIGATION SITE. This price shall include all labor, material, and equipment necessary to perform the work.

All Traffic Control Devices shall be included in the cost for TRAFFIC CONTROL & PROTECTION (EXPRESSWAYS).

All signing work shall be paid for in accordance with TEMPORARY INFORMATION SIGNING.

**CHANGEABLE MESSAGE SIGNS**

This item shall be as contained in the Special Provisions for "Portable Changeable Message Signs" except as follows:

2 signs will be required for this contract.

**FAILURE TO OPEN TRAFFIC LANES TO TRAFFIC:**

Should the Contractor fail to completely open and keep open all the traffic lanes to traffic in accordance with the limitations specified under the Special Provisions for "Keeping the Expressway Open to Traffic", the Contractor shall be liable to the Department for the amount of:

One Lane Blocked = $2000

Two Lanes Blocked = $5,000

Not as a penalty but as liquidated and ascertained damages for each and every 15 minute interval or a portion thereof that a lane is blocked outside the allowable time limitations. Such damages may be deducted by the Department from any monies due the Contractor. These damages shall apply during the contract time and during any extensions of the contract time.

**WORK ZONE TRAFFIC CONTROL**
**(Lump Sum Payment)**

Specific traffic control plans and details to be used for the local street traffic control include the Highway Standards 701501, 701601 and 701606.

Method of Measurement: All traffic control and protection for local streets will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION (SPECIAL). This price shall be payment in full for all labor, materials, transportation, handling and incidental work necessary to furnish install maintain and remove all traffic control devices required as indicated in the plans and approved by the Engineer.

**KEEPING THE EXPRESSWAY OPEN TO TRAFFIC**

Whenever work is in progress on or adjacent to an expressway, the Contractor shall provide the necessary traffic control devices to warn the public and to delineate the work zone as required

in these Special Provisions, the Standard Specifications, the State Standards and the District Freeway Lane Closure details. All the Contractor's personnel shall be limited to these barricaded work zones and shall not cross the expressway.

The Contractor shall request and gain approval from the Illinois Department of Transportation's Expressway Traffic Operations Engineer (847-705-4155) twenty-four (24) hours in advance of all daily lane, ramp and shoulder closures and seventy-two (72) hours in advance of all permanent and weekend closures on all Freeways and/or Expressways in District One.

Temporary Lane Closures will only be permitted during the hours listed in the tables below:

**LOCATION: I-80/94 Kingery (3- lane sections) I-294 to Calumet Ave. (US 41)**

| WEEKNIGHT | TYPE OF CLOSURE | ALLOWABLE LANE CLOSURE HOURS | | |
|---|---|---|---|---|
| SUNDAY THRU THURSDAY | ONE LANE | 9:00 PM | TO | 5:00 AM |
| | TWO LANES | 11:00 PM | TO | 5:00 AM |
| FRIDAY | ONE LANE | 10:00 PM (FRI) | TO | 10:00 AM (SAT) |
| | TWO LANES | 12:01 AM (SAT) | TO | 7:00 AM (SAT) |
| SATURDAY | ONE LANE | 9:00 PM (SAT) | TO | 11:00 AM (SUN) |
| | TWO LANES | 11:00 PM (SAT) | TO | 9:00 AM (SUN) |

**LOCATION: I-80/94 & I-94 (2-lane sections)**

One lane closures in these sections will only be permitted during the allowable hours that are listed for two lane closures in the above tables.

Shoulder closures and partial non-interstate ramp closures, which are not shown on the maintenance of traffic plan sheets, will **not** be permitted during the hours of 5:00 AM to 9:00 AM and 3:00 PM to 7:00 PM. Monday thru Friday.

Full expressway closures will only be permitted for a maximum of 15 minutes at a time, during the low traffic periods of **1:00 AM** to **5:00 AM**., Monday through Friday and **1:00 AM** to **7:00 AM** on Sunday. During full expressway closures the Contractor is required to close off all lanes except one. Police forces should be notified and requested to close the remaining lane at which time the work item may be removed or set in place. The District One Traffic Operations Department shall be notified (847-705-4155) seventy-two hours in advance of the proposed road closure and will coordinate the closure operations with police forces.

All stage changes, which require the stopping and/or the pacing of traffic, shall take place during the allowable hours for Full Expressway Closures and shall be approved by the Department.

All daily lane closures shall be removed during adverse **weather conditions** such as rain, snow, and/or fog and as determined by the Engineer.

Additional lane closure hour restrictions may have to be imposed to facilitate the flow of traffic to and from major sporting events and/or other events.

All lane closure signs shall not be erected any earlier than one-half (1/2) hour before the starting hours listed above. Also, these signs should be taken down within one-half (1/2) hour after the closure is removed.

The Contractor will be required to cooperate with all other contractors when erecting lane closures on the expressway. All lane closures within one (1) mile of each other in one direction of the expressway shall be on the same side of the pavement and any lane closure within a half (1/2) mile of each other should be connected. The maximum length of any lane closure on the project and combined with any adjacent projects shall be three (3) miles. Gaps between successive permanent lane closures shall be no less than two (2) miles in length.

Private vehicles shall not be parked in the work zone. Contractor's equipment and/or vehicles shall not be parked on the shoulders or in the median during non-working hours. The parking of equipment and/or vehicles on State right-of-way will only be permitted at the locations approved by the Engineer.

**SERVICE PATROLS**

Description: The Contractor shall provide vehicles and personnel to patrol the expressway, to relocate incidents and stalls from the traveled lanes up to and including loaded semi trucks, to clean up debris from the incidents and, in general, to increase safety, reduce delays, and provide assistance to motorists.

Patrolling Requirements: Service patrols shall be provided to cover the entire I-80/94 Kingery Reconstruction Project in accordance with the following requirements:

- Dates: Start 12:01 AM no later than ten days after the execution of the contract by the Department.
  End 11:59 PM on December 31, 2005 or as directed by the Engineer
- Times: 24 hours per day, 7 days per week
- Patrol Limits: Northern limit - I–94 (Bishop Ford) at 159$^{th}$ Street (US 6) interchange. Eastern limit - I-80/94 (Borman Expressway) at US 41 (Calumet Ave.) interchange. Western limit - I-80/294 at Halsted Street interchange. Southern limit – IL 394 at Glenwood-Dyer Road interchange. Including all ramps at the I-80/294/IL 394 interchange and the Torrence Ave. interchange.
- Number of Patrols: Two service patrol units

Patrol Vehicle Requirements**:** The service patrol vehicle shall be a “medium duty” tow vehicle with a minimum Gross Vehicle Weight Rating (GVWR) chassis of twenty nine thousand (29,000) pounds, dual wheel chassis and ten ton recovery equipment rating. Tow body shall have adequate storage for items listed in this special provision. All vehicles used on this project shall be less than two years old and have less than twenty-four thousand (24,000) miles on an individual Vehicle’s odometer, engine, transmission and chassis at the beginning of the project. The use of “flat bed” type recovery vehicles is prohibited.

Within one (1) week of the start of the project and before initiating any patrol activities, the Contractor along with the Engineer shall inspect each patrol vehicle and its associated equipment, accessories and parts to ensure that they meet all specifications and requirements contained herein. The Contractor shall perform basic similar inspections, at least once per month, throughout the duration of this project. The Contractor shall fully document all inspections and all actions taken a result of such inspections, and submit them to the Department. The format of such documentation shall be submitted by the Contractor and approved by the Department before initiating service patrols.

All Service Patrol Vehicles shall be marked with logos and letters on 2-foot by 2-foot magnetic signs (each side of the vehicle). No other Logos, letters, and numbers shall be visible while on patrol. The wording on the magnetic signs will be as specified by the Department. “Service Free” stickers (3-inch capital letters) shall also be posted on both sides of the vehicle. All identification markings shall be maintained in a clean and readable condition throughout this contract. All wording and logos shall be removed or covered when vehicles are not patrolling.

Each Service Patrol Vehicle shall be equipped with the following:

A. Hydraulically operated, wheel lift-towing equipment, with a minimum lift rating of ten thousand (10,000) pounds retracted, eight thousand (8,000) pounds extended. All tow equipment shall include proper nylon webbed safety straps. The wheel lift shall accommodate tire sizes of both automobiles and medium duty trucks. Towing capacity of wheel lift shall be 32,000 pounds minimum.
B. Hydraulically operated tow boom with a minimum static rating of twenty thousand (20,000) pounds which shall be capable of towing up to an 80,000 pound loaded tractor trailer.
C. Winch Cable – one hundred feet of ½” diameter, 6x19 with working limit of ten thousand pounds.
D. Accessory truck tow bar shall be rated at eighty thousand pounds minimum
E. Two 12 foot 3/8 inch alloy tow chains, with grab hooks on each end.
F. A rubber face push bumper.
G. Spot light capable of directing a three hundred foot beam centered in any direction.
H. Power outlets (hot boxes), front and rear-mounted, with outlets compatible to twelve volt booster cables.
I. Heavy duty, 145+amps charged battery.
J. A trailer hitch capable of handling a 1.875inch and/or a 2 inch ball.
K. Motorcycle transporting capability.
L. Rear work lights.
M. Safety chain D-ring or eyelet mounted on rear of vehicle.
N. A truck mounted flashing Type B arrowboard with in cab controls capable of folding by means of electrical hydraulic controls. Manually operated, fold up/fold down types are not acceptable.
O. Amber warning lights or strobes with front and rear directional flashing capability.

The vehicle shall also contain the following equipment, accessories and parts:

A. Tool Kit
B. 2 gallons of Diesel Fuel.
C. 2 gallons of Unleaded gasoline in approved safety can.
D. 2 3/8 inch safety chains, minimum of 5 feet in length, grab hooks on both ends.
E. One First Aid kit.
F. One Fire extinguisher, twenty pound minimum, chemical ABC
G. One pry bar, minimum 36 inches long
H. 5 gallons of water.
I. 2 wood blocks, 4-inch x 4-inch x 12-inch.
J. A 24-inch wide street broom.
K. A square-end shovel.
L. 36 highway flares of 15 minute burn.
M. 16 twenty-eight inch high reflectorized cones.
N. A two ton, minimum, Hydraulic floor jack.
O. Lug wrenches for standard and metric
P. One set of booster cables, 25 feet in length.

Q. Multipurpose funnel with flexible spout.
R. Dolly, “pop-up”-type”, for removing otherwise untowable vehicles.
S. 5 gallon can filled with oil absorbent material.
T. One 5 gallon trash can for debris collection.
U. One lock out set.
V. One container of “plug-in-dike”, to plug diesel fuel leaks.

Requirements for Vehicle Operators: Service Patrol Vehicle Operators shall be licensed in accordance with the Illinois Vehicle Code for the vehicles to be used under this contract. Any change in drivers and vehicles as presented under this Contract must be approved in writing, in advance, by the Resident Engineer. Termination of the employee may occur for noncompliance. All operators must have a current Class A or B Commercial Driver’s License with endorsements, if applicable, and be certified in CPR and basic first aid.

Operators shall be competent and trained in the tasks of tow truck operators and provide safe and proper discharge of their service responsibilities. The Contractor shall provide resumes of the proposed operators to the Department before assigning them to patrol vehicles. Potential operators shall be subjected to driving record and criminal background checks by the Illinois State Police. The Department reserves the right to not approve a driver based on any information obtained by the Department or information contained in the background checks.

The Service Patrol Vehicle Operator shall:

1. Follow all the policies and procedures set forth in the I-80/94 Kingery Service Patrol Manual which will be given to the Contractor at the start of the project.
2. Work closely with the Illinois State Police, the Indiana State Police, local fire departments, local police departments, and the Department’s Emergency Traffic Patrol rendering assistance as needed.
3. Attend Incident Management Meetings for this project. There will be approximately twelve meetings.
4. Wear nametags with photo identification that are visible to the motorists.
5. Maintain “Service Patrol Logs” which will be completed daily and made available to the Department at all times. These Service Patrol Logs shall contain all items which will be listed in the I-80/94 Kingery Service Patrol Manual.
6. The Contractor shall provide 10,000 first-class postage paid I-80/94 Kingery Service Patrol Post Cards bearing the following return address I-80/94 Kingery Service Patrol, Illinois Department Of Transportation, Bureau of Traffic, 201 west Center Ct, Schaumburg, IL., 60196. The format of the post card shall be approved by the Engineer. The Contractor shall be responsible for ensuring an adequate number of post cards are available in each service patrol vehicle throughout the duration of this project. Operator shall distribute the post card to each motorist that they assist.
7. Not accept gratuities, gifts, or compensation in cash, kind or any form from the motorists under any circumstances. Not ask any motorist/passenger encountered for any personal information such as Name, Address or Phone number. VIOLATION OF THIS REQUIREMENT SHALL CONSTITUTE GROUNDS FOR IMMEDIATE DISMISSAL.
8. Not tow any vehicle to any location other than shoulders or drop locations.
9. Not recommend any specific secondary towing service, or repair shop. VIOLATION OF THIS REQUIREMENT SHALL CONSTITUTE GROUNDS FOR IMMEDIATE DISMISSAL.

Communication Equipment Requirements: Each Service Patrol Vehicle shall be equipped with a licensed cellular, two-way radio/telephone. The Contractor shall provide the Department with 3 additional radio/telephones. These cellular radio/telephones shall have two-way capabilities for talking directly to IDOT representatives and the project supervisor. The Contractor shall maintain the radio/phones and all necessary licenses throughout the contract.

Each vehicle shall also be equipped with an external speaker and public address system with one hundred watts output. The PA system shall be used while assisting motorists or as directed by the Department. The Contractor is expected to use PA system in a professional manner.

Method of Measurement: Service Patrols shall be measured for payment in calendar days for each vehicle and operator. A calendar day is every day shown on the calendar and starts at 12:00 midnight and ends the following 12:00 midnight, twenty-four hours later.

Basis of Payment: This work will be paid for at the contract unit price per calendar day or fraction thereof for SERVICE PATROL. This price shall include an operator, the vehicle and all materials, supplies, and equipment necessary to reduce traffic delays by providing assistance to motorists and by relocating stalled and disabled vehicles in an expeditious manner.

**STAGING AND INTERCHANGE RESTRICTIONS**

Prior to the actual beginning and completion of the various stages of construction and traffic protection, the Contractor will be required to provide lane closures and barricade systems, for preparation work such as pavement marking removal, temporary lane marking, placing temporary concrete barrier, relocating existing guardrail, etc. These lane closures and barricade systems, including barricades, drums, cones, lights, signs, flaggers etc. shall be provided in accordance with details in the plans and these Special Provisions and as approved by the Engineer. The cost of this work will not be paid for separately but shall be considered included in the contract lump sum price for TRAFFIC CONTROL AND PROTECTION**,** EXPRESSWAYS.

Ramp Closures
Temporary ramp closures at the interchange between I-80/94 and Calumet Ave. (US 41) will only be permitted at night during the allowable hours listed for two-lane closures as stated in the Special Provision “Keeping the Expressway Open to Traffic”.

For all ramp closures the Contractor shall furnish and install “DETOUR with arrow” signs (900mm x 900mm) and the appropriate shield (900mm) as directed by the Engineer. The cost of these signs shall be included in the contract price for TRAFFIC CONTROL AND PROTECTION, EXPRESSWAYS (6 signs maximum per closure).

The Contractor shall coordinate the work such that no two (2) adjacent entrance or exit ramps in one direction of the expressway are closed at the same time. The closing of ramps, which are used as the detour route for other roadways or ramps, is prohibited.

Should the Contractor fail to completely open, and keep open, the ramps to traffic in accordance with the above limitations, the Contractor shall be liable to the Department for liquidated damages as noted under the Special Provision, “Failure to Open Traffic Lanes to Traffic”.

**TEMPORARY INFORMATION SIGNING**

**Description:** This work shall consist of furnishing, installing, maintaining, relocating for various states of construction and eventually removing temporary informational signs. Included in this item may be ground mount signs, signs on temporary stands, truss mount signs, bridge mount signs, and overlay sign panels which cover portions of existing signs.

**Materials:** Materials shall be according to the following Articles of Section 1000 - Materials:

| | **Item** | **Article/Section** |
|---|---|---|
| a.) | Sign Base (Notes 1 & 2) | 1090 |
| b.) | Sign Face ( Note 3) | 1091 |
| c.) | Sign Legends | 1092 |
| d.) | Sign Supports | 1093 |
| e.) | Overlay Panels (Note 4) | 1090.01 |

Note 1. The Contractor may use 16mm (5/8 inch) instead of 19mm (3/4 inch) thick plywood.
Note 2. Type A sheeting can be used on the plywood base.
Note 3. All sign faces shall be Type A except all orange signs shall meet the requirements of Article 1084.02(b).
Note 4. The overlay panels shall be 2mm (0.08 inch) thick.

**GENERAL CONSTRUCTION REQUIRMENTS**

**Installation:** The sign sizes and legend sizes shall be verified by the Contractor prior to fabrication.

Signs which are placed along the roadway and/or within the construction zone shall be installed according to the requirements of Article 702.05 and Article 720.04. The signs shall be 2.1m (7') above the near edge of the pavement and shall be a minimum of 600mm (2') beyond the edge of the paved shoulder. A minimum of 2 posts shall be used.

The attachment of temporary signs to existing sign structures or sign panels shall be approved by the Engineer. Any damage to the existing signs due to the Contractor's operations shall be repaired or signs replaced, as determined by the Engineer, at the Contractor's expense.

Signs which are placed on overhead bridge structures shall be fastened to the handrail with stainless steel bands. These signs shall rest on the concrete parapet where possible. The Contractor shall furnish mounting details for approval by the Engineer.

**Method Of Measurement**: This work shall be measured for payment in square meters (square feet) edge to edge (horizontally and vertically).

All hardware, posts, supports, bases for ground mounted signs, connections, which are required for mounting these signs will be included as part of this pay item.

**Basis Of Payment:** This work shall be paid for at the contract unit price per square meter (square feet) for TEMPORARY INFORMATION SIGNING, which price shall be full compensation for all labor, equipment and materials required for performing the work as herein specified.

**TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)**

This work shall include furnishing, installing, maintaining, replacing, relocating, and removing all traffic control devices used for the purpose of regulating, warning, or directing traffic. Traffic control and protection shall be provided as called for in the plans, applicable Highway Standards, District One Expressway details, Standards and Supplemental Specifications, these Special Provisions, or as directed by the Engineer.

**GENERAL:**

The governing factor in the execution and staging of work for this project is to provide the motoring public with the safest possible travel conditions on the expressway through the construction zone. The Contractor shall arrange his operations to keep the closing of lanes and/or ramps to a minimum.

The Contractor shall be responsible for the proper location, installation, and arrangement of all traffic control devices. Special attention shall be given to existing warning signs and overhead guide signs during all construction operations. Warning signs and existing guide signs with down arrows shall be kept consistent with the barricade placement at all times. The Contractor shall immediately remove, completely cover, or turn from the motorist's view all signs which are inconsistent with lane assignment patterns.

The Contractor shall coordinate all traffic control work on this project with adjoining or overlapping projects, including barricade placement necessary to provide a uniform traffic detour pattern. When directed by the Engineer, the Contractor shall remove all traffic control devices which were furnished, installed, or maintained by him under this contract, and such devices shall remain the property of the Contractor. All traffic control devices shall remain in place until specific authorization for relocation or removal is received from the Engineer.

**Signs:**

Prior to the beginning of construction operations, the Contractor will be provided a sign log of all existing signs within the limits of the construction zone. The Contractor is responsible for verifying the accuracy of the sign log. Throughout the duration of this project, all existing traffic signs shall be maintained by the Contractor. All provisions of Article 107.25 of the Standard Specifications shall apply except the third paragraph shall be revised to read: "The Contractor shall maintain, furnish, and replace at his own expense, any traffic sign or post which has been damaged or lost by the Contractor or a third party. The Contractor will not be held liable for third party damage to large freeway guide signs".

Exit Gore Signs

The exit gore signs as shown in Standard 701411 shall be a minimum size of 1.2m (48 inch) by 1.2m (48 inch) with 300mm (12 inch) capital letters and a 500mm (20inch) arrow.

Rough Grooved Surface Signs

The Contractor shall furnish and erect "Rough Grooved Surface" signs (W8-1107) on both sides of the expressway, 300m (1000') in advance of any milled area. These signs shall be erect on all ramps which enter the milled area. All signs shall be mounted at a minimum clearance height of 2.1m (7').

Drums/Barricades

Any drop-off area greater than 75mm (3"), but less than 150mm (6") within 2.5m (8') of the pavement edge shall be delineated with drums or Type II barricades equipped with mono-directional steady burn lights at 30m (100') center to center spacing. If the drop-off within 2.5m (8') of the pavement edge exceeds 150mm (6"), the drums or barricades mentioned above shall be placed at 15m (50') center to center spacing.

Check barricades shall be placed in work areas perpendicular to traffic every 300m (1000'), one per lane and per shoulder, to prevent motorists from using work areas as a traveled way. Check barricades shall also be placed in advance of each open patch, or excavation, or any other hazard in the work area, the first at the edge of the open traffic lane and the second centered in the closed lane. Check barricades, either Type I or II, or drums shall be equipped with the flashing light.

To provide sufficient lane widths (3m [10'] minimum) for traffic and also working room, the Contractor shall furnish and install vertical barricades with steady burn lights or reflectorized cones, in lieu of drums, along the cold milling and asphalt paving operations. The vertical barricades shall be placed at the same spacing as the drums. The reflectorized cones shall be placed at 15m (50') centers along the work zone and 8m (25') centers at ramps. The maximum length of any operation where cones are substituted for drums shall be 300m (1000') and the distance between operations shall be no less than 780m (1/2 mile). All drums in these areas shall be removed from the edge of the traveled lane and shall be re-installed at the completion of the operation. Special attention shall be given to maintain the cones in an upright position and in proper alignment.

Arrowboards

The advance arrowboard is required for all expressway lane closures. This arrowboard shall be placed at the location shown on the District Lane Closure Standard or as directed by the Engineer.

**Method of Measurement:** This item of work will be measured on a lump sum basis for furnishing, installing, maintaining, replacing, relocating, and removing traffic control devices required in the plans and these Special Provisions. Traffic control and protection required under Standards 701101, 701400, 701401, 701411 and 701426 will be included with this item.

**Basis of Payment:**

a) This work will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS). This price shall be payment in full for all labor, materials, transportation, handling, and incidental work necessary to furnish, install, maintain, replace, relocate, and remove all Expressway traffic control devices required in the plans and specifications.

   In the event the sum total value of all the work items for which traffic control and protection is required is increased or decreased by more than ten percent (10%), the contract bid price for Traffic Control and Protection will be adjusted as follows:

   Adjusted contract price = .25P + .75P [1+(X-0.1)]

Where "P" is the bid unit price for Traffic Control and Protection:

$$\text{Where "X" =} \frac{\text{Difference between original and final sum total value of all work items for which traffic control and protection is required.}}{\text{Original sum total value of all work items for which traffic control and protection is required.}}$$

The value of the work items used in calculating the increase and decrease will include only items which have been added to or deducted from the contract under Article 104.02 of the Standard Specifications and only items which require use of Traffic Control and Protection.

b) The Engineer may require additional traffic control be installed in accordance with standards and/or designs other than those included in the plans. In such cases, the standards and/or designs will be made available to the Contractor at least one week in advance of the change in traffic control. Payment for any additional traffic control required will be in accordance with Article 109.04 of the Standard Specifications.

c) Revisions in the phasing of construction or maintenance operations, requested by the Contractor, may require traffic control to be installed in accordance with standards and/or designs other than those included in the plans. Revisions or modifications to the traffic control shown in the contract shall be submitted by the Contractor for approval by the Engineer. No additional payment will be made for a Contractor requested modification.

d) Temporary concrete barrier wall and end sections will be measured and paid for according to Section 704.

Sand module impact attenuators, temporary bridge rail, and temporary rumble strips will be paid for separately.

All temporary pavement markings will be measured and paid for according to Section 703 and Section 780.

All pavement marking removal will be measured and paid for according to Section 703 or Section 781.

All prismatic reflectors will be measured and paid for according to Section 782.

**TRAFFIC CONTROL FOR WORK ZONE AREAS**
Effective: 9/14/95 Revised: 1/30/03

Work zone entry and exit openings shall be established daily by the Contractor with the approval of the Engineer. All vehicles including cars and pickup trucks shall exit the work zone at the exit openings. All trucks shall enter the work zone at the entry openings. These openings shall be signed in accordance with the details shown elsewhere in the plans and shall be under flagger control during working hours.

The Contractor shall plan his trucking operations into and out of the work zone as well as on to and off the expressway to maintain adequate merging distance. Merging distances to cross all lanes of traffic shall be no less than 1/2 mile. This distance is the length from where the trucks enter the expressway to where the trucks enter the work zone. It is also the length from where

the trucks exit the work zone to where the trucks exit the expressway. The stopping of expressway traffic to allow trucks to change lanes and/or cross the expressway is prohibited.

Failure to comply with the above requirements will result in a Traffic Control Deficiency charge. The deficiency charge will be calculated as outlined in the special provision for **"TRAFFIC CONTROL DEFICIENCY DEDUCTION"**. The Contractor will be assessed this daily charge for each day a deficiency is documented by the Engineer.

**TRAFFIC CONTROL SURVEILLANCE (EXPRESSWAYS)**

The contractor shall provide a person with a vehicle to survey, inspect and maintain all temporary traffic control devices when a lane is closed to traffic and when hazards are present adjacent to or within 10 foot of the edge of pavement for more than 24 hours.

The surveillance person is required to drive through the project, to inspect all temporary traffic control devices, to correct all traffic control deficiencies, if possible, or immediately contact someone else to make corrections and to assist with directing traffic until such corrections are made, at intervals not to exceed 4 hours. This person shall list every inspection on an inspection form, furnished by the Engineer, and shall return a completed form on the first working day after the inspections are made.

The Contractor shall supply a telephone staffed on a 24-hour-a-day basis to receive any notification of any deficiencies regarding traffic control and protection or receive any request for improving, correcting or modifying traffic control, installations or devices, including pavement markings. The Contractor shall dispatch additional men, materials and equipment as necessary to begin to correct, improve or modify the traffic control as directed, within one hour of notification by this surveillance person or by the Department. Upon completion of such corrections and/or revisions, the Contractor shall notify the Department's Communication Center at (847) 705-4612.

**Method Of Measurement:** Traffic Control Surveillance will be measured on calendar day basis. One calendar day is equal to a minimum of six (6) inspections. The inspections shall start within 4 hours after the lane is closed to traffic or a hazard exists within 10 foot from the edge of pavement and shall end when the lane closure or hazard is removed.

**Basis Of Payment:** Surveillance will be paid for at the contract unit price per calendar day or fraction thereof for TRAFFIC CONTROL SURVEILLANCE (EXPRESSWAYS). The price shall include all labor and equipment necessary to provide the required inspection and maintenance on the expressway and on all cross streets which are included in the project. The cost of the materials for the maintenance of traffic control devices shall be included in the traffic control pay items.

**CIVIL**

**APPROACH SLAB REMOVAL**
Effective: March 1, 2002 Revised:

**Description**. This item shall consist of full depth approach slab removal and disposal at locations designated on the plans and in accordance with the applicable portions of Sections 440 and 501 of the Standard Specification.

**Method of Measurement**. This work will be measured for payment on the basis of the actual square meters (square yards) of approach slab removed, regardless of replacement area.

**Basis of payment**. This work will be paid for at the contract unit price per square meter (square yard) for APPROACH SLAB REMOVAL, which price shall be payment in full for all labor, equipment and materials necessary to complete the work.

**BAR SPLICERS, SPECIAL**

Description: The Contractor shall provide complete bar splicer assemblies of an approved type meeting the requirements as shown on the plan details for long term transverse construction joint. The Contractor shall install the bar splicers as shown in the Stage I Construction of the Long Term Transverse Construction Joint Detail, at the locations shown in the plans and as directed by the Engineer. The remainder of the bar splicer shall be delivered to the IDOT Bishop Ford Maintenance Yard (708) 331-4339 for storage.

The bars shall be enclosed in a water resistant wooden container of sufficient strength to withstand the anticipated handling of the bar splicers prior to reuse at a later date. The container shall be clearly stamped for the designated location of the bar splicer use.

**Basis of Payment**. This work will be paid for at the contract unit price each for BAR SPLICERS, SPECIAL, which price shall include furnishing an approved bar splicer assembly, installing the stage I portion of the splicer assembly and enclosing and delivery of the remaining portion of the bar splicer assembly. The concrete pad and reinforcement shall not be paid for separately but shall be included in the cost of CRC Pavement, of the thickness specified. Tie bars, drilled and grouted, shall not be paid for separately, but shall be included in the cost of PCC Pavement, of the thickness specified.

**CONCRETE MEDIAN BARRIER AND BASE REMOVAL**

This work shall consist of the removal and disposal of existing concrete median barrier and base at the locations shown on the plans and as directed by the Engineer in accordance with applicable portions of section 440 of the Standard Specifications.

Method of Measurement. This work will be measured for payment in meters (feet) along the top of the concrete barrier of the area to be removed.

Basis of payment. This work will be paid for at the contract unit price per meters (feet) for CONCRETE MEDIAN BARRIER AND BASE REMOVAL, which price shall be payment in full for all labor, equipment, disposal and materials necessary to complete the work as specified herein.

**EARTH EXCAVATION SPECIAL**
Effective: March 4, 2002 Revised:

This work consists of constructing benches within the existing embankment as shown in the plans on standard detail sheet BD-51, in accordance with the applicable portions of Sections 202 and 205 of the Standard Specifications, and as directed by the Engineer.

**Method of Measurement.** (a) Contract Quantities. When the project is constructed essentially to the lines and grades or dimensions shown on the plans and the Contractor and the Engineer have agreed in writing that the plan quantities are accurate, no further measurement will be required and payment will be made for the quantities shown in the contract for the various items of work involved, except that if errors are discovered after work has been started, appropriate adjustments will be made.

When the plans have been altered or when disagreement exists between the Contractor and the Engineer as to the accuracy of plan quantities, either party shall, before any work is started which would affect the measurement, have the right to request and thereby cause the portion of the quantity involved to be measured and appropriate adjustments to be made.

(b.) Measured Quantities. Earth Excavation (Special). Will be measured in its original position and the volume in cubic meter (cubic yard) computed by the method of average end areas.

**Basis of Payment**. This work will be paid for at the contract unit price cubic meter (cubic yard) for EARTH EXCAVATION (SPECIAL) measured as specified.

**EMBANKMENT FOR 30 YEAR EXTENDED LIFE CONCRETE PAVEMENT**

Description. This work shall be in accordance with Section 205 of the Standard Specifications at the locations specified on the plans and in accordance with the Special Provision for Extended Life Concrete Pavement (30 year) with the following additional requirements:

Material. Reclaimed asphalt pavement shall not be used within the ground water table or as a fill if ground water is present.

Samples. Embankment material shall be sampled, tested, and approved before use. The contractor shall identify embankment sources, and provide equipment as the Engineer requires, for the collection of samples from those sources. Samples will be furnished to the Geotechnical Engineer a minimum of three weeks prior to use in order that laboratory tests for approval and compaction can be performed. Embankment material placement cannot begin until tests are completed and approval given.

Placing Material. In addition to Article 202.03, broken concrete, reclaimed asphalt pavement with no expansive aggregate, or uncontaminated dirt and sand generated from construction or demolition activities shall be placed in 150 mm (6 in.) lifts and disked with the underlying lift until a uniform homogenous material is formed. This process also applies to the overlaying lifts. The disk must have a minimum of 600 mm (24 in.) diameter blade.

Compaction. Soils classification for moisture content control will be determined by the Soils Inspector using visual field examination techniques and the IDH Textural Classification Chart.

When tested for density in place each lift shall have a maximum moisture content as follows.

a) A maximum of 110 percent of the optimum moisture for all forms of clay soils.

b) A maximum of 105 percent of the optimum moisture for all forms of clay loam soils.

The top two feet of embankment below the Granular Subbase shall be compacted to not less than 100 percent of the standard laboratory density.

Stability. The top two feet of embankment below the Granular Subbase shall have a minimum shear strength of 2600 psf, minimum IBV of 8.0, or maximum IDOT Dynamic Cone Penetration Rate of 0.9 blows per inch, depending on the test method being used.

Basis of Payment and Method of Measurement: This work shall be measured and paid for per Articles 205.07 and 205.08 of the Standard Specifications. The additional costs to meet the various Material, Samples, Compaction, Stability, Placing, and Trimming requirements, described above, for embankment beneath 30 year pavement will not be measured for payment but shall be considered included in the cost of the various items of excavation.

**EXTENDED LIFE CONCRETE PAVEMENT (30 YEAR)**

Description: This work shall consist of constructing concrete pavement, shoulders and appurtenances of an extended life (30 year) design at locations specified on the plans. Work shall be performed according to the Standard Specifications except as modified herein:

Definitions:

a) Granular Subbase. The aggregate above the subgrade and below the granular subbase cap.

b) Granular Subbase Cap. The aggregate above the granular subbase and below the bituminous concrete base.

c) Bituminous Concrete Base. The bituminous concrete layer above the granular subbase cap and below the pavement.

Embankment: Add the following to Section 205:

“Embankment material shall be approved by the Engineer and shall have a standard laboratory density of not less than 1450 Kg/cu m (90 lb/cu ft). It shall not have an organic content greater than ten percent when tested according to AASHTO T 194. Soils that demonstrate the following properties shall be restricted to the interior of the embankment:

a) A grain size distribution with less than 35 percent passing the 75 um (#200) sieve.

b) A plasticity index (PI) of less than 12.

c) A liquid limit (LL) in excess of 50.

d) Potential for erosion.

e) Potential for excess volume change.

Such soils shall be covered on the side and top with a minimum of 900 mm (3 ft) of soil not characterized by any of the five items above."

Revised the second paragraph of Article 205.05 to read:

"All lifts shall be compacted to not less than 95 percent of the standard laboratory density."

Revise the first sentence of the third paragraph of Article 205.05 to read:

"The embankment shall not contain more than 110 percent of the optimum moisture content determined according to AASHTO T 99 (Method C)."

Subgrade Preparation: Add the following to the second paragraph of Article 301.06:

During compaction, the upper 200 mm (8 in.) of the subgrade shall not contain more than 110 percent of the optimum moisture content determined according to AASHTO T 99 (Method C)."

Granular Subbase and Granular Subbase Cap: Revise Article 311.02 to read:

"311.02 Materials. Materials shall meet the requirements of the following Articles of Section 1000 – Materials:

a) Granular Subbase (Note 1)…….1004.04
b) Granular Subbase Cap (Note 2) …….1004.04

Note 1. The quality requirements in Article 1004.04 (b) shall not apply. The granular subbase shall be subbase granular material Type B, shall be classified as Category III in the Aggregate Gradation Control System (AGCS), and shall meet the following gradation requirements:

| **Granular Subbase Gradations** | | | | | | |
|---|---|---|---|---|---|---|
| Coarse Aggregate Type | Sieve Size Percent Passing | | | | | |
| | 200 mm (8 in.) | 150 mm (6 in.) | 100 mm (4 in.) | 50 mm (2 in.) | 4.75 mm (#4) | 75 um (#200) |
| Crushed Stone, Crushed Slag, and Crushed Concrete | 100 | 97 ± 3 | 90 ± 10 | 45 ± 25 | | 5 ± 5 |
| Crushed Gravel | | 100 | 90 ± 10 | 55 ± 25 | 30 ± 20 | 5 ± 5 |

The granular subbase shall be well-graded from coarse to fine. Material that is gap-graded or single-sized will not be accepted.

Note 2. The granular subbase cap shall be subbase granular material, Type B and shall be CA 6 gradation." Reclaimed Asphalt Pavement (RAP) meeting Article 1004.07 of the Standard Specifications and having 100% passing the 75 mm (3 inches) sieve and well-graded down through fines may also be used as capping aggregate. RAP shall not contain steel slag or other expansive material. The results of the Department's tests on the RAP material will be the determining factor for consideration as expansive.

Add the following to Article 311.03:

"(h) Vibratory Roller ……..1101.01 (g)"

Revise Article 311.05(c) to read:

"(c) Subbase Granular Material, Type B. The manner of placing and compacting the material shall be approved by the Engineer prior to starting the work.

The Granular subbase shall be constructed in layers not more than 600 mm (2 ft) thick when compacted. Each layer shall be compacted with a vibratory roller to the satisfaction of the Engineer.

After completion of the granular subbase, the granular subbase cap shall be placed. Each layer shall be compacted with a vibratory roller to the satisfaction of the Engineer.

If the moisture content of the material is insufficient to obtain satisfactory compaction, sufficient water shall be added, at the Contractors expense, so that satisfactory compaction can be obtained."

Revise that first sentence of the first paragraph of Article 311.08 (b) to read:

"Aggregate used in the granular subbase and granular subbase cap will be measured for payment in square meters (square yards)."

Bituminous Concrete Base: This work shall be performed according to the special provision, "Superpave Bituminous Concrete Mixtures". The mixture used shall be the Superpave IL-19.0, N50, 3.0% voids.

Pavement and Shoulders: Add the following to Articles 420.03, 421.03, and 483.03:

"The Contractor shall submit to the Engineer, for approval before paving, the proposed internal type vibrator spacing for the paver. The Contractor shall also provide the proposed vibrator operating frequencies for a paving speed greater than or equal to 0.9 m/min (3 ft./min) and a paving speed less than 0.9 m/min (3 ft/min)."

Portland Cement Concrete:" Revise Article 1020.02 (d) to read:

"(d) Coarse Aggregate (Note 1) ……1004.01 – 1004.02"

Add the following to Article 1020.02:

"Note 1. For pavement, median, curb, gutter, combination curb and gutter and concrete barrier, the freeze-thaw rating expansion limit for the coarse aggregate shall be a maximum of 0.040 percent according to Illinois Modified AASHTO T 161, Procedure B."

Revise the curing table of Article 1020.13 as follows:

"The curing period for pavement, median, curb, gutter and combination curb and gutter shall be a minimum of 7 days."

Revise the first sentence of the second paragraph of Article 1020.13 (a)(4) to read:

"Membrane curing shall be completed within ten minutes after tining."

Add the following to Article 1020.14(a):

"Prior to placing concrete, the Contractor shall indicate to the Engineer how the temperature of the concrete mixture will be controlled. If the temperature requirements are not being met, production of concrete shall stop until corrective action is taken. The Contractor will be allowed to deliver concrete already in route to the paving site."

Method of Measurement: This work shall be measured for payment per sections 200, 300, and 400 of the Standard Specifications.

Basis of Payment: The plans indicate which roadways will be constructed to the 30 year extended life pavement requirements. The cost to construct the roadways to the 30 year extended life pavement requirements will not be paid for separately, but included in the cost of the various items of work.

The additional costs to meet the various Material, Samples, Compaction, Stability, Placing and Trimming requirements for embankment beneath the 30 year extended life pavement will not be measured for payment, but included in the cost of the various items of excavation.

The additional cost to meet the various Material, Equipment, Placing, Stability, Compaction, Trimming, and Finishing requirements for Granular Subbase beneath 30 year extended life pavement will not be paid for separately, but included in the cost per square meter for SUBBASE GRANULAR MATERIAL TYPE B, of the thickness specified.

The additional costs to meet the various Material, Placing, Stability, Compaction, Trimming, and Finishing requirements for the bituminous stabilized subbase beneath 30 year extended life pavement will not be paid for separately, but included in the cost per square meter for STABILIZED SUBBASE, of the thickness specified.

The additional costs to meet the various Material, Equipment, Placement, Finishing, Curing, and Sealing requirements for 30 year extended life pavement will not be paid for separately but included in the cost per square meter for CONTINOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT, of the thickness specified; per square meter for PORTLAND CEMENT CONCRETE SHOULDER, of the thickness specified; per each for LUG SYSTEM COMPLETE, of the width specified; per square meter of BRIDGE APPROACH PAVEMENT (SPECIAL).

**EXPLORATION TRENCH**

Revise the first sentence of Article 213.01 to read:

"This item shall consist of constructing a trench for the purpose of locating existing farm underdrains, sewers and underground utilities within the construction limits of the proposed improvement."

Revise the first sentence of the second paragraph of Article 213.02 to read:

"Excavation for the trench shall cease when the underdrain, sewer or underground utility is reached and its exact location can be ascertained to the satisfaction of the Engineer."

Revise the third paragraph of Article 213.02 to read:

"When an existing farm underdrain, sewer or underground utility is encountered, another trench shall be excavated on the opposite side of the proposed improvement to establish the line and grade of the existing farm underdrain or underground utility. Broken tile or damaged underground utilities shall be repaired immediately at the Contractor's expense, and no surface runoff shall be allowed to enter any tile or utility."

Revise the fifth paragraph of Article 213.02 to read:

"When approved by the Engineer, the Contractor may use other means of locating existing farm underdrains, sewers or underground utilities."

Revise the second paragraph of Article 213.04 to read:

"Other means of locating existing farm underdrains, sewers, or underground utilities approved by the Engineer, will be paid for according to Article 109.04."

**FRAMES AND GRATES TO BE REMOVED**

**Description.** This work shall consist of the removal and disposal of the existing frames and grates over existing drainage structures at the locations as shown on the plans. This work shall be performed in a manner as not to damage the existing structure under the frame.

Materials shall be disposed of in a licensed landfill, recycled, reused, or otherwise disposed of as allowed by State or Federal solid waste disposal laws and regulations and solid waste determinations of the IEPA.

**Basis of Payment**. This work will be paid for at the contract unit price each for FRAMES AND GRATES TO BE REMOVED.

**IMPACT ATTENUATORS, TEMPORARY**

**Description.** This work will be constructed in accordance with the BDE Special Provision Impact Attenuators, Temporary (BDE) with the exception that the Attenuators will all be left in place and become the property of the State at the end of the Contract. The items shown in t he plan as IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE), TEST LEVEL 3 shall be provided as IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3.

**Basis of Payment**. This work will be paid in accordance with the BDE Special Provision Impact Attenuators, Temporary (BDE) with the exception that the Items described on the plans as IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE), TEST LEVEL 3 shall be paid as IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3

**NON-SPECIAL WASTE WORKING CONDITIONS**

This work shall be according to Article 669 of the Standard Specifications for Road and Bridge Construction adopted January 1, 2002 and the following:

Qualifications. The term environmental firm shall mean an environmental firm with at least five (5) documented leaking underground storage tank (LUST) cleanups or that is prequalified in hazardous waste by the Department. Documentation includes but is not limited to, verifying remediation and special waste operations for sites contaminated with gasoline, diesel, or waste oil in accordance with all Federal, State, or local regulatory requirements and shall be provided to the Engineer for approval.

General. Implementation of this Special Provision will likely require the Contractor to subcontract for the execution of certain activities. It will be the Contractor's responsibility to assess the working conditions and adjust anticipated production rates accordingly.

The Contractor shall manage all contaminated materials as non-special waste as previously identified. This work shall include monitoring and potential sampling, analytical testing, and management of material contaminated by regulated substances.

The Contractor shall excavate and dispose of any groundwater classified as a special waste as directed by this project or the Engineer. Any excavation or disposal beyond what is required by this project or the Engineer shall be at the Contractor’s expense. The preliminary site investigation (PSI) report, available through the District’s Environmental Studies Unit, estimated the excavation quantity of non-special waste at the following location. The information available at the time of plan preparation determined the limits of the contamination and the quantities estimated were based on groundwater excavation for construction purposes only. The lateral distance is measured from centerline and the farthest distance is the offset distance or construction limit which ever is less. The Environmental Firm shall continuously monitor for worker protection and the Contractor shall manage and dispose of all groundwater removed within the following areas as classified below. Any groundwater samples or analysis without the approval of the Engineer shall be at the Contractor’s expense.

1. Station 7+372 to Station 7+380 +/- 14 to 19 meters (46 to 62 feet) LT (Hazmat Incident - North Shoulder between Burnham Avenue and Wentworth Avenue). Contaminants of concern sampling parameters: PNAs.

Backfill pugs shall be place within the following locations.

1. Station 7+372 to Station 7+380 +/- 14 to 19 meters (46 to 62 feet) LT (Hazmat Incident - North Shoulder between Burnham Avenue and Wentworth Avenue). Contaminants of concern sampling parameters: PNAs.

**FENCE REMOVAL**

This work shall consist of the removal and disposal of existing fence at the locations shown on the plans and as directed by the Engineer. The work shall include the removal and disposal of the fence, posts, post foundations, and any other appurtenances.

All holes left by the removal of the fence posts and post foundations shall be filled with crushed stone screenings. The furnishing and placement of the crushed stone screenings will not be paid for separately but shall be considered as incidental to fence removal.

Method of Measurement. This work will be measured for payment in meters (feet) along the top of the fence of the area to be removed.

Basis of payment. This work will be paid for at the contract unit price per meters (feet) for FENCE REMOVAL, which price shall be payment in full for all labor, equipment and materials necessary to complete the work as specified herein.

**RECLAIMED ASPHALT PAVEMENT FOR NON-POROUS EMBANKMENT AND BACKFILL**
Effective: April 1, 2001

Add the following sentence to Article 1004.06 (a) Description of the Standard Specifications for Road and Bridge Construction:

> "Reclaimed Asphalt Pavement (RAP) may be used as aggregate in Non-porous Granular Embankment and Backfill. The Rap material shall be reclaimed asphalt pavement material resulting from the cold milling or crushing of an existing hot-mix bituminous concrete pavement structure, including shoulders. RAP containing contaminants such as earth, brick, concrete, sheet asphalt, sand, or other materials identified by the Department will be unacceptable until the contaminants are thoroughly removed.

Add the following sentence to Article 1004.06 (C) Gradation of the Standard Specifications for Road and Bridge Construction.

> "One hundred percent of the RAP when used shall pass the 75mm (3 inch) sieve. The RAP shall be well graded from coarse to fine. RAP that is gap-graded or single-sized will not be accepted.

**SHORT TERM PAVEMENT SUPERPAVE (FULL DEPTH)**

Description: This work shall consist of construction of short term, full depth, bituminous pavement as shown in the plans and as directed by the engineer in accordance with Section 407 of the Standard Specifications for Road and Bridge Construction and the Special Provision For Superpave Bituminous Concrete Mixtures as herein modified.

Revise the Article 407.09(a)(2) to read: “(2) Greater than 70km/h (40 mph).”

Articles 407.09(b) and 407.10 shall not apply.

The special provisions for “Pavement Thickness Determination for Payment” and “Surface Testing of Interstate Pavements” are not applicable for Short Term Pavement, Superpave, Full Depth.

Material substitution will not be allowed.

**Method of Measurement**. SHORT TERM PAVEMENT SUPERPAVE (FULL DEPTH) will be measured in accordance with Article 407.12 of the Standard Specifications.

**Basis of Payment**. Short term full depth bituminous pavement will be paid for at the contract unit price per square meter (square yard) for SHORT TERM PAVEMENT SUPERPAVE (FULL DEPTH) at the thickness shown in the plans. The second paragraph and the fifth paragraph of Article 407.13 shall apply.

## SUPPLEMENTAL WATERING

**Scope**. This work will include watering turf, trees shrubs and perennial plants at the rates specified and as directed by the Engineer

**Schedule**. See the plans for supplemental watering dates. Watering will only begin after the successful completion of all period of establishment requirements.

Watering must be completed in a timely manner. When the Engineer directs the Contractor to do supplemental watering, the Contractor must begin the watering operation within 24 hours and must apply a minimum of 10 units of water per day until the watering directed is complete. Damage to plant material that is a result of the Contractor's failure to water in a timely way must be repaired or replaced at the Contractor's expense.

**Source of Water**. The Contractor shall notify the Engineer of the source of water used and provide written certification that the water does not contain chemicals harmful to plant growth.

**Rate of Application.** The normal rates of application for watering are as follows. The Engineer will adjust these rates as needed depending upon weather conditions.

| | |
|---|---|
| Turf and Perennial Plants: | 3 gallons per square foot (122 liters per square meter) |
| Trees: | 10 gallons per tree (38 liters per tree) |
| Shrubs: | 3 gallons per shrub (12 liters per shrub) |
| Seedlings: | 2 gallons per seedling (8 liters per seedling) |
| Ornamental Grasses: | 2 gallons per square foot (122 liters per square meter) |
| Groundcovers and Vines: | 2 gallons per square foot (122 liters per square meter) |

**Method of Application**. A spray nozzle that does not damage small plants must be used when watering perennial plants or turf. Water shall be applied at the base of the plant to kept as much water as possible off plant leaves. An open hose may be used to water trees, shrubs and seedlings if mulch and soil are not displaced by watering. The Contractor must supply metering equipment as needed to assure the specified application rate of water.

**Method of Measurement**. Supplemental watering will be measured in units of 1000 gallons (3785 liters) of water applied as directed.

**Basis of Payment**. This work will be paid for at the contract unit price per unit of SUPPLEMENTAL WATERING, measured as specified. Payment will include the cost of all water, equipment and labor needed to complete the work as specified.

## TEMPORARY CONCRETE BARRIER

Description: This work shall consist of furnishing, placing, maintaining, relocating, and removing concrete barriers at temporary locations as shown on the plans or as directed by the Engineer. This work shall be done according to the applicable portions of Section 704 of the Standard Specifications and as indicated herein.

Due to the various traffic staging required for this contract, several pay items are required for temporary concrete barrier. Temporary concrete barrier for this contract may involve relocating temporary concrete barrier which is already on site from an advance work contract or may involve providing additional temporary concrete barrier by the Contractor.

TEMPORARY CONCRETE BARRIER shall consist of furnishing, placing, maintaining, and removing temporary concrete barrier by the contractor at locations shown on the plans or as directed by the Engineer in accordance with the applicable portions of Section 704 of the Standard Specifications.

TEMPORARY CONCRETE BARRIER (INSTALL ONLY) shall consist of furnishing, placing, and maintaining temporary concrete barrier at locations shown on the plans or as directed by the Engineer in accordance with the applicable portions of Section 704 of the Standard Specifications. It shall remain on the jobsite at the conclusion of the project at the location shown on the plans. Temporary concrete barrier that is to remain on the job site at the conclusion of the contract shall become the property of the State at the conclusion of this contract.

RELOCATE TEMPORARY CONCRETE BARRIER, (SPECIAL) shall consist of relocating temporary concrete barrier installed under an advance work contract or installed by the Contractor under this contract, to locations shown on the plans or as directed by the Engineer in accordance with the applicable portions of Section 704 of the Standard Specifications.

REMOVE TEMPORARY CONCRETE BARRIER shall consist of removing excess temporary concrete barrier already on site as shown on the plans or as directed by the Engineer in accordance with the applicable portions of Section 704 of the Standard Specifications. Removal of temporary concrete barrier placed by the contractor will not be paid for separately but included in the cost of TEMPORARY CONCRETE BARRIER. Temporary concrete barrier that is to be removed from the job sit at the end of construction shall become the property of the Contractor.

Method of Measurement: The temporary concrete barrier items will be measured per Article 704.07 of the Standard Specifications and as modified herein.

Add the following to the first paragraph of Article 704.07:

"When excess temporary concrete barrier is shown to be removed it will be measured for payment in meters in place along the centerline of the barrier."

Basis of Payment: Temporary concrete barrier which is to be relocated, either from an advance work contract or during the course of the current contract shall be paid for at the contract unit price per meter for RELOCATE TEMPORARY CONCRETE BARRIER (SPECIAL). Temporary concrete barrier which is to remain on the job site at the conclusion of the contract will be paid for at the contract unit price per meter for TEMPORARY CONCRETE BARRIER (INSTALL ONLY). Temporary concrete barrier which is to be removed shall be paid for at the contract unit price per meter for REMOVE TEMPORARY CONCRETE BARRIER.

The relocation of glare screens attached to the top of any temporary concrete barrier shall be disassembled and reattached to the barrier wall at its new location as shown on the plans. This work shall not be paid for separately but included in the cost of RELOCATE TEMPORARY CONCRETE BARRIER (SPECIAL).

**TEMPORARY PAVEMENT**

Description: This work shall consist of constructing a temporary pavement at the locations shown on the plans or as directed by the engineer.

The contractor shall use either portland cement concrete as outlined in Section 353 and 354 of the Standard Specifications or bituminous concrete according to Section 355, 356, 406 of the Standard Specifications, and the special provisions for Bituminous Base Course/Widening

Superpave and Superpave Bituminous Concrete Mixtures. The bituminous mixtures to be used shall be specified in the plans. The thickness of the Temporary Pavement shall be as described in the plans. The contractor shall have the option of constructing either material type if both portland cement concrete and bituminous concrete are shown in the plans.

Articles 355.10 and 406.21 shall not apply.

The removal of the Temporary Pavement shall conform to Section 440 of the Standard Specification.

Method of Measurement: Temporary pavement will be measured in place and the area computed in square meters (square yards).

Basis of Payment: This work will be paid for at the contract unit price per square meter (square yard) for TEMPORARY PAVEMENT and TEMPORARY PAVEMENT (INTERSTATE).

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

**WHITEWASHING FOR CONCRETE PAVEMENT**

Description. This work shall consist of whitewashing the bituminous concrete base or bituminous stabilized subbase for portland cement concrete pavement and shoulders.

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

| Item | Article/Section |
|---|---|
| (a) | Water 1002 |
| (b) | Hydrated Lime 1012.01 |
| (c) | Calcium Carbonate Pigments (Note 1) |

Note 1. ASTM D-1199, Type GC or PC, Grade II or finer. Other materials or grades may be used with the approval of the Engineer provided the resulting coating is bright white and uniform in nature. By-product lime will not be allowed.

Equipment. Equipment shall be capable of mixing, continuously agitating, and applying the prepared solution in a uniform manner.

Construction Requirements. When the pavement or shoulders will be placed between May 15 and October 15, the surface of the bituminous concrete base or bituminous stabilized subbase underlying the pour shall be whitewashed. Whitewashing shall be completed prior to placing the reinforcing steel or load transfer devices. Whitewashing shall not be applied when rain is imminent.

The whitewash shall be prepared by combining two parts water to one part pigment by weight. The ingredients shall be mixed until smooth in consistency and free of lumps. If sufficient coating can be demonstrated, the ratio may be increased up to three parts water to one part pigment by weight with the approval of the Engineer. After mixing, the whitewash shall be continually agitated until applied.

The whitewash shall be uniformly applied to the entire bituminous concrete base or bituminous stabilized subbase at a rate of 0.35 L/sq m (0.075 gal/sq yd). The method of application shall be approved by the Engineer. Thick films from spills or over-application shall be removed by means that does not damage the base or subbase.

If a truck is used to apply the whitewash, a medium to long nap carpet shall be dragged behind the spray bar. The carpet shall be pre-dampened with whitewash and sufficiently weighted to ensure uniform application.

Once the whitewash coating is applied, it shall be maintained until placement of the reinforcing steel, load transfer devices or pavement.

Method of Measurement. This work will be measured for payment in place and the area computed in square meters (square yards). The measurements will be made along the top of bituminous concrete base or bituminous stabilized subbase whitewashed.

Basis of Payment. This work will be paid for at the contract unit price per square meter (square yard) for WHITEWASHING FOR CONCRETE PAVEMENT.

**TYPE A FINAL FINISH OF PORTLAND CEMENT CONCRETE PAVEMENT FOR VARIABLY SPACED TINING**

Revise the third paragraph of Article 420.11 (e)(1) to read as follows:

The metal comb shall consist of a single line of tempered spring steel tines variably spaced between 11/16 inch (17 mm) and 2-1/8 inches (54 mm) as shown in the table below, securely mounted in a suitable head. The tines shall be flat and of a size and stiffness sufficient to produce a groove of the specified dimensions in the plastic concrete without tearing of the pavement edge or surface. The Contractor shall modify the equipment or operations if an acceptable pavement or surface is not produced. The mechanically operated metal comb shall be attached to an exclusive piece of equipment, which is mechanically self-propelled and capable of traversing the entire pavement width being placed in a single pass. The artificial turf carpet drag may be attached to this piece of equipment provided a surface texture is produced satisfactory to the Engineer. The tining device shall be operated so as to produce a pattern of grooves 1/8 inch to 3/16 inch (3 to 5 mm) deep and 1/10 to 1/8 inch (2.5 to 3.2 mm) wide across the pavement. The tining device shall be operated at a 1:6 skew across the pavement for facilities with a posted speed limit of 55 mph (89 kph) or greater. No other operation will be permitted with this equipment. Separate passes will be required for the turf dragging operation and the tining operation.

Metal Comb Tine Spacing (English, Center to Center of Tines, in):

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 5/16 | 1 7/16 | 1 7/8 | 2 1/8 | 1 7/8 | 1 11/16 | 1 1/4 | 1 1/4 | 1 1/16 |
| 1 7/16 | 1 1/8 | 1 13/16 | 13/16 | 1 11/16 | 7/8 | 1 5/8 | 2 1/16 | 15/16 |
| 11/16 | 1 1/8 | 1 9/16 | 1 5/16 | 1 1/16 | 1 | 1 | 1 1/16 | 13/16 |
| 1 7/16 | 1 1/2 | 2 1/16 | 2 | 1 3/4 | 1 7/16 | 1 11/16 | 2 1/16 | 1 1/16 |
| 1 7/16 | 1 5/8 | 1 5/8 | 1 1/8 | 1 11/16 | 1 3/4 | 1 3/4 | 1 3/16 | 1 7/16 |
| 1 5/16 | 1 9/16 | 1 1/8 | 1 1/4 | 1 15/16 | 1 5/16 | 1 3/4 | 13/16 | 1 3/4 |
| 1 15/16 | 2 1/16 | 2 | 1 1/8 | 1 | 11/16 | 2 1/16 | 11/16 | 1 1/2 |
| 2 | 1 9/16 | 11/16 | 1 15/16 | 1 15/16 | 1 9/16 | 2 | 1 7/16 | 1 7/16 |
| 1 1/2 | 1 13/16 | 1 1/8 | 1 1/2 | 1 15/16 | 15/16 | 1 5/16 | | |

Metal Comb Tine Spacing (Metric, Center to Center of Tines, mm):

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 34 | 36 | 47 | 54 | 48 | 43 | 32 | 31 | 27 | 36 | 29 | 46 |
| 21 | 43 | 23 | 42 | 52 | 24 | 18 | 28 | 40 | 34 | 27 | 26 |
| 25 | 27 | 20 | 37 | 38 | 52 | 51 | 45 | 37 | 43 | 53 | 27 |
| 37 | 42 | 41 | 29 | 43 | 45 | 44 | 30 | 37 | 33 | 40 | 28 |
| 31 | 50 | 34 | 45 | 20 | 45 | 50 | 53 | 51 | 29 | 25 | 18 |
| 53 | 18 | 38 | 51 | 40 | 17 | 49 | 50 | 39 | 51 | 36 | 36 |
| 38 | 46 | 29 | 38 | 50 | 24 | 33 | | | | | |

**ELECTRICAL**

**COILABLE NON-METALLIC CONDUIT**
Effective: March 10, 2004

Revise Article 1088.01(c) to read:

"(c) Coilable Nonmetallic Conduit.

Polyethylene Duct. The duct shall be a plastic duct which is intended for underground use and can be manufactured and coiled or reeled in continuous transportable lengths and uncoiled for further processing and/or installation without adversely affecting its properties of performance.

The duct shall be made of high density polyethylene which shall meet the requirements of ASTM D 2447, for schedule 40. The duct shall be composed of black high density polyethyiene meeting the requirements of ASTM D 3350, Class C, Grade P33. The wall thickness shall be in accordance with Table 2 for ASTM D 2447.

Duct dimensions shall conform to the following table:

| Nom. Duct Diameter | | Nom. Outside Diameter | | Min. Wall Thickness | |
|---|---|---|---|---|---|
| mm | in | Mm | in | mm | in |
| 27 | 1 | 33.4 | 1.315 | 3.4 | 0.133 |
| 35 | 1.25 | 42.2 | 1.660 | 3.6 | 0.140 |
| 41 | 1.5 | 48.3 | 1.900 | 3.7 | 0.145 |
| 53 | 2.0 | 60.3 | 2.375 | 3.9 | 0.154 |

Performance Tests. Polyethylene Duct testing procedures and test results shall meet the requirements of ASTM D 3485. Certified copies of the test report shall be submitted to the Engineer prior to the installation of the duct. Duct crush test results shall meet or exceed the following requirements:

| Duct Diameter | | Min. force required to deform sample 50% | |
|---|---|---|---|
| Mm | in | N | lb |
| 27 | 1 | 5337 | 1200 |
| 35 | 1.25 | 4937 | 1110 |
| 41 | 1.5 | 4559 | 1025 |
| 53 | 2.0 | 3780 | 850 |

**CONDUIT ATTACHED TO STRUCTURE, PVC**
Effective: July 8, 2004

Add the following paragraph to Article 811.02:

“(c) Rigid Nonmetallic Conduit……..1088.01(b)”

"The gasket shall be extruded directly onto the junction box cover."

Add the following paragraph to Article 811.03(d):

"All PVC conduits over 1.0 meter in length shall have expansion couplings. The relative position of the sides of the expansion couplings shall be adjusted to properly compensate for the thermal expansion of the conduit due to the ambient temperature at the time of installation."

Add the following paragraphs to Article 811.03:

"(e) Rigid Nonmetallic Conduit

"(1) General. Rigid nonmetallic conduit and fittings installed in exposed locations shall be Schedule 80. Rigid nonmetallic conduit installation shall be according to Article 810.0(b). Conduits terminating in junction and pull boxes shall be shall be terminated with hubs, integral box hubs, or integral box bosses.

"(2) Supports. Surface mounted rigid nonmetallic conduit shall be supported in compliance with Article 811.03(a)(2), except the reference to "NEC Article 346-12" shall be replaced with "NEC (2002 Edition) Article 352.30. The maximum distance between conduit supports shall be that shown in NEC (2202 Edition) Table 352.30(B)."

**INDIANA STATE LINE RADIO TOWER ALTERATIONS**
July 8, 2004

Description

This item consists of modifications to state line radio tower site on the south side of I-80/94 near station 7+980 to permit the construction of retaining wall 016-W922. This work consists of locating existing underground electrical systems, furnishing ground rods, ground ring and equipment grounding conductors, temporary and permanent fence posts and fencing, removing an existing handhole, removing underground electrical cables and conduit, and coordination with other contractors and the Indiana Department of Transportation.

Materials

Grounding Electrodes (Rods) and Grounding Electrode Conductors shall comply with Article 1087.01 of the Standard Specifications. Chain Link fence materials, accessories, and fittings shall comply with Articles 1006.26, 1006.27, and 1006.28 of the Standard Specifications. Concrete for fence post foundations shall be class SI Concrete.

Submittals

The Contractor shall submit manufacturer data sheets and shop drawings clearly indicating and specifying all of the material to be used, including but not limited to grounding electrodes, grounding electrode conductors, exothermic welding materials and molds and manufacturer certification of the personnel making such welds, and all fencing materials. Fencing materials include but are not limited to chain link fabric, line posts, terminal posts, gate posts, tension wire, horizontal braces, truss rods, gate frames, post tops, stretcher bars, fabric ties, fittings, bolts, and nuts. Where a sheet or drawing describes more than one unique item, the Contractor shall clearly mark the submittal to indicate which items are being proposed. Failure to do so will cause the submittal to be rejected.

Construction Requirements

The Contractor shall perform work at this site so that site access control is maintained at least equal to the control of the site prior to construction activity. Access through a padlocked gate for Indiana DOT personnel shall be maintained at all times. If the minimum distance between the temporary fencing and any portion of the antenna structure or electrical enclosure is less than 2.5 m (8 ft), the Contractor shall provide tall fencing, additional site fencing, or other methods to further restrict unauthorized access to the site. The Contractor's proposed methods for restricting unauthorized access shall be submitted to the Engineer and approved by the Engineer prior to construction.

The contract structural drawings show the location of the proposed retaining wall. The Contractor shall confirm all dimensions, the wall location, and take into account the working clearances required by the Contractor for the construction of the retaining wall and coordination with other contracts when planning the work described herein. Failure to do so shall not justify additional compensation for the work herein or for other work impacted by the work at this site.

The Contractor shall locate underground electrical installations prior to beginning construction on this site. The elements to be located include, but are not limited to, the ground ring conductor and all equipment grounding conductors extending from the antenna structure, electrical enclosure, and fence posts, the underground feeder between the electrical enclosure and the electrical service located at the north end of the alley immediately east of State Line Road, and the cables and conduit between the electrical enclosure and the vehicle sensor location immediately east of the state line on I-80/94. The contractor shall immediately notify and request direction from the Engineer if the underground feeder between the electrical enclosure and the electrical service will conflict with any of the construction in this contract.

The following work shall be performed prior to any work to construct the retaining wall 016-W922 adjacent to the site:

The contractor shall install a new ground ring cable along the north side of the tower foundation between the existing ground ring cable runs on the east and west sides of the site in a location that will not be affected by the construction of the retaining wall. The trench shall be hand-dug to prevent damage to existing ground ring and equipment grounding conductors. The ground ring cable shall be bare stranded copper cable, 4/0 AWG, installed in compliance with Article 806.03, except that all connections shall be made by exothermic welds installed in compliance with the exothermic welding manufacturer's written direction by personnel trained and certified by the exothermic welding manufacturer. Welds shall be inspected against the exothermic welding manufacturer's instructions, and deficient welds shall be cut out and replaced, using additional splice welds to replace the affected cable. The new ground ring cable shall be welded to the existing ground ring cable at each end, to ground rods driven at 3.0 to 4.5 m (10 to 15 foot) intervals, and to any and all equipment grounding conductors that cross its trench. Equipment grounding conductors for the temporary corner fence posts and the permanent fence posts shall also be welded to this ground ring cable. Ground rods shall be a minimum 20 mm diameter and 3050 mm length copper-clad steel.

Temporary fencing shall be as tall as the existing fence, or taller if required to maintain the site's access control. Temporary fencing shall be installed across the site in a location that will not be disturbed by the construction of the retaining wall, and shall be constructed in compliance with Section 664 of the Standard Specifications. The Contractor shall mark the

locations of existing underground electrical equipment and shall locate the temporary fence posts where they will not damage the underground electrical equipment. The corner posts shall be connected with exothermic welds to their equipment grounding conductors, which are exothermically welded to the ground ring. Line posts shall be spaced no more than 10 feet apart. If the temporary fencing must be located far enough south to affect the gate on the east side of the fence, the relocation of the gate, including all posts, hardware, and grounding connections shall be included in the cost of this work and will not be paid for separately.

Once the ground ring conductor with all connections and the temporary fencing are installed complete and to the satisfaction of the Engineer, the portion of the existing ground ring that is north of the new ground ring conductor shall be cut north of the splices between the new and existing ground ring conductors and the equipment grounding conductors from the tower or enclosure shall also be cut north of the new ground ring conductor. The contractor shall test the resistance of the ground ring as modified to verify that the resistance of the ground ring is less than 5 ohms. This test shall be performed using equipment and methods in compliance with Motorola Standard *RG51*. If the resistance exceeds 5 ohms, the Contractor shall install additional ground rods and exothermically weld them to the ground rod and repeat the resistance testing until the resistance is proven to be less than 5 ohms. The Contractor shall provide 2 full working days notice of the testing to the Engineer and the Indiana DOT so that they may have personnel present to witness the testing if they desire. The existing ground ring north of the new ground ring conductor and the severed equipment grounding conductors shall be removed; they shall not be abandoned in place. The existing fence fabric north of the temporary fence line shall be removed from the fence posts and other support hardware. Sufficient existing fence fabric shall be coiled on each end to reach the proposed end posts.

Notify Indiana DOT (Troy Boyd, (219) 939-3650) not less than one week prior to the date when the Contractor intends to remove the vehicle detection sensors and cables. The Contractor shall make a list of any non-functional vehicle detectors, and obtain the signature of an authorized Indiana DOT employee on that list. The contractor is responsible for delivering all vehicle sensing equipment to the Indiana DOT in the condition noted in the list, or replacing it in kind to the satisfaction of the Engineer. Indiana DOT personnel will open the site electrical enclosure to permit the Contractor to disconnect the vehicle sensor cables from the detection equipment in the enclosure. After the sensor cables have been disconnected at the radio tower electrical enclosure, the Contractor shall remove the existing vehicle sensors, sensor carriers, pull ropes, carrier clamps, the sensor lead-in cables and home-run cables. The Contractor shall cut out the splices between the lead-in (3M 40002) and home-run (3M 30003) cables. *The Contractor shall not disconnect the lead-in cable from the vehicle sensors.*

The Contractor shall individually coil and tie each lead-in cable with vehicle sensor attached and wrapped in plastic bubble sheet or similar protective material. Each lead-in cable and sensor shall be labeled with a securely fastened tag indicating the position from which it was removed as defined below:

Direction (WB or EB)
Lane (Inside is “A Lane,” then in alphabetical order to outside lane)
Sensor sequence (Lead or Lag)

All removed sensors with lead-in cables, sensor carriers and other removed equipment shall be carefully packaged in boxes not exceeding 25 kilograms each, the boxes labeled with “State Line Vehicle Detection.” The boxes shall be delivered with a detailed inventory of the

equipment in the boxes to the Indiana DOT Borman Traffic Management Center, 7701 East Melton Road (U. S. 20), Gary, Indiana. The delivery shall be scheduled with the Borman Traffic Management Center not less than three full working days in advance of the anticipated delivery time and date. The Contractor shall obtain a signed receipt for the equipment delivered, which shall be included with request for payment under this pay item. Payment shall not be made without a itemized receipt for the full complement of equipment from the state line vehicle detection site. The Indiana DOT reserves the right to make a full inspection and functional check on the delivered material prior to issuing the signed receipt.

Remove the ATMS handhole adjacent to the radio tower without damaging the conduits that extend from the electrical enclosure. Cut back the conduits that extend from the electrical enclosure back so that they will not conflict with the construction of the retaining wall. Close off the cut ends of the conduit with PVC conduit caps sealed with room-temperature-vulcanizing (RTV) sealant compatible with the conduit material.

Construction of the retaining wall may proceed once the work described above is complete. Coordinate the location of embedded threaded coil loop inserts in the retaining wall with the proposed location of the new fence end posts. After the completion of the retaining wall, the Contractor shall perform the following work:

Install fence end posts adjacent to retaining wall. Attach fence end posts to embedded anchors in retaining wall. Exothermically weld fence end posts to equipment grounding conductors that are welded to the ground ring. Attach existing fencing, previously coiled back, to the fence end posts in compliance with Section 664 of the Standard Specifications. Disconnect temporary fence corner posts from ground ring. Remove temporary fence fabric, posts including foundations, and hardware. Backfill temporary fence post foundation holes.

Coordinate construction of the new sensor cable handhole with contract 62664.

All existing ground ring and equipment grounding conductors, sensor home-run cables, handholes, conduit, and all existing and temporary fencing, posts and hardware that are demolished as part of this work shall become the property of the Contractor and shall be promptly removed from state property and disposed of properly. The salvage value of this material shall be incorporated as a credit into the price of this work.

Method of Measurement

INDIANA STATE LINE RADIO TOWER SITE WORK shall not be measured for payment. A payment of 70% of the contract unit price will be allowed once all work required prior to construction of the retaining wall is complete, inspected, and approved. The final 30% payment will be allowed once the work permitted after the completion of the retaining wall is complete, inspected, and approved.

Basis of Payment

This work will be paid at the contract lump sum price for **INDIANA STATE LINE RADIO TOWER SITE WORK**, which shall be payment in full for all material, labor, equipment, tools and all incidentals necessary for the completion of this work as described herein and elsewhere in the contract documents.

**JUNCTION BOX, STAINLESS STEEL**
Effective: January 1, 2002

Revise the second sentence of the seventh paragraph of Article 1088.04 of the Standard Specifications to read:

"The gasket shall be extruded directly onto the junction box cover."

**RACEWAYS EMBEDDED IN STRUCTURE**
Effective: March 10, 2004

Section 810 of the Standard Specifications for Road and Bridge Construction shall be modified as follows:

Add the following to Article 810.03(c):

“Coilable non-metallic conduit shall be machine straightened to remove the longitudinal curvature caused by coiling the conduit onto reels prior to installing in trench, encasing in concrete or embedding in structure. The straightening shall not deform the cross-section of the conduit such that any two measured outside diameters, each from any location and at any orientation around the longitudinal axis along the conduit differ by more than 6 mm (0.25”).” The longitudinal axis of the straightened conduit shall not deviate by more than 20 mm per meter (0.25” per foot) from a straight line.

Section 812 of the Standard Specifications for Road and Bridge Construction shall be modified as follows:

Add the following to Article 812.02:

“(d) Coilable Nonmetallic Conduit….1088.01(c)”

Change Article 812.03(d) to 812.03 (e). Add the following as the new Article 812.03(d):

“(d) Coilable Nonmetallic Conduit. Conduit installation shall be according to Article 810.03(c).“

Add the following paragraph to Article 812.03:

All conduits which extend outside of the structure but are not terminated in a cabinet, junction box, pull box, handhole, post, pole, or pedestal shall extend a minimum or 300 mm (12”) or the length shown on the plans beyond the structure. The end of this extension shall be capped and sealed with a cap designed for the conduit to be capped. The ends of rigid metal conduit to be capped shall be threaded, the threads protected with full galvanizing, and capped with a threaded galvanized steel cap. The ends of rigid nonmetallic conduit and coilable nonmetallic conduit shall be capped with a rigid PVC cap of not less than 3 mm (0.125”) thick. The cap shall be sealed to the conduit using a room-temperature-vulcanizing (RTV) sealant compatible with the material of both the cap and the conduit. A washer or similar metal ring shall be glued to the inside center of the cap with epoxy, and the pull cord shall be tied to this ring.

**DRAINAGE & UTILITIES**
**CLEANING EXISTING DRAINAGE STRUCTURES**
Effective: September 30, 1985 November 1, 1996

All existing storm sewers, pipe culverts, manholes, catch basins and inlets shall be considered as drainage structures insofar as the interpretation of this Special Provision is concerned. When specified for payment, the location of drainage structures to be cleaned will be shown on the plans.

All existing drainage structures which are to be adjusted or reconstructed shall be cleaned in accordance with Article 602.14 of the Standard Specifications. This work will be paid for in accordance with Article 602.15 of the Standard Specifications.

All other existing drainage structures which are specified to be cleaned on the plans will be cleaned in accordance with Article 602.14 of the Standard Specifications. This work will be paid for at the contract unit price each for DRAINAGE STRUCTURES TO BE CLEANED, and at the contract unit price per meter (foot) for STORM SEWERS TO BE CLEANED.

**STEEL PLATES TO BE INSTALLED ON DRAINAGE STRUCTURE**

Description: This work shall consist of the providing and installing flat steel plates on drainage structures that will remain in service in areas where pavement will be placed over the existing structures. The steel plate will remain in place and will become the property of the State.

Materials: The Steel will be flat stock in a minimum thickness of 6 mm (nominal) and will have yield strength of 400 MPa.

Installation: The steel plate shall be placed flat and level on the existing drainage structure. The Plate shall extend a minimum of 600 mm beyond the opening in the Drainage Structure

**Basis of Payment**. This work will be paid for at the contract unit price for each of STEEL PLATES TO BE INSTALLED ON DRAINAGE STRUCTURE which price shall include payment in full for all labor, tools, equipment, disposal, fill, and incidentals required to perform the work as specified herein.

**STRUCTURAL**
**ERECTING STRUCTURAL STEEL**

Description: This work shall consist of all labor, materials, tools and equipment necessary for the erection of structural steel, which will be furnished by others under a separate contract, as per the details included in the plans, according to the applicable portions of Section 505 and 506 of the Standard Specifications and these special provisions. The shim plates and neoprene pads for the bearings will be furnished by others under a separate fabrication contract; the installation of these items shall be included in the cost for erecting structural steel. All shop and field fasteners will be furnished by others with structural steel. The anchor bolts required for installation of bearings, and all other miscellaneous steel not furnished by others shall be furnished and installed under a separate pay item for Furnishing and Erecting Structural Steel.

Installation of floating bearings shall be paid for separately, and shall not be included in this item.

The Contractor for furnishing of structural steel is herein referred to as Fabrication Contractor, and the Contractor for erection of these items is referred to as Erection Contractor.

Erection: The structural steel shall be erected according to the requirements of Article 505.08 of the Standard Specifications and this special provision.

Field Painting: Portions of the structural steel will be shop painted by the Fabrication Contractor. The Erection Contractor shall be responsible for field touch-up painting, and spot cleaning and painting of the damaged coating on newly erected work. The cleaning and painting work shall be according to the Special Provision for “Cleaning and Painting New Metal Structures”. The paint coating shall be compatible with the paint system used by the Fabrication Contractor.

Article 505.09 of the Standard Specifications shall be amended to add the following:

1. No extra compensation will be allowed for touch-up field painting of steel members which have been burred and marred at the time of shipping or erecting and all other areas of the new structural steel surfaces where the paint coatings have been removed or are incomplete.

2. The structural steel and the fixed steel bearings included shim plates and neoprene pads for the bearings will be furnished and delivered under a separate fabrication contract.

   Delivery of structural steel and bearings to the site shall be coordinated with the Fabrication Contractor to permit the erection of the steel in stages without delaying the progress of the steel erection. The Erection Contractor shall provide the Fabrication Contractor with a working schedule for shipping the structural steel and bearings to the jobsite, within 30 calendar days after the execution of the erection contract. The Erection Contractor shall notify the Fabrication Contractor a minimum of three calendar weeks in advance for any changes in the scheduled delivery dates. Copies of all notifications and correspondence between the Erection Contractor and Fabrication Contractor shall be submitted promptly to the Engineer.

The expense of night time and weekend erection of structural steel shall not be paid for separately, but shall be included in the lump sum cost for ERECTING STRUCTURAL STEEL.

For bidding purposes only, it is anticipated that the delivery of the structural steel will be required on or before the dates given in the following table:

| | | | |
|---|---|---|---|
| Phase 2 Stage 2 | I-80/94 over Little Calumet River | EB Outside Lanes | May 16, 2005 |

These dates are the scheduled delivery dates. The Engineer will confirm these dates.

3. The Fabrication Contractor will provide one (1) reproducible copy of all approved fabrication shop drawings to the Erection Contractor for use during erection of the fabricated structural steel. Shop drawings will include a list and location of the field bolts required.

4. All field fasteners will be furnished by the Fabrication Contractor, unless noted otherwise.

Basis of Payment: The erecting of structural steel will be measured and paid for according to Section 505 of the Standard Specification respectively. Anchor bolts for bearings will be measured and paid for at the contract unit price per each for ANCHOR BOLT (INDIANA).

**FLOATING BEARINGS**
Effective: October 13, 1988 Revised: June 23, 2003

Description. This work shall consist of furnishing and installing floating (pot type) bearing assemblies as shown on the plans.

Floating bearings shall be the following types:

| | |
|---|---|
| Fixed: | Allows rotation in any direction and fixed against translation. |
| Guided Expansion: | Allows rotation in any direction and translation in limited directions. |
| Non-Guided Expansion: | Allows rotation in any direction and translation in any direction. |

The floating bearings shall be of the type specified and designed for the loads shown on the plans. The design of the top and bottom bearing plates are based on detail assumptions which are not applicable to all suppliers and may require modifications depending on the supplier chosen by the Contractor. The overall depth dimension for the floating bearings shall be as specified on the plans. The horizontal dimensions shall be limited to the available bearing seat area. Any modifications required to accommodate the bearings chosen shall be submitted to the Engineer for approval prior to ordering materials. Modifications required shall be made at no additional cost to the State.

The Contractor shall comply with all manufacturer's material, fabrication and installation requirements specified.

Shop drawings shall be submitted to the Engineer for approval according to Article 105.04 of the Standard Specifications.

Materials. The materials for the floating bearing assemblies shall be according to the following:

(a) Elastomeric Materials. The rubber disc shall be according to Article 1083.02 of the Standard Specifications for "55 Duro" rubber.

(b) Polytetrafluoroethylene (TFE) Material. The TFE material shall be according to Article 1083.03 of the Standard Specifications.

(c) Stainless Steel Sheets: The stainless steel sheets shall be of the thickness specified and shall be according to ASTM A 240, Type 302 or 304. The sliding surface shall be polished to a bright mirror finish less than 510 nm (20 micro-in.) root mean square.

(d) Structural Steel. All structural steel used in the bearing assemblies shall be according to AASHTO M 270M Grade 345 (M 270, Grade 50), unless otherwise specified.

(e) Threaded studs. The threaded stud, when required, shall conform to the requirements of AASHTO M 164M (M 164).

Fabrication and Installation of Floating Bearings. The bearings shall be complete factory-produced assemblies. They shall provide for rotation in all directions and for sliding, when specified, in directions as indicated on the plans. All bearings shall be furnished as a complete unit from one manufacturing source. All material used in the manufacture shall be new and unused with no reclaimed material incorporated into the finished assembly.

The Contractor shall furnish certified copies of the bearing manufacturer's test reports on the physical properties of the component materials for the bearings to be furnished and a certification by the bearing manufacturer stating the bearing assemblies furnished conform to all the requirements shown on the plans and as herein specified. When directed by the Engineer, the manufacturer shall furnish random samples of component materials used in the bearings for testing by the Department.

The bearings furnished shall be manufactured so that the rotational capability are provided by an assembly having a rubber disc of proper thickness, confined in a manner so it behaves like a fluid. The disc shall be installed, with a snug fit, into a steel cylinder and confined by a tight fitting piston. The outside diameter of the piston shall be no more than 750 microns (0.03 in.) less than the inside diameter of the cylinder at the interface level of the piston and rubber disc. The sides of the piston shall be beveled. TFE sheets shall be attached to the top and bottom of the rubber disc to facilitate rotation of the rubber disc. Suitable brass sealing rings shall be provided to prevent any extrusion between piston and cylinder.

The translation capability for both guided and non-guided expansion bearings shall be provided by means of a polished stainless steel sliding plate that bears on a TFE sheet bonded and recessed to the top surface of the piston. The sliding element of expansion bearings shall be restrained against movement in the fixed direction by exterior guide bars capable of resisting the horizontal forces or 20 percent of the vertical design load on the bearing applied in any direction, whichever is greater. The sliding surfaces of the guide bar shall be of TFE sheet and stainless steel. Guiding off of the fixed base, or any extension of it, will not be permitted.

Specifications. Prior to shipment the exposed edges and other exposed portions of the structural steel bearing plates shall be cleaned and painted according to Articles 506.03 and 506.04 of the Standard Specifications. Painting shall be with the paint specified for shop painting of structural steel. During cleaning and painting the stainless steel, TFE sheet and neoprene shall be protected from abrasion and paint.

TFE sheets shall be bonded to steel under factory controlled conditions using heat and pressure for the time required to set the epoxy adhesive used. The TFE sheet shall be free from bubbles and the sliding surface shall be burnished to an absolutely smooth surface.

The steel piston and the steel cylinder shall each be machined from a solid piece of steel. The steel base cylinder shall be either integrally machined, recessed into with a snug fit, or continuously welded to its bottom steel bearing plate.

Packaging. Each floating bearing assembly shall be fully assembled at the manufacturing plant and delivered to the construction site as complete units. The assemblies shall be packaged, crated or wrapped so the assemblies will not be damaged during handling, transporting and shipping. The bearings shall be held together with removable restraints so sliding surfaces are not damaged.

Centerlines shall be marked on both top and base plates for alignment in the field. The bearings shall be shipped in moisture-proof and dust-proof covers.

Testing. Each floating bearing assembly shall be load tested to 150 percent of the rated capacity at a 2 percent slope by the manufacturer prior to shipment. The load of 150 percent of the rated capacity shall be maintained for at least 30 minutes. Any bearings showing failure of the sealing rings or other component parts after this load test shall be replaced. The Contractor shall furnish a notarized certification from the bearing manufacturer stating the floating bearings have been load tested as specified. The Department reserves the right to perform the specified load test on one or more of the furnished bearings. If the tested bearing shows failure it shall be replaced and the remaining bearings shall be load tested for acceptance at the Contractor's expense.

Shear Inhibited Disc Type Bearing. Shear Inhibited Disc type bearing assemblies may be used in lieu of the Floating (Pot type) Bearing assemblies at the option of the Contractor. All requirements specified for floating bearings shall be applicable for the shear inhibited disc type bearings except as follows:

(a) The Structural Element shall be restricted from shear by the pin and ring design and need not be completely confined as with the Floating Bearing design.

(b) The Structural Element shall be molded of Polyether Urethane compound and shall be monolithic. The physical properties of the Polyether Urethane shall be according to one of the following requirements:

| PHYSICAL PROPERTY | ASTM TEST METHOD | REQUIREMENTS COMPOUND A MIN. | COMPOUND A MAX. | COMPOUND B MIN. | COMPOUND B MAX. |
|---|---|---|---|---|---|
| Hardness, Type D durometer | D 2240 | 46 | 50 | 60 | 64 |
| Tensile Stress, kPa (psi) | D 412 | | | | |
| At 100% elongation | | 10,350 kPa (1500 psi) | - | 13,800 kPa (2000 psi) | - |
| At 300% elongation | | 19,300 kPa (2800 psi) | - | 25,500 kPa (3700 psi) | - |
| Tensile Strength, kPa (psi) | D 412 | 27,600 kPa (4000 psi) | - | 34,500 kPa (5000 psi) | - |
| Ultimate Elongation, % | D 412 | 300 | - | 220 | - |
| Compression Set 22 hr. at 70 °C (158 °F), % | D 395 | - | 40 | - | 40 |

Bearings shall be erected according to Article 505.08(f) of the Standard Specifications.

Exposed edges and other exposed portions of the structural steel plates shall be field painted as specified for Structural Steel.

Basis of Payment. This work will be paid for at the contract unit price each for FLOATING BEARINGS, FIXED; FLOATING BEARINGS, GUIDED EXPANSION; or FLOATING BEARINGS, NON-GUIDED EXPANSION of the load rating specified.

When the fabrication and erection of floating bearings is accomplished under separate contracts, the applicable requirements of Article 505.09 shall apply.

Fabricated floating bearings and other materials complying with the requirements of this item, furnished and accepted, will be paid for at the contract unit price each for FURNISHING FLOATING BEARINGS, FIXED, FURNISHING FLOATING BEARINGS, GUIDED EXPANSION or FURNISHING FLOATING BEARINGS, NON-GUIDED EXPANSION of the load rating specified.

Storage and care of fabricated floating bearings and other materials complying with the requirements of this item by the Fabrication Contractor beyond the specified storage period, will be paid for at the contract unit price per calendar day for STORAGE OF FLOATING BEARINGS if a pay item is provided for in the contract, or will be paid for according to Article 109.04 if a pay item is not provided in the contract.

Floating bearings and other materials fabricated under this item erected according to the requirements of the specifications, and accepted, will be paid for at the contract unit price each for ERECTING FLOATING BEARINGS, FIXED, ERECTING FLOATING BEARINGS, GUIDED EXPANSION or ERECTING FLOATING BEARINGS, NON-GUIDED EXPANSION of the load rating specified.

**FURNISHING STRUCTURAL STEEL AND BEARINGS (FOR INFORMATION ONLY)**

Description: This work consists of furnishing, fabricating, shop painting, storing and delivering all structural steel, floating and elastomeric bearing assemblies, fixed steel bearings and shim plates to the jobsite, as shown on the plans, according to the requirements of Sections 503, 505, 506 and 1083 of the Standard Specifications and as specified in these Special Provisions. The Contractor for this work shall hereinafter be referred to as the Fabrication Contractor. The items furnished under this item will be erected by Erection Contractors under separate erection contracts.

This work shall include the furnishing of all materials including but not limited to steel beams, plate girders, splice plates, diaphragm steel, cross frames, floating and elastomeric bearing assemblies, fixed steel bearings and all shop and field fasteners for structural steel. The steel retainers, shim plates and neoprene pads for all bearings shall be furnished under the pay item for Furnishing Structural Steel. Anchor Bolts and Stud Shear Connectors will be furnished and installed by Erection Contractors under a separate erection contracts.

Steel Fabrication and Shop Assembly: All structural steel shall be fabricated and stored according to the requirements of Article 505.04 of the Standard Specifications. The work under the pay item of “Furnishing Structural Steel” shall include shop assembly of individual framing members as specified in Article 505.04 (g).

Delivery of Structural Steel and Bearings: For bidding purposes only, it is anticipated that the delivery of the structural steel and bearings will be required on or before the dates given in the following table:

| Delivery Stage | Structure Construction Stage | Erection Contract | Construction Area | Delivery Dates |
|---|---|---|---|---|
| 1 | Stage 1 | I-80/94 over Burnham Ave. | WB Outside Lanes | April 18, 2005 |
| 2 | Phase 2 Stage 2 | I-80/94 over Little Calumet River | EB Outside Lanes | May 16, 2005 |
| 3 | Entire Structure | I-94 (NB) over Thorn Creek | Entire Structure | June 13, 2005 |
| 4 | Stages 2 and 3 | I-80/94 over Burnham Ave. | All EB Lanes | April 17, 2006 |
| 5 | Phase 3 Stage 2 | I-80/94 over Little Calumet River | EB Inside Lanes | May 15, 2006 |
| 6 | Stage 4 | I-80/94 over Burnham Ave. | WB Inside Lanes | June 19, 2006 |
| 7 | Phase 3 Stage 3 | I-80/94 over Little Calumet River | All WB Lanes | July 5, 2006 |

These dates are the scheduled delivery dates. The Engineer will confirm these dates.

Delivery of structural steel and bearings to the jobsite shall be coordinated with the Erection Contractors to permit the erection of the steel in stages without delaying the progress of the Erection Contractors. It shall be the Fabrication Contractor's responsibility to deliver the structural steel and bearings on time according to Article 505.09 of the Standard Specifications.

The Erection Contractors will provide the Fabrication Contractor with a working schedule for shipping the structural steel to the jobsite, within 30 calendar days after the execution of the erection contracts. The Erection Contractors will notify the Fabrication Contractor of any changes in the scheduled delivery date(s) a minimum of three calendar weeks in advance of his/her steel erection date for each bridge. If necessary, the Erection Contractors will be allowed up to and including the Fabrication Contractor's contract completion date to make such changes. Any changes to the working or shipping schedule requested by either Contractor after the Fabrication Contractor's completion date shall require the Engineer's written approval and shall be agreed upon in writing by both Contractors. No additional compensation shall be allowed nor will an extension of time be considered because of the above requirements.

Storage of Structural Steel and Bearings: The Fabrication Contractor will be responsible for storage of fabricated materials until delivery to the jobsite according to Article 505.09 of the Standard Specifications, except the furnishing pay items shall include storage of fabricated materials up to 60 days after the completion dates. The storage shall include proper protection and care of the fabricated materials. The storage of fabricated materials required beyond the specified 60-days period shall be measured and paid per storage unit as defined below.

The Fabrication Contractor shall be responsible for delivering the fabricated materials to the jobsite according to the above table for "Delivery of Structural Steel and Bearings". The Erection Contractors will be responsible for receiving, unloading, storing, and protecting all fabricated materials from the time of delivery, as required by Article 505.09 of the Standard Specifications.

Shop Painting: All structural steel shall receive full 3-coat paint system as specified in the plans, and according to the Special Provision for "Cleaning and Painting New Metal Structures".

Drawings: Shop drawings shall be prepared according to Article 505.03 of the Standard Specification and as modified herein. Each bearing assembly or shipping piece shall be detailed with an erection mark. The erection marks shall be shown on the shop drawings and also on the individual shipping pieces so they can be located in the field. The shop drawings shall list the manufacturer (and paint number, if applicable) for the paint system. Shop drawings shall include a field bolt list and location of the field bolts required.

In addition to the drawings required by Article 505.03 of the Standard Specifications, the Fabrication Contractor shall provide two copies of the approved fabrication and shop assembly plan and procedures and two (2) paper copies and one (1) reproducible copy of all approved fabrication shop drawings to each Erection Contractor for use during erection of the structural steel. No extra compensation will be allowed for furnishing shop drawings for the Erection Contractor's use.

Method of Measurement: The storage of the fabricated structural steel beyond the specified storage period of 60 days will be measured by an UNIT which consists of storage of five (5) metric ton mass of fabricated structural steel for one (1) calendar day. The specified storage period included with furnishing the pay item and the payment for storage beyond the specified storage period shall apply to both, interim and final, completion dated as specified in the Special Provision for "Completion Date".

Basis of Payment: The furnishing of elastomeric and floating bearing assemblies, storage of elastomeric and floating bearing assemblies, and furnishing of structural steel will be measured and paid for according to Sections 503 and 505 of the Standard Specifications and according to the Special Provision for “Floating Bearings”. The cost incurred by the Fabrication Contractor for storage of structural steel beyond the specified storage period of 60 days will be paid for at the contract unit price per UNIT for STORAGE OF STRUCTURAL STEEL.

## NOISE ABATEMENT WALL ANCHOR ROD ASSEMBLY

**Description.** This item shall consist of fabricating, furnishing and installing noise abatement wall anchor rod assemblies for retaining wall or other roadway structure in accordance with applicable portions of Section 505 of the Standard Specifications as shown on the plans or as directed by the Engineer.

**General** The Contractor shall furnish and install anchor rod assemblies for noise abatement walls according to Article 1006.09 of the standard specifications and as modified elsewhere in these special provisions.

**Materials**. Anchor rods shall be in accordance with AASHTO specifications as shown in the plans.

**Method Of Measurement.** Noise Abatement Wall Anchor Rod Assembly shall be counted, per each assembly complete.

**Basis Of Payment.** This item shall be paid at the contract unit price each for NOISE ABATEMENT WALL ANCHOR ROD ASSEMBLY, which shall be payment in full for the furnishing, installing, materials, identification and delivery to the jobsite.

## PIPE UNDERDRAINS FOR STRUCTURES

Description. This work shall consist of furnishing and installing the perforated drain pipe, geotechnical fabric and/or impervious geomembrane, and coarse aggregate as shown on the plans, as specified herein, and as directed by the Engineer

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

Pipe underdrains shall consist of perforated drain pipe in accordance with Article 601.02 of the Standard Specifications. Outlet pipes shall not be perforated.

The coarse aggregate shall have a gradation of CA5 or CA7 in accordance with Section 1004 of the Standard Specifications.

The fabric surrounding the coarse aggregate shall consist of Geotechnical Fabric for French Drains in Accordance with Article 1080.05 of the Standards Specifications.

The impervious geomembrane surrounding the coarse aggregate shall be a minimum 20 mil in thickness and shall be manufactured from polypropylene, polyethylene, or polyvinyl chloride material.

Construction Requirements. All work shall be in accordance with the applicable requirements of Section 601 of the Standard Specifications except as modified below.

The pipe underdrains shall be installed to the lines and gradients as shown on the plans. The drain pipe shall be situated within an area of coarse aggregate as shown on the plans. The coarse aggregate shall be wrapped completely in geotechnical fabric and/or impervious geomembrane as shown on the plans.

**Method of Measurement.** Pipe underdrains for structures shall be measured for payment in meters (feet), in place. Measurement shall be along the centerline of the pipe underdrains. All connectors, outlet pipes, elbows, and all other miscellaneous items shall be included in the measurement.

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

## REMOVAL OF EXISTING NOISE ABATEMENT WALL

Description: This work shall consist of the removal of the existing Noise Abatement Wall at the locations indicated on the plans and salvage to the location specified by the Indiana Department of Transpiration. The support posts shall not be cut off at the existing grade, but instead shall be completely removed, including the concrete footing. The holes that remain after the removal is complete shall be backfilled with crushed stone screenings. The materials removed shall be disposed of as specified in Article 202.03. Contact the Indiana Department of Transportation at least two weeks prior to wall removal for inventory of wall panels to be salvaged and location where salvage panels should be delivered.

**Basis of Payment**. This work will be paid for at the contract unit price for square meters of REMOVAL OF EXISTING NOISE ABATEMENT WALL, which price shall include payment in full for all labor, tools, equipment, disposal, fill, and incidentals required to perform the work as specified herein.

## TEMPORARY SHEET PILING

Effective: September 2, 1994 Revised: December 13, 2002

Description. This work shall consist of furnishing, driving, adjusting for stage construction when required and subsequent removal of the sheet piling according to the dimensions and details shown on the plans and according to the applicable portions of Section 512 of the Standard Specifications.

This work shall also include furnishing, installing and subsequent removal of all miscellaneous steel shapes, plates and connecting hardware when required to attach the sheeting to an existing substructure unit and/or to facilitate stage construction.

General. The Contractor may propose other means of supporting the sides of the excavation provided they are done so at no extra cost to the department. If the Contractor elects to vary from the design requirements shown on the plans, the revised design calculations and details shall be submitted to the Engineer for approval. The calculations shall be prepared and sealed by an Illinois Licensed Structural Engineer. This approval will not relieve the Contractor of responsibility for the safety of the excavation. Approval shall be contingent upon acceptance by all involved utilities and/or railroads.

Material. The sheet piling shall be made of steel and may be new or used material, at the option of the Contractor. The sheet piling shall have a minimum section modulus as shown on the plans or in the approved Contractor's alternate design. The sheeting shall have a minimum yield strength of 265 MPa (38.5 ksi) unless otherwise specified. The sheeting, used by the Contractor, shall be identifiable and in good condition free of bends and other structural defects. The Contractor shall furnish a copy of the published sheet pile section properties to the Engineer for verification purposes. The Engineer's approval will be required prior to driving any sheeting. All driven sheeting not approved by the Engineer shall be removed at the Contractor's expense.

Construction. The Contractor shall verify locations of all underground utilities before driving any sheet piling. Any disturbance or damage to existing structures, utilities or other property, caused by the Contractor's operation, shall be repaired by the Contractor in a manner satisfactory to the Engineer at no additional cost to the Department. The Contractor shall be responsible for determining the appropriate equipment necessary to drive the sheeting to the tip elevation(s) specified on the plans or according to the Contractor's approved design. The sheet piling shall be driven, as a minimum, to the tip elevation(s) specified, prior to commencing any related excavation. If unable to reach the minimum tip elevation, the adequacy of the sheet piling design will require re-evaluation by the Department prior to allowing excavation adjacent to the sheet piling in question. The Contractor shall not excavate below the maximum excavation line shown on the plans without the prior permission of the Engineer. The sheet piling shall remain in place until the Engineer determines it is no longer required.

The sheet piling shall be removed and disposed of by the Contractor when directed by the Engineer. When allowed, the Contractor may elect to cut off a portion of the sheet piling leaving the remainder in place. The remaining sheet piling shall be a minimum of 300 mm (12 in.) below the finished grade or as directed by the Engineer. Removed sheet piling shall become the property of the Contractor.

When an obstruction is encountered, the Contractor shall notify the Engineer and upon concurrence of the Engineer, the Contractor shall begin working to break up, push aside, or remove the obstruction. An obstruction shall be defined as any object (such as but not limited to, boulders, logs, old foundations etc.) where it's presence was not obvious or specifically noted on the plans prior to bidding, that cannot be driven through or around with normal driving procedures, but requires additional excavation or other procedures to remove or miss the obstruction.

Method of Measurement. The temporary sheet piling will be measured for payment in place in square meters (square feet). Any temporary sheet piling cut off, left in place, or driven to dimensions other than those shown on the contract plans without the written permission of the Engineer, shall not be measured for payment but shall be done at the contractor's expense.

If the Contractor is unable to drive the sheeting to the specified tip elevation(s) and can demonstrate that any further effort to drive it would only result in damaging the sheeting, then the

Contractor shall be paid based on the plan quantity of temporary sheeting involved. However, no additional payment will be made for any walers, bracing, or other supplement to the temporary sheet piling, which may be required as a result of the re-evaluation in order to insure the original design intent was met.

Basis of Payment. This work will be paid for at the contract unit price per square meter (square foot) for TEMPORARY SHEET PILING.

Payment for any excavation performed in conjunction with this work will not be included in this item but shall be paid for as specified elsewhere in this contract.

Obstruction mitigation shall be paid for according to Article 109.04 of the Standard Specifications.

**RUSTICATION FINISH FOR RETAINING WALLS**
Effective: May 1, 1990 Revised: November 1, 1996

This work consists of providing a rustication finish on retaining walls in accordance with the details shown in the plans and the Special Provisions.

Forms shall be constructed so that the completed concrete structures conform to the shape, lines and dimensions of the members as shown on the plans. Forms shall be properly braced or tied together to maintain position and shape. Forms shall be made sufficiently tight to prevent leakage of mortar.

Formliners shall be used to obtain the rustication finish on the retaining walls. Formwork shall have the strength and stability to ensure finished concrete dimensions within the tolerances specified herein. The quality of the formwork shall be maintained throughout the entire project.

Variations in dimensions for the wall sections with a rustication finish shall be within the following tolerances: the width and depth of rustication joints shall be within 3 mm (1/8 inch) $\pm$ , the location of the rustication joints shall be within 13 mm (1/2 inch)$\pm$, the maximum variation of a joint from a straight line shall be 6 mm (1/4 inch)$\pm$ in 3 meters (10 feet).

The Contractor shall submit proposed construction procedures for the rustication finish on the outside face of retaining walls. The Contractor's method of obtaining the surface texture specified on the plans shall be subject to approval by the Engineer.

Upon approval of the construction procedures by the Engineer, the Contractor shall pour a 9 m (30 feet) long test section of retaining wall at a location directed by the Engineer. After removal of the formwork, the Engineer will examine the test section of the wall and instruct the Contractor if the rustication finish is acceptable or if future wall sections need further modications. If necessary, the Contractor shall pour additional test sections of wall at locations designated by the Engineer until a wall section meets with the Engineer's approval. The rustication finish of all subsequently installed wall sections shall match the approved test section. All deviations from the approved rustication finish shall be repaired by the Contractor to the satisfaction of the Engineer at no additional cost to the contract.

The Contractor shall notify the Engineer at least 40 hours prior to placing concrete. Concrete shall not be placed until the Engineer has inspected the formwork and the placement of reinforcing bars for compliance with the plans.

Method of Measurement. Rustication finish will be measured in place and the area computed in square meters (square feet). The dimensions used to compute the area of rustication will be the dimensions indicated on the plans or directed by the Engineer which outline plane area. Measurement will not be made on the actual surface area of rustication finish.

Basis of Payment. This work will be paid for at the contract unit price per square meter (square foot) for RUSTICATION FINISH, which price includes all work as specified herein.

**SLIPFORMED PARAPETS**

The slipforming option, as stated in Article 503.17(e)(1) of the Standard Specifications will not be allowed on this project.

**TEMPORARY SHEET PILING (REMAIN IN PLACE)**

**Description.** This work shall consist of furnishing, driving, adjusting for stage construction when required of temporary sheet piling. The temporary sheet piling shall also be installed according to the dimensions and details shown on the plans and according to the applicable portions of Section 512 of the Standard Specifications.

This work shall also include furnishing and installing all miscellaneous steel shapes, plates and connecting hardware when required to attach the sheeting to an existing substructure unit and/or to facilitate stage construction.

**General.** The Contractor may propose other means of supporting the sides of the excavation provided they are done so at no extra cost to the department. If the Contractor elects to vary from the design requirements shown on the plans, the revised design calculations and details shall be submitted to the Engineer for approval. The calculations shall be prepared and sealed by an Illinois Licensed Structural Engineer. This approval will not relieve the Contractor of responsibility for the safety of the excavation. Approval shall be contingent upon acceptance by all involved utilities and/or railroads.

**Material.** The sheet piling shall be made of steel and may be new or used material, at the option of the Contractor. The sheet piling shall have a minimum section modulus as shown on the plans or in the approved alternate design, with a minimum yield strength of 265 MPa (38.5 ksi) unless otherwise specified. The sheeting, used by the Contractor, shall be identifiable and in good condition free of bends and other structural defects. The Contractor shall furnish a copy of the published sheet pile section properties to the Engineer for verification purposes. The Engineer's approval will be required prior to driving any sheeting. All driven sheeting not approved by the Engineer shall be removed at the Contractor's expense.

**Construction.** The Contractor shall verify locations of all underground utilities before driving any sheet piling. Any disturbance or damage to existing structures, utilities or other property, caused by the Contractor's operation, shall be repaired by the Contractor in a manner satisfactory to the Engineer at no additional cost to the Department. The Contractor shall be

responsible for determining the appropriate equipment necessary to drive the sheeting to the tip elevation(s) specified on the plans or according to the Contractor's approved design. The sheet piling shall be driven, as a minimum, to the tip elevation(s) specified, prior to commencing any related excavation. If unable to reach the minimum tip elevation, the adequacy of the sheet piling design will require re-elevation by the Department prior to allowing excavation adjacent to the sheet piling in question. The Contractor shall not excavate below the limits of excavation shown on the plans without the prior permission of the Engineer. The sheet piling shall remain in place.

When an obstruction is encountered, the Contractor shall notify the Engineer and upon concurrence of the Engineer, the Contractor shall begin working to break up, push aside, or remove the obstruction. An obstruction shall be defined as any object (such as but not limited to, boulders, logs, old foundations, etc,) where it's presence was not obvious or specifically noted on the plans prior to bidding, that cannot be driven through or around with normal driving procedures, but requires additional excavation or other procedures to remove or miss the obstruction.

**Method of Measurement.** The temporary sheet piling will be measured for payment in place in square meters (square feet). Any temporary sheet piling cut off, or driven to dimensions other than those shown on the contract plans without the written permission of the Engineer, shall not be measured for payment but shall be done at the contractor's expense.

If the Contractor is unable to drive the sheeting to the specified tip elevation(s) and can demonstrate that any further effort to drive it would only result in damaging the sheeting, then the Contractor shall be paid based on the plan quantity of temporary sheeting involved. However, no additional payment will be made for any walers, bracing, or other supplement to the temporary sheet piling, which may be required as a result of the re-evaluation in order to insure the original design intent was met.

**Basis of Payment**. This work will be paid for at the contract unit price per square meter (square foot) for TEMPORARY SHEET PILING (REMAIN IN PLACE)

Payment for any excavation performed in conjunction with this work will not be included in this item but shall be paid for as specified elsewhere in this contract.

Obstruction mitigation shall be paid for according to Article 109.04 of the Standard Specifications.

**INDOT - ANCHOR BOLT**

This item shall be performed at locations and per details shown on the plans, in accordance with the applicable portions of Section 711 of the Indiana Department of Transportation Standard Specifications and as directed by the engineer.

**Method of Measurement.** ANCHOR BOLT (INDIANA) will be measured for payment on per EACH basis.

**Basis of Payment.** Payment for ANCHOR BOLT (INDIANA) will be at the contract unit price per EACH, which price shall include all materials, labor and equipment to complete the work.

**INDOT - CONCRETE, A, SUBSTRUCTURE**

This item shall be performed at locations and per details shown on the plans, in accordance with the applicable portions of Section 702 of the Indiana Department of Transportation Standard Specifications and as directed by the engineer.

**Method of Measurement.** CONCRETE, A, SUBSTRUCTURE (INDIANA) will be measured for payment on per CU M basis.

**Basis of Payment.** Payment for CONCRETE, A, SUBSTRUCTURE (INDIANA) will be at the contract unit price per CU M, which price shall include all materials, labor and equipment to complete the work.

**INDOT - CONCRETE, C, SUPERSTRUCTURE**

This item shall be performed at locations and per details shown on the plans, in accordance with the applicable portions of Section 702 of the Indiana Department of Transportation Standard Specifications and as directed by the engineer.

**Method of Measurement.** CONCRETE, C, SUPERSTRUCTURE (INDIANA) will be measured for payment on per CU M basis.

**Basis of Payment.** Payment for CONCRETE, C, SUPERSTRUCTURE (INDIANA) will be at the contract unit price per CU M, which price shall include all materials, labor and equipment to complete the work.

**INDOT - EXCAVATION DRY**

This item shall be performed at locations and per details shown on the plans, in accordance with the applicable portions of Section 206 of the Indiana Department of Transportation Standard Specifications and as directed by the engineer.

**Method of Measurement.** EXCAVATION DRY (INDIANA) will be measured for payment on a per CU M basis.

**Basis of Payment.** Payment for EXCAVATION DRY (INDIANA) will be at the contract unit price per CU M, which price shall include all materials, labor and equipment to complete the work.

**INDOT - EXCAVATION FOUNDATION, UNCLASSIFIED**

This item shall be performed at locations and per details shown on the plans, in accordance with the applicable portions of Section 206 of the Indiana Department of Transportation Standard Specifications and as directed by the engineer.

**Method of Measurement.** EXCAVATION FOUNDATION, UNCLASSIFIED (INDIANA) will be measured for payment on a per CU M basis.

**Basis of Payment.** Payment for EXCAVATION FOUNDATION, UNCLASSIFIED (INDIANA) will be at the contract unit price per CU M, which price shall include all materials, labor and equipment to complete the work.

**INDOT - EXCAVATION WET**

This item shall be performed at locations and per details shown on the plans, in accordance with the applicable portions of Section 206 of the Indiana Department of Transportation Standard Specifications and as directed by the engineer.

**Method of Measurement.** EXCAVATION WET (INDIANA) will be measured for payment on a per CU M basis.

**Basis of Payment.** Payment for EXCAVATION WET (INDIANA) will be at the contract unit price per CU M, which price shall include all materials, labor and equipment to complete the work.

**INDOT - FIELD WELDED STUD SHEAR CONNECTOR**

This item shall be performed at locations and per details shown on the plans, in accordance with the applicable portions of Section 711 of the Indiana Department of Transportation Standard Specifications and as directed by the engineer.

**Method of Measurement.** FIELD WELDED STUD SHEAR CONNECTOR (INDIANA) will be measured for payment on per EACH basis.

**Basis of Payment.** Payment for FIELD WELDED STUD SHEAR CONNECTOR (INDIANA) will be at the contract unit price per EACH, which price shall include all materials, labor and equipment to complete the work.

**INDOT - PRESENT STRUCTURE, STR. NO. I-80-1-8460, REMOVE PORTIONS**

This item shall be performed at locations and per details shown on the plans, in accordance with the applicable portions of Section 202 of the Indiana Department of Transportation Standard Specifications and as directed by the engineer.

**Method of Measurement.** PRESENT STRUCTURE, STR. NO. I-80-1-8460, REMOVE PORTIONS (INDIANA) will be measured for payment on a per L SUM basis.

**Basis of Payment.** Payment for PRESENT STRUCTURE, STR. NO. I-80-1-8460, REMOVE PORTIONS (INDIANA) will be at the contract unit price per L SUM, which price shall include all materials, labor and equipment to complete the work.

**INDOT - PILE, CONCRETE, STEEL SHELL ENCASED, 6.35MM, 356MM**

This item shall be performed at locations and per details shown on the plans, in accordance with the applicable portions of Section 701 of the Indiana Department of Transportation Standard Specifications and as directed by the engineer.

**Method of Measurement.** PILE, CONCRETE, STEEL SHELL ENCASED, (INDIANA) 6.35mm, 356mm will be measured for payment on per METER basis.

**Basis of Payment.** Payment for PILE, CONCRETE, STEEL SHELL ENCASED, (INDIANA) 6.35mm, 356mm will be at the contract unit price per METER, which price shall include all materials, labor and equipment to complete the work.

**INDOT - PIPE, UNDERDRAIN, PERF., 1.63MM, 150MM**

This item shall be performed at locations and per details shown on the plans, in accordance with the applicable portions of Section 718 of the Indiana Department of Transportation Standard Specifications and as directed by the engineer.

**Method of Measurement.** PIPE, UNDERDRAIN, PERF., (INDIANA) 1.63mm, 150mm will be measured for payment on per METER basis.

**Basis of Payment.** Payment for PIPE, UNDERDRAIN, PERF., (INDIANA) 1.63mm, 150mm will be at the contract unit price per METER, which price shall include all materials, labor and equipment to complete the work.

**INDOT - REINFORCING BARS, EPOXY COATED**

This item shall be performed at locations and per details shown on the plans, in accordance with the applicable portions of Section 703 of the Indiana Department of Transportation Standard Specifications and as directed by the engineer.

**Method of Measurement.** REINFORCING BARS, EPOXY COATED (INDIANA) will be measured for payment on per KG basis.

**Basis of Payment.** Payment for REINFORCING BARS, EPOXY COATED (INDIANA) will be at the contract unit price per KG, which price shall include all materials, labor and equipment to complete the work.

**INDOT - RIPRAP, REVETMENT**

This item shall be performed at locations and per details shown on the plans, in accordance with the applicable portions of Section 616 of the Indiana Department of Transportation Standard Specifications and as directed by the engineer.

**Method of Measurement.** RIPRAP, REVETMENT (INDIANA) will be measured for payment on per SQ M basis.

**Basis of Payment.** Payment for RIPRAP, REVETMENT (INDIANA) will be at the contract unit price per SQ M, which price shall include all materials, labor and equipment to complete the work.

**INDOT - STRUCTURE BACKFILL**

This item shall be performed at locations and per details shown on the plans, in accordance with the applicable portions of Section 211 of the Indiana Department of Transportation Standard Specifications and as directed by the engineer.

**Method of Measurement.** STRUCTURE BACKFILL (INDIANA) will be measured for payment on a per CU M basis.

**Basis of Payment.** Payment for STRUCTURE BACKFILL (INDIANA) will be at the contract unit price per CU M, which price shall include all materials, labor and equipment to complete the work.

**INDOT - STRUCTURAL EXPANSION JOINT, SS**

This item shall be performed at locations and per details shown on the plans, in accordance with the applicable portions of Section 724 of the Indiana Department of Transportation Standard Specifications and as directed by the engineer.

**Method of Measurement.** STRUCTURAL EXPANSION JOINT, SS (INDIANA) will be measured for payment on per METER basis.

**Basis of Payment.** Payment for STRUCTURAL EXPANSION JOINT, SS (INDIANA) will be at the contract unit price per METER, which price shall include all materials, labor and equipment to complete the work.

**INDOT - SURFACE SEAL**

This item shall be performed at locations and per details shown on the plans, in accordance with the applicable portions of Section 709 of the Indiana Department of Transportation Standard Specifications and as directed by the engineer.

**Method of Measurement.** SURFACE SEAL (INDIANA) will be measured for payment on per L SUM basis.

**Basis of Payment.** Payment for SURFACE SEAL (INDIANA) will be at the contract unit price per L SUM, which price shall include all materials, labor and equipment to complete the work.

**INDOT - THREADED TIE BAR ASSEMBLY, EPOXY COATED**

This item shall be performed at locations and per details shown on the plans, in accordance with the applicable portions of Section 703 of the Indiana Department of Transportation Standard Specifications and as directed by the engineer.

The remainder of the bar splicer shall be delivered to the IDOT Bishop Ford Maintenance Yard (708) 331-4339 for storage.

The bars shall be enclosed in a water resistant wooden container of sufficient strength to withstand the anticipated handling of the threaded tie bar assemblies prior to reuse at a later date. The container shall be clearly stamped for the designated location of the threaded tie bar assembly use.

**Method of Measurement.** THREADED TIE BAR ASSEMBLY, EPOXY COATED (INDIANA) will be measured for payment on per EACH basis.

**Basis of Payment.** Payment for THREADED TIE BAR ASSEMBLY, EPOXY COATED (INDIANA) will be at the contract unit price per EACH, which price shall include furnishing an approved tie bar assembly, installing the stage I portion of the assembly and enclosing and delivery of the remaining portion of the assembly, which price shall include all materials, labor and equipment to complete the work.

**INDOT - TEST PILE, 356MM**

This item shall be performed at locations and per details shown on the plans, in accordance with the applicable portions of Section 701 of the Indiana Department of Transportation Standard Specifications and as directed by the engineer.

**Method of Measurement.** TEST PILE, 356mm (INDIANA) will be measured for payment on per EACH basis.

**Basis of Payment.** Payment for TEST PILE, 356mm (INDIANA) will be at the contract unit price per EACH, which price shall include all materials, labor and equipment to complete the work.

**EROSION CONTROL**
**EROSION AND SEDIMENT CONTROL MANAGER**
Effective: January 1, 2003 Revised: October 1, 2004

Add the following to Article 105.06:

Erosion and Sediment Control Manager (ESCM). The Contractor shall assign to the project an on-site full-time employee to serve in the capacity of ESCM. This employee shall be thoroughly experienced in all aspects of erosion and sediment control and construction. The ESCM shall have sufficient authority for the implementation of the approved erosion and sediment control schedules and methods of operation, including both on-site and off-site activities.

At least 10 days prior to beginning any work on this project, the name and credentials of the ESCM shall be submitted to the Engineer. Any changes in the ESCM shall require a resubmission of the above. The resubmission shall be timed to ensure that an ESCM is assigned to the project at all times. This ESCM shall be included in the cost of the various erosion control pay items.

**EROSION AND SEDIMENT CONTROL CALL OUT**
Effective: January 1, 2003

This work shall consist of the short notice mobilization of a work crew for the purpose of maintaining and repairing critical erosion and sediment control items when required to respond to unpredictable events beyond the Contractor's control. Upon receipt of a written notification of the a Request for Erosion and Sediment Control Call Out (RESCCO) from the Engineer, the Contractor shall have until the end of the next Working Day to perform the required work.

If the required work is not performed by the end of the next Working Day, the Request for Erosion and Sediment Control Call Out will also be considered the warning for an Erosion and Sediment Control Deficiency Deduction (ESCDD). The Erosion and Sediment Control Deficiency Deduction will be dated 2 Working Days after the date on the Request for Erosion and Sediment Control Call Out. The Erosion and Sediment Control Deficiency Deduction will be enforced as described herein.

| **Contractor Action** | **Department Action** |
|---|---|
| Receipt of RESCCO end of Day One. | Deliver RESCCO on Day One |
| Finish required Work end of Day Two. | Department measures work performed according to Erosion and Sediment Control Call Out Method of Measurement. |
| Finish required Work end of Day Three. | Department pays only standard pay items and does not apply to Erosion and Sediment Control Call Out Method of Measurement. |
| Finish required Work end of Day Four or later. | Department invokes ESCDD prior to Work Day Three, pays only standard work pay items, and does not apply to Erosion and Sediment Control Call Out Method of Measurement. |

Any individual RESCCO will not be applied towards work whose contract prices total more than $10,000 (ten thousand dollars) before the application of Article 280.06(l)."

Method of Measurement. This work will not be measured for payment separately, but included in the items of work performed, when indicated in a Request for Erosion and Sediment Control Call Out. Each RESCCO will be paid at a rate of 1.1 units for every 1.0 units of work measured and performed.

Basis of Payment. This work will be paid for at the contract unit price for the work items performed, measured as specified and will not be paid for separately

**EROSION AND SEDIMENT CONTROL SCHEDULE**
Effective: January 1, 2003

Add the following to the end of the first paragraph of Article 108.02:

The Progress Schedule shall also include the following listed items. The erosion and sediment control components of the Progress Schedule shall be referred to as the Erosion and Sediment Control Schedule.

The Erosion and Sediment Control Schedule shall include the following:

(a) Clearing of areas necessary for installation of perimeter controls specified in the Contract Documents.
(b) Construction of perimeter controls specified in the Contract Documents.
(c) Remaining clearing.
(d) Roadway grading (including off-site work).
(e) Structural Stabilization devices listed in the Storm Water Pollution Prevention Plan (SWPPP).
(f) Winter shutdown date and probable days lost to inclimate weather.
(g) Seeding dates.
(h) If applicable, utility installation and whether storm drains shall be used or blocked after construction.
(i) Final grading, landscaping, and stabilization.
(j) Removal of perimeter controls as required by plans.

**SURFACE ROUGHENING**
Effective: January 1, 2003

This Special Provision revises Section 250 (Seeding) of the Standard Specifications for Road and Bridge Construction, creating a requirement that steep slopes be surface roughened as part of the seed bed preparation.

After the first paragraph of Article 250.05 add the following paragraph:

All slopes 1:3 (vertical to horizontal) and steeper shall be surface roughened by tracking with tracked machinery. The machinery shall be operated up and down the slope to leave horizontal depressions in the prepared seed bed. Back-blading shall not be permitted during the final grading operation. The number of machinery passes shall be limited to minimize soil compaction.

After the third paragraph of Article 250.10 add the following paragraph:

Surface roughening will not be paid separately, but is included in the cost of Seeding, of the type specified.

**EROSION AND SEDIMENT CONTROLS**
Effective: January 1, 2003

This Special Provision revises Section 280 (Temporary Erosion Control) of the Standard Specifications for Road and Bridge Construction.

Include the following as the third paragraph of Article 280.01:

This work shall also include implementation and management of the approved Erosion and Sediment Control Schedules, method of operation weekly co-inspections, inspection following rainfalls, and preparation and adherence to the Erosion and Sediment Control Schedule. Removal of erosion and sediment control items will be by others in the future where shown on the Plans or as directed by the Engineer.

Revise Article 280.02 (f) to read:

(f) Silt Fence .....Article 1080.02

Add the following as Article 280.02:

(k) Course Aggregate……..……..……..Article 1004.01 gradation CA-3

(l) Geotextile Fabric….. ……..……..……..……Article 1080.03

(m) Seeding Class 2A…….Article 250.07 & 1081.04

(n) Excelsior Blanket……..……..Article 1081.10 (a)

(o) Riprap, Gradation 3 ……..……..…Article 1005.01

(p) Cellular Confinement Grid……Article 1080.06

Delete Article 280.04 (b) and replace with:

(b) Sediment Control, Silt Fence. This silt fence shall consist of a continuous silt fence adjacent to an area of construction to intercept sheet flow of water borne silt and sediment, and prevent it from leaving the area of construction.

The silt fence shall be supported on hardwood posts spaced on a maximum of 2.4 m (8 ft) centers. The bottom of the fabric shall be installed in a backfilled and compacted trench a minimum of 150 mm (6 in) deep, and securely attached to the hardwood post by a method approved by the Engineer. The minimum height above ground for all silt fence shall be 760 mm (30 in).

Add the following as Article 280.04:

(h) Sediment Control, Stabilized Construction Entrance. This work shall consist of the furnishing of all equipment, labor, and materials necessary for the installation of the stabilized construction entrances as shown on the Plans or as directed by the Engineer. Construction entrances shall be used in conjunction with the stabilization of construction roads and other exposed areas to reduce or eliminate the tracking of sediment onto public right-of-ways or streets.

Topsoil shall be removed, geotextile fabric placed, and the cellular confinement grid installed and staked according to the manufacturer's recommendations. Stabilized construction entrances shall be built to the lines and dimensions shown in the details at the locations shown in the Plans, or as directed by the Engineer. The cells shall be filled with aggregate base course using gradation CA-3. The aggregate base course shall be placed within the cellular confinement grid using the methods and equipment recommended by the manufacturer. The aggregate base course shall be placed by applicable portions for Section 351 of the Standard Specification. All surface water flowing or diverted toward the construction entrance shall be accounted for either by installation of a pipe culvert under the entrance, or if piping is impractical, a mountable berm will be permitted.

Sediment Control, Stabilized Construction Entrance Removal. This work shall consist of the removal of a stabilized construction entrance and all items necessary for the removal of a

stabilized construction entrance. This includes the under entrance pipe culvert or excess aggregate for the mountable berm, any aggregate radii abutting temporary pavement, cellular confinement grids, and all unnecessary aggregate within 5 m (16 ft) of the original lines and dimensions of which the entrance was constructed. All methods of removal shall be approved by the Engineer. Material shall be disposed of according to Article 202.03, or as directed by the Engineer.

(i) Erosion Control, Temporary Pipe Slope Drain. This work shall consist of furnishing of the equipment, labor, and materials necessary for the installation, maintaining and removal of pipe, anchor devices, filter fabric, and flared end sections to convey surface runoff down the face of un-stabilized slopes to minimize erosion on the slope face. Temporary Pipe Slope Drain shall be used in conjunction with temporary berms that direct runoff into the temporary pipe slope drain flared end section located at the top of the embankment, for the length of the embankment.

The temporary pipe slope drain shall be constructed as shown in the plans and shall outlet into a sediment trap or basin, or a stable conveyance system that leads to a sedimentation device, as approved by the Engineer. The temporary pipe slope drain, inlet, and outlet shall be securely anchored to the slope in such a manner to prevent any movement laterally and vertically. All methods of anchoring shall be approved by the Engineer. All connections are to be watertight. A flared end section shall be attached to the inlet end of the pipe and shall be relocated each time the pipe is extended. The height of the temporary berm at the location of the temporary pipe slope drain shall be at least 2 times the diameter of the pipe. To prevent erosion around the flared end section, geotextile fabric will be placed under the flared end section and shall extend 2 meters (6 feet) in front of it and up the front face of the temporary berm. This work shall be installed as shown in the Plans or as approved by the Engineer.

At the end of each construction day, temporary berms at the top edge of the embankment shall be constructed and each temporary pipe slope drain will be extended and the inlet reinstalled. These temporary berms shall be constructed as shown on the Plans or as directed by the Engineer.

(j) Erosion Control, Temporary Channel Diversion. This system consists of the furnishing of the equipment, labor, and materials required to install, maintain and remove the temporary channel diversion needed to carry the existing stream flow through or around a construction site while the permanent drainage structure is being installed. The temporary channel diversion will be stabilized as shown on the drawings and will be removed/filled once the permanent drainage structure is in place and stabilized.

All surfaces to be protected shall be graded and compacted. Prepared surfaces that become crusted shall be reworked to an acceptable condition prior to placing the geotextile fabric.

Geotextile Fabric Installation In-Stream. Geotextile fabric shall be applied with the length of roll laid parallel to the flow of the water. Start the installation with the initial strip placed in the center of the ditch to avoid an overlap in the center of the ditch. Where more than one width is required, lap joints shall be limited to one every 3 meters of width.

An anchor slot shall be placed at the upslope and downslope ends of the geotextile fabric perpendicular to the flow of water. At least 30 cm (12 in) of the end of the geotextile fabric shall be buried vertically in the anchor slot. The geotextile fabric shall be secured in the anchor slot by pins at 1 meter (3 feet) or less on center prior to burying. The soil shall be firmly compacted

against the geotextile fabric in the anchor slot. This shall be accomplished by placing the geotextile fabric into the slot, folding it over to expose the underside, pinning the fabric through both layers, backfilling the anchor slot, and compacting the soil.

Pins shall be a 5 mm diameter x 450 mm (3/16 in x 18 in) long wire with a 40 mm (1.5 in) washer attached and shall be driven flush to geotextile fabric surface.

Successive lengths of geotextile fabric shall be overlapped at least 1 meter (3 feet) with the upstream length on top. Pin the overlap by placing 3 pins evenly spaced across the upslope end, center, and downslope end of the overlap, totaling 9 pins for each overlap. Check slots, oriented perpendicular to the flow of water, shall be constructed by placing a tight fold at least 20 cm (8 in) vertically into the soil spaced no more than 8 meters (27 feet) on center. Pin the geotextile fabric in the check slot at each edge overlap and in the center of the geotextile fabric.

Side edges of temporary diversion channel geotextile fabric shall terminate on horizontal shelves running parallel to the flow of water for the full length of the ditch. Edges of the geotextile fabric shall be pinned at 1 meter (3 feet) on center and buried in the Sediment Control, Silt Fence trench.

The Contractor shall maintain the temporary diversion channel until all work on the contract has been completed and accepted. Maintenance shall consist of the repair of areas damaged by any cause.

Restoration of the Temporary channel shall include cleaning any sediment from the channel and backfilling it with approved embankment.

The location of the temporary channel diversion shall be as shown in the plans, or as directed by the Engineer. Water shall not be diverted through the diversion channel until it is adequately protected with geotextile fabric.

(k) Same-Day Stabilization. This work is to be implemented after the initial perimeter controls are in place and concurrently placed with the Contractor's daily operations. These critical areas shall be designated for Same-Day Stabilization as shown on the Plans.

Same-Day Stabilization may consist of either temporary erosion control measures or the permanent landscaping as indicated on the Plans. The permanent landscaping shall be implemented for the Same-Day Stabilization whenever possible. The placing of permanent landscaping intended to be removed at a later date shall receive prior approval by the Engineer.

The Contractor shall stage his work so that portions of the slopes and ditches can be brought to finish grade, topsoil placed, and landscaped prior to the end of the workday, whenever possible.

In either case, the work zone must be left in such condition that the disturbed areas are stabilized. Temporary erosion control measures consist of tarps sufficiently staked to the ground or other erosion controls approved by the Engineer. Measures shall be taken to control sediment -laden water and on-site runoff into dewatering or sedimentation devices on a daily basis.

The Contractor shall be responsible for coordinating his operations with the work of any subcontractors, to insure that stabilization is performed the same day that the disturbance occurs. The performance of Same-Day Stabilization is also subject to the penalties of the Erosion and Sediment Control Deficiency Deduction described herein.

(l) Erosion Control, Diversion Dike and Temporary Ditch. This work shall consist of the construction and maintenance of a temporary ridge of compacted soil, located to intercept and divert runoff to a stabilized outlet or to intercept sediment-laden water and divert it to a sediment-trapping device. Diversion Dikes or Temporary Ditches shall be constructed to the lines and dimensions shown on the plans or as directed by the Engineer.

The diversion dike shall be stabilized through the use of Erosion Control Blanket and Temporary Erosion Control Seeding. Diversion dikes intended for use longer than one construction season may be seeded with Seeding Class 2A, or as directed by the Engineer. Excelsior Blanket shall be installed in the manner described for placement in ditches, with the direction of water flow being parallel to the length of the diversion dike.

The embankment used to construct the diversion dike shall be placed along an alignment which all trees, brush, stumps, and other obstructions have been removed that would interfere with the proper functioning of the diversion dike. The embankment shall be constructed by applicable portions for Section 205 of the Standard Specification.

(m) Sediment Control, Dewatering Basins. This work shall consist of the construction, maintenance, and removal or filling and compacting of the dewatering basins. A dewatering basin shall be installed wherever the Contractor is removing and discharging water from excavated areas on the construction site and the water is not being routed through an adequately sized sediment trap or sediment basin, as determined by the Engineer. The purpose of the basin is to temporarily store the discharged water and to release it in a manner that causes the sediment-laden water to be filtered prior to release into a natural drainage way or stabilized conveyance. Dewatering basins shall be located above the water table whenever possible. Whenever possible the excavated material shall be placed in ring around the dewatering basin. An aggregate spillway consisting of class 3 riprap, shall be constructed as shown in the plan detail and lined with geotextile fabric.

The volume required to be stored is dependent upon the pumping rate and the amount of sediment in the water. Locations of the dewatering basins are as shown on the Plans or as approved by the Engineer. All methods of placing embankment must be approved by the Engineer.

Dewatering Basins shall be filled in or removed by a method approved by the Engineer. Whenever possible, the material excavated from the dewatering basin shall be the material returned to the dewatering basin. Final dewatering shall not be made directly into a stream or channel All other fill materials shall require the approval of the Engineer. Material shall be disposed of according to Article 202.03, or as directed by the Engineer.

(n) Sediment Control, Stone Outlet Structure Sediment Trap. This work shall consist of the furnishing all of the equipment, labor and materials required to install and maintain a stone outlet structure sediment trap, as shown on the Details in the Plans, or as directed by the Engineer. Riprap, placed over a geotextile fabric, shall be used to construct the stone outlet structure.

Add the following to Article 280.05:

Sediment Control, Silt Fence Maintenance shall consist of maintaining silt fence that has fallen down or become ineffective as a result of natural forces. This work shall include the removal of sediment buildup from behind the silt fence when the sediment has reached a level of half the

above ground height of the fence, or as directed by the Engineer. Silt fence damaged by the Contractor's operations or negligence shall be repaired at the Contractor's expense, or as directed by the Engineer.

Sediment Control, Stabilized Construction Entrance Maintenance shall consist of maintaining stabilized construction entrances that have become ineffective as a result of standard operations and natural forces. This work will include will include the removal and proper disposal of excess materials and the delivery and placing of aggregate in the manner described in Sediment Control, Stabilized Construction Entrance.

Sediment Control, Drainage Structure Inlet Filter Cleaning shall consist of cleaning sediment out of a drainage structure inlet filter when directed by the Engineer. This cleaning work is to be periodically performed as directed by the Engineer, for the duration of the use of each drainage structure inlet filter assembly. The Engineer will be the sole judge of the need for cleaning, based on the rate that debris and silt is collected at each inlet filter location.

Cleaning of the inlet filter shall consist of inspecting, cleaning (includes removal and proper disposal of debris and silt that has accumulated in the filter fabric bag), by vactoring, removing and dumping, or any other method approved by the Engineer.

280.06 Method of Measurement. Revise Article 280.06 (a) to read:

(a) Excavation for Sediment and Dewatering Basins, Temporary Ditches, Diversion Dikes, and Dewatering Basins. The volume of excavation for sediment and dewatering basins, temporary ditches, and diversions dikes will be measured for payment in place and the volume computed in cubic meters (cubic yards).

Revise Article 280.06 (c) to read:

(c) Sediment Control, Silt Fence. This work will be measured for payment in meters (feet) in place and removed. Silt fence designated not to be removed, by the Plans or the Engineer will be measured for payment by this item, as well.

Sediment Control, Silt Fence Maintenance. This work will be measured for payment, each incident, in meters (feet) of silt fence cleaned, re-erected, or otherwise maintained.

Add the following as Article 280.06:

(h) Sediment Control, Stabilized Construction Entrance. This work will be measured for payment by the outside dimensions of cellular confinement grid and the area calculated in square meters (square yards). All grading, excavation, and embankment necessary to construct the entrance shall not be paid for separately, but included in the cost of Sediment Control, Stabilized Construction Entrance. Temporary pavement placement shall be paid for separately. Placement of the Pipe Culvert, of the diameter specified, shall be paid for separately. If additional Trench Backfill should be required for placement of the Pipe Culvert, it shall be paid for separately.

Sediment Control, Stabilized Construction Entrance Maintenance. This work will be measured for payment to the outside dimensions of the material removed and the area calculated in square meters (square yards). All excavation and grading necessary to remove and replace the sediment fill aggregate shall not paid for separately, but shall be included in the cost of Sediment Control, Stabilized Construction Entrance Maintenance.

Sediment Control, Stabilized Construction Entrance Removal. This work will be measured for payment for each stabilized construction entrance removed. Removal of temporary pavement and temporary pipe culverts shall not be paid for separately, but included in the cost of Sediment Control, Stabilized Construction Entrance Removal.

(i) Erosion Control, Temporary Pipe Slope Drains. This work will be measured for payment by each complete system installed and maintained, regardless of pipe diameter and length. This work will be measured only once per location installed. All connections, anchors, extensions, geotextile materials, and temporary berms used to install, reinstall, or operate the temporary pipe slope drains will not be measured for payment.

(j) Erosion Control, Temporary Channel Diversion. This work will be measured for payment in along the centerline of the channel in meters (feet) of temporary channel diversion installed, maintained, and removed. Earth Excavation, Earth Plug, Riprap, geotextile materials for channel lining, and backfill will not be measured separately for payment, but be included in cost of temporary channel diversion. Sediment Control, Silt Fence shall be paid for separately.

(k) Same-Day Stabilization. This work will not be measured for payment, but included in the cost of the items utilized shown on the Plans or as directed by the Engineer.

(l) Sediment Control, Stone Outlet Structure Sediment Trap. This work will not be measured for payment separately, but included in the price for each item of work performed as shown in the Details in the Plans.

Sediment Control, Drainage Structure Inlet Filter Cleaning. This work will be measure for payment each time that the cleaning work is performed at each of the drainage structure inlet filter locations.

Revise Article 280.07 (a) to read:

(a) Excavation for Sediment and Dewatering Basins, Temporary Ditches, and Diversion Dikes. This work will be paid for at the contract unit price per cubic meter (cubic yard) for EARTH EXCAVATION FOR EROSION CONTROL. The various required linings shall be paid for at the contract unit price for the various items of work as detailed on the plans.

Revise Article 280.07 (c) to read:

(c) Sediment Control, Silt Fence. This work will be paid for at the contract unit price per meter (feet) for SEDIMENT CONTROL, SILT FENCE.

Sediment Control, Silt Fence Maintenance. This work will be paid for at the contract unit price per meter (feet) for SEDIMENT CONTROL, SILT FENCE MAINTENANCE per each occurrence.

Revise Article 280.07 (h) to read:

(h) Maintenance. Maintenance of temporary erosion and sediment control systems, including repair of the various systems, removal of entrapped sediment and cleaning of any silt filter fabric will be paid for according to Article 109.04, unless otherwise specified. The sediment shall be removed as directed by the Engineer during the contract period and disposed of according to Article 202.03.

Add the following as Article 280.07:

(i) Sediment Control, Stabilized Construction Entrance. This work will be paid for at the contract unit price per square meter (square yard), for SEDIMENT CONTROL, STABILIZED CONSTRUCTION ENTRANCE. Pipe Culverts shall be paid for in accordance to Article 542.11 of the Standard Specifications. Trench Backfill shall be paid for in accordance to Article 208.04.

Sediment Control, Stabilized Construction Entrance Maintenance. This work will be paid for at the contract unit price per square meter (square yard), for SEDIMENT CONTROL, STABILIZED CONSTRUCTION ENTRANCE MAINTENANCE.

Sediment Control, Stabilized Construction Entrance Removal. This work will be paid for at the contract unit price each, for SEDIMENT CONTROL, STABILIZED CONSTRUCTION ENTRANCE REMOVAL.

(j) Erosion Control, Temporary Pipe Slope Drains. This work will be paid for at the contract unit price each, for EROSION CONTROL, TEMPORARY PIPE SLOPE DRAINS.

(k) Erosion Control, Temporary Channel Diversion. This work will be paid for at the contract unit price, per meter (feet), for EROSION CONTROL, TEMPORARY CHANNEL DIVERSION.

(l) Same-Day Stabilization. This work will be paid for at the contract unit price for the various items of work performed and will not be paid for separately.

(m) Sediment Control, Stone Outlet Structure Sediment Trap. This work will be paid for at the contract unit price for the work measured and will not be paid for separately. Riprap will be paid for according to Article 281.07. Earth Excavation for Erosion Control will be paid for according to Article 280.07 (a)

(n) Sediment Control, Drainage Structure Inlet Filter Cleaning. This work will be paid for at the contract unit price per each occurrence for SEDIMENT CONTROL, DRAINAGE STRUCTURE INLET FILTER CLEANING.

**GEOTEXTILE FABRIC MATERIALS**
Effective: January 1, 2003

Add the following to Article 1080.02:

Sediment Control, Silt Fence fabric shall conform to the specifications of AASHTO M288-00 for Temporary Silt Fence, $<$ 50% elongation, unsupported. This fabric shall be 90 cm (36 in) in width.

Certification. The manufacturer shall furnish a certification with each shipment of silt fence material, stating the amount of product furnished, and that the material complies with these requirements.

Sediment Control, Silt Fence support posts shall be of 5x5 cm (2x2 inch) nominal hardwood, a minimum of 1.2 m (4.0 ft) long.

Add the following Article to Section 1080:

1080.06 Cellular Confinement Grid.

Geotextile Fabric.....AASHTO M288-00, Class 3 Separation, ≥ 50% elongation

Cellular Confinement Grid:

| | |
|---|---|
| Maximum Cell Length | 315 mm |
| Maximum Cell Width | 299 mm |
| Cell Depth | 200 mm |
| Nominal Cell Area | 460 $cm^2$ |
| Cells per $m^2$ | 21.7 cells |

Certification. The manufacturer shall furnish a certification with each shipment of cellular confinement grid, stating the amount of product furnished, and that the material complies with these requirements.

**TEMPORARY SOIL RETENTION SYSTEM**

Effective: December 30, 2002

Description. This work shall consist of designing, furnishing, installing, adjusting for stage construction when required and subsequent removal of the temporary soil retention system according to the dimensions and details shown on the plans and in the approved design submittal.

General. The temporary soil retention system shall be designed by the Contractor as a minimum, to retain the exposed surface area specified in the plans or as directed by the Engineer.

The design calculations and details for the temporary soil retention system proposed by the Contractor shall be submitted to the Engineer for approval. The calculations shall be prepared and sealed by an Illinois Licensed Structural Engineer. This approval will not relieve the Contractor of responsibility for the safety of the excavation. Approval shall be contingent upon acceptance by all involved utilities and/or railroads.

Construction. The Contractor shall verify locations of all underground utilities before installing any of the soil retention system components or commencing any excavation. Any disturbance or damage to existing structures, utilities or other property, caused by the Contractor's operation, shall be repaired by the Contractor in a manner satisfactory to the Engineer at no additional cost to the Department. The soil retention system shall be installed according to the Contractor's approved design, or as directed by the Engineer, prior to commencing any related excavation. If unable to install the temporary soil retention system as specified in the approved design, the Contractor shall have the adequacy of the design re-evaluated. Any reevaluation shall be submitted to the Engineer for approval prior to commencing the excavation adjacent to the area in question. The Contractor shall not excavate below the maximum excavation line shown in the approved design without the prior permission of the Engineer. The temporary soil retention system shall remain in place until the Engineer determines it is no longer required.

The temporary soil retention system shall be removed and disposed of by the Contractor when directed by the Engineer. When allowed, the Contractor may elect to cut off a portion of the temporary soil retention system leaving the remainder in place. The remaining temporary soil retention system shall be removed to a depth which will not interfere with the new construction, and as a minimum, to a depth of 300 mm (12 in.) below the finished grade, or as directed by the Engineer. Removed system components shall become the property of the Contractor.

When an obstruction is encountered, the Contractor shall notify the Engineer and upon concurrence of the Engineer, the Contractor shall begin working to break up, push aside, or remove the obstruction. An obstruction shall be defined as any object (such as but not limited to, boulders, logs, old foundations etc.) where it's presence was not obvious or specifically noted on the plans prior to bidding, that cannot be driven or installed through or around, with normal driving or installation procedures, but requires additional excavation or other procedures to remove or miss the obstruction.

Method of Measurement. The temporary soil retention system furnished and installed according to the Contractor's approved design or as directed by the Engineer will be measured for payment in place, in square meters (square feet). The area measured shall be the vertical exposed surface area envelope of the excavation supported by temporary soil retention system.

Any temporary soil retention system cut off, left in place, or installed beyond those dimensions shown on the contract plans or the approved contractor's design without the written permission of the Engineer, shall not be measured for payment but shall be done at the contractor's own expense.

Basis of Payment. This work will be paid for at the contract unit price per square meter (square foot) for TEMPORARY SOIL RETENTION SYSTEM.

Payment for any excavation, related solely to the installation and removal of the temporary soil retention system and/or its components, shall not be paid for separately but shall be included in the unit bid price for TEMPORARY SOIL RETENTION SYSTEM. Other excavation, performed in conjunction with this work, will not be included in this item but shall be paid for as specified elsewhere in this contract.

Obstruction mitigation shall be paid for according to Article 109.04 of the Standard Specifications.

**AUTHORITY OF RAILROAD ENGINEER (BDE)**
Effective: July 1, 2004

Revise Article 105.02 of the Standard Specifications to read:

"**105.02 Authority of Railroad Engineer.** Whenever the safety of railroad traffic is concerned, the Railroad Engineer will have jurisdiction over safety measures to be taken and his/her decision as to the methods, procedures, and measures used shall be final, and any and all Contractors performing work near or about the railroad shall be governed by such decision. Instructions to the Contractor by the Railroad Engineer will be given through the Engineer. Work ordered as specified herein will be classified and paid for according to Article 104.02. Work performed for the Contractor's convenience will not be paid for separately but shall be considered as included in the contract."

**BITUMINOUS BASE COURSE / WIDENING SUPERPAVE**
Effective: April 1, 2002 Revised: April 1, 2004

Description. This work shall consist of constructing bituminous base course Superpave and bituminous concrete base course widening Superpave according to Sections 355 and 356

respectively, of the Standard Specifications and the special provision, “Quality Control/Quality Assurance of Bituminous Concrete Mixtures” except as modified herein.

Revise Article 355.02(d) of the Standard Specifications to read:

" (d) RAP Material (Note3)"

Revise Note 2 of Article 355.02 of the Standard Specifications to read:

" Note 2. Unless otherwise specified on the plans, the bituminous material shall be performance graded (PG) asphalt cement (AC) , PG58-22. When more than 15 percent RAP is used, a softer PG binder may be required as determined by the Engineer. When the pavement has a structural number ($D_t$) of 3.00 or less, the low temperature grade of the asphalt cement shall be lowered one grade (i.e. PG58-28 replaces PG58-22)."

Add the following to the end Article 355.02 of the Standard Specifications:

" Note 3. RAP shall meet the requirements of the special provision "RAP for Use in Bituminous Concrete Mixtures"."

Revise Article 355.05 of the Standard Specifications to read:

"**355.05 Mixture Design.** The Contractor shall submit mix designs for approval, for each required mixture. Mix designs shall be developed by Level III personnel who have completed the course, “Superpave Mix Design Upgrade”. The mixtures shall be designed according to the respective Illinois Modified AASHTO references listed below:

AASHTO MP 2 Standard Specification for Superpave Volumetric Mix Design

AASHTO R 30 Standard Practice for Mixture Conditioning of Hot-Mix Asphalt (HMA)

AASHTO PP 28 Standard Practice for Designing Superpave HMA

AASHTO T 209 Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures

AASHTO T 312 Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor

AASHTO T 308 Determining the Asphalt Content of Hot Mix Asphalt (HMA) by the Ignition Method

(a) Job Mix Formula (JMF). The JMF shall be according to the following limits:

| Ingredient | Percent by Dry Weight |
|---|---|
| Aggregate | 93.0 to 96.0 |
| Asphalt Cement | 4.0 to 7.0 |
| Dust/AC Ratio | 1.4 |

When RAP material is being used, the JMF shall be according to the following limits:

| Ingredient | Percent by Dry Weight |
|---|---|
| Virgin Aggregate(s) | 46.0 to 96.0 |
| RAP Material(s) (Note 1) | 0 to 50 |
| Mineral Filler (if required) | 0 to 5.0 |
| Asphalt Cement | 4.0 to 7.0 |
| Dust/AC Ratio | 1.4 |

Note 1. If specified on the plans, the maximum percentage of RAP shall be as specified therein.

It is recommended that the selected combined aggregate gradation not pass through the restricted zones specified in Illinois Modified AASHTO MP 2.

Bituminous concrete binder course Superpave mixture IL-25.0 or IL-19.0 meeting the requirements of the special provision, “Superpave Bituminous Concrete Mixtures" may also be used. The minimum compacted lift thickness specified therein shall apply.

(b) Volumetric Requirements.

| **Design Compactive Effort** | **Design Air Voids Target (%)** |
|---|---|
| $N_{DES}$ =50 | 2.0 |

(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 using 4 in. Marshall bricks. To be considered acceptable by the Engineer as a mixture not susceptible to stripping, the ratio of conditioned to unconditioned split tensile strengths (TSR) shall be equal to or greater than 0.75. Mixtures, either with or without an additive, with TSR values less than 0.75 will be considered unacceptable.

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. The liquid additive shall be selected from the Department's list of approved additives and may be limited to those which have exhibited satisfactory performance in similar mixes.

Dry hydrated lime shall be added at a rate of 1.0 to 1.5 percent by weight of total dry aggregate. Slurry shall be added in such quantity as to provide the required amount of hydrated lime solids by weight of total dry aggregate. The exact rate of application for all anti-stripping additives will be determined by the Engineer. The method of application shall be according to Article 406.12 of the Standard Specifications."

Revise Article 355.06 of the Standard Specifications to read:

"**355.06 Mixture Production.** The asphalt cement shall be transferred to the asphalt tanks and heated to a temperature of 120 °C (250 °F) to 175 °C (350 °F). If the loading temperature exceeds 175 °C (350 °F), the asphalt shall not be used until it has cooled to 175 °C (350 °F). Wide variations in temperature which affect the amount of asphalt delivered will not be permitted.

When a hot-mix plant conforming to Article 1102.01 is used, the aggregate shall be dried and heated in the revolving dryer to a temperature of 120 °C (250 °F) to 175 °C (350 °F).

The aggregate and bituminous material used in the bituminous aggregate mixture shall be measured separately and accurately by weight or by volume. When the aggregate is in the mixer, the bituminous material shall be added and mixing continued for a minimum of 30 seconds and until a homogeneous mixture is produced in which all particles of the aggregate are coated. The mixing period, size of the batch and the production rate shall be approved by the Engineer.

The ingredients shall be heated and combined in such a manner as to produce a mixture which, when discharged from the mixer, shall be workable and vary not more 10 °C (20 °F) from the temperature set by the Engineer.

When RAP material(s) is used in the bituminous aggregate mixture, the virgin aggregate(s) shall be dried and heated in the dryer to a temperature that will produce the specified resultant mix temperature when combined with the RAP material.

The heated virgin aggregates and mineral filler shall be combined with RAP material in such a manner as to produce a bituminous mixture which when discharged from the mixer shall not vary more than 15 °C (30 °F) from the temperature set by the Engineer. The combined ingredients shall be mixed for a minimum of 35 seconds and until a homogeneous mixture as to composition and temperature is obtained. The total mixing time shall be a minimum of 45 seconds consisting of dry and wet mixing. Variation in wet and dry mixing times may be permitted, depending on the moisture content and amount of salvaged material used. The mix temperature shall not exceed 175 °C (350 °F). Wide variations in the mixture temperature will be cause for rejection of the mix.

(a) Personnel. The QC Manager and Level I Technician shall have successfully completed the Department's "Superpave Field Control Course".

(b) Required Tests. Testing shall be conducted to control the production of the bituminous mixture using the test methods identified and performed at a frequency not less than indicated in the following table.

| Parameter | Frequency of Tests<br>Non-Class I Mixtures | Test Method |
|---|---|---|
| Aggregate Gradation<br><br>Hot bins for batch and continuous plants.<br><br>Individual cold-feeds or combined belt-feed for drier-drum plants.<br><br>(% passing seives:<br>12.5 mm (1/2 In.),<br>4.75 mm (No. 4),<br>75 µm (No. 200)) | 1 gradation per day of production.<br><br>The first day of production shall be washed ignition oven test on the mix. Thereafter, the testing shall alternate between dry gradation and washed ignition oven test on the mix.<br><br>The dry gradation and the washed ignition oven test results shall be plotted on the same control chart. | Illinois Procedure (See Manual of Test Procedures for Materials). |

| | | |
|---|---|---|
| Asphalt Content by ignition oven (Note 1.) | 1 per day | Illinois-Modified AASHTO T 308 |
| Air Voids<br><br>Bulk Specific Gravity of Gyratory Sample<br><br>Maximum Specific Gravity of Mixture | <br><br>1 per day<br><br>1 per day | <br><br>Illinois-Modified AASHTO T 312<br><br>Illinois-Modified AASHTO T 209 |

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

During production, the ratio of minus 75 µm (#200) sieve material to total asphalt cement shall be not less than 0.6 nor more than 1.6, and the moisture content of the mixture at discharge from the mixer shall not exceed 0.5 percent. If at any time the ratio of minus 75 µm (#200) material to asphalt or moisture content of the mixture falls outside the stated limits, production of the mix shall cease. The cause shall be determined and corrective action satisfactory to the Engineer shall be initiated prior to resumption of production.

During production, mixture containing an anti-stripping additive will be tested by the Engineer for stripping according to Illinois Modified AASHTO T 283. If the mixture fails to meet the TSR criteria for acceptance, no further mixture will be accepted until the Contractor takes such action as is necessary to furnish a mixture meeting the criteria.

(c) Control Charts/Limits. Control charts/limits shall be according to QC/QA requirements for Non-Class I Mixtures, except air voids shall be plotted on the control charts within the following control limits:

| Air Void Control Limits | |
|---|---|
| Mixture | Individual Test |
| Shoulders | ± 1.2 % |
| Others | ± 1.2 %” |

Revise Article 355.08 of the Standard Specifications to read:

“ **355.08 Placing.** The bituminous mixture shall be placed with a spreading and finishing machine. The minimum compacted thickness of each lift shall be according to the following table:

| Nominal Maximum Aggregate Size of Mixture | Minimum Compacted Lift Thickness |
|---|---|
| CA 10 - 19 mm (3/4 in.) | 57 mm (2 1/4 in.) |
| CA 6 – 25 mm (1 in.) | 76 mm (3 in.) |

The maximum compacted thickness of each lift shall be 100 mm (4 in.). If the Contractor elects to substitute an approved vibratory roller for one of the required rollers, the maximum compacted thickness of the each lift, excluding the top lift, may be increased to 150 mm (6 in.) provided the required density is obtained.

The surface of each lift shall be clean and dry before succeeding lifts are placed."

Revise Article 355.13 of the Standard Specifications to read:

" **355.13 Basis of Payment**. This work will be paid for at the contract unit price per square meter (square yard) for BITUMINOUS BASE COURSE SUPERPAVE of the thickness specified."

Revise Article 356.02 of the Standard Specifications to read:

" **356.02 Materials.** The materials for the bituminous concrete mixture shall meet the requirements of Article 355.02, be designed according to Article 355.05 and produced according to Article 355.06. Bituminous concrete binder course Superpave mixture IL-25.0 or IL-19.0meeting the requirements of the special provision, "Superpave Bituminous Concrete Mixtures" may also be used. The minimum compacted lift thickness specified therein shall apply."

Revise the first paragraph of Article 356.06 of the Standard Specifications to read:

" **356.06 Base Course Widening.** The bituminous concrete mixture shall be transported according to Article 406.14."

Revise the second sentence of the fifth paragraph of Article 356.06 of the Standard Specifications to read:

" The minimum compacted thickness of each lift shall be according to the table shown in Article 355.08."

Revise the first paragraph of Article 356.11 of the Standard Specifications to read:

" **356.11 Basis of Payment**. Where the Department requires that bituminous concrete be used, this work will be paid for at the contract unit price per square meter (square yard) for BITUMINOUS CONCRETE BASE COURSE WIDENING SUPERPAVE of the thickness specified."

**BITUMINOUS CONCRETE SURFACE COURSE (BDE)**

Effective: April 1, 2001 Revised: April 1, 2003

Replace the fourth paragraph of Article 406.23(b) of the Standard Specifications with the following:

"Mixture for cracks, joints, flangeways, leveling binder (machine method), leveling binder (hand method) and binder course in excess of 103 percent of the quantity specified by the Engineer will not be measured for payment.

Surface course mixture in excess of 103 percent of adjusted plan quantity will not be measured for payment. The adjusted plan quantity for surface course mixtures will be calculated as follows:

Adjusted Plan Quantity = C x quantity shown on the plans or as specified by the Engineer.

where C = metric: $C = \frac{G_{mb} \times 24.99}{U}$ English: $C = \frac{G_{mb} \times 46.8}{U}$

and where:

$G_{mb}$ = average bulk specific gravity from approved mix design.
U = Unit weight of surface course shown on the plans in kg/sq m/25 mm (lb/sq yd/in.), used to estimate plan quantity.
24.99 = metric constant.
46.8 = English constant.

If project circumstances warrant a new surface course mix design, the above equations shall be used to calculate the adjusted plan quantity for each mix design using its respective average bulk specific gravity."

**BRIDGE DECK CONSTRUCTION (BDE)**
Effective: April 1, 2002 Revised: April 1, 2004

Add the following to Article 503.03 of the Standard Specifications:

"(h). Fogging Equipment .....1103.17(k)"

Add the following after the first sentence of the second paragraph to Article 503.07 of the Standard Specifications:

"When placing Class BD concrete, the discharge end of the pump shall have attached an "S" shaped flexible or rigid conduit, a 90 degree elbow with a minimum of 3 m (10 ft) of flexible conduit placed parallel to the deck, or a similar configuration approved by the Engineer."

Add the following after the second sentence of the ninth paragraph of Article 503.07 of the Standard Specifications:

"When consolidating concrete in bridge decks, the vibrator shall be vertically inserted into the concrete for 3 - 5 seconds, or for a period of time determined by the Engineer."

Add the following after the first paragraph of Article 503.17 of the Standard Specifications:

"For the bridge deck pour, fogging equipment shall be in operation unless the evaporation rate is less than 0.5 kg/sq m/hour (0.1 lb/sq ft/hour) and the Engineer gives permission to turn off the equipment. The evaporation rate shall be determined according to the figure in the Portland Cement Association's publication, "Design and Control of Concrete Mixtures" (refer to the section on plastic shrinkage cracking). The Contractor shall provide temperature, relative humidity, and wind speed measuring equipment.

The fogging equipment shall be adjusted to adequately cover the entire width of the pour.

If there is a delay of more than ten minutes during bridge deck placement, wet burlap shall be used to protect the concrete until operations resume.

Concrete placement operations shall be coordinated to limit the distance between the point of concrete placement and concrete covered with cotton mats for curing. The distance shall not exceed 10.5 m (35 ft). For bridge deck widths greater than 15 m (50 ft), the distance shall not exceed 7.5 m (25 ft)."

Add the following to the end of the first paragraph of Article 503.17(b) of the Standard Specifications to read:

"The concrete in these areas shall be struck off during the deck pour and excess material from the finishing machine shall not be incorporated."

In the Coarse Aggregate Gradation table of Article 1004.01(c) of the Standard Specifications revise the percent passing the 12.5 mm (1/2 in.) sieve for gradation CA 7 to "45±15[4/ 9/]".

In the Coarse Aggregate Gradation table of Article 1004.01(c) of the Standard Specifications revise the percent passing the 12.5 mm (1/2 in.) sieve for gradation CA 11 to "45±15[6/ 9/]".

Add the following to the Coarse Aggregate Gradation table of the Standard Specifications:

"9/ When Class BD concrete is to be pumped, the coarse aggregate gradation shall have a minimum of 45 percent passing the 12.5 mm (1/2 in.) sieve. The Contractor may combine two or more coarse aggregate sizes, consisting of CA-7, CA-11, CA-13, CA-14, and CA-16, provided a CA-7 or CA-11 is included in the blend."

Revise Article 1020.05(d) of the Standard Specifications to read:

"(d) Class BD Concrete. The maximum mortar factor shall be 0.86."

Add the following to Article 1103.17 of the Standard Specifications:

"(k) Fogging Equipment. Fogging equipment shall consist of a mechanically operated, pressurized system using a triple headed nozzle or an equivalent nozzle. The fogging nozzle shall be capable of producing a fine fog mist that will increase the relative humidity of the air just above the fresh concrete surface without accumulating any water on the concrete. The fogging equipment shall be mounted behind the roller and pan of finishing machine or on a separate foot bridge. Controls shall be designed to vary the volume of water flow, be easily accessible and immediately shut off the water when in the off position. Hand held fogging equipment will not be allowed."

**CHAIR SUPPORTS (BDE)**

Effective: November 1, 2002 Revised: November 2, 2002

Revise the fourth and fifth paragraphs of Article 421.06(a) to read:

"Pavement reinforcement shall be supported on steel chair supports at the depth below the pavement surface as indicated on the plans. The Contractor shall submit prints of shop drawings showing details of chair supports and their spacing to the Engineer and obtain the Engineer's approval before any fabrication is begun.

The chair supports shall possess the necessary rigidity and be spaced at intervals close enough to hold the reinforcement at the proper depth and position. However, the spacing of the chair supports shall not exceed 900 mm (3 ft) transversely or 1.2 m (4 ft) longitudinally. The chair supports shall be fabricated with sand plates."

**COARSE AGGREGATE FOR TRENCH BACKFILL, BACKFILL AND BEDDING (BDE)**

Effective: April 1, 2001 Revised: November 1, 2003

Revise Article 208.02 of the Standard Specifications to read:

"**208.02 Materials.** Materials shall be according to the following Articles of Section 1000 – Materials:

(a) Fine Aggregate (Note 1) ..... 1003.04
(b) Coarse Aggregate (Note 2) ..... 1004.06

Note 1. The fine aggregate shall be moist to the satisfaction of the Engineer.

Note 2. The coarse aggregate shall be wet to the satisfaction of the Engineer."

Revise the first sentence of the second paragraph of subparagraph (b) in Article 208.03 of the Standard Specifications to read:

"Any material meeting the requirements of Articles 1003.04 or 1004.06 which has been excavated from the trenches shall be used for backfilling the trenches."

Add the following to the end of Article 542.02 of the Standard Specifications:

"(bb) Fine Aggregate (Note 1) ..... 1003.04
(cc) Coarse Aggregate (Note 2) ..... 1004.06

Note 1. The fine aggregate shall be moist to the satisfaction of the Engineer.

Note 2. The coarse aggregate shall be wet to the satisfaction of the Engineer."

Revise the first and second sentences of the second paragraph of subparagraph (a) of Article 542.04 of the Standard Specifications to read:

"The unstable and unsuitable material shall be removed to a depth determined by the Engineer and for a width of one diameter (or equivalent diameter) of the pipe on each side of the pipe culvert, and replaced with aggregate. Rock shall be removed to an elevation 300 mm (1 ft) lower than the bottom of the pipe or to a depth equal to 40 mm/m (1/2 in./ft) of ultimate fill height over the top of the pipe culvert, whichever is the greater depth, and for a width as specified in (b) below, and replaced with aggregate."

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

"Well compacted aggregate, at least 100 mm (4 in.) in depth below the pipe culvert, shall be placed the entire width of the trench and for the length of the pipe culvert, except well compacted impervious material shall be used for the outer 1 m (3 ft) at each end of the pipe. When the trench has been widened by the removal and replacement of unstable or unsuitable material, the foundation material shall be placed for a width not less than the above specified widths on each side of the pipe. The aggregate and impervious material shall be approved by the Engineer and shall be compacted to the Engineer's satisfaction by mechanical means."

Revise subparagraph (e) of Article 542.04 of the Standard Specifications to read:

"(e) Backfilling. As soon as the condition of the pipe culvert will permit, the entire width of the trench shall be backfilled with aggregate to a height of at least the elevation of the center of the pipe. The aggregate shall be placed longitudinally along the pipe culvert, except at the outer 1 m (3 ft) at each end of the culvert which shall be backfilled with impervious material. The elevation of the backfill material on each side of the pipe

shall be the same. The space under the pipe shall be completely filled. The aggregate and impervious material shall be placed in 200 mm (8 in.) layers, loose measurement. When using PVC, PE, or corrugated metal pipe, the aggregate shall be continued to a height of at least 300 mm (1 ft) above the top of the pipe and compacted to a minimum of 85 percent of standard lab density by mechanical means. When reinforced concrete pipes are used and the trench is within 600 mm (2 ft) of the pavement structure, the backfill shall be compacted to a minimum of 85 percent of standard lab density by mechanical means.

When using PVC, PE, or corrugated metal pipe a minimum of 300 mm (1 ft) of cover from the top of the pipe to the top of the subgrade will be required.

The installed pipe and its embedment shall not be disturbed when using movable trench boxes and shields, sheet pile, or other trench protection.

The remainder of the trench shall be backfilled with select material, from excavation or borrow, free from large or frozen lumps, clods or rock, meeting the approval of the Engineer. The material shall be placed in layers not exceeding 200 mm (8 in.) in depth, loose measurement and compacted to 95 percent of the standard laboratory density. Compaction shall be obtained by use of mechanical tampers or with approved vibratory compactors. Before compacting, each layer shall be wetted or dried to bring the moisture content within the limits of 80 to 110 percent of optimum moisture content determined according to AASHTO T 99 (Method C). All backfill material shall be deposited in the trench or excavation in such a manner as not to damage the culvert. The filling of the trench shall be carried on simultaneously on both sides of the pipe. The Contractor may, at his/her expense, backfill the entire trench with aggregate in lieu of select material. The aggregate shall be compacted to the satisfaction of the Engineer by mechanical means.

The backfill material for all trenches and excavations made in the subgrade of the proposed improvement, and for all trenches outside of the subgrade where the inner edge of the trench is within 600 mm (2 ft) of the edge of the proposed pavement, curb, gutter, curb and gutter, stabilized shoulder, or sidewalk shall be according to Section 208. The trench backfill material shall be compacted to a minimum of 85 percent of standard lab density by mechanical means.

The Contractor may, at his/her expense, backfill the entire trench with controlled low strength material meeting the approval of the Engineer.

When the trench has been widened for the removal and replacement of unstable or unsuitable material, the backfilling with aggregate and impervious material, will be required for a width of at least the specified widths on each side of the pipe. The remaining width of each layer may be backfilled with select material. Each 200 mm (8 in.) layer for the entire trench width shall be completed before beginning the placement of the next layer."

Revise subparagraph (b) of Article 542.05 of the Standard Specifications to read:

"(b) Embankment. Embankment extending to an elevation of 300 mm (1 ft) over the top of the pipe shall be constructed according to Article 542.04(f), except the material up to the elevation of the center of the pipe and extending to a width of at least 450 mm (18 in.) on

each side of the pipe, exclusive of the outer 1 m (3 ft) at each end of the pipe, shall consist of aggregate. At the outer 1 m (3 ft) at each end of the culvert, impervious material shall be used."

Add the following paragraph after the first paragraph of Article 542.10 of the Standard Specifications:

"Trench backfill will be measured for payment according to Article 208.03."

Add the following paragraph after the third paragraph of Article 542.11 of the Standard Specifications:

"Trench backfill will be paid for according to Article 208.04."

Add the following to of Article 550.02 of the Standard Specifications:

"(m) Fine Aggregate (Note 2) ..... 1003.04
(n) Coarse Aggregate (Note 3) ..... 1004.06

Note 2. The fine aggregate shall be moist to the satisfaction of the Engineer.

Note 3. The coarse aggregate shall be wet to the satisfaction of the Engineer."

Revise the first two sentences of the third paragraph of Article 550.04 of the Standard Specifications to read:

"Well compacted, aggregate bedding material at least 100 mm (4 in.) in depth below the pipe, shall be placed for the entire width of the trench and length of the pipe. The aggregate shall be compacted to the satisfaction of the Engineer by mechanical means."

Revise Article 550.07 of the Standard Specifications to read:

"**550.07 Backfilling.** As soon as the condition of the pipe will permit, the entire width of the trench shall be backfilled with aggregate to a height of at least the elevation of the center of the pipe. The aggregate shall be placed longitudinally along the pipe. The elevation of the backfill material on each side of the pipe shall be the same. The space under the pipe shall be completely filled. The aggregate backfill material shall be placed in 200 mm (8 in.) layers, loose measurement and compacted to the satisfaction of the Engineer by mechanical means. When using PVC pipe, the aggregate shall be continued to a height of at least 300 mm (12 in.) above the top of the pipe.

The installed pipe and its embedment shall not be disturbed when using movable trench boxes and shields, sheet pile, or other trench protection.

The remainder of the trench and excavation shall be backfilled to the natural line or finished surface as rapidly as the condition of the sewer will permit. The backfill material shall consist of suitable excavated material from the trench or of trench backfill as herein specified. All backfill material shall be deposited in the trench or excavation in such a manner as not to damage the sewer and shall be compacted to the satisfaction of the Engineer by mechanical means.

The filling of the trench shall be carried on simultaneously on both sides of the pipe.

The backfill material for trenches and excavation made in the subgrade of the proposed improvement, and for all trenches outside of the subgrade where the inner edge of the trench is within 600 mm (2 ft) of the edge of the proposed pavement, curb, gutter, curb and gutter, stabilized shoulder or sidewalk shall be according to Section 208. The backfill material shall be compacted to 85 percent of standard lab density by mechanical means.

All backfill material up to a height of 300 mm (1 ft) above the pipe shall be deposited in uniform layers not exceeding 200 mm (8 in.) thick, loose measurement. The material in each layer shall be compacted to the satisfaction of the Engineer by mechanical means. The backfilling above this height shall be done according to Method 1, 2 or 3 as described below, with the following exceptions.

When trench backfill or excavated material meeting the requirements of Section 208 is required above the first 300 mm (1 ft) of the pipe, the layers shall not exceed 200 mm (8 in.). Gradations CA6 or CA10 shall not be used with Method 2 or Method 3.

Method 1. The material shall be deposited in uniform layers not exceeding 300 mm (1 ft) thick, loose measurement, and each layer shall be compacted to the satisfaction of the Engineer by mechanical means.

Method 2. The material shall be deposited in uniform layers not exceeding 300 mm (1 ft) thick, loose measurement, and each layer shall be either inundated or deposited in water.

Method 3. The trench shall be backfilled with loose material, and settlement secured by introducing water through holes jetted into the backfill to a point approximately 600 mm (2 ft) above the top of the pipe. The holes shall be spaced as directed by the Engineer but shall be no farther than 2 m (6 ft) apart.

The water shall be injected at a pressure just sufficient to sink the holes at a moderate rate of speed. The pressure shall be such that the water will not cut cavities in the backfill material nor overflow the surface. If water does overflow the surface, it shall be drained into the jetted holes by means of shallow trenches.

Water shall be injected as long as it will be absorbed by the backfill material and until samples taken from test holes in the trench show a satisfactory moisture content. The Contractor shall bore the test holes not more than 15 m (50 ft) apart and at such other locations in the trench designated by the Engineer. As soon as the watersoaking has been completed, all holes shall be filled with soil and compacted by ramming with a tool approved by the Engineer.

Backfill material which has been watersoaked shall be allowed to settle and dry for at least 10 days before any surface course or pavement is constructed on it. The length of time may be altered, if deemed desirable, by the Engineer. Where the inner edge of the trench is within 600 mm (2 ft) of the edge of the proposed pavement, curb, gutter, curb and gutter, stabilized shoulder or sidewalk, the provisions of this paragraph shall also apply.

At the end of the settling and drying period, the crusted top of the backfill material shall be scarified and, if necessary, sufficient backfill material added, as specified in Method 1, to complete the backfilling operations.

The method used for backfilling and compacting the backfill material shall be the choice of the Contractor. If the method used does not produce results satisfactory to the Engineer, the Contractor will be required to alter or change the method being used so the resultant backfill will be satisfactory to the Engineer. Should the Contractor be required to alter or change the method being used, no additional compensation will be allowed for altering or changing the method.

The Contractor may, at his/her expense, backfill the entire trench with controlled low strength material meeting the approval of the Engineer.

When sheeting and bracing have been used, sufficient bracing shall be left across the trench as the backfilling progresses to hold the sides firmly in place without caving or settlement. This bracing shall be removed as soon as practicable. Any depressions which may develop within the area involved in the construction operation due to settlement of the backfilling material shall be filled in a manner approved by the Engineer.

When the Contractor constructs the trench with sloped or benched sides according to Article 550.04, backfilling for the full width of the excavation shall be as specified, except no additional compensation will be allowed for trench backfill material required outside the vertical limits of the specified trench width.

Whenever excavation is made for installing sewer pipe across earth shoulders or private property, the topsoil disturbed by excavation operations shall be replaced as nearly as possible in its original position, and the whole area involved in the construction operations shall be left in a neat and presentable condition.

When using any PVC pipe, the pipe shall be backfilled with aggregate to 300 mm (1 ft) over the top of the pipe and compacted to a minimum of 85 percent of standard lab density by mechanical means.

When reinforced concrete pipes are used and the trench is within 600 mm (2 ft) of the pavement structure, the backfill shall be compacted to a minimum of 85 percent of standard lab density by mechanical means.

Deflection Testing for Storm Sewers. All PVC storm sewers will be tested for deflection not less than 30 days after the pipe is installed and the backfill compacted.

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

Where the mandrel is used, the mandrel shall be furnished by the Contractor and pulled by hand through the pipeline with a suitable rope or cable connected to each end. Winching or other means of forcing the deflection gauge through the pipeline will not be allowed.

The mandrel shall be of a shape similar to that of a true circle enabling the gauge to pass through a satisfactory pipeline with little or no resistance. The mandrel shall be of a design to prevent it from tipping from side to side and to prevent debris build-up from occurring between the channels of the adjacent fins or legs during operation. Each end of the core of the mandrel shall have fasteners to which the pulling cables can be attached. The mandrel shall have 9,

various sized fins or legs of appropriate dimension for various diameter pipes. Each fin or leg shall have a permanent marking that states its designated pipe size and percent of deflection allowable.

The outside diameter of the mandrel shall be 95 percent of the base inside diameter, where the base inside diameter is:

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

If the pipe is found to have a deflection greater than specified, that pipe section shall be removed, replaced, and retested."

Revise subparagraph (c) of Article 1003.04 of the Standard Specifications to read:

"(c) Gradation. The fine aggregate gradation shall be as follows:

Backfill, bedding and trench backfill for pipe culverts and storm sewers ..... FA 1, FA 2, FA 6, or FA 21
Porous granular embankment and backfill, french drains, and sand backfill for underdrains ..... FA 1, FA 2, or FA20 (Note 1)

Note 1: For FA 1, FA 2, and FA 20 the percent passing the 75 μm (No. 200) sieve shall be 2 ± 2."

Revise the title of Article 1004.06 of the Standard Specifications to read:

**"Coarse Aggregate for Blotter, Embankment, Backfill, Trench Backfill, French Drains, and Bedding."**

Add the following to the end of subparagraph (c) of Article 1004.06 of the Standard Specifications:

"Backfill, bedding, and trench backfill for pipe culverts and storm sewers ..... CA 6, CA 10, and CA 18"

**CONCRETE ADMIXTURES (BDE)**

Effective: January 1, 2003 Revised: July 1, 2004

Revise Article 1020.05(b) of the Standard Specifications to read:

"(b) Admixtures. Except as specified, the use of admixtures to increase the workability or to accelerate the hardening of the concrete will be permitted only when approved in writing by the Engineer. The Department will maintain an Approved List of Concrete Admixtures. When the Department permits the use of a calcium chloride accelerator, it shall be according to Article 442.02, Note 5.

When the atmosphere or concrete temperature is 18 °C (65 °F) or higher, a retarding admixture meeting the requirements of Article 1021.03 shall be used in the Class BD Concrete and portland cement concrete bridge deck overlays. The amount of retarding admixture to be used will be determined by the Engineer. The proportions of the

ingredients of the concrete shall be the same as without the retarding admixture except that the amount of mixing water shall be reduced, as may be necessary, in order to maintain the consistency of the concrete as required. In addition, a high range water-reducing admixture shall be used in Class BD Concrete. The amount of high range water-reducing admixture will be determined by the Engineer. At the option of the Contractor, a water-reducing admixture may be used. Type I cement shall be used.

For Class PC and PS Concrete, a retarding admixture may be added to the concrete mixture when the concrete temperature is 18 °C (65 °F) or higher. Other admixtures may be used when approved by the Engineer, or if specified by the contract. If an accelerating admixture is permitted by the Engineer, it shall be the non-chloride type.

At the Contractor's option, admixtures in addition to an air-entraining admixture may be used for Class PP-1 concrete. The accelerator shall be the non-chloride type. If a water-reducing or retarding admixture is used, the cement factor may be reduced a maximum 18 kg/cu m (0.30 hundredweight/cu yd). If a high range water-reducing admixture is used, the cement factor may be reduced a maximum 36 kg/cu m (0.60 hundredweight/cu yd). Cement factor reductions shall not be cumulative when using multiple admixtures. An accelerator shall always be added prior to a high range water-reducing admixture, if both are used.

If Class C fly ash or ground granulated blast-furnace slag is used in Class PP-1 concrete, a water-reducing or high range water-reducing admixture shall be used. However, the cement factor shall not be reduced if a water-reducing, retarding, or high range water-reducing admixture is used. In addition, an accelerator shall not be used.

For Class PP-2 or PP-3 concrete, a non-chloride accelerator followed by a high range water-reducing admixture shall be used, in addition to the air-entraining admixture. For Class PP-3 concrete, the non-chloride accelerator shall be calcium nitrite.

For Class PP-2 or PP-3 concrete, the Contractor has the option to use a water-reducing admixture. A retarding admixture shall not be used unless approved by the Engineer. A water-reducing, retarding, or high range water-reducing admixture shall not be used to reduce the cement factor.

When the air temperature is less than 13 °C (55 °F) for Class PP-1 or PP-2 concrete, the non-chloride accelerator shall be calcium nitrite.

For Class PP-4 concrete, a high range water-reducing admixture shall be used in addition to the air-entraining admixture. The Contractor has the option to use a water-reducing admixture. An accelerator shall not be used. For stationary or truck mixed concrete, a retarding admixture shall be used to allow for haul time. The Contractor has the option to use a mobile portland cement concrete plant according to Article 1103.04, but a retarding admixture shall not be used unless approved by the Engineer. A water-reducing, retarding, or high range water-reducing admixture shall not be used to reduce the cement factor.

If the Department specifies a calcium chloride accelerator for Class PP-1 concrete, the maximum chloride dosage shall be 1.0 L (1.0 quart) of solution per 45 kg (100 lb) of cement. The dosage may be increased to a maximum 2.0 L (2.0 quarts) per 45 kg

(100 lb) of cement if approved by the Engineer. If the Department specifies a calcium chloride accelerator for Class PP-2 concrete, the maximum chloride dosage shall be 1.3 L (1.3 quarts) of solution per 45 kg (100 lb) of cement. The dosage may be increased to a maximum 2.6 L (2.6 quarts) per 45 kg (100 lb) of cement if approved by the Engineer.

For Class PV, MS, SI, RR, SC and SH concrete, at the option of the Contractor, or when specified by the Engineer, a water-reducing admixture or a retarding admixture may be used. The amount of water-reducing admixture or retarding admixture permitted will be determined by the Engineer. The air-entraining admixture and other admixtures shall be added to the concrete separately, and shall be permitted to intermingle only after they have separately entered the concrete batch. The sequence, method and equipment for adding the admixtures shall be approved by the Engineer. The water-reducing admixture shall not delay the initial set of the concrete by more than one hour. Type I cement shall be used.

When a water-reducing admixture is added, a cement factor reduction of up to 18 kg/cu m (0.30 hundredweight/cu yd), from the concrete designed for a specific slump without the admixture, will be permitted for Class PV, MS, SI, RR, SC and SH concrete. When an approved high range water-reducing admixture is used, a cement factor reduction of up to 36 kg/cu m (0.60 hundredweight/cu yd), from a specific water cement/ratio without the admixture, will be permitted based on a 14 percent minimum water reduction. This is applicable to Class PV, MS, SI, RR, SC and SH concrete. A cement factor below 320 kg/cu m (5.35 hundredweight/cu yd) will not be permitted for Class PV, MS, SI, RR, SC and SH concrete. A cement factor reduction will not be allowed for concrete placed underwater. Cement factor reductions shall not be cumulative when using multiple admixtures.

For use of admixtures to control concrete temperature, refer to Articles 1020.14(a) and 1020.14(b).

The maximum slumps given in Table 1 may be increased to 175 mm (7 in.) when a high range water-reducing admixture is used for all classes of concrete except Class PV and PP."

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 may 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 to the satisfaction of the Engineer as to manufacturer and trade name of the material they contain.

Prior to inclusion of a product on the Department's Approved List of Concrete Admixtures, the manufacturer shall submit a report prepared by an independent laboratory accredited by the AASHTO Accreditation Program. 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.

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 335 kg/cu m (5.65 cwt/cu yd). Compressive strength test results for six months and one year will not be required.

In addition to the report, 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 335 kg/cu m (5.65 cwt/cu yd). The manufacturer may select their lab or an independent lab to perform this testing. The laboratory is not required to be accredited by the AASHTO Accreditation Program.

Prior to the approval of an admixture, the Engineer may conduct all or part of the applicable tests on a sample that is representative of the material to be furnished. The test and reference concrete mixtures tested by the Engineer will contain a cement content of 335 kg/cu m (5.65 cwt/cu yd). For freeze-thaw testing, the Department will perform the test according to Illinois Modified AASHTO T 161, Procedure B.

The manufacturer shall include in the submittal the following information according to ASTM C 494; the average and manufacturing range of specific gravity, the average and manufacturing range of solids in the solution, and the average and manufacturing range of pH. The submittal shall also include an infrared spectrophotometer trace no more than five years old.

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 the AASHTO Accreditation Program.

All admixtures, except chloride-based accelerators, shall contain no more than 0.3 percent chloride by mass (weight).

**1021.02 Air-Entraining Admixtures.** Air-entraining admixtures shall conform to the requirements of AASHTO M 154.

If the manufacturer certifies that the air-entraining admixture is an aqueous solution of Vinsol resin that has been neutralized with sodium hydroxide (caustic soda), testing for compliance with the requirements may be waived by the Engineer. In the certification, the manufacturer shall show complete information with respect to the formulation of the solution, including the number of parts of Vinsol resin to each part of sodium hydroxide. Before the approval of its use is granted, the Engineer will test the solution for its air-entraining quality in comparison with a solution prepared and kept for that purpose.

**1021.03 Retarding and Water-Reducing Admixtures.** The admixture shall comply with the following requirements:

(a) The retarding admixture shall comply with the requirements of AASHTO M 194, Type B (retarding) or Type D (water-reducing and retarding).

(b) The water-reducing admixture shall comply with the requirements of AASHTO M 194, Type A.

(c) The high range water-reducing admixture shall comply with the requirements of AASHTO M 194, Type F (high range water-reducing) or Type G (high range water-reducing and retarding).

When a Type F or Type G high range water-reducing admixture is used, water-cement ratios shall be a minimum of 0.32.

Type F or Type G admixtures may be used, subject to the following restrictions:

For Class MS, SI, RR, SC and SH concrete, the water-cement ratio shall be a maximum of 0.44.

The Type F or Type G admixture shall be added at the jobsite unless otherwise directed by the Engineer. The initial slump shall be a minimum of 40 mm (1 1/2 in.) prior to addition of the Type F or Type G admixture, except as approved by the Engineer.

When a Type F or Type G admixture is used, retempering with water or with a Type G admixture will not be allowed. An additional dosage of a Type F admixture, not to exceed 40 percent of the original dosage, may be used to retemper concrete once, provided set time is not unduly affected. A second retempering with a Type F admixture may be used for all classes of concrete except Class PP and SC, provided that the dosage does not exceed the dosage used for the first retempering, and provided that the set time is not unduly affected. No further retempering will be allowed.

Air tests shall be performed after the addition of the Type F or Type G admixture.

**1021.04 Set Accelerating Admixtures.** The admixture shall comply with the requirements of AASHTO M 194, Type C (accelerating) or Type E (water reducing and accelerating)"

**CORRUGATED METAL PIPE CULVERTS (BDE)**
Effective: August 1, 2003 Revised: July 1, 2004

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

"When corrugated steel or aluminum alloy culvert pipe (including bituminous coated steel or aluminum and pre-coated steel) is used, the pipe shall be placed such that the longitudinal lap is placed at the sides and separate sections of pipe shall be joined with a hugger-type band. When the pipes are fabricated with a smooth sleeve-type coupler, the gasket shall meet the requirements of Article 1006.01."

Add the following paragraph after the first paragraph of Article 1006.01 of the Standard Specifications:

"Round pipes 1200 mm (48 in.) in diameter and smaller may be fabricated with a smooth sleeve-type coupler. Gasket material on the smooth sleeve-type coupler shall be polyisoprene or equal with a durometer hardness of 45±5 (ASTM D 2240, Shore A). Pipe used with smooth sleeve-type couplers shall contain a homing mark that indicates when the joint is tight. The homing mark shall consist of a painted stripe around the circumference of the male end of the pipe."

Delete the last sentence of the first paragraph of Article 1006.01(a) of the Standard Specifications.

Add the following paragraph after the first paragraph of Article 1006.03 of the Standard Specifications:

"Round pipes 1200 mm (48 in.) in diameter and smaller may be fabricated with a smooth sleeve-type coupler. Gasket material on the smooth sleeve-type coupler shall be polyisoprene or equal with a durometer hardness of 45±5 (ASTM D 2240, Shore A). Pipe used with smooth sleeve-type couplers shall contain a homing mark that indicates when the joint is tight. The homing mark shall consist of a painted stripe around the circumference of the male end of the pipe."

**CURING AND PROTECTION OF CONCRETE CONSTRUCTION (BDE)**
Effective: January 1, 2004

Revise the second and third sentences of the eleventh paragraph of Article 503.06 of the Standard Specifications to read:

"Forms on substructure units shall remain in place at least 24 hours. The method of form removal shall not result in damage to the concrete."

Delete the twentieth paragraph of Article 503.22 of the Standard Specifications.

Revise the "Unit Price Adjustments" table of Article 503.22 of the Standard Specifications to read:

| "UNIT PRICE ADJUSTMENTS | |
|---|---|
| Type of Construction | Percent Adjustment in Unit Price |
| For concrete in substructures, culverts (having a waterway opening of more than 1 sq m (10 sq ft)), pump houses, and retaining walls (except concrete pilings, footings and foundation seals): | |
| When protected by: | |
| Protection Method II | 115% |
| Protection Method I | 110% |
| For concrete in superstructures: | |
| When protected by: | |
| Protection Method II | 123% |
| Protection Method I | 115% |
| For concrete in footings: | |
| When protected by: | |
| Protection Method I, II or III | 107% |
| For concrete in slope walls: | |
| When protected by: | |
| Protection Method I | 107%" |

Delete the fourth paragraph of Article 504.05(a) of the Standard Specifications.

Revise the second and third sentences of the fifth paragraph of Article 504.05(a) of the Standard Specifications to read:

"All test specimens shall be cured with the units according to Article 1020.13."

Revise the first paragraph of Article 504.06(c)(6) of the Standard Specifications to read:

"Curing and Low Air Temperature Protection. The curing and protection for precast, prestressed concrete members shall be according to Article 1020.13 and this Article."

Revise the first sentence of the second paragraph of Article 504.06(c)(6) of the Standard Specifications to read:

"For curing, air vents shall be in place, and shall be so arranged that no water can enter the void tubes during the curing of the members."

Revise the first sentence of the third paragraph of Article 504.06(c)(6) of the Standard Specifications to read:

"As soon as each member is finished, the concrete shall be covered with curing material according to Article 1020.13."

Revise the eighth paragraph of Article 504.06(c)(6) of the Standard Specifications to read:

"The prestressing force shall not be transferred to any member before the concrete has attained the compressive strength of 28,000 kPa (4000 psi) or other higher compressive release strength specified on the plans, as determined from tests of 150 mm (6 in.) by 300 mm (12 in.) cylinders cured with the member according to Article 1020.13. Members shall not be shipped until 28-day strengths have been attained and members have a yard age of at least 4 days."

Delete the third paragraph of Article 512.03(a) of the Standard Specifications.

Delete the last sentence of the second paragraph of Article 512.04(d) of the Standard Specifications.

Revise the "Index Table of Curing and Protection of Concrete Construction" table of Article 1020.13 of the Standard Specifications to read:

| "INDEX TABLE OF CURING AND PROTECTION OF CONCRETE CONSTRUCTION | | | |
|---|---|---|---|
| TYPE OF CONSTRUCTION | CURING METHODS | CURING PERIOD DAYS | LOW AIR TEMPERATURE PROTECTION METHODS |
| **Cast-in-Place Concrete:** [11/] | | | |
| Pavement<br>Shoulder | 1020.13(a)(1)(2)(3)(4)(5)[3/ 5/] | 3 | 1020.13(c) |
| Base Course<br>Base Course Widening | 1020.13(a)(1)(2)(3)(4)(5)[1/ 2/] | 3 | 1020.13(c) |
| Driveway<br>Median<br>Curb<br>Gutter<br>Curb and Gutter<br>Sidewalk<br>Slope Wall | 1020.13(a)(1)(2)(3)(4)(5)[4/ 5/] | 3 | 1020.13(c)[16/] |
| Paved Ditch<br>Catch Basin<br>Manhole<br>Inlet<br>Valve Vault | 1020.13(a)(1)(2)(3)(4)(5)[4/] | 3 | 1020.13(c) |
| Pavement Patching | 1020.13(a)(1)(2)(3)(4)(5)[2/] | 3[12/] | 1020.13(c) |
| Pavement Replacement | 1020.13(a)(1)(2)(3)(4)(5)[1/ 2/] | 3 | 442.06(h) and 1020.13(c) |
| Railroad Crossing | 1020.13(a)(3)(5) | 1 | 1020.13(c) |
| Piles | 1020.13(a)(3)(5) | 7 | 1020.13(e)(1)(2)(3) |
| Footings<br>Foundation Seals | 1020.13(a)(1)(2)(3)(4)(5)[4/6/] | 7 | 1020.13(e)(1)(2)(3) |
| Substructure | 1020.13(a)(1)(2)(3)(4)(5)[1/7/] | 7 | 1020.13(e)(1)(2)(3) |
| Superstructure (except deck) | 1020.13(a)(1)(2)(3)(5) [8/] | 7 | 1020.13(e)(1)(2) |
| Deck | 1020.13(a)(5) | 7 | 1020.13(e)(1)(2)[17/] |
| Retaining Walls | 1020.13(a)(1)(2)(3)(4)(5)[1/7/] | 7 | 1020.13(e)(1)(2) |
| Pump Houses | 1020.13(a)(1)(2)(3)(4)(5)[1/] | 7 | 1020.13(e)(1)(2) |
| Culverts | 1020.13(a)(1)(2)(3)(4)(5)[4/6/] | 7 | 1020.13(e)(1)(2)[18/] |
| Other Incidental Concrete | 1020.13(a)(1)(2)(3)(5) | 3 | 1020.13(c) |
| **Precast Concrete:** [11/] | | | |
| Bridge Beams<br>Piles<br>Bridge Slabs<br>Nelson Type Structural Member | 1020.13(a)(3)(5) [9/10/] | As required. [13/] | 504.06(c)(6), 1020.13(e)(2)[19/] |
| All Other Precast Items | 1020.13(a)(3)(4)(5)[2/9/10/] | As required. [14/] | 504.06(c)(6), 1020.13(e)(2)[19/] |
| **Precast, Prestressed Concrete:** [11/] | | | |
| All Items | 1020.13(a)(3)(5)[9/10/] | Until strand tensioning is released.[15/] | 504.06(c)(6), 1020.13(e)(2)[19/] |

Notes-General:

1/ Type I, membrane curing only

2/ Type II, membrane curing only

3/ Type III, membrane curing only

4/ Type I, II and III membrane curing

5/ Membrane curing will not be permitted between November 1 and April 15.

6/ The use of water to inundate footings, foundation seals or the bottom slab of culverts is permissible when approved by the Engineer, provided the water temperature can be maintained at 7 °C ( 45 °F) or higher.

7/ Asphalt Emulsion for Waterproofing may be used in lieu of other curing methods when specified and permitted according to Article 503.18.

8/ On non-traffic surfaces which receive protective coat according to Article 503.19, a linseed oil emulsion curing compound may be used as a substitute for protective coat and other curing methods. The linseed emulsion curing compound will be permitted between April 16 and October 31 of the same year, provided it is applied with a mechanical sprayer according to Article 1101.09 (b), and meets the material requirements of Article 1022.07.

9/ Steam curing (heat and moisture) is acceptable and shall be accomplished by the method specified in Article 504.06(c)(6).

10/ A moist room according to AASHTO M 201 is acceptable for curing.

11/ If curing is required and interrupted because of form removal for cast-in-place concrete items, precast concrete products, or precast prestressed concrete products, the curing shall be resumed within two hours from the start of the form removal.

12/ Curing maintained only until opening strength is attained, with a maximum curing period of three days.

13/ The curing period shall end when the concrete has attained the mix design strength. The producer has the option to discontinue curing when the concrete has attained 80 percent of the mix design strength or after seven days. All strength test specimens shall remain with the units and shall be subjected to the same curing method and environmental condition as the units, until the time of testing.

14/ The producer shall determine the curing period or may elect to not cure the product. All strength test specimens shall remain with the units and shall be subjected to the same curing method and environmental condition as the units, until the time of testing.

15/ The producer has the option to continue curing after strand release.

16/ When structural steel or structural concrete is in place above slope wall, Article 1020.13(c) shall not apply. The protection method shall be according to Article 1020.13(e)(1).

17/ When Article 1020.13(e)(2) is used to protect the deck, the housing may enclose only the bottom and sides. The top surface shall be protected according to Article 1020.13(e)(1).

18/ For culverts having a waterway opening of 1 sq m (10 sq ft) or less, the culverts may be protected according to Article 1020.13(e)(3).

19/ The seven day protection period in the first paragraph of Article 1020.13(e)(2) shall not apply. The protection period shall end when curing is finished. For the third paragraph of Article 1020.13(e)(2), the decrease in temperature shall be according to Article 504.06(c)(6)."

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

"(5) Wetted Cotton Mat Method. After the surface of concrete has been textured or finished, it shall be covered immediately with dry cotton mats. The cotton mats shall be placed in a manner which will not mar the concrete surface. A texture resulting from the cotton mat material is acceptable. The cotton mats shall then be wetted immediately and thoroughly soaked with a gentle spray of water. For bridge decks, a foot bridge shall be used to place and wet the cotton mats.

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

After placement of the soaker hoses, the cotton mats shall be covered with white polyethylene sheeting or burlap-polyethylene blankets.

For construction items other than bridge decks, soaker hoses or a continuous wetting system will not be required if the alternative method keeps the cotton mats wet. Periodic wetting of the cotton mats is acceptable.

For areas inaccessible to the cotton mats on bridge decks, curing shall be according to Article 1020.13(a)(3)."

Revise the first paragraph of Article 1020.13(c) of the Standard Specifications to read:

"Protection of Portland Cement Concrete, Other Than Structures, From Low Air Temperatures. When the official National Weather Service forecast for the construction area predicts a low of 0 °C (32 °F), or lower, or if the actual temperature drops to 0 °C (32 °F), or lower, concrete less than 72 hours old shall be provided at least the following protection:"

Delete Article 1020.13(d) and Articles 1020.13(d)(1),(2),(3),(4) of the Standard Specifications.

Revise the first five paragraphs of Article 1020.13(e) of the Standard Specifications to read:

"Protection of Portland Cement Concrete Structures From Low Air Temperatures. When the official National Weather Service Forecast for the construction area predicts a low below 7 °C (45 °F), or if the actual temperature drops below 7 °C (45 °F), concrete less than 72 hours old shall be provided protection. Concrete shall also be provided protection when placed during the winter period of December 1 through March 15. Concrete shall not be placed until the materials, facilities and equipment for protection are approved by the Engineer.

When directed by the Engineer, the Contractor may be required to place concrete during the winter period. If winter construction is specified, the Contractor shall proceed with the construction, including concrete, excavation, pile driving, steel erection and all appurtenant work required for the complete construction of the item, except at times when weather conditions make such operations impracticable.

Regardless of the precautions taken, the Contractor shall be responsible for protection of the concrete placed and any concrete damaged by cold temperatures shall be removed and replaced by the Contractor at his/her own expense."

Add the following at the end of the third paragraph of Article 1020.13(e)(1) of the Standard Specifications:

"The Contractor shall provide means for checking the temperature of the surface of the concrete during the protection period."

Revise the second sentence of the first paragraph of Article 1020.13(e)(2) of the Standard Specifications to read:

"The Contractor shall provide means for checking the temperature of the surface of the concrete or air temperature within the housing during the protection period."

Delete the last sentence of the first paragraph of Article 1020.13(e)(3) of the Standard Specifications.

Add the following Article to Section 1022 of the Standard Specifications:

"**1022.06 Cotton Mats.** Cotton mats shall consist of a cotton fill material, minimum 400 g/sq m (11.8 oz/sq yd), covered with unsized cloth or burlap, minimum 200 g/sq m (5.9 oz/sq yd), and be tufted or stitched to maintain stability.

Cotton mats shall be in a condition satisfactory to the Engineer. Any tears or holes in the mats shall be repaired.

Add the following Article to Section 1022 of the Standard Specifications:

"**1022.07 Linseed Oil Emulsion Curing Compound.** Linseed oil emulsion curing compound shall be composed of a blend of boiled linseed oil and high viscosity, heavy bodied linseed oil emulsified in a water solution. The curing compound shall meet the requirements of a Type I, II, or III according to Article 1022.01, except the drying time requirement will be waived. The oil phase shall be 50 ± 4 percent by volume. The oil phase shall consist of 80 percent by mass (weight) boiled linseed oil and 20 percent by mass (weight ) Z-8 viscosity linseed oil. The water phase shall be 50 ± 4 percent by volume."

Revise Article 1020.14 of the Standard Specifications to read:

"**1020.14 Temperature Control for Placement.** Temperature control for concrete placement shall conform to the following requirements:

(a) Temperature Control other than Structures. The temperature of concrete immediately before placing, shall be not less than 10 °C (50 °F) nor more than 32 °C (90 °F). Aggregates and/or water shall be heated or cooled as necessary to produce concrete within these temperature limits.

When the temperature of the plastic concrete reaches 30 °C (85 °F), an approved retarding admixture shall be used or the approved water reducing admixture in use shall have its dosage increased by 50 percent over the dosage recommended on the Department's Approved List of Concrete Admixtures for the temperature experienced. The amount of retarding admixture to be used will be determined by the Engineer. This requirement may be waived by the Engineer when fly ash compensated mixtures are used.

Plastic concrete temperatures up to 35 °C (96 °F), as placed, may be permitted provided job site conditions permit placement and finishing without excessive use of water on and/or overworking of the surface. The occurrence within 24 hours of unusual surface distress shall be cause to revert to a maximum 32 °C (90 °F) plastic concrete temperature.

Concrete shall not be placed when the air temperature is below 5 °C (40 °F) and falling or below 2 °C (35 °F), without permission of the Engineer. When placing of concrete is authorized during cold weather, the Engineer may require the water and/or the aggregates to be heated to not less than 20 °C (70 °F) nor more than 65 °C (150 °F).

The aggregates may be heated by either steam or dry heat prior to being placed in the mixer. The apparatus used shall heat the mass uniformly and shall be so arranged as to preclude the possible occurrence of overheated areas which might damage the materials. No frozen aggregates shall be used in the concrete.

For pavement patching, refer to Article 442.06(e) for additional information on temperature control for placement.

(b) Temperature Control for Structures. The temperature of concrete as placed in the forms shall be not less than 10 °C (50 °F) nor more than 32 °C (90 °F). Aggregates and/or water shall be heated or cooled as necessary to produce concrete within these temperature limits. When insulated forms are used, the temperature of the concrete mixture shall not exceed 25 °C (80 °F). If the Engineer determines that heat of hydration might cause excessive temperatures in the concrete, the concrete shall be placed at a temperature between 10 °C (50 °F) and 15 °C (60 °F), per the Engineer's instructions. When concrete is placed in contact with previously placed concrete, the temperature of the concrete may be increased as required to offset anticipated heat loss.

Concrete shall not be placed when the air temperature is below 7 °C (45 °F) and falling or below 4 °C (40 °F), without permission of the Engineer. When placing of concrete is authorized during cold weather, the Engineer may require the water and/or the aggregates to be heated to not less than 20 °C (70 °F) nor more than 65 °C (150 °F). The aggregates may be heated by either steam or dry heat prior to being placed in the mixer. The apparatus used shall heat the mass uniformly and shall be so arranged as to preclude the possible occurrence of overheated areas which might damage the materials. No frozen aggregates shall be used in the concrete.

When the temperature of the plastic concrete reaches 30 °C (85 °F), an approved retarding admixture shall be used or the approved water reducing admixture in use shall have its dosage increased by 50 percent over the dosage recommended on the Department's Approved List of Concrete Admixtures for the temperature experienced. The amount of retarding admixture to be used will be determined by the Engineer. This requirement may be waived by the Engineer when fly ash compensated mixtures are used.

(c) Temperature. The concrete temperature shall be determined according to ASTM C 1064."

**DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)**

Effective: September 1, 2000 Revised: June 1, 2004

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. 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. 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 DBE Directory or most recent addendum.

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 federally-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

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 firms 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 20.00% of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will 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 firmly committed 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 DBE Directory as a reference source for DBE companies certified by the Department. 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.state.il.us.

BIDDING PROCEDURES. Compliance with the bidding procedures of this Special Provision is required prior to the award of the contract and the failure of the as-read low bidder to comply will render the bid nonresponsive.

(a) In order to assure the timely award of the contract, the as-read low bidder must submit a Disadvantaged Business Utilization Plan on Department form SBE 2026 within seven (7) working days after the date of letting. To meet the seven (7) day requirement , the bidder may send the Plan by certified mail or delivery service within the seven (7) working day period. If a question arises concerning the mailing date of a Plan, the mailing date will be established by the U.S. Postal Service postmark on the original certified mail receipt from the U.S. Postal Service or the receipt issued by a delivery service. It is the responsibility of the as-read low bidder to ensure that the postmark or receipt date is affixed within the seven (7) working days if the bidder intends to rely upon mailing or delivery to satisfy the submission day requirement. The Plan is to be submitted 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). It is the responsibility of the bidder to obtain confirmation of telefax delivery. The Department will not accept a Utilization Plan if it does not meet the seven (7) day submittal requirement, and the bid will be declared nonresponsive. In the event the bid is declared nonresponsive due to a failure to submit a Plan or failure to comply with the bidding procedures set forth herein, the Department may elect to cause the forfeiture of the penal sum of the bidder's proposal guaranty, and may deny authorization to bid the project if re-advertised for bids. The Department reserves the right to invite any other bidder to submit a Utilization Plan at any time for award consideration or to extend the time for award.

(b) The Utilization Plan shall indicate that the bidder either has obtained sufficient DBE participation commitments to meet the contract goal or has not obtained enough DBE participation commitments in spite of a good faith effort to meet the goal. The Utilization Plan shall further provide the name, telephone number and telefax number of a responsible official of the bidder designated for purposes of notification of 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. The signatures on these forms must be original signatures. All elements of information indicated on the said form shall be provided, including but not limited to the following:

(1) The name and address of each DBE to be used;

(2) A description, including pay item numbers, of the commercially useful work to be done by each DBE;

(3) The price to be paid to each DBE for the identified work specifically stating 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) A commitment statement signed by the bidder and each DBE evidencing availability and intent to perform commercially useful work on the project; and

(5) If the bidder is a joint venture comprised of DBE firms and non-DBE firms, the plan must also include a clear identification of the portion of the work to be performed by the DBE partner(s).

(d) The contract will not be awarded until the Utilization Plan submitted by the bidder is approved. The Utilization Plan will be approved by the Department if the Plan commits sufficient commercially useful DBE work performance to meet the contract goal. The Utilization Plan will not be approved by the Department if the Plan does not commit sufficient DBE performance to meet the contract goal unless the bidder documents that it made a good faith effort to meet the goal. The good faith procedures of Section VIII of this special provision apply. If the Utilization Plan is not approved because it is deficient in a technical matter, unless waived by the Department, the bidder will be notified and will be allowed no less than a five (5) working day period in order to cure the deficiency.

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% 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 firm does not count toward the DBE goals.

(b) DBE as a joint venture Contractor: 100% 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% 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 firm does not count toward the DBE goal.

(d) DBE as a trucker: 100% 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 contact. Credit will be given for the full value of all such DBE trucks operated using DBE employed drivers. Goal credit will be limited to the value of the reasonable fee or commission received by the DBE if trucks are leased from a non-DBE company.

(e) DBE as a material supplier:

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

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

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

GOOD FAITH EFFORT PROCEDURES. If the bidder cannot obtain sufficient DBE commitments to meet the contract goal, the bidder must document in the Utilization Plan the good faith efforts made in the attempt 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 could reasonably be expected to obtain sufficient DBE participation. The Department will consider the quality, quantity and intensity of the kinds of efforts that the bidder has made. Mere *pro forma* efforts are not good faith efforts; rather, the bidder is expected to have taken those 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 prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors 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 contractor'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 contractor'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 Contractor 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 a good faith effort has not been made, the Department will notify the bidder of that preliminary determination by contacting the responsible company official designated in the Utilization Plan. The preliminary determination shall include a statement of reasons why good faith efforts have not been found, and may include additional good faith efforts that the bidder could take. The notification will designate a five (5) working day period during which the bidder shall take additional efforts. The bidder is not limited by a statement of additional efforts, but may take other action beyond any stated additional efforts in order to obtain additional DBE commitments. The bidder shall submit an amended Utilization Plan if additional DBE commitments to meet the contract goal are secured. If additional DBE commitments sufficient to meet the contract goal are not secured, the bidder shall report the final good faith efforts made in the time allotted. All additional efforts taken by the bidder will be considered as part of the bidder's good faith efforts. If the bidder is not able to meet the goal after taking additional efforts, the Department will make a pre-final determination of the good faith efforts of the bidder and will notify the designated responsible company official of the reasons for an adverse determination.

(c) The bidder may request administrative reconsideration of a pre-final determination adverse to the bidder within the five (5) working days after 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 pre-final 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. In addition, the request shall be considered a consent by the bidder to extend the time for award. 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 (10) 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 nonresponsive.

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 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) 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. If a DBE listed in the Utilization Plan is terminated for reasons other than convenience, or fails to complete its work on the contract for any reason, the Contractor shall make good faith efforts to find another DBE to substitute for the terminated 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 DBE that was terminated, but only to the extent needed to meet the contract goal or the amended contract goal. 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 and provide a full accounting of the efforts undertaken to obtain substitute DBE participation. The Bureau 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.

(c) 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 therefor to the DBE by the Contractor, but not later than thirty (30) calendar days after payment has been made by the Department to the Contractor for such work or material, the Contractor shall submit a DBE Payment Report on Department form SBE 2115 to the District Engineer. If full and final payment has not been made to the DBE, the Report 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 Plan, the Department will deduct from contract payments to the Contractor the amount of the goal not achieved as liquidated and ascertained damages.

(d) 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.

**EPOXY PAVEMENT MARKING (BDE)**

Effective: January 1, 2001 Revised: August 1, 2003

Revise Article 1095.04(b) of the Standard Specifications to read:

"(b) The Epoxide Value (WPE) of Component A shall be tested according to ASTM D 1652 on a pigment free basis. The WPE shall not vary more than plus or minus 50 units of the qualification samples."

Revise Article 1095.04(c) of the Standard Specifications to read:

"(c) The Total Amine Value of Component B shall be tested according to ASTM D 2074. The Total Amine Value shall not vary more than plus or minus 50 units of the qualification samples."

Revise Article 1095.04(g) of the Standard Specifications to read:

"(g) The epoxy pavement marking material, when mixed in the proper mix ratio and applied at 0.35 mm to 0.41 mm (14 to 16 mils) wet film thickness and with the proper saturation of glass spheres, shall exhibit a dry no pick-up time of twenty minutes or less when tested according to ASTM D 711."

Revise Article 1095.04(m) of the Standard Specifications to read:

"(m) The glass beads meet the requirements of Article 1095.07 and the following:

(1) The first drop glass beads shall be tested by the standard visual method of large glass spheres adopted by the Department. The beads shall have a silane coating and meet the following sieve requirements.

| Sieve Size | U.S. Standard Sieve Number | % Passing (by weight) |
|---|---|---|
| 1.70 mm | 12 | 95-100 |
| 1.40 mm | 14 | 75-95 |
| 1.18 mm | 16 | 10-47 |
| 1.00 mm | 18 | 0-7 |
| 850 μm | 20 | 0-5 |

(2) The second drop glass beads shall be Type B."

Revise the second sentence of the first paragraph of Article 1095.04(n) of the Standard Specifications to read:

"Subject the coated panel for 75 hours to accelerated weathering using the light and water exposure apparatus (fluorescent UV – condensation type) as specified in ASTM G 53 (equipped with UVB-313 lamps)."

**EROSION AND SEDIMENT CONTROL DEFICIENCY DEDUCTION (BDE)**
Effective: August 1, 2001 Revised: November 1, 2001

When the Engineer is notified or determines an erosion and/or sediment control deficiency(s) exists, he/she will direct the Contractor in writing to correct the deficiency. The Contractor shall then correct the deficiency within 24 hours. The 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 National Pollutant Discharge Elimination System (NPDES) Storm Water Permit for Construction Site Activities.

If the Contractor fails to correct the deficiency(s) within 24 hours, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency exists. The time period will begin with the initial written notification to the Contractor and end with the Engineer's acceptance of the corrected work. The per calendar day deduction will be either $1000.00 or 0.05 percent of the awarded contract value, whichever is greater.

If the Contractor fails to respond, the Engineer may correct the deficiencies and deduct the cost from monies due or which may become due the Contractor. This corrective action shall in no way relieve the Contractor of his/her contractual requirements or responsibilities.

**FLAGGER VESTS (BDE)**
Effective: April 1, 2003

Revise the first sentence of Article 701.04(c)(1) of the Standard Specifications to read:

"The flagger shall be stationed to the satisfaction of the Engineer and be equipped with a fluorescent orange, fluorescent yellow/green or a combination of fluorescent orange and fluorescent yellow/green vest meeting the requirements of the American National Standards Institute specification ANSI/ISEA 107-1999 for Conspicuity Class 2 garments

and approved flagger traffic control signs conforming to Standard 702001 and Article 702.05(e)."

Revise Article 701.04(c)(6) of the Standard Specifications to read:

"(6) Nighttime Flagging. The flagger station shall be lit by additional overhead lighting other than streetlights. The flagger shall be equipped with a fluorescent orange or fluorescent orange and fluorescent yellow/green garment meeting the requirements of the American National Standards Institute specification ANSI/ISEA 107-1999 for Conspicuity Class 2 garments."

**FREEZE-THAW RATING (BDE)**
Effective: November 1, 2002

Revise the first sentence of Article 1004.02(f) of the Standard Specifications to read:

"When coarse aggregate is used to produce portland cement concrete for base course, base course widening, pavement, driveway pavement, sidewalk, shoulders, curb, gutter, combination curb and gutter, median, paved ditch or their repair using concrete, the gradation permitted will be determined from the results of the Department's Freeze-Thaw Test."

**FURNISHED EXCAVATION (BDE)**
Effective: August 1, 2002 Revised: November 1, 2004

Revise Article 204.01 of the Standard Specifications to read:

"**Description.** Borrow excavation and furnished excavation shall consist of excavating suitable materials obtained from locations approved by the Engineer and transporting the materials to various locations throughout the limits of the contract."

Revise Article 204.07(b) of the Standard Specifications to read:

"(b) Measured Quantities. Furnished excavation will be computed for payment in cubic meters (cubic yards) as follows:

Furnished Excavation = Embankment - [Suitable Excavation x (1 - Shrinkage Factor)]

Where:

Embankment = the volume of fill in its final position computed by the method of average end areas and based upon the existing ground line as shown on the plans except as noted in (1) and (2) below;

Suitable Excavation = earth excavation, rock excavation, and other on-site excavation suitable for use in embankments as shown in the Earthwork Schedule on the plans;

Shrinkage Factor = 0.25 unless otherwise shown on the plans.

(1) If the Contractor so requests, the Engineer will reestablish the existing ground line after the clearing and tree removal have been performed according to Section 201 and the top 150 mm (6 in.) of the existing ground surface has been disked and compacted to the satisfaction of the Engineer.

(2) If settlement platforms are erected, the Engineer will reestablish the existing ground line after the embankment is complete as specified in Article 204.07(a)(2).

Furnished excavation placed in excess of that required for the execution of the contract will not be measured for payment."

Add the following paragraph to the end of Article 204.07 of the Standard Specifications:

"The quantity for furnished excavation will not be recalculated when surplus, suitable materials are utilized in embankments according to Article 202.03."

**HAND VIBRATOR (BDE)**
Effective: November 1, 2003

Add the following paragraph to Article 1103.17(a) of the Standard Specifications:

"The vibrator shall have a non-metallic head for areas containing epoxy coated reinforcement. The head shall be coated by the manufacturer. The hardness of the non-metallic head shall be less than the epoxy coated reinforcement, resulting in no damage to the epoxy coating. Slip-on covers will not be allowed."

**IMPACT ATTENUATORS, TEMPORARY (BDE)**
Effective: November 1, 2003 Revised: April 1, 2004

Description. This work shall consist of furnishing, installing, maintaining, and removing temporary 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 |
| (h) Rapid Set Mortar (Note 2) | |

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.

Note 2. Rapid set mortar shall be obtained from the Department's approved list of Packaged, Dry, Rapid Hardening Cementitous Materials for Concrete Repairs. For a rapid set mortar mixture, one part packaged rapid set cement shall be combined with two parts fine aggregate, by volume or a packaged rapid set mortar shall be used. Mixing of the rapid set mortar shall be according to the manufacturer's instructions.

## 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.

Installation. Regrading of slopes or approaches for the installation shall be as shown on the plans.

Attenuator bases, when required by the manufacturer, 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.

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.

When water filled attenuators are used between November 1 and April 15, they shall contain anti-freeze according to the manufacturer's recommendations.

Markings. Sand module impact attenuators shall be striped with alternating reflectorized Type AA or Type AP fluorescent orange and reflectorized white horizontal, circumferential stripes. There shall be at least two of each stripe on each module.

Other types of impact attenuators shall have a terminal marker applied to their nose and reflectors along their sides.

Maintenance. All maintenance of the impact attenuators shall be the responsibility of the Contractor until removal is directed by the Engineer.

Relocate. When relocation of temporary impact attenuators is specified, they shall be removed, relocated and reinstalled at the new location. The reinstallation requirements shall be the same as those for a new installation.

Removal. When the Engineer determines the temporary impact attenuators are no longer required, the installation shall be dismantled with all hardware becoming the property of the Contractor.

Surplus material shall be disposed of according to Article 202.03. Anti-freeze, when present, shall be disposed of/recycled according to local ordinances.

When impact attenuators have been anchored to the pavement, the anchor holes shall be repaired with rapid set mortar Only enough water to permit placement and consolidation by rodding shall be used and the material shall be struck-off flush.

Method of Measurement. This work will be measured for payment as each, where each is defined as one complete installation.

Basis of Payment. This work will be paid for at the contract unit price per each for IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW); IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, WIDE); IMPACT ATTENUATORS, TEMPORARY (SEVERE USE, NARROW); IMPACT ATTENUATORS, TEMPORARY (SEVERE USE, WIDE); or IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE) of the test level specified.

Relocation of the devices will be paid for at the contract unit price per each for IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE); IMPACT ATTENUATORS, RELOCATE (SEVERE USE); or IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE); of the test level specified.

Regrading of slopes or approaches will be paid for according to Section 202 and/or Section 204 of the Standard Specifications.

**INLET FILTERS (BDE)**
Effective: August 1, 2003

Add the following to Article 280.02 of the Standard Specifications:

"(k) Inlet Filters..... 1081.15(h)"

Add the following paragraph after the first paragraph of Article 280.04(c) of the Standard Specifications:

"When specified, drainage structures shall be protected with inlet filters. Inlet filters shall be installed either directly on the drainage structure or under the grate of the drainage structure resting on the lip of the frame. The fabric bag shall hang down into the drainage structure. Prior to ordering materials, the Contractor shall determine the size and shape of the various drainage structures being protected."

Revise Article 280.07(d) of the Standard Specifications to read:

"(d) Inlet and Pipe Protection. This work will be paid for at the contract unit price per each for INLET AND PIPE PROTECTION.

Protection of drainage structures with inlet filters will be paid for at the contract unit price per each for INLET FILTERS."

Add the following to Article 1081.15 of the Standard Specifications:

"(h) Inlet Filters. An inlet filter shall consist of a steel frame with a two piece geotextile fabric bag attached with a stainless steel band and locking cap that is suspended from the frame. A clean, used bag and a used steel frame in good condition meeting the approval of the Engineer may be substituted for new materials. Materials for the inlet filter assembly shall conform to the following requirements:

(1) Frame Construction. Steel shall conform to Article 1006.04.

Frames designed to fit under a grate shall include an overflow feature that is welded to the frame's ring. The overflow feature shall be designed to allow full flow of water into the structure when the filter bag is full. The dimensions of the frame shall allow the drainage structure grate to fit into the inlet filter assembly frame opening. The assembly frame shall rest on the inside lip of the drainage structure frame for the full variety of existing and proposed drainage structure frames that are present on this contract. The inlet filter assembly frame shall not cause the drainage structure grate to extend higher than 6 mm (1/4 in.) above the drainage structure frame.

(2) Grate Lock. When the inlet is located in a traffic lane, a grate lock shall be used to secure the grate to the frame. The grate lock shall conform to the manufacturer's requirements for materials and installation.

(3) Geotextile Fabric Bag. The sediment bag shall be constructed of an inner filter bag and an outer reinforcement bag.

a. Inner Filter Bag. The inner filter bag shall be constructed of a polypropylene geotextile fabric with a minimum silt and debris capacity of 0.06 cu m (2.0 cu ft). The bag shall conform to the following requirements:

| Inner Filter Bag | | |
|---|---|---|
| Material Property | Test Method | Minimum Avg. Roll Value |
| Grab Tensile Strength | ASTM D 4632 | 45 kg (100 lb) |
| Grab Tensile Elongation | ASTM D 4632 | 50% |
| Puncture Strength | ASTM D 4833 | 29 kg (65 lb) |
| Trapezoidal Tear | ASTM D 4533 | 20 kg (45 lb) |
| UV Resistance | ASTM D 4355 | 70% at 500 hours |
| Actual Open Size | ASTM D 1420 | 212 μm (No. 70 sieve US) |
| Permittivity | ASTM D 4491 | 2.0/sec |
| Water Flow Rate | ASTM D 4491 | 5900 Lpm/sq m (145 gpm/sq ft) |

b. Outer Reinforcement Bag. The outer reinforcement bag shall be constructed of polyester mesh material that conforms to the following requirements:

| Outer Reinforcement Bag | | |
|---|---|---|
| Material Property | Test Method | Value |
| Content | ASTM D 629 | Polyester |
| Weight | ASTM D 3776 | 155 g/sq m (4.55 oz/sq yd) ±15% |
| Whales (holes) | ASTM D 3887 | 7.5 ± 2 holes/25 mm (1 in.) |
| Chorses (holes) | ASTM D 3887 | 15.5 ± 2holes/25 mm (1 in.) |
| Instronball Burst | ASTM D 3887 | 830 kPa (120 psi) min. |
| Thickness | ASTM D 1777 | 1.0 ± 0.1 mm (0.040 ± 0.005 in.) |

(4) Certification. The manufacturer shall furnish a certification with each shipment of inlet filters, stating the amount of product furnished, and that the material complies with these requirements."

**ORGANIC ZINC RICH PAINT SYSTEM**
Effective: November 1, 2001 Revised: August 1, 2003

Add the following to Section 1008 of the Standard Specifications:

" **1008.26 Organic Zinc-Rich Paint System.** The organic zinc-rich paint system shall consist of an organic zinc-rich primer, an epoxy or urethane intermediate coat, and aliphatic urethane finish coats. It is intended for use over blast-cleaned steel when three-coat shop applications are specified. The system is also suitable for field painting blast-cleaned existing structures.

(a) General Requirements.

(1) Compatibility. Each coating in the system shall be supplied by the same paint manufacturer.

(2) Toxicity. Each coating shall contain less than 0.01 percent lead in the dry film and no more than trace amounts of hexavalent chromium, cadmium, mercury or other toxic heavy metals.

(3) Volatile Organics. The volatile organic compounds of each coating shall not exceed 420 g/L (3.5 lb/gal) as applied.

(b) Test Panel Preparation.

(1) Substrate and Surface Preparation. Test panels shall be AASHTO M 270M, Grade 250 (M 270 Grade 36), hot-rolled steel measuring 100 mm x 150 mm (4 in. x 6 in.). Panels shall be blast-cleaned per SSPC–SP5 white metal condition using metallic abrasive. The abrasive shall be a 60/40 mix of shot and grit. The shot shall be an SAE shot number S230 and the grit an SAE number G40. Hardness of the shot and grit shall be Rockwell C45. The anchor profile shall be 40-65 microns (1.5-2.5 mils) measured according to ASTM D 4417, Method C.

(2) Application and Curing. All coatings shall be spray applied at the manufacturer's recommended film thickness. The coated panels shall be cured at least 14 days at 24 °C ± 1 °C (75 °F ± 2 °F) and 50 ± 5 percent relative humidity.

(3) Scribing. The test panels shall be scribed according to ASTM D 1654 with a single "X" mark centered on the panel. The rectangular dimensions of the scribe shall have a top width of 50 mm (2 in.) and a height of 100 mm (4 in.). The scribe cut shall expose the steel substrate as verified with a microscope.

(4) Number of Panels. All testing shall be performed on triplicate panels.

(c) Zinc-Rich Primer Requirements.

(1) Generic Type. This material shall be an organic zinc-rich epoxy or urethane primer. It shall be suitable for topcoating with epoxies, urethanes, and acrylics.

(2) Zinc Dust. The zinc dust pigment shall comply with ASTM D 520, Type II.

(3) Slip Coefficient. The organic zinc coating shall meet a Class B AASHTO slip coefficient (0.50 or greater) for structural steel joints using ASTM A 325M (A 325) or A 490M (A 490) bolts.

(4) Salt Fog. There shall be no delamination, blistering, rust creepage at the scribe, or rusting at the scribe edges after 5,000 hours of salt fog exposure when tested according to ASTM B 117 and evaluated according to AASHTO R 31.

(5) Cyclic Exposure. There shall be no delamination, blistering, rust creepage at the scribe, or rusting at the scribe edges after 5,000 hours of cyclic exposure when tested according to ASTM D 5894 and evaluated according to AASHTO R 31.

(6) Humidity Exposure. There shall be no delamination, blistering, rust creepage at the scribe, or rusting at the scribe edges after 4,000 hours of humidity exposure when tested according to ASTM D 2247 and evaluated according to AASHTO R 31.

(7) Adhesion. The adhesion to an abrasively blasted steel substrate shall not be less than 6200 kPa (900 psi) when tested according to ASTM D 4541 Annex A4.

(8) Freeze Thaw Stability. There shall be no reduction of adhesion, which exceeds the test precision, after 30 days of freeze/thaw/immersion testing. One 24-hour cycle shall consist of 16 hours of approximately –30 °C (-22 °F) followed by 4 hours of thawing at 50 °C (122 °F) and 4 hours tap water immersion at 25 °C (77 °F). The test panels shall remain in the freezer on weekends and holidays.

(d) Intermediate Coat Requirements.

(1) Generic Type. This material shall be an epoxy or urethane. It shall be suitable as an intermediate coat over inorganic and organic zinc primers and compatible with acrylic, epoxy, and polyurethane topcoats.

(2) Color. The color of the intermediate coat shall be white or off-white.

(e) Urethane Finish Coat Requirements.

(1) Generic Type. This material shall be an aliphatic urethane. It shall be suitable as a topcoat over epoxies and urethanes.

(2) Color and Hiding Power. The finish coat shall match Munsell Glossy Color 7.5G 4/8 Interstate Green, 2.5YR 3/4 Reddish Brown, 10B 3/6 Blue, or 5B 7/1 Gray. The color difference shall not exceed 3.0 Hunter Delta E Units. Color difference shall be measured by instrumental comparison of the designated Munsell standard to a minimum dry film thickness of 75 microns (3 mils) of sample coating produced on a test panel according to ASTM D 823, Practice E, Hand–Held, Blade Film Application. Color measurements shall be determined on a spectrophotometer with 45 degrees circumferential/zero degrees geometry, illuminant C, and two degrees observer angle. The spectrophotometer shall measure the visible spectrum from 380-720 nanometers with a wavelength interval and spectral bandpass of 10 nanometers.

The contrast ratio of the finish coat at 75 microns (3 mils) dry film thickness shall not be less than 0.99 when tested according to ASTM D 2805.

(3) Weathering Resistance. Test panels shall be aluminum alloy measuring 300 mm x 100 mm (12 in. x 4 in.) prepared according to ASTM D 1730 Type A, Method 1 Solvent Cleaning. A minimum dry film thickness of 75 microns (3 mils) of finish coat shall be applied to three test panels according to ASTM D 823, Practice E, Hand Held Blade Film Application. The coated panels shall be cured at least 14 days at 24 °C ± 1 °C (75 °F ± 2 °F) and 50 ± 5 percent relative humidity. The panels shall be subjected to 300 hours of accelerated weathering using the light and water exposure apparatus (fluorescent UV - condensation type) as specified in ASTM G 53-96 and ASTM G 154 (equipped with UVB-313 lamps). The cycle shall consist of 8 hours UV exposure at 60 °C (140 °F) followed by 4 hours of condensation at 40 °C (104 °F). After exposure, rinse the panel with clean water; allow to dry at room temperature for one hour. The exposed panels shall not show a color change of more than 3 Hunter Delta E Units.

(f) Three Coat System Requirements.

(1) Finish Coat Color. For testing purposes, the color of the finish coat shall match Federal Standard No 595, color chip 14062 (green).

(2) Salt Fog. When tested according to ASTM B 117 and evaluated according to AASHTO R 31, the paint system shall exhibit no spontaneous delamination and not exceed the following acceptance levels after 5,000 hours of salt fog exposure:

| Salt Fog Acceptance Criteria (max) | | | |
|---|---|---|---|
| Blister Criteria | Rust Criteria | | |
| Size/Frequency | Maximum Creep | Average Creep | % Rusting at Scribed Edges |
| #8 Few | 4mm | 1mm | 1 |

(3) Cyclic Exposure. When tested according to ASTM D 5894 and evaluated according to AASHTO R 31, the paint system shall exhibit no spontaneous delamination and not exceed the following acceptance levels after 5,000 hours of cyclic exposure:

| Cyclic Exposure Acceptance Criteria (max) | | | |
|---|---|---|---|
| Blister Criteria | Rust Criteria | | |
| Size/Frequency | Maximum Creep | Average Creep | % Rusting at Scribed Edges |
| #8 Few | 2mm | 1mm | 1 |

(4) Humidity Exposure. There shall be no delamination, blistering, rust creepage at the scribe, or rusting at the scribe edges after 4,000 hours of humidity exposure when tested according to ASTM D 2247 and evaluated according to AASHTO R 31.

(5) Adhesion. The adhesion to an abrasively blasted steel substrate shall not be less than 6200 kPa (900 psi) when tested according to ASTM D 4541 Annex A4.

(6) Freeze Thaw Stability. There shall be no reduction of adhesion, which exceeds the test precision, after 30 days of freeze/thaw/immersion testing. One 24 hour cycle shall consist of 16 hours of approximately –30 °C (-22 °F) followed by 4 hours of thawing at 50 °C (122 °F) and 4 hours tap water immersion at 25 °C (77 °F). The test panels shall remain in the freezer mode on weekends and holidays.

(g) Qualification Samples and Tests. The manufacturer shall supply, to an independent test laboratory and to the Department, samples of the organic zinc-rich primer, epoxy or urethane intermediate coat, and aliphatic urethane finish coats for evaluation. Prior to approval and use, the manufacturer shall submit a notarized certification of the independent laboratory, together with results of all tests, stating that these materials meet the requirements as set forth herein. The certified test report shall state lots tested, manufacturer's name, product names, and dates of manufacture. New certified test results and samples for testing by the Department shall be submitted any time the manufacturing process or paint formulation is changed. All costs of testing, other than tests conducted by the Department, shall be borne by the manufacturer.

(h) Acceptance Samples and Certification. A 1 L (1 qt) sample of each lot of paint produced for use on state or local agency projects shall be submitted to the Department for testing, together with a manufacturer's certification. The certification shall state that the formulation for the lot represented is essentially identical to that used for qualification testing. All acceptance samples shall be witnessed by a representative of the Illinois Department of Transportation. The organic zinc-rich primer, epoxy or urethane intermediate coat, and aliphatic urethane finish coats shall not be used until tests are completed and they have met the requirements as set forth herein."

**PARTIAL PAYMENTS (BDE)**
Effective: September 1, 2003

Revise Article 109.07 of the Standard Specifications to read:

"**109.07 Partial Payments.** Partial payments will be made as follows:

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

The failure to perform any requirement, obligation, or term of the contract by the Contractor shall be reason for withholding any progress payments until the Department determines that compliance has been achieved. Furthermore, progress payments may be reduced by liens filed pursuant to Section 23(c) of the Mechanics Lien Act, 770 ILCS 60/23(c).

(b) Material Allowances. At the discretion of the Department, payment may be made for materials, prior to their use in the work, when satisfactory evidence is presented by the Contractor. Satisfactory evidence includes justification for the allowance (to expedite the work, meet project schedules, regional or national material shortages, etc.), documentation of material and transportation costs, and evidence that such material is properly stored on the project or at a secure location acceptable and accessible to the Department.

Material allowances will be considered only for nonperishable materials when the cost, including transportation, exceeds $10,000 and such materials are not expected to be utilized within 60 days of the request for the allowance. For contracts valued under

$500,000, the minimum $10,000 requirement may be met by combining the principal (material) product of no more than two contract items. An exception to this two item limitation may be considered for any contract regardless of value for items in which material (products) are similar except for type and/or size.

Material allowances shall not exceed the value of the contract items in which used and shall not include the cost of installation or related markups. Amounts paid by the Department for material allowances will be deducted from estimates due the Contractor as the material is used. Two-sided copies of the Contractor's cancelled checks for materials and transportation must be furnished to the Department within 60 days of payment of the allowances or the amounts will be reclaimed by the Department."

**PAVEMENT THICKNESS DETERMINATION FOR PAYMENT (BDE)**

Effective: April 1, 1999 Revised: January 1, 2004

Description. This work shall consist of determining pavement thickness for payment for full depth bituminous concrete and all pcc pavements. Pavement pay items that individually contain at least 840 sq m (1000 sq yd) of contiguous pavement will be subject to this Special Provision with the following exclusions: temporary pavements; variable width pavement; radius returns and side streets less than 125 m (400 ft) in length; and turn lanes of constant width less than 125 m (400 ft) in length. The areas of pavement excluded from the pay adjustment as described in this Special Provision will be cored according to Article 407.10 of the Standard Specifications. Temporary pavements are defined as pavements constructed and removed under this contract.

Materials. Rapid set materials shall be obtained from the Department's approved list of Packaged, Dry, Rapid Hardening Cementitous Materials For Concrete Repairs. Coarse aggregate may be added to the mortar if allowed by the manufacturer's instructions on the package. Mixing shall be according to the manufacture's recommendations.

Equipment. Cores shall be taken utilizing an approved coring machine. The cores shall have a diameter of 50 mm (2 in.). The cores shall be measured utilizing an approved measuring device.

CONSTRUCTION REQUIREMENTS

Tolerance in Thickness. Determination of the pavement thickness shall be performed after the pavement surface tests and all corrective grinding are complete according to Article 407.09 of the Standard Specifications. Adjustments made in the contract unit price for pavement thickness will be in addition to and independent of those made for the Profile Index.

The pavement will be divided into approximately equal lots of not more than 1500 m (5000 ft) in length. When the length of a continuous strip of pavement is less than 1500 m (5000 ft), these short lengths of pavement, ramps, turn lanes, and other short sections of continuous pavement shall be grouped together to form lots of approximately 1500 m (5000 ft) 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 sublot 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.

Fifty millimeter (Two inch) cores shall be taken from the pavement by the Contractor at random locations selected by the Engineer. When computing the thickness of a lot, one core will be taken per sublot. Core locations will be specified by the Engineer prior to beginning the coring operations.

The Contractor and the Engineer shall witness the coring operations, the measurement, 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 discarded.

Patching Holes. Upon completion of coring, all core holes shall be filled with a rapid set mortar or concrete. Only enough water to permit placement and consolidation by rodding shall be used, and the material shall be struck-off flush with the adjacent pavement.

For a rapid set mortar mixture, one part packaged rapid set cement shall be combined with two parts fine aggregate, by volume; or a packaged rapid set mortar shall be used. For a rapid set concrete mixture, a packaged rapid set mortar shall be combined with coarse aggregate according to the manufacturer's instructions or a packaged rapid set concrete shall be used. Mixing of a rapid set mortar or concrete shall be according to the manufacturer's instructions.

Deficient Sublot. When the thickness of the core in a sublot is deficient by more than ten percent of plan thickness, the Contractor will have the option of taking three additional cores selected at random by the Engineer within the same sublot at the Contractor's expense. The thickness of the additional three cores will be averaged with the original core thickness. When the average thickness shows the sublot to be deficient by ten percent or less, no additional action is necessary. If the Contractor chooses not to take additional cores, the pavement in the sublot shall be removed and replaced at the Contractor's expense. When additional cores are taken and the average thickness of the additional cores show the sublot to be deficient by more than ten percent, the pavement in that sublot shall be removed and replaced at the Contractor's expense. When requested in writing by the Contractor, the Engineer, at his/her option, may permit in writing such thin pavement to remain in place. For Bituminous Concrete Pavement (Full Depth) allowed to remain in place, additional lift(s) may be placed, at the Contractor's expense, to bring the deficient pavement to plan thickness when the Engineer determines grade control conditions will permit such lift(s). The material thickness(es), areas to be overlaid, and method of placement used for additional lift(s) will be approved by the Engineer. When the thin pavement is removed and replaced or additional lifts are placed, the replacement pavement will be retested for thickness at the Contractor's expense. When the thin pavement is left in place and no additional lift(s) are placed, no payment will be made for the deficient pavement sublot. The thickness of the original core taken in the sublot will be used in determining the payment for the entire lot and no adjustment to the pay factor will be made for any corrective action taken.

Deficient Lot. After analyzing the cores, the Percent Within Limits will be calculated. A lot of pavement represented by the Percent Within Limits (PWL) of 60 percent or less, shall be removed and replaced at the Contractor's expense. When requested in writing by the Contractor, the Engineer, at his/her option, may permit in writing such pavement to remain in place. For Bituminous Concrete Pavement (Full Depth), allowed to remain in place, additional lift(s) may be placed, at the Contractor's expense, to bring the deficient pavement to plan thickness when the Engineer determines grade control conditions will permit such lift(s). The material, thickness(es), areas to be overlaid and method of placement used for the additional lift(s) will be approved by the Engineer. After either corrective action, the Contractor shall core the lot according to the "Coring Procedures" at no additional cost to the Department. The PWL

will then be recalculated for the lot, however, the pay factor for the lot will be a maximum of 100 percent. When requested in writing by the Contractor, the Engineer, at his/her option, may permit in writing, the lot to remain in place. When the lot is left in place and no additional lifts are placed the pay factor for the lot will be based on the calculated PWL.

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 cores in addition to those specified. 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. These additional cores and locations will be determined prior to commencement of coring operations. When the additional cores show the pavement to be deficient by more than ten percent, additional cores shall be taken at locations determined by the Engineer to determine the limits of the deficient pavement area. The deficient pavement area will be defined as the area between two acceptable cores. An acceptable core is a core with a thickness of 90 percent or more of plan thickness. The defined pavement area shall be removed and replaced at the Contractor's expense. When requested by the Contractor, the Engineer, at his/her option, may permit in writing such thin pavement to remain in place. On Bituminous Concrete Pavement (Full Depth) allowed to remain in place, additional lift(s) may be placed to bring the deficient pavement to plan thickness when the Engineer determines that grade control conditions will permit such lift(s). The material, thickness(es), areas to be overlaid and method of placement for the additional lift(s) will be approved by the Engineer. When the thin pavement is removed and replaced or additional lifts are placed, the replacement pavement will be retested for thickness at the Contractor's expense. When the thin 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 deficient by ten percent or less the additional cores will be paid for according to Article 109.04. When the additional cores show the pavement to be deficient by more than ten percent the additional cores taken in the deficient area shall be at the Contractor's expense.

Profile Index Adjustment. After any section of pavement is removed and replaced or any additional lifts are added, the corrected areas shall be tested for pavement smoothness and any necessary Profile Index adjustments and/or corrections will be made based on these final profile readings. Such surface testing shall be performed at the Contractor's expense.

Core Analysis. Cores will be analyzed according to the following:

(a) Definition:

$x_i$ = 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 (LSL = 0.98 plan thickness for pavement)
$Q_L$ = Lower Quality Index
S = Sample Standard Deviation
PWL = Percent Within Limits

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

Compute the sample standard deviation to the nearest three decimal places using:

$$S = \sqrt{\frac{\sum\left(x_i - \bar{x}\right)^2}{n-1}}$$ where $\Sigma(x_i - \bar{x})^2 = (x_1 - \bar{x})^2 + (x_2 - \bar{x})^2 + \ldots + (x_{10} - \bar{x})^2$

Determine the Lower Quality Index to the nearest two decimal places using:

$$Q_L = \frac{\left(\bar{x} - LSL\right)}{S}$$

Determine the percentage that will fall above the Lower Specification Limit (LSL) by going to the attached Table and utilizing calculated $Q_L$. Read the appropriate PWL value from the Table. For $Q_L$ values less than zero the value shown in the table must be subtracted from 100 to obtain PWL.

Pay Adjustment. The following pay adjustment equation will be used to determine (to the nearest two decimal places) the pay factor for each lot.

Pay Factor (PF) in percent = 55 + 0.5 (PWL)

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

Total Payment. The payment will be based on the appropriate pay items in Sections 407, 420, and 421. The final payment will be adjusted according to the following equation:

Total Payment = TPF[CUP (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 entire pavement will be the average of the PF for all the lots, however, not more than 102 percent of plan quantity will be paid.

Deficient pavement is defined as an area of pavement represented by a sublot deficient by more than 10 percent which is left in place with no additional thickness added.

All work involved in determining the total payment will be included in the contract unit prices of the pay items involved.

| Percent Within Limits | | | | | | | |
|---|---|---|---|---|---|---|---|
| Quality Index ($Q_L$)* | Percent Within Limits (PWL) | Quality Index ($Q_L$)* | Percent Within Limits (PWL) | Quality Index ($Q_L$)* | Percent Within Limits (PWL) | Quality Index ($Q_L$)* | 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 $Q_L$ values less than zero, subtract the table value from 100 to obtain PWL

**Percent Within Limits (continued)**

| Quality Index ($Q_L$)* | Percent Within Limits (PWL) | Quality Index ($Q_L$)* | Percent Within Limits (PWL) | Quality Index ($Q_L$)* | 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 | $\geq$ 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 $Q_L$ values less than zero, subtract the table value from 100 to obtain PWL

53600

**PAYMENTS TO SUBCONTRACTORS (BDE)**
Effective: June 1, 2000 Revised: September 1, 2003

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 no later than 30 days from the receipt of each payment made to the Contractor.

State law addresses the timing of payments to be made to subcontractors. Section 7 of the Prompt Payment Act, 30 ILCS 540/7, generally requires that when a Contractor receives any payment from the Department, the Contractor is required to make corresponding, proportional payments to each subcontractor performing work within 15 calendar days after receipt of the state payment. Section 7 of the State Prompt Payment Act further provides that interest in the amount of 2% per month, in addition to the payment due, shall be paid to any subcontractor 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 throughout the contracting chain.

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

As progress payments are made to the Contractor in accordance with Article 109.07 of the Standard Specifications for Road and Bridge Construction, the Contractor shall make a corresponding partial payment within 15 calendar days to each subcontractor in proportion to the work satisfactorily completed by each subcontractor. The proportionate amount of partial payment due to each subcontractor 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 shall be paid in full within 15 calendar days after the subcontractor's work has been satisfactorily completed. The Contractor shall hold no retainage from the subcontractors.

This Special Provision does not create any rights in favor of any subcontractor against the State of Illinois or authorize any cause of action against the State of Illinois on account of any payment, nonpayment, delayed payment or interest claimed by application of the State Prompt Payment Act. The Department will neither determine the reasonableness of any cause for delay of payment nor enforce any claim to payment, including interest. Moreover, the Department will not approve any delay or postponement of the 15 day requirement. State law creates 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 in accordance with the Public Construction Bond Act, 30 ILCS 550.

**PERSONAL PROTECTIVE EQUIPMENT (BDE)**
Effective: July 1, 2004

All personnel, excluding flaggers, working outside of a vehicle (car or truck) within 7.6 m (25 ft) of pavement open to traffic shall wear a fluorescent orange, fluorescent yellow/green or a combination of fluorescent orange and fluorescent yellow/.green vest meeting the requirements

of the American National Standards Institute specification ANSI/ISEA 107-1999 for Conspicuity Class 2 garments. Other types of garments may be substituted for the vest as long as the garments have manufacturers tags identifying them as meeting the ANSI Class 2 requirement.

**PLASTIC BLOCKOUTS FOR GUARDRAIL (BDE)**
Effective: November 1, 2004

Add the following to Article 630.02 of the Standard Specifications:

"(h) Plastic Blockouts (Note 1.)

Note 1. Plastic blockouts, 150 mm (6 in.) deep, may be used in lieu of 150 mm (6 in.) deep wood block-outs for steel plate beam guardrail. The plastic blockouts shall be on the Department's approved list."

**PORTABLE CHANGEABLE MESSAGE SIGNS (BDE)**
Effective: November 1, 1993 Revised: April 2, 2004

Description. This work shall consist of furnishing, placing, and maintaining changeable message sign(s) at the locations(s) shown on the plans or as directed by the Engineer.

The sign(s) shall be trailer mounted. The message panel shall be at least 2.1 m (7 ft) above the pavement, present a level appearance, and be capable of displaying up to eight characters in each of three lines at a time. Character height shall be 450 mm (18 in.).

The message panel shall be of either a bulb matrix or disc matrix design controlled by an onboard computer capable of storing a minimum of 99 programmed messages for instant recall. The computer shall be capable of being programmed to accept messages created by the operator via an alpha-numeric keyboard and able to flash any six messages in sequence. The message panel shall also be capable of being controlled by a computer from a remote location via a cellular linkage. The Contractor shall supply the modem, the cellular phone, and the necessary software to run the sign from a remote computer at a location designated by the Engineer. The Contractor shall promptly program and/or reprogram the computer to provide the messages as directed by the Engineer.

The message panel shall be visible from 400 m (1/4 mile) under both day and night conditions. The letters shall be legible from 250 m (750 ft).

The sign shall include automatic dimming for nighttime operation and a power supply capable of providing 24 hours of uninterrupted service.

The Contractor shall provide all preventive maintenance efforts s(he) deems 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. The cost of such work shall be borne by the Contractor or deducted from current or future compensation due the Contractor.

When the sign(s) are displaying messages, they shall be considered a traffic control device. At all times when no message is displayed, they shall be considered equipment.

Basis of Payment. When portable changeable message signs are shown on the Standard, this work will not be paid for separately but shall be considered as included in the cost of the Standard.

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

**PORTLAND CEMENT CONCRETE (BDE)**
Effective: November 1, 2002

Add the following paragraph after the fourth paragraph of Article 1103.01(b) of the Standard Specifications:

"The truck mixer shall be approved before use according to the Bureau of Materials and Physical Research's Policy Memorandum, "Approval of Concrete Plants and Delivery Trucks"."

Add the following paragraph after the first paragraph of Article 1103.01(c) of the Standard Specifications:

"The truck agitator shall be approved before use according to the Bureau of Materials and Physical Research's Policy Memorandum, "Approval of Concrete Plants and Delivery Trucks"."

Add the following paragraph after the first paragraph of Article 1103.01(d) of the Standard Specifications:

"The nonagitator truck shall be approved before use according to the Bureau of Materials and Physical Research's Policy Memorandum, "Approval of Concrete Plants and Delivery Trucks"."

Revise the first sentence of the first paragraph of Article 1103.02 of the Standard Specifications to read:

"The plant shall be approved before production begins according to the Bureau of Materials and Physical Research's Policy Memorandum, "Approval of Concrete Plants and Delivery Trucks"."

**PRECAST CONCRETE PRODUCTS (BDE)**
Effective: July 1, 1999 Revised: November 1, 2004

Product Approval. Precast concrete products shall be produced according to the Department's current Policy Memorandum, "Quality Control/Quality Assurance Program for Precast Concrete Products". The Policy Memorandum applies to precast concrete products listed under the Products Key of the "Approved List of Certified Precast Concrete Producers".

Precast Concrete Box Culverts. Add the following sentence to the end of the fourth paragraph of Article 540.06:

"After installation, the interior and exterior joint gap between precast concrete box culvert sections shall not exceed 38 mm (1 1/2 in.)."

Portland Cement Replacement. For precast concrete products using Class PC concrete or other mixtures, portland cement replacement with fly ash or ground granulated blast-furnace (GGBF) slag shall be governed by the AASHTO or ASTM standard specification referenced in the Standard Specifications.

For all other precast concrete products using Class PC concrete or other mixtures, portland cement replacement with fly ash or GGBF slag shall be approved by the Engineer. Class F fly ash shall not exceed 15 percent by mass (weight) of the total portland cement and Class F fly ash. Class C fly ash shall not exceed 20 percent by mass (weight) of the total portland cement and Class C fly ash. GGBF slag shall not exceed 25 percent by mass (weight) of the total portland cement and GGBF slag.

Concrete mix designs, for precast concrete products, shall not consist of portland cement, fly ash and GGBF slag.

Ready-Mixed Concrete. Delete the last paragraph of Article 1020.11(a) of the Standard Specifications.

Shipping. When a precast concrete product has attained the specified strength, the earliest the product may be loaded, shipped, and used is on the fifth calendar day. The first calendar day shall be the date casting was completed.

Acceptance. Products which have been lot or piece inspected and approved by the Department prior to July 1, 1999, will be accepted for use on this contract.

**PREFORMED RECYCLED RUBBER JOINT FILLER (BDE)**
Effective: November 1, 2002

Revise Article 503.02(c) of the Standard Specifications to read:

"(c) Preformed Expansion Joint Filler .....1051"

Revise Article 637.02(d) of the Standard Specifications to read:

"(d) Preformed Expansion Joint Filler .....1051"

Add the following Article to Section 1051 of the Standard Specifications:

"1051.10 Preformed Recycled Rubber Joint Filler. Preformed recycled rubber joint filler shall consist of ground tire rubber, free of steel and fabric, combined with ground scrap or waste polyethylene. It shall not have a strong hydrocarbon or rancid odor and shall meet the physical property requirements of ASTM D 1752. Water absorption by volume shall not exceed 5.0 percent."

**RAP FOR USE IN BITUMINOUS CONCRETE MIXTURES (BDE)**
Effective: January 1, 2000 Revised: April 1, 2002

Revise Article 1004.07 to read:

"**1004.07 RAP Materials.** RAP is reclaimed asphalt pavement resulting from cold milling or crushing of an existing dense graded hot-mix asphalt pavement. RAP must originate from routes or airfields under federal, state or local agency jurisdiction. The Contractor shall supply documentation that the RAP meets these requirements.

(a) Stockpiles. The Contractor shall construct individual, sealed RAP stockpiles meeting one of the following definitions. No additional RAP will be allowed on top of the pile after the pile has been sealed.

(1) Homogeneous. Homogeneous RAP stockpiles shall consist of RAP from Class I/ Superpave, or equivalent mixtures only and represent the same aggregate quality, but shall be at least C quality or better, the same type of crushed aggregate (either crushed natural aggregate, ACBF slag, or steel slag), similar gradation and similar AC 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. Homogenous stockpiles shall meet the requirements of Article 1004.07(d). Homogeneous RAP stockpiles not meeting these requirements may be processed (crushing and screening) and retested.

(2) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I/ Superpave, or equivalent mixtures only. The coarse aggregate in this RAP shall be crushed aggregate only and may represent more than one aggregate type and/or quality but shall be at least C quality or better. This RAP may have an inconsistent gradation and/or asphalt cement content prior to processing. All conglomerate RAP shall be processed prior to testing by crushing to where all RAP shall pass the 16 mm (5/8 in.) or smaller screen. Conglomerate RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department. Conglomerate RAP stockpiles shall meet the requirements of Article 1004.07(d).

(3) Conglomerate "D" Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP containing coarse aggregate (crushed or round) that is at least D quality or better. This RAP may have an inconsistent gradation and/or asphalt content. Conglomerate DQ RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department. Conglomerate DQ RAP shall meet the requirements of Article 1004.07(d).

Reclaimed Superpave Low ESAL IL-9.5L surface mixtures shall only be placed in conglomerate DQ RAP stockpiles due to the potential for rounded aggregate.

(4) Other. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as "Other". "Other" RAP stockpiles shall not be used in any of the Department's bituminous mixtures.

(b) Use. The allowable use of a RAP stockpile shall be set by the lowest quality of coarse aggregate in the RAP stockpile. Class I/Superpave surface mixtures are designated as

containing Class B quality coarse aggregate only. Superpave Low ESAL IL-19.0L binder and IL-9.5L surface mixtures are designated as Class C quality coarse aggregate only. Class I/Superpave binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate only. Bituminous stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate only. Any mixture not listed above shall have the designated quality determined by the Department.

RAP containing steel slag or other expansive material, as determined by the Department, shall be homogeneous and will be approved for use in Class I/Superpave (including Low ESAL) surface mixtures only. RAP stockpiles for use in Class I/Superpave mixtures (including Low ESAL), base course, base course widening and Class B mixtures shall be either homogeneous or conglomerate RAP stockpiles except conglomerate RAP stockpiles shall not be used in Superpave surface mixture Ndesign 50 or greater. RAP for use in bituminous aggregate mixtures (BAM) shoulders and BAM stabilized subbase shall be from homogeneous, conglomerate, or conglomerate DQ stockpiles.

Additionally, RAP used in Class I/Superpave surface mixtures shall originate from milled or crushed mixtures only, in which the coarse aggregate is of Class B quality or better. RAP stockpiles for use in Class I/Superpave (including Low ESAL) binder mixes as well as base course, base course widening and Class B mixtures shall originate from milled or processed surface mixture, binder mixture, or a combination of both mixtures uniformly blended to the satisfaction of the Engineer, in which the coarse aggregate is of Class C quality or better.

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

(d) Testing. All RAP 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 450 metric tons (500 tons) for the first 1800 metric tons (2,000 tons) and one sample per 1800 metric tons (2,000 tons) thereafter. A minimum of five tests shall be required for stockpiles less than 3600 metric tons (4,000 tons).

For testing existing stockpiles, the Contractor shall submit a plan for approval to the District proposing a satisfactory method of sampling and testing the RAP pile either in-situ or by restockpiling. The sampling plan shall meet the minimum frequency required above and detail the procedure used to extract representative samples throughout the pile for testing.

Before extraction, each field sample shall be split to 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.

All of the extraction results shall be compiled and averaged for asphalt content and gradation. Individual extraction test results, when compared to the averages, will be accepted if within the tolerances listed below.

| Parameter | Homogeneous / Conglomerate | Conglomerate "D" Quality |
|---|---|---|
| 25 mm (1 in.) | | ± 5% |
| 12.5 mm (1/2 in.) | ± 8% | ± 15% |
| 4.75 mm (No. 4) | ± 6% | ± 13% |
| 2.36 mm (No. 8) | ± 5% | |
| 1.18 mm (No. 16) | | ± 15% |
| 600 μm (No. 30) | ± 5% | |
| 75 μm (No. 200) | ± 2.0% | ± 4.0% |
| AC | ± 0.4% | ± 0.5% |

If more than 20 percent of the individual sieves are out of the gradation tolerances, or if more than 20 percent of the asphalt content test results fall outside the appropriate tolerances, the RAP will not be allowed to be used in the Department's bituminous concrete mixtures unless the RAP representing the failing tests is removed from the stockpile to the satisfaction of the Engineer. 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)".

(e) Designs. At the Contractor's option, bituminous concrete mixtures may be constructed utilizing RAP material meeting the above detailed requirements. The amount of RAP included in the mixture shall not exceed the percentages specified in the plans.

RAP designs shall be submitted for volumetric verification. If additional RAP 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 stockpile and design, and meets all of the requirements herein, the additional RAP stockpiles may be used in the original mix design at the percent previously verified.

(f) Production. The coarse aggregate in all RAP used shall be equal to or less than the nominal maximum size requirement for the bituminous mixture being produced.

To remove or reduce agglomerated material, a scalping screen, 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 control tolerances or QC/QA test results require corrective action, the Contractor shall cease production of the mixture containing RAP and either switch to the virgin aggregate design or submit a new RAP design.

**SEEDING AND SODDING (BDE)**

Effective: July 1, 2004 Revised: November 1, 2004

Revise Class 1A and 2A seeding mixtures shown in Table 1 of Article 250.07 of the Standard Specifications to read:

| "Table 1 - SEEDING MIXTURES | | | |
|---|---|---|---|
| Class – Type | | Seeds | kg/hectare (lb/acre) |
| 1A | Salt Tolerant Lawn Mixture 7/ | Bluegrass<br>Perennial Ryegrass<br>Audubon Red Fescue<br>Rescue 911 Hard Fescue<br>Fults Salt Grass* | 70 (60)<br>20 (20)<br>20 (20)<br>20 (20)<br>70 (60) |
| 2A | Salt Tolerant Roadside Mixture 7/ | Alta Fescue or Ky 31<br>Perennial Ryegrass<br>Audubon Red Fescue<br>Rescue 911 Hard Fescue<br>Fults Salt Grass 1/ | 70 (60)<br>20 (20)<br>20 (30)<br>20 (30)<br>70 (60)" |

Revise Note 7 of Article 250.07 of the Standard Specifications to read:

"Note 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 coverage over the entire seeded area(s) after one growing season. The guarantee shall be submitted to the Engineer in writing prior to performing the work. After one growing season, areas not sustaining 75 percent growth shall be interseeded or reseeded, as determined by the Engineer, at the Contractor's expense."

Add the following sentence to Article 252.04 of the Standard Specifications:

"Sod shall not be placed during the months of July and August."

Revise the first paragraph of Article 252.08 of the Standard Specifications to read:

"**252.08 Sod Watering.** Within two hours after the sod has been placed, water shall be applied at a rate of 25 L/sq m (5 gal/sq yd). Additional water shall be applied every other day at a rate of 15 L/sq m (3 gal/sq yd) for a total of 15 additional waterings. During periods exceeding 26 ºC (80 ºF) or subnormal rainfall, the schedule of additional waterings may be altered with the approval of the Engineer."

Revise Article 252.09 of the Standard Specifications to read:

"**252.09 Supplemental Watering.** During periods exceeding 26 ºC (80 ºF) or subnormal rainfall, supplemental watering may be required after the initial and additional waterings. Supplemental watering shall be performed when directed by the Engineer. Water shall be applied at the rate specified by the Engineer within 24 hours of notice."

Revise the first and third paragraphs of Article 252.12 of the Standard Specifications to read:

"**252.12 Method of Measurement**. Sodding will be measured for payment in place and the area computed in square meters (square yards). To be acceptable for final payment, the sod shall be growing in place for a minimum of 30 days in a live, healthy condition. When directed by the Engineer, any defective or unacceptable sod shall be removed, replaced and watered by the Contractor at his/her own expense."

"Supplemental watering will be measured for payment in units of 1000 L (1000 gal) of water applied on the sodded areas. Waterings performed in addition to those required by Article 252.08 or after the 30 day establishment period will be considered as supplemental watering."

Replace the first paragraph of Article 252.13 of the Standard Specifications with the following:

"**252.13 Basis of Payment.** Sodding will be paid for at the contract unit price per square meter (square yard) for SODDING or SODDING, SALT TOLERANT according to the following schedule.

(a) Initial Payment. Upon placement of sod, 25 percent of the pay item will be paid.

(b) Final Payment. Upon acceptance of sod, the remaining 75 percent of the pay item will be paid."

Revise Article 1081.03(b) of the Standard Specifications to read:

"(b) Salt Tolerant Sod.

| Variety | Percent by Weight |
|---|---|
| Buffalo Grass<br>Buchloe Dactyloides | 30% |
| Amigo Fineleaf Tall Fescue | 20% |
| Audubon Red Fescue | 15% |
| Rescue 911 Hard Fescue | 15% |
| Rugby Kentucky Bluegrass | 5% |
| Fults Pucinnellia Distans | 15%" |

Revise Table II of Article 1081.04(c)(6) of the Standard Specifications to read:

TABLE II

| Variety of Seeds | Hard Seed Percent Maximum | Purity Percent Minimum | Pure, Live Seed Percent Minimum | Weed Percent Maximum | Secondary Noxious Weeds No. per kg (oz) Max. Permitted* | Remarks |
|---|---|---|---|---|---|---|
| Alfalfa | 20 | 92 | 89 | 0.50 | 211 (6) | 1/ |
| Brome Grass | - | 90 | 75 | 0.50 | 175 (5) | - |
| Clover, Alsike | 15 | 92 | 87 | 0.30 | 211 (6) | 2/ |
| Clover, Crimson | 15 | 92 | 83 | 0.50 | 211 (6) | - |
| Clover, Ladino | 15 | 92 | 87 | 0.30 | 211 (6) | - |
| Clover, Red | 20 | 92 | 87 | 0.30 | 211 (6) | - |
| Clover, White Dutch | 30 | 92 | 87 | 0.30 | 211 (6) | 3/ |
| Audubon Red Fescue | 0 | 97 | 82 | 0.10 | 105 (3) | - |
| Fescue, Alta or Ky. 31 | - | 97 | 82 | 1.00 | 105 (3) | - |
| Fescue, Creeping Red | - | 97 | 82 | 1.00 | 105 (3) | - |
| Fults Salt Grass | 0 | 98 | 85 | 0.10 | 70 (2) | - |
| Kentucky Bluegrass | - | 97 | 80 | 0.30 | 247 (7) | 5/ |
| Lespedeza, Korean | 20 | 92 | 84 | 0.50 | 211 (6) | 3/ |
| Oats | - | 92 | 88 | 0.50 | 70 (2) | 4/ |
| Orchard Grass | - | 90 | 78 | 1.50 | 175 (5) | 4/ |
| Redtop | - | 90 | 78 | 1.80 | 175 (5) | 4/ |
| Ryegrass, Perennial, Annual | - | 97 | 85 | 0.30 | 175 (5) | 4/ |
| Rye, Grain, Winter | - | 92 | 83 | 0.50 | 70 (2) | 4/ |
| Rescue 911 Hard Fescue | 0 | 97 | 82 | 0.10 | 105 (3) | - |
| Timothy | - | 92 | 84 | 0.50 | 175 (5) | 4/ |
| Vetch, Crown | 30 | 92 | 67 | 1.00 | 211 (6) | 3/ & 6/ |
| Vetch, Spring | 30 | 92 | 88 | 1.00 | 70 (2) | 4/ |
| Vetch, Winter | 15 | 92 | 83 | 1.00 | 105 (3) | 4/ |
| Wheat, hard Red Winter | - | 92 | 89 | 0.50 | 70 (2) | 4/ |

**SELF-CONSOLIDATING CONCRETE FOR PRECAST PRODUCTS (BDE)**
Effective: July 1, 2004

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. The design and testing of a self-consolidating concrete mixture shall be according to Section 1020 of the Standard Specifications except as modified herein.

Materials. Materials shall conform to the following requirements:

(a) 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 flowable concrete that does not require mechanical vibration.

The high range water-reducing admixture shall comply with the requirements of AASHTO M 194, Type F.

The viscosity modifying admixture will be evaluated according to the test methods and mix design proportions referenced in AASHTO M 194, except the following physical requirements shall be met:

(1) For initial and final set times, the allowable deviation of the test concrete from the reference concrete shall not be more than 1.0 hour earlier or 1.5 hours later.

(2) For compressive and flexural strengths, the test concrete shall be a minimum of 90 percent of the reference concrete at 3, 7 and 28 days.

(3) The length change of the test concrete shall be a maximum 135 percent of the reference concrete. However, if the length change of the reference concrete is less than 0.030 percent, the length change of the test concrete shall be a maximum 0.010 percentage units greater than the reference concrete.

(4) The relative durability factor of the test concrete shall be a minimum 80 percent.

(b) Fine Aggregate. A fine aggregate used alone in the mix design shall not have an expansion greater than 0.30 percent per ASTM C 1260. For a blend of two or more fine aggregates, the resulting blend shall not have an expansion greater than 0.30 percent.

The aggregate blend expansion will be calculated as follows:

Aggregate Blend Expansion = (a/100 x A) + (b/100 x B) + (c/100 x C) + ……etc.

Where: a, b, c, … = percent of aggregate blend
A, B, C, … = aggregate expansion according to ASTM C 1260

Mix Design Criteria. The slump requirements of Article 1020.04 of the Standard Specifications shall not apply. In addition, the allowable coarse aggregate gradations shall be CA 11, CA 13, CA 14, CA 16, or a blend of these gradations. The fine aggregate proportion shall be a maximum 50 percent by mass (weight) of the total aggregate used.

Trail Batch. A minimum 1 cu m (1 cu yd) trial batch shall be produced. The mixture will be evaluated for air content, slump flow, visual stability index, compressive strength, passing ability, and static/dynamic segregation resistance.

The trial batch shall be scheduled and performed in the presence of the Engineer. Testing shall be performed per the Department's test method or as approved by the Engineer.

For the trial batch, the air content shall be within the top half of the allowable specification range. The slump flow range shall be 510 mm (20 in.) minimum to 710 mm (28 in.) maximum. The visual stability index shall be a maximum of 1. Strength shall be determined at 28 days. At the Contractor's option, strength may be determined for additional days.

Passing ability and static/dynamic segregation resistance shall be determined by tests selected by the Contractor and approved by the Engineer. The visual stability index shall not be used as the sole criteria for evaluating static segregation resistance.

After an acceptable mixture has been batched and tested, the mixture shall also be evaluated for robustness. Robustness shall be evaluated by varying the dosage of the self-consolidating admixture system and water separately. Additional trial batches may be necessary to accomplish this.

When necessary, the trial batches shall be disposed of according to Article 202.03 of the Standard Specifications.

Quality Control. Once testing is completed and acceptable results have been attained, production test frequencies and allowable test ranges for slump flow, visual stability index, passing ability, and static/dynamic segregation resistance shall be proposed. The production test frequencies and allowable test ranges will be approved by the Engineer.

The slump flow range shall be ± 50 mm (± 2 in.) of the target value, and within the overall range of 510 mm (20 in.) minimum to 710 mm (28 in.) maximum. The visual stability index shall be a maximum of 1. The approved test ranges for passing ability and static/dynamic segregation resistance will be based on recommended guidelines determined by the Engineer.

**STABILIZED SUBBASE AND BITUMINOUS SHOULDERS SUPERPAVE (BDE)**
Effective: April 1, 2002 Revised: July 1, 2004

Description. This work shall consist of constructing stabilized subbase and bituminous shoulders Superpave according to Sections 312 and 482 respectively, of the Standard Specifications and the special provision, “Quality Control/Quality Assurance of Bituminous Concrete Mixtures” except as modified herein.

Revise Article 312.03(b) of the Standard Specifications to read:

“(b) RAP Material (Note 3)”

Revise Note 2 of Article 312.03 of the Standard Specifications to read:

“Note 2. Gradation CA 6, CA 10, or CA 12 shall be used.”

Revise Note 3 of Article 312.03 of the Standard Specifications to read:

"Note 3. RAP shall meet the requirements of the special provision "RAP for Use in Bituminous Concrete Mixtures". RAP containing steel slag shall be permitted for use in top-lift surface mixtures only."

Revise Note 4 of Article 312.03 of the Standard Specifications to read:

"Note 4. Unless otherwise specified on the plans, the bituminous material shall be performance graded asphalt cement, PG58-22. When more than 15 percent RAP is used, a softer PG binder may be required as determined by the Engineer."

Revise Article 312.06 of the Standard Specifications to read:

"**312.06 Mixture Design.** The Contractor shall submit mix designs for approval, for each required mixture. Mix designs shall be developed by Level III personnel who have completed the course, “Superpave Mix Design Upgrade”. The mixtures shall be designed according to the respective Illinois Modified AASHTO references listed below:

AASHTO MP 2 Standard Specification for Superpave Volumetric Mix Design

AASHTO R 30 Standard Practice for Mixture Conditioning of Hot-Mix Asphalt (HMA)

AASHTO PP 28 Standard Practice for Designing Superpave HMA

AASHTO T 209 Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures

AASHTO T 312 Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor

AASHTO T 308 Determining the Asphalt Content of Hot Mix Asphalt (HMA) by the Ignition Method

(a) Job Mix Formula (JMF). The JMF shall be according to the following limits:

| Ingredient | Percent by Dry Weight |
|---|---|
| Aggregate | 94.0 to 96.0 |
| Asphalt Cement | 4.0 to 6.0* |
| Dust/AC Ratio | 1.4 |

*Upper limit may be raised for the lower or top lifts if the Contractor elects to use a highly absorptive coarse and/or fine aggregate requiring more than six percent asphalt. The additional asphalt shall be furnished at no cost to the Department.

When RAP material is being used, the JMF shall be according to the following limits:

| Ingredient | Percent by Dry Weight |
|---|---|
| Virgin Aggregate(s) | 46.0 to 96.0 |
| RAP Material(s) (Note 1) | 0 to 50 |
| Mineral Filler (if required) | 0 to 5.0 |
| Asphalt Cement | 4.0 to 7.0 |
| Dust/AC Ratio | 1.4 |

Note 1. If specified on the plans, the maximum percentage of RAP shall be as specified therein.

It is recommended that the selected combined aggregate gradation not pass through the restricted zones specified in Illinois Modified AASHTO MP 2.

(b) Volumetric Requirements.

| Design Compactive Effort | Design Air Voids Target (%) |
|---|---|
| $N_{DES}$ =30 | 2.0 |

(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 using 4 in. Marshall bricks. To be considered acceptable by the Engineer as a mixture not susceptible to stripping, the ratio of conditioned to unconditioned split tensile strengths (TSR) shall be equal to or greater than 0.75. Mixtures, either with or without an additive, with TSR values less than 0.75 will be considered unacceptable.

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. The liquid additive shall be selected from the Department's list of approved additives and may be limited to those which have exhibited satisfactory performance in similar mixes.

Dry hydrated lime shall be added at a rate of 1.0 to 1.5 percent by weight of total dry aggregate. Slurry shall be added in such quantity as to provide the required amount of hydrated lime solids by weight of total dry aggregate. The exact rate of application for all anti-stripping additives will be determined by the Engineer. The method of application shall be according to Article 406.12 of the Standard Specifications."

Revise Article 312.08 of the Standard Specifications to read:

"**312.08 Mixture Production.** When a hot-mix plant conforming to Article 1102.01 is used, the aggregate shall be dried and heated in the revolving dryer to a temperature of 120 °C (250 °F) to 175 °C (350 °F).

The aggregate and bituminous material used in the bituminous aggregate mixture shall be measured separately and accurately by weight or by volume. When the aggregate is in the mixer, the bituminous material shall be added and mixing continued for a minimum of 35 seconds and until a homogeneous mixture is produced in which all particles of the aggregate are coated. The mixing period, size of the batch and the production rate shall be approved by the Engineer.

The ingredients shall be heated and combined in such a manner as to produce a mixture which, when discharged from the mixer, shall be workable and vary not more 10 °C (20 °F) from the temperature set by the Engineer.

When RAP material(s) is used in the bituminous aggregate mixture, the virgin aggregate(s) shall be dried and heated in the dryer to a temperature that will produce the specified resultant mix temperature when combined with the RAP material.

The heated virgin aggregates and mineral filler shall be combined with RAP material in such a manner as to produce a bituminous mixture which when discharged from the mixer shall not vary more than 15 °C (30 °F) from the temperature set by the Engineer. The combined ingredients shall be mixed for a minimum of 35 seconds and until a homogeneous mixture as to composition and temperature is obtained. The total mixing time shall be a minimum of 45 seconds consisting of dry and wet mixing. Variation in wet and dry mixing times may be permitted, depending on the moisture content and amount of salvaged material used. The mix temperature shall not exceed 175 °C (350 °F). Wide variations in the mixture temperature will be cause for rejection of the mix.

(a) Personnel. The QC Manager and Level I Technician shall have successfully completed the Department’s "Superpave Field Control Course”.

(b) Required Tests. Testing for stabilized subbase and bituminous shoulders shall be conducted to control the production of the bituminous mixture using the test methods identified and performed at a frequency not less than indicated in the following table.

| Parameter | Frequency of Tests<br>Non-Class I Mixtures | Test Method |
|---|---|---|
| Aggregate Gradation<br><br>Hot bins for batch and continuous plants.<br><br>Individual cold-feeds or combined belt-feed for drier-drum plants.<br><br>(% passing seives:<br>12.5 mm (1/2 In.),<br>4.75 mm (No. 4),<br>75 µm (No. 200)) | 1 gradation per day of production.<br><br>The first day of production shall be washed ignition oven test on the mix. Thereafter, the testing shall alternate between dry gradation and washed ignition oven test on the mix.<br><br>The dry gradation and the washed ignition oven test results shall be plotted on the same control chart. | Illinois Procedure (See Manual of Test Procedures for Materials). |
| Asphalt Content by ignition oven (Note 1.) | 1 per day | Illinois-Modified AASHTO T 308 |
| Air Voids<br><br>Bulk Specific Gravity of Gyratory Sample<br><br>Maximum Specific Gravity of Mixture | <br><br>1 per day<br><br>1 per day | <br><br>Illinois-Modified AASHTO T 312<br><br>Illinois-Modified AASHTO T 209 |

Note 1. The Engineer may waive the ignition oven requirement for AC content if the aggregates to be used are known to have ignition AC 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 AC content.

During production, the ratio of minus 75 µm (#200) sieve material to total asphalt cement shall be not less than 0.6 nor more than 1.6, and the moisture content of the mixture at discharge from the mixer shall not exceed 0.5 percent. If at any time the ratio of minus 75 µm (#200) material to asphalt or moisture content of the mixture falls outside the stated limits, production of the mix shall cease. The cause shall be determined and corrective action satisfactory to the Engineer shall be initiated prior to resumption of production.

During production, mixture containing an anti-stripping additive will be tested by the Engineer for stripping according to Illinois Modified AASHTO T 283. If the mixture fails to meet the TSR criteria for acceptance, no further mixture will be accepted until the Contractor takes such action as is necessary to furnish a mixture meeting the criteria.

(c) Control Charts/Limits. Control charts/limits shall be according to QC/QA requirements for Non-Class I Mixtures except air voids shall be plotted on the control charts within the following control limits:

| Air Void Control Limits | |
|---|---|
| Mixture | Individual Test |
| Shoulders | ± 1.2 % |
| Others | ± 1.2 %” |

Replace the first paragraph of Article 312.10 of the Standard Specifications with the following:

"**312.10 Placing and Compacting.** After the subgrade has been compacted and is acceptable to the Engineer, the bituminous aggregate mixture shall be spread upon it with a mechanical spreader. The maximum compacted thickness of each lift shall be 150 mm (6 in.) provided the required density is obtained. The minimum compacted thickness of each lift shall be according to the following table:

| Nominal Maximum Aggregate Size of Mixture | Minimum Compacted Lift Thickness |
|---|---|
| CA 12 – 12.5 mm (1/2 in.) | 38 mm (1 1/2 in.) |
| CA 10 - 19 mm (3/4 in.) | 57 mm (2 1/4 in.) |
| CA 6 – 25 mm (1 in.) | 76 mm (3 in.) |

The surface of each lift shall be clean and dry before succeeding lifts are placed."

Revise Article 482.02 of the Standard Specifications to read:

"**482.02 Materials.** Materials shall meet the requirements of Article 312.03. For the top lift, the aggregate used shall meet the gradation requirements for a CA 10 or CA 12. Blending of aggregates to meet these gradation requirements will be permitted."

Revise the first paragraph of Article 482.04 of the Standard Specifications to read:

"**482.04 General.** For pavement and shoulder resurfacing projects, Superpave binder and surface course mixtures may be used in lieu of bituminous aggregate mixture for the resurfacing of shoulders, at the option of the Contractor, or shall be used when specified on the plans."

Revise Article 482.04(c) of the Standard Specifications to read:

"(c) Mixture Production .....312.08"

Revise Article 482.05 of the Standard Specifications to read:

"**482.05 Composition of Bituminous Aggregate Mixture.** The composition of the mixture shall be according to Article 312.06, except that the amount of asphalt cement used in the top lift shall be increased up to 0.5 percent more than that required in the lower lifts. For resurfacing projects when the Superpave binder and surface course mixtures option is used, the asphalt cement used in the top lift shall not be increased. Superpave mixtures used on the top lift of such shoulders shall meet the gradation requirements of the special provision "Superpave Bituminous Concrete Mixtures".

For shoulder and strip construction, the composition of the Superpave binder and surface course shall be the same as that specified for the mainline pavement."

In the following locations of Section 482 of the Standard Specifications, change "Class I" to "Superpave":

the second paragraph of Article 482.04
the first sentence of the second paragraph of Article 482.06
the first sentence of the fourth paragraph of Article 482.06

the second sentence of the fourth paragraph of Article 482.06
the first sentence of the third paragraph of Article 482.08(b)

Revise the first paragraph of Article 482.06 of the Standard Specifications to read:

"**482.06 Placing and Compacting.** This work shall be according to Article 312.10. The mechanical spreader for the top lift of shoulders shall meet the requirements of Article 1102.03 when the shoulder width is 3 m (10 ft) or greater."

Revise Article 482.09 of the Standard Specifications to read:

"**482.09 Basis of Payment**. When bituminous shoulders are constructed along the edges of the completed pavement structure, this work will be paid for at the contract unit price per square meter (square yard) for BITUMINOUS SHOULDERS SUPERPAVE of the thickness specified. The specified thickness shall be the thickness shown on the plans at the edge of the pavement.

On pavement and shoulder resurfacing projects, the shoulder resurfacing will be paid for at the contract unit price per metric ton (ton) for BITUMINOUS SHOULDERS SUPERPAVE.

The construction of shoulder strips for resurfacing pavements will be paid according to the special provision, "Superpave Bituminous Concrete Mixtures"."

**SUBGRADE PREPARATION (BDE)**
Effective: November 1, 2002

Revise the tenth paragraph of Article 301.03 of the Standard Specifications to read:

"Equipment of such weight, or used in such a way as to cause a rut in the finished subgrade of 13 mm (1/2 in.) or more in depth, shall be removed from the work or the rutting otherwise prevented."

**SUPERPAVE BITUMINOUS CONCRETE MIXTURES (BDE)**
Effective: January 1, 2000 Revised: April 1, 2004

Description. This work shall consist of designing, producing and constructing Superpave bituminous concrete mixtures using Illinois Modified Strategic Highway Research Program (SHRP) Superpave criteria. This work shall be according to Sections 406 and 407 of the Standard Specifications and the special provision, "Quality Control/Quality Assurance of Bituminous Concrete Mixtures", except as follows.

Materials.

(a) Fine Aggregate Blend Requirement. The Contractor may be required to provide FA 20 manufactured sand to meet the design requirements. For mixtures with Ndesign $\geq$ 90, at least 50 percent of the required fine aggregate fraction shall consist of either stone sand, slag sand, or steel slag sand meeting the FA/FM 20 gradation.

(b) Reclaimed Asphalt Pavement (RAP). If the Contractor is allowed to use more than 15 percent RAP, as specified in the plans, a softer performance-graded binder may be required as determined by the Engineer.

RAP shall meet the requirements of the special provision, “RAP for Use in Bituminous Concrete Mixtures”.

RAP will not be permitted in mixtures containing polymer modifiers.

RAP containing steel slag will be permitted for use in top-lift surface mixtures only.

(c) Bituminous Material. The asphalt cement (AC) shall be performance-graded (PG) or polymer modified performance-graded (SBS-PG or SBR-PG) meeting the requirements of Article 1009.05 of the Standard Specifications for the grade specified on the plans.

The following additional guidelines shall be used if a polymer modified asphalt is specified:

(1) The polymer modified asphalt cement shall be shipped, maintained, and stored at the mix plant according to the manufacturer's requirements. Polymer modified asphalt cement shall be placed in an empty tank and shall not be blended with other asphalt cements.

(2) The mixture shall be designed using a mixing temperature of 163 $\pm$ 3 °C (325 $\pm$ 5 °F) and a gyratory compaction temperature of 152 $\pm$ 3 °C (305 $\pm$ 5 °F).

(3) Pneumatic-tired rollers will not be allowed unless otherwise specified by the Engineer. A vibratory roller meeting the requirements of Article 406.16 of the Standard Specifications shall be required in the absence of the pneumatic-tired roller.

Laboratory Equipment.

(a) Superpave Gyratory Compactor. The superpave gyratory compactor (SGC) shall be used for all QC/QA testing.

(b) Ignition Oven. The ignition oven shall be used to determine the AC content. The ignition oven shall also be used to recover aggregates for all required washed gradations.

The Engineer may waive the ignition oven requirement for AC content if the aggregates to be used are known to have ignition AC 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 AC content.

Mixture Design. The Contractor shall submit mix designs, for approval, for each required mixture. Mix designs shall be developed by Level III personnel who have successfully completed the course, “Superpave Mix Design Upgrade”. Articles 406.10 and 406.13 of the Standard Specifications shall not apply. The mixtures shall be designed according to the respective Illinois Modified AASHTO references listed below.

AASHTO MP 2 Standard Specification for Superpave Volumetric Mix Design

AASHTO R 30 Standard Practice for Mixture Conditioning of Hot-Mix Asphalt (HMA)

AASHTO PP 28 Standard Practice for Designing Superpave HMA

AASHTO T 209 Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures

AASHTO T 312 Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor

AASHTO T 308 Determining the Asphalt Content of Hot Mix Asphalt (HMA) by the Ignition Method

(a) Mixture Composition. The ingredients of the bituminous mixture shall be combined in such proportions as to produce a mixture conforming to the composition limits by weight. The gradation mixture specified on the plans shall produce a mixture falling within the limits specified in Table 1.

**TABLE 1. MIXTURE COMPOSITION (% PASSING)[1/]**

| Sieve Size | IL-25.0 mm | | IL-19.0 mm | | IL-12.5 mm[4/] | | IL-9.5 mm[4/] | |
|---|---|---|---|---|---|---|---|---|
| | min | max | min | max | Min | max | min | max |
| **37.5 mm (1 1/2 in.)** | | 100 | | | | | | |
| **25 mm (1 in.)** | 90 | 100 | | 100 | | | | |
| **19 mm (3/4 in.)** | | 90 | 82 | 100 | | 100 | | |
| **12.5 mm (1/2 in.)** | 45 | 75 | 50 | 85 | 90 | 100 | | 100 |
| **9.5 mm (3/8 in.)** | | | | | | 89 | 90 | 100 |
| **4.75 mm (#4)** | 24 | 42[2/] | 24 | 50[2/] | 28 | 65 | 28 | 65 |
| **2.36 mm (#8)** | 16 | 31 | 20 | 36 | 28 | 48[3/] | 28 | 48[3/] |
| **1.18 mm (#16)** | 10 | 22 | 10 | 25 | 10 | 32 | 10 | 32 |
| **600 μm (#30)** | | | | | | | | |
| **300 μm (#50)** | 4 | 12 | 4 | 12 | 4 | 15 | 4 | 15 |
| **150 μm (#100)** | 3 | 9 | 3 | 9 | 3 | 10 | 3 | 10 |
| **75 μm (#200)** | 3 | 6 | 3 | 6 | 4 | 6 | 4 | 6 |

1/ Based on percent of total aggregate weight.

2/ The mixture composition shall not exceed 40 percent passing the 4.75 mm (#4) sieve for binder courses with Ndesign ≥ 90.

3/ The mixture composition shall not exceed 40 percent passing the 2.36 mm (#8) sieve for surface courses with Ndesign ≥ 90.

4/ The mixture composition for surface courses shall be according to IL-12.5 mm or IL-9.5 mm, unless otherwise specified by the Engineer.

One of the above gradations shall be used for leveling binder as specified in the plans and according to Article 406.04 of the Standard Specifications.

It is recommended that the selected combined aggregate gradation not pass through the restricted zones specified in Illinois Modified AASHTO MP 2.

(b) Dust/AC Ratio for Superpave. The ratio of material passing the 75 μm (#200) sieve to total asphalt cement shall not exceed 1.0 for mixture design (based on total weight of mixture).

(c) Volumetric Requirements. The target value for the air voids of the hot mix asphalt (HMA) shall be 4.0 percent at the design number of gyrations. The VMA and VFA of the HMA design shall be based on the nominal maximum size of the aggregate in the mix and shall conform to the requirements listed in Table 2.

**TABLE 2. VOLUMETRIC REQUIREMENTS**

| | Voids in the Mineral Aggregate (VMA), % minimum | | | | Voids Filled with Asphalt (VFA), % |
|---|---|---|---|---|---|
| **Ndesign** | **IL-25.0** | **IL-19.0** | **IL-12.5** | **IL-9.5** | |
| **50** | 12.0 | 13.0 | 14.0 | 15 | 65 - 78 |
| **70** | | | | | 65 - 75 |
| **90** | | | | | |
| **105** | | | | | |

(d) 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 T 283 using 4 in. Marshall bricks. To be considered acceptable by the Department as a mixture not susceptible to stripping, the ratio of conditioned to unconditioned split tensile strengths (TSRs) shall be equal to or greater than 0.75. Mixtures, either with or without an additive, with TSRs less than 0.75 will be considered unacceptable.

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. The liquid additive shall be selected from the Department's list of approved additives and may be limited to those which have exhibited satisfactory performance in similar mixes.

Dry hydrated lime shall be added at a rate of 1.0 to 1.5 percent by weight of total dry aggregate. Slurry shall be added in such quantity as to provide the required amount of

hydrated lime solids by weight of total dry aggregate. The exact rate of application for all anti-stripping additives will be determined by the Department. The method of application shall be according to Article 406.12 of the Standard Specifications.

Personnel. The QC Manager and Level I Technician shall have successfully completed the Department's "Superpave Field Control Course".

Required Plant Tests. Testing shall be conducted to control the production of the bituminous mixture. The Contractor shall use the test methods identified to perform the following mixture tests at a frequency not less than that indicated in Table 3.

**TABLE 3. REQUIRED PLANT TESTS for SUPERPAVE**

| Parameter | | Frequency of Tests | Test Method |
|---|---|---|---|
| Aggregate Gradation<br><br>Hot bins for batch and continuous plants<br><br>Individual cold-feeds or combined belt-feed for drier drum plants.<br><br>(% passing sieves:<br>12.5 mm (1/2 in.),<br>4.75 mm (No. 4),<br>2.36 mm (No. 8),<br>600 µm (No. 30),<br>75 µm (No. 200)) | | 1 dry gradation per day of production (either morning or afternoon sample).<br><br>And<br><br>1 washed ignition oven test on the mix per day of production (conduct in afternoon if dry gradation is conducted in the morning or vice versa).<br><br>NOTE. The order in which the above tests are conducted shall alternate from the previous production day (example: a dry gradation conducted in the morning will be conducted in the afternoon on the next production day and so forth).<br><br>The dry gradation and washed ignition oven test results shall be plotted on the same control chart. | Illinois Procedure (See Manual of Test Procedures for Materials). |
| Asphalt Content by Ignition Oven (Note 1.) | | 1 per half day of production | Illinois Modified AASHTO T 308 |
| Air Voids | Bulk Specific Gravity of Gyratory Sample | 1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day) | Illinois Modified AASHTO T 312 |
| | Maximum Specific Gravity of Mixture | | Illinois Modified AASHTO T 209 |

Note 1. The Engineer may waive the ignition oven requirement for AC content if the aggregates to be used are known to have ignition AC 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 AC content.

During production, the ratio of minus 75 µm (#200) sieve material to total asphalt cement shall be not less than 0.6 nor more than 1.2 and the moisture content of the mixture at discharge from the mixer shall not exceed 0.5 percent. If at any time the ratio of minus 75 µm (#200) material to asphalt or moisture content of the mixture falls outside the stated limits, production of the mix shall cease. The cause shall be determined and corrective action satisfactory to the Engineer shall be initiated prior to resuming production.

During production, mixtures containing an anti-stripping additive will be tested by the Department for stripping according to Illinois Modified T 283. If the mixture fails to meet the TSR criteria for acceptance, no further mixture will be accepted until the Contractor takes such action as is necessary to furnish a mixture meeting the criteria.

Construction Requirements

Lift Thickness.

(a) Binder and Surface Courses. The minimum compacted lift thickness for constructing bituminous concrete binder and surface courses shall be according to Table 4:

| TABLE 4 – MINIMUM COMPACTED LIFT THICKNESS | |
|---|---|
| Mixture | Thickness, mm (in.) |
| IL-9.5 | 32 (1 1/4) |
| IL-12.5 | 38 (1 1/2) |
| IL-19.0 | 57 (2 1/4) |
| IL-25.0 | 76 (3) |

(b) Leveling Binder. Mixtures used for leveling binder shall be as follows:

| TABLE 5 – LEVELING BINDER | |
|---|---|
| Nominal, Compacted, Leveling Binder Thickness, mm (in.) | Mixture |
| ≤ 32 (1 1/4) | IL-9.5 |
| 32 (1 1/4) to 50 (2) | IL 9.5 or IL-12.5 |

Density requirements shall apply for leveling binder when the nominal, compacted thickness is 32 mm (1 1/4 in.) or greater for IL-9.5 mixtures and 38 mm (1 1/2 in.) or greater for IL-12.5 mixtures.

(c) Full-Depth Pavement. The compacted thickness of the initial lift of binder course shall be 100 mm (4 in.). The compacted thickness of succeeding lifts shall meet the minimums specified in Table 4 but not exceed 100 mm (4 in.).

If a vibratory roller is used for breakdown, the compacted thickness of the binder lifts, excluding the top lift, may be increased to 150 mm (6 in.) provided the required density is obtained.

(d) Bituminous Patching. The minimum compacted lift thickness for constructing bituminous patches shall be according to Table 4.

Control Charts/Limits. Control charts/limits shall be according to QC/QA Class I requirements, except density shall be plotted on the control charts within the following control limits:

| TABLE 6. DENSITY CONTROL LIMITS | | |
|---|---|---|
| Mixture | Parameter | Individual Test |
| 12.5 mm / 9.5 mm | Ndesign ≥ 90 | 92.0 – 96.0% |
| 12.5 mm / 9.5 mm | Ndesign < 90 | 92.5 – 97.4% |
| 19.0 mm / 25.0 mm | Ndesign ≥ 90 | 93.0 – 96.0% |
| 19.0 mm / 25.0 mm | Ndesign < 90 | 93.0 – 97.4% |

Basis of Payment. On resurfacing projects, this work will be paid for at the contract unit price per metric ton (ton) for BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, of the friction aggregate mixture and Ndesign specified, LEVELING BINDER (HAND METHOD), SUPERPAVE, of the Ndesign specified, LEVELING BINDER (MACHINE METHOD), SUPERPAVE, of the Ndesign specified, and BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, of the mixture composition and Ndesign specified.

On resurfacing projects in which polymer modifiers are required, this work will be paid for at the contract unit price per metric ton (ton) for POLYMERIZED BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, of the friction aggregate mixture and Ndesign specified, POLYMERIZED LEVELING BINDER (HAND METHOD), SUPERPAVE, of the Ndesign specified, POLYMERIZED LEVELING BINDER (MACHINE METHOD), SUPERPAVE, of the Ndesign specified, and POLYMERIZED BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, of the mixture composition and Ndesign specified.

On full-depth pavement projects, this work will be paid for at the contract unit price per square meter (square yard) for BITUMINOUS CONCRETE PAVEMENT, (FULL-DEPTH), SUPERPAVE, of the thickness specified.

On projects where widening is constructed and the entire pavement is then resurfaced, the binder for the widening will be paid for at the contract unit price per square meter (square yard) for BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, of the mixture composition, Ndesign, and thickness specified. The surface and binder used to resurface the entire pavement will be paid for according to the paragraphs above for resurfacing projects.

**SURFACE TESTING OF PAVEMENTS (BDE)**

Effective: April 1, 2002 Revised: July 1, 2004

**Bituminous Concrete Overlays**

Revise Article 406.03(k) of the Standard Specifications to read:

"(k) Pavement Surface Test Equipment .....1101.10"

Revise Article 406.21 of the Standard Specifications to read:

"**406.21 Surface Tests.** The finished surface of the pavement shall be tested for smoothness within 24 hours and before the pavement is opened to traffic. All objects and debris shall be removed from the pavement surface prior to testing. Testing shall be performed in the presence of the Engineer.

(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 75 km/hr (45 mph). These sections shall be tested using a California Profilograph or an approved equivalent.

(2) Low-Speed Mainline Pavement. Low-speed mainline pavement shall consist of pavements, ramps and loops with a posted speed of 75 km/hr (45 mph) or less. These sections shall be tested using a California Profilograph or an approved equivalent.

(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 300 m (1000 ft) and pavement within the superelevation transition of such curves;

b. the first or last 4.5 m (15 ft) of a pavement section where the Contractor is not responsible for the adjoining surface;

c. intersections;

d. variable width pavements;

e. side street returns;

f. crossovers;

g. connector pavement from mainline pavement expansion joint to the bridge approach pavement;

h. bridge approach pavement; and

i. other miscellaneous pavement surfaces (i.e. a turn lane) as determined by the Engineer.

Miscellaneous pavement shall be tested using a 5 m (16 ft) straightedge set to a 10 mm (3/8 in.) 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 1600 m (1 mile) long and one lane wide. When the length of a continuous strip of pavement is less than 1600 m (1 mile), that pavement will be included in an adjacent lot. Structures will be omitted when measuring pavement length.

(2) Sublots. Lots will be divided into 160 m (0.1 mile) sublots. A partial sublot resulting from an interruption in the pavement will be subject to the same evaluation as a whole sublot.

(c) Testing Procedure. One wheel track shall be tested per lane. Testing shall be performed 1 m (3 ft) 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 150 m (500 ft) 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 profilograph was pushed, and the profilograph operator name(s). The top portion of the Department supplied form, “Profilograph 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 sublot in mm/km (in./mile) and indicate any high points (bumps) in excess of 8 mm (0.30 in.) 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 sublot, average profile index of the lot and locations of bumps shall be recorded on the form.

All traces and reports shall be provided to the Engineer for the project file.

The Engineer will use the results of the testing to evaluate paving methods and equipment. If the average profile index of a lot exceeds 635 mm/km (40.0 in./mile) for high-speed mainline pavement or 1025 mm/km (65.0 in./mile) 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 8 mm (0.30 in.) in a length of 8 m (25 ft) or less shall be corrected. If the bump is greater than 13 mm (0.50 in.), the pavement shall be removed and replaced to the satisfaction of the Engineer at the Contractor’s expense. The minimum length of pavement to be removed shall be 900 mm (3 ft).

(1) High-Speed Mainline Pavement. Any sublot having a profile index within the range of, greater than 475 (30.0) to 635 (40.0) mm/km (in./mile) including bumps, shall be corrected to reduce the profile index to 475 mm/km (30.0 in./mile) or less on each trace. Any sublot having a profile index greater than 635 mm/km (40.0 in./mile) including bumps, shall be corrected to reduce the profile index to 475 mm/km (30.0 in./mile) or less on each trace, or replaced at the Contractor’s option.

(2) Low-Speed Mainline Pavement. Any sublot having a profile index within the range of, greater than 710 (45.0) to 1025 (65.0) mm/km (in./mile) including bumps, shall be corrected to reduce the profile index to 710 mm/km (45.0 in./mile) or less on each trace. Any sublot having a profile index greater than 1025 mm/km (65.0 in./mile) including bumps, shall be corrected to reduce the profile index to 710 mm/km (45.0 in./mile) or less on each trace, or replaced at the Contractor’s option.

(3) Miscellaneous Pavement. Surface variations which exceed the 10 mm (3/8 in.) 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 sublot(s) shall be retested. The Contractor shall furnish the profilograph 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 the Contractor's expense.

(f) Smoothness Assessments. Assessments will be paid to or deducted from the Contractor for each sublot of mainline pavement, per the Smoothness Assessment Schedule. Assessments will be based on the average profile index of each sublot prior to performing any corrective work unless the Contractor has chosen to remove and replace the sublot. 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 (Bituminous Concrete Overlays) | | |
|---|---|---|
| High-Speed Mainline Pavement Average Profile Index mm/km (in./mile) | Low-Speed Mainline Pavement Average Profile Index mm/km (in./mile) | Assessment per sublot |
| 95 (6.0) or less | 240 (15.0) or less | +$150.00 |
| >95 (6.0) to 160 (10.0) | >240 (15.0) to 400 (25.0) | +$80.00 |
| >160 (10.0) to 475 (30.0) | >400 (25.0) to 710 (45.0) | +$0.00 |
| >475 (30.0) to 635 (40.0) | >710 (45.0) to 1025 (65.0) | +$0.00 |
| Greater than 635 (40.0) | Greater than 1025 (65.0) | -$300.00 |

Smoothness assessments will not be applied to miscellaneous pavement sections."

**Bituminous Concrete 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 406.21 except as follows:

Two wheel tracks shall be tested per lane. Testing shall be performed 1 m (3 ft) from and parallel to each lane edge."

| SMOOTHNESS ASSESSMENT SCHEDULE (Full-Depth Bituminous) | | |
|---|---|---|
| High-Speed Mainline Pavement Average Profile Index mm/km (in./mile) | Low-Speed Mainline Pavement Average Profile Index mm/km (in./mile) | Assessment per sublot |
| 95 (6.0) or less | | +$800.00 |
| >95 (6.0) to 175 (11.0) | 240 (15.0) or less | +$550.00 |
| >175 (11.0) to 270 (17.0) | >240 (15.0) to 400 (25.0) | +$350.00 |
| >270 (17.0) to 475 (30.0) | >400 (25.0) to 710 (45.0) | +$0.00 |
| >475 (30.0) to 635 (40.0) | >710 (45.0) to 1025 (65.0) | +$0.00 |
| Greater than 635 (40.0) | Greater than 1025 (65.0) | -$500.00 |

Delete the fourth paragraph of Article 407.13 of the Standard Specifications.

**Portland Cement Concrete Pavement**

Revise Article 420.12 of the Standard Specifications to read:

"**420.12 Surface Tests.** The finished surface of the pavement shall be tested for smoothness according to Article 406.21 except as follows:

Two wheel tracks shall be tested per lane. Testing shall be performed 1 m (3 ft) from and parallel to each lane edge.

Membrane curing damaged during testing shall be repaired as directed by the Engineer at the Contractor's expense.

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 420.21 at the Contractor's expense."

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 mm/km (in./mile) | Low-Speed Mainline Pavement Average Profile Index mm/km (in./mile) | Assessment per sublot |
| 95 (6.0) or less | | +$1200.00 |
| >95 (6.0) to 175 (11.0) | 240 (15.0) or less | +$950.00 |
| >175 (11.0) to 270 (17.0) | >240 (15.0) to 400 (25.0) | +$600.00 |
| >270 (17.0) to 475 (30.0) | >400 (25.0) to 710 (45.0) | +$0.00 |
| >475 (30.0) to 635 (40.0) | >710 (45.0) to 1025 (65.0) | +$0.00 |
| Greater than 635 (40.0) | Greater than 1025 (65.0) | -$750.00 |

Delete the sixth paragraph of Article 420.23 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) 5 m (16 ft) Straightedge. The 5 m (16 ft) straightedge shall consist of a metal I-beam mounted between two wheels spaced 5 m (16 ft) 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. The straightedge shall meet the approval of the Engineer.

(b) California Profilograph. The California Profilograph or approved equivalent shall consist of a frame 8 m (25 ft) 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. All traces from pavement sections tested with a California Profilograph or approved equivalent shall be recorded on paper with scales of 300:1 longitudinally and 1:1 vertically. Data filters for an automated California Profilograph shall be set according to the parameters outlined in California Test 526, except the blanking band shall be set to 0.0 mm (0.00 in.).

(1) Calibration. The Contractor shall demonstrate to the Engineer that the testing equipment has proper tire pressure inflation, trueness of tire travel, and is calibrated for vertical displacement and horizontal distance. This calibration shall consist of the following:

a. A 150 to 300 m (500 to 1000 ft) long calibration test section shall be located on the project. This test section should be relatively straight and flat. The profilograph shall be calibrated for longitudinal distance on this test section to the satisfaction of the Engineer.

b. Longitudinal calibration consists of pushing, at walking speed (approximately 5 km/hr (3 mph)), the profilograph over the pre-measured test section and determining the chart scale factor. To calculate the chart scale factor, divide the pre-measured test distance, in millimeters (inches), by the length of the profile trace from this test section, in millimeters (inches). This factor should be $300 \pm 0.5$. If the profilograph produces charts with a different scale factor, adjustment of the profilograph shall be made to bring the scale factor to the tolerance specified above.

c. Vertical calibration consists of placing the center recording wheel of the profilograph on a base plate and recording the base elevation. Two plates, 13 mm (0.5 in.) thick each, are added under the center wheel, one at a time, and the change in elevation noted. The two plates are removed, one at a time, and the change in elevation noted. Each step in the process shall show a change in height of 13 mm $\pm$ 1.0 mm (0.5 in. $\pm$ 0.01 in.). If the profilograph produces results not conforming to the above limits, it shall be adjusted to the tolerance specified.

d. The automatic trace reduction capability of a machine so equipped shall be checked by comparing the machine's results to the results obtained through manual trace reduction using California Test 526 with a 0.0 mm (0.00 in.) blanking band. The comparison shall be made with the trace obtained on the pre-measured test section. The results of the comparison shall not differ by more than 30 mm/km (2.0 in./mile).

e. All calibration traces and calculations shall be submitted to the Engineer for the project file.

The Engineer may retest the pavement at any time to verify the accuracy of the equipment.

(2) Trace Analysis. The Contractor shall reduce/evaluate these traces using a 0.0 mm (0.00 in.) blanking band and determine a profile index in mm/km (in./mile) for each section of finished pavement surface. If the Contractor's profilograph is equipped with a computerized recorder, the trace produced will be evaluated without further reduction. If the profilograph has a mechanical recorder, 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 0.0 mm (0.00 in.) for the blanking band."

**TEMPORARY CONCRETE BARRIER (BDE)**

Effective: October 1, 2002 Revised: November 1, 2003

Revise Section 704 of the Standard Specifications to read:

"**SECTION 704. TEMPORARY CONCRETE BARRIER**

**704.01 Description.** This work shall consist of furnishing, placing, maintaining, relocating and removing precast concrete barrier at temporary locations as shown on the plans or as directed by the Engineer.

**704.02 Materials.** Materials shall meet the requirements of the following Articles of Section 1000 - Materials:

| Item | Article/Section |
|---|---|
| (a) Portland Cement Concrete | 1020 |
| (b) Reinforcement Bars (Note 1) | 1006.10(a)(b) |
| (c) Connecting Pins and Anchoring Pins | 1006.09 |
| (d) Connecting Loop Bars (Note 2) | |
| (e) Rapid Set Mortar (Note 3) | |

Note 1. Reinforcement bars shall be Grade 400 (Grade 60).

Note 2. Connecting loop bars shall be smooth bars conforming to the requirements of ASTM A 36.

Note 3. Rapid set materials shall be obtained from the Department's approved list of Packaged, Dry, Rapid Hardening Cementitous Materials for Concrete Repairs. For a rapid set mortar mixture, one part packaged rapid set cement shall be combined with two parts fine aggregate, by volume or a packaged rapid set mortar shall be used. Mixing of the rapid set mortar shall be according to the manufacturer's instructions.

## CONSTRUCTION REQUIREMENTS

**704.03 General.** Precast concrete barrier produced after October 1, 2002 shall meet National Cooperative Highway Research Program (NCHRP) Report 350, Category 3, Test Level 3 requirements and have the F shape. Precast concrete barrier shall be constructed according to the Bureau of Materials and Physical Research's Policy Memorandum "Quality Control/Quality Assurance Program for Precast Concrete Products", applicable portions of Sections 504 and 1020, and to the details shown on the plans.

Precast units shall not be removed from the casting beds until a flexural strength of 2,000 kPa (300 psi) or a compressive strength of 10,000 kPa (1400 psi) is attained. When the concrete has attained a compressive strength according to Article 1020.04, and not prior to four days after casting, the units may be loaded, shipped and used.

**704.04 Installation**. F shape barrier units shall be seated on bare, clean pavement or paved shoulder and pinned together in a smooth, continuous line at the exact locations provided by the Engineer. The barrier unit at each end of the installation shall be secured to the pavement or paved shoulder using six anchoring pins and protected with an impact attenuator as shown on the plans.

F shape and New Jersey shape barrier units shall not be mixed in the same run.

Barrier units or attachments damaged during transportation or handling, or by traffic during the life of the installation, shall be repaired or replaced by the Contractor at his/her expense. The Engineer will be the sole judge in determining which units or attachments require repair or replacement.

The temporary barriers shall be removed when no longer required by the contract. After removal, all anchoring holes in the pavement or paved shoulder shall be filled with a rapid set mortar. Only enough water to permit placement and consolidation by rodding shall be used and the material shall be struck-off flush.

**704.05 New Jersey Shape Barrier.** New Jersey shape barrier produced prior to October 1, 2002 according to earlier Department standards, may be used until January 1, 2008.

Barrier units or attachments damaged during transportation or handling, or by traffic during the life of the installation, shall be repaired or replaced by the Contractor at his/her expense. The Engineer will be the sole judge in determining which units or attachments require repair or replacement.

F shape and New Jersey shape barrier units shall not be mixed in the same run.

The barrier unit at each end of the installation shall be secured to the pavement or paved shoulder using six dowel bars and protected with an impact attenuator as shown on the plans.

The temporary barriers shall be removed when no longer required by the contract. After removal, all anchoring holes in the pavement or paved shoulder shall be filled with a rapid set mortar. Only enough water to permit placement and consolidation by rodding shall be used and the material shall be struck-off flush.

**704.06 Method of Measurement.** Temporary concrete barrier will be measured for payment in meters (feet) in place along the centerline of the barrier. When temporary concrete barrier is relocated within the limits of the jobsite, the relocated barrier will be measured for payment in meters (feet) in place along the centerline of the barrier.

**704.07 Basis of Payment.** When the Contractor furnishes the barrier units, this work will be paid for at the contract unit price per meter (foot) for TEMPORARY CONCRETE BARRIER or RELOCATE TEMPORARY CONCRETE BARRIER.

When the Department furnishes the barrier units, this work will be paid for at the contract unit price per meter (foot) for TEMPORARY CONCRETE BARRIER, STATE OWNED or RELOCATE TEMPORARY CONCRETE BARRIER, STATE OWNED.

Impact attenuators will be paid for separately."

**TRAFFIC BARRIER TERMINALS (BDE)**
Effective: January 1, 2003

Revise Article 631.05 of the Standard Specifications to read:

"**631.05 Traffic Barrier Terminal, Type 5 and Type 5A.** The face of the guardrail shall be installed flush with the face of the bridge rail or parapet."

Revise Article 631.06 of the Standard Specifications to read:

"**631.06 Traffic Barrier Terminal, Type 6.** When attaching the end shoe to concrete constructed with forms and with a thickness of 300 mm (12 in.) or less, the holes may be formed, core drilled or an approved 20 mm (3/4 in.) cast-in-place insert may be used.

When attaching the end shoe to concrete constructed with forms and with a thickness greater than 300 mm (12 in.), an approved M20 (3/4 in.) bolt with an approved expansion device may be used in lieu of formed or core drilled holes.

When attaching the end shoe to concrete constructed by slipforming, the holes shall be core drilled.

The tapered, parapet, wood block out shall be used on all appurtenances with a sloped face.

When no bridge approach curb is present, Type B concrete curb shall be constructed as shown on the plans according to Section 606."

Revise Article 631.07 of the Standard Specifications to read:

"**631.07 Traffic Barrier Terminal, Type 6B.** Attachment of the end shoe to concrete shall be according to Article 631.06 except the tapered, parapet, wood block out will not be required."

Delete the third and fourth paragraphs of Article 631.11 of the Standard Specifications.

Add the following paragraph to the end of Article 631.11 of the Standard Specifications:

"Construction of the Type B concrete curb for TRAFFIC BARRIER TERMINAL, TYPE 6 will be paid for according to Article 606.14."

**TRUCK BED RELEASE AGENT (BDE)**
Effective: April 1, 2004

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

"In addition to the release agent, the Contractor may use a light scatter of manufactured sand (FA 20 or FA 21) evenly distributed over the bed of the vehicle."

**WEIGHT CONTROL DEFICIENCY DEDUCTION**
Effective: April 1, 2001 Revised: August 1, 2002

The Contractor shall provide accurate weights of materials delivered to the contract for incorporation into the work (whether temporary or permanent) and for which the basis of payment is by weight. These weights shall be documented on delivery tickets which shall identify the source of the material, type of material, the date and time the material was loaded, the contract number, the net weight, the tare weight when applicable and the identification of the transporting vehicle. For aggregates, the Contractor shall have the driver of the vehicle furnish or establish an acceptable alternative to provide the contract number and a copy of the material order to the source for each load. The source is defined as that facility that produces the final material product that is to be incorporated into the contract pay items.

The Department will conduct random, independent vehicle weight checks for material sources according to the procedures outlined in the Documentation Section Policy Statement of the Department's Construction Manual and hereby incorporated by reference. The results of the independent weight checks shall be applicable to all contracts containing this Special Provision. Should the vehicle weight check for a source result in the net weight of material on the vehicle exceeding the net weight of material shown on the delivery ticket by 0.50% (0.70% for aggregates) or more, the Engineer will document the independent vehicle weight check and immediately furnish a copy of the results to the Contractor. No adjustment in pay quantity will be made. Should the vehicle weight check for a source result in the net weight of material shown on the delivery ticket exceeding the net weight of material on the vehicle by 0.50% (0.70% for aggregates) or more, the Engineer will document the independent vehicle weight check and immediately furnish a copy of the results to the Contractor. The Engineer will adjust the net weight shown on the delivery ticket to the checked delivered net weight as determined by the independent vehicle weight check.

The Engineer will also adjust the method of measurement for all contracts for subsequent deliveries of all materials from the source based on the independent weight check. The net weight of all materials delivered to all contracts containing this Special Provision from this source, for which the basis of payment is by weight, will be adjusted by applying a correction factor "A" as determined by the following formula:

$$A = 1.0 - \left(\frac{B - C}{B}\right); \text{ Where } A \leq 1.0; \left(\frac{B - C}{C}\right) > 0.50\% \text{ (0.70\% for aggregates)}$$

Where A = Adjustment factor
B = Net weight shown on delivery ticket
C = Net weight determined from independent weight check

The adjustment factor will be applied as follows:

Adjusted Net Weight = A x Delivery Ticket Net Weight

The adjustment factor will be imposed until the cause of the deficient weight is identified and corrected by the Contractor to the satisfaction of the Engineer. If the cause of the deficient weight is not identified and corrected within seven (7) calendar days, the source shall cease delivery of all materials to all contracts containing this Special Provision for which the basis of payment is by weight.

Should the Contractor elect to challenge the results of the independent weight check, the Engineer will continue to document the weight of material for which the adjustment factor would be applied. However, provided the Contractor furnishes the Engineer with written documentation that the source scale has been calibrated within seven (7) calendar days after the date of the independent weight check, adjustments in the weight of material paid for will not be applied unless the scale calibration demonstrates that the source scale was not within the specified Department of Agriculture tolerance.

At the Contractor's option, the vehicle may be weighed on a second independent Department of Agriculture certified scale to verify the accuracy of the scale used for the independent weight check.

**WORK ZONE SPEED LIMIT SIGNS (BDE)**
Effective: April 2, 2004 Revised: April 15, 2004

Delete Article 702.05(c).

Revise Article 702.05(d) to read:

"(d) Work Zone Speed Limit Signs. Work zone speed limit sign assemblies shall be provided and located as shown on the plans. Two additional assemblies shall be placed 150 m (500 ft) beyond the last entrance ramp for each interchange. The individual signs that make up an assembly may be combined on a single panel. The sheeting for the signs shall be reflective and conform to the requirements of Article 1084.02.

All permanent "SPEED LIMIT" signs located within the work zone shall be removed or covered. This work shall be coordinated with the lane closure(s) by promptly establishing a reduced posted speed zone when the lane closure(s) are put into effect and promptly reinstating the posted speed zone when the lane closure(s) are removed.

The work zone speed limit signs and end work zone speed limit signs shown in advance of and at the end of the lane closure(s) shall be used for the entire duration of the closure(s).

The work zone speed limit signs shown within the lane closure(s) shall only be used when workers are present in the closed lane adjacent to traffic; at all other times, the signs shall be promptly removed or covered. The sign assemblies shown within the lane closure(s) will not be required when the worker(s) are located behind a concrete barrier wall.

**WORK ZONE TRAFFIC CONTROL DEVICES (BDE)**

Effective: January 1, 2003 Revised: November 1, 2004

Add the following to Article 702.01 of the Standard Specifications:

"All devices and combinations of devices shall meet the requirements of the National Cooperative Highway Research Program (NCHRP) Report 350 for their respective categories. The categories are as follows:

Category 1 includes small, lightweight, channelizing and delineating devices that have been in common use for many years and are known to be crashworthy by crash testing of similar devices or years of demonstrable safe performance. These include cones, tubular markers, flexible delineators and plastic drums with no attachments. Category 1 devices shall be crash tested and accepted or may be self-certified by the manufacturer.

Category 2 includes devices that are not expected to produce significant vehicular velocity change but may otherwise be hazardous. These include drums and vertical panels with lights, barricades and portable sign supports. Category 2 devices shall be crash tested and accepted for Test Level 3.

Category 3 includes devices that are expected to cause significant velocity changes or other potentially harmful reactions to impacting vehicles. These include crash cushions, truck mounted attenuators and other devices not meeting the definitions of Category 1 or 2. Category 3 devices shall be crash tested and accepted for either Test Level 3 or the test level specified.

Category 4 includes portable or trailer-mounted devices such as arrow boards, changeable message signs, temporary traffic signals and area lighting supports. Currently, there is no implementation date set for this category and it is exempt from the NCHRP 350 compliance requirement.

The Contractor shall provide a manufacturer's self-certification letter for each Category 1 device and an FHWA acceptance letter for each Category 2 and Category 3 device used on the contract. The letters shall state the device meets the NCHRP 350 requirements for its respective category and test level, and shall include a detail drawing of the device."

Delete the third, fourth and fifth paragraphs of Article 702.03(b) of the Standard Specifications.

Delete the third sentence of the first paragraph of Article 702.03(c) of the Standard Specifications.

Revise the first sentence of the first paragraph of Article 702.03(e) of the Standard Specifications to read:

"Drums shall be nonmetallic and have alternating reflectorized Type AA or Type AP fluorescent orange and reflectorized white horizontal, circumferential stripes."

Add the following to Article 702.03 of the Standard Specifications:

"(h) Vertical Barricades. Vertical barricades may be used in lieu of cones, drums or Type II barricades to channelize traffic."

Delete the fourth paragraph of Article 702.05(a) of the Standard Specifications.

Revise the sixth paragraph of Article 702.05(a) of the Standard Specifications to read:

"When the work operations exceed four days, all signs shall be post mounted unless the signs are located on the pavement or define a moving or intermittent operation. When approved by the Engineer, a temporary sign stand may be used to support a sign at 1.2 m (5 ft) minimum where posts are impractical. Longitudinal dimensions shown on the plans for the placement of signs may be increased up to 30 m (100 ft) to avoid obstacles, hazards or to improve sight distance, when approved by the Engineer. "ROAD CONSTRUCTION AHEAD" signs will also be required on side roads located within the limits of the mainline "ROAD CONSTRUCTION AHEAD" signs."

Delete all references to "Type 1A barricades" and "wing barricades" throughout Section 702 of the Standard Specifications.

**GENERAL ELECTRICAL REQUIREMENTS**
Effective: October 1, 2004

Add the following to Article 801 of the Standard Specifications:

Preconstruction Inspection:

General. Before performing any excavation, removal, or installation work (electrical or otherwise) at the site, the Contractor shall request a preconstruction site inspection, to be held in the presence of the Engineer and a representative of the party or parties responsible for maintenance of any lighting and/or traffic control systems which may be affected by the work. The request for the and preconstruction inspection shall be made no less than seven (7) calendar days prior to the desired inspection date. The preconstruction inspection shall establish the approximate location and operating condition of lighting and/or traffic control systems which may be affected by the work

Marking of Existing Cable Systems. The contractors responsible for construction and maintenance of existing underground cable routes within this contract's limits of improvement shall, at the Contractor's request, mark and/or stake, once per location, all of the underground cables for which they have maintenance responsibility or which they have constructed but have not yet been accepted by the State. A project may involve multiple "locations" where separated electrical

systems are involved (i.e. different controllers). The markings shall be taken to have a horizontal tolerance of at least 304.8 mm (one (1) foot) to either side. The requests for the cable locations and marking shall be made at the same time the request for the preconstruction inspection is made. The Contractor shall exercise extreme caution where existing buried cable runs are involved. The markings of existing systems are made strictly for assistance to the Contractor and this does not relieve the Contractor of responsibility for the repair or replacement of any cable run damaged in the course of his work, as specified elsewhere herein. NOTE THAT THE CONTRACTOR SHALL BE ENTITLED TO ONLY ONE REQUEST FOR LOCATION MARKING OF EXISTING SYSTEMS AND THAT ADDITIONAL REQUESTS MAY ONLY BE HONORED AT THE CONTRACTOR'S EXPENSE.

Proposed Electrical Equipment and Cable Systems. Proposed temporary and permanent electrical equipment and underground cables may be installed by other contractors within the limits of improvement of this contract while this work in this contract is being performed. The Contractor shall coordinate the work in this contract with other contractors as required elsewhere in these special provisions. This coordination includes but is not limited to coordinating construction sequences and noting the location of electrical equipment and underground cables as such work is performed and preserving such information as a supplement to the initial existing cable locations provided to the Contractor. The Contractor shall have the same responsibility for preventing damage to, and liability for repairing any damage done to, electrical equipment and underground cables installed during the execution of this contract, as for electrical equipment and underground cables existing at the start of work under this contract.

Add the following to Article 801 of the Standard Specifications:

"Electrical material or equipment which are similar or identical shall be the product of the same manufacturer, Electrical materials and equipment shall bear the UL label whenever such labeling is available."

Revise the 7th and 8th paragraphs of Article 801.08 of the Standard Specifications to read:

"Engineer's Stamp. After the Engineer reviews the submittals for conformance with the design concept of the project, the Engineer will stamp the drawings indicating their status as 'Approved', 'Approved-As-Noted', 'Disapproved', or 'Information Only'. Since the Engineer's review is for conformance with the design concept only, it is the Contractor's responsibility to coordinate the various items into a working system as specified. The Contractor shall not be relieved from responsibility for errors or omissions in the shop, working, layout drawings, or other documents by the Department's approval thereof. The Contractor must still be in full compliance with contract and specification requirements.

Resubmittals. All submitted items reviewed and marked 'APPROVED AS NOTED', or 'DISAPPROVED' are to be resubmitted in their entirety with a disposition of previous comments to verify contract compliance at no additional cost to the state unless otherwise indicated within the submittal comments."

The Contractor shall coordinate the electrical work performed under this contract with other contracts as required in the Standard Specification Article 105.08 and as modified in these special provisions.

The Contractor shall mandrel-test and provide pulling ropes for all embedded conduits as required in the fifth paragraph of Article 812.03(a) of the Standard Specifications. This work is included in the payment for raceways embedded in structure.

**CONCRETE COLLAR**

Description: This item shall consist of the construction of cast-in-place concrete collars as shown on the plans, in accordance with the applicable portions of Section 503 and 542 of the Standard Specifications.

**Method of Measurement**: CONCRETE COLLAR will be measured for payment on a per each basis.

**Basis of Payment**: This work will be paid for at the contract unit price each for CONCRETE COLLAR, which price shall be payment in full for all labor, equipment and materials necessary to complete the work as specified herein. Reinforcement will be paid for according to Section 508. Expansion bolts, when required, will be paid for according to Section 540.

**TRAFFIC CONTROL FOR WORK ZONE AREAS**
Effective: 9/14/95 Revised: 1/30/03

Work zone entry and exit openings shall be established daily by the Contractor with the approval of the Engineer. All vehicles including cars and pickup trucks shall exit the work zone at the exit openings. All trucks shall enter the work zone at the entry openings. These openings shall be signed in accordance with the details shown elsewhere in the plans and shall be under flagger control during working hours.

The Contractor shall plan his trucking operations into and out of the work zone as well as on to and off the expressway to maintain adequate merging distance. Merging distances to cross all lanes of traffic shall be no less than 1/2 mile. This distance is the length from where the trucks enter the expressway to where the trucks enter the work zone. It is also the length from where the trucks exit the work zone to where the trucks exit the expressway. The stopping of expressway traffic to allow trucks to change lanes and/or cross the expressway is prohibited.

Failure to comply with the above requirements will result in a Traffic Control Deficiency charge. The deficiency charge will be calculated as outlined in the special provision for **"TRAFFIC CONTROL DEFICIENCY DEDUCTION"**. The Contractor will be assessed this daily charge for each day a deficiency is documented by the Engineer.

**CONNECTION TO EXISTING SEWER**

This item shall consist of the construction of proposed storm sewer connection to existing storm sewer at locations shown on the plans and as directed by the Engineer.

The new opening in the existing storm sewer shall be made in a manner to minimize any structural damage to the storm sewer. Any damage to the existing storm sewer shall be repaired to the Engineer's satisfaction at no additional cost to the department.

The storm sewer connection to the existing storm sewer shall be sealed with class SI concrete or brick and suitable mortar, per District One Detail BD-07 Detail "C", to the satisfaction of the engineer.

**Method of Measurement**: CONNECTION TO EXISTING SEWER will be measured for payment on a per each basis.

**Basis of Payment**: This work will be paid for at the contract unit price per each for CONNECTION TO EXISTING SEWER which price shall be payment in full for all labor, equipment and materials necessary to complete the work as herein specified.

**CONNECTION TO EXISTING STRUCTURE**

This item shall consist of the construction of proposed storm sewer connection to existing median inlet structures at locations shown on the plans and as directed by the Engineer.

The new opening in the existing median inlet structure shall be made in a manner to minimize any structural damage to the median inlet structure. Any damage to the median inlet structure shall be repaired to the Engineer's satisfaction at no additional cost to the department.

The storm sewer connection to the existing median inlet structure shall be sealed with class SI concrete or brick and suitable mortar to the satisfaction of the engineer.

**Method of Measurement**: CONNECTION TO EXISTING STRUCTURE will be measured for payment on a per each basis.

**Basis of Payment**: This work will be paid for at the contract unit price per each for CONNECTION TO EXISTING STRUCTURE which price shall be payment in full for all labor, equipment and materials necessary to complete the work as herein specified.

**INDOT - BASIS FOR USE OF APPROVED OR PREQUALIFIED MATERIALS**

The Indiana Department of Transportation Standard Specifications are revised as follows:

SECTION 106, AFTER LINE 45, INSERT AS FOLLOWS:

The basis for use of materials shown in the List of Approved or Prequalified Materials will be the Engineer's verification that the materials provided are included in the List of Approved or Prequalified Materials.

**INDOT - APPROVED EXPANSION JOINT SS DEVICES**

**APPROVED EXPANSION JOINT SS DEVICES** Only the following expansion devices will be considered acceptable for use as expansion joint SS in accordance with 724.

(a) The Strupco 40SS as manufactured by the Structural Rubber Products Company, 2245 South Ninth, Springfield, Illinois, 62705, and detailed as Alternate A on Bridge Standard Sheet "SS-1A Joints", adopted December, 1994
(b) The SE-400 as manufactured by the Watson Bowman and Acme Corporation, 95 Pineview Drive, Amherst, New York, 14120, and detailed as Alternate B on Bridge Standard Sheet "SS-1A Joints", adopted December, 1994
(c) The Steelflex SSA as manufactured by the D. S. Brown Company, 300 E. Cherry Street, North Baltimore, Ohio, 45872, and detailed as Alternate C on Bridge Standard Sheet "SS-1B Joints", adopted December, 1994
(d) The RJ-400 as manufactured by R.J. Watson, Inc., P.O. Box 85, East Amherst, New York, 14051, and detailed as Alternate D on Bridge Standard Sheet SS-1B Joints, adopted December, 1994

Expansion joints SS other than those listed above will not be accepted for use. Expansion joints SS manufactured by the above listed companies which are not in accordance with the details shown on the referenced standard sheet will not be permitted.

**INDOT - BEARING ASSEMBLIES**

The Indiana Department of Transportation Standard Specifications are revised as follows:

SECTION 726, BEGIN LINE 1, INSERT AS FOLLOWS:

**SECTION 726 -- BEARING ASSEMBLIES**

**Description**. This work shall consist of furnishing and installing bearing assemblies in accordance with the applicable requirements of 915.04, the details shown on the plans, the manufacturer's recommendations, or as directed.

**Materials**. Materials shall be in accordance with 915.05.

**Construction Requirements**. Masonry plates for polytetrafluoroethylene bearings shall be perfectly level. The tolerance between the top face of the masonry 10 plate and the bottom face of the top plate shall be a maximum of 1.6 mm (1/16 in.), measured at the ends of a diameter of the bottom plate of the bearing assembly. Other dimensional tolerances shall be as shown on the plans or in accordance with 915.04(d). 726.04

Method of Measurement. This work will be measured by the number of bearing assemblies complete in place. 726.05

Basis of Payment. This work will be paid for at the contract unit price per each for bearing assemblies of the type shown on the Schedule of Pay Items. Payment will be made under: Pay Item Pay Unit Symbol Bearing Assembly, (of the type specified) EACH type The costs of having a manufacturer's representative at the job site during installation, and all necessary incidentals shall be included in the cost of this work.

SECTION 915, AFTER LINE 264, INSERT AS FOLLOWS:

915.05 Polytetrafluoroethylene Bearing Assemblies. Assemblies. A copy of the manufacturer's design manual shall be submitted for approval when directed. All steel components shall be in

accordance with ASTM A 709M Grade 250 (ASTM A 709 Grade 36) unless otherwise shown on the plans. Where these assemblies are to be used in conjunction with self-weathering steel bridges, the steel components shall be in accordance with ASTM A 709M Grade 345W (ASTM A 709 Grade 50W). Stainless steel mating surfaces shall be 14 gage minimum ASTM A 240 type 304 sheets with a maximum surface roughness of 20 Rms. Rev. 1-4-99 The polytetrafluoroethylene shall be 100 percent virgin unfilled polymer or 15 percent glass filled and etched on the bonding side. The properties of the polytetrafluorethylene shall be in accordance with the following:

REQUIREMENT TEST METHOD VALUE
Hardness at 78F (25C) ASTM D 5212 50-65 Durometer
Tensile Strength, minimum ASTM D 638 17.24 MPa (2,500 psi)
Elongation, min. percent ASTM D 638 200 Specific Gravity ASTM D 792 2.1 to 2.3

Polytetrafluoroethylene, where required, shall be bonded to grit blasted steel. The polytetrafluoroethylene guides shall be bonded and mechanically fixed into place. The bonding compound used to bond polytetrafluoroethylene or elastomeric pads to steel plates shall be in accordance with ASTM D 429, Method B.

All steel surfaces exposed to the environment shall be zinc metallized and shall be 175 m (7 mils) thick in accordance with CSA G-189, or painted with structural primer in accordance with 909.02(a). The finish coat for painted steel shall be in accordance with 909.02(d). The color shall be in accordance with Federal Color Standard 595a, color No. 30045.

All required materials shall be covered by a type B certification in accordance with 916.

**INDOT - COST REDUCTION INCENTIVE**

The Indiana Department of Transportation Standard Specifications are revised as follows:

SECTION 109, AFTER LINE 320, INSERT AS FOLLOWS:

A proposal which uses empirical design (Section 9.7.2 of the AASHTO LRFD Bridge Design Specifications, 2nd Edition) of the concrete bridge deck will not be considered or approved.

**INDOT - DEMOLITION/RENOVATION NOTIFICATION TO IDEM**

The Indiana Department of Transportation Standard Specifications are revised as follows.

SECTION 202, AFTER LINE 33, INSERT AS FOLLOWS:

In accordance with IAC 14-10, the Contractor shall complete and submit a demolition/renovation notification to IDEM when demolition or renovation of buildings, houses, canopies, and bridges are part of the contract. This notification shall be submitted regardless of whether asbestos containing material is present. Each notification form submitted to IDEM may have a maximum of 10 structures listed on the form. For the purposes of this form, a structure includes a building, house, canopy, or a bridge. Fees for this demolition/renovation notification are $50.00 per notification and shall be paid to IDEM by the Contractor.

Copies of the demolition/renovation notification form can be obtained at: www.in.gov/icpr/webfile/formsdiv/44593.pdf. Questions concerning the completion of the demolition/renovation notification should be addressed to IDEM's Office of Air Management's toll free number (888) 547-8150. Office hours are Monday through Friday between the hours of 6:30 a.m. and 4:30 p.m. An inspector will assist in proper completion of the notification.

Initial notification to IDEM shall be by certified mail, return receipt requested, or by hand delivery. Verification of this notification shall be provided to the Engineer. The Contractor shall provide such notification 10 work days prior to the date on which demolition or renovation operations are anticipated to begin. If the Contractor postpones the beginning date of demolition or renovation operations, IDEM shall be provided written notice of the new start date, postmarked at least five work days or delivered at least two work days before these operations begin. Verification of this notification shall also be provided to the Engineer.

SECTION 202, BEGIN LINE 275, DELETE AND INSERT AS FOLLOWS:

202.06.1 Inspection and Removal of Asbestos. The Contractor shall comply with all applicable environmental regulations including but not limited to those as follows:

In accordance with 202.02 and IAC 14-10, a demolition/renovation notification is to be submitted to IDEM 10 work days prior to the start of demolition or renovation operations. During the 10 day period, IDEM may make a determination of the existence of asbestos materials. Verification of this notification shall also be provided. Local governmental agencies may have additional regulations that must be followed. The Contractor shall contact IDEM's air management office to determine what local agencies have regulations.

**INDOT - GENERAL BRIDGE REQUIREMENTS**

The Indiana Department of Transportation Standard Specifications are revised as follows:

SECTION 206, LINE 145, INSERT AS FOLLOWS:

206.08 Preparation of Foundation Surfaces. Excavation for foundations on rock without piles shall extend a minimum of 600 mm (2 ft) into solid rock. All rock or other hard material, if

SECTION 702, AFTER LINE 21, INSERT AS FOLLOWS: Concrete in superstructure, integral bents, and railings shall be class C. Concrete in bent caps, unless poured integrally with the superstructure; pier caps; abutment caps; pier stems; abutment walls; mudwalls; columns; crashwalls; collision walls; and wingwalls, unless poured with integral end bents, shall be class A. Concrete in footings shall be class B.

SECTION 702, BEGIN LINE 547, INSERT AND DELETE AS FOLLOWS: Forms for exposed concrete edges shall be filleted and chamfered as shown on the plans and 25 mm (1 in.). Forms shall be given a bevel or draft for in the case of all projections, such as girders and copings, to ensure easy removal.

SECTION 702, BEGIN LINE 1379, INSERT AS FOLLOWS: The costs of forms, polyvinyl chloride deck drains, falsework, falsework piling, centering, expansion joints, waterproofing, curing, finishing, and necessary incidentals shall be included in the costs of the pay items. The cost of placing epoxy resin adhesive on existing concrete surfaces shall

SECTION 703, LINE 45, INSERT AS FOLLOWS: 703.06 Placing and Fastening. Reinforcing steel shall not be ordered for piers or bents to be founded on soil or rock until the foundation conditions have been investigated. The bottom elevations of such footings will then be determined. Written permission will then be given to order such reinforcing steel. Sufficient excavation and all necessary soundings shall be made as directed so that exact bottom elevations of footings may be determined. All dimensions shown on the plans for spacing of

SECTION 707, AFTER LINE 175, INSERT AS FOLLOWS: Voids in precast concrete members shall be formed of approved material. Voids shall be vented during curing. All voids shall be drained by means of an approved method.

SECTION 707, LINE 190, INSERT AS FOLLOWS: approved methods. The outside faces of fascia beams and the tops of all beams shall be sealed in accordance with 702.21. Such faces shall not be rubbed.

**INDOT – MASONRY COATING**

This item shall be performed at locations and per details shown on the plans, in accordance with the applicable portions of Sections 702, 709 and 728 of the Indiana Department of Transportation Standard Specifications the following special provision and as directed by the engineer.

**Description.** This work shall consist of the preparation of the concrete surfaces, cleaning such surfaces by means of sandblasting, and furnishing and applying masonry coating as described herein. The masonry coating shall be applied to all concrete surfaces shown on the plans or as directed.

**MATERIALS** 728.02 Materials. Materials shall be in accordance with 909.13. 10

**CONSTRUCTION REQUIREMENTS**

Surface Preparation. The surfaces to be masonry coated shall be given a finish in accordance with 702.21. Such surfaces shall then be sealed with a concrete sealer in accordance with 709. Air pockets of up to 6 mm (1/4 in.) in width and depth will not require grouting prior to application of the masonry coating. Air pockets larger than 6 mm (1/4 in.) in width and depth shall be filled with a grout mix composed of one part portland cement, two parts screened and washed sand graded to pass the 1.18 mm (No. 16) sieve with not more than 5 percent retained on the 600 µm (No. 30) sieve, and sufficient water to produce a thick liquid mix. The grout shall be applied to fill the air pockets and voids by using burlap pads, float sponges or other acceptable methods. As soon as the grout has taken its initial set, the surface shall be brushed to remove all loose grout, leaving the surface smooth and free of air pockets and voids. Prior to the application of the masonry coating, regardless of whether the concrete surface has been previously sealed, the surface to be coated shall be lightly sandblasted to remove flaking coatings, dirt, oil and other substances deleterious to the applied finish coating.

Overblasting, exposing additional air pockets, or disfiguring the surface shall be prevented. Final cleaning shall be done with compressed air. The air compressor shall be equipped with suitable separators, traps, or filters which shall remove water, oil, 30 grease, or other substances from the air line. Prior to application of the finish coating, the surfaces shall have been prepared in

accordance with the manufacturer's recommendations and shall be in a condition consistent with the manufacturer's requirements.

Application. The application, including equipment used, shall be in accordance with the manufacturer's recommendations. The material shall be applied by qualified personnel experienced in the work.

The material shall be thoroughly mixed in its original container. If skins have formed, the material will be rejected. The material shall not be thinned. The masonry coating may be applied

over a damp, but not wet, surface. It shall be applied at a uniform film thickness at a rate of 1.1± 0.1 $m^2$ /L (45 ± 5 sft/gal.) or as recommended by the manufacturer and approved by the Engineer. In either case, the application rate shall be sufficient to produce a uniform color and texture. The material shall be applied only when the ambient temperature is between 7 C (45 F) and rising, and 38 C (100 F). It shall not be applied onto frozen surfaces or if rain is imminent. If rain occurs on a freshly applied surface, recoating may be required based on the extent of rain damage.

The material shall not be applied if dusty conditions exist in the vicinity of the surfaces to be coated. When dust conditions are beyond the control of the contractor, or are generated off-site, application shall not take place until more favorable conditions exist. The application of the masonry coating shall be scheduled as one of the final finishing operations to minimize construction generated dust. A wet edge shall be maintained at all times to prevent lap marks. Stopping and starting in the middle of a section of concrete will not be permitted. If applying the coating with a roller, the material shall initially be applied in vertical strokes, cross rolled for even film and appearance, then finished with vertical strokes.

After application, the coating shall be dry to the touch within 48 hours. The coating shall achieve a final cure within two to three weeks under ideal conditions. 728.05 Finishing. The coating material in the finished state shall be capable of accommodating the thermal and elastic expansion ranges of the substrate without cracking.

The texture of the completed finish coat shall be generally similar to that of rubbed concrete. The completed finish coat shall be tightly bonded to the structure to 70 present a uniform appearance and texture. If necessary, additional coats shall be applied to produce the desired surface texture and uniformity.

Coatings shall be entirely removed from the structure upon their failure to positively adhere without chipping, flaking or peeling, or attaining the desired surface appearance. The finish coat shall be reapplied after proper surface preparation until the desired finished product is achieved. The average thickness of the completed finish coat shall not exceed 3 mm (1/8 in.).

The manufacturer shall submit, for each batch of material used, the product 80 analysis data as follows: (a) Mass per liter (Weight per gallon). (b) Viscosity in Kreb units. (c) Mass percent pigment. (d) Mass percent vehicle solids. (e) Infrared spectra of vehicle solution.

**Method of Measurement.** Only those measurements necessary to verify application rates will be made.

**Basis of Payment.** Masonry coating used on concrete bridge railing or bridge concrete median barrier will be paid for at the contract lump sum price for masonry coating. Concrete sealer will

be paid for in accordance with 709.08. Payment will be made under: Pay Item Pay Unit Symbol Masonry Coating, LS Surface Seal, LS. The cost of masonry coating used on roadway concrete median barrier shall be included in the cost of such median barrier. The cost of surface preparation, furnishing and applying the material, labor, equipment, and necessary incidentals shall be included in the cost of this work.

**SECTION 909, AFTER LINE 832, INSERT AS FOLLOWS:** 909.13 Masonry Coating Material. Masonry coating material shall be a commercial product designed specifically for coating concrete. The material shall be suitable for application on damp concrete, or concrete which is not fully cured. Only one coating material shall be used on an individual structure. It shall be delivered to the project site in sealed containers bearing the manufacturer's original labels. The brand, color, and type shall be clearly marked on each container. All material shall be from the same lot or batch unless otherwise authorized. A copy of the manufacturer's printed instructions shall be made available.

The coating material shall be stored in airtight, upright containers. The containers shall be stored in a dry enclosure where the temperature is above 7 C (45 F) and less than 38 C (100 F). Material which has been subjected to freezing will be rejected.

The masonry coating shall have a shelf life of not less than 12 months.

The color of the applied masonry coating shall be in accordance with Federal Color Standard No. 595a. Such color shall match the color identification number shown on the plans.

**(a) Material Testing.** All testing shall be performed by a qualified commercial testing laboratory acceptable to the Division of Materials and Tests.

The applied finish coating shall be subjected to and shall satisfy the requirements of the tests listed below, prior to use on a structure. The masonry coating manufacturer shall certify that the coating is compatible with the sealer used on the concrete surface,

**1. Freeze-Thaw Tests.** The applied finish coating shall be subjected to freeze-thaw cycle tests as follows:

a.Three concrete specimens, not less than 100 mm by 150 mm by 150 mm (4 in. by 6 in. by 6 in.), of the mix design for the structure shall be cast and cured. Fourteen days moist curing with a drying period at room temperature, 16 C to 27 C (60 F to 80 F), for 24 hours will be required before the specimens are coated with the applied finish. There shall be no excessive oil on specimen forms. The finish coating shall be applied to the sides of specimens at a spreading of 1.2 0.2 m /l (50 10 sft/gal). Brush application will be permitted. Cementitious coatings shall be cured at room temperature and 50 percent relative humidity for 24 hours, at room temperature and 90 percent relative humidity for 48 hours, at room temperature and 50 percent relative humidity for four days for a total curing time of seven days. Other coatings shall be cured at room temperature for 48 hours after the completing of curing.

b.The specimens shall be immersed in water at room temperature for three hours, then removed.

c.The specimens shall be placed in cold storage at -26 C (-15 F) for one hour, then removed.

d.The specimens shall be thawed at room temperature for one hour.

e.Steps c. and d. above shall be repeated for a total of 50 cycles. At the end of 50 cycles, the specimens shall show no visible defects.

**2. Accelerated Weathering.** The applied finish coating shall be subjected to a 5,000 hour exposure test in a Twin-Carbon-Arc-Weatherometer, ASTM G 23, Type D, at an operating temperature of 63 C (145 F). The test shall be made at 20 minute cycles consisting of 17 minutes of light and 3 minutes of water spray plus light. At the end of the exposure test, the exposed samples shall show no chipping, flaking, or peeling. The panels for this test shall be prepared by means of applying the coating at a spreading rate of 1.2 0.2 m /l (50 10 sft/gal.) to both sides and edges. Panels shall be cut from asbestos cement shingles in accordance with Federal Specification SS-S-346, Type I. Curing time shall be in accordance with 908.12(b)1.

**3. Fungus Growth Resistance.** The applied finish coating shall pass a fungus resistance test in accordance with Federal Specification TT-P-29g. Fungus growth shall not be indicated after a minimum incubation period of 21 days. Rev. 3-01-01

**4. Abrasion Resistance.** The applied finish coating shall pass the 3,000 liter sand abrasion test in accordance with Method 6191 Abrasion Resistance - Falling Sand, Federal Test Method Standard 141a. The specimens for this test shall be prepared by means of applying the coating to a cleaned steel panel at a spreading rate of 1.2 0.2 m /l (50 10 sft/gal.). The specimens shall be cured at room temperature for 21 days.

**5. Impact Resistance**. The coating shall be applied to a concrete panel prepared in accordance with Federal Test Method Standard 141a, Method 2051, at a spreading rate of 1.2 0.2 m /l (50 10 sft/gal.), and permitted to cure for 21 days a room temperature. The test shall then be run using the Gardner Mandrel Impact Tester in accordance with ASTM D 2794 using a 13 mm ( in.) indenter with an impact load of 2.7 joules (24 in. lbs). The coating shall shown no chipping under this impact load.

**6. Salt-Spray Resistance Test.** A concrete specimen shall be coated at the rate of 1.2 0.2 m /l (50 10 sft) and cured for 21 days at room temperature. The coated specimen shall be exposed to a 5 percent salt solution in accordance with ASTM B 117 for 300 hours where the atmospheric temperature is maintained at 32 C 1 C (90 F 2 F). At the end of 300 hours of exposure, the coating shall shown no ill effects, loss of adhesion, or deterioration.

**7. Flexibility Test.** A sheet metal specimen shall be coated with the applied finish coating at a rate of 1.1 0.2 m /l (45 10 sft/gal.) and permitted to cure for 48 hours at room temperature. The coated specimen shall be bent 180 degrees over a 25 mm (1 in.) diameter mandrel. After bending, the coating shall show no breaking.

(b) Certification. Before material is applied, a type B certification in accordance with 916 shall be furnished attesting that the commercial product furnished is in accordance with the same formula as that previously subject to the tests specified below and approved. Copies of the test reports shall be attached to the certification. Reports for tests made more than four years prior to shipment to the contract will not be accepted.

A service record shall be supplied which shows that the finish coating material has a satisfactory service record on sealed concrete surfaces for a period of not less than five years prior to the date of submission of the service record. The finish coating shall also have shown satisfactory service characteristics without peeling, chipping, flaking, or nonuniform change in texture or color. A specific structure for the specific product shall be named for the service record.

## FIELD OFFICE EQUIPMENT

Description. This item shall consist of furnishing, delivering, installing and maintaining in good condition office equipment and services for the exclusive use of the Engineer(s). This item **does not** include providing office space, electrical service or air conditioning, heating and ventilation.

The equipment shall be delivered for use to the Kingery Field Office building at 2025 E. 175th St., Lansing, IL. The services required shall also be provided at this location. The equipment shall be in good working order, in a new or like new condition and the Engineer will have final approval of acceptability of all equipment and services. Equipment and/or services found to be unacceptable by the Engineer shall be removed and replaced immediately. Upon notification by the Engineer, all equipment shall be removed from the Kingery Field Office building and all services terminated. The equipment shall remain the property of the contractor.

Required Equipment and Services
The following equipment, furniture and services shall be furnished:

a) Eighteen desks with a minimum working surface area of 60 in. by 30 in. and eighteen non-folding desk type chairs with arm rests and upholstered seats and backs.

b) One four-post drafting table with minimum top size of 930 mm x 1.2 m (37 ½ in. x 48 in.). 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.

c) One desk with minimum working surface 1.1 m x 750 mm (42 in. x 30 in.) with height adjustment of 585 to 750 mm (23 in. to 30 in.) for computer use.

d) Three free standing four drawer legal size file cabinets with locks. At least one of these cabinets must be underwriters' laboratories insulated file device 350 degrees one hour rating. Three free standing two drawer letter size file cabinets with locks shall also be provided.

e) Six folding chairs.

f) One equipment cabinet of minimum inside dimension of 1100 mm (44 in.) high x 600 mm (24 in.) wide x 750 mm (30 in.) deep with lock. The walls shall be of steel with a 2 mm (3/32 in.) 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 office style refrigerator with a minimum of size of 8 cu. ft. and a freezer unit or one home type refrigerator/freezer as approved by the Engineer.

h) Two electric desk type tape printing calculators and two pocket scientific notation calculators with 1000 hour battery life or with portable chargers.

i) Telephone service with touch-tone including long distance service for 6 separate new phone lines, all labor and materials necessary to install the phone lines (including outlets) at the locations directed by the Engineer in the existing Kingery Field Office, 6 multi-line telephones capable of handling at least 3 separate phone lines, 2 multi-line telephones capable of handling at least 2 separate phone lines and 2 answering machines. Three of the phone lines shall be capable of "rolling over" to an unused phone line in the group. Two of the phone lines shall be located at locations as directed by the Engineer.

j) One commercial office type dry process copy machine with automatic feed and sorter capable of copying field books, 8-1/2" x 11", 8-1/2" x 14" and 11" x 17" originals (nontransparent master sources) as black lines on white paper including reproduction paper, activating agent, toner, all required maintenance and suitable power source.

k) One plain paper fax machine including maintenance and operating supplies.

l) Two 4' x 6' dry erase boards with one set of four different color working dry erase markers and one dry eraser per dry erase board.

m) One commercial fire extinguisher having a minimum underwriters laboratory rating of 4A60BC.

n) Three folding tables at least 8' in length.

o) Eight office type trash cans.

p) One electric water cooler and dispenser with bottled water service capable of supplying sufficient drinking water for 15 individuals.

q) One industrial type first-aid cabinet or kit, fully equipped and maintained.

r) Suitable portable commercial/office type room dividers (6' high min.) in sufficient quantity capable of dividing a 65' x 45' open area into 2 individual common office areas as acceptable to the Engineer.

Basis of Payment. The work will be paid for on a monthly basis or fraction thereof until released by the Engineer. The Contractor will be paid the contract bid price each month provided the equipment is maintained and services are furnished. Payment will not be made when the contract is suspended according to Article 108.07 for failure of the Contractor to comply with the provisions of the contract. The equipment and services will be paid for at the contract unit price per calendar month or fraction thereof for FIELD OFFICE EQUIPMENT. This price shall include all utility costs and shall reflect the salvage value of the equipment and furniture which becomes the property of the Contractor after release by the Engineer, except that the Department will pay that portion of each monthly long distance telephone bill in excess of $50.

Any extraordinary damage attributed to State operations during the course of the job will be repaired by the Contractor and may be paid for according to Article 109.04. No extra payment will be made for systems maintenance, repairs or replacement, or for damages incurred as a result of vandalism, theft or other criminal activities.

## BITUMINOUS EQUIPMENT, SPREADING AND FINISHING MACHINE (BDE)

Effective: January 1, 2005

Revise the fourth paragraph of Article 1102.03 of the Standard Specifications to read:

"The paver shall be equipped with a receiving hopper having sufficient capacity for a uniform spreading operation. The hopper shall be equipped with a districation system to uniformly place a non-segregated mixture in front of the screed. The distribution system shall

have chain curtains, deflector plates, and/or other devices designed and built by the paver manufacturer to prevent segregation during distribution of the mixture from the hopper to the paver screed. The Contractor shall submit a written certification that the devices recommended by; the paver manufacturer to prevent segregation have been installed and are operational. Prior to paving, the Contractor, in the presence of the Engineer, shall visually inspect paver parts specifically identified by the manufacturer for excessive wear and the need for replacement. The Contractor shall supply a completed check list to the Engineer noting the condition of the parts. Worn parts shall be replaced. The Engineer may require an additional inspection prior to the placement of a surface course or at other times throughout the work."

**MINIMUM LANE WIDTH WITH LANE CLOSURE (BDE)**
Effective: January 1, 2005

Add the following paragraph after the eighth paragraph of Article 701.04(a) of the Standard Specifications.

"The minimum lane width adjacent to a closed lane during paving, patching, and other moving operations on freeways and expressways shall be a minimum of 3 m (10 ft). The 3 m (10 ft) shall be clear, unobstructed, and free of channelizing devices or other obstacles."

**PORTLAND CEMENT (BDE)**
Effective: January 1, 2005

Replace the first sentence of the second paragraph of Article 1001.01 of the Standard Specifications with the following:

"For portland cement according to ASTM C 150, the addition of up to 5.0 percent limestone by mass (weight) to the cement will not be permitted. Also, the total of all organic processing additions shall not exceed 1.0 percent by mass (weight) of the cement and the total of all inorganic processing additions shall not exceed 4.0 percent by mass (weight) of the cement."

**TRAFFIC CONTROL DEFICIENCY DEDUCTION (BDE)**
Effective: April 1, 1992 Revised: January 1, 2005

To ensure a prompt response to incidents involving the integrity of work zone traffic control, the Contractor shall provide a telephone number where a responsible individual can be contacted 24 hours-a-day.

When the Engineer is notified, or determines a traffic control deficiency exists, he/she 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 12 hours based upon the urgency of the situation and the nature of the deficiency. The Engineer shall be the sole judge.

A deficiency may be any lack of repair, maintenance, or non-compliance with the traffic control plan. A deficiency may also be applied to situations where corrective action is not an option such as the use of non-certified flaggers for short term operations; working with lane closures beyond the time allowed in the contract; or failure to perform required contract obligations such as traffic control surveillance.

If the Contractor fails to correct a deficiency within the specified time, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency exists. The calendar day(s) will begin with notification to the Contractor and end with the Engineer's acceptance of the correction. The daily monetary deduction will be either $1,000 or 0.05 percent of the awarded contract value, whichever is greater. For those deficiencies where corrective action was not an option this monetary deduction will be immediate.

In addition, if the Contractor fails to respond, the Engineer may correct the deficiency and the cost thereof will be deducted from monies due or which may become due the Contractor. This corrective action will in no way relieve the Contractor of his/her contractual requirements or responsibilities.

**WORK ZONE PUBLIC INFORMATION SIGNS (BDE)**

Effective: September 1, 2002 Revised: January 1, 2005

Description. This work shall consist of furnishing, erecting, maintaining, and removing work zone public information signs.

Camera-ready artwork for the signs will be provided to sign manufacturing companies upon request by contacting the Central Bureau of Operations at 217-782-2076. The sign number is W21-I116-6048.

Freeways/Expressways. These signs are required on freeways and expressways. The signs shall be erected as shown on Highway Standard 701400 and according to Article 702.05(a) of the Standard Specifications.

All Other Routes. These signs shall be used on other routes when specified on the plans. They shall be erected in pairs midway between the first and second warning signs.

Basis of Payment. This work will not be paid for separately but shall be considered as included in the cost of the Standard.

**STEEL COST ADJUSTMENT (BDE)**

Effective: April 2, 2004 Revised: July 1, 2004

Description. At the bidder’s option, a steel cost adjustment will be made to provide additional compensation to the Contractor or a credit to the Department for fluctuations in steel prices. The bidder must indicate on the attached form whether or not steel cost adjustments will be part of this contract. This attached form shall be submitted with the bid. Failure to submit the form shall make this contract exempt of steel cost adjustments.

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), frames and

grates, and other miscellaneous items will be subject to a steel cost adjustment when the pay item 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) Evidence that increased or decreased steel costs have been passed on to the Contractor.

(b) The dates and quantity of steel, in kg (lb), shipped from the mill to the fabricator.

(c) The quantity of steel, in kg (lb), 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 kg (lb)
D = price factor, in dollars per kg (lb)

$D = CBP_M - CBP_L$

Where: $CBP_M$ = The average of the Consumer Buying Price indices for Shredded Auto Scrap (Chicago) and No. 1 Heavy Melt (Chicago) as published by the American Metal Market (AMM) for the day the steel is shipped from the mill. The indices will be converted from dollars per ton to dollars per kg (lb).

$CBP_L$ = The average of the Consumer Buying Price indices for Shredded Auto Scrap (Chicago) and No. 1 Heavy Melt (Chicago) as published by the AMM for the day the contract is let. The indices will be converted from dollars per ton to dollars per kg (lb).

The unit masses (weights) 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 $CBP_M$ 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 $CBP_L$ and $CBP_M$ in excess of five percent, as calculated by:

$\text{Percent Difference} = \{(CBP_L - CBP_M) \div CBP_L\} \times 100$

Steel cost adjustments will be calculated by the Engineer and will be paid or deducted when all other contract requirements for the steel items 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.

**Attachment**

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

**RETURN WITH BID**

## ILLINOIS DEPARTMENT OF TRANSPORTATION

**OPTION FOR STEEL COST ADJUSTMENT**

The bidder shall submit this form with his/her bid. Failure to submit the form shall make this contract exempt of steel 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 plans?

Yes ☐ No ☐

**Signature:** _____ **Date:** _____

# STORM WATER POLLUTION PLAN FORM

Illinois Department of Transportation

**Storm Water Pollution Prevention Plan**

Route FAI 80/94 and IL 394 Marked I-80/94, Bishop Ford Expressway and Kingery Expressway

Section See individual contract Project No.

County Cook, IL and Lake, IN

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.

John P. Kuhl
Signature

12-20-02
Date

District Eng
Title

## 1 Site Description

a. The following is a description of the construction activity which is the subject of this plan (use additional pages, as necessary):

The project is located at I-80/94 from I-294 (Tri- State Tollway) to US 41.

Construction Descriptions

Interstate 80 will be reconstructed from approximately 1000 m west of IL 394 to US 41. In addition, Interstate 94 will be reconstructed from 159th Street to Interstate 80 and IL 394 will be reconstructed from its terminus at Interstate 94 to 1600 m south of Thornton-Lansing Road. The project also includes the reconstruction of Thornton-Lansing Road for approximately 350 m east and west of IL 394; Dorchester Avenue from Thornton-Lansing Road to approximately 700 m south of Thornton-Lansing Road; IL 83 (Torrence Avenue) from 335 m north of I-80 to 558 m south of I-80; 176th Place from 217 m west of IL 83 to IL 83; 170th Street from 290 m west of I-94 to 295 m east of I-94; Van Dam Road from 170th Street to 110 m north of 170th Street and from 384 m south of 159th Street to 183 m south of 159th Street; Bernice Avenue from IL 83 to Wentworth Avenue, net length 1918 m; 175th Street from IL 83 to Wentworth Avenue, net length 1988 m; Wentworth Avenue from 400 m south of I-80 to 630 m north of I-80; and portions of 175th Street between Paxton Avenue and IL 83, net length 333 m.

The proposed improvements will consist of four through lanes in each direction along Interstate 80/94 within the reconstruction limits. Auxiliary lanes are also utilized between all of the interchanges within the project limits. In addition, C-D roads have been incorporated for both the I-80 and I-94 traffic movements. The IL 83 interchange will be reconfigured from a cloverleaf to a Single Point Urban Interchange (SPUI). The I-80 and I-

94 interchange will be reconfigured as well, with the east to north and west to south movements at the I-80/94 IL 394 loop ramps being removed and replaced with semi directional ramps (flyovers).

All mainline structures and overhead structures (IL 83, Wentworth Avenue, 170th Street and Thornton-Lansing Road) will be reconstructed. Some mainline structures will be realigned to accommodate the interchange reconfigurations. In addition, several retaining walls will be constructed along the mainline roadways and cross streets.

All interstate, including IL 394, and ramp pavements will be replaced with either continuously reinforced concrete pavement or jointed concrete pavement. IL 83, 170th Street, Burnham Avenue, and Wentworth Avenue pavements will be replaced with jointed concrete pavement. Existing pavements on 175th Street, Bernice Avenue, Thornton-Lansing, Dorchester Avenue, Van Dam Road and 176th Place will be replaced with bituminous pavements.

Drainage inlets will be placed along the median of the Interstates and IL 83 and storm water runoff will be conveyed through proposed sewers to outlets at existing locations per the Location Drainage Plan. New detention areas will be provided in the location of the existing loop ramps at IL 83. Existing drainage culverts that cross I-80 will be replaced. Pump Stations 1 and 6 will be removed at the completion of the improvements. Roadside ditches along I-94, IL 394 and ramps will be improved.

Other work includes construction of a noise abatement walls along both sides of I-80 from IL 83 to US 41 (with omissions) and along I-94 from Thorn Creek to 159th Street, installation of high mast tower lighting, sign structure installations, pavement striping restoration and all necessary and related road work.

Environmental Descriptions

West of the I-94/IL 394 interchange are sensitive ecological areas and commitments have been made to protect them. These areas include the Thorn Creek Forest Preserve, Volbrecht Woods, Wampum Lake Seepage INAI sites, and sand flatwood communities. All required protection devices, activities, and training must be completed before any work may begin.

Entry is not permitted under any circumstances in these forest preserve areas. This includes all construction traffic, foot and motorized, to enter this forest preserve. Perimeter fencing and no-intrusion signage will be erected. These protection devices are listed in the Erosion Control Plan.

The required plant species sensitivity training session is further explained in the Special Provisions.

Existing ground water levels must be maintained to protect existing pharmacological communities. New drainage swales are to be dug so they do not intersect with ground water levels. Rubber gasket sealed storm sewers and anti-seep collars are among the devices utilized.

Compaction must also be minimized in this western location outside of the embankment area. The Contractor may use low ground weight vehicles or matting to reduce rutting. The Contractor will also be responsible to rework the topsoil to remove any unnatural compaction that occurred.

IDOT will work with the FPDCC to develop a maintenance and restoration plan.

Reseeding west of this interchange will be done with native prairie mixes that supplement the adjacent areas and any tree replacement within the preserve will be coordinated with the FPDCC. More specific information is included in the plans.

b. 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 (use additional pages, as necessary):

The project has been scheduled to be built in three phases (first phase advanced work, second phase mainline first year, and second phase mainline second year). During each phase multiple contracts will be awarded. Each of these contracts have multiple stages.

Phase I Contracts: 62103, 62109, 62112, 62348, 62350, 62351, 62352, 62353, 62422, 62518

Phase I-Stages 1 and 2

- Resurface of IL 394 and replacement of shoulders.
- Placement of new embankment for I-94 EB from IL 394 to merge with I-80.
- Construction of new pavement on new alignment for I-94 EB from IL 394 to merge with I-80.
- Construction of new ramp bridge from I-80/294 EB to IL 394 NB and widening of I-294 to accommodate the ramp exit.
- Construction of new IL 394 NB bridge over Thorn Creek.
- Construction of new Thornton-Lansing Road bridge over IL 394 and associated roadway work on Dorchester Avenue.
- Construction of new 170th Street bridge over I-94 and associated roadway work on Prince Drive and Van Dam Road.
- Reconstruction of the northbound lanes of IL 83 (Torrence Avenue), new ramps on east side of I-80/IL 83 interchange and temporary ramp pavement at I-80.
- Begin construction of both Bernice Avenue and 175th Street from IL 83 to Wentworth Avenue and portions of 175th Street between Paxton Avenue IL 83. Construction includes retaining walls and street relocation.
- Begin construction of Wentworth Avenue.

Phase I-Stage 3

- Finish construction at locations discussed in Phase I-Stages 1 and 2.
- Switch traffic on IL 83 to northbound lanes and construct southbound lanes and new drainage system.
- Construct ramps on west side of I-80/IL 83 interchange.
- Complete all work necessary for start of Phase II.

Phase II Contracts: 62104, 62107, 62109, 62110, 62113, 62350
Phase II-Stage 1

- Placement of embankment and pavement for widening of I-80/294 from Thorn Creek to the bridge over the Grand Trunk Railroad.
- Placement of embankment and pavement for IL 394 NB.
- Construction of IL 394 Northbound bridge over I-80.
- Placement of embankment and pavement for I-94 Westbound.
- Construction of bridge for I-94 westbound over Thorn Creek.
- Placement of embankment and pavement for a small segment of IL 394 southbound over Grand Trunk Railroad.
- Construction of the outer lanes of the bridge IL 394 southbound over Canadian National Railroad.

- Placement of embankment and pavement for Ramp H, IL 394 northbound to I-80 westbound.
- Placement of embankment and pavement for connector ramp from IL 394 northbound to I-80 east bound.
- Construction of collector-distributor roadway west of IL 83.

Phase II-Stages 2 thru 6

- Continue construction at locations discussed in Phase II-Stage 1 with sub-stages used to complete the work necessary for the start of Phase III.

Phase III Contracts: 62105, 62108, 62111, 62114
Phase III-Stage 1

- Placement of embankment and pavement for I-94 EB.
- Placement of embankment and pavement for IL 394 SB.
- Construction of IL 394 Southbound bridge over I-80.
- Placement of embankment and pavement for I-94 Eastbound.
- Construction of bridge for I-94 Eastbound over Thorn Creek.
- Construction of the remaining portion of the bridge IL 394 southbound over Canadian National Railroad.
- Placement of embankment and pavement for Ramp F, IL 394 southbound to I-80 westbound.
- Construction of I-80 eastbound lanes from Burnham Avenue to Illinois State Line.
- Construction of I-80 westbound lanes from I-294 to approximately the exit to I-94 WB.

Phase III-Stage 2

- Begin reconstruction of Burnham Road from Bernice Road to south of I-80/94.
- Construction of I-80 westbound lanes from approximately the exit to I-94 WB to US 41.
- Construction of I-80 Eastbound lanes near Railroad Avenue.
- Continue construction at locations discussed in Phase III-Stage 1 with sub-stages used to complete the work.

Post Mainline Construction

- Final landscaping.
- Bridge painting.

c. The total area of the construction site is estimated to be 371 acres (150 HA).
The total area of the site that it is estimated will be disturbed by excavation, grading or other activities is acres 371 (150 HA): Phase I, 134 ac (54 ha); Phase II, 142 ac (57 ha); Phase III, 95 ac (39 ha).

d. The estimated runoff coefficients of the various areas of the site after construction activities are completed are contained in the project drainage study, which is hereby incorporated by reference in this plan. Information describing the soils at the site is contained either in the Soils Report for the project, which is hereby incorporated by reference, or in an attachment to this plan.

e. The design/project report, hydraulic report, or plan documents, hereby incorporated by reference, contain site map(s) indicating drainage patterns and approximate slopes anticipated after major grading activities, areas of major soil disturbance, the location of major structural and nonstructural 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 a surface water.

f. The names of receiving water(s) and areal extent of wetland acreage at the site are in the design/project report or plan documents, which are incorporated by reference as a part of this plan.

Thorn creek will accept storm water runoff on the western half of the project, and the Little Calumet will accept run off on the eastern half of the project.

g. During major storm events, some locations within the work zone may become saturated. These saturated areas may be expected near Thorn Creek, I-80 over the Canadian National Railroad eastern abatement, Ramp F, Ramp E, I-94 WB near Thorn Creek, and the areas near culverts. In addition, the project impacts several wetlands and these areas would also be expected to be saturated as a result of a major storm event. Care has been taken to prepare the Erosion Control Plan to limit erosion and the ponding of water in the work zone.

## 2. Controls

This section of the plan addresses the various controls that will be implemented for each of the major construction activities described in 1.b. above. For each measure discussed, the contractor that will be responsible for its implementation is indicated. Each such contractor has signed the required certification on forms which are attached to, and a part of, this plan:

### a. Erosion and Sediment Controls

(i) Stabilization Practices. Provided below is a description of interim and permanent stabilization practices, including site-specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices may include: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided in 2.a.(i).(A) and 2.b., 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 14 days after the construction activity in that portion of the site has temporarily or permanently ceased on all disturbed portions of the site where construction activity will not occur for a period of 21 or more calendar days.

(A) Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable thereafter.

Description of Stabilization Practices (use additional pages, as necessary):

1. Temporary Erosion Control Seeding shall be applied in accordance with the Special Provision. Seed mixture will depend on the time of year it is applied. Oats will be applied from January 1 to July 31 and Hard Red Winter Wheat from August 1 to December 31.
2. Short Term Seeding — Seeding Class 2A shall be used to protect bare earth from more than just one or two summer-winter cycles. Due to the length and complexity of this project, it is necessary that short term, final graded slopes be short term seeded as

directed by the Engineer.

3. Stone Riprap — Class A4 stone riprap with filter fabric will be used as protection at the discharge end of most storm sewer and culvert end sections to prevent scouring at the end of pipes and to prevent downstream erosion.
4. Temporary Tree Protection — Shall consist of items "temporary fencing" and "tree trunk protection" as directed by the engineer and in accordance with Article 201.05 of the Illinois Department of Transportation's Standard Specifications for Road and Bridge Construction.
5. Permanent Stabilization — All areas disturbed by construction will be stabilized as soon as permitted with permanent seeding following the finished grading, but always within seven days with Temporary Erosion Control Seeding. Erosion Blankets will be installed over fill slopes, which have been brought to final grade and have been seeded to protect the slopes from rill and gully erosion and allow seeds to germinate properly.
6. Erosion Control Blankets and Mulching — Erosion control blankets will be installed over fill slopes and in high velocity areas that have been brought to final grade and seeded to protect slopes from erosion and allow seeds to germinate. Mulch will be applied in relatively flat areas to prevent further erosion.

(ii) **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 discharge of pollutants from exposed areas of the site. Such practices may include silt fences, earth dikes, drainage swales, sediment traps, check dams, 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.

Description of Structural Practices (use additional pages, as necessary):

1. Sediment Control, Stabilized Construction Access – Coarse aggregate overlaying a geote fabric will be placed in locations necessary for contractor access. The aggregate surface of access points will capture soil debris, reducing the amount of soil deposits placed on to roadway by vehicles leaving the work zones.
2. Inlet Filters – Inlet and Pipe Protection will be provided for storm sewers. These filters wil placed in every inlet, catch basis or manhole with an open lid, which will drain water during at l a 10-year storm event. The Erosion Control Plan will identify the structures requiring Inlet filters
3. Sediment Control, Silt Fence— A silt fence will be placed adjacent to the areas of constructio intercept waterborne silt and prevent it from leaving the site. These areas are marked on erosion control plans in each contract.
4. Sediment Control, Temporary Ditch Checks — Rolled excelsior ditch checks will be place swales at the rate of one for every 0.3 meters in vertical drop, or as directed by the Enginee order to prevent downstream erosion.
5. Sediment Control, Temporary Stream Crossing -- Coarse aggregate overlaying a geotextile fa will be placed in locations necessary for contractor access over water channels. The aggre surface of the crossing will reduce the amount of soil disturbance in the streams.
6. Sediment Control, Temporary Pipe Slope Drain – This item consists of a pipe with flared sections, placed daily, along with anchor devices in conjunction with temporary berms that di runoff down an unstabilized slope.
7. Sediment Control, Dewatering Basins will be provided at wherever the contractor is removing discharging water from excavated areas and the water is not being routed through a sediment or basin.
8. Stone riprap will be provided at several storm and culvert outlets as a measure for erosion sediment control where needed during and after the project.
9. Bridges will be designed to reduce the potential for scouring.
10. Underdrains will be used to minimize potential erosion caused by surface water flows by redu the subsurface water which can cause failed pavements, unstable shoulders and other distur areas.
11. Covers will be placed on open ends of pipes in trenches.

The structural practices indicated above may not be used in every contract. The Erosion Control Pl included in every contract will indicate which structural practices are required for that contract.

**b. Storm Water Management**

Provided below is a description of measures that will be installed during the construction process control pollutants in storm water discharges that will occur after construction operations have bee completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

(i) Such practices may include: storm water detention structures (including wet ponds); storm wat retention structures; flow attenuation by use of open vegetated swales and natural depression infiltration of runoff on site; and sequential systems (which combine several practices). **Th practices selected for implementation were determined on the basis of the technic guidance in Section 10-300 (Design Considerations) in Chapter 10 (Erosion an Sedimentation Control) of the Illinois Department of Transportation Drainage Manual. practices other than those discussed in Section 10-300 are selected for implementation if practices are applied to situations different from those covered in Section 10-300, th technical basis for such decisions will be explained below.**

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

(iii) The Department proposes to remove vegetation within the project limits as necessary f construction. The Department proposes to revegetate these areas with salt tolerant turf gra near the roadway and the majority of ground cover consisting of native prairie grasses ar wildflowers. Areas that require tree removal will be reforested.

Approximately 1,772 trees exist on Forest Preserve property that are proposed for removal. Th Forest Preserve accounted for tree trunk cross sectional area, species, location, and condition evaluate these trees. The Department has agreed to replace all 1,772 trees on a 1 to 1 basi The replacement trees will only be worth 57% of the original trees, requiring the Department reimburse the FPDCC for the remaining 43% to fulfill the Department's mitigation responsibilit During this process, 4.0 acres of Forest Preserve property will be exposed, with the Departme reforesting the 4.0 acres according to our planting policies, leaving the FPDCC the potential restore 3.0 more acres.

(iv) Articulated Block Mats are being utilized for this project to control erosion underneath brid decks adjacent to streams and wet areas. These articulated block mats will be installed early the project, providing construction crews with stabilized work pads, and will be left in place, givir bridge inspectors and highway maintainers suitable, and non-damaging means to perfor necessary maintenance.

Note:

1. Ponded water areas with wetland type vegetation will be created for this project for wat quality only, and not detention or habitat. Only the first flush of runoff will be detained.
2. It is not anticipated that any channels will be relocated as part of this project, however, a need arises, a riffle pool will be used to accommodate the relocation.
3. When possible, the flow in detention basins will be offset, not linear.
4. Care will be taken to only use fertilizer nutrients on final seeding items when nutrients a incorporated into the soil during seedbed preparation.

Description of Storm Water Management Controls (use additional pages, as necessary):

1. Detention ponds on the southwest and northwest quadrants of the IL 83 and I-94/CD roa interchange will provide additional storm water detention.

2. Proposed oversized pipe at Outlet 22 will provide additional storm water detention.

3. Lengths of ditches will be maximized in order to aid in pollutant filtering along with th over sizing of storm sewers and ditches.

4. Pump Stations #1 and #6 will be removed as a result of this project. The removal of thes pump stations will reduce the velocity of release water at the discharge points. Th reduction in velocity of the water will reduce the potential for erosion.

5. Permanent measures for storm water management controls will be placed as soon a possible during construction.
   a. All ditches will be vegetated, where feasible, which will provide a buffering effe for run off contaminates.
   b. Ditches should receive permanent seeding after the final grading and topsoil hav been placed.
   c. In turf areas where low maintenance seeding is required, native prairie grasse should be used in the final landscaping design.
   d. Wet bottom ditches will be employed before outfalls. The ditches will b oversized to contribute to detention, where feasible. If wet bottom ditches are n feasible, the ditches will be lined with riprap.

6. Sediment traps located outside the final clear zone and below the elevation of th roadway subgrade will be left in place at the completion of the project.

**c. Other Controls**

(i) Waste Disposal. No solid materials, including building materials, shall be discharged into Water of the State, except as authorized by a Section 404 permit.

(ii) The provisions of this plan shall ensure and demonstrate compliance with applicable State and/o local waste disposal, sanitary sewer or septic system regulations.

**d. Approved State or Local Plans**

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 or site permits or 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 o storm water management plans approved by local officials: See Erosion Control and Landscaping Plan.

## 3 Maintenance

The following is a description of procedures that will be used to maintain, in good and effective opera conditions, vegetation, erosion and sediment control measures and other protective measures identified in plan (use additional pages, as necessary):

Construction equipment shall be stored and fueled only at designated locations. All necessary measures shall taken to contain any fuel or pollution runoff in compliance with environmental law and EPA Water Qua Regulations. Leaking equipment or supplies shall be immediately repaired or removed from the site. construction field engineer on a weekly basis shall inspect the project to determine that erosion controls effe are in place and effective and if other control is necessary. Sediment collected during construction by the vari temporary erosion systems shall be disposed on the site on a regular basis as directed by the Engineer.

All erosion and sediment control measures will be checked weekly and after each significant rainfall (13 mm ( inch) or greater in a 24 hour period). The following items will be checked:

1. Seeding – all erodable bare earth areas will be temporarily seeded and inspected on a weekly basis minimize the amount of erodable surface within the contract limits.
2. Silt Filter Fence, all types
3. Erosion Control Blanket
4. Tree Protection
5. Ditch Checks
6. Temporary slope drains
7. Sediment/dewatering basins
8. Stabilized construction entrances

All maintenance of the erosion control systems will be the responsibility of the contractor. All locations wh vehicles enter and exit the construction site and all other areas subject to erosion should also be inspec periodically. Inspection of these areas shall be made at least once every seven days and within 24 hours of end of each 13 mm (0.5 inch) or greater rainfall, or an equivalent snowfall.

## 4 Inspections

Qualified personnel shall inspect disturbed areas of the construction site, which have not been fin stabilized, structural control measures, and locations where vehicles enter or exit the site. S inspections shall be conducted at least once every seven (7)-calendar days and within 24 hours of the of a storm that is 0.5 inches or greater or equivalent snowfall.

a. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion sediment control measures identified in the plan shall be observed to ensure that they are opera correctly. Where discharge locations or points are accessible, they shall be inspected to ascer whether erosion control measures are effective in preventing significant impacts to receiving wat Locations where vehicles enter or exit the site shall be inspected for evidence of off site sediment tracki

b. Based on the results of the inspection, the description of potential pollutant sources identified in sectio above and pollution prevention measures identified in section 2 above shall be revised as appropriate soon as practicable after such inspection. Any changes to this plan resulting from the required inspecti shall be implemented within 7 calendar days following the inspection.

c. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making inspection, the date(s) of the inspection, major observations relating to the implementation of this st water pollution prevention plan, and actions taken in accordance with section 4.b. shall be made retained as part of the plan for at least three (3) years after the date of the inspection. The report shall 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 w covered by this plan, the Resident Engineer or Resident Technician shall complete and file an "Incide of Noncompliance" (ION) report for the identified violation. The Resident Engineer or Resident Technic shall use forms provided by the Illinois Environmental Protection Agency and shall include spe information on the cause of noncompliance, actions which were taken to prevent any further cause noncompliance, and a statement detailing any environmental impact which may have resulted from noncompliance. All reports of noncompliance shall be signed by a responsible authority in accorda with Part VI. G of the general permit.

The report of noncompliance 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

## 5 Non-Storm Water Discharges

Except for flows from fire fighting activities, sources of non-storm water that is combined with storm water di associated with the industrial activity addressed in this plan must be described below. Appropriate pollution pr measures, as described below, will be implemented for the non-storm water component(s) of the discharg additional pages as necessary to describe non-storm water discharges and applicable pollution control measure

Dewatering activities for footing and pier construction of retailing walls and bridges will be a source of non-storm water discharge during construction. Contractors should discharge dewatering activities to a temporary settling basing surrounded by silt fence.

The cutting of joints in PCC pavements or bridge deck grooving will result in slurry. This slurry must be contained on the deck/pavement and cleaned up.

An additional source of non-storm water discharge during construction is the slurry from washing out redi-mix concrete trucks. Redi-mix concrete trucks should wash out in in designated areas surrounded by silt fence. After all PCC items have been constructed, the dried concrete wash material should be cleaned up and properly disposed of. It will be the contractor's responsibility to secure these designated areas for the duration of their use. The Engineer must approve the locations.

On site maintenance of equipment must be performed in accordance with environmental law, such as proper storage and no dumping of old engine oil or other fluids on site.

Good Housekeeping

1. An effort will be made to store only enough product required to do the job.
2. All materials stored on site will be stored in a neat, orderly manner in their appropriate containers, and possible, under a roof or other enclosure.
3. Products will be kept in their original containers with the original manufacturer's label.
4. Substances will not be mixed with one another unless recommended by the manufacturer.
5. The site superintendent will inspect daily to ensure proper use and disposal of materials on the site.
6. Whenever possible, all of a product will be used up before disposing of the container.
7. Follow manufacturer's recommended practices for use and disposal.

Illinois Department of Transportation

**Contractor Certification Stat**

This certification statement is a part of the Storm Water Pollution Prevention Plan for the project described in accordance with NPDES Permit No. ILR10, issued by the Illinois Environmental Protection Agency on M

Project Information:

Route FAI 80/94 and IL 394 Marked I-80/94, Bishop Ford Expwy, I

Sectio See individual contract Project No. _____

County Cook, Illinois and Lake, Indiana

I certify under penalty of law that I understand the terms of the general National Pollutant Discharge Elim System (NPDES) permit (ILR 10) that authorizes the storm water discharges associated with industrial from the construction site identified as part of this certification.

_____ Signature _____ Date

_____ Title

_____ Name of Firm

_____ Street Address

_____ City _____ State

_____ Zip Code

_____ Telephone Number

**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY**

cal 8-11-04 - pai

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276, 217-782-3397
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601, 312-814-6026

217/782-3362 ROD R. BLAGOJEVICH, GOVERNOR RENEE CIPRIANO, DIRECTOR

JUL 27 2004

Chicago District
Corps of Engineers
111 North Canal Street, 6th Floor
Chicago, IL 60606

Re: Illinois Department of Transportation, District 1 (Cook County)
Interstate 80/94/394 interchange reconstruction – Thorn Creek and Unnamed Wetlands
Log # C-0378-03 [CoE appl. # 200400584]

Gentlemen:

This Agency received a request on April 3, 2003 from IDOT District 1 requesting necessary comments concerning the proposed reconstruction of the Interstate 80/94/394 interchange including the construction of three bridges over Thorn Creek and roadway improvements that will impact 2.17-acre of wetland. We offer the following comments.

Based on the information included in this submittal, it is our engineering judgment that the proposed project may be completed without causing water pollution as defined in the Illinois Environmental Protection Act, provided the project is carefully planned and supervised.

These comments are directed at the effect on water quality of the construction procedures involved in the above described project and are not an approval of any discharge resulting from the completed facility, nor an approval of the design of the facility. These comments do not supplant any permit responsibilities of the applicant toward the Agency.

This Agency hereby issues certification under Section 401 of the Clean Water Act (PL 95-217), subject to the applicant's compliance with the following conditions:

1. The applicant shall not cause:
   a. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulations;
   b. water pollution defined and prohibited by the Illinois Environmental Protection Act; or
   c. interference with water use practices near public recreation areas or water supply intakes.
2. The applicant shall provide adequate planning and supervision during the project construction period for implementing construction methods, processes and cleanup procedures necessary to prevent water pollution and control erosion.

3. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statues, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by this Agency. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.

4. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of staked straw bales, sedimentation basins and temporary mulching. All construction within the waterway shall be constructed during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) or more acres, total land area on or after March 10, 2003. An NPDES Storm Water Permit may be obtained by submitting a properly completed Notice of Intent (NOI) form by certified mail to the Agency's Division of Water Pollution Control, Permit Section.

5. The applicant shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2002).

6. The channel relocation shall be constructed under dry conditions and stabilized to prevent erosion prior to the diversion of flow.

7. The proposed work shall be constructed with adequate erosion control measures (i.e., silt fences, straw bales, etc.) to prevent transport of sediment and materials to the adjoining wetlands and downstream.

8. The fill material used for temporary crossings in waters of the State shall be predominantly sand or larger size material, with <20% passing a #230 U. S. sieve.

9. The wetland mitigation plan received by the Agency on May 3, 2004 shall be implemented. Modification to the wetland mitigation plan must be submitted to the Agency for approval. The permittee shall submit written proof from the wetland mitigation bank that the wetland credits have been purchased within thirty (30) days of said purchase. The subject documents shall be submitted to:

Illinois Environmental Protection Agency
Bureau of Water
Watershed Management Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

This certification becomes effective when the Department of the Army, Corps of Engineers, includes the above conditions # 1 through # 9 as conditions of the requested permit issued pursuant to Section 404 of PL 95-217.

This certification replaces the certification issued July 15, 2004 (Log # C-0378-03 [CoE appl. # 200300468]). The CoE appl. # has been revised to # 200400584 for the current phase of the project.

This certification does not grant immunity from any enforcement action found necessary by this Agency to meet its responsibilities in prevention, abatement, and control of water pollution.

Sincerely,

Bruce J. Yurdin
Manager, Watershed Management Section
Bureau of Water

BY:TJF:0378-03.doc

cc: IEPA, Records Unit
IEPA, DWPC, FOS, Des Plaines
IDNR, OWR, Bartlett
USEPA, Region 5
Mr. John Kos, IDOT District 1
Mr. Ken Eng, IDOT District 1

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

INDIANA DEPARTMENT OF TRANSPORTATION
*100 North Senate Avenue*
*Room N642*
*Indianapolis, Indiana 46204-2217*
*(317) 232-7977* *FAX: (317) 233-4929*
*An Equal Opportunity Employer ● http:// www.in.gov/dot*

*JOSEPH E. KERNAN, Governor*
*J. BRYAN NICOL, Commissioner*

Writer's Direct Line
317-232-7977

August 4, 2004

RECEIVED
AUG 2 6 2004
AMERICAN CONSULTING ENGINEERS, L.L.C.

Indiana Department of Environmental Management
Office of Water Management
100 N. Senate Avenue
Room 1255
Indianapolis, IN 46204

Attention: Permits Section

RE: Proj. No.: I-80-1-8460 (EB & WB)
On: I-80/94
Des. No.: 0100987
In: Lake County

Dear Sirs:

This letter is our Notice of Intent (N.O.I.) indicating our intention to comply with the terms of the general permit for construction Activity (soil erosion control), 327-IAC-15-5 in lieu of applying for an individual NPDES Permit.

"I certify that this document and all attachments were prepared under the process established by INDOT which complies with the philosophy and methods of the Indiana Handbook for Erosion Control in Developing Areas. This handbook was published by the Division of Soil Conservation of the Indiana Department of Natural Resources. This process ensures that qualified personnel properly gather and evaluate the information submitted. To the best of my knowledge, the information is accurate and complete. The methods of erosion control submitted with this document may have to be altered during the construction of the project based on the methods of sequence of construction chosen the contractor."

The erosion control measures included in the erosion control plan comply with the requirements of 327-IAC-15-5-9 complies with the county erosion control requirements. The erosion control measures will be local authority and the soil and water conservation district office have been sent a copy of the plan for review (a copy of the transmittal letter attached). Implementation of the erosion control plan will be conducted by personnel trained in erosion control practices.

If you have questions call Carole Korbly Scott at (317) 232-7977.

Sincerely,
Merril E. Dougherty
Hydraulics Engineer Supervisor

MED/CKS/mp
cc: Thomas Engel – American Consulting Engineers
Greg Kicinski – Contracts & Construction
Annamarie Eubanks - Design
Margie Nieman – Program Development
Permits file
idem

Indiana Department of Transportation-Design Div. To Gary Crusader

Lake County, Indiana 1549 Broadway Gary, IN 46407

**PUBLISHERS CLAIM**

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**Pursuant to the provisions and penalties of of Chapters 155, Acts 1953 I hereby certify that the foregoing account is just and correct, that the amount claimed is legally due, after allowing all just credits, and that no part of the same has been paid.**

Dorothy R. Leavell

Date: July 2, 2004 Title: Manager Legal Advertising

**PUBLISHER'S AFFIDAVIT**

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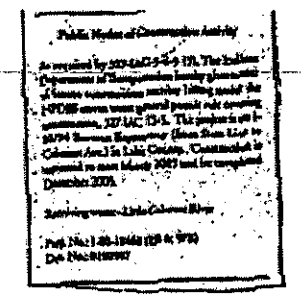
Lake County } ss:



Personally appeared before me, a notary public in and said county and state, the undersigned Dorothy R. Leavell who, being duly sworn, says that she is Manager Legal Advertising at the Gary Crusader a weekly newspaper of general circulation printed and published in the English language in the City of Gary—in state and county aforesaid, and that the printed matter attached hereto is a true copy, which was duly published in said paper for 1 time, the date of publication being as follows: 7/3

Subscribed and sworn to before me this 2 day of July 2004.

Notary Public

My commission expires: September 21, 2004

# Construction/Stormwater Pollution Prevention Plan
## Technical Review and Comment *(Form 1)*

**Project Information**

**Project Name:** Des. # 0100987; Proj. No. I-80-1-8460 (EB & WB); I-80/94 Borm:**County:** Lake
**Plan Submittal Date:** 06/28/04 **Hydrologic Unit Code:** 07120003030060
**Project Location Description:** I-80/94 from Illinois-Indiana State Line to Calumet Avenue
**Latitude and Longitude:** 41 degrees, 34 minutes, 31 seconds north & 87 degrees, 31 minutes, 10 seconds west
**Civil Township:** North **Quarter:** N1/2 **Section:** 13 **Township:** T. 36 N. **Range:** R. 10 W.
**Project Owner Name:** Indiana Department of Transportation
**Contact:** Carole Korbly Scott
**Address:** 100 North Senate Avenue, Room N642
**City:** Indianapolis **State:** Indiana **Zip:** 46204-2217
**Phone:** 317.232.7977 **FAX:** 317.233.4929 **E-Mail:** cscott@indot.state.in.us
**Plan Preparer Name:** American Consulting Engineers, LLC
**Affiliation:** Design Consultant
**Address:** 5440 North Cumberland Avenue, Suite 111
**City:** Chicago **State:** Illinois **Zip:** 60656-1452
**Phone:** 773.314.1200 **FAX:** 773.314.1202 **E-Mail:** www.ae-plc.com

**Plan Review**

**Review Date:** 07/01/04
**Principal Plan Reviewer:** Larry Osterholz, Stormwater Specialist
**Agency:** Indiana Department of Natural Resources - Division of Soil Conservation
**Address:** 211 East Drexel Parkway
**City:** Rensselaer **State:** IN **Zip:** 47978-7294
**Phone:** 219.866.8554, Ext. 12 **FAX:** 219.866.5507 **E-Mail:** losterholz@dnr.state.in.us
**Assisted By:**

☑ **PLAN IS ADEQUATE: A comprehensive plan review has been completed and it has been determined that the plan satisfies the minimum requirements and intent of 327 IAC 15-5.**

☑ **Please refer to additional information included on the following page(s).**

☑ **Submit Notice of Intent (NOI):** *Attach a copy of this cover page when submitting the NOI to the Indiana Department of Environmental Management. Construction activities may begin 48 hours following the submittal of the NOI. A copy of the NOI must also be sent to the Reviewing Authority (e.g. SWCD, DNR).*

☐ **A preliminary plan review has been completed; a comprehensive review will not be completed within the 28-day review period. The reviewing authority reserves the right to perform a comprehensive review at a later date and revisions to the plan may be required at that time to address deficiencies.**

☐ **Please refer to additional information included on the following page(s).**

☐ **Submit Notice of Intent (NOI):** *Attach a copy of this cover page when submitting the NOI to the Indiana Department of Environmental Management. Construction activities may begin 48 hours following the submittal of the NOI. A copy of the NOI must also be sent to the Reviewing Authority (e.g. SWCD, DNR).*

☐ **PLAN IS DEFICIENT: Significant deficiencies were identified during the plan review.**

☐ **Please refer to additional information included on the following page(s).**

☐ **DO NOT file a Notice of Intent for this project.**

☐ **DO NOT commence land disturbing activities until all deficiencies are adequately addressed, the plan re-submitted, and notification has been received that the minimum requirements have been satisfied.**

☐ **Plan Revisions** ☐ **Deficient Items should be mailed or delivered to the Principal Plan Reviewer identified in the Plan Review Section above.**

**Construction/Stormwater Pollution Prevention Plan - Technical Review and Comment** *(Form 1)*

**Project Name:** Des. # 0100987; Proj. No. I-80-1-8460 (EB & WB); I-80/94 Borman Expressway
**Date Reviewed:** 07/01/04

*The technical review and comments are intended to evaluate the completeness of the Construction/Stormwater Pollution Prevention Plan for the project. The Plan submitted was not reviewed for the adequacy of the engineering design. All measures included in the plan, as well as those recommended in the comments should be evaluated as to their feasibility by a qualified individual with structural measures designed by a qualified engineer. The Plan has not been reviewed for other local, state, or federal permits that may be required to proceed with this project. Additional information, including design calculations may be requested to further evaluate the Plan.*

*All proposed stormwater pollution prevention measures and those referenced in this review must meet the design criteria and standards set forth in the "Indiana Stormwater Quality Manual" from the Indiana Department of Natural Resources, Division of Soil Conservation or similar Guidance Documents.*

**Please direct questions and/or comments regarding this plan review to:**
Larry Osterholz, Stormwater Specialist
**Please refer to the address and contact information identified in the Plan Review Section on page 1.**

## Assessment of Construction Plan Elements *(Section A)*

**The Construction Plan Elements are adequately represented to complete a plan review:**
☑ Yes ☐ No
**The items checked below are deficient and require submittal to meet the requirements of the rule.**

| A | | | A | | |
|---|---|---|---|---|---|
| ☐ | 1 | Index showing locations of required Plan Elements | ☐ | 2 | 11 by 17 inch plat showing building lot numbers/boundaries and road layout/names |
| ☐ | 3 | Narrative describing the nature and purpose of the project | ☐ | 4 | Vicinity map showing project location |
| ☐ | 5 | Legal Description of the Project Site (Include Latitude and Longitude - NOI Requirement) | ☐ | 6 | Location of all lots and proposed site improvements (roads, utilities, structures, etc.) |
| ☐ | 7 | Hydrologic unit code (14 Digit) | ☐ | 8 | Notation of any State or Federal water quality permits |
| ☐ | 9 | Specific points where stormwater discharge will leave the site | ☐ | 10 | Location and name of all wetlands, lakes and water courses on and adjacent to the site |
| ☐ | 11 | Identification of all receiving waters | ☐ | 12 | Identification of potential discharges to ground water (abandoned wells, sinkholes, etc.) |
| ☐ | 13 | 100 year floodplains, floodways, and floodway fringes | ☐ | 14 | Pre-construction and post construction estimate of Peak Discharge (10 Year storm event) |
| ☐ | 15 | Adjacent landuse, including upstream watershed | ☐ | 16 | Locations and approximate boundaries of all disturbed areas (Construction Limits) |
| ☐ | 17 | Identification of existing vegetative cover | ☐ | 18 | Soils map including soil descriptions and limitations |
| ☐ | 19 | Locations, size and dimensions of proposed stormwater systems (e.g. pipes, swales and channels) | ☐ | 20 | Plans for any off-site construction activities associated with this project (sewer/water tie-ins) |
| ☐ | 21 | Locations of proposed soil stockpiles and/or borrow/disposal areas | ☐ | 22 | Existing site topography at an interval appropriate to indicate drainage patterns |
| ☐ | 23 | Proposed final topography at an interval appropriate to indicate drainage patterns | | | |

Indiana Department of Environmental Management
**Notice of Intent (NOI)**
Storm Water Runoff Associated with Construction Activity
NPDES General Permit Rule 327 IAC 15-5 (Rule 5)

Submission of this Notice of Intent letter constitutes notice that the project site owner is applying for coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit Rule for Storm Water Discharges Associated with Construction Activity. Permitted project site owners are required to comply with all terms and conditions of the General Permit Rule 327 IAC 15-5 (Rule 5).

Check the type of Submittal: ☒ Initial ☐ Amendment, ☐ Renewal ☐ Extension

**Project Name and Location:**

Project Permit #_____ Project Name: I-80/94 Kingery/Borman Exp County: Lake

Brief Description of Project Location: I-80/94 from State Line to Calumet Avenue

Latitude 41° 34' 31" and Quarter NW Section 13

Longitude 87° 31' 10" Township 36N Range 10W

Does ☒ all or ☐ part of this project lie within the jurisdictional boundaries of a Municipal Separate Storm Sewer System (MS4) as defined in 327 IAC 15-13? ☐ Yes ☐ No If yes, please name the MS4(s):
Village of Munster, Village of Hammond

**Project Site Owner and Project Contact Information:**

Company Name (If Applicable): INDOT

Project Site Owner's Name (An Individual): Merril Dougherty Title/Position: Hydraulics Engineer

Address: 100 N. Senate Avenue Room 642N

City: Indianapolis State: IN Zip: 46204

Phone: 317-232-7977 FAX:317-233-4929 E-Mail Address (If Available): _____

Ownership Status (check one): Governmental Agency: ☐ Federal ☒ State ☐ Local

Non-Governmental: ☐ Public ☐ Private ☐ Other (Explain): _____

Contact Person: Carole Scott Affiliation with Project Site Owner: INDOT

Address (if different from above): _____

City: _____ State: _____ Zip: _____

Phone: _____ FAX: _____ E-Mail Address (If Available): _____

**Project Description:**

☐ Residential-Single Family ☐ Residential-Multi-Family ☐ Commercial ☐ Industrial ☒ Other Expressway

**Discharge Information:**

Name of Receiving Water: Little Calumet River
(If applicable, name of municipal operator of storm sewer. Please note that even if a retention pond is present on the property, the name of the nearest possible receiving water is required).

**Project Acreage:**

Total Acreage: 6.1 Acres 2.5 Ha Proposed Acreage to be Disturbed: 2.9 Acres 1.2 Ha

Total Impervious Surface Area (Estimated for Completed Project): 112,000 Square Feet 1.0 Ha

* No additional impervious area

**Timetable (Maximum of 5 Years):**

Start Date: March 2005 and Estimated End Date for all Land Disturbing Activity: December 2005

*(Continued on Reverse Side)*

**Construction Plan Certification:**
By signing this Notice of Intent letter, I certify the following:

A. The storm water quality measures included in the Construction Plan comply with the requirements of 327 IAC 15-5-6.5, 327 IAC 15-5-7, and 327 IAC 15-5-7.5;
B. the storm water pollution prevention plan complies with all applicable federal, state, and local storm water requirements;
C. the measures required by section 7 and 7.5 of this rule will be implemented in accordance with the storm water pollution prevention plan;
D. if the projected land disturbance is One (1) acre or more, the applicable Soil and Water Conservation District or other entity designated by the Department, has been sent a copy of the Construction Plan for review;
E. storm water quality measures beyond those specified in the storm water pollution prevention plan will be implemented during the life of the permit if necessary to comply with 327 IAC 15-5-7; and
F. implementation of storm water quality measures will be inspected by trained individuals.

**In addition to this form, I have enclosed the Following:**

☐ Verification by the reviewing agency of acceptance of the Construction Plan.

☐ Proof of publication in a newspaper of general circulation in the affected area that notified the public that a construction activity is to commence, including all required elements contained in 327 IAC 15-5-5 (9).

☐ $100 check or money order payable to the Indiana Department of Environmental Management. If the project lies solely within the permitted jurisdiction of an MS4 and is regulated by the MS4 under 327 IAC 15-13 – a fee is not required with submittal of this Notice of Intent.

A permit issued under 327 IAC 15-5 is granted by the commissioner for a period of five (5) years from the date coverage commences. Once the five (5) year permit term duration is reached, a general permit issued under this rule will be considered expired, and, as necessary for construction activity continuation, a new Notice of Intent letter would need to be submitted ninety (90) days prior to the termination of coverage.

**Project Site Owner Responsibility Statement:**
By signing this Notice of Intent letter, 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 gather and evaluate 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 or violating the provisions of 327 IAC 15-5, including the possibility of fine and imprisonment for knowing violations.

Printed Name of Project Owner: Merril Dougherty

Signature of Project Owner: Merril E Dougherty Date: 8-4-04

**This Notice of Intent must be signed by an individual meeting the signatory requirements in 327 IAC 15-4-3(g)**

Mail this form to: **Indiana Department of Environmental Management**
**Office of Water Quality, Storm Water (Rule 5) Desk**
**100 North Senate Avenue, P.O. Box 6015**
**Indianapolis, IN 46206-6015**

**327 IAC 15-5-6 (a) also requires a copy of the completed Notice of Intent letter be submitted to the local Soil and Water Conservation District or other entity designated by the Department, where the land disturbing activity is to occur.**

Questions regarding the development of the Construction Plan and/or field implementation of 327 IAC 15-5 may be directed to your local Soil and Water Conservation District office or the Department of Natural Resources at 317-233-3870. Questions regarding the Notice of Intent may be directed to the Rule 5 contact person at 317/233-1864 or 800/451-6027 ext 31864.

State Form 47487 (R/ /03)

# Indiana Department of Natural Resources / Division of Water

## Administratively Complete Notice

ivision of Water
Room W264
402 West Washington Street
Indianapolis, IN 46204

Notice Date : August 19, 2004

Toll Free # : (877) 928-3755
Telephone # : (317) 232-4160
FAX# : (317) 233-4579

Application # : FW-22987

Type : Construction in a floodway

Stream : Little Calumet River

Applicant:

*Indiana Department of Transportation
Carole Korbly Scott
100 North Senate Avenue, Room N642
Indianapolis, IN 46204-2249

Agent:

American Consulting Engineers, LLC
5440 North Cumberland Avenue
Suite 111
Chicago, IL 60656-1452

RECEIVED
AUG 2 6 2004
AMERICAN CONSULTING ENGINEERS, L.L.C.

Dear Applicant:

On July 15, 2004, the Division of Water received your permit application under the Flood Control Act, IC 14-28-1, with the associated Flood Hazard Area Rule, 312 IAC 10, for the project described on the next page. Based on staff's preliminary review, your application has been deemed administratively complete. Further review of your application will be performed by Department staff to determine if additional technical or environmental information is required. If so, you will be notified by mail at a later date.

If you have any questions regarding the status of your application, please contact the appropriate staff member at the address shown above or at one of the following telephone numbers. Refer to application # FW-22987 in all correspondence with the Department.

| Responsibility | Staff | Telephone and Fax # |
|---|---|---|
| Administrative | Becky S. Davis | (317) 232-4160, 233-4579 |
| Technical | Becky S. Davis | (317) 232-4160, 233-4579 |
| Environmental | Christie L. Kiefer | (317) 232-4160, 233-4579 |

In addition to a permit from the Department of Natural Resources, you may also be required to obtain a permit from, or coordinate with, the following agencies. Contact with these agencies is your responsibility.

| Agency | Telephone # |
|---|---|
| *US Army Corps of Engineers, Detroit District | (313) 226-2218 |
| Lake County Drainage Board | (219) 755-3755 |
| Indiana Department of Environmental Management | (317) 233-8488 or (800) 451-6027 |
| Local city or county planning or zoning commission | |

Be advised that this notice is not a permit nor an authorization to proceed with the project. It should not be construed as a waiver of the provisions or requirements of any other state, federal, or local regulatory activity.

pc: American Consulting Engineers, LLC

INDIANA DEPARTMENT OF NATURAL RESOURCES

# Indiana Department of Natural Resources / Division of Water

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Room W264
402 West Washington Street
Indianapolis, IN 46204

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Telephone # : (317) 232-4160
FAX# : (317) 233-4579

Notice Date : August 19, 2004

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Carole Korbly Scott
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Indianapolis, IN 46204-2249

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pc: American Consulting Engineers, LLC

# Indiana Department of Natural Resources / Division of Water

## Administratively Complete Notice

Division of Water
Room W264
402 West Washington Street
Indianapolis, IN 46204

Notice Date : August 19, 2004

Toll Free # : (877) 928-3755
Telephone # : (317) 232-4160
FAX# : (317) 233-4579

Application # : FW-22987

Type : Construction in a floodway

Stream : Little Calumet River

Description:

A new bridge will be constructed to carry I-80/94/US 6 across the river. The new bridge will replace the old bridge at the same site. The new structure will have 2 superstructure units; a 3-span continuous plate girder bridge with span lengths of 98.4', 124.7', and 114.8' crossing the Little Calumet River and a 3-span continuous rolled shape with span lengths of 78.7', 91.8', and 65.6' crossing a railroad right-of-way. The structure will have an out-to-out length of 581.3' and a clear roadway width of 82.7' east bound and 82.7' west bound. The abutments will have 2:1 sideslopes armored with limestone riprap placed over geotextile fabric. The west abutment and piers 1 and 2 will be skewed 30 degrees to align with the streamflow. The east abutment, and piers 3,4, and 5 will be skewed 20 degrees to align with the railroad.The approach roads will be elevated a maximum of 4.9' above the existing grade. The proposed structure supports are designed such that the existing structure can be demolished in stages while the new structure is under constructed. Also, a 54' stormwater outfall structure will be constructed near the Indiana/Illinois state line to replace an existing outfall structure in Illinois. Two 54' pipes will run from I-80/94 north to the river. the pipes will terminate with a headwall that will conform to the bank slope. An energy dissipater will be constructed at the end of the toe wall. The dissipater will consist of a concrete apron and riprap placed over a geotextile fabric. Details of the project are contained in information and plans received at the Division of Water on July 15, 2004, July 29, 2004, August 9, 2004, August 19, 2004.

Location:

Along the east and west banks of Little Calumet River, beginning at I-80/94/US 6 bridge and continuing upstream approximately 200'. The outfall structure is located along the south/west bank approximately 114' east of the State Line and continuing downstream approximately 6' near Munster, North Township, Lake County
SE¼, SE¼, Section 13, T 36N, R 10W, Calumet City, IL-IN Quadrangle
UTM Coordinates: Downstream 4602598 North, 456711 East

pc: American Consulting Engineers, LLC

# ILLINOIS DEPARTMENT OF LABOR

## PREVAILING WAGES FOR
## COOK, IL AND LAKE, IN COUNTIES
## EFFECTIVE FEBRUARY 2005

The Prevailing rates of wages are included in the Contract proposals which are subject to Check Sheet #5 of the Supplemental Specifications and Recurring Special Provisions. The rates have been ascertained and certified by the Illinois Department of Labor for the locality in which the work is to be performed and for each craft or type of work or mechanic needed to execute the work of the Contract. As required by Prevailing Wage Act (820 ILCS 130/0.01, et seq.) and Check Sheet #5 of the Contract, not less than the rates of wages ascertained by the Illinois Department of Labor and as revised during the performance of a Contract shall be paid to all laborers, workers and mechanics performing work under the Contract. Post the scale of wages in a prominent and easily accessible place at the site of work.

If the Illinois Department of Labor revises the prevailing rates of wages to be paid as listed in the specification of rates, the contractor shall post the revised rates of wages and shall pay not less than the revised rates of wages. Current wage rate information shall be obtained by visiting the Illinois Department of Labor web site at http://www.state.il.us/agency/idol/ or by calling 312-793-2814. It is the responsibility of the contractor to review the rates applicable to the work of the contract at regular intervals in order to insure the timely payment of current rates. Provision of this information to the contractor by means of the Illinois Department of Labor web site satisfies the notification of revisions by the Department to the contractor pursuant to the Act, and the contractor agrees that no additional notice is required. The contractor shall notify each of its subcontractors of the revised rates of wages.

# Cook County Prevailing Wage for March 2005

| Trade Name | RG | TYP | C | Base | FRMAN | *M-F>8 | OSA | OSH | H/W | Pensn | Vac | Trng |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ASBESTOS ABT-GEN | | ALL | | 29.000 | 29.750 | 1.5 | 1.5 | 2.0 | 6.310 | 3.440 | 0.000 | 0.170 |
| ASBESTOS ABT-MEC | | BLD | | 23.300 | 24.800 | 1.5 | 1.5 | 2.0 | 3.640 | 5.520 | 0.000 | 0.000 |
| BOILERMAKER | | BLD | | 36.820 | 40.140 | 2.0 | 2.0 | 2.0 | 6.920 | 6.260 | 0.000 | 0.210 |
| BRICK MASON | | BLD | | 32.050 | 35.260 | 1.5 | 1.5 | 2.0 | 5.650 | 6.340 | 0.000 | 0.440 |
| CARPENTER | | ALL | | 34.320 | 35.820 | 1.5 | 1.5 | 2.0 | 5.560 | 4.860 | 0.000 | 0.490 |
| CEMENT MASON | | ALL | | 35.400 | 36.650 | 2.0 | 1.5 | 2.0 | 5.430 | 4.400 | 0.000 | 0.150 |
| CERAMIC TILE FNSHER | | BLD | | 24.450 | 0.000 | 2.0 | 1.5 | 2.0 | 4.750 | 3.950 | 0.000 | 0.210 |
| COMM. ELECT. | | BLD | | 30.890 | 33.390 | 1.5 | 1.5 | 2.0 | 5.600 | 5.270 | 0.000 | 0.700 |
| ELECTRIC PWR EQMT OP | | ALL | | 33.950 | 39.550 | 1.5 | 1.5 | 2.0 | 6.570 | 8.120 | 0.000 | 0.170 |
| ELECTRIC PWR GRNDMAN | | ALL | | 26.480 | 39.550 | 1.5 | 1.5 | 2.0 | 5.130 | 6.330 | 0.000 | 0.140 |
| ELECTRIC PWR LINEMAN | | ALL | | 33.950 | 39.550 | 1.5 | 1.5 | 2.0 | 6.570 | 8.120 | 0.000 | 0.170 |
| ELECTRICIAN | | ALL | | 34.650 | 37.250 | 1.5 | 1.5 | 2.0 | 8.100 | 6.430 | 0.000 | 0.750 |
| ELEVATOR CONSTRUCTOR | | BLD | | 38.995 | 43.870 | 2.0 | 2.0 | 2.0 | 7.275 | 3.420 | 2.340 | 0.370 |
| FENCE ERECTOR | | ALL | | 24.840 | 26.090 | 1.5 | 1.5 | 2.0 | 6.650 | 6.740 | 0.000 | 0.000 |
| GLAZIER | | BLD | | 30.000 | 31.000 | 1.5 | 2.0 | 2.0 | 6.090 | 8.450 | 0.000 | 0.500 |
| HT/FROST INSULATOR | | BLD | | 31.650 | 33.400 | 1.5 | 1.5 | 2.0 | 7.260 | 8.360 | 0.000 | 0.230 |
| IRON WORKER | | ALL | | 34.850 | 36.350 | 2.0 | 2.0 | 2.0 | 8.220 | 10.27 | 0.000 | 0.270 |
| LABORER | | ALL | | 29.000 | 29.750 | 1.5 | 1.5 | 2.0 | 6.310 | 3.440 | 0.000 | 0.170 |
| LATHER | | BLD | | 34.320 | 35.820 | 1.5 | 1.5 | 2.0 | 5.560 | 4.860 | 0.000 | 0.490 |
| MACHINIST | | BLD | | 34.540 | 36.290 | 2.0 | 2.0 | 2.0 | 3.200 | 4.100 | 2.380 | 0.000 |
| MARBLE FINISHERS | | ALL | | 25.050 | 0.000 | 1.5 | 1.5 | 2.0 | 5.220 | 6.340 | 0.000 | 0.570 |
| MARBLE MASON | | BLD | | 32.050 | 35.260 | 1.5 | 1.5 | 2.0 | 5.650 | 6.340 | 0.000 | 0.570 |
| MILLWRIGHT | | ALL | | 34.320 | 35.820 | 1.5 | 1.5 | 2.0 | 5.560 | 4.860 | 0.000 | 0.490 |
| OPERATING ENGINEER | | BLD | 1 | 37.600 | 41.600 | 2.0 | 2.0 | 2.0 | 6.050 | 4.850 | 1.800 | 0.600 |
| OPERATING ENGINEER | | BLD | 2 | 36.300 | 41.600 | 2.0 | 2.0 | 2.0 | 6.050 | 4.850 | 1.800 | 0.600 |
| OPERATING ENGINEER | | BLD | 3 | 33.750 | 41.600 | 2.0 | 2.0 | 2.0 | 6.050 | 4.850 | 1.800 | 0.600 |
| OPERATING ENGINEER | | BLD | 4 | 32.000 | 41.600 | 2.0 | 2.0 | 2.0 | 6.050 | 4.850 | 1.800 | 0.600 |
| OPERATING ENGINEER | | FLT | 1 | 42.700 | 42.700 | 1.5 | 1.5 | 2.0 | 6.050 | 4.850 | 1.800 | 0.000 |
| OPERATING ENGINEER | | FLT | 2 | 41.200 | 42.700 | 1.5 | 1.5 | 2.0 | 6.050 | 4.850 | 1.800 | 0.000 |
| OPERATING ENGINEER | | FLT | 3 | 36.650 | 42.700 | 1.5 | 1.5 | 2.0 | 6.050 | 4.850 | 1.800 | 0.000 |
| OPERATING ENGINEER | | FLT | 4 | 30.500 | 42.700 | 1.5 | 1.5 | 2.0 | 6.050 | 4.850 | 1.800 | 0.000 |
| OPERATING ENGINEER | | HWY | 1 | 35.800 | 39.800 | 1.5 | 1.5 | 2.0 | 6.050 | 4.850 | 1.800 | 0.600 |
| OPERATING ENGINEER | | HWY | 2 | 35.250 | 39.800 | 1.5 | 1.5 | 2.0 | 6.050 | 4.850 | 1.800 | 0.600 |
| OPERATING ENGINEER | | HWY | 3 | 33.200 | 39.800 | 1.5 | 1.5 | 2.0 | 6.050 | 4.850 | 1.800 | 0.600 |
| OPERATING ENGINEER | | HWY | 4 | 31.800 | 39.800 | 1.5 | 1.5 | 2.0 | 6.050 | 4.850 | 1.800 | 0.600 |
| OPERATING ENGINEER | | HWY | 5 | 30.600 | 39.800 | 1.5 | 1.5 | 2.0 | 6.050 | 4.850 | 1.800 | 0.600 |
| ORNAMNTL IRON WORKER | | ALL | | 32.300 | 34.050 | 2.0 | 2.0 | 2.0 | 6.650 | 9.690 | 0.000 | 0.750 |
| PAINTER | | ALL | | 32.100 | 36.110 | 1.5 | 1.5 | 1.5 | 5.550 | 4.900 | 0.000 | 0.340 |
| PAINTER SIGNS | | BLD | | 25.530 | 28.660 | 1.5 | 1.5 | 1.5 | 2.600 | 2.040 | 0.000 | 0.000 |
| PILEDRIVER | | ALL | | 34.320 | 35.820 | 1.5 | 1.5 | 2.0 | 5.560 | 4.860 | 0.000 | 0.490 |
| PIPEFITTER | | BLD | | 35.000 | 37.000 | 1.5 | 1.5 | 2.0 | 6.410 | 5.600 | 0.000 | 0.650 |
| PLASTERER | | BLD | | 31.000 | 32.500 | 1.5 | 1.5 | 2.0 | 5.240 | 6.100 | 0.000 | 0.400 |
| PLUMBER | | BLD | | 37.100 | 39.100 | 1.5 | 1.5 | 2.0 | 6.250 | 3.440 | 0.000 | 0.590 |
| ROOFER | | BLD | | 31.450 | 33.450 | 1.5 | 1.5 | 2.0 | 4.790 | 2.630 | 0.000 | 0.330 |
| SHEETMETAL WORKER | | BLD | | 33.400 | 36.070 | 1.5 | 1.5 | 2.0 | 6.460 | 7.850 | 0.000 | 0.590 |
| SIGN HANGER | | BLD | | 23.750 | 24.600 | 1.5 | 1.5 | 2.0 | 3.880 | 2.000 | 0.000 | 0.000 |
| SPRINKLER FITTER | | BLD | | 34.500 | 36.500 | 1.5 | 1.5 | 2.0 | 7.000 | 5.550 | 0.000 | 0.500 |
| STEEL ERECTOR | | ALL | | 34.850 | 36.350 | 2.0 | 2.0 | 2.0 | 8.220 | 10.27 | 0.000 | 0.270 |
| STONE MASON | | BLD | | 32.050 | 35.260 | 1.5 | 1.5 | 2.0 | 5.650 | 6.340 | 0.000 | 0.440 |
| TERRAZZO FINISHER | | BLD | | 26.200 | 0.000 | 1.5 | 1.5 | 2.0 | 5.750 | 4.750 | 0.000 | 0.220 |
| TERRAZZO MASON | | BLD | | 30.050 | 32.550 | 1.5 | 1.5 | 2.0 | 5.750 | 6.150 | 0.000 | 0.120 |
| TILE MASON | | BLD | | 29.850 | 31.850 | 2.0 | 1.5 | 2.0 | 4.750 | 4.750 | 0.000 | 0.430 |
| TRAFFIC SAFETY WRKR | | HWY | | 22.800 | 24.400 | 1.5 | 1.5 | 2.0 | 3.078 | 1.875 | 0.000 | 0.000 |
| TRUCK DRIVER | E | ALL | 1 | 26.900 | 27.550 | 1.5 | 1.5 | 2.0 | 4.200 | 3.200 | 0.000 | 0.000 |
| TRUCK DRIVER | E | ALL | 2 | 27.150 | 27.550 | 1.5 | 1.5 | 2.0 | 4.200 | 3.200 | 0.000 | 0.000 |
| TRUCK DRIVER | E | ALL | 3 | 27.350 | 27.550 | 1.5 | 1.5 | 2.0 | 4.200 | 3.200 | 0.000 | 0.000 |
| TRUCK DRIVER | E | ALL | 4 | 27.550 | 27.550 | 1.5 | 1.5 | 2.0 | 4.200 | 3.200 | 0.000 | 0.000 |
| TRUCK DRIVER | W | ALL | 1 | 27.500 | 28.050 | 1.5 | 1.5 | 2.0 | 4.200 | 3.100 | 0.000 | 0.000 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TRUCK DRIVER | W | ALL | 2 | 27.650 | 28.050 | 1.5 | 1.5 | 2.0 | 4.200 | 3.100 | 0.000 | 0.000 |
| TRUCK DRIVER | W | ALL | 3 | 27.850 | 28.050 | 1.5 | 1.5 | 2.0 | 4.200 | 3.100 | 0.000 | 0.000 |
| TRUCK DRIVER | W | ALL | 4 | 28.050 | 28.050 | 1.5 | 1.5 | 2.0 | 4.200 | 3.100 | 0.000 | 0.000 |
| TUCKPOINTER | | BLD | | 33.500 | 34.500 | 1.5 | 1.5 | 2.0 | 4.210 | 5.840 | 0.000 | 0.400 |

Legend:

M-F>8 (Overtime is required for any hour greater than 8 worked each day, Monday through Friday.

OSA (Overtime is required for every hour worked on Saturday)

OSH (Overtime is required for every hour worked on Sunday and Holidays)

H/W (Health & Welfare Insurance)

Pensn (Pension)

Vac (Vacation)

Trng (Training)

# Explanations

COOK COUNTY

TRUCK DRIVERS (WEST) - That part of the county West of Barrington Road.

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial/Decoration Day, Fourth of July, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration such as the day after Thanksgiving for Veterans Day. If in doubt, please check with IDOL.

EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date.
ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

CERAMIC TILE FINISHER

The grouting, cleaning, and polishing of all classes of tile, whether for interior or exterior purposes, all burned, glazed or unglazed products; all composition materials, granite tiles, warning detectable tiles, cement tiles, epoxy composite materials, pavers, glass, mosaics, fiberglass, and all substitute materials, for tile made in tile-like units; all mixtures in tile like form of cement, metals, and other materials that are for and intended for use as a finished floor

surface, stair treads, promenade roofs, walks, walls, ceilings, swimming pools, and all other places where tile is to form a finished interior or exterior. The mixing of all setting mortars including but not limited to thin-set mortars, epoxies, wall mud, and any other sand and cement mixtures or adhesives when used in the preparation, installation, repair, or maintenance of tile and/or similar materials. The handling and unloading of all sand, cement, lime, tile, fixtures, equipment, adhesives, or any other materials to be used in the preparation, installation, repair, or maintenance of tile and/or similar materials. Ceramic Tile Finishers shall fill all joints and voids regardless of method on all tile work, particularly and especially after installation of said tile work. Application of any and all protective coverings to all types of tile installations including, but not be limited to, all soap compounds, paper products, tapes, and all polyethylene coverings, plywood, masonite, cardboard, and any new type of products that may be used to protect tile installations, Blastrac equipment, and all floor scarifying equipment used in preparing floors to receive tile. The clean up and removal of all waste and materials. All demolition of existing tile floors and walls to be re-tiled.

COMMUNICATIONS ELECTRICIAN - Installation, operation, inspection, maintenance, repair and service of radio, television, recording, voice sound vision production and reproduction, telephone and telephone interconnect, facsimile, data apparatus, coaxial, fibre optic and wireless equipment, appliances and systems used for the transmission and reception of signals of any nature, business, domestic, commercial, education, entertainment, and residential purposes, including but not limited to, communication and telephone, electronic and sound equipment, fibre optic and data communication systems, and the performance of any task directly related to such installation or service whether at new or existing sites, such tasks to include the placing of wire and cable and electrical power conduit or other raceway work within the equipment room and pulling wire and/or cable through conduit and the installation of any incidental conduit, such that the employees covered hereby can complete any job in full.

MARBLE FINISHER

Loading and unloading trucks, distribution of all materials (all stone, sand, etc.), stocking of floors with material, performing all rigging for heavy work, the handling of all mateiral that may be needed for the installation of such materials, building of scaffolding, polishing if needed, patching, waxing of material if damaged, pointing up, caulking, grouting and cleaning of marble, holding water on diamond or Carborundum blade or saw for setters cutting, use of tub saw or any other saw needed for preparation of material, drilling of holes for wires that anchor material set by setters, mixing up of molding plaster for installation of material, mixing up thin set for the installation of material, mixing up of sand to cement for the installatin of material and such other work as may be required in helping a Marble Setter in the handling of all material in the erection or installation of interior marble, slate, travertine, art marble, serpentine, alberene stone, blue stone, granite and other stones (meaning as to stone any foreign or domestic materials as are specified and used in building interiors and experiors and customarily known as stone in the trade), carrara, sanionyx, vitrolite and similar opaque glass and the laying of all marble tile, terrazzo tile, slate tile and precast tile, steps, risers treads, base, or any other materials that may be used as substitutes for any of the aforementioned materials and which are used on interior and experior which sare installed in a similar manner.

TERRAZZO FINISHER

The handling of sand, cement, marble chips, and all other materials that may be used by the Mosaic Terrazzo Mechanic, and the mixing, grinding, grouting, cleaning and sealing of all Marble, Mosaic, and Terrazzo work, floors, base, stairs, and wainscoting by hand or machine, and in addition, assisting and aiding Marble, Masonic, and Terrazzo Mechanics.

TRAFFIC SAFETY

Work associated with barricades, horses and drums used to reduce lane usage on highway work, the installation and removal of temporary lane markings, and the installation and removal of temporary road signs.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION - EAST & WEST

Class 1. Two or three Axle Trucks. A-frame Truck when used for transportation purposes; Air Compressors and Welding Machines, including those pulled by cars, pick-up trucks and tractors; Ambulances; Batch Gate Lockers; Batch Hopperman; Car and Truck Washers; Carry-alls; Fork Lifts and Hoisters; Helpers; Mechanics Helpers and Greasers; Oil Distributors 2-man operation; Pavement Breakers; Pole Trailer, up to 40 feet; Power Mower Tractors; Self-propelled Chip Spreader; Skipman; Slurry Trucks, 2-man operation; Slurry Truck Conveyor Operation, 2 or 3 man; TEamsters Unskilled dumpman; and Truck Drivers hauling warning lights, barricades, and portable toilets on the job site.

Class 2. Four axle trucks; Dump Crets and Adgetors under 7 yards; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnapulls or Turnatrailers when pulling other than self-loading equipment or similar equipment under 16 cubic yards; Mixer Trucks under 7 yards; Ready-mix Plant Hopper Operator, and Winch Trucks, 2 Axles.

Class 3. Five axle trucks; Dump Crets and Adgetors 7 yards and over; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnatrailers or turnapulls when pulling other than self-loading equipment or similar equipment over 16 cubic yards; Explosives and/or Fission Material Trucks; Mixer Trucks 7 yards or over; Mobile Cranes while in transit; Oil Distributors, 1-man operation; Pole Trailer, over 40 feet; Pole and Expandable Trailers hauling material over 50 feet long; Slurry trucks, 1-man operation; Winch trucks, 3 axles or more; Mechanic--Truck Welder and Truck Painter.

Class 4. Six axle trucks; Dual-purpose vehicles, such as mounted crane trucks with hoist and accessories; Foreman; Master Mechanic; Self-loading equipment like P.B. and trucks with scoops on the front.

OPERATING ENGINEERS - BUILDING

Class 1. Mechanic; Asphalt Plant; Asphalt Spreader; Autograde; Backhoes with Caisson attachment; Batch Plant; Benoto; Boiler and Throttle Valve; Caisson Rigs; Central Redi-Mix Plant; Combination Back Hoe Front End-loader Machine; Compressor and Throttle Valve; Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Paver; Concrete Placer; Concrete Placing Boom; Concrete Pump (Truck Mounted); Concrete Tower; Cranes, All; Cranes, Hammerhead; Cranes, (GCI and similar Type); Creter Crane; Crusher, Stone, etc.; Derricks, All; Derricks, Traveling; Formless Curb and Gutter Machine; Grader, Elevating; Grouting Machines; Highlift Shovels or Front Endloader 2-1/4 yd. and over; Hoists, Elevators, outside type rack and pinion and similar machines; Hoists, one, two and three Drum; Hoists, Two

Tugger One Floor; Hydraulic Backhoes; Hydraulic Boom Trucks; Hydro Vac (and similar equipment); Locomotives, All; Motor Patrol; Pile Drivers and Skid Rig; Post Hole Digger; Pre-Stress Machine; Pump Cretes Dual Ram; Pump Cretes; Squeeze Cretes-screw Type Pumps; Raised and Blind Hole Drill; Roto Mill Grinder; Scoops - Tractor Drawn; Slip-form Paver; Straddle Buggies; Tournapull; Tractor with Boom and Side Boom; Trenching Machines.

Class 2. Bobcat (over 3/4 cu. yd.); Boilers; Brick Forklift; Broom, All Power Propelled; Bulldozers; Concrete Mixer (Two Bag and Over); Conveyor, Portable; Forklift Trucks; Greaser Engineer; Highlift Shovels or Front Endloaders under 2-1/4 yd.; Hoists, Automatic; Hoists, inside Freight Elevators; Hoists, Sewer Dragging Machine; Hoists, Tugger Single Drum; Laser Screed; Rock Drill (self-propelled); Rock Drill (truck mounted); Rollers, All; Steam Generators; Tractors, All; Tractor Drawn Vibratory Roller; Winch Trucks with "A" Frame.

Class 3. Air Compressor; Combination - Small Equipment Operator; Generators; Heaters, Mechanical; Hoists, Inside Elevators - (Rheostat Manual Controlled); Hydraulic Power Units (Pile Driving, Extracting, and Drilling); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Welding Machines (2 through 5); Winches, 4 small Electric Drill Winches; Bobcat (up to and including 3/4 cu. yd.).

Class 4. Bobcats and/or other Skid Steer Loaders; Oilers; and Brick Forklift.

OPERATING ENGINEERS - FLOATING

Class 1. Craft foreman (Master Mechanic), diver/wet tender, engineer (hydraulic dredge).

Class 2. Crane/backhoe operator, mechanic/welder, assistant engineer (hydraulic dredge), leverman (hydraulic dredge), and diver tender.

Class 3. Deck equipment operator (machineryman), maintenance of crane (over 50 ton capacity) or backhoe (96,000 pounds or more), tug/launch operator, loader, dozer and like equipment on barge, breakwater wall, slip/dock or scow, deck machinery, etc.

Class 4. Deck equipment operator (machineryman/fireman), (4 equipment units or more) and crane maintenance 50 ton capacity and under or backhoe weighing 96,000 pounds or less, assistant tug operator.

OPERATING ENGINEERS - HEAVY AND HIGHWAY CONSTRUCTION

Class 1. Craft Foreman; Asphalt Plant; Asphalt Heater and Planer Combination; Asphalt Heater Scarfire; Asphalt Spreader; Autograder/GOMACO or other similar type machines; ABG Paver; Backhoes with Caisson attachment; Ballast Regulator; Belt Loader; Caisson Rigs; Car Dumper; Central Redi-Mix Plant; Combination Backhoe Front Endloader Machine, (1 cu. yd. Backhoe Bucket or over or with attachments); Concrete Breaker (Truck Mounted): Concrete Conveyor; Concrete Paver over 27E cu. ft.; Concrete Placer; Concrete Tube Float; Cranes, all attachments; Cranes, Hammerhead, Linden, Peco & Machines of a like nature; Crete Crane; Crusher, Stone, etc.; Derricks, All; Derrick Boats; Derricks, Traveling; Dowell machine with Air Compressor; Dredges; Field Mechanic-Welder; Formless Curb and Gutter Machine; Gradall and Machines of a like nature; Grader, Elevating; Grader, Motor Grader, Motor Patrol, Auto Patrol, Form Grader, Pull Grader, Subgrader; Guard Rail Post Driver Mounted; Hoists, One, Two and Three Drum; Hydraulic Backhoes; Backhoes with

shear attachments; Mucking Machine; Pile Drivers and Skid Rig; Pre-Stress Machine; Pump Cretes Dual Ram; Rock Drill - Crawler or Skid Rig; Rock Drill - Truck Mounted; Roto Mill Grinder; Slip-Form Paver; Soil Test Drill Rig (Truck Mounted); Straddle Buggies; Hydraulic Telescoping Form (Tunnel); Tractor Drawn Belt Loader (with attached pusher - two engineers); Tractor with Boom; Tractaire with Attachments; Trenching Machine; Truck Mounted Concrete Pump with Boom; Raised or Blind Hole; Drills (Tunnel Shaft); Underground Boring and/or Mining Machines; Wheel Excavator; Widener (APSCO).

Class 2. Batch Plant; Bituminous Mixer; Boiler and Throttle Valve; Bulldozers; Car Loader Trailing Conveyors; Combination Backhoe Front Endloader Machine (less than 1 cu. yd. Backhoe Bucket or over or with attachments); Compressor and Throttle Valve; Compressor, Common Receiver (3); Concrete Breaker or Hydro Hammer; Concrete Grinding Machine; Concrete Mixer or Paver 7S Series to and including 27 cu. ft.; Concrete Spreader; Concrete Curing Machine, Burlap Machine, Belting Machine and Sealing Machine; Concrete Wheel Saw; Conveyor Muck Cars (Haglund or Similar Type); Drills, All; Finishing Machine - Concrete; Greaser Engineer; Highlift Shovels or Front Endloader; Hoist - Sewer Dragging Machine; Hydraulic Boom Trucks (All Attachments); Hydro-Blaster; All Locomotives, Dinky; Pump Cretes; Squeeze Cretes-Screw Type Pumps, Gypsum Bulker and Pump; Roller, Asphalt; Rotory Snow Plows; Rototiller, Seaman, etc., self-propelled; Scoops - Tractor Drawn; Self-Propelled Compactor; Spreader - Chip - Stone, etc.; Scraper; Scraper - Prime Mover in Tandem (Regardless of Size); Tank Car Heater; Tractors, Push, Pulling Sheeps Foot, Disc, Compactor, etc.; Tug Boats.

Class 3. Boilers; Brooms, All Power Propelled; Cement Supply Tender; Compressor, Common Receiver (2); Concrete Mixer (Two Bag and Over); Conveyor, Portable; Farm-Type Tractors Used for Mowing, Seeding, etc.; Fireman on Boilers; Forklift Trucks; Grouting Machine; Hoists, Automatic; Hoists, All Elevators; Hoists, Tugger Single Drum; Jeep Diggers; Pipe Jacking Machines; Post-Hole Digger; Power Saw, Concrete Power Driven; Pug Mills; Rollers, other than asphalt; Seed and Straw Blower; Steam Generators; Stump Machine; Winch Trucks with "A" Frame; Work Boats; Tamper - Form-Motor Driven.

Class 4. Air Compressor; Combination - Small Equipment Operator; Directional Boring Machine; Generators; Heaters, Mechanical; Hydraulic Power Unit (Pile Driving, Extracting, or Drilling); Hydro-Blaster; Light Plants, All (1 through 5); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Tractaire; Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 5. Bobcats (all); Brick Forklifts, Oilers.

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 618/993-7271 for wage rates or clarifications.

LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.