

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

PREQUALIFICATION

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

REQUESTS FOR AUTHORIZATION TO BID

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

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

The Internet is the Department's primary way of doing business. The subscription server e-mails are an added courtesy the Department provides. It is suggested that 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 Tim Garman (217)524-1642 or garmantr@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)524-1642

ADDENDUMS AND REVISIONS TO THE PROPOSAL FORMS

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

57

RETURN WITH BID

Proposal Submitted By
Name
Address
City

Letting August 4, 2006

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. 87330
DEKALB County
Section 05-00160-00-WR (DeKalb)
Route FAU 5348 (Annie Glidden Road)
Project HPP-2295(1)
District 3 Construction Funds

PLEASE MARK THE APPROPRIATE BOX BELOW:

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

Prepared by

F

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

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Preparation and submittal of bids	217/782-7806
Mailing of CD-ROMS	217/782-7806

RETURN WITH BID



PROPOSAL

TO THE DEPARTMENT OF TRANSPORTATION

1. Proposal of _____

Taxpayer Identification Number (Mandatory) _____

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

**Contract No. 87330
DEKALB County
Section 05-00160-00-WR (DeKalb)
Project HPP-2295(1)
Route FAU 5348 (Annie Glidden Road)
District 3 Construction Funds**

Project consists of bituminous pavement reconstruction, bituminous bike path, precast box culverts, sidewalk, curb and gutter, storm sewer, water main, traffic signal modernization and interconnecting, landscaping, cleaning and painting steel bridge and all other work necessary to complete the project on FAU Route 5348 (Annie Glidden Road) from the Union Pacific Railroad Bridge to Fairview Drive in the City of DeKalb.

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 examined 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:

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

Bank cashier's checks or properly certified checks accompanying 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)

RETURN WITH BID

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

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

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

Schedule of Combination Bids

Combination No.	Sections Included in Combination	Combination Bid	
		Dollars	Cents

7. **SCHEDULE OF PRICES.** The undersigned bidder submits herewith, in accordance with the rules and instructions, a schedule of prices for the items of work for which bids are sought. The unit prices bid are in U.S. dollars and cents, and all extensions and summations have been made. The bidder understands that the quantities appearing in the bid schedule are approximate and are provided for the purpose of obtaining a gross sum for the comparison of bids. If there is an error in the extension of the unit prices, the unit prices shall govern. Payment to the contractor awarded the contract will be made only for actual quantities of work performed and accepted or materials furnished according to the contract. The scheduled quantities of work to be done and materials to be furnished may be increased, decreased or omitted as provided elsewhere in the contract.
8. **CERTIFICATE OF AUTHORITY.** The undersigned bidder, if a business organized under the laws of another State, assures the Department that it will furnish a copy of its certificate of authority to do business in the State of Illinois with the return of the executed contract and bond. Failure to furnish the certificate within the time provided for execution of an awarded contract may be cause for cancellation of the award and forfeiture of the proposal guaranty to the State.

STATE JOB # - C-93-089-06
 PPS NBR - 3-10199-0000

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 87330

ECMS002 DTGECM03 ECMR003 PAGE 1
 RUN DATE - 06/29/06
 RUN TIME - 183231

COUNTY NAME	DEKALB	CODE	037	DIST	03	SECTION NUMBER	05-000160-00-WR	PROJECT NUMBER	HPP-2295/001/000	ROUTE	FAU 5348
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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE DOLLARS	CENTS	TOTAL PRICE DOLLARS	CTS
A2004724	T-GLED TRI-I SM 3	EACH	30.000	X	=		
A2008024	T-TILIA CORDATA 3	EACH	25.000	X	=		
C2005824	S-RHUS AROMA GRO 2'	EACH	60.000	X	=		
K0039125	HEMERC L HAP RET CG 1G	UNIT	120.000	X	=		
K1005481	SHRED BARK MULCH 3	SQ YD	1,500.000	X	=		
XX003273	SEDUM AUTUMN JOY 1G	EACH	89.000	X	=		
XX003503	FLARED END SEC REM	EACH	18.000	X	=		
XX003594	FORMED CONC REPAIR	CU FT	5.000	X	=		
XX003817	GRATING-C FL END S 12	EACH	1.000	X	=		
XX004679	PED SH LED 1F BM CDT	EACH	8.000	X	=		
XX004852	BIT DRIVEWAY PAVT SUP	SQ YD	990.000	X	=		
XX005078	CB TY C 2 DIA	EACH	20.000	X	=		
XX005476	DI WM 12 RJ	FOOT	115.000	X	=		
XX005531	VMS 330 MODIFICATION	L SUM	1.000	X	=		
XX005731	MAP PANEL MODIFICATN	EACH	1.000	X	=		

FAU 5348
 05-000160-00-WR (DEKALB)
 DEKALB
 ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 87330
 ECMS002 DTGECM03 ECMR003 PAGE 2
 RUN DATE - 06/29/06
 RUN TIME - 183231

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
XX006195	STABILIZED BIKE PATH	SQ YD	1,908.000	=			
XX006266	CURB STOP & BOX 1.5"	EACH	1.000	=			
XX006277	TEMP SEDIMENT TRAP	EACH	2.000	=			
XX006285	PERIMTR EROS BARR SPL	FOOT	1,265.000	=			
XX006290	MAN T A 7 DIA	EACH	4.000	=			
XX006581	BRICK SIGN	L SUM	1.000	=			
XX006582	BRICK SIGN & CON FOUN	L SUM	1.000	=			
XX006583	TEMP PIPE CULVERT	L SUM	1.000	=			
XX006584	CURB STOP & BOX REM	EACH	7.000	=			
XX006585	CURB STOP & BOX 3/4"	EACH	7.000	=			
XX006586	PVC CASING PIPE 30"	FOOT	50.000	=			
XX006587	VALVE VAULTS, 6'-DIA	EACH	2.000	=			
XX006588	SLIP ON FB CK VLV 12"	EACH	1.000	=			
XX006589	RELOC WOOD SIGN ASSEMB	EACH	1.000	=			
XX006590	REL CIVIL DEF WARN SI	L SUM	1.000	=			

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
XX006591	PAVEMENT TEXTURING	SQ FT	5,620.000	X	=		
XX006592	UD2#42#62#8#6GXLPUSE2	FOOT	5,075.000	X	=		
XX006593	UD2#42#62#83#10#6GXL2	FOOT	140.000	X	=		
XX006594	LIGHT STANDARD	EACH	2.000	X	=		
XX006595	LIGHT STD, INSTALLED	EACH	23.000	X	=		
XX006596	DECOR BASE COMB MAA&P	EACH	4.000	X	=		
XX006597	WIRELESS INTERCON SYSTEM	L SUM	1.000	X	=		
XX006598	VINYL FENCE 6	FOOT	85.000	X	=		
XX006599	T-ACERX FREM ARM 3	EACH	1.000	X	=		
XX006600	T-FRAX AMER AA 3	EACH	28.000	X	=		
XX006601	T-MALUS SP SN TF 3	EACH	11.000	X	=		
XX006602	S-ARONIA MELAN IB, 2.5'	EACH	54.000	X	=		
XX006603	S-BERBER THUN BAIL 2'	EACH	213.000	X	=		
XX006604	S-EUONYMUS AL CFBB 3	EACH	10.000	X	=		
XX006605	S-HAMAMELLIS MOLLIS 5	EACH	1.000	X	=		

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
XX006606	S-ILEX VERT RS 18	EACH	20.000	=			
XX006607	S-VIBURN DENT BMA 3	EACH	15.000	=			
XX006608	GRASSES MOL CAER 1GAL	EACH	18.000	=			
XX006609	GRASSES PAN VIR 1 GAL	EACH	44.000	=			
XX006610	GRASSES SCHIZ SCOP 1G	EACH	119.000	=			
XX006611	GRASSES SPORO HETO 1G	EACH	142.000	=			
X0321558	SAN MH ADJ NEW T1F CL	EACH	5.000	=			
X0322033	STORM SEW WM REQ 12	FOOT	20.000	=			
X0322256	TEMP INFO SIGNING	SQ FT	18.000	=			
X0322671	STAB CONSTR ENTRANCE	SQ YD	730.000	=			
X0323885	TS BATT BACKUP SYSTEM	EACH	1.000	=			
X0712400	TEMP PAVEMENT	SQ YD	2,365.000	=			
X2111000	TOPSOIL EXCAVATION	CU YD	12,560.000	=			
X3550300	BIT BC SUPER 6	SQ YD	4,064.000	=			
X3550500	BIT BC SUPER 8	SQ YD	29,429.000	=			

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
X4066426	BC SC SUPER "D" N70	TON	3,887.000	=			
X4066616	BCBC SUP IL-19.0 N70	TON	6,262.000	X			
X4066770	LEV BIND MM SUPER N70	TON	364.000	X			
X4080020	INCID BIT SUR SUP N50	TON	110.000	X			
X7015000	CHANGEABLE MESSAGE SN	CAL MO	4.000	X			
X8730250	ELCBL C 20 3C TW SH	FOOT	365.000	X			
X8730402	ELCBL C COMM 19 12PR	FOOT	3,525.000	X			
X8801300	SH P LED 1F 3S BM	EACH	1.000	X			
X8801310	SH P LED 1F 3S MAM	EACH	6.000	X			
X8801395	SH P LED 1F 5S BM	EACH	4.000	X			
X8801400	SH P LED 1F 5S MAM	EACH	5.000	X			
X8801437	SH P LED 2F 1-3,1-5BM	EACH	1.000	X			
Z0000990	AGG FOR TEMP ACCESS	TON	440.000	X			
Z0001050	AGG SUBGRADE 12	SQ YD	38,146.000	X			
Z0002600	BAR SPLICERS	EACH	30.000	X			

FAU 5348
 05-000160-00-WR (DEKALB)
 DEKALB

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 87330

ECMS002 DIGECM03 ECMR003 PAGE 6
 RUN DATE - 06/29/06
 RUN TIME - 183231

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE
				DOLLARS	CENTS	
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000			
Z0019600	DUST CONTROL WATERING	UNIT	300.000			
Z0023800	FILL EX SEPTIC TANK	EACH	2.000			
Z0030260	IMP ATTN TEMP FRN TL3	EACH	1.000			
Z0030330	IMP ATTN REL FRD TL3	EACH	1.000			
Z0048665	RR PROT LIABILITY INS	L SUM	1.000			
Z0076600	TRAINEES	HOUR	1,000.000	0	80	800.00
20100110	TREE REMOV 6-15	UNIT	88.000			
20100210	TREE REMOV OVER 15	UNIT	56.000			
20200100	EARTH EXCAVATION	CU YD	24,977.000			
20201200	REM & DISP UNS MATL	CU YD	16,540.000			
20400800	FURNISHED EXCAV	CU YD	2,000.000			
20600110	GRAN EMBANK SPEC	TON	1,870.000			
20700110	POROUS GRAN EMBANK	TON	880.000			
20700400	POROUS GRAN EMB SPEC	CU YD	15,520.000			

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
20800150	TRENCH BACKFILL	CU YD	4,946.000	=			
21001000	GEOTECH FAB F/GR STAB	SQ YD	32,398.000	X			
21101615	TOPSOIL F & P 4	SQ YD	76,625.000	X			
21101685	TOPSOIL F & P 24	SQ YD	1,022.000	X			
21301084	EXPLDR TRENCH 84	FOOT	200.000	X			
25000210	SEEDING CL 2A	ACRE	7.600	X			
25000312	SEEDING CL 4A	ACRE	6.100	X			
25000314	SEEDING CL 4B	ACRE	0.700	X			
25000400	NITROGEN FERT NUTR	POUND	1,394.000	X			
25000500	PHOSPHORUS FERT NUTR	POUND	1,394.000	X			
25000600	POTASSIUM FERT NUTR	POUND	1,394.000	X			
25100115	MULCH METHOD 2	ACRE	30.000	X			
25100630	EROSION CONTR BLANKET	SQ YD	10,764.000	X			
25200110	SODDING SALT TOLERANT	SQ YD	7,863.000	X			
25200200	SUPPLE WATERING	UNIT	120.000	X			

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE
				DOLLARS	CENTS	
28000250	TEMP EROS CONTR SEED	POUND	1,781.000	=		
28000300	TEMP DITCH CHECKS	EACH	51.000	=		
28000400	PERIMETER EROS BAR	FOOT	1,715.000	=		
28000500	INLET & PIPE PROTECT	EACH	35.000	=		
28000510	INLET FILTERS	EACH	37.000	=		
28100105	STONE RIPRAP CL A3	SQ YD	105.000	=		
28100107	STONE RIPRAP CL A4	SQ YD	198.000	=		
28100111	STONE RIPRAP CL A6	SQ YD	200.000	=		
28200200	FILTER FABRIC	SQ YD	398.000	=		
40600200	BIT MATLS PR CT	TON	34.000	=		
40600300	AGG PR CT	TON	81.000	=		
40600980	BIT SURF REM BUTT JT	SQ YD	416.000	=		
42001300	PROTECTIVE COAT	SQ YD	8,951.000	=		
42300300	PCC DRIVEWAY PAVT 7	SQ YD	149.000	=		
42400200	PC CONC SIDEWALK 5	SQ FT	35,045.000	=		

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
42400400	PC CONC SIDEWALK 7	SQ FT	1,110.000	=			
42400800	DETECTABLE WARNINGS	SQ FT	412.000	=			
44000006	BIT SURF REM 1 1/2	SQ YD	203.000	=			
44000030	BIT SURF REM VAR DP	SQ YD	4,270.000	=			
44000300	CURB REM	FOOT	148.000	=			
44000500	COMB CURB GUTTER REM	FOOT	1,601.000	=			
44000600	SIDEWALK REM	SQ FT	10,499.000	=			
44002020	CONC MEDIAN SURF REM	SQ FT	920.000	=			
44201761	CL D PATCH T1 10	SQ YD	8.000	=			
44201765	CL D PATCH T2 10	SQ YD	51.000	=			
44201769	CL D PATCH T3 10	SQ YD	19.000	=			
44201785	CL D PATCH T1 12	SQ YD	8.000	=			
44201789	CL D PATCH T2 12	SQ YD	14.000	=			
44201794	CL D PATCH T3 12	SQ YD	95.000	=			
44201796	CL D PATCH T4 12	SQ YD	340.000	=			

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
44300300	AREA REF CR CON TR A	SQ YD	10,744.000	X	=		
48101600	AGGREGATE SHLDS B 8	SQ YD	575.000	X	=		
50600300	CLEAN PAINT STEEL BR	L SUM	1.000	X	=		
50800205	REINF BARS, EPOXY CTD	POUND	24,290.000	X	=		
50900500	ALUM RAILING	FOOT	128.000	X	=		
51100300	SLOPE WALL 6	SQ YD	44.000	X	=		
51205200	TEMP SHT PILING	SQ FT	2,600.000	X	=		
51500100	NAME PLATES	EACH	1.000	X	=		
54003000	CONC BOX CUL	CU YD	72.000	X	=		
54011205	PCBC 12X5	FOOT	306.000	X	=		
54213657	PRC FLAR END SEC 12	EACH	8.000	X	=		
54213660	PRC FLAR END SEC 15	EACH	5.000	X	=		
54213663	PRC FLAR END SEC 18	EACH	3.000	X	=		
54213669	PRC FLAR END SEC 24	EACH	2.000	X	=		
54213693	PRC FLAR END SEC 48	EACH	2.000	X	=		

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE
				DOLLARS	CENTS	
54214533	PRC FL END S EQ RS 48	EACH	1.000	=		
54247100	GRATING-C FL END S 15	EACH	1.000	=		
54247130	GRATING-C FL END S 24	EACH	2.000	=		
54247190	GRATING-C FL END S 48	EACH	2.000	=		
54248180	GRT-C FL END S EQV 48	EACH	1.000	=		
550A2320	SS RG CL A 1 12	FOOT	2,229.000	=		
550A2330	SS RG CL A 1 15	FOOT	1,118.000	=		
550A2340	SS RG CL A 1 18	FOOT	176.000	=		
550A2360	SS RG CL A 1 24	FOOT	187.000	=		
550A2380	SS RG CL A 1 30	FOOT	44.000	=		
550A2400	SS RG CL A 1 36	FOOT	175.000	=		
550A2420	SS RG CL A 1 48	FOOT	619.000	=		
550A2520	SS RG CL A 2 12	FOOT	441.000	=		
550A2530	SS RG CL A 2 15	FOOT	114.000	=		
550A2540	SS RG CL A 2 18	FOOT	782.000	=		

FAU 5348
 05-000160-00-WR (DEKALB)
 DEKALB

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 87330
 ECMS002 DTGECM03 ECMR003 PAGE 12
 RUN DATE - 06/29/06
 RUN TIME - 183231

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE
				DOLLARS	CENTS	
550A2560	SS RG CL A 2 24	FOOT	339.000	X	=	
550A2580	SS RG CL A 2 30	FOOT	1,188.000	X	=	
550A2760	SS RG CL A 3 24	FOOT	354.000	X	=	
55035900	SS 2 RCEP S60 R38	FOOT	123.000	X	=	
55100400	STORM SEWER REM 10	FOOT	96.000	X	=	
55100500	STORM SEWER REM 12	FOOT	469.000	X	=	
55100700	STORM SEWER REM 15	FOOT	586.000	X	=	
55100900	STORM SEWER REM 18	FOOT	567.000	X	=	
55101100	STORM SEWER REM 21	FOOT	48.000	X	=	
55101200	STORM SEWER REM 24	FOOT	191.000	X	=	
55101800	STORM SEWER REM 42	FOOT	48.000	X	=	
55102000	STORM SEWER REM 54	FOOT	135.000	X	=	
56103000	D I WATER MAIN 6	FOOT	235.000	X	=	
56103100	D I WATER MAIN 8	FOOT	946.000	X	=	
56103200	D I WATER MAIN 10	FOOT	43.000	X	=	

FAU 5348
 05-000160-00-WR (DEKALB)
 DEKALB

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 87330

ECMS002 DIGECM03 ECMR003 PAGE 13
 RUN DATE - 06/29/06
 RUN TIME - 183231

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE
				DOLLARS	CENTS	
56103300	D I WATER MAIN 12	FOOT	1,943.000		=	
56103400	D I WATER MAIN 16	FOOT	224.000		=	
56104900	WATER VALVES 6	EACH	1.000		=	
56105000	WATER VALVES 8	EACH	4.000		=	
56105100	WATER VALVES 10	EACH	1.000		=	
56105200	WATER VALVES 12	EACH	2.000		=	
56105300	WATER VALVES 16	EACH	2.000		=	
56106400	ADJ WATER MAIN 8	FOOT	40.000		=	
56108800	TAP VALVE & SLEEVE 6	EACH	1.000		=	
56200200	WATER SERV LINE 3/4	FOOT	224.000		=	
56200500	WATER SERV LINE 1 1/2	FOOT	8.000		=	
56201300	CORP STOPS 3/4	EACH	7.000		=	
56201600	CORP STOPS 1 1/2	EACH	1.000		=	
56400100	FIRE HYDNTS TO BE MVD	EACH	1.000		=	
56400300	FIRE HYDNTS TO BE ADJ	EACH	4.000		=	

FAU 5348
 05-000160-00-WR (DEKALB)
 DEKALB

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 87330

ECMS002 DTGECM03 ECMR003 PAGE 14
 RUN DATE - 06/29/06
 RUN TIME - 183231

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE
				DOLLARS	CENTS	
56400500	FIRE HYDNITS TO BE REM	EACH	6.000	=		
56400820	FIRE HYD W/AUX V & VB	EACH	8.000	=		
56500600	DOM WAT SER BOX ADJ	EACH	1.000	=		
60107700	PIPE UNDERDRAINS 6	FOOT	720.000	=		
60202405	CB TA 4 DIA	EACH	19.000	=		
60205605	CB TA 5 DIA	EACH	4.000	=		
60213300	CB SPEC	EACH	71.000	=		
60220200	MAN TA 4 DIA	EACH	13.000	=		
60222900	MAN TA 5 DIA	EACH	18.000	=		
60249110	VALVE VAULTS 4 DIA	EACH	1.000	=		
60249120	VALVE VAULTS 5 DIA	EACH	8.000	=		
60250200	CB ADJUST	EACH	1.000	=		
60252800	CB RECONST	EACH	3.000	=		
60255500	MAN ADJUST	EACH	1.000	=		
60265700	VV ADJUST	EACH	4.000	=		

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
60266100	VV RECONST	EACH	2.000	=			
60266500	VV REMOVED	EACH	12.000	=			
60266910	VALVE BOX REMOVED	EACH	9.000	=			
60402210	GRATES T8	EACH	18.000	=			
60404805	FR & GRATES T11V	EACH	6.000	=			
60404950	FR & GRATES T24	EACH	20.000	=			
60405700	FR & GRATES SPEC	EACH	71.000	=			
60406000	FR & LIDS T1 OL	EACH	6.000	=			
60406100	FR & LIDS T1 CL	EACH	50.000	=			
60500040	REMOV MANHOLES	EACH	3.000	=			
60500050	REMOV CATCH BAS	EACH	18.000	=			
60500080	REMOV CB - MAIN FLOW	EACH	1.000	=			
60603800	COMB CC&G TB6.12	FOOT	2,828.000	=			
60605000	COMB CC&G TB6.24	FOOT	11,708.000	=			
60618200	BIT MEDIAN SURF	SQ FT	2,333.000	=			

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE
				DOLLARS	CENTS	
60618300	CONC MEDIAN SURF 4	SQ FT	57.000	=		
67100100	MOBILIZATION	L SUM	1.000	=		
70101800	TRAF CONT & PROT SPL	L SUM	1.000	=		
70300100	SHORT-TERM PAVT MKING	FOOT	3,330.000	=		
70300220	TEMP PVT MK LINE 4	FOOT	50,280.000	=		
70300250	TEMP PVT MK LINE 8	FOOT	1,020.000	=		
70300260	TEMP PVT MK LINE 12	FOOT	140.000	=		
70300280	TEMP PVT MK LINE 24	FOOT	150.000	=		
70300520	PAVT MARK TAPE T3 4	FOOT	2,615.000	=		
70400100	TEMP CONC BARRIER	FOOT	400.000	=		
70400200	REL TEMP CONC BARRIER	FOOT	375.000	=		
72000100	SIGN PANEL T1	SQ FT	320.000	=		
72000200	SIGN PANEL T2	SQ FT	103.000	=		
72400200	REMOV SIN PAN ASSY TB	EACH	1.000	=		
72900100	METAL POST TY A	FOOT	620.000	=		

FAU 5348
 05-000160-00-WR (DEKALB)
 DEKALB

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 87330

ECMS002 DTGECM03 ECMR003 PAGE 17
 RUN DATE - 06/29/06
 RUN TIME - 183231

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
72900200	METAL POST TY B	FOOT	43.000	=			
73700200	REM CONC FDN-GR MT	EACH	1.000	=			
78000100	THPL PVT MK LTR & SYM	SQ FT	749.000	=			
78000200	THPL PVT MK LINE 4	FOOT	22,650.000	=			
78000500	THPL PVT MK LINE 8	FOOT	4,710.000	=			
78000600	THPL PVT MK LINE 12	FOOT	1,040.000	=			
78000650	THPL PVT MK LINE 24	FOOT	315.000	=			
78100100	RAISED REFL PAVT MKR	EACH	514.000	=			
78300100	PAVT MARKING REMOVAL	SQ FT	10,500.000	=			
80400100	ELECT SERV INSTALL	EACH	1.000	=			
80500200	SERV INSTALL TY B	EACH	2.000	=			
80600200	GRNDING ELECTRODE BG	EACH	24.000	=			
81000600	CON T 2 GALVS	FOOT	2,853.000	=			
81000700	CON T 2 1/2 GALVS	FOOT	138.000	=			
81000800	CON T 3 GALVS	FOOT	83.000	=			

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
81001000	CON T 4 GALVS	FOOT	127.000	X	=		
81001100	CON T 5 GALVS	FOOT	16.000	X	=		
81018500	CON P 2 GALVS	FOOT	1,323.000	X	=		
81018900	CON P 4 GALVS	FOOT	790.000	X	=		
81019000	CON P 5 GALVS	FOOT	90.000	X	=		
81400100	HANDHOLE	EACH	18.000	X	=		
81400200	HD HANDHOLE	EACH	3.000	X	=		
81400300	DBL HANDHOLE	EACH	2.000	X	=		
81500200	TR & BKFIL F ELECT WK	FOOT	5,729.000	X	=		
81702110	EC C XLP USE 1C 10	FOOT	12,606.000	X	=		
82103400	LUM SV HOR MT PC 400W	EACH	4.000	X	=		
82500505	LIGHT CONTROLLER SPL	EACH	1.000	X	=		
83600300	LIGHT POLE FDN 30D	FOOT	192.000	X	=		
83600315	LIGHT POLE FDN 30D OS	FOOT	36.000	X	=		
84200500	REM EX LT UNIT SALV	EACH	1.000	X	=		

FAU 5348
 05-000160-00-WR (DEKALB)
 DEKALB

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 87330

ECMS002 DTGECM03 ECMR003 PAGE 19
 RUN DATE - 06/29/06
 RUN TIME - 183231

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
84200700	LIGHTING FDN REMOV	EACH	1.000	=			
84400105	RELOC EX LT UNIT	EACH	1.000	=			
85000200	MAIN EX TR SIG INSTAL	EACH	2.000	=			
85700200	FAC T4 CAB	EACH	1.000	=			
85900100	TRANSCIEVER	EACH	1.000	=			
87301215	ELCBL C SIGNAL 14 2C	FOOT	1,517.000	=			
87301225	ELCBL C SIGNAL 14 3C	FOOT	1,930.000	=			
87301245	ELCBL C SIGNAL 14 5C	FOOT	2,020.000	=			
87301255	ELCBL C SIGNAL 14 7C	FOOT	2,081.000	=			
87301305	ELCBL C LEAD 14 1PR	FOOT	2,366.000	=			
87301805	ELCBL C SERV 6 2C	FOOT	113.000	=			
87301815	ELCBL C SERV 6 3C	FOOT	120.000	=			
87502440	TS POST GALVS 10	EACH	1.000	=			
87502500	TS POST GALVS 16	EACH	4.000	=			
87702940	STL COMB MAA&P 42	EACH	1.000	=			

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
87702970	STL COMB MA&P 48	EACH	1.000	=			
87702985	STL COMB MA&P 52	EACH	1.000	=			
87703000	STL COMB MA&P 55	EACH	1.000	=			
87800100	CONC FDN TY A	FOOT	20.000	=			
87800200	CONC FDN TY D	FOOT	4.000	=			
87800415	CONC FDN TY E 36D	FOOT	60.000	=			
87900200	DRILL EX HANDHOLE	EACH	1.000	=			
88200100	TS BACKPLATE	EACH	11.000	=			
88500100	INDUCTIVE LOOP DETECT	EACH	11.000	=			
88600100	DET LOOP T1	FOOT	1,255.000	=			
88800100	PED PUSH-BUTTON	EACH	8.000	=			
89000100	TEMP TR SIG INSTALL	EACH	1.000	=			
89501400	REL EM VEH PR SYS D U	EACH	2.000	=			
89501410	REL EM VEH PR SYS P U	EACH	1.000	=			
89502375	REMOV EX TS EQUIP	EACH	1.000	=			

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
89502380	REMOV EX HANDHOLE	EACH	4.000	X	=	=	
89502385	REMOV EX CONC FDN	EACH	8.000	X	=	=	

TOTAL \$ _____

NOTE:

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.

RETURN WITH BID

2. The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-13, or that an effective exemption has been issued by the Board of Ethics to any individual subject to the Section 50-13 prohibitions pursuant to the provisions of Section 50-20 of the Code and Executive Order Number 3 (1998). Information concerning the exemption process is available from the Department upon request.

D. Negotiations

1. The Illinois Procurement Code provides in pertinent part:

Section 50-15. Negotiations.

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

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

E. Inducements

1. The Illinois Procurement Code provides:

Section 50-25. Inducement. Any person who offers or pays any money or other valuable thing to any person to induce him or her not to bid for a State contract or as recompense for not having bid on a State contract is guilty of a Class 4 felony. Any person who accepts any money or other valuable thing for not bidding for a State contract or who withholds a bid in consideration of the promise for the payment of money or other valuable thing is guilty of a Class 4 felony.

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

F. Revolving Door Prohibition

1. The Illinois Procurement Code provides:

Section 50-30. Revolving door prohibition. Chief procurement officers, associate procurement officers, State purchasing officers, their designees whose principal duties are directly related to State procurement, and executive officers confirmed by the Senate are expressly prohibited for a period of 2 years after terminating an affected position from engaging in any procurement activity relating to the State agency most recently employing them in an affected position for a period of at least 6 months. The prohibition includes, but is not limited to: lobbying the procurement process; specifying; bidding; proposing bid, proposal, or contract documents; on their own behalf or on behalf of any firm, partnership, association, or corporation. This Section applies only to persons who terminate an affected position on or after January 15, 1999.

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

G. Reporting Anticompetitive Practices

1. The Illinois Procurement Code provides:

Section 50-40. Reporting anticompetitive practices. When, for any reason, any vendor, bidder, contractor, chief procurement officer, State purchasing officer, designee, elected official, or State employee suspects collusion or other anticompetitive practice among any bidders, offerors, contractors, proposers, or employees of the State, a notice of the relevant facts shall be transmitted to the Attorney General and the chief procurement officer.

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

H. Confidentiality

1. The Illinois Procurement Code provides:

Section 50-45. Confidentiality. Any chief procurement officer, State purchasing officer, designee, or executive officer who willfully uses or allows the use of specifications, competitive bid documents, proprietary competitive information, proposals, contracts, or selection information to compromise the fairness or integrity of the procurement, bidding, or contract process shall be subject to immediate dismissal, regardless of the Personnel code, any contract, or any collective bargaining agreement, and may in addition be subject to criminal prosecution.

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

RETURN WITH BID

I. Insider Information

1. The Illinois Procurement Act provides:

Section 50-50. Insider information. It is unlawful for any current or former elected or appointed State official or State employee to knowingly use confidential information available only by virtue of that office or employment for actual or anticipated gain for themselves or another person.

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

III. CERTIFICATIONS

A. The certifications hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder. The Department may terminate the contract if it is later determined that the bidder rendered a false or erroneous certification, and the surety providing the performance bond shall be responsible for completion of the contract.

B. Bribery

1. The Illinois Procurement Code provides:

Section 50-5. Bribery.

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

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

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

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

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

(2) the business demonstrates to the governmental entity with which it seeks to contract, and that entity finds that the commission of the offense was not authorized, requested, commanded, or performed by a director, officer, or high managerial agent on behalf of the business as provided in paragraph (2) of subsection (a) of Section 5-4 of the Criminal Code of 1961.

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

(d) Certification. Every bid submitted to and contract executed by the State shall contain a certification by the contractor that the contractor is not barred from being awarded a contract or subcontract under this Section. A contractor who makes a false statement, material to the certification, commits a Class 3 felony.

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

C. Educational Loan

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

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

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

D. Bid-Rigging/Bid Rotating

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

§ 33E-11. (a) Every bid submitted to and public contract executed pursuant to such bid by the State or a unit of local government shall contain a certification by the prime contractor that the prime contractor is not barred from contracting with any unit of State or local government as a result of a violation of either Section 33E-3 or 33E-4 of this Article. The State and units of local government shall provide the appropriate forms for such certification.

RETURN WITH BID

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

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

A violation of Section 33E-4 would be represented by a conviction of the crime of bid-rotating which, in addition to Class 2 felony sentencing, provides that any person convicted of this offense or any similar offense of any state or the United States which contains the same elements as this offense shall be permanently barred from contracting with any unit of State or local government. No corporation shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of such corporation if the employee so convicted is no longer employed by the corporation and: (1) it has been finally adjudicated not guilty or (2) if it demonstrates to the governmental entity with which it seeks to contract and that entity finds that the commission of the offense was neither authorized, requested, commanded, nor performed by a director, officer or a high managerial agent in behalf of the corporation.

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

E. International Anti-Boycott

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

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

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

F. Drug Free Workplace

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

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

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

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

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

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

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

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

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

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 any or all of its subcontractors. Applicable apprenticeship and training programs are those that have been approved and registered with the United States Department of Labor. The bidder shall list in the space below, the official name of the program sponsor holding the Certificate of Registration for all of the types of work or crafts in which the bidder is a participant and that will be performed with the bidder's forces. Types of work or craft work that will be subcontracted shall be included and listed as subcontract work. The list shall also indicate any type of work or craft job category that does not have an applicable apprenticeship or training program. **The bidder is responsible for making a complete report and shall make certain that each type of work or craft job category that will be utilized on the project as reported on the Construction Employee Workforce Projection (Form BC-1256) and returned with the bid is accounted for and listed.**

NA - FEDERAL

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:

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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.

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- 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 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 for services in the previous 2 years.

Yes ___ No ___

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

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

- 2. Is your spouse or any minor children currently appointed to or employed by any agency of the State of Illinois? If your spouse or minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds \$90,420.00, (60% of the Governor's salary as of 7/1/01) provide the name of the spouse and/or minor children, the name of the State agency for which he/she is employed and his/her annual salary. _____

3. If your spouse or any minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds \$90,420.00, (60% of the salary of the Governor 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 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 any minor children entitled to receive (i) more than 15% in the aggregate of the total distributable income from your firm, partnership, association or corporation, or (ii) an amount in excess of 2 times the salary of the Governor?

Yes ___ No ___

(c) Elective status; the holding of elective office of the State of Illinois, the government of the United States, any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois currently or in the previous 3 years.

Yes ___ No ___

(d) Relationship to anyone holding elective office currently or in the previous 2 years; spouse, father, mother, son, or daughter.

Yes ___ No ___

(e) Appointive office; the holding of any appointive government office of the State of Illinois, the United State of America, or any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois, which office entitles the holder to compensation in excess of the expenses incurred in the discharge of that office currently or in the previous 3 years.

Yes ___ No ___

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

Yes ___ No ___

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

Yes ___ No ___

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(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: _____ Date _____
Signature of Individual or Authorized Representative

NOT APPLICABLE STATEMENT

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

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

Name of Authorized Representative (type or print)

Title of Authorized Representative (type or print)

Signature of Authorized Representative Date _____

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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

Signature box with lines for Name of Authorized Representative, Title of Authorized Representative, Signature of Authorized Representative, and Date.

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SPECIAL NOTICE TO CONTRACTORS

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

CONSTRUCTION EMPLOYEE UTILIZATION PROJECTION

- (a) All bidders on construction contracts shall complete and submit, along with and as part of their bids, a Bidder's Employee Utilization Form (Form BC-1256) setting forth a projection and breakdown of the total workforce intended to be hired and/or allocated to such contract work by the bidder including a projection of minority and female employee utilization in all job classifications on the contract project.
- (b) The Department of Transportation shall review the Employee Utilization Form, and workforce projections contained therein, of the contract awardee to determine if such projections reflect an underutilization of minority persons and/or women in any job classification in accordance with the Equal Employment Opportunity Clause and Section 7.2 of the Illinois Department of Human Rights' Rules and Regulations for Public Contracts adopted as amended on September 17, 1980. If it is determined that the contract awardee's projections reflect an underutilization of minority persons and/or women in any job classification, it shall be advised in writing of the manner in which it is underutilizing and such awardee shall be considered to be in breach of the contract unless, prior to commencement of work on the contract project, it submits revised satisfactory projections or an acceptable written affirmative action plan to correct such underutilization including a specific timetable geared to the completion stages of the contract.
- (c) The Department of Transportation shall provide to the Department of Human Rights a copy of the contract awardee's Employee Utilization Form, a copy of any required written affirmative action plan, and any written correspondence related thereto. The Department of Human Rights may review and revise any action taken by the Department of Transportation with respect to these requirements.

RETURN WITH BID

**Contract No. 87330
DEKALB County
Section 05-00160-00-WR (DeKalb)
Project HPP-2295(1)
Route FAU 5348 (Annie Glidden Road)
District 3 Construction Funds**

PART II. WORKFORCE PROJECTION - continued

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

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

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

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

PART III. AFFIRMATIVE ACTION PLAN

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

Company _____ Telephone Number _____

Address _____

NOTICE REGARDING SIGNATURE

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

Signature: _____ Title: _____ Date: _____

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

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ADDITIONAL FEDERAL REQUIREMENTS

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

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

RETURN WITH BID

**Contract No. 87330
DEKALB County
Section 05-00160-00-WR (DeKalb)
Project HPP-2295(1)
Route FAU 5348 (Annie Glidden Road)
District 3 Construction Funds**

PROPOSAL SIGNATURE SHEET

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

(IF AN INDIVIDUAL) Firm Name _____
Signature of Owner _____
Business Address _____

(IF A CO-PARTNERSHIP) Firm Name _____
By _____
Business Address _____
Name and Address of All Members of the Firm: _____

(IF A CORPORATION) Corporate Name _____
By _____
Signature of Authorized Representative _____
Typed or printed name and title of Authorized Representative _____

(IF A JOINT VENTURE, USE THIS SECTION FOR THE MANAGING PARTY AND THE SECOND PARTY SHOULD SIGN BELOW) Attest _____
Signature _____
Business Address _____

(IF A JOINT VENTURE) Corporate Name _____
By _____
Signature of Authorized Representative _____
Typed or printed name and title of Authorized Representative _____

Attest _____
Signature _____
Business Address _____

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

RETURN WITH BID



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

Item No.
Letting Date

KNOW ALL MEN BY THESE PRESENTS, That We

as PRINCIPAL, and

as SURETY, are held jointly, severally and firmly bound unto the STATE OF ILLINOIS in the penal sum of 5 percent of the total bid price, or for the amount specified in Article 102.09 of the "Standard Specifications for Road and Bridge Construction" in effect on the date of invitation for bids, whichever is the lesser sum, well and truly to be paid unto said STATE OF ILLINOIS, for the payment of which we bind ourselves, our heirs, executors, administrators, successors and assigns.

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

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

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

In TESTIMONY WHEREOF, the said PRINCIPAL and the said SURETY have caused this instrument to be signed by their respective officers this day of A.D.,

PRINCIPAL SURETY
(Company Name)
By: (Signature & Title) By: (Signature of Attorney-in-Fact)

Notary Certification for Principal and Surety

STATE OF ILLINOIS,
COUNTY OF

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

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

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

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

My commission expires Notary Public

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

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

PROPOSAL ENVELOPE



PROPOSALS

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

Item No.	Item No.	Item No.

Submitted By:

Name:
Address:
Phone No.

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

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

NOTICE

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

CONTRACTOR OFFICE COPY OF CONTRACT SPECIFICATIONS

NOTICE

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

Contract No. 87330
DEKALB County
Section 05-00160-00-WR (DeKalb)
Project HPP-2295(1)
Route FAU 5348 (Annie Glidden Road)
District 3 Construction Funds



Illinois Department of Transportation



NOTICE TO BIDDERS

- 1. TIME AND PLACE OF OPENING BIDS.** Sealed proposals for the improvement described herein will be received by the Department of Transportation at the Harry R. Hanley Building, 2300 South Dirksen Parkway, in Springfield, Illinois until 10:00 o'clock a.m., August 4, 2006. 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. 87330
DEKALB County
Section 05-00160-00-WR (DeKalb)
Project HPP-2295(1)
Route FAU 5348 (Annie Glidden Road)
District 3 Construction Funds**

Project consists of bituminous pavement reconstruction, bituminous bike path, precast box culverts, sidewalk, curb and gutter, storm sewer, water main, traffic signal modernization and interconnecting, landscaping, cleaning and painting steel bridge and all other work necessary to complete the project on FAU Route 5348 (Annie Glidden Road) from the Union Pacific Railroad Bridge to Fairview Drive in the City of DeKalb.

- 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

BD 351 (Rev. 01/2003)

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 and LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS.

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

SUPPLEMENTAL SPECIFICATIONS

<u>Std. Spec. Sec.</u>	<u>Page No.</u>
101 Definition of Terms.....	1
105 Control of Work.....	2
205 Embankment	3
251 Mulch	4
281 Riprap	5
282 Filter Fabric for Use With Riprap	8
285 Concrete Revetment Mats	10
311 Granular Subbase.....	14
351 Aggregate Base Course	15
440 Removal of Existing Pavement and Appurtenances.....	16
442 Pavement Patching	17
449 Removal and Replacement of Preformed Elastomeric Compression Joint Seal	18
481 Aggregate Shoulders	19
501 Removal of Existing Structures.....	20
503 Concrete Structures	21
505 Steel Structures	22
506 Cleaning and Painting Metal Structures	25
508 Reinforcement Bars	26
512 Piling	27
540 Box Culverts.....	28
589 Elastic Joint Sealer	30
602 Catch Basin, Manhole, Inlet, Drainage Structures and Valve Vault Construction, Adjustment and Reconstruction.....	31
603 Adjusting Frames and Grates of Drainage and Utility Structures	32
610 Shoulder Inlets with Curb	33
665 Woven Wire Fence	34
669 Removal and Disposal of Regulated Substances	35
671 Mobilization	36
702 Work Zone Traffic Control Devices	37
1003 Fine Aggregates	38
1004 Coarse Aggregate	39
1005 Stone, Concrete Blocks and Broken Concrete for Erosion Protection, Sediment Control and Rockfill	42
1006 Metals	46
1007 Timber and Preservative Treatment	49
1012 Hydrated Lime	50
1020 Portland Cement Concrete	51
1021 Concrete Admixtures	58
1022 Concrete Curing Materials	59
1024 Nonshrink Grout	61
1041 Brick	63
1043 Precast Reinforced Concrete Manhole Sections and Adjusting Rings	64
1056 Preformed Flexible Gaskets and Mastic Joint Sealer for Sewer and Culvert Pipe	66
1059 Elastic Joint Sealers	67
1060 Waterproofing Materials	68
1069 Pole and Tower	69
1070 Foundation and Breakaway Devices	70
1077 Post and Foundation	72
1080 Fabric Materials	73
1081 Materials For Planting	76
1083 Elastomeric Bearings	77
1094 Overhead Sign Structures	78
1103 Portland Cement Concrete Equipment	79

RECURRING SPECIAL PROVISIONS

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

<u>CHECK SHEET #</u>	<u>PAGE NO.</u>
1 X State Required Contract Provisions All Federal-aid Construction Contracts (Eff. 2-1-69) (Rev. 10-1-83)....	80
2 X Subletting of Contracts (Federal-aid Contracts) (Eff. 1-1-88) (Rev. 5-1-93)	82
3 X EEO (Eff. 7-21-78) (Rev. 11-18-80)	83
4 Specific Equal Employment Opportunity Responsibilities NonFederal-aid Contracts (Eff. 3-20-69) (Rev. 1-1-94)	94
5 Required Provisions - State Contracts (Eff. 4-1-65) (Rev. 4-1-93)	100
6 Reserved	105
7 Asphalt Quantities and Cost Reviews (Eff. 7-1-88).....	106
8 X National Pollutant Discharge Elimination System Permit (Eff. 7-1-94) (Rev. 1-1-03)	107
9 Haul Road Stream Crossings, Other Temporary Stream Crossings and In-Stream Work Pads (Eff. 1-2-92) (Rev. 1-1-98)	108
10 Construction Layout Stakes Except for Bridges (Eff. 1-1-99) (Rev. 1-1-02)	109
11 Construction Layout Stakes (Eff. 5-1-93) (Rev. 1-1-02).....	112
12 Use of Geotextile Fabric for Railroad Crossing (Eff. 1-1-95) (Rev. 1-1-97)	115
13 Asphaltic Emulsion Slurry Seal and Fibrated Asphaltic Emulsion Slurry Seal (Eff. 8-1-89) (Rev. 2-1-97) ...	117
14 Bituminous Surface Treatments Half-Smart (Eff. 7-1-93) (Rev. 1-1-97)	123
15 X Quality Control/Quality Assurance of Bituminous Concrete Mixtures (Eff. 1-1-00) (Rev. 3-1-05).....	129
16 Subsealing of Concrete Pavements (Eff. 11-1-84) (Rev. 2-1-95)	148
17 Bituminous Surface Removal (Cold Milling) (Eff. 11-1-87) (Rev. 10-15-97)	152
18 Resurfacing of Milled Surfaces (Eff. 10-1-95).....	154
19 PCC Partial Depth Bituminous Patching (Eff. 1-1-98).....	155
20 Patching with Bituminous Overlay Removal (Eff. 10-1-95) (Rev. 7-1-99).....	157
21 Reserved	159
22 Protective Shield System (Eff. 4-1-95) (Rev. 1-1-03).....	160
23 Polymer Concrete (Eff. 8-1-95) (Rev. 3-1-05).....	162
24 X Controlled Low-Strength Material (CLSM) (Eff. 1-1-90) (Rev. 3-1-05).....	164
25 X Pipe Underdrains (Eff. 9-9-87) (Rev. 1-1-98).....	169
26 Guardrail and Barrier Wall Delineation (Eff. 12-15-93) (Rev. 1-1-97).....	170
27 Bicycle Racks (Eff. 4-1-94) (Rev. 1-1-97)	175
28 Reserved	177
29 Reserved	178
30 Reserved	179
31 X Night Time Inspection of Roadway Lighting (Eff. 5-1-96)	180
32 Reserved	181
33 English Substitution of Metric Bolts (Eff. 7-1-96)	182
34 English Substitution of Metric Reinforcement Bars (Eff. 4-1-96) (Rev. 1-1-03)	183
35 Polymer Modified Emulsified Asphalt (Eff. 5-15-89) (Rev. 1-1-04)	185
36 Corrosion Inhibitor (Eff. 3-1-80) (Rev. 7-1-99)	187
37 Quality Control of Concrete Mixtures at the Plant-Single A (Eff. 8-1-00) (Rev. 1-1-04)	188
38 Quality Control of Concrete Mixtures at the Plant-Double A (Eff. 8-1-00) (Rev. 1-1-04).....	194
39 Quality Control/Quality Assurance of Concrete Mixtures (Eff. 4-1-92) (Rev. 3-1-05).....	202
40 Traffic Barrier Terminal Type 1, Special (Eff. 8-1-94) (Rev. 1-1-03)	215
41 Reserved	216
42 X Segregation Control of Bituminous Concrete (Eff. 7-15-97)	217
43 Reserved	220

LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS

	<u>PAGE NO.</u>
LRS 1 <input type="checkbox"/> Cooperation With Utilities (Eff. 1-1-99) (Rev. 1-1-02)	222
LRS 2 <input checked="" type="checkbox"/> Furnished Excavation (Eff. 1-1-99) (Rev. 1-1-02)	224
LRS 3 <input type="checkbox"/> Construction Zone Traffic Control (Eff. 1-1-99)	225
LRS 4 <input checked="" type="checkbox"/> Flaggers in Work Zones (Eff. 1-1-99)	226
LRS 5 <input type="checkbox"/> Reserved	227
LRS 6 <input type="checkbox"/> Bidding Requirements and Conditions for Contract Proposals (Eff. 1-1-02)	228
LRS 7 <input type="checkbox"/> Bidding Requirements and Conditions for Material Proposals (Eff. 1-1-03)	234
LRS 8 <input type="checkbox"/> Failure to Complete the Work on Time (Eff. 1-1-99)	240
LRS 9 <input type="checkbox"/> Bituminous Surface Treatments (Eff. 1-1-99)	241
LRS 10 <input type="checkbox"/> Reflective Sheeting Type C (Eff. 1-1-99) (Rev. 1-1-02)	242
LRS 11 <input type="checkbox"/> Employment Practices (Eff. 1-1-99)	243
LRS 12 <input type="checkbox"/> Wages of Employees on Public Works (Eff. 1-1-99)	245
LRS 13 <input type="checkbox"/> Selection of Labor (Eff. 1-1-99)	246

INDEX OF SPECIAL PROVISIONS

	<u>PAGE</u>
LOCATION OF IMPROVEMENT	SP-1
DESCRIPTION OF PROJECT	SP-1
COMPLETION DATES PLUS GUARANTEED WORKING DAYS	SP-1
EXISTING UTILITIES	SP-2
PAVEMENT MARKING PAINT	SP-3
CONSTRUCTION SAFETY AND HEALTH STANDARDS	SP-3
PUBLIC SAFETY AND CONVENIENCE	SP-3
MAINTENANCE OF ROADWAY	SP-4
PROTECTION OF EXISTING DRAINAGE FACILITIES DURING CONSTRUCTION	SP-4
KEEPING ROADS OPEN TO TRAFFIC	SP-4
PROTECTION AND RESTORATION OF TRAFFIC SIGNS	SP-5
PROTECTION OF TREES	SP-5
EARTH EXCAVATION	SP-5
REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	SP-6
FURNISHED EXCAVATION	SP-6
COMPENSATORY STORAGE BASIN EMBANKMENT	SP-7
GRANULAR EMBANKMENT, SPECIAL	SP-7
POROUS GRANULAR EMBANKMENT, SPECIAL	SP-7
GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SP-8
TOPSOIL EXCAVATION	SP-8
TOPSOIL PLACEMENT, 4"	SP-9
TOPSOIL PLACEMENT, 24"	SP-9
EXPLORATION TRENCH 84" DEPTH	SP-9
EROSION CONTROL	SP-10
SEEDING	SP-10
MULCH, METHOD 2	SP-11
EROSION CONTROL BLANKET	SP-11

	<u>PAGE</u>
PLANTING TREES AND SHRUBS	SP-11
TEMPORARY EROSION CONTROL	SP-11
TEMPORARY EROSION CONTROL SEEDING	SP-12
TEMPORARY DITCH CHECKS	SP-12
PERIMETER EROSION BARRIER	SP-12
PERIMETER EROSION BARRIER (SPECIAL)	SP-13
TEMPORARY SEDIMENT TRAP	SP-13
INLET AND PIPE PROTECTION	SP-13
INLET FILTERS	SP-14
STONE RIPRAP	SP-14
STABILIZED BITUMINOUS PATH	SP-14
BITUMINOUS MATERIALS (PRIME COAT)	SP-15
AGGREGATE (PRIME COAT)	SP-15
INCIDENTAL BITUMINOUS SURFACING, SUPERPAVE, N50	SP-15
TEMPORARY PAVEMENT	SP-15
PROTECTIVE COAT	SP-16
PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 7 INCH	SP-16
PORTLAND CEMENT CONCRETE SIDEWALK DETECTABLE WARNINGS	SP-16
BITUMINOUS SURFACE REMOVAL - BUTT JOINT BITUMINOUS SURFACE REMOVAL, 1½" BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)	SP-17
SAW CUTTING	SP-18
CONCRETE MEDIAN SURFACE REMOVAL	SP-18
AREA REFLECTIVE CRACK CONTROL TREATMENT, SYSTEM A	SP-18
AGGREGATE SHOULDERS, TYPE B, 8"	SP-19
CLEANING AND PAINTING STEEL BRIDGE	SP-19
TEMPORARY SHEET PILING	SP-19
GRATING FOR CONCRETE FLARED END SECTION	SP-20
STORM SEWERS, TYPE 2, REINFORCED CONCRETE ELLIPTICAL PIPE SPAN 60, RISE 38	SP-21

	<u>PAGE</u>
STORM SEWERS, RUBBER GASKET	SP-21
STORM SEWER (WATER MAIN REQUIREMENTS) 12 INCH	SP-21
STORM SEWER REMOVAL	SP-22
DUCTILE IRON WATER MAIN	SP-22
DUCTILE IRON WATER MAIN, RESTRAINED JOINT 12"	SP-23
WATER VALVES	SP-24
TAPPING VALVES AND SLEEVES	SP-24
ABANDON WATER MAIN	SP-24
ADJUSTING WATER MAIN 8"	SP-25
WATER SERVICE LINE CURB STOP AND BOX CORPORATION STOPS	SP-25
FIRE HYDRANTS TO BE ADJUSTED	SP-26
FIRE HYDRANT TO BE REMOVED	SP-26
FIRE HYDRANT WITH AUXILIARY VALVE AND VALVE BOX	SP-27
DOMESTIC WATER SERVICE BOXES TO BE ADJUSTED	SP-27
PIPE UNDERDRAINS, 6"	SP-28
CLOSED LIDS	SP-28
CATCH BASINS MANHOLES INLETS VALVE VAULTS	SP-28
ADJUSTMENT AND RECONSTRUCTION OF STRUCTURES	SP-29
CATCH BASINS, SPECIAL	SP-29
SANITARY MANHOLES TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID	SP-30
VALVE VAULTS TO BE REMOVED	SP-31
VALVE BOXES TO BE REMOVED	SP-31
FRAME AND GRATES, SPECIAL	SP-31
COMBINATION CONCRETE CURB AND GUTTER	SP-31
BITUMINOUS MEDIAN SURFACE	SP-32
CONCRETE MEDIAN SURFACE, 4 INCH	SP-32

	<u>PAGE</u>
TRAFFIC CONTROL PLAN	SP-32
WORK ZONE TRAFFIC CONTROL (LUMP-SUM PAYMENT)	SP-33
TEMPORARY PAVEMENT MARKING	SP-34
TEMPORARY INFORMATION SIGNING	SP-35
REMOVE SIGN PANEL ASSEMBLY - TYPE B	SP-35
RELOCATE WOOD SIGN ASSEMBLY	SP-35
REMOVE CONCRETE FOUNDATION - GROUND MOUNT	SP-36
PAVEMENT MARKING REMOVAL	SP-36
STABILIZED CONSTRUCTION ENTRANCE	SP-36
CHANGEABLE MESSAGE SIGN	SP-37
FLARED END SECTION REMOVAL	SP-37
FORMED CONCRETE REPAIR	SP-37
BITUMINOUS DRIVEWAY PAVEMENT, SUPERPAVE	SP-38
AGGREGATE FOR TEMPORARY ACCESS	SP-38
AGGREGATE SUBGRADE, 12"	SP-39
CONSTRUCTION LAYOUT	SP-40
DUST CONTROL WATERING	SP-42
FILLING EXISTING SEPTIC TANK	SP-42
CURB STOP AND BOX TO BE REMOVED	SP-42
BRICK SIGN AND CONCRETE FOUNDATION REMOVAL	SP-43
BRICK SIGN	SP-43
PAVEMENT TEXTURING	SP-44
PVC CASING PIPE 30"	SP-45
SLIP-ON FLAT BOTTOM CHECK VALVE, 12"	SP-45
TEMPORARY PIPE CULVERT	SP-46
VINYL FENCE, 6'	SP-46
LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, PHOTOCELL CONTROL, 400-WATT	SP-47
LIGHTING CONTROLLER, SPECIAL	SP-47

	<u>PAGE</u>
LIGHT POLE FOUNDATION, 30" DIAMETER, OFFSET	SP-48
UNIT DUCT, WITH 2-1/C NO. 4, 2-1/C NO. 6, 2-1/C NO. 8 AND 1/C NO. 6 GROUND, 600V (XLP-TYPE USE), 2" DIA., POLYETHYLENE	
UNIT DUCT, WITH 2-1/C NO. 4, 2-1/C NO. 6, 2-1/C NO. 8, 3-1/C NO. 10 AND 1/C NO. 6 GROUND, 600V (XLP-TYPE USE), 2" DIA., POLYETHYLENE	SP-48
LIGHT STANDARD	SP-49
LIGHT STANDARD, INSTALLED	SP-52
TRAFFIC SIGNAL WORK	SP-53
TRAFFIC SIGNALS — GENERAL	SP-54
OPERATION OF EXISTING TRAFFIC SIGNALS	SP-54
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	SP-55
TRAFFIC SIGNAL BACKPLATE	SP-56
TRAFFIC SIGNAL POST	SP-56
MAST ARM ASSEMBLY AND POLE	SP-56
TRAFFIC-ACTUATED CONTROLLER	SP-56
DETECTOR LOOP	SP-57
PEDESTRIAN PUSHBUTTON	SP-58
GALVANIZED STEEL CONDUIT	SP-58
UNIT DUCT	SP-59
ELECTRIC CABLE	SP-59
SERVICE INSTALLATION, TYPE B	SP-59
CONCRETE FOUNDATION	SP-60
HANDHOLE (TRAFFIC SIGNALS)	SP-60
TRENCH AND BACKFILL	SP-61
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	SP-61
TEMPORARY TRAFFIC SIGNAL INSTALLATION	SP-61
COMMUNICATIONS CABLE IN CONDUIT	SP-64
CONTROL OF TRAFFIC SIGNAL MATERIALS	SP-64
VMS 330 MODIFICATION	SP-65
MAP PANEL MODIFICATION	SP-66

	<u>PAGE</u>
RELOCATE EMERGENCY VEHICLE PRIORITY SYSTEM	SP-66
SIGN PANEL, TYPE 1 OR 2	SP-66
TRAFFIC SIGNAL BATTERY BACKUP SYSTEM	SP-66
SIGNAL HEAD, LIGHT EMITTING DIODE	SP-67
PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	SP-74
DECORATIVE BASE FOR COMBINATION MAST ARM ASSEMBLY AND POLE	SP-74
RELOCATE CIVIL DEFENSE WARNING SIREN	SP-75
WIRELESS INTERCONNECT SYSTEM	SP-75
GENERAL LANDSCAPING	SP-76
CITY OF DEKALB SUPPLEMENTAL SPECIFICATIONS FOR WATER MAIN IMPROVEMENTS	SP-85
STORM WATER POLLUTION PREVENTION PLAN	SP-102
404 CORPS OF ENGINEERS PERMIT	SP-108
ILLINOIS DEPARTMENT OF NATURAL RESOURCES PERMIT	SP-119

INDEX LOCAL ROADS AND STREETS SPECIAL PROVISIONS

<u>LR#</u>	<u>TITLE</u>	<u>PAGE</u>
SD 16	"Slab Movement Detection Device" (Eff. 11-1-84).....	
SD 17	"Required Cold Milled Surface Texture" (Eff. 11-1-87).....	
105	X "Cooperation with Utilities" (Eff 1/1/99) (Rev 1/1/06).....	145-146
107-1	X "Nationwide Permit No. 14" (Eff. 2-1-04) (Rev. 3-1-05). Developed by the Bureau of Local Roads and Streets.....	112-118
	to outline the necessary requirements to comply with No. 14 permits.	
107-2	"Railroad Protective Liability Insurance for Local Lettings" (Eff. 3-1-05). Developed by the Bureau of Local Roads & Streets to require insurance policies to be submitted to the letting agency rather than the department.	
107-3	"Wages of Employees on Public Works" (Eff 8-10-95).....	
108	"Combination Bids (Eff. 1-1-94)(Rev. 3-1-05). Developed by the Bureau of Local Roads & Streets to allow the revision of working days and calendar days. Revised to incorporate applicable portions of deleted Sections 102 & 103	
109	"Contract Claims" (Eff. 1-1-02) (Rev. 5-1-02). Developed by the Bureau of Local Roads and Streets to assist local agencies in handling contract claims.	
212	"Shaping Roadway" (Eff. 8-1-69) (Rev. 1-1-02).....	
302	Rescinded	
355-1	"Asphalt Stabilized Base Course, Road Mix or Traveling Plant Mix" (Eff. 10-1-73)(Rev. 1-1-02).....	
355-2	"Asphalt Stabilized Base Course, Plant Mix" (Eff. 2-20-63)(Rev. 1-1-02)	
355-3	"Bituminous Aggregate Mixture Base Course" (6-27-66)(Rev. 1-1-02). Developed by the Bureau of Materials and Physical Research and the Bureau of Local Roads and Streets to construct a stabilized base course with paving grade asphalt.	
400	"Penetrating Emulsified Prime" (Eff. 4-1-84)(Rev. 1-1-02).....	
402	"Salt Stabilized Surface Course" (Eff. 2-20-63)(Rev. 1-1-02).....	
403-1	"Penetrating Emulsified Asphalt" (Eff. 1-1-94)(Rev. 1-1-02). Developed for bituminous surface treatments on roads that require flexibility and penetration due to low traffic volume.	
403-2	Bituminous Hot Mix Sand Seal Coat" (Eff. 8-1-69)(Rev. 1-1-02).....	
420	"PCC Pavement (Special)" (Eff. 5-12-64)(Rev. 1-1-02). Developed by the Bureau of Local Roads & Streets to allow local agencies to construct quality PCC pavements for low volume roads.	
430	"Paving Brick and Concrete Paver Pavements and Sidewalks" (Eff 1-1-04) Developed by the Bureau of Local Roads & Streets and the Bureau of Materials & Physical Research to provide statewide requirements for paving brick and concrete paver pavements and sidewalks.	
442	"Bituminous Patching Mixtures for Maintenance Use" (Eff 1-1-04). Developed by the Bureau of Local Roads & Streets to reference approved bituminous patching mixtures.	
451	"Crack Filling Bituminous Pavement with Fiber-Asphalt" (Eff. 10-1-91)(Rev. 1-1-02).....	
503-1	"Furnishing Class SI Concrete" (Eff. 10-1-73)(Rev. 1-1-02).....	
503-2	"Furnishing Class SI Concrete (Short Load)" (Eff. 1-1-89) (Rev. 1-1-02). Developed by the Bureau of Local Roads and Streets to allow a load charge to be added when short loads are expected during the contract.	
542	"Pipe Culverts, Type (Furnished)" (Eff. 9-1-64) (Rev. 1-1-02).....	
663	"Calcium Chloride Applied" (Eff. 6-1-58) (Rev. 1-1-02).....	
671	Rescinded	
701	"Flagger Certification" (Eff. 1-1-93) (Rev. 1-1-02).....	
702	"Construction and Maintenance Signs" (Eff 1-1-04) Developed by the Bureau of Local Roads & Streets to require florescent orange sheeting and a minimum sign size of 48" X 48" on construction and maintenance signs.	
1004	"Coarse Aggregate for Bituminous Surface Treatment" (Eff. 1-1-02). Developed by the Bureau of Materials & Physical Research, the Bureau of Local Roads & Streets, and Local Agencies to provide a coarser mix when aggregate producers have adjusted the CA-16 gradation according to the Aggregate Gradation Control System (AGCS) to a finer mix for Hot-Mix Asphalt.	
1013	"Rock Salt (Sodium Chloride)" (Eff. 8-1-69) (Rev. 1-1-02).....	

GUIDE BRIDGE SPECIAL PROVISION INDEX/CHECK SHEET

Effective: March 15, 2006

File Name	√	Pg No.	Title	Effective	Revised
GBSP1			Reserved		
GBSP2			Drilled Shafts	May 1, 2001	Feb 7, 2005
GBSP3			Reserved		
GBSP4			Polymer Modified Portland Cement Mortar	June 7, 1994	Jan 1, 2002
GBSP11			Permanent Steel Sheet Piling	Dec 15, 1993	Sept 28, 2005
GBSP12			Drainage System	June 10, 1994	Jan 1, 2002
GBSP13			Floating Bearing	Oct 13, 1998	June 21, 2004
GBSP14			Jack and Remove Existing Bearings	April 20, 1994	June 27, 2005
GBSP15			Three Sided Precast Concrete Structure	July 12, 1994	Sept 28, 2005
GBSP16			Jacking Existing Superstructure	Jan 11, 1993	Jan 3, 2003
GBSP17			Bonded Preformed Joint Seal	July 12, 1994	Jan 1, 2002
GBSP18			Modular Expansion Joint	May 19, 1994	June 27, 2005
GBSP19			Fabric Reinforced Elastomeric Trough	June 6, 1994	Sept 12, 2003
GBSP21			Cleaning and Painting Contact Surface Areas of Existing Steel Structures	June 30, 2003	Feb 7, 2005
GBSP22			Cleaning and Painting New Metal Structures	Sept 13, 1994	June 27, 2005
GBSP25	X	123	Cleaning and Painting Existing Steel Structures	Oct 2, 2001	Feb 7, 2005
GBSP26			Containment and Disposal of Lead Paint Cleaning Residues	Oct 2, 2001	Aug 18, 2004
GBSP28			Deck Slab Repair	May 15, 1995	Mar 15, 2006
GBSP29			Bridge Deck Microsilica Concrete Overlay	May 15, 1995	Mar 15, 2006
GBSP30			Bridge Deck Latex Concrete Overlay	May 15, 1995	Dec 12, 2005
GBSP31			Bridge Deck High-Reactivity Metakaolin (HRM) Concrete Overlay	Jan 21, 2000	Mar 15, 2006
GBSP32			Temporary Sheet Piling	Sept 2, 1994	Dec 13, 2002
GBSP33			Pedestrian Truss Superstructure	Jan 13, 1998	Mar 15, 2006
GBSP34			Concrete Wearing Surface	June 23, 1994	Dec 12, 2005
GBSP35			Silicone Bridge Joint Sealer	Aug 1, 1995	Feb 7, 2005
GBSP36			Surface Preparation and Painting Req. for Weathering Steel	Nov 21, 1997	Dec 12, 2005
GBSP37			Underwater Structure Excavation Protection.	April 1, 1995	Aug 21, 2002
GBSP38			Mechanically Stabilized Earth Retaining Walls.	Feb 3, 1999	Mar 15, 2006
GBSP39			Precast, Prestressed Concrete Deck Beams Stage Constr.	Sept 1, 1994	Jan 1, 2002
GBSP40			Fabric Reinforced Elastomeric Mat	July 14, 2000	Sept 12, 2003
GBSP41			Bridge Joint Sealing System	May 1, 2001	Jan 1, 2002
GBSP42			Drilled Soldier Pile Retaining Wall	Sept 20, 2001	Mar 30, 2005
GBSP43			Driven Soldier Pile Retaining Wall	Nov 13, 2002	April 25, 2003
GBSP44			Temporary Soil Retention System	Dec 30, 2002	
GBSP45			Bridge Deck Thin Polymer Overlay	May 7, 1997	Mar 5, 2003
GBSP46			Geotextile Retaining walls	Sept 19, 2003	Nov 17, 2003
GBSP47			High Performance Concrete Structures	Aug 5, 2002	Sept 10, 2003
GBSP49			LRFD Piling	Mar 15, 2006	
GBSP50			Removal of Existing Non-composite Bridge Decks	June 21, 2004	Feb 7, 2005
GBSP51			Pipe Underdrain for Structures	May 17, 2000	Dec 12, 2005
GBSP52			Porous Granular Embankment (Special)	Sept 28, 2005	
GBSP53			Structural Repair of Concrete	Mar 15, 2006	
GBSP54			Protective Coat	Mar 15, 2006	

BDE SPECIAL PROVISIONS
For The August 4, and September 22, 2006 Lettings

The following special provisions indicated by an "x" are applicable to this contract. An * indicates a new or revised special provision for the letting.

<u>File Name</u>	<u>PG</u>		<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
	<u>#</u>				
80099			Accessible Pedestrian Signals (APS)	April 1, 2003	
80156	147	X	Aggregate Shipping Tickets	Jan. 1, 2006	
80108			Asbestos Bearing Pad Removal	Nov. 1, 2003	
7254I			Asbestos Waterproofing Membrane and Asbestos Bituminous Concrete Surface Removal	June 1, 1989	June 30, 1994
80128	148	X	Authority of Railroad Engineer	July 1, 2004	
80065	149	X	Bituminous Base Course/Widening Superpave	April 1, 2002	Aug. 1, 2005
80050	155	X	Bituminous Concrete Surface Course	April 1, 2001	April 1, 2003
80142	156	X	Bituminous Equipment, Spreading and Finishing Machine	Jan. 1, 2005	
80066			Bridge Deck Construction	April 1, 2002	April 1, 2004
5026I			Building Removal-Case I (Non-Friable and Friable Asbestos)	Sept. 1, 1990	Aug. 1, 2001
5048I			Building Removal-Case II (Non-Friable Asbestos)	Sept. 1, 1990	Aug. 1, 2001
5049I			Building Removal-Case III (Friable Asbestos)	Sept. 1, 1990	Aug. 1, 2001
5053I			Building Removal-Case IV (No Asbestos)	Sept. 1, 1990	Aug. 1, 2001
80118	157	X	Butt Joints	April 1, 2004	April 1, 2005
80031			Calcium Chloride Accelerator for Portland Cement Concrete Patching	Jan. 1, 2001	
80077			Chair Supports	Nov. 1, 2002	Nov. 2, 2002
80051	158	X	Coarse Aggregate for Trench Backfill, Backfill and Bedding	April 1, 2001	Nov. 1, 2003
80094	165	X	Concrete Admixtures	Jan. 1, 2003	July 1, 2004
80112			Concrete Barrier	Jan. 1, 2004	April 2, 2004
80102	170	X	Corrugated Metal Pipe Culverts	Aug. 1, 2003	July 1, 2004
80114	171	X	Curing and Protection of Concrete Construction	Jan. 1, 2004	Nov. 1, 2005
80146	179	X	Detectable Warnings	Aug. 1, 2005	
80029	181	X	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	June 22, 2005
80144			Elastomeric Bearings	April 1, 2005	
31578	189	X	Epoxy Coating on Reinforcement	April 1, 1997	Jan. 1, 2003
80041			Epoxy Pavement Marking	Jan. 1, 2001	Aug. 1, 2003
80055	190	X	Erosion and Sediment Control Deficiency Deduction	Aug. 1, 2001	Nov. 1, 2001
80103	191	X	Expansion Joints	Aug. 1, 2003	
80101	192	X	Flagger Vests	April 1, 2003	Jan. 1, 2006
80079	193	X	Freeze-Thaw Rating	Nov. 1, 2002	
80072	194	X	Furnished Excavation	Aug. 1, 2002	Nov. 1, 2004
80054	195	X	Hand Vibrator	Nov. 1, 2003	
80147			Illuminated Sign	Aug. 1, 2005	
* 80109			Impact Attenuators	Nov. 1, 2003	Aug. 1, 2006
* 80110	196	X	Impact Attenuators, Temporary	Nov. 1, 2003	Aug. 1, 2006
80104	198	X	Inlet Filters	Aug. 1, 2003	
80080			Insertion Lining of Pipe Culverts	Nov. 1, 2002	Aug. 1, 2003
80150	200	X	Light Emitting Diode (LED) Pedestrian Signal Head	Nov. 1, 2005	April 1, 2006
80067	202	X	Light Emitting Diode (LED) Signal Head	April 1, 2002	Nov. 1, 2005
80081			Lime Gradation Requirements	Nov. 1, 2002	
80133			Lime Stabilized Soil Mixture	Nov. 1, 2004	April 1, 2006
80158			Manholes	April 1, 2006	
80045			Material Transfer Device	June 15, 1999	March 1, 2001
80137			Minimum Lane Width with Lane Closure	Jan. 1, 2005	
80138	204	X	Mulching Seeded Areas	Jan. 1, 2005	
80082	205	X	Multilane Pavement Patching	Nov. 1, 2002	
80129			Notched Wedge Longitudinal Joint	July 1, 2004	
80069			Organic Zinc-Rich Paint System	Nov. 1, 2001	Aug. 1, 2003

<u>File Name</u>	<u>PG</u>		<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
	<u>#</u>				
80116	206	X	Partial Payments	Sept. 1, 2003	
80013			Pavement and Shoulder Resurfacing	Feb. 1, 2000	July 1, 2004
53600	207	X	Pavement Thickness Determination for Payment	April 1, 1999	Jan. 1, 2004
80022	212	X	Payments to Subcontractors	June 1, 2000	Jan. 1, 2006
80155	214	X	Payrolls and Payroll Records	Aug. 10, 2005	
80130	216	X	Personal Protective Equipment	July 1, 2004	
80148	217	X	Planting Woody Plants	Jan. 1, 2006	
80134			Plastic Blockouts for Guardrail	Nov. 1, 2004	
80073			Polymer Modified Emulsified Asphalt	Nov. 1, 2002	
80119			Polyurea Pavement Marking	April 1, 2004	
80124	218	X	Portable Changeable Message Signs	Nov. 1, 1993	April 2, 2004
80139	219	X	Portland Cement	Jan. 1, 2005	Nov. 1, 2005
80083	220	X	Portland Cement Concrete	Nov. 1, 2002	
80036			Portland Cement Concrete Patching	Jan. 1, 2001	Jan. 1, 2004
419	221	X	Precast Concrete Products	July 1, 1999	Nov. 1, 2004
80120			Precast, Prestressed Concrete Members	April 1, 2004	
80084	222	X	Preformed Recycled Rubber Joint Filler	Nov. 1, 2002	
80015			Public Convenience and Safety	Jan. 1, 2000	
80121			PVC Pipeliner	April 1, 2004	April 1, 2005
80159			Railroad Flaggers	April 1, 2006	
80122			Railroad, Full-Actuated Controller and Cabinet	April 1, 2004	
34261			Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
80157	223	X	Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	
80105			Raised Reflective Pavement Markers (Bridge)	Aug. 1, 2003	
80011	224	X	RAP for Use in Bituminous Concrete Mixtures	Jan. 1, 2000	April 1, 2002
* 80160			Reflective Crack Control Treatment	April 1, 2006	Aug. 1, 2006
80151	228	X	Reinforcement Bars	Nov. 1, 2005	Nov. 2, 2005
* 80164			Removal and Disposal of Regulated Substances	Aug. 1, 2006	
80032			Remove and Re-Erect Steel Plate Beam Guardrail and Traffic Barrier Terminals	Jan. 1, 2001	Jan. 1, 2005
80085			Sealing Abandoned Water Wells	Nov. 1, 2002	
* 80131	230	X	Seeding and Sodding	July 1, 2004	Aug. 1, 2006
80152			Self-Consolidating Concrete for Cast-In-Place Construction	Nov. 1, 2005	
80132	233	X	Self-Consolidating Concrete for Precast Products	July 1, 2004	Nov. 1, 2005
80096			Shoulder Rumble Strips	Jan. 1, 2003	
80140			Shoulder Stabilization at Guardrail	Jan. 1, 2005	
80135			Soil Modification	Nov. 1, 2004	April 1, 2006
80070	235	X	Stabilized Subbase and Bituminous Shoulders Superpave	April 1, 2002	Aug. 1, 2005
80127	241	X	Steel Cost Adjustment	April 2, 2004	July 1, 2004
* 80153			Steel Plate Beam Guardrail	Nov. 1, 2005	Aug. 1, 2006
80143	245	X	Subcontractor Mobilization Payments	April 2, 2005	
80086	246	X	Subgrade Preparation	Nov. 1, 2002	
80136			Superpave Bituminous Concrete Mixture IL-4.75	Nov. 1, 2004	
80010	247	X	Superpave Bituminous Concrete Mixtures	Jan. 1, 2000	April 1, 2004
80039			Superpave Bituminous Concrete Mixtures (Low ESAL)	Jan. 1, 2001	April 1, 2004
80075			Surface Testing of Pavements	April 1, 2002	Nov. 1, 2005
80145			Suspension of Slipformed Parapets	June 11, 2004	
80092	254	X	Temporary Concrete Barrier	Oct. 1, 2002	Nov. 1, 2003
80087	257	X	Temporary Erosion Control	Nov. 1, 2002	
80008			Temporary Module Glare Screen System	Jan. 1, 2000	
80106			Temporary Portable Bridge Traffic Signals	Aug. 1, 2003	
80098			Traffic Barrier Terminals	Jan. 1, 2003	
57291	259	X	Traffic Control Deficiency Deduction	April 1, 1992	Jan. 1, 2005
80161			Traffic Signal Grounding	April 1, 2006	
20338	260	X	Training Special Provisions	Oct. 15, 1975	

<u>File Name</u>	<u>PG</u>		<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
		<u>#</u>			
80107	263	X	Transient Voltage Surge Suppression	Aug. 1, 2003	
80123	265	X	Truck Bed Release Agent	April 1, 2004	
80154			Turf Reinforcement Mat	Nov. 1, 2005	
80162			Uninterruptable Power Supply (UPS)	April 1, 2006	
80149			Variable Spaced Tining	Aug. 1, 2005	
80163			Water Blaster with Vacuum Recovery	April 1, 2006	
80048	266	X	Weight Control Deficiency Deduction	April 1, 2001	Aug. 1, 2002
80090			Work Zone Public Information Signs	Sept. 1, 2002	Jan. 1, 2005
80125			Work Zone Speed Limit Signs	April 2, 2004	Jan. 1, 2006
80126			Work Zone Traffic Control	April 2, 2004	Nov. 1, 2005
80097	268	X	Work Zone Traffic Control Devices	Jan. 1, 2003	Nov. 1, 2004
80071	270	X	Working Days	Jan. 1, 2002	

The following special provisions have been **deleted** from use:

80141 Additional Award Criteria This special provision is no longer required.

80113 Curb Ramps for Sidewalk Warnings This special provision has been replaced by the BDE Special Provision, "Detectable Warnings".

The following special provisions require additional information from the designer. The additional information needs to be included in a separate document attached to this check sheet. The Project Development and Implementation section will then include the information in the applicable special provision. The Special Provisions are:

- Building Removal-Case I
- Building Removal-Case II
- Building Removal-Case III
- Building Removal-Case IV
- DBE Participation
- Material Transfer Device
- Railroad Protective Liability Insurance
- Training Special Provisions
- Working Days

**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 *Illinois Manual on Uniform Traffic Control Devices for Streets and Highways*; and the *Manual of Test Procedures for Materials* in effect on the date of invitation for bids; the latest edition of the *Standard Specifications for Water and Sewer Main Construction in Illinois*; the Illinois Urban Manual; and the Supplemental Specifications and Recurring Special Provisions indicated on the Check Sheet included herein which apply to and govern the construction of FAU Route 5348 (Annie Glidden Road), Section 05-00160-00-WR, City of DeKalb, and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

LOCATION OF IMPROVEMENT

This improvement is located on FAU Route 5348 (Annie Glidden Road) from the Union Pacific Railroad Bridge to Fairview Drive, for a total distance of 6,308 feet, within the City of DeKalb, DeKalb County, Illinois.

DESCRIPTION OF PROJECT

This improvement consists of full-depth bituminous pavement reconstruction, full-depth bituminous widening and resurfacing, bituminous bicycle path, precast box culverts, sidewalk, curb and gutter, storm sewer, water main, traffic signal modernization and interconnect, lighting, pavement marking, landscaping, cleaning and painting steel bridge, and other appurtenant work necessary to complete the project in accordance with the plans, Standard Specifications, and these Special Provisions.

COMPLETION DATES PLUS GUARANTEED WORKING DAYS

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

A completion date has been set for this contract as noted below. Should the Contractor fail to complete the work on or before the completion date stipulated or within such extended time as may have been allowed, liquidated damages as stated in Article 108.09 of the Standard Specifications shall be assessed.

Completion Date October 31, 2007

The Contractor shall complete all contract items and safely open all roadways to traffic by 11:59 p.m. on October 31, 2007, except as specified herein.

The Contractor will be allowed to complete all clean-up work and punch list items 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 at the discretion of the Engineer.

Article 108.09 of the Standard Specifications shall apply to both the completion dates and the number of working days.

EXISTING UTILITIES

Existing utilities are shown on the plans according to information obtained from utility companies, the City, and surveys. The Engineer does not guarantee the accuracy or completeness of this information.

The Contractor shall be aware of the location of all utilities and structures in the project area. The Contractor shall conduct construction operations to avoid damage to the above-mentioned utilities or structures.

Should any damage to utilities occur due to the Contractor's negligence, the Contractor shall be responsible for making all repairs in a manner acceptable to the Engineer. All costs associated with making the repairs shall be the responsibility of the Contractor.

The Contractor shall be aware of the locations of vehicle detector loops cut into the pavement. Any vehicle detector loop damaged by the Contractor's negligence shall be repaired by the Contractor in a manner acceptable to the Engineer. All costs associated with making the repairs shall be the responsibility of the Contractor.

The Contractor shall notify all utility owners of the proposed construction schedule and shall coordinate construction operations with the utility owners so that relocation of utility lines and structures can proceed in an orderly manner. Notification shall be in writing with copies transmitted to the Engineer. The Contractor shall be responsible for obtaining from each utility company the working schedule for adjusting or relocating their respective facilities. Articles 105.07 and 107.31 of the Standard Specifications, and the Special Provision for Cooperation with Utilities shall apply.

The names of representatives of the known utility companies are listed below.

ELECTRIC	Commonwealth Edison Company Mr. Mike Lennox 123 Energy Avenue Rockford, IL 61109 (815) 490-2869
CABLE TV	Comcast Cable Communications Mr. Mike Williams 1430 Sycamore Road DeKalb, IL 60115 (815) 739-9415
GAS	Nicor Gas Mr. Scott Stogsdill 1844 Ferry Road Naperville, IL 60563 (630) 983-8676
TELEPHONE	Verizon Mr. Joel Plapp 112 West Elm Street Sycamore, IL 60178 (815) 895-1415
FIBER OPTIC	Lightcore Mr. Robert Sampson 14567 North Outer Forty Road, Suite 500 Chesterfield, MO 63017 (314) 880-1632

DEKALB FIBER OPTIC	Mi-tech Services Mr. Jon T. Gruber 1700 Industrial Drive Green Bay, WI 54302 (920) 465-8018
SANITARY	DeKalb Sanitary District Mr. Michael Zima 303 Hollister Avenue DeKalb, IL 60115 (815) 758-3513
WATER	City of DeKalb Mr. Bryan Faivre 1216 Market Street DeKalb, IL 60115 (815) 748-2050

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.

The Contractor's attention is directed to the fact that there exists within the State of Illinois a Joint Utility Locating Information for Excavators (JULIE) system. All utility companies and municipalities which have gas mains and a number of others are a part of this system.

Instead of notifying each individual utility owner that he will be working in the area, the Contractor can call the JULIE system at (800) 892-0123, and they will notify all utility companies involved that their respective utility should be located. A minimum of 48 hours' advance notice is required, and the Contractor will have to provide the political name of the township where the work is located (as shown on the cover sheet), along with other location information such as land section and quarter section numbers.

PAVEMENT MARKING PAINT

In addition to the requirements of Article 105.09 of the Standard Specifications, the Contractor shall furnish, at their expense, white, pink or purple pavement marking paint in aerosol cans, for use by the Engineer. The Contractor and subcontractors shall only use these same colors for their own markings, therefore, **not** using JULIE utility colors.

CONSTRUCTION SAFETY AND HEALTH STANDARDS

It is a condition of this contract and shall be made a condition of each subcontract entered into pursuant to this contract that the Contractor and any Subcontractor shall not require any laborer or mechanic employed in performance of the contract to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous to their health or safety, as determined under Federal Construction Safety and Health Standards.

PUBLIC SAFETY AND CONVENIENCE

The Contractor shall maintain entrances along the proposed improvement. Interference with traffic movements and inconvenience to owners of abutting property and the public shall be kept to a minimum. Any delays or inconveniences caused by the Contractor by complying with these requirements shall be considered as included in the contract, and no additional compensation will be allowed.

Contractors shall plan their work so that there will be no open holes in the pavement and that all barricades will be removed from the roadway during non-working hours, except where required for public safety.

MAINTENANCE OF ROADWAY

Beginning on the date that the Contractor begins work on this project, the Contractor shall assume responsibility for the normal maintenance of all 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 required for this work will be provided by the Contractor as required by the Engineer.

The work involved in maintaining the existing pavement and shoulders as above specified will be paid for separately at the respective contract unit prices for the various items of work involved unless specified elsewhere in these Special Provisions. Traffic control and protection required for this work shall be paid for as specified in these Special Provisions.

If no such items of work have been provided for 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 as extra work, in accordance with Article 109.04 of the Standard Specifications.

PROTECTION OF EXISTING DRAINAGE FACILITIES DURING CONSTRUCTION

All existing drainage structures are to be kept free of debris resulting from construction operations. All work and material necessary to prevent accumulation of debris in the drainage structures will be considered as incidental to the contract. Any debris in the drainage structures resulting from construction operations shall be removed at the Contractor's own expense, and no extra compensation will be allowed. Should reconstruction or adjustment of a drainage structure be required by the Engineer in the field, the necessary work and payment shall be done in accordance with Section 602 and Article 104.02 respectively of the Standard Specifications.

During construction, if the Contractor's forces encounter or otherwise becomes aware of any sewers, underdrains, or field drains within the right-of-way other than those shown on the plans, they shall inform the Engineer. The Engineer shall direct the work necessary to maintain or replace the facilities in service, and to protect them from damage during construction if maintained. Existing facilities to be maintained that are damaged because of non-compliance with this provision shall be replaced at the Contractor's own expense. Should the Engineer have directed the replacement of a facility, the necessary work and payment shall be done in accordance with Sections 550 and 601 and Article 104.02 respectively of the Standard Specifications.

KEEPING ROADS OPEN TO TRAFFIC

All roads shall remain open to traffic, except as provided for in the contract or as directed by the Engineer.

One through lane of traffic in each direction shall be maintained on Annie Glidden Road and South Malta Road/Taylor Street throughout construction, unless otherwise approved by the City and upon the recommendation of the Engineer.

If approved, the Contractor may reduce traffic to one lane due to construction only between the hours of 9:00 a.m. and 3:00 p.m. and per the Engineer's approval. The Contractor shall maintain two-way traffic during these restricted hours with the use of signs and flagmen as shown on the traffic control standards.

All lanes of traffic in each direction shall be maintained all evenings between 3:00 p.m. and 9:00 a.m. and all day if no construction activities are being carried out. These restricted lane closure time provisions may be waived at the Engineer's discretion.

PROTECTION AND RESTORATION OF TRAFFIC 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 furnish and replace at his own expense any traffic sign or post which, as determined by the Engineer from the sign log, has been damaged or lost by the Contractor or a third party."

If, during construction, the Engineer determines that any signs or posts are deficient not due to the Contractor's negligence, the City of DeKalb will furnish new signs and/or posts to the Contractor to replace those determined to be deficient.

This work shall apply to informational signs as well as traffic signs.

All signs removed shall be reinstalled 16 to 18 feet off the edge of pavement where possible. In curb sections, this will vary and will be determined by the City of DeKalb.

All single-sign installations shall be installed with the bottom of the sign five (5) feet above edge of pavement in rural districts, and seven (7) feet above the edge of pavement in business, commercial or residential districts. On installations having two or more signs, the bottom of the lowest sign shall be four (4) feet above edge of pavement.

All signs replaced will be erected using new metal posts. They are to be driven into solid ground using pneumatic driver. This work will not be paid for separately but shall be considered included in the contract.

PROTECTION OF TREES

Extra care shall be exercised when operating equipment around trees or shrubs, including protecting the tree trunks, branches, and roots from damage. All pruning, protection, and replacement in accordance with Section 201 of the Standard Specifications will not be paid for separately but shall be included in the contract.

EARTH EXCAVATION

This work shall be in accordance with Section 202 of the Standard Specifications insofar as applicable and the following provisions.

This work shall include removal of any existing bituminous pavement shown on the plans and cross sections or as directed by the Engineer.

All excess excavated soil not used as embankment, backfill, or topsoil shall be disposed of at off-site locations provided by the Contractor or taken to a location designated by the Engineer. Overhaul will not be paid for but shall be included in the unit price per cubic yard for Earth Excavation.

Embankment shall not be paid for separately but shall be included in the cost of Earth Excavation.

Excavation for the roadway has been computed on the basis of cut and fill to the subgrade of the proposed topsoil from existing pre-construction conditions. Topsoil Excavation and Topsoil Placement will be paid for separately. Excavation or embankment required for temporary pavement will be included in the item Temporary Pavement, 8".

Payment shall be based on actual volume of excavation completed without an adjustment in unit price due to an increase or decrease in plan quantity.

Earth excavation to be used as embankment, particularly from the compensatory storage basin area, may require a reduction in moisture content that typically can be achieved by spreading the material in a single lift and aerating with a continuous discing operation. The geotechnical report is on file with the Engineer.

It is the intent of the contract to use on-site excavated material for embankment throughout the improvement. If on-site material is not available for use as embankment due to construction staging or weather conditions, Furnished Excavation may be used as approved by the Engineer.

Earth moved more than once due to construction staging and/or procedures selected by the Contractor will not be paid for separately but shall be considered included in the cost of Earth Excavation.

REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL

This work shall be in accordance with Section 202 of the Standard Specifications insofar as applicable and the following provisions.

Soft, unstable soils of varying depths may exist at locations within the roadway reconstruction sections which will require removal and replacement with Porous Granular Embankment, Special as shown on the typical sections and cross sections. The geotechnical report is on file with the Engineer.

A depth of 18 inches has been assumed for removal of unsuitable materials and replacement with Porous Granular Embankment, Special. The actual extent of removal and replacement shall be determined by the Engineer in the field at the time of construction. The undercut shall extend 12 inches outside the bottom edge of the proposed subgrade and come up at 1:1 slopes to the existing ground surface.

A proof rolling procedure acceptable to the Engineer shall be followed in order to verify the stability of the subgrade prior to placement of the aggregate subgrade. Verification of subgrade stability shall be done through the use of a cone penetrometer in conjunction with the Illinois Department of Transportation's Subgrade Stability Manual.

A contingency quantity of 15,504 cubic yards of this item has been included in the plan quantities, along with 15,504 cubic yards of Porous Granular Embankment, Special for replacement of the unsuitable material beneath proposed roadway pavement. Undercutting shall only be allowed at the discretion of the Engineer after it is determined that the provision of Section 301 of the Standard Specifications will not yield results to allow timely progress on the project.

FURNISHED EXCAVATION

This work shall be in accordance with Sections 204 and 205 of the Standard Specifications insofar as applicable and the following provisions.

It is the intent of the contract to use on-site excavated material for embankment throughout the improvement. If on-site material is not available for use as embankment due to construction staging or weather conditions, Furnished Excavation may be used as approved by the Engineer.

Embankment shall not be paid for separately but shall be included in the cost of Furnished Excavation.

A contingency quantity of 2000 cubic yards of Furnished Excavation has been included in the contract to establish an unit price for this item.

COMPENSATORY STORAGE BASIN EMBANKMENT

This work shall be in accordance with Section 205 of the Standard Specifications insofar as applicable and the following provisions.

Earth embankment to be used in the creation of the berms at the compensatory storage basin shall be constructed of impermeable soils and shall be homogeneous material. All materials used in the construction of the compensatory storage basin embankment shall be approved by a certified/licensed geotechnical technician or geotechnical engineer.

The slope/berm stability shall also be approved by the geotechnical technician or geotechnical engineer.

The earth embankment at the compensatory storage basin shall be constructed on suitable soils. Unsuitable underlying soils will be removed prior to construction of the embankment.

Compaction of the earth embankment shall be made in layers using a "sheepsfoot" or other approved equipment to attain 95% standard laboratory density.

Berm topsoil placement and seeding shall occur in the time frame indicated in the specifications. Stability of the earth embankment berm shall be monitored until the facility has been vegetated to the satisfaction of the Engineer. The vegetation shall be established in advance of the compensatory storage basin becoming functional.

This work will not be paid for separately but shall be considered included in the cost of Earth Excavation.

GRANULAR EMBANKMENT, SPECIAL

This work shall be in accordance with Section 206 of the Standard Specifications insofar as applicable and the following provisions.

This work shall consist of furnishing, placing, shaping, and compacting aggregate as subgrade to the proposed box culvert according to the lines and grades shown on the plans.

The material shall conform to Gradation CA2 of Article 1004.04© of the Standard Specifications.

This work shall be paid for at the contract unit price per ton for GRANULAR EMBANKMENT, SPECIAL.

POROUS GRANULAR EMBANKMENT, SPECIAL

This work consists of furnishing, placing, and compacting porous granular material to the lines and grades shown on the plans or as directed by the Engineer in accordance with applicable portions of Section 207 of the Standard Specifications. The material shall be used as a bridging layer over soft, pumpy, loose soil and for placing under water and shall conform with Article 1004.06 of the Standard Specifications except the gradation shall be as follows:

1. Crushed Stone, Crushed Blast Furnace Slag, and Crushed Concrete

<u>Sieve Size</u>	<u>Percent Passing</u>
*150 mm (6")	97±3
*100 mm (4")	90±10
50 mm (2")	45±25
75 µm (#200)	5±5

2. Gravel, Crushed Gravel and Pit Run Gravel

<u>Sieve Size</u>	<u>Percent Passing</u>
*150 mm (6")	97 \pm 3
*100 mm (4")	90 \pm 10
50 mm (2")	55 \pm 25
4.75 mm (#4)	30 \pm 20
75 μ m (#200)	5 \pm 5

* For undercut greater than 450 mm (18"), the percent passing the 150 mm (6") sieve may be 90 \pm 10 and the 100 mm (4") sieve requirements eliminated.

The porous granular material shall be placed in one lift when the total thickness to be placed is 600 mm (24") or less or as directed by the Engineer. Each lift of the porous granular material shall be rolled with a vibratory roller meeting the requirements of Article 1101.01 of the Standard Specifications to obtain the desired keying or interlock and compaction. The Engineer shall verify that adequate keying has been obtained.

Construction equipment not necessary for the completion of the replacement material will not be allowed on the undercut areas until completion of the recommended thickness of the porous granular embankment, special.

Full-depth undercut should occur at limits determined by the Engineer. A transition slope to the full depth of undercut shall be made outside the undercut limits at a taper of 1:1 below the proposed aggregate subgrade.

The Porous Granular Embankment, Special shall be used as field conditions warrant at the time of construction. Payment shall be based on actual volume of Porous Granular Embankment, Special installed without an adjustment in unit price due to an increase or decrease in plan quantity.

This work shall be paid for at the contract unit price per cubic yard for POROUS GRANULAR EMBANKMENT, SPECIAL.

GEOTECHNICAL FABRIC FOR GROUND STABILIZATION

This work shall be in accordance with Section 210 of the Standard Specifications insofar as applicable and the following provision.

Geotechnical fabric for ground stabilization shall be placed at all locations requiring undercut and Porous Granular Embankment, Special and as required for Geotextile Retaining Walls.

Payment shall be based on actual area of fabric installed without adjustment in unit price due to an increase or decrease in plan quantity.

TOPSOIL EXCAVATION

This work shall be in accordance with Section 211 of the Standard Specifications insofar as applicable and the following provisions.

This item is for excavation of topsoil obtained from within the compensatory storage basin area only. An existing topsoil thickness of 12" has been assumed for this area. This material shall be stockpiled within the project limits at locations approved by the Engineer. This material shall be used for Topsoil Placement, of the depth specified, throughout the project limits.

This work shall be paid for at the contract unit price per cubic yard for TOPSOIL EXCAVATION, which price shall include excavation and stockpiling of the material within the project limits.

TOPSOIL PLACEMENT, 4"

This work shall be in accordance with Section 211 of the Standard Specifications insofar as applicable and the following provisions.

All topsoil, regardless of origin, shall be in accordance with Article 1081.05 and shall be approved by the Engineer prior to placement.

Plan quantities reflect 4" thick topsoil placement in all disturbed areas not otherwise paved. Excavation for the roadway has been computed on the basis of cut and fill to the subgrade of the proposed topsoil.

This work will be paid for at the contract unit price per square yard for TOPSOIL PLACEMENT, 4" which price will include hauling the topsoil from the stockpile located within the project limits and placing the topsoil at locations designated by the Engineer throughout the project.

TOPSOIL PLACEMENT, 24"

This work shall be in accordance with Section 211 of the Standard Specifications insofar as applicable and the following provisions.

All topsoil, regardless of origin, shall be in accordance with Article 1081.05 and shall be approved by the Engineer prior to placement.

This item shall be used in the landscaped medians along Annie Glidden Road.

This work will be paid for at the contract unit price per square yard for TOPSOIL PLACEMENT, 24" which price will include hauling the topsoil from the stockpile located within the project limits and placing the topsoil at median locations designated by the Engineer.

EXPLORATION TRENCH 84" DEPTH

This item shall consist of excavating a trench at the locations directed by the Engineer for the purpose of locating existing sewers or water mains within the construction limits of the proposed improvement.

The trench shall be deep enough to expose the sewers or water main, and the width of the trench shall be sufficient to allow proper investigation to determine if the sewers or water main need to be adjusted.

The exploration trench shall be backfilled with trench backfill meeting the requirements of the Standard Specifications, the cost of which shall be included in the item of Exploration Trench.

An estimated length of exploration trench has been shown in the summary of quantities to establish a unit price only, and payment shall be based on the actual length of trench explored without a change in unit price due to any adjustment in plan quantities.

This work shall be paid for at the contract unit price per foot for EXPLORATION TRENCH 84" DEPTH, and no extra compensation will be allowed for any delays, inconveniences, or damage sustained by the Contractor in performing the work.

EROSION CONTROL

This work shall be in accordance with Sections 250, 251, 252, 253, 280, 281, and 282 of the Standard Specifications and the Illinois Urban Manual insofar as applicable and the following provisions.

The City of DeKalb, Illinois Department of Natural Resources and United States Army Corps of Engineers have reviewed the Soil Erosion and Sedimentation Plans. Major changes to the Soil Erosion and Sedimentation Plans should be avoided near the delineated jurisdictional Waters of the U.S.

Recommendations by the City during construction shall be implemented. The Contractor, with the consent of the Engineer, may increase erosion-control measures to protect against sediment transport from the construction site.

Costs incurred by penalties, obtaining additional permits, or delays due to insufficient maintenance or construction of the erosion-control measures shall be at the Contractor's expense, with no additional compensation.

The Contractor shall comply with the following standards:

- Unless otherwise indicated, all vegetative and structural erosion and sediment control practices will be constructed according to minimum standards and specifications in the Illinois Urban Manual revised February 2002.
- A copy of the approved erosion and sediment control plan shall be maintained on the site at all times.
- Prior to commencing land-disturbing activities in areas other than indicated on these plans (including but not limited to additional phases of development and off-site borrow or waste areas), a supplementary erosion-control plan shall be submitted to the City for review.
- The Contractor is responsible for installation of any additional erosion-control measures necessary to prevent erosion and sedimentation as determined by the City.
- During dewatering operations, water will be pumped into sediment basins or silt traps. Dewatering directing into field tiles or stormwater structures is prohibited. (Dewatering to the sewers that flow to the stormwater detention facility is permitted).
- The Contractor shall allow a City, National Resource Conservation District (NRCS) or Army Corps of Engineers District representative the right to conduct on-site investigations throughout all active construction phases to determine whether all necessary soil erosion and sediment control practices have been installed and are functioning properly.

SEEDING

This work shall be in accordance with Section 250 of the Standard Specifications insofar as applicable and the following provisions.

All areas that are to be permanently seeded shall be mulched except where erosion control blanket is indicated on plan as an erosion control measure. Erosion control blanket shall be used at the compensatory storage basin side slopes, at ditch bottom locations indicated on plan, and where Seeding, Class 4B is planted.

Mulch, Method 2 and Erosion Control Blanket will not be included in the cost of the seeding but will be paid for separately.

Areas with insufficient growth of the vegetation, as determined by the Engineer, shall be re-seeded and mulched at no additional compensation to the Contractor. Re-seeding shall take place within 24 hours of notification from the Engineer.

This work shall be measured and paid for at the contract unit price per acre of SEEDING, of the Class specified. This price shall include preparation of the soil, seed mixture, and all material, equipment, and labor necessary to complete this item to the satisfaction of the Engineer.

MULCH, METHOD 2

This work shall be in accordance with Sections 251 of the Standard Specifications insofar as applicable and the following provision.

Procedures 1 and 2 of Mulch Method, Type 2 will not be allowed for this contract.

This work shall be measured and paid for at the contract unit price per acre for MULCH, METHOD 2. This price shall include mulch and all material, equipment, and labor necessary to complete this work.

EROSION CONTROL BLANKET

This work shall be in accordance with Section 251 of the Standard Specifications insofar as applicable and the following provisions.

The erosion control blanket shall be installed according to Section 251.04 of the Standard Specifications and shall be excelsior blanket exclusively.

The erosion control blanket shall be affixed to the earth as illustrated in the Illinois Urban Manual, Standard Drawing IL-530.

Failure of the erosion control blanket to prevent slope erosion shall be corrected within 24 hours or before any precipitation as predicted by the National Weather Service for DeKalb, Illinois, or as directed by the Engineer. Maintenance of the failed erosion control blanket shall include additional topsoil, seeding of the type specified for the area, and additional erosion control blanket (if necessary) at no additional compensation to the Contractor.

This work shall be measured in place and paid for at the contract unit price per square yard of EROSION CONTROL BLANKET. This price shall include earth staples, excelsior blanket, and all material, equipment, and labor necessary for a complete installation.

PLANTING TREES AND SHRUBS

The Engineer will place marking flags furnished by the Contractor at locations of each tree and shrub before delivery of the plant material.

Under no circumstances should trees or shrubs be planted on the berm at the compensatory storage basin.

An estimated quantity of trees and shrubs has been shown in the plans. Payment shall be based on actual quantity of each item planted without a change in unit price as a result of adjustment in plan quantities.

TEMPORARY EROSION CONTROL

Maintenance of the temporary erosion control systems in accordance with Article 280.05 of the Standard Specifications, including replacement if necessary, shall not be paid for but shall be included in the contract unit price for the installed system. Removal of temporary erosion control items shall occur only upon approval of the Engineer.

Revise Article 280.07(h) to read: Maintenance of temporary erosion control systems, including repair of various systems, removal of entrapped sediment and cleaning of any silt filter fabric, will not be paid for separately but shall be included in the contract unit price for each temporary erosion control system. If the Contractor fails to maintain the temporary erosion control systems as directed by the Engineer, the Engineer

is required to file an Incidence of Non-Compliance (ION) with the Illinois Environmental Protection Agency, as required by the Storm Water Pollution Prevention Plan.

TEMPORARY EROSION CONTROL SEEDING

This work shall be in accordance with Section 280 of the Standard Specifications and Code 965 of the Illinois Urban Manual Practice Standard, insofar as applicable and the following provisions.

Lime, fertilizer, and seeding mixture necessary for this item shall be considered included in the unit price per pound of Temporary Erosion Control Seeding.

All areas that are temporary seeded shall be mulched using Mulch, Method 2. Mulch will not be included in the cost of the temporary seeding but will be paid for separately.

Areas with insufficient growth of the temporary vegetation, as directed by the Engineer, shall be reseeded and mulched at no additional compensation to the Contractor. Reseeding shall take place within 24 hours of notification from the Engineer.

This work shall be measured and paid for at the contract unit price per pound of TEMPORARY EROSION CONTROL SEEDING. This price shall include preparation of the soil, lime, fertilizer, seed mixture, and all material, equipment, and labor necessary to complete this item to the satisfaction of the Engineer.

TEMPORARY DITCH CHECKS

This work shall be in accordance with Section 280 of the Standard Specifications insofar as applicable and the following provisions.

Temporary ditch checks shall be installed according to Section 280 of the Standard Specifications and IDOT Highway Standard Detail 280001. The temporary ditch checks shall be constructed of urethane foam/geotextile materials. The use of straw bales will not be allowed for this work.

Failure of a temporary ditch check shall be corrected within 24 hours or before any precipitation as predicted by the National Weather Service for DeKalb, Illinois, or as directed by the Engineer. Maintenance of the failed temporary ditch check shall be performed at no additional compensation to the Contractor.

This work shall be measured and paid for at the contract unit price each for TEMPORARY DITCH CHECKS. This price shall include urethane foam/geotextile, stakes, and all material, equipment, and labor necessary for a complete installation and removal.

PERIMETER EROSION BARRIER

This work shall be in accordance with Section 280 of the Standard Specifications insofar as applicable and the following provisions.

Perimeter erosion barrier shall be installed as shown on the soil erosion and sedimentation plans. The Engineer may change the start or end locations due to field verification. The perimeter erosion barrier shall be used to eliminate silt-laden stormwater from flowing out of the construction site.

Maintenance shall be completed in accordance with Section 280.05 of the Standard Specifications. Failure of the perimeter erosion barrier shall be corrected within 24 hours or before any precipitation as predicted by the National Weather Service for DeKalb, Illinois, or as directed by the Engineer.

This work shall be measured and paid for at the contract unit price per foot for PERIMETER EROSION BARRIER. This price shall include all materials, excavation, equipment, and labor necessary for a complete installation and removal.

PERIMETER EROSION BARRIER (SPECIAL)

This work shall be in accordance with Section 280 of the Standard Specifications insofar as applicable and the following provisions.

Perimeter Erosion Barrier (Special) shall be installed according to Section 280 of the Standard Specifications for Perimeter Erosion Barrier and the details in the plans.

The orange plastic snow fence shall be kept clean and vibrant throughout construction.

Maintenance shall be completed in accordance with Section 280.05 of the Standard Specifications. Failure of the perimeter erosion barrier (special) shall be corrected within 24 hours or before any precipitation as predicted by the National Weather Service for DeKalb, Illinois, or as directed by the Engineer.

This work shall be measured and paid for at the contract unit price per foot for PERIMETER EROSION BARRIER (SPECIAL). This price shall include all materials, excavation, equipment, and labor necessary for a complete installation and removal.

TEMPORARY SEDIMENT TRAP

This work shall be in accordance with Section 280 of the Standard Specifications insofar as applicable and the following provisions.

Temporary sediment traps shall be installed according to Section 280 of the Standard Specifications for Sediment Basins and the IDOT Highway Standard Detail 280001.

The temporary sediment trap shall be installed before construction begins on the current stage of work. The temporary sediment trap shall be functional until disturbed portions of the tributary drainage areas have established permanent vegetation.

This work shall be measured and paid for at the contract unit price each for TEMPORARY SEDIMENT TRAP. The price shall include excavation, riprap, filter fabric, and all material, equipment, and labor necessary to complete this item. This price shall also include removal of the riprap, deposited sediment, and filter fabric.

INLET AND PIPE PROTECTION

This work shall be in accordance with Section 280 of the Standard Specifications insofar as applicable and the following provisions.

Inlet and pipe protection shall be installed according to Section 280, Inlet and Pipe Protection, and the IDOT Highway Standard Detail 280001. Inlet and pipe protection shall be of the silt filter fabric type. The use of straw bales will not be allowed for this work.

Failure of the inlet and pipe protection shall be corrected within 24 hours or before any chance of precipitation as predicted by the National Weather Service for DeKalb, Illinois, or as directed by the Engineer. Maintenance of the inlet and pipe protection (including removal and disposal of silt) shall be performed at no additional compensation to the Contractor.

This work shall be measured and paid for at the contract unit price each for INLET AND PIPE PROTECTION. This price shall include filter fabric, stakes, and all material, equipment, and labor necessary for complete installation and removal.

INLET FILTERS

This work shall be in accordance with Section 280 of the Standard Specifications and BDE Special Provision 80104, Inlet Filters, insofar as applicable and the following provisions.

Inlet filters shall be as manufactured by Inlet and Pipe Protection, Inc., Naperville, Illinois (<http://www.inletfilters.com>) or approved equal.

Inlet filters shall fit the frame and grate specified on the plans.

Inlet filters shall be emptied of debris or repaired, if needed, within 24 hours after a precipitation event and before any precipitation as predicted by the National Weather Service for DeKalb, Illinois, or as directed by the Engineer. Maintenance of the inlet filter shall be performed at no additional compensation to the Contractor.

This work shall be measured and paid for at the contract unit price each for INLET FILTERS. This price shall include the inlet filter and all material, equipment, and labor necessary for complete installation and removal.

STONE RIPRAP

This work shall be in accordance with Section 281 of the Standard Specifications and Practice Standard 910 and Construction Specification 61 of the Illinois Urban Manual, Practice Standard insofar as applicable and the following provisions.

Stone riprap shall be constructed to the dimensions shown on the plan and to Illinois Urban Manual, Standard Drawing IL-610.

The thickness of the stone riprap layer shall be according to the following table:

<u>Gradation</u>	<u>Minimum Thickness</u>	<u>Bedding Thickness</u>
3	15 inches	---
4	20 inches	6 inches
5	28 inches	8 inches
6	32 inches	10 inches

Filter fabric for use with riprap will be measured and paid for according to Section 282 of the Standard Specifications.

This work shall be measured and paid for at the contract unit price per square yard for STONE RIPRAP of the class specified. This price shall include excavation, riprap, and all material, equipment, and labor necessary to complete this work.

STABILIZED BITUMINOUS PATH

This work shall be in accordance with Sections 351 and 406 of the Standard Specifications and BDE Special Provision 80010, insofar as applicable and the following provisions.

The base course shall be a nominal thickness of 6" of Aggregate Base Course, Type B and shall be placed in accordance with Section 351 of the Standard Specifications with the following revision.

Revise the following as the second sentence of Article 351.05(c): Water shall be added as required by the Engineer to compact the material to not less than 95% of the standard laboratory density.

The final layer shall be a nominal thickness of 3" of Bituminous Concrete Surface Course, Superpave, Mix C, N50 and shall be placed in accordance with Section 406 of the Standard Specifications and BDE Special Provision 80010.

This work will be paid for at the contract unit price per square yard for STABILIZED BITUMINOUS PATH, which price shall include all labor, equipment, and material including Aggregate Base Course, Bituminous Prime Coat, and Bituminous Concrete Surface Course to provide a complete and finished bicycle path.

BITUMINOUS MATERIALS (PRIME COAT)

Prime coat shall meet the specifications of Article 406.06(b) of the Standard Specifications with the following revisions and additions:

Prime coat shall be applied at a rate of 0.1 gallon per square yard. Bituminous material shall be SS-1, unless otherwise required by Article 403.07 of the Standard Specifications.

The Contractor will be required to present a weight ticket of the truckload prior to applying the prime coat. After application the truck shall then be weighed again in order to determine the net weight of prime coat that has been placed. Both tickets shall be stamped by the certified weighmaster.

The Contractor shall erect (to the Engineer's satisfaction) 36" by 36" minimum *FRESH OIL AHEAD* signs prior to the prime coat application, which signs shall remain until the prime coat has adequately cured.

This work shall be paid for at the contract unit price per ton for BITUMINOUS MATERIALS (PRIME COAT).

AGGREGATE (PRIME COAT)

This work shall be done in accordance with Article 406.06(b) of the Standard Specifications insofar as applicable and the following provisions.

The fine aggregate shall be mechanically spread at a uniform rate of 2 pounds per square yard.

INCIDENTAL BITUMINOUS SURFACING, SUPERPAVE, N50

This work shall be in accordance with Section 408 of the Standard Specifications and BDE Special Provision 80010 insofar as applicable and the following provisions.

Revise Article 408.02 to read: "The bituminous mixture for the incidental bituminous surfacing shall meet the requirements of Bituminous Concrete Binder Course, Superpave, IL 19.0, N50."

This item is to be used as: temporary bituminous ramps during stage construction; temporary patches on all sewer or water main trenches; temporary bituminous ramps placed around protruding frames and lids prior to the placement of the final bituminous concrete surface course; or as directed by the Engineer.

This work will be paid for at the contract unit price per ton for INCIDENTAL BITUMINOUS SURFACING, SUPERPAVE, N50, which price shall include all material, labor, and equipment necessary for a complete installation.

TEMPORARY PAVEMENT

This work shall be in accordance with Sections 406 of the Standard Specifications and BDE Special Provision 80010 insofar as applicable and the following provisions.

This work shall include placement and removal of temporary pavement at locations as shown on the Construction Staging Plans and as directed by the Engineer. The temporary pavement shall consist of

eight (8) inches of Bituminous Concrete Binder Course, Superpave, IL 19.0, N50 placed on compacted soil as approved by the Engineer.

This item shall include any excavation or embankment required to bring the temporary pavement and temporary ditches to grade.

Excavation or embankment required due to this item will not be paid for separately but shall be included in the cost of this item.

This work will be paid for at the contract unit price per square yard for TEMPORARY PAVEMENT, which price shall be payment in full for all equipment, labor, and material including furnishing, transporting, placing, compacting, maintaining temporary bituminous concrete pavement, excavation, embankment, and removal as herein specified and as directed by the Engineer.

PROTECTIVE COAT

This work shall be in accordance with Articles 420.21 and 1023.01 of the Standard Specifications insofar as applicable and the following provisions.

The protective coating shall be applied to the exposed surfaces of P.C.C. sidewalk, P.C.C. driveway, combination concrete curb and gutter, and concrete median surface.

Concrete curing shall be limited to methods in Article 1020.13(a)[1], [2], and [3].

This work will be paid for at the contract unit price per square yard for PROTECTIVE COAT, which price shall include all material, labor, and equipment for a complete application.

PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 7 INCH

This work shall be in accordance with Section 423 of the Standard Specifications insofar as applicable and the following provisions.

Materials to be included and placed for this work shall consist of the following:

- Three (3) inches of Aggregate Base Course, Type B
- Seven (7) inches of Portland Cement Concrete Pavement.

Dowel bars (No. 4 x 1'-0") shall be placed at five feet on center to tie into the back of curb as shown in the details in the plans.

This work shall be measured in place and the area computed in square yards, complete.

This work will be paid for at the contract unit price per square yard for PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 7 INCH, which price shall include excavation, base course, P.C.C. pavement, tie bars, and all labor, equipment, and materials necessary to provide a complete and finished driveway.

PORTLAND CEMENT CONCRETE SIDEWALK DETECTABLE WARNINGS

This work shall be in accordance with Section 424 of the Standard Specifications, BDE Special Provision 80146 the details in the plans, the Illinois Accessibility Code Standards insofar as applicable and the following provisions.

Revise Article 424.06, Placing and Finishing, to include the following paragraphs:

Portland Cement Concrete Sidewalk shall be constructed on a 3" compacted bed of aggregate meeting the requirements of Aggregate Base Course, Type B. This aggregate will not be paid for separately but shall be included in the cost of the sidewalk being constructed.

Whenever the sidewalk construction is to be across a previously backfilled trench or excavation, or across a subgrade of questionable future stability, three #4 reinforcing bars shall be so installed to adequately span the area of concern. All bars shall extend a minimum of three (3) feet beyond the edges of the areas possessing instability onto subgrades displaying permanent final settlement or compaction. The minimum length of the reinforcing bars shall be ten (10) feet.

No cure-and-seal compound shall be applied when the air temperature is below 40° F or is between 40° and 45° and falling. All concrete poured after October 15th shall meet the requirements of Article 420.21, and protective coating shall meet the requirements of Section 1023.

Revise paragraph 3 in Article 424.08, Sidewalk Ramps, to read as follows:

Sidewalk ramps shall be constructed and cured as specified in this section, except that final texturing shall be accomplished by placing polymer concrete detectable warning panels with raised truncated domes in the finished concrete. The panels shall be E-Z-Set Polymer Detachable Warning Panels as manufactured by Detectable Warning Systems, Inc. or approved equal. The panels shall be brick red in color.

Revise Article 424.08, Sidewalk Ramps, to include the following paragraph:

Where the sidewalk abuts curb and gutter, the sidewalk shall be poured to full depth of the curb and gutter for a minimum width of 12 inches. No. 4 x 1'-0" dowel bars shall be drilled and epoxied into the curb to restrict the new sidewalk from settling. No expansion joint will be placed at the curb and gutter but shall be placed at the top of the ramps where it meets the main walk. All new concrete walk shall be pinned to existing walk.

Revise Article 424.12, Basis of Payment, to read as follows:

This work will be paid for at the contract unit price per square foot for PORTLAND CEMENT CONCRETE SIDEWALK of the thickness specified, which price shall include curing and sealing coating, required expansion joints, dowel bars, reinforcing bars, backfilling, variable-height edge treatment at sidewalk ramps, and any removal and disposal of subgrade and/or earth excavation, and at the contract unit price per square foot for DETECTABLE WARNINGS to achieve the proper ADA requirements.

BITUMINOUS SURFACE REMOVAL - BUTT JOINT
BITUMINOUS SURFACE REMOVAL, 1½"
BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)

This work shall be in accordance with Sections 406 and 440 of the Standard Specifications insofar as applicable and shall consist of milling bituminous pavement to the depths, locations, and limits specified in the plans.

If the milling machine cuts too deep or tears out areas of the existing pavement which were to be saved, the voids shall be filled with leveling binder at the Contractor's expense.

Where specified as variable depth, milling depths will vary from 0" to a maximum of 4".

Temporary ramps at butt joints on roadways open to traffic shall be provided in accordance with 406.18 of the Standard Specifications. This work shall be measured and paid for as Incidental Bituminous Surfacing, Superpave, N50.

Penalty. Failure by the Contractor to provide a temporary bituminous ramp shall be grounds for assessment of a penalty of \$100 per day per ramp location for each calendar day thereafter that such facility remains incomplete after written notification from the Engineer. Such penalty shall be deducted from monies due or to become due the Contractor under the contract.

Bituminous concrete removed will be measured in place and the area computed in square yards without regard for the number of passes required to remove the surface material.

This item of work will be paid for according to Sections 406 and 440 of the Standard Specifications.

SAW CUTTING

This work shall consist of the full-depth sawing of the existing pavement, curb and gutter, or other existing items with a sawing machine at the locations shown on the plans or as directed by the Engineer.

The Contractor shall machine-saw a perpendicular clean joint between the portion of the item to be removed and that to remain in place to prevent damage to the remaining item. If an additional quantity is damaged or removed, the additional work will not be measured for payment but shall be done at the Contractor's expense.

This item shall not be paid for separately but shall be included in the cost of the item being removed.

CONCRETE MEDIAN SURFACE REMOVAL

This work shall be in accordance with Section 440 of the Standard Specifications insofar as applicable and the following provisions.

This work shall consist of the removal and satisfactory disposal of existing concrete median surface at locations shown on plan or as designated by the Engineer.

This work will be paid for at the contract unit price per square foot for CONCRETE MEDIAN SURFACE REMOVAL.

AREA REFLECTIVE CRACK CONTROL TREATMENT, SYSTEM A

This work shall be in accordance with Section 443 of the Standard Specifications insofar as applicable and the following provisions.

All crack control treatment shall be System A.

Area Reflective Crack Control Treatment, System A will be measured for payment in place and the area computed in square yards.

This work will be paid for at the contract unit price per square yard for AREA REFLECTIVE CRACK CONTROL TREATMENT, SYSTEM A.

AGGREGATE SHOULDERS, TYPE B, 8"

This work shall be in accordance with Section 481 of the Standard Specifications insofar as applicable and the following provisions.

The Aggregate Shoulders, Type B material shall be limited to **crushed gravel, crushed stone, or crushed concrete**. The plasticity index requirements and the requirements for adding water at the central mixing plant will be waived.

This work will be paid for at the contract unit price per square yard for AGGREGATE SHOULDERS, TYPE B, 8".

CLEANING AND PAINTING STEEL BRIDGE

This work shall be in accordance with Section 506 of the Standard Specifications and IDOT Guide Bridge Special Provision No. 25 insofar as applicable and the following provisions.

The bridge to be painted is Railroad Bridge No. 019-4703.

Only the railing, sides, and conduit on the north side shall be cleaned and painted. The bottom shall not be cleaned and painted.

The surface preparation shall include washing, sanding, scarifying, and removing grease by hand and power tools as appropriate.

The spot prime coat shall consist of one (1) coat of Tnemec 135 - ChemBuild 3.0 to 4.0 mils DFT.
The intermediate coat shall consist of one (1) coat of Tnemec Series 30 SPRA-SAF 2.0 to 3.0 mils DFT.
The finish coat shall consist of one (1) coat of Tnemec Series 30 SPRA-SAF 2.0 to 3.0 mils DFT.

The color shall be as directed by the City.

This work will have to be coordinated with the construction staging shown on the plans so as not to interfere with the roadway work.

This work will be paid for at the contract lump sum price for CLEANING AND PAINTING STEEL BRIDGE.

TEMPORARY SHEET PILING

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.

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.

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.

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 12 inches 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 its 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.

The temporary sheet piling will be measured for payment in place in 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 ensure the original design intent was met.

This work will be paid for at the contract unit price per 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.

GRATING FOR CONCRETE FLARED END SECTION

This work shall be in accordance with Section 542 of the Standard Specifications insofar as applicable and the following provisions.

Grating for the concrete flared end sections shall be constructed according to IDOT Standard Detail 542311, "Grating for Concrete Flared End Section for 600 mm (24") thru 1350 mm (54") Pipe" and District Standard Detail 85.1, "Grating for Horizontal Elliptical Concrete Flared End Section" as shown in the plans. Grating for concrete flared end sections not shown in the standard shall be constructed in a similar manner and shall be approved by the Engineer.

This work will be paid for at the contract unit price each for GRATING FOR CONCRETE FLARED END SECTION of the size specified. The price shall include all materials, equipment, and labor necessary to complete this work.

STORM SEWERS, TYPE 2, REINFORCED CONCRETE ELLIPTICAL PIPE SPAN 60, RISE 38

This work shall be in accordance with Section 550 of the Standard Specifications insofar as applicable and the following provisions.

Storm sewer shall be backfilled in accordance with Article 550.07, Method 1 only.

Reinforced concrete pipe bends shall not be paid for separately but shall be paid per foot of storm sewer of the diameter specified.

45 Degree Lateral Field Joints shall be constructed as shown in the detail in the plans. The cost of the joint shall be included in the cost of the storm sewer items.

STORM SEWERS, RUBBER GASKET

This work shall be in accordance with Section 550 of the Standard Specifications insofar as applicable and the following provisions.

Storm sewers shall be RCCP, Class IV, unless otherwise designated in the plans.

Storm sewer shall have rubber gasket joints conforming to ASTM Specification C-361.

Storm sewer shall be backfilled in accordance with Article 550.07, Method 1 only.

45 Degree Lateral Field Joints shall be constructed as shown in the detail in the plans. The cost of the joint shall be included in the cost of the storm sewer items.

Brick and mortar shall seal proposed connections into existing structures. These connections shall be included in the cost of the storm sewer items.

Blind connections shall be core-drilled to the approximate outside diameter of the proposed pipe to be connected. Mortar (brick, if needed) shall be used to secure the proposed connection. The blind connection shall be included in the cost of the storm sewer items.

All storm sewer will be paid for at the contract unit price per foot for STORM SEWERS, RUBBER GASKET, CLASS A of the type and diameter specified.

STORM SEWER (WATER MAIN REQUIREMENTS) 12 INCH

This work shall be in accordance with Section 550 of the Standard Specifications insofar as applicable and the following provisions.

Storm sewer pipe shall be cement-lined ductile iron Class 52 and shall conform to AWWA C-151 (ANSI A21.51), "Ductile Iron Pipe, Centrifugally Cast, for Water," latest revision. Joints between new pipe material shall be rubber-gasket push-on type and shall conform the AWWA C-111 (ANSI A21.11), "Rubber-Gasket Joints for Ductile Iron Pressure Pipe and Fittings," latest revision. Joints between existing pipe material and the new ductile iron pipe shall be made by means of a mission coupling (ASTM C-594) or as directed by the Engineer. Bedding shall be in accordance with Section 208 of the Standard Specifications and special details.

This work will be paid for at the contract unit price per foot for STORM SEWERS (WATER MAIN REQUIREMENTS) 12 INCH. This price shall include the ductile iron pipe, rubber gaskets, excavation, and all materials, labor, and equipment necessary for a complete installation.

STORM SEWER REMOVAL

This work shall be in accordance with Section 551 of the Standard Specifications insofar as applicable and the following provisions.

At all existing storm sewer structures to remain where storm sewers have been removed, the resultant hole shall be securely sealed with concrete or brick masonry.

Trench backfill for this item will not be paid for separately but shall be included in the cost of this item.

Where proposed storm sewer is to be installed in a trench at the same location as that of storm sewer to be removed, excavation and trench backfill will not be paid for both the proposed storm sewer installation and removal of the existing storm sewer operations.

This work will be paid for at the contract unit price per foot for STORM SEWER REMOVAL of the diameter specified, measured as removed, including trench backfill.

DUCTILE IRON WATER MAIN

This work shall be in accordance with Section 561 of the Standard Specifications, the City of DeKalb "Supplemental Specifications for Water Main Improvements" and the "Standard Specifications for Water and Sewer Main Construction in Illinois," insofar as applicable, and the following provisions.

Water main pipe shall be ductile iron pipe Class 52, conforming to ANSI A-21.51 (AWWA C-151), centrifugally cast with standard thickness cement lining conforming with AWWA C-104. All water main shall be placed in a Type 2 laying condition, and electrical conductivity shall be provided with brass wedges.

All joints shall be mechanical or push-on in conformance with ANSI A-21.11 and AWWA C-111.

Water main fittings shall be American-made compact ductile iron mechanical joint fittings conforming to AWWA C-153. Bedding wedges, nominal cover, marking tape, etc, required for water main shall also apply to fittings.

Bedding shall be in accordance with Section 208 of the Standard Specifications and special details. All water main, hydrant leads, and services must have a minimum cover of six (6) feet.

Pipe compound will not be permitted in any water main construction, including service connections.

Thrust blocking shall be provided at all bends greater than 10 degrees, at all mechanical joint connections, and at all fire hydrants.

Thrust blocks shall be precast concrete blocks (6" x 8" x 16" min.) or Megalug brand. Poured thrust blocking must be approved by the City Water Resource Division.

All water main shall be encased in a polyethylene encasement. The encasement shall be a loose eight (8) millimeter thick polyethylene tube in accordance with ANSI/AWWA C-105/A-21.5, Method A.

The pipeline shall be tested for pressure and leakage between points as designated by the Engineer. Tests shall be made with all the joints uncovered. Testing shall be in accordance with the requirements of

ANSI/AWWA C-600. The test pressure shall be the greater of 150 psi or twice operating pressure. The Contractor is responsible for achieving the test pressure, even if testing against existing valves.

The Contractor shall give the City Engineer a minimum of 24 hours' advance notice of the time he contemplates making the test in order that a City Water Resource Division representative is present to observe the test.

The utmost of care shall be taken during the filling operation to prevent any possible contamination to the existing water distribution system.

The Contractor shall furnish and install all the necessary equipment and apparatus, as determined by the City of DeKalb, for making the test.

Before being placed in service, all new water mains shall be cleaned and chlorinated with liquid chlorine, according to the AWWA publication, "A Standard Procedure for Disinfecting Water Mains - AWWA C-651".

The Contractor shall give the Engineer at least 24 hours' notice ahead of the time he will be performing disinfection in order that the Engineer can be present and observe the work.

Following the chlorination, the Contractor will collect and submit for bacteriological analysis two sets of samples, each set to be collected on successive days not less than 24 hours apart. Mains will not be accepted or placed in service until satisfactory reports are obtained for two sets collected on successive days, and the Engineer has been provided with copies of all test results satisfactorily evidencing the mains to be ready for service.

The Contractor shall include the entire costs of disinfecting mains and appurtenances in the contract price for water mains.

Testing shall be completed prior to installation of water services.

Where the proposed water main cannot maintain the required separation from the existing sanitary and storm sewers, the water main shall be placed in a casing pipe which extends ten feet to each side of the crossing.

The Contractor will be required to coordinate all water main shutdowns with the City of DeKalb. The City of DeKalb must be notified one week in advance of anticipated water main shutdowns so as to have time to properly notify residents and merchants.

Existing pipelines shall be properly supported during construction of the water main so that cracking and leakage or failure of the existing pipeline does not occur.

All of the above shall be included in and paid for at the contract unit price per foot for DUCTILE IRON WATER MAIN of the diameter specified. Measurement shall be the actual measured length, including all fittings except valves.

DUCTILE IRON WATER MAIN, RESTRAINED JOINT 12"

This work shall be in accordance with Section 561 of the Standard Specifications, the City of DeKalb "Supplemental Specifications for Water Main Improvements", the "Standard Specifications for Water and Sewer Main Construction in Illinois," and the previous Special Provision for Ductile Iron Water Main insofar as applicable, and the following provisions.

Water main pipe shall be ductile iron pipe Class 52, conforming to ANSI A-21.51 (AWWA C-151), centrifugally cast with standard thickness cement lining conforming with AWWA C-104. All water main shall be placed in a Type 2 laying condition, and electrical conductivity shall be provided with brass wedges.

The water main pipe shall have restrained joints in conformance with AWWA C-111. All fittings shall be of the restrained joint type.

All of the above shall be included in and paid for at the contract unit price per foot for DUCTILE IRON WATER MAIN, RESTRAINED JOINT 12". Measurement shall be the actual measured length, including all fittings except valves.

WATER VALVES

This work shall be in accordance with Section 561 of the Standard Specifications, the City of DeKalb "Supplemental Specifications for Water Main Improvements" and the "Standard Specifications for Water and Sewer Main Construction in Illinois," insofar as applicable, and the following provisions.

All water valves 12" and smaller shall be resilient wedge gate valves conforming to AWWA C-515. The gate valves shall be Mueller A2360-20, American Flow Control Series 2500 or approved equal. Gate valves shall have an epoxy-coated seat, coated valve body, non-rising stem, o-ring seal, open left with a 2" square operating nut. All below-grade nuts and fasteners shall be 304 grade stainless steel.

All water valves 14" and larger shall be butterfly valves conforming to AWWA C-504. The butterfly valves shall be Mueller B3211-20 Mechanical Joint, Pratt Groundhog or approved equal. The butterfly valves shall open left with a 2" square operating nut. All below-grade nuts and fasteners shall be 304 grade stainless steel.

This work shall be paid for at the contract unit price per each for WATER VALVES of the size specified.

TAPPING VALVES AND SLEEVES

This work shall be in accordance with Section 561 of the Standard Specifications, the City of DeKalb "Supplemental Specifications for Water Main Improvements" and the "Standard Specifications for Water and Sewer Main Construction in Illinois," insofar as applicable, and the following provisions.

Tapping valves shall be Mueller 687.

Tapping sleeves for sizes up to 8" shall be Mueller H615 MJ CI, Smith Blair 665 or Cascade CST-EX. Tapping sleeves for 10" and larger shall be Mueller H615 MJ CI or approved equal. All fasteners used to connect tapping sleeve to tapping valve shall be 304 grade stainless steel fasteners.

This work will be paid for at the contract unit price each for TAPPING VALVES AND SLEEVES of the size specified. This price shall include the cost of all materials, fittings, adaptors, joint materials, blocking, and all labor and equipment necessary to make a complete and finished installation.

ABANDON WATER MAIN

This work shall be in accordance with Section 561 of the Standard Specifications, the City of DeKalb "Supplemental Specifications for Water Main Improvements" and the "Standard Specifications for Water and Sewer Main Construction in Illinois," insofar as applicable, and the following provisions.

This item shall consist of abandoning existing water main at locations shown in the plans or as directed by the Engineer.

The termini of the abandoned water main shall be cut, capped, and blocked at locations shown on the plan or as directed by the Engineer.

This work shall also consist of removing, capping, and blocking the existing water main if it interferes with the installation of the proposed water main at locations as directed by the Engineer.

Existing water services shall be transferred to the proposed water mains as shown on the plans and as directed by the City Water Resources Division or Engineer.

Abandoning the existing water main will not be paid for separately but shall be included in the cost of the various water main items and appurtenances.

ADJUSTING WATER MAIN 8"

This work shall be in accordance with Section 561 of the Standard Specifications, the City of DeKalb "Supplemental Specifications for Water Main Improvements", the "Standard Specifications for Water and Sewer Main Construction in Illinois," and the previous Special Provision for Ductile Iron Water Main insofar as applicable, and the following provisions.

This work shall consist of adjusting existing water mains where they are in conflict with new improvements.

All adjustments in the line or grade of the existing water main shall be approved by the Engineer.

All materials, labor, and equipment necessary to adjust the water main shall be on hand before shutdown and cutting the existing main. The Contractor shall take every precaution to hold the interruption of service to a minimum.

A minimum clearance of 18" shall be maintained between the adjusted main and the improvement for which the adjustment is made.

Adequate precautions shall be taken to prevent contaminants from entering the existing main. The inside surfaces of all new materials used in the adjustment shall be cleaned of all foreign material and swabbed with a solution of efficient bactericide before assembly. The adjusted section shall then be flushed utilizing available fire hydrants.

Pipe removed in this work shall be salvaged and delivered to the City yard and shall remain the property of the City, unless otherwise provided.

Trench backfill for this item will not be paid for separately but will be included in the price of this item.

An estimated length of water main adjustment has been shown in the plans. Payment shall be based on actual length of water main adjustment required without a change in unit price due to an increase or decrease in plan quantity.

This work will be paid for at the contract unit price per foot for ADJUSTING WATER MAIN 8". This price shall include the cost of all pipe, fittings, adaptors, joint material, blocking, trench backfill, removal and disposal of existing main, and all labor, material, and equipment necessary to make a complete and finished installation.

**WATER SERVICE LINE
CURB STOP AND BOX
CORPORATION STOPS**

This work shall be in accordance with the Sections 561, 562, and 565 of the Standard Specifications, the City of DeKalb "Supplemental Specifications for Water Main Improvements" and the "Standard Specifications for Water and Sewer Main Construction in Illinois," insofar as applicable, and the following provisions.

After the water mains have been tested and disinfected, the water service line shall be provided from the main to the outlet side of the curb stop. The copper service pipe shall be soft temper, Type K copper tubing meeting AWWA Specification 7S-CR.

Corporation stop: Mueller H15000 or H15008 (¾" to 1")
Mueller H15000 or H15013 (1½" to 2")

Curb stop: Mueller H15154, H15155, H25154, or H25155

Each curb stop shall be provided with a 6' cast-iron service box Mueller H10300. The service box shall be of sufficient length to permit the top to be installed approximately 3" above finish grade. Each service box shall be provided with a cap with the word *WATER* cast in the top.

Every water service line from the corporation to the curb stop shall be inspected by the City of DeKalb Water Resources Division. All inspections shall be open trench. Contractors requesting service line inspections shall contact the City Water Resources Division 48 hours prior to requested inspection time.

Excavation and trench backfill shall not be paid for separately but shall be included in the price of these items.

This work will be paid for at the contract unit price per foot for WATER SERVICE LINE of the diameter specified; per each for CURB STOP AND BOX of the size specified; and per each for CORPORATION STOPS of the size specified. These prices shall include the cost of excavation, trench backfill, copper tubing, fittings, corporation stop, curb stop, cast-iron curb box, service clamps, tapping, blocking, and all material, labor, and equipment necessary for a complete and finished installation.

FIRE HYDRANTS TO BE ADJUSTED

This work shall be in accordance with Section 564 of the Standard Specifications insofar as applicable and the following provisions.

This work shall consist of adjusting fire hydrants to an elevation that will provide 18 to 24 inches between the hose nozzles and the proposed finished elevation.

Adjustment of the hydrants will be accomplished by inserting barrel spool and stem extension pieces into the hydrant. Materials used for this work shall conform to AWWA Standard C-502.

If an auxiliary valve has been installed to serve the hydrant, its valve box shall be adjusted so that its cover is flush with the proposed finished ground elevation.

The work shall be performed in a manner approved by the City.

This work will be paid for at the contract unit price each for FIRE HYDRANTS TO BE ADJUSTED, which price will be payment in full for all material, equipment, and labor required to make a completed installation including the adjusting of the auxiliary valve box.

FIRE HYDRANT TO BE REMOVED

This work shall be in accordance with Section 564 of the Standard Specifications insofar as applicable and the following provisions.

This work shall consist of the removal of existing fire hydrants and auxiliary valves at locations shown on the plans or as directed by the Engineer.

All hydrants for removal need to be disconnected with the auxiliary valve attached. Care must be provided so as not to damage the hydrants during the removal process. The hole formed by the removal of these items shall be backfilled.

All fire hydrants, including those with auxiliary valves, shall be delivered to Public Works, City of DeKalb. The removal of auxiliary valves will not be paid for separately but shall be included in the cost of this item.

Trench backfill for this item will not be paid for separately but shall be included in the cost of this item.

The removed fire hydrants shall remain the property of the City as directed by the Engineer.

This work will be paid for at the contract unit price each for FIRE HYDRANTS TO BE REMOVED, which price will be payment in full for all labor, equipment, and materials for a complete removal, including removal of the auxiliary valve, backfilling the resultant hole, and disposal or delivery of removed items.

FIRE HYDRANT WITH AUXILIARY VALVE AND VALVE BOX

This work shall consist of furnishing and installing fire hydrants at locations specified in the plans. This work shall conform to Division IV, Section 45 of the "Standard Specifications for Water and Sewer Main Construction in Illinois," the City of DeKalb "Supplemental Specifications for Water Main Improvements", details in the plans, and the following provisions.

Fire hydrants shall be in conformance with AWWA C-502 and shall be either Waterous Pacer Model WB-67-250 or Mueller Super Centurion 250, or equal, as approved by the City. Hydrants shall be of sufficient length to allow for 6' of cover over the hydrant lead. Hydrants will have a 6" MJ shoe, 1½" Pentagon operating nut (open left), one 4" NST pumper nozzle, and two 2½" NST hose nozzles. An auxiliary 6" valve and cast-iron valve box shall be installed on each hydrant lead. Auxiliary valves shall be as specified previously for water valves. The cast-iron valve box shall be a Tyler 6850 two-piece cast-iron valve box with a valve box stabilizer installed. All hydrants shall have two coats of paint matching the City standard for color, which is red

This work will be paid for at the contract unit price each for FIRE HYDRANT WITH AUXILIARY VALVE AND VALVE BOX, which price shall include all labor, equipment, and materials for complete installation including auxiliary valve and cast-iron valve box, and adjusting the barrel length so as to provide 18 to 24 inches between the pump nozzle and ground.

DOMESTIC WATER SERVICE BOXES TO BE ADJUSTED

This work shall be in accordance with Sections 565 and 602 of the Standard Specifications insofar as applicable and the following provisions.

This work shall consist of adjusting existing water service boxes so the top surface of the box is set to the proposed finished elevation.

The Contractor shall take sufficient precautions while adjusting the water service boxes to ensure that they are not damaged or otherwise made inoperable. Any water service box damaged by the Contractor due to his negligence shall be replaced by him at his expense.

At time of adjustment, the Contractor shall clean out all water service boxes of foreign material and ensure that a valve wrench can be properly seated on the valve operating nut.

The work shall be performed in a manner approved by the Engineer.

An estimated number of domestic water service boxes to be adjusted has been shown in the Summary of Quantities. Payment shall be based on the actual number of domestic water service boxes adjusted without a change in unit price because of adjustment in plan quantities.

This work will be paid for at the contract unit price each for DOMESTIC WATER SERVICE BOXES TO BE ADJUSTED.

PIPE UNDERDRAINS, 6"

This work shall be in accordance with Section 601 of the Standard Specifications and the detail in the plan insofar as applicable and the following provisions.

The pipe underdrains shall be perforated polyvinyl chloride (PVC) pipe meeting Article 1040.09 of the Standard Specifications.

Bedding material surrounding the pipe and within three (3) inches of the outside edge of the pipe shall be CA 16 aggregate and shall be completely wrapped in one layer of geotechnical fabric.

The pipe underdrains shall be installed at all locations as shown on the plans. The pipe underdrains shall be located below the pavement aggregate subgrade, so as to drain the subgrade, as shown in the detail in the plans. The underdrain shall have a minimum slope of one percent (1%). The upstream end of the pipe shall be capped with a material matching the pipe material.

Pipe underdrains located within ten feet of existing or proposed water main (that is not in casing pipe) shall be water main quality PVC pipe meeting AWWA C900-97 and shall not have perforations. This work will be included in the cost of Pipe Underdrains, 6".

This work shall be measured for payment in feet of pipe installed.

This work shall be paid for at the contract unit price per foot for PIPE UNDERDRAINS, 6", which price shall include the cost of excavating, disposing of surplus material, furnishing and installing the pipe, fabric, and bedding and backfilling with CA 16 trench backfill material.

CLOSED LIDS

All frames with closed lids to be furnished as part of this contract for construction, adjustment, or reconstruction of any manhole or valve vault shall have cast into the lid one of the following words:

All lids to be used on drainage structures shall bear the word *STORM*.

All lids to be used on sanitary sewer structures shall bear the word *SANITARY* and shall be of the self-sealing and bolt-down type with concealed pick holes and O-ring seals.

All lids to be used on water system structures shall bear the word *WATER*.

**CATCH BASINS
MANHOLES
INLETS
VALVE VAULTS**

This work shall be in accordance with Section 602 of the Standard Specifications insofar as applicable and the following provisions.

All new structures shall be constructed using precast reinforced concrete risers. Adjustments shall be made using adjusting rings. A maximum of eight (8) inches of adjusting rings will be permitted. At locations where

Type 8 grates are to be installed on a flat slab top, a minimum of four (4) inches of adjusting rings shall be used in order to allow for topsoil placement over the flat top. All final frame adjustments shall be made by using solid flat steel shims (2" x 2" x uniform thickness). The frame will be set to grade using steel shims and without disturbing the adjustment; the frame will then be lifted off and set aside. A full bed of mortar will be placed on the structure between the adjusting shims, which shall form a solid masonry bond between the frame and the adjusting ring or structure. The frame shall be set back into place in a method not to damage the bed of mortar. All adjusted frames in the roadway shall be backfilled using compacted bituminous concrete or Class SI concrete to a minimum depth of 5" below the bottom of the frame. Cost of the above shall be included in the unit price for the various structures in the contract.

The top of all structures shall be wrapped with a continuous non-woven polypropylene geotextile fabric. The non-woven fabric shall be Advanced Drainage Systems 4420 or approved equal. The non-woven fabric shall overlap the lip of the frame by six inches and extend downward 30 inches below the bottom of the frame. (See the Catch Basins, Special detail in the plans for a typical application)

For Valve Vault, 6' Diameter see the detail in the plans for Manhole, Type A, 72" Diameter.

The framed lid, frame and grate, or grate will be paid for separately.

This work will be paid for at the contract unit price each for CATCH BASINS, MANHOLES, INLETS or VALVE VAULTS of the type, or type and diameter, or diameter specified, which price shall include sand cushion, steps, flat slab tops, non-woven geotextile fabric, excavation, backfill, and all material, labor, and equipment necessary for a complete installation. The frames and grates or lids will be paid for separately.

ADJUSTMENT AND RECONSTRUCTION OF STRUCTURES

This work shall be in accordance with Section 602 of the Standard Specifications insofar as applicable and the following provisions.

All adjustments shall be made by using precast reinforced concrete, high-density polyethylene plastic, or recycled rubber adjustment rings. A maximum of 8" of adjusting rings will be permitted. All final frame adjustments shall be made by using solid flat steel shims (2" x 2" x uniform thickness). The frame will be set to grade using steel shims and without disturbing the adjustment; the frame will then be lifted off and set aside. A full bed of mortar will be placed on the structure between the adjusting shims, which shall form a solid masonry bond between the frame and the adjusting ring or structure. The frame shall be set back into place in a method not to damage the bed of mortar. All adjusted frames in the roadway shall be backfilled using compacted bituminous concrete or Class SI concrete to a minimum depth of 5" below the bottom of the frame.

When new frame and grates or lids are called for with the adjustment or reconstruction, the cost for furnishing and installing the new frame and grate or lid shall be paid for separately, unless noted otherwise. Existing frames and grates or lids shall remain the property of the City or County as directed by the Engineer.

Structures which are to be reconstructed shall be reconstructed to the depth approved by the Engineer.

CATCH BASINS, SPECIAL

This work shall be in accordance with Section 602 of the Standard Specifications insofar as applicable, the details in the plans and the following provisions.

The structure shall be 2' x 3' (inside dimensions) as shown on the detail in the plans. The structure shall be constructed of Class SI concrete or precast concrete.

The top of the structure shall be wrapped with a continuous non-woven polypropylene geotextile fabric. The non-woven fabric shall be Advanced Drainage Systems 4420 or approved equal. The non-woven fabric shall

overlap the lip of the frame by six inches and extend downward 30 inches below the bottom of the frame. (See the Catch Basins, Special detail in the plans for a typical application)

The frame and grate will be paid for separately.

This work will be paid for at the contract unit price each for CATCH BASINS, SPECIAL, which price shall include sand cushion, steps, non-woven geotextile fabric, excavation, backfill, and all material, labor, and equipment necessary for a complete installation. The frames and grates will be paid for separately.

SANITARY MANHOLES TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID

This work shall be in accordance with Section 602 of the Standard Specifications insofar as applicable, the DeKalb Sanitary District requirements, the details in the plans, and the following provisions.

Revise the second sentence of Article 602.06, Concrete Masonry Units, to read:

The units shall be laid in a mastic joint sealer.

Revise the second sentence of Article 602.07, Precast Reinforced Concrete Sections, to read:

The units shall be laid in mastic joint sealer, sealed with external sealing bands, or sealed using mastic joint sealer.

Sanitary sewer manholes shall have frame/chimney seal as shown in the detail of the plans or heat-activated shrink wrap encapsulating manhole frame and adjusting area, incidental to this item. The following will be acceptable.

1. Canusa Wrapid Seal as supplied by Resource Utility Supply Company, Hillcrest, Illinois, (888) 562-7797.
2. Internal Adaptor Seal Ring as supplied by Sidener Supply of Belvidere, Illinois, (800) 892-5396.

All adjustments shall be made by using precast reinforced concrete, high-density polyethylene plastic, or recycled rubber adjustment rings. A maximum of 8" of adjusting rings will be permitted. All final frame adjustments shall be made by using solid flat steel shims (2" x 2" x uniform thickness). The frame will be set to grade using steel shims and without disturbing the adjustment; the frame will then be lifted off and set aside. A full bed of mortar will be placed on the structure between the adjusting shims, which shall form a solid masonry bond between the frame and the adjusting ring or structure. The frame shall be set back into place in a method not to damage the bed of mortar. All adjusted frames in the roadway shall be backfilled using compacted bituminous concrete or Class SI concrete to a minimum depth of 5" below the bottom of the frame.

The cost for furnishing and installing the new frame and lid shall be included in the cost for adjusting the structure. The new frame and lid shall be of self-sealing watertight gasket design. Existing frames and lids shall be delivered to the City as directed by the Engineer. Delivery shall be included in the cost of the item being adjusted.

This work will be paid for at the contract unit price each for SANITARY MANHOLES TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID, which price shall include all labor, equipment, and materials, including frame and lid, excavation, and backfill for a complete adjustment.

VALVE VAULTS TO BE REMOVED

This work shall be in accordance with Section 605 of the Standard Specifications insofar as applicable and the following provisions.

This work shall consist of all work necessary to remove the existing valve vault at the locations shown on the plans or as directed by the Engineer. Valves shall be closed prior to backfilling of hole.

This work will be paid for at the contract unit price per each for VALVE VAULTS TO BE REMOVED.

VALVE BOXES TO BE REMOVED

This work shall consist of all work necessary to completely remove existing valve boxes, fill the resultant hole with compacted trench backfill, and to dispose of all removed materials. Trench backfill for this item will not be paid for separately but shall be included in the cost of this item. Valve boxes shall be delivered to the City yard as directed by the Engineer. Delivery shall be included in the cost of the item being removed.

This work will be paid for at the contract unit price each for VALVE BOXES TO BE REMOVED, which will be payment in full for all required work.

FRAME AND GRATES, SPECIAL

This work shall be in accordance with Section 604 of the Standard Specifications insofar as applicable, the following provisions, and details in the plans.

Structures with a "SPEC" special frame and grate shall use Neenah Foundry Company R-3246-CL frame and grate or Engineer-approved equal.

This item will be paid for at the contract unit price each for FRAME AND GRATES, SPECIAL, which price includes frames and grates and all equipment, material, and labor necessary for a complete installation.

COMBINATION CONCRETE CURB AND GUTTER

This work shall be in accordance with Section 606 of the Standard Specifications insofar as applicable, the details in the plans, and the following provisions.

Combination concrete curb and gutter shall have nominal concrete flag thicknesses of 12" at Annie Glidden Road pavement and 10" at Taylor Street and South Malta Road pavement.

A formless curb machine shall be used to place all combination concrete curb and gutter except radii 30 feet or less and shall be used in accordance with Article 606.04 of the Standard Specifications.

One-inch transverse expansion joints shall be placed at all radius points of the proposed concrete curb and gutter and at approximate 100-foot intervals between the above, as determined by the Engineer. Providing and installing these joints shall be included in the cost for the curb and gutter.

Expansion joint filler material shall be 1" thick and shall be installed so as to be a minimum of 1/2" lower than the finished gutter sections.

All expansion and contraction joints shall be sealed in accordance with Section 420 of the Standard Specifications.

At locations where the proposed curb and gutter is to be constructed across trenches or within three feet of the close edge of any trench, two (2) No. 4 reinforcement bars shall be placed in the proposed gutter. These reinforcement bars shall not be continuous through transverse expansion joints, but shall be stopped 3" short

of same. Cost of these reinforcement bars, complete in place, shall be included in the cost for the curb and gutter.

This work shall be paid for at the contract unit price per foot for COMBINATION CONCRETE CURB AND GUTTER of the type specified which price shall be payment in full for all necessary labor, materials, and equipment including excavation, Class SI concrete, and reinforcement for a complete installation.

BITUMINOUS MEDIAN SURFACE

This work consists of the construction of bituminous median surface on a prepared subgrade in accordance with Sections 351 and 406 of the Standard Specifications and BDE Special Provision 80010 insofar as applicable, and as detailed on the plans.

Materials to be included and placed for this work shall consist of the following:

Three (3) inches of Bituminous Concrete Surface Course, Superpave, Mix C, N50
Six (6) inches of Aggregate Base Course, Type B

This work shall be measured in place and the area computed in square feet, complete.

This work will be paid for at the contract unit price per square foot for BITUMINOUS MEDIAN SURFACE, which price shall include excavation, base course, bituminous materials, and all labor, equipment, and materials to provide a complete and finished median surface.

CONCRETE MEDIAN SURFACE, 4 INCH

This work shall be in accordance with Section 606 of the Standard Specifications insofar as applicable and the following provisions.

The concrete median surface shall be constructed as shown in the plans and details and as directed by the Engineer.

The concrete median surface will be constructed over four (4) inches of Aggregate Base Course, Type B, which will not be paid for separately but will be included in the cost of the concrete median surface.

This work will be paid for at the contract unit price per square foot for CONCRETE MEDIAN SURFACE, 4 INCH, which price shall include aggregate base course and all materials, labor, and equipment necessary for a complete installation.

TRAFFIC CONTROL PLAN

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 Articles 105.05, 107.09, 107.14, and 107.25, and to Sections 701, 702, and 703 of the Standard Specifications, and to the following Highway Standards, Details, Recurring Special Provisions, and Special Provisions contained herein relating to traffic control.

The Contractor shall contact the Engineer at least 72 hours in advance of beginning work.

Standards

701001, 701006, 701501, 701601, 701701, 701801, 702001, 704001

Details

Construction Staging Plans
Traffic Control and Protection for Side Roads, Intersections and Driveways
Pavement Marking Letters and Symbols for Traffic Staging
Informational Warning Sign (For Narrow Travel Lanes)

Special Provisions

Work Zone Traffic Control (Lump-Sum Payment)
Maintenance of Roadway
Keeping Roads Open to Traffic
LRS 4 Flagger in Work Zones
BDE 57291 Traffic Control Deficiency Deduction
BDE 80092 Temporary Concrete Barrier
BDE 80097 Work Zone Traffic Control Devices
BDE 80101 Flagger Vests
BDE 80110 Impact Attenuators, Temporary
BDE 80124 Portable Changeable Message Signs
BDE 80125 Work Zone Speed Limit Signs
BDE 80130 Personal Protective Equipment

At the preconstruction meeting, the Contractor shall furnish the name of the individual in his direct employ who is to be responsible for the installation and maintenance of the traffic control for this project. If the actual installation and maintenance are to be accomplished by a subcontractor, consent shall be requested of the Engineer at the time of the preconstruction meeting in accordance with Article 108.01 of the Standard Specifications. This shall not relieve the Contractor of the foregoing requirement for a responsible individual in his direct employ. The City will provide the Contractor the name of its representative to contact concerning the Traffic Control Plan.

WORK ZONE TRAFFIC CONTROL (LUMP-SUM PAYMENT)

This work shall be done in accordance with Section 701 of the Standard Specifications insofar as applicable and the following provisions.

Specific traffic control plan details and special provisions have been prepared for this contract.

This work shall include furnishing, installing, maintaining, relocating, and removing all traffic control devices used for the purpose of regulating, warning, or directing traffic during the construction or maintenance of this improvement.

The Contractor will be responsible for the proper location, installation, and arrangement of all traffic control devices. Special attention shall be given to advance warning signs during construction operations in order to keep lane assignment consistent with barricade placement at all times. The Contractor will be required to cover all traffic control devices which are inconsistent with lane assignment patterns during the transition from one construction stage to another.

Construction signs referring to daytime lane closures during working hours shall be removed or covered during non-working hours.

The Contractor shall be responsible for coordination of all traffic control work on this project with adjoining or overlapping projects and for coordination of barricade placement necessary to provide a uniform traffic pattern. When directed by the Engineer, the Contractor will be required to remove all traffic control devices which were furnished, installed, and 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.

The Contractor shall ensure that all applicable traffic control devices installed by him are operational 24 hours a day, including Sundays and holidays. The Contractor shall provide TRAFFIC CONTROL SURVEILLANCE in accordance with Article 701.04(b)(2) of the Standard Specifications. Payment for TRAFFIC CONTROL SURVEILLANCE will be considered included in the lump-sum price for Traffic Control and Protection, Special.

The Contractor shall provide a manned telephone on a continuous 24-hour-a-day basis to receive notification of any deficiencies regarding traffic control and protection and shall dispatch men, materials, and equipment to correct any such deficiencies. The Contractor shall be required to respond to any call from the City or Engineer concerning any request for improving or correcting traffic control devices and begin making the requested corrections within two (2) hours from the time of notification.

The Contractor is to plan his work so that there will be no open holes in the pavement and that all barricades have been removed from the pavement during non-working hours. Steel plates over trenches will be permitted; however, they must be of sufficient strength and stability to accommodate all traffic.

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 along the roadway through this construction zone. The Contractor shall so arrange his operations as to keep the closing of any lane of the roadway to a minimum.

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. Payment for traffic control required by these standards and/or designs will be considered included in the lump-sum price for Traffic Control and Protection, Special.

All traffic control (except pavement marking) indicated on the traffic control plan details and specified in the Special Provisions will be measured for payment on a lump-sum basis.

All traffic control and protection 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 as approved by the Engineer. The salvage value of the materials removed shall be reflected in the bid price for this item.

Delete Article 701.07(d) of the Standard Specifications.

Revise Article 701.08(e) of the Standard Specifications to read: "Traffic Control Surveillance will not be paid for separately but shall be included in the contract lump-sum price for TRAFFIC CONTROL AND PROTECTION (SPECIAL)."

Short-term pavement marking and temporary pavement marking will be paid for separately.

TEMPORARY PAVEMENT MARKING

This work shall be in accordance with Section 703 of the Standard Specifications insofar as applicable and the following provisions.

This item of work shall consist of placing pavement markings in accordance with the staging plans and as directed by the Engineer.

The markings are to be installed to properly channelize and maintain traffic control during construction of this project. Temporary paint pavement marking will not be applied to the final bituminous surface course.

This work will be paid for at the contract unit price per foot of applied line for TEMPORARY PAVEMENT MARKING LINE of the width specified, and per square foot for TEMPORARY PAVEMENT MARKING - LETTERS AND SYMBOLS.

TEMPORARY INFORMATION SIGNING

This work shall be in accordance with Section 720 of the Standard Specifications insofar as applicable and the following provisions.

This item is for furnishing and installing temporary information signs for identification of commercial driveways and side streets and miscellaneous informational signs required during construction staging as directed by the Engineer.

An estimated quantity of temporary information signing has been shown in the summary of quantities to establish a unit price only, and payment shall be based on the actual quantity of temporary information signing installed without a change in unit price due to any adjustment in plan quantities.

Installation, mounting hardware, sign posts, if required, and removal will be included in the unit price of this item.

This work shall be paid for at the contract unit price per square foot for TEMPORARY INFORMATION SIGNING, which price shall include all labor, materials, and equipment necessary for a complete installation and removal.

REMOVE SIGN PANEL ASSEMBLY - TYPE B

This work shall be in accordance with Section 724 of the Standard Specifications insofar as applicable and the following provisions.

This item is for the removal of the Northern Illinois University (NIU) sign and supports located at approximately Sta. 93+90 LT on Annie Glidden Road.

The sign shall be removed and remain the property of NIU as directed by the Engineer. Care shall be taken to not damage the sign and supports during removal and delivery. If the sign assembly is damaged because of non-compliance with this provision it shall be replaced at the Contractor's own expense.

This work shall be paid for at the contract unit price each for REMOVE SIGN PANEL ASSEMBLY - TYPE B which price shall include all labor, equipment, and materials for a complete removal and delivery of the sign panel assembly.

RELOCATE WOOD SIGN ASSEMBLY

This work shall be in accordance with Section 724 of the Standard Specifications insofar as applicable and the following provisions.

This item is for the relocation of the *THE KNOLLS AT PRAIRIE CREEK* wooden sign and supports located in the Knolls Avenue South median at Annie Glidden Road.

The sign shall be relocated as directed by the Engineer. Care shall be taken to not damage the sign and supports during removal and relocation. If the sign assembly is damaged because of non-compliance with this provision it shall be replaced at the Contractor's own expense.

This work shall be paid for at the contract unit price each for RELOCATE WOOD SIGN ASSEMBLY which price shall include all labor, equipment, and materials for a complete relocation of the sign panel assembly.

REMOVE CONCRETE FOUNDATION - GROUND MOUNT

This work shall be in accordance with Section 737 of the Standard Specifications insofar as applicable and the following provisions.

This item is for the removal and satisfactory disposal of the concrete sign foundation located at approximately Sta. 88+55 LT on Annie Glidden Road. The engraved stone sign will be removed by City of DeKalb Park District forces prior to the foundation removal.

This work will be paid for at the contract unit price each for REMOVE CONCRETE FOUNDATION - GROUND MOUNT.

PAVEMENT MARKING REMOVAL

This work shall be in accordance with Section 783 of the Standard Specifications insofar as applicable and the following provisions.

This work shall consist of removing existing and/or temporary pavement marking (excluding tape) that has been installed to control traffic and is in conflict with proposed markings required for traffic control during stage construction. Markings shall be removed as required by the plans or as directed by the Engineer.

Pavement markings that fall in areas that are to be removed or overlaid need not be removed if they do not conflict with redirected traffic movements.

The pavement markings shall be removed to the fullest extent possible from the pavement by a method that does not materially damage the surface or texture of the pavement. Any damage to the pavement caused by pavement marking removal shall be repaired by the Contractor at his expense by methods acceptable to the Engineer.

Residue from this pavement marking removal operation shall be promptly cleaned from the traffic lanes in a manner acceptable to the Engineer.

This work will be measured for payment in square feet of marking actually removed, regardless of the marking line width.

This work will be paid for at the contract unit price per square foot for PAVEMENT MARKING REMOVAL, which price shall be payment in full for all equipment, labor, and material required to perform this work.

STABILIZED CONSTRUCTION ENTRANCE

This work shall be in accordance with Sections 282 and 351 of the Standard Specifications and Code 930 of the Illinois Urban Manual, Practice Standard insofar as applicable, the following provisions, and the details in the plans.

The stabilized construction entrance shall be constructed according to the Illinois Urban Manual, Standard Drawing IL-630.

The Contractor has the option to install a wash rack. It is the Contractor's responsibility to maintain the roadway in a clean condition.

The locations of the stabilized construction entrances must be approved by the Engineer.

This work shall be measured and paid for at the contract unit price per square yard for STABILIZED CONSTRUCTION ENTRANCE. This price shall include excavation, aggregate, filter fabric, wash rack (if

needed), and all material, equipment, and labor necessary for complete installation and removal when the entrance is not needed.

CHANGEABLE MESSAGE SIGN

This work shall be in accordance with BDE Special Provision 80124 insofar as applicable and the following provisions.

Changeable message signs shall be placed at locations shown in the plans or directed by the Engineer. The message signs shall be placed outside traffic lanes but within existing public right-of-way and shall not obstruct visibility or pedestrian movements.

The message signs shall be placed 14 days in advance of initial start-up. The message signs shall be relocated and re-programmed as project work and staging progresses, as shown in the plans, or directed by the Engineer.

Furnishing, placing, and maintaining of Portable Changeable Message Signs shall be paid for per calendar month for each sign as CHANGEABLE MESSAGE SIGN. Relocating and re-programming the message signs shall not be paid for separately but shall be included in the cost of this item.

FLARED END SECTION REMOVAL

The work shall be in accordance with Section 551 of the Standard Specifications insofar as applicable and the following provisions.

This work consists of the removal of flared end sections at locations shown on plan and disposal and as directed by the Engineer.

This work will be paid for at the contract unit price each for FLARED END SECTION REMOVAL, regardless of material or size, which price will include all labor, material, and equipment for a complete removal.

FORMED CONCRETE REPAIR

This work shall be in accordance with Sections 503 and 508 of the Standard Specifications insofar as applicable and the following provisions.

This item is for the repair of the existing concrete retaining wall located at approximately Sta. 81+33 LT on Annie Glidden Road.

This work consists of removing and disposing of all deteriorated concrete and replacing it with new concrete. The new concrete shall be Class SI concrete. This work also includes the construction of necessary formwork and installing supplemental reinforcement bars or expansion bolts as directed by the Engineer.

The area to be repaired shall have all loose, unsound concrete removed completely by the use of an electric chisel or other mechanical tools approved by the Engineer. When removing the existing concrete the Contractor shall provide a one (1) inch deep saw cut along the outside edges of the repair area.

Any loose concrete shall be satisfactorily removed while maintaining the integrity of the existing steel reinforcing. The existing reinforcing shall be straightened and cleaned by sandblasting. After cleaning all exposed reinforcement bars shall be carefully evaluated to determine if replacement or additional reinforcement bars are required. Additional No. 5 dowel bars may have to be drilled and grouted into the existing concrete to remain if the existing reinforcing is determined by the Engineer to be of insufficient quality. The reinforcement bars shall not be paid for separately, but shall be included in the cost of this item.

The proposed concrete wall shall be of similar dimensions, shape, and finish as to the existing concrete wall.

The formwork shall provide a smooth and uniform concrete finish most nearly matching the existing surface of the concrete wall. Formwork shall be completely mortar tight and closely fitted where it adjoins the existing concrete surface to prevent leakage. Air vents may be provided to reduce voids and improve surface appearance. The Contractor shall use exterior mechanical vibration, as approved by the Engineer, to release air pockets that may be entrapped.

Prior to placing the new concrete the Contractor shall prepare the surface of the existing concrete against which the new concrete is placed by sand, air or water blasting. The surface shall be free of oil, dirt, and loose concrete. Just prior to concrete placement the surface shall be thoroughly wetted to a saturated surface dry condition or as directed by the Engineer.

Curing shall be done according to the applicable portions of Article 1020.13 of the Standard Specifications and as directed by the Engineer.

This work shall be paid for at the contract unit price per cubic foot for FORMED CONCRETE REPAIR, which price shall include removal and disposal of existing materials, reinforcing bars, Class SI concrete, and all labor, equipment, and materials required for a complete repair.

BITUMINOUS DRIVEWAY PAVEMENT, SUPERPAVE

This work consists of the construction of bituminous driveway pavement on a prepared subgrade in accordance with Sections 351 and 406 of the Standard Specifications and BDE Special Provision 80010 insofar as applicable and as detailed on the plans.

Materials to be included and placed for this work shall consist of the following:

- Three (3) inches of Bituminous Concrete Surface Course, Superpave, Mix C, N50
- Seven (7) inches of Aggregate Base Course, Type B

This work shall be measured in place and the area computed in square yards, complete.

This work will be paid for at the contract unit price per square yard for BITUMINOUS DRIVEWAY PAVEMENT, SUPERPAVE, which price shall include excavation, base course, bituminous materials, and all labor, equipment, and materials to provide a complete and finished driveway.

AGGREGATE FOR TEMPORARY ACCESS

The Contractor shall maintain ingress and egress to all abutting properties during construction operations. Temporary driveways, temporary sidewalks, and temporary roads shall be constructed of aggregate to the dimensions determined by the Engineer.

This work shall be in accordance with Articles 107.09, 301.04, and 1004.04 of the Standard Specifications, with the exception that the materials shall be limited to **crushed gravel, crushed stone, or crushed concrete**. The plasticity index requirements and the requirements for adding water at the central mixing plant will be waived.

After the temporary driveways, temporary sidewalks, and temporary roads have served their purpose, the suitable aggregate shall be removed, and at the direction and approval of the Engineer, utilized for other purposes such as embankment construction or other driveway aprons.

This work will be paid for at the contract unit price per ton for AGGREGATE FOR TEMPORARY ACCESS, which price shall be payment in full for furnishing, transporting, placing, maintaining and removing, reusing, or disposing of the aggregate, as herein specified and as directed by the Engineer.

Payment for aggregate will be determined by weight tickets and will be paid for its initial use only, regardless of the number of times the aggregate is moved.

AGGREGATE SUBGRADE, 12"

This work shall be done in accordance with the applicable portions of Section 207 of the Standard Specifications. The material shall conform with Article 1004.06 of the Standard Specifications except as follows:

1. Crushed Stone, Crushed Blast Furnace Slag, and Crushed Concrete

<u>Sieve Size</u>	<u>Percent Passing</u>
*150 mm (6")	97±3
*100 mm (4")	90±10
50 mm (2")	45±25
75 µm (#200)	5±5

2. Gravel, Crushed Gravel and Pit Run Gravel

<u>Sieve Size</u>	<u>Percent Passing</u>
*150 mm (6")	97±3
*100 mm (4")	90±10
50 mm (2")	55±25
4.75 mm (#4)	30±20
75 µm (#200)	5±5

3. Crushed Concrete with Bituminous Materials**

<u>Sieve Size</u>	<u>Percent Passing</u>
*150 mm (6")	97±3
100 mm (*4")	90±10
50 mm (2")	45±25
4.75 mm (#4)	20±20
75 µm (#200)	5±5

* For undercut greater than 450 mm (18") the percent passing the 150 mm (6") sieve may be 90±10 and the 100 mm (4") sieve requirements eliminated.

** The bituminous material shall be separated and mechanically blended with the crushed concrete so that the bituminous material does not exceed 40% of the final product. The top size of the bituminous material in the final product shall be less than 100 mm (4") and shall not contain steel slag or any material that is considered expansive by the Department.

The aggregate subgrade shall be placed in two lifts consisting of a 225 mm (9") and variable nominal thickness lower lift and a 75 mm (3") nominal thickness top lift of capping aggregate having a gradation of CA 6. Reclaimed Asphalt Pavement (RAP) meeting Article 1004.07 of the Standard Specifications and having 100% passing the 75 mm (3") 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. A vibratory roller meeting the requirements of Article 1101.01 of the Standard Specifications shall be used to roll each lift of

material to obtain the desired keying or interlock and necessary compaction. The Engineer will verify that adequate keying has been obtained.

When a recommended remedial treatment for unstable subgrades is included in the contract, the lower lift of Aggregate Subgrade may be placed simultaneously with the material for Porous Granular Embankment, Subgrade when the total thickness to be placed is 600 mm (24") or less.

Method of Measurement.

- a. Contract Quantities. Contract quantities shall be in accordance with Article 202.07.
- b. Measured Quantities. Aggregate subgrade will be measured in place and the area computed in square yards.

Basis of Payment. This work will be paid for at the contract unit price per square yard for AGGREGATE SUBGRADE, 12", which price shall include the capping aggregate.

CONSTRUCTION LAYOUT

The Contractor shall be required to furnish and place construction layout stakes for this project. The Local Agency will provide adequate reference points to the centerline of survey and bench marks as shown in the plans and listed herein. Any additional control points set by the Local Agency will be identified in the field to the Contractor, and all field notes will be kept in the office of the Resident Engineer.

The Contractor shall provide field forces, equipment, and material to set all additional stakes for this project, which are needed to establish offset stakes, reference points, and any other horizontal or vertical controls, including supplementary bench marks, necessary to secure a correct layout of the work. Stakes for line and grade of pavement and/or curb shall be set at sufficient station intervals (not to exceed 15 m (50 ft.)) to assure substantial conformance to plan line and grade. The Contractor will not be required to set additional stakes to locate a utility line which is not included as a pay item in the contract nor to determine property lines between private properties.

The Contractor shall be responsible for having the finished work conform to the lines, grades, elevations, and dimensions called for in the plans. Any inspection or checking of the Contractor's layout by the Local Agency Engineer and the acceptance of all or any part of it shall not relieve the Contractor of his/her responsibility to secure the proper dimensions, grades, and elevations of the several parts of the work. The Contractor shall exercise care in the preservation of stakes and bench marks and shall have them reset at his/her expense when any are damaged, lost, displaced, removed, or otherwise obliterated.

Responsibility of the Local Agency

- (a) The Local Agency will locate and reference the centerline of all roads and streets except interchange ramps. The centerline of private entrances and short street intersection returns may not be located or referenced by the Local Agency.
- (b) Locating and referencing the centerline of survey will consist of establishing and referencing the control points of the centerline of surveys such as PC's, PT's, and as many POT's as are necessary to provide a line of sight. The Local Agency will locate and reference control points once. Reestablishing control points thereafter will be at the Contractor's expense.
- (c) Bench marks will be established along the project outside of construction lines.
- (d) Stakes set for (a) and (b) above will be identified in the field to the Contractor.

- (e) The Local Agency will make random checks of the Contractor's staking to determine if the work is in conformance with the plans. Where the Contractor's work will tie into work that is being or will be done by others, checks will be made to determine if the work is in conformance with the proposed overall grade and horizontal alignment.
- (f) The Local Agency will make all measurements and take all cross sections from which the various pay items will be measured.
- (g) Where the Contractor, in setting construction stakes, discovers discrepancies, the Local Agency will check to determine their nature and make whatever revisions are necessary in the plans, including the re-cross sectioning of the area involved. Any additional re-staking required by the Engineer will be the responsibility of the Contractor. The additional re-staking done by the Contractor will be paid for according to 109.04 of the Standard Specifications.
- (h) The Local Agency will accept responsibility for the accuracy of the initial control points as provided herein.
- (i) It is not the responsibility of the Local Agency, except as provided herein, to check the correctness of the Contractor's stakes; any errors apparent will be immediately called to the Contractor's attention, and s(he) shall be required to make the necessary correction before the stakes are used for construction purposes.
- (j) Where the plan quantities for excavation are to be used as the final pay quantities, the Local Agency will make sufficient checks to determine if the work has been completed in conformance with the plan cross sections.

Responsibility of the Contractor

- (a) The Contractor shall establish from the given survey points and bench marks all the control points necessary to construct the individual project elements. S(he) shall provide the Engineer adequate control in close proximity to each individual element to allow adequate checking of construction operations. This includes, but is not limited to, line and grade stakes, line and grade nails in form work, and or/filed or etched marks in substantially completed construction work. It is the Contractor's responsibility to tie in centerline control points in order to preserve them during construction operations.
- (b) At the completion of the grading operations, the Contractor shall set stakes at 25 m (100 ft.) station intervals along each profile grade line. These stakes will be used for final cross sectioning by the Local Agency.
- (c) The Contractor shall locate the right-of-way points for the installation of right-of-way markers. The Contractor shall set all line stakes for the construction of fences by the Contractor.
- (d) All work shall be in accordance with normally accepted self-checking surveying practices. Field notes shall be kept in standard survey field notebooks, and those books shall become the property of the Local Agency at the completion of the project. All notes shall be neat, orderly, and in accepted form.
- (e) For highway structure staking, the Contractor shall use diligent care and appropriate accuracy. Points shall be positioned to allow reuse throughout the construction process. Prior to the beginning of construction activities, all structure centerlines and pier lines are to be established by the Contractor and checked by the Engineer. The Contractor shall provide a detailed structure layout drawing showing span dimensions, staking lines, and offset distances.

Measurement and Payment. This item will be paid for at the contract lump sum price for CONSTRUCTION LAYOUT.

DUST CONTROL WATERING

This work shall consist of the exclusive control of dust resulting from construction operations and is not intended for use in the compaction of earth embankments.

Dust shall be controlled by the uniform application of sprinkled water and shall be applied only when directed by and in a manner meeting the approval of the Engineer.

All equipment used for this work shall meet with the Engineer's approval and shall be equipped with adequate measuring devices for metering the exact amount of water discharged. All water used shall be properly documented by ticket or other approved means. Water may not be obtained from a fire hydrant without approval of the City.

This work will be measured in units of gallons of water applied. One unit will be the equivalent of 1,000 gallons of water applied.

This work will be paid for at the contract unit price per unit as DUST CONTROL WATERING.

FILLING EXISTING SEPTIC TANK

This work shall be in accordance with Section 605 of the Standard Specifications insofar as applicable and the following provisions.

This work consists of the abandonment and filling of existing septic tanks at locations shown on the plan and as directed by the Engineer.

The City is to be notified one week in advance of the Contractor beginning this work so that City forces can pump out the existing septic tanks to be filled.

The top of the existing septic tank to be filled shall be removed to an elevation of at least one foot below the earth subgrade of the proposed improvement. All inlet and/or outlet connections shall be securely sealed with Class SI concrete or brick and mortar. After the concrete or mortar has set, the existing structure shall be filled with sand, placed, and compacted to the satisfaction of the Engineer.

All material resulting from the filling of the existing septic tank shall be properly disposed of by the Contractor to the satisfaction of the Engineer.

This work will be paid for at the contract unit price each for FILLING EXISTING SEPTIC TANK, which price shall include removing and disposing of the top portions of the structure, sealing existing pipes when necessary, and filling the existing structure with sand.

CURB STOP AND BOX TO BE REMOVED

This work consists of removing existing curb stops and boxes and will remain the property of the City. This work will occur at all locations where a proposed curb stop and box is to be installed and at all locations where water service will be abandoned.

All parts of the curb stop and box shall be removed with the Contractor exercising due care to prevent damage to same and to the existing water service line so that a proposed curb stop may be properly connected to the existing water service line. The resulting hole from the removal operation shall be backfilled with granular material meeting the requirements of Section 208 of the Standard Specifications. Trench backfill for this item will not be paid for separately but shall be included in the cost of this item.

This work will be paid for at the contract unit price each for CURB STOP AND BOX TO BE REMOVED, which will be payment in full for all required work.

BRICK SIGN AND CONCRETE FOUNDATION REMOVAL

This work consists of the removal and disposal of an existing brick sign and concrete foundation at the location shown on plan.

Prior to the removal of the brick sign and foundation, the existing *GLIDDEN MANOR* sign lettering shall be removed, stored, and salvaged for installation on the proposed brick sign. The Contractor shall furnish and replace at his own expense any sign lettering, as determined by the Engineer, that has been damaged or lost by the Contractor.

The sign coping and brick/concrete wall portion of the sign shall be completely removed.

The concrete foundation shall be removed in accordance with Section 737 of the Standard Specifications insofar as applicable. The concrete foundation shall be removed to an elevation at least one foot below finished grade.

All removed materials shall be disposed of as approved by the Engineer. All resultant holes shall be backfilled with trench backfill material. Trench backfill will not be paid for separately, but shall be included in the cost of this item.

This work will be paid for at the contract lump sum price for BRICK SIGN AND CONCRETE FOUNDATION REMOVAL, which price shall include salvaging and storing existing sign lettering, excavation, disposal of removed materials, trench backfill, and all labor, equipment, and materials for a complete removal and restoration.

BRICK SIGN

This work consists of the construction of a brick/concrete sign with a concrete foundation as specified herein and detailed in the plans.

This work shall be in accordance with Sections 503, 508, and 1041 of the Standard Specifications insofar as applicable.

Class SI concrete and epoxy-coated reinforcing bars shall be used in the construction of the concrete foundation and wall. The concrete foundation shall be constructed to a depth not less than 42 inches below finished grade.

Galvanized brick anchor wall ties shall be spaced at 16 inches on center, both horizontally and vertically.

Bricks shall be standard face brick meeting ASTM C216 for Grade SW. Bricks shall be of the same color and texture as those that are in the existing brick sign that is being removed.

Provide ½" air gap between the back of brick and the face of the concrete wall. Caulk the vertical joints at the back of the sign between the back of brick and the concrete wall to keep watertight.

Provide weep holes at 24 inches on center at the bottom brick course.

The sign coping shall consist of three precast concrete pieces mortared to the top of the wall.

The "GLIDDEN MANOR" sign lettering salvaged from the existing brick sign shall be installed on the proposed sign in a similar manner as the existing installation, as approved by the Engineer. Hardware/fasteners required to attach the lettering shall be included in the cost of this item.

This work will be paid for at the contract lump sum price for BRICK SIGN, which price shall include all excavation, concrete, reinforcing bars, brick, mortar, caulk, ties, coping blocks, sign hardware/fasteners, and all labor, equipment, and materials for a complete installation.

PAVEMENT TEXTURING

This work consists of the imprinting of patterns and application of coatings to asphalt surfaces at median and crosswalk locations shown on plan and as directed by the Engineer.

The pavement texturing shall be in accordance with the manufacturer's specifications. The pavement texturing system shall be by Integrated Paving Concepts, Inc. "StreetPrint Pavement Texturing" for wet climate zones or approved equal.

The asphalt surface shall be prepared prior to coating and shall be free of dirt, debris, oil, or anything that will adversely affect the adhesion of the new coating system. All loose material on the asphalt surface shall be removed by mechanical brooming or blowing clean using a backpack blower or compressed air. Any difficult-to-remove dirt shall be removed using a pressure washer. Prior to applying the coatings, the asphalt surface shall be completely dry.

Layout and imprinting of patterns into the asphalt surface shall be as shown on the plan.

The upper portion of the asphalt surface shall be heated using reciprocating infrared re-heating equipment to make the upper portion of the asphalt surface pliable enough to accept the imprint of the template. Overheating of the asphalt shall not be permitted. Direct flame heaters shall not be allowed for the purpose of heating the asphalt. Hot air portable heaters may only be used for heating isolated areas. The temperature of the asphalt surface shall be regularly monitored during the reheating process. The asphalt pavement shall be adequately heat soaked (softened) to a depth of at least ½ inch, without burning the asphalt. The asphalt surface temperature shall not exceed 300°F. If during the re-heating process the surface is overheated and begins to emit black smoke, the contractor shall stop work immediately. The damaged surface area shall be removed by milling the upper 1" and replaced by a partial depth patch, with the topmost layer matching the existing surface layer mix and binder. Patching and all work associated with the repair effort shall be at the Contractor's expense.

Surface imprinting templates shall be pressed fully into the heated asphalt surface using vibratory plate compactors.

The surface coating system shall be installed by applying at least four thin layers of coating material to the asphalt surface. Each application of coating material shall be allowed to dry completely before applying the next layer. The color of the coating system shall be brick red. Each layer of the coating system shall consist of the same color. The coating application shall be spray-applied and broomed to work the material into the asphalt surface. Subsequent applications shall be sprayed and rolled, using a 1" to 1½" nap roller or sprayed and broomed. The contractor shall use manufacturer recommended spray equipment. Total coverage area of combined coating materials shall not be more than 150 square feet per pail of coating. The Contractor shall apply the surfacing system only when the air temperature is at least 50°F and rising, and will not drop below 50°F within 8 hours of application of the coating material. There should be no precipitation expected within 2 hours after applying the final layer.

Upon completion, the patterned area shall be checked for proper stamping depth of print, by taking random samples. 98% of the stamped area shall have an imprint depth of ¼ inch. If any sample areas have an imprint depth that is less than ¼ inch, those areas shall be re-heated and re-stamped prior to applying the coatings.

The total coating thickness shall be monitored by measuring the volume of material used per unit area. For this project an average coverage area for the combined coating layers shall be 150 square feet coated per 5 gallon pail of material used. The Contractor shall provide proof of material usage.

The stamped asphalt pavement will be measured for payment in square feet in place. No deduction will be made for the area(s) occupied by manholes, inlets, drainage structures, or by any public utility appurtenances within the area. Traffic control required for installation will be included in the cost of this item.

This work will be paid for at the contract unit price per square foot for PAVEMENT TEXTURING, which price shall include traffic control and all labor, equipment, and materials for a complete installation.

PVC CASING PIPE 30"

This work shall be in accordance with Section 1040 of the Standard Specifications, the City of DeKalb "Supplemental Specifications for Water Main Improvements" and the "Standard Specifications for Water and Sewer Main Construction in Illinois," insofar as applicable, and the following provisions.

This work consists of placing pvc casing pipe in trench to provide a sealed carrier pipe between other utilities and the water main.

The PVC Casing Pipe shall be DR 18 meeting AWWA C-905.

"Cascade" type spacers shall be used for installation of the water main.

If the size of the casing pipe specified is insufficient to accommodate the type of pipe and spacers the Contractor uses, the increased cost to furnish and provide the work necessary to install the larger-diameter casing pipe shall be provided by the Contractor at no increase in contract unit price for the casing pipe specified, regardless of diameter.

This work will be paid for at the contract unit price per foot for PVC CASING PIPE 30", measured in place. The price shall include the cost of all materials, pipe, fittings, joint materials, blocking, spacers, bulkheads, and all labor and equipment necessary to make a complete and finished installation.

Water main installed within the casing pipe shall be paid for separately, as set for hereinbefore.

SLIP-ON FLAT BOTTOM CHECK VALVE, 12"

This work consists of furnishing and installing a slip-on flat bottom check valve at the location shown on plan, as directed by the Engineer and in accordance with the details in the plans and the following provisions.

The check valve shall be an all rubber, flow-operated check type with a slip-on connection. The check valve is designed to slip over the outside of the pipe. The diameter specified is the nominal inside diameter of the pipe. The check valve shall be attached to the pipe by means of vendor furnished stainless steel clamps. The port area shall contour down to a duckbill, which shall allow passage of flow in one direction while preventing reverse flow. The valve shall be one-piece rubber construction with nylon reinforcement. The duckbill shall be offset so that the bottom line of the valve is flat, keeping the invert of the pipe parallel with the invert of the valve. The top of the valve shall rise to form the duckbill shape and formed into a curve of 180°.

The check valve shall be of the Series TF-1 as manufactured by Tideflex Technologies, Inc. of Pittsburgh, PA 15205 or approved equal.

The check valve shall be installed according to the manufacturer's installation procedures.

The Contractor shall submit check valve shop drawings, performance and operation data, materials of construction, dimensions and weights, elastomer characteristics, flow data, headloss data, and pressure ratings for approval by the Engineer. Flow test data must be from an accredited hydraulics laboratory to confirm pressure drop data. The manufacturer's name, plant location, valve size, and serial number shall be bonded to the check valve. Valves shall be manufactured in the USA.

This work will be paid for at the contract unit price each for SLIP-ON FLAT BOTTOM CHECK VALVE, 12", which price shall include all labor, equipment, and materials for a complete installation.

TEMPORARY PIPE CULVERT

This work shall be in accordance with Sections 208 and 542 of the Standard Specifications and Recurring Special Provision 24 insofar as applicable, the details in the plans, and the following provisions.

This work shall consist of furnishing and installing approximately 100 feet of 54" EQRS Corrugated Steel Pipe Arch, Type 2, (2 $\frac{3}{8}$ " x $\frac{1}{2}$ ") including a 60° bend, at the location shown on the plan for channeling and maintaining drainage flow during construction of the precast box culverts. This work includes: any excavation required for installation of the temporary pipe culvert including excavation required to ensure positive drainage of the temporary pipe culvert; installing the temporary pipe culvert including trench backfill at locations where the temporary pipe culvert will remain; attaching the temporary pipe culvert to the existing culvert; removing approximately 46 feet of the temporary pipe culvert and bend after completion of the north cell of the precast box culvert; and filling approximately 54' of temporary pipe culvert to remain with controlled low-strength material after completion of the north cell of the precast box culvert.

The temporary pipe culvert to be removed will become the property of the Contractor.

This work will be performed as directed by the Engineer.

If unsuitable soils are found at the temporary pipe culvert to remain, as determined by the Engineer, the material shall be removed to depths determined by the Engineer and will be paid for as Removal and Disposal of Unsuitable Material. The resulting void shall be backfilled with Porous Granular Embankment, Special to provide a bedding material for the temporary pipe culvert. Removal and Disposal of Unsuitable Material and Porous Granular Embankment, Special if required, as determined by the Engineer, will not be included in the cost of this item but shall be paid for separately.

This work will be paid for at the contract lump sum price for TEMPORARY PIPE CULVERT, which price shall include all excavation, trench backfill, controlled low-strength material, corrugated steel pipe arch, and all labor, material, and equipment required for a complete installation, including removal and disposal of temporary pipe culvert not to remain.

VINYL FENCE, 6'

This work consists of furnishing and installing vinyl fencing at locations shown on plan, as directed by the Engineer, in accordance with the manufacturer's specifications, the details in the plans, and the following provisions.

The vinyl fencing shall be "Chesterfield" style, 6' in height, and "Clay" in color, as manufactured Bufftech, Inc. a subsidiary of CertainTeed, Inc., or approved equal.

The Contractor shall submit manufacturer's technical data, shop drawings, color sample, and manufacturer's standard warranty for approval by the Engineer prior to beginning work.

The Contractor shall deliver the fence materials to the site in the manufacturer's original, unopened containers and packaging, with labels clearly identifying the product name and manufacturer. The fence materials shall be stored in a clean, dry area in accordance with the manufacturer's specifications. Temporary protective coverings shall be kept in place. The Contractor shall protect materials and finish from damage during handling and installation.

The top rail shall be a 2" x 6" x 94½" deco ribbed rail, with a galvanized steel channel.

The bottom rail shall be a 2" x 6" x 94½" deco ribbed rail, with a galvanized steel channel.

The fence shall have full pickets that are 7⁄8" x 7" x 62¾" with interlocking tongue-and-groove configuration.

Fence posts shall be 5" x 5" x 107" overall and shall be spaced at 96⅙" center-to-center.

Fence post foundations shall be constructed of Class SI concrete. Concrete foundations shall be a minimum of 12" in diameter and extend down a minimum of 42" below finished grade.

This work will be paid for at the contract unit price per foot for VINYL FENCE, 6', measured in place. The price shall include the cost of all excavation, concrete, fence appurtenances and hardware, and all material, labor, and equipment necessary to make a complete and finished installation.

LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, PHOTOCELL CONTROL, 400-WATT

This work shall be in accordance with Section 821 of the Standard Specifications insofar as applicable and the following provisions.

This item is for installation on the steel combination mast arm assembly and poles located at the intersection of Annie Glidden Road and South Malta Road/Taylor Street.

The luminaires shall be cobra head type design with a drop lens and photocell control. The lamp shall be clear 400-watt, high-pressure sodium and meet the requirements of Article 1067.02. The luminaire shall be a General Electric M-400 luminaire, Catalog Number MSRL40S1A21RMS3C with a black finish, a Lithonia Lighting CHM luminaire, Catalog Number CHM 400S R3 DLG 120 SCWA LPI PE1 CF DBL or an approved equal meeting the applicable requirements of Section 1067.

This work will be paid for at the contract unit price each for LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, PHOTOCELL CONTROL, 400-WATT.

LIGHTING CONTROLLER, SPECIAL

This work shall be in accordance with Section 825 of the Standard Specifications and the following provisions.

The cabinet shall be a single-door enclosure meeting the requirements of Article 1074.03 of a Type IV traffic signal controller cabinet. The cabinet surface shall be smooth, free of marks and scratches, and provide an unpainted aluminum finish.

The components shall meet the requirements of Article 1068.01(e) insofar as applicable and the details in the plans.

This work will be paid for at the contract unit price each for LIGHTING CONTROLLER, SPECIAL.

LIGHT POLE FOUNDATION, 30" DIAMETER, OFFSET

1. DESCRIPTION

- 1.1 This item shall consist of the construction of a steel-reinforced concrete offset foundation of the diameter indicated, with offset construction as indicated and complete with raceways, all as indicated on the contract drawings.
- 1.2 The foundation work shall include all excavation, reinforcement, concrete, anchor bolts, nuts, washers, and raceways.

2. MATERIALS

The materials shall be as specified in Article 836.02 of the Standard Specifications.

3. CONSTRUCTION REQUIREMENTS

This work shall be in accordance with Articles 836.03(a) and 836.03(b) of the Standard Specifications.

4. METHOD OF MEASUREMENT

The foundation shall be measured for payment in feet of foundation in place, with the measurement to be taken along the vertical and horizontal centerlines of the foundation, except that the total depth shall be not greater than indicated on the plans or as directed by the Engineer.

5. BASIS OF PAYMENT

This work will be paid for at the contract unit price per foot for LIGHT POLE FOUNDATION, 30" DIAMETER, OFFSET, which shall be payment in full for the work as shown on the drawings and described herein.

UNIT DUCT, WITH 2-1/C NO. 4, 2-1/C NO. 6, 2-1/C NO. 8 AND 1/C NO. 6 GROUND, 600V (XLP-TYPE USE), 2" DIA., POLYETHYLENE
UNIT DUCT, WITH 2-1/C NO. 4, 2-1/C NO. 6, 2-1/C NO. 8, 3-1/C NO. 10 AND 1/C NO. 6 GROUND, 600V (XLP-TYPE USE), 2" DIA., POLYETHYLENE

This work shall be in accordance with Section 816 of the Standard Specifications insofar as applicable and the following provisions.

The materials shall meet the requirements of Article 816.02. The colors of the conductors shall be as follows:

2-1/C	#4	Black and white
2-1/C	#6	Red and black
2-1/C	#8	Red and black
3-1/C	#10	Black, white, and green
1/C	#6	Green

This work will be paid for at the contract unit price per foot installed for UNIT DUCT, WITH 2-1/C NO. 4, 2-1/C NO. 6, 2-1/C NO. 8 AND 1/C NO. 6 GROUND, 600V (XLP-TYPE USE), 2" DIA., POLYETHYLENE or UNIT DUCT, WITH 2-1/C NO. 4, 2-1/C NO. 6, 2-1/C NO. 8, 3-1/C NO. 10 AND 1/C NO. 6 GROUND, 600V (XLP-TYPE USE), 2" DIA., POLYETHYLENE, as applicable.

LIGHT STANDARD

1. DESCRIPTION

This item shall consist of furnishing a decorative aluminum pole complete with a davit mast arm, galvanized anchor bolts, festoon outlet, clamp-on banner arms for a maximum 6-foot long by 2-foot wide banner, and all required hardware, with a 250-watt, high-pressure sodium horizontal-mount luminaire and lamp at a 40-foot mounting height and dual-bracketed ornamental luminaires and lamps at a 14-foot mounting height and a cast-aluminum, split-pedestal base.

2. GENERAL REQUIREMENTS

- 2.1 Each pole shall be a two-piece assembly consisting of a fluted round lower pole shaft and a round upper short-radius davit arm. The pole arm assembly shall be part of a coordinated system with components designed such that a common lower shaft of each pole type will accept a variety of different-length davit arms. Evidence shall be submitted that the pole will provide such a system, including not only the davit arm lengths specified or indicated for this project, but other arm lengths as well. As a minimum, the system shall allow configurations with the following arms for each pole height:
- | | |
|---------|--------|
| 8-foot | single |
| 10-foot | single |
| 15-foot | single |
- 2.2 The pole shall be designed to 2001 AASHTO design criteria for 90 mph winds and 50-year design life for a luminaire of not less than 75 pounds having an effective projected area of not less than 1.6 square feet on a 15-foot arm and withstand loadings of up to and including the same luminaire on each of two 12-foot arms oriented at any angle from 45 degrees to 180 degrees apart.
- 2.3 The pole shall be designed such that deflection of the pole from the vertical axis does not exceed one degree per 10 feet of nominal pole height as caused by the deadweight moment of the arm and design-load luminaire referenced above.
- 2.4 Pole deflection calculations, certified by the manufacturer, shall be submitted to the Engineer as part of the data and product information submitted for approval. The calculations shall be for all lower shaft-mast arm calculations applicable to this project.
- 2.5 The pole shall be coordinated with all luminaires being provided on this project to be free of susceptibility to harmful harmonics and vibrations. The pole shall incorporate an integral vibration damper. The information submitted for approval shall address this requirement.
- 2.6 The upper arm shall slip-fit over the lower shaft not less than 12 inches, and the assembly shall be held in place with two stainless steel bolts with associated stainless steel nuts, flat washers, and lockwashers. Each bolt shall be threaded only at its end so as to minimize the potential for damage to the pole wire (no threads on inside of pole). The flush joint shall be as shown on the contract plans.
- 2.7 The combined assembly shall produce a luminaire mounting height as shown on the contract drawings. Mounting height is defined as the distance from the tenon centerline to the bottom of the pole base.

2.8 The upper davit arm shall be of smooth circular cross-section seamless tapered aluminum alloy, Type 6063-T6. It shall be free of dents, kinks, ripples, scratches, or other defects. The outer wall shall have a satin ground finish 100 grit or finer.

3. LOWER SHAFT

3.1 As specified above, the lower shaft shall be a common size component, suitable for the mounting of various types of davit arms.

3.2 The shaft shall have a cast aluminum base plate conforming to ASTM Designation AA356-T6 for aluminum alloy, welded to the pole shaft. All welding shall be performed by the inert gas shielded arc method, and all welds shall be free from cracks and pores. The base plate shall have bolt slots suitable for 1-inch diameter anchor bolts. Poles shall have 15-inch nominal bolt circle.

3.3 The shaft shall have two 4-inch by 8-inch handholes with rounded ends. The handholes shall be reinforced and shall have a cover of the same material as the pole held in place with tamper-resistant steel core nylon screws. The handholes shall be located as indicated on the contract drawings.

3.4 The shaft shall be equipped with a ground lug, welded inside the shaft, suitable for No. 6 and No. 4 wires, located adjacent to and accessible from the handhole.

3.5 The lower shaft shall have a 10-inch bottom diameter and shall taper to a consistent diameter of 6 inches at the top, 32'-3" up from the base.

3.6 The lower shaft shall have a nominal wall thickness of not less than 219 mils.

4. DAVIT ARM

4.1 As specified above, davit arms of various arms lengths shall be suitable for the lower shaft, regardless of mounting height and the limitation of types on this project.

4.2 The davit arm shall be of the short-radius type, having a centerline bending radius not greater than 45 inches. The bend shall produce a nominal up-tilt of the arm not to exceed 5 degrees for an unloaded pole and 1.5 degrees for a loaded pole. The arm shall be coordinated with the luminaire furnished under this contract so as to produce a level mounting of the luminaire (up-tilt not greater than 1.5 degrees) with the luminaire installed. Submittal information shall include conformation of this coordination.

4.3 The bend shall be carefully made so that the arm is free of kinks, wrinkles, or other defects.

4.4 The davit arm, regardless of mounting height, shall have a 6-inch diameter at the slip point and shall taper to a 3.5-inch diameter at the luminaire end.

4.5 Each davit arm shall have a nominal wall thickness of not less than 188 mils.

4.6 The upper end of the arm shall have a 2 $\frac{3}{8}$ -inch O.D. tenon with an extension of not less than 7.5 inches or more than 10.5 inches. The tenon shall be coordinated with the luminaires being furnished for the project so that no more than 2 inches of the tenon between the upper end of the davit arm and the luminaire is exposed.

5. APPURTENANCES

- 5.1 Ornamental brackets shall be provided as shown on the contract drawings.
- 5.2 A cast-aluminum, split-pedestal base shall be provided as shown on the contract drawings.
- 5.3 Clamp-on banner arms shall be provided as shown on the contract drawings.

6. ANCHOR BOLTS

Four anchor bolts per light standard shall be provided. The anchor bolts shall be 1 inch x 36 inches x 4 inches galvanized steel. Two hex nuts and two flat washers shall be provided for each bolt.

7. VIBRATION REQUIREMENTS

- 7.1 The detailed design and fabrication of the shaft and of the mast arms shall be such as to withstand 80 mph AASHTO criteria for wind and vibrations caused by the wind pressure.
- 7.2 There shall be no excessive vibrations in the shaft, mast arm(s) under moderate wind pressure, where damage may result to the luminaire(s) and/or its component parts, and/or mast arm(s). A dampening device, as an integral part of the shaft, shall be installed in the shaft to alleviate such excessive vibrations. The proposed vibration-dampening device shall be submitted for the Engineer's approval.
- 7.3 No information contained herein shall be construed to relieve the Contractor of the above requirements.

8. FINISH

- 8.1 All exposed parts of the pole shall be cleaned as recommended by the finish manufacturer and approved by the City Engineer.
- 8.2 All exposed parts shall receive a powder coat finish as recommended by the manufacturer.
- 8.3 Unless otherwise indicated, the color of the finish shall be glossy black.
- 8.4 The finish shall be applied in accordance with the manufacturer's recommendations, and the manufacturer shall certify in writing to the City that the finish has been applied properly.

9. LUMINAIRES

- 9.1 The luminaire shall be cobra head type design with a drop lens. The lamp shall be clear 250-watt, high-pressure sodium and meet the requirements of Article 1067.02. The luminaire shall be a General Electric M-400 luminaire, Catalog Number MSRL25S3A11RMS3C with a black finish, a Lithonia Lighting CHM luminaire, Catalog Number CHM 250S R3 DLG 240 SCWA LPI CF DBL or an approved equal.
- 9.2 The ornamental luminaires shall be a General Electric Edison V Luminaire, Catalog Number EDVX 05S 0 A1 1BC S BLCK, an Antique Street Lamps AT 23 luminaire, Catalog Number AT23A 50S MED ACT GR5 240 ANBK or an approved equal. The lamps shall be clear 50-watt, high-pressure sodium and meet the requirements of Article 1067.02

9.3 All applicable portions of Section 821 of the "Standard Specifications for Road and Bridge Construction" shall apply.

10. FESTOON OUTLET

Each pole shall be manufactured with an opening for a duplex receptacle with weatherproof cover. The festoon outlet shall be installed 20 feet above the base of the pole on the back side of the pole (side facing away from the street). The duplex receptacles shall be 20-amp, 125-volt ground fault interrupting, NEMA 5-20R with weatherproof cover. The receptacle shall remain weatherproof while in use.

11. CERTIFICATION AND GUARANTEE

The submittal information shall include a written certification of compliance with the contract requirements from the manufacturer. The certification shall specifically identify the project route, location, section number, and contract number, as applicable, and shall identify specifically the equipment covered by the certification. The certification shall be made on the manufacturer's corporate stationary, and it shall be dated and signed by a responsible officer of the company, with the signee's title listed.

12. SHIPMENT

12.1 The poles shall be carefully inspected at the factory prior to shipment to assure that the poles are complete and free of defects.

12.2 When poles are stacked together, they shall be supported with suitable spacers or shall otherwise be protected from dents and other potential shipping damage. The spacing and protective materials shall be suitable for and usable in the storage of the poles.

13. DELIVERY

The poles shall be delivered to the City's Street Operations Garage at 1316 Market Street.

14. BASIS OF PAYMENT

This item will be paid for at the contract unit price each for LIGHT STANDARD, which shall be payment in full for furnishing the pole and luminaires as described herein.

LIGHT STANDARD, INSTALLED

1. DESCRIPTION

This item shall consist of furnishing and installing a decorative aluminum pole complete with davit mast arm, galvanized anchor bolts, festoon outlet, clamp-on banner arms, and all required hardware, with a 250-watt, high-pressure sodium, horizontal-mount luminaire and lamp at a 40-foot mounting height and dual-bracketed ornamental luminaires and lamps at a 14-foot mounting height and a cast-aluminum, split-pedestal base.

2. GENERAL REQUIREMENTS

This light standard shall conform to the specification for Light Standard.

3. INSTALLATION

- 3.1 The light pole shall be set plum on the foundation without the use of shims, grout, or any other leveling devices under the pole base. The davit mast arm shall be set at right angles to the centerline of the pavement. The leveling arm of the horizontal-mount luminaire shall be set in a plane parallel to the roadway. The bracket arms shall be set parallel to the centerline of the pavement. The ornamental luminaires shall be set plumb on the bracket arms. The cast-aluminum base shall be set plumb on the foundation without the use of shims, grout, or any other leveling device.
- 3.2 This item shall be coordinated with other contract items, including pole wire and foundations, which shall be provided under separate pay items as applicable.
- 3.3 Poles shall not be installed until luminaires are available for installation at the same time. Poles shall not be left standing without a coordinated installation of davit mast arm and horizontal-mount luminaire and bracket arms and ornamental luminaires. Poles shall not be paid for unless the coordinated assembly, including davit arm and horizontal-mount luminaire and bracket arms and ornamental luminaires, is complete.

4. BASIS OF PAYMENT

This item will be paid for at the contract unit price each for LIGHT STANDARD, INSTALLED, which will be payment in full for all work necessary to provide a complete and operational installation.

TRAFFIC SIGNAL WORK

In order to reduce possible vehicular conflicts with fixed objects and avoid public criticism, it is necessary to require that no posts, poles, heads, or controller cabinets be installed until all traffic signal control equipment is brought to and located on the job site.

The construction, installation, and/or removal work shall be accomplished at the following intersections:

Annie Glidden Road at Taylor Street/South Malta Road
Annie Glidden Road at Fairview Drive

Description of Work. The work to be completed at Annie Glidden Road/Taylor Street/South Malta Road consists of a temporary traffic signal installation, removal of existing traffic signal equipment, relocation of a pole-mounted civil defense warning siren, and the construction of a new full-actuated traffic signal installation having all combination mast arms, pedestrian signals, vehicle detector loops, emergency vehicle preemption, and a proposed hard wire cable in conduit to the City's existing interconnect system. The work to be completed at Annie Glidden Road/Fairview Drive consists of a proposed wireless interconnect system to the Annie Glidden Road/Taylor Street/South Malta Road intersection.

Inspection. All work done and materials furnished shall be subject at all times to inspection during the progress of the work. The Contractor shall comply fully and adequately with all the provisions of the contract under which the work is to be done and the specifications therefore.

Easements and Temporary Use Permits. All construction shall be completed within the right-of-way, unless a permanent or temporary easement exists or is obtained or a temporary use permit is obtained by the City of DeKalb for work off the right-of-way.

Partial Payment. Partial payments shall be made as the work progresses as specified in the Standard Specifications.

Acceptance and Final Payment. Acceptance and final payment shall be in accordance with Article 109.08 of the Standard Specifications.

TRAFFIC SIGNALS — GENERAL

The intent of this special provision is to prescribe the materials and construction methods commonly used in traffic signal installations. All material furnished shall be new. The locations and the details of all installations shall be as indicated on the plans or as directed by the Engineer.

All signal and pedestrian heads shall provide 12" (300 mm) displays with black polycarbonate housings.

Pedestrian signal heads shall be furnished with international symbolic *WALKING PERSON* and *UPRAISED PALM* displays with black polycarbonate housings.

When the road is open to traffic, except as otherwise provided in Sections 850 and 890, the Contractor may request a turn-on and inspection of the completed traffic signal installation. This request must be made to the Engineer a minimum of seven (7) working days prior to the time of the requested inspection. Upon demonstration that the signals are operating and all work is completed in accordance with the contract and to the satisfaction of the Engineer, the Engineer will then allow the signals to be placed in continuous operation.

OPERATION OF EXISTING TRAFFIC SIGNALS

Existing traffic signal installations and/or any electrical facilities at certain intersections included in this Section may be altered or reconstructed totally or partially as part of the work on this Section. The Contractor is hereby advised that all traffic control equipment presently installed at these locations may be the property of the State of Illinois, Department of Transportation, or the City of DeKalb.

The Contractor is further advised that the existing traffic signal or the existing temporary installations must remain in operation during all construction stages except for the most essential down time. Any shutdown of the installation for a period to exceed fifteen (15) minutes must have the prior approval of the Engineer. Such approval will generally only be granted during the period extending from 10:00 a.m. to 3:00 p.m. on weekdays. Any other traffic signal shutdown, either for periods in excess of one (1) hour or outside of the 10:00 a.m. to 3:00 p.m. weekday period, must have prior approval of the Engineer.

Prior to commencing work, the Contractor shall notify the IDOT Traffic Engineer and the City of DeKalb Public Works Department of his intent to perform this work. Once the Contractor has begun any work on any portion of the project, all traffic signals within the limits of this contract or those which have the item "Maintenance of Existing Traffic Signal Installation," "Temporary Traffic Signal Installation(s)", and/or "Maintenance of Existing Flashing Beacon Installation" shall become the full responsibility of the Contractor. The Contractor shall supply the Engineer and the Department's Electrical Maintenance Contractor a 24-hour emergency contact name and telephone number. Upon request from the Contractor, the City of DeKalb will locate any buried conduit or other electrical facility which may interfere with the Contractor's operations without charge to him. This shall in no way relieve the Contractor of his responsibility to repair and/or replace electrical facilities damaged by his operations.

Any known or suspected damage to the electrical facility shall be reported immediately to the Engineer. The Contractor will be held fully responsible for the repair and/or replacement of any part of the existing installation—whether permanent or temporary—if in the sole opinion of the Engineer such damage was caused by the negligence of the Contractor, his agents, or employees. The State, at its own discretion, may call upon the State's Electrical Maintenance Contractor or the City of DeKalb to make any such repairs and/or replacements at the total expense of the Contractor for this Section.

MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION

Maintenance of existing traffic signal installation will be required at the intersection of Annie Glidden Road and Illinois Route 38 and at the intersection of Annie Glidden Road and Fairview Drive.

Revise Section 850.00 of the Standard Specifications to read:

The energy charges for the operation of the traffic signal installation shall be paid for by others. Full maintenance responsibility shall start as soon as the Contractor begins any physical work on the contract or any portion thereof.

The Contractor shall have on-staff electricians with IMSA Level II certification to provide signal maintenance.

This item shall include maintenance of all traffic signal equipment at the intersection, including emergency vehicle preemption equipment, master controllers, telephone service installations, communication cables, and conduits to adjacent intersections.

The maintenance shall be according to Article 802.07 and the following contained herein.

The Contractor shall check all controllers every two (2) weeks, which will include visually inspecting all timing intervals, relays, detectors, and preemption equipment to ensure that they are functioning properly. This item includes, as routine maintenance, all portions of emergency vehicle preemption equipment. The Contractor shall maintain in stock at all times a sufficient amount of materials and equipment to provide effective temporary and permanent repairs.

The Contractor shall provide immediate corrective action when any part or parts of the system fail to function properly. Two far-side heads facing each approach shall be considered the minimum acceptable signal operation, pending permanent repairs. When repairs at a signalized intersection require that the controller be disconnected, and power is available, the Contractor shall place the traffic signal installation on flashing operation. The signals shall flash RED for all directions, unless a different indication has been specified by the Engineer. The Contractor shall be required to place stop signs (R1-1-36) at each approach of the intersection as a temporary means of regulating traffic. At approaches where a yellow flashing indication is necessary, as directed by the Engineer, stop signs will not be required. The Contractor shall furnish and equip all their vehicles assigned to the maintenance of traffic signal installations with a sufficient number of stop signs as specified herein. The Contractor shall maintain a sufficient number of spare stop signs in stock at all times to replace stop signs which may be damaged or stolen.

The Contractor shall provide the Engineer with a 24-hour telephone number for the maintenance of the traffic signal installation and for emergency calls by the Engineer.

Traffic signal equipment which is lost or not returned to the Department for any reason shall be replaced with new equipment meeting the requirements of these specifications.

The Contractor shall respond to all emergency calls from the Department or others within one hour after notification and provide immediate corrective action. When equipment has been damaged or becomes faulty beyond repair, the Contractor shall replace it with new and identical equipment. The cost of furnishing and installing the replaced equipment shall be borne by the Contractor at no additional charge to the State or City. The Contractor may institute action to recover damages from a responsible third party. If at any time the Contractor fails to perform all work as specified herein to keep the traffic signal installation in proper operating condition, or if the Engineer cannot contact the Contractor's designated personnel, the Engineer shall have the State's Electrical Maintenance Contractor perform the maintenance work required. The State's Electrical Maintenance Contractor shall bill the Contractor for the total cost of the work. The Contractor shall pay this bill within thirty (30) days of the date of receipt of the invoice, or the cost of such work will be deducted from

the amount due the Contractor. The Contractor shall allow the Electrical Maintenance Contractor to make reviews of the existing traffic signal installation that has been transferred to the Contractor for maintenance.

This work shall be paid for at the contract unit price each for MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION.

TRAFFIC SIGNAL BACKPLATE

Delete the first sentence of Article 1078.03 of the Standard Specifications and add "All backplates shall be aluminum and louvered."

TRAFFIC SIGNAL POST

Add the following to Section 1077.01 of the Standard Specifications:

All posts and bases shall be steel, hot-dipped galvanized. The posts and bases to be located at the intersection of Annie Glidden Road/Taylor Street/South Malta Road shall be painted gloss black. Painting shall consist of powder coating by the manufacturer and will be required over the galvanization.

MAST ARM ASSEMBLY AND POLE

Add the following to Section 1077.03 of the Standard Specifications.

Traffic signal mast arms shall be one-piece construction, unless otherwise approved by the Engineer. All assemblies shall be galvanized. The combination mast arm assemblies and poles located at the intersection of Annie Glidden Road/Taylor Street/South Malta Road shall be painted gloss black. All painting shall consist of powder coating by the manufacturer and will be required over the galvanization.

This work includes installing luminaires at the combination mast arm assemblies and poles located at the Annie Glidden Road/Taylor Street/South Malta Road intersection.

The luminaires shall be furnished and paid for as a separate item.

This work shall also include installing one (1) decorative split-type, cast-aluminum pedestal base around each mast arm assembly pole located at the intersection of Annie Glidden Road/Taylor Street/South Malta Road in accordance with the manufacturer's recommendations and details in the contract drawings.

The decorative pedestal base shall be furnished and paid for as a separate item.

TRAFFIC-ACTUATED CONTROLLER

The installation of a traffic-actuated controller shall meet the requirements of Section 857 of the Standard Specifications, except as follows:

The controller furnished for this improvement shall be a Multisonic Model 820A so as to be fully compatible with the City of DeKalb's VMS System Master Computer.

The following additional features shall be furnished with the controller:

1. Provide a separate interconnect isolation panel with required lightning arresters. A terminal for a minimum of 12 pairs of wire will be placed in the cabinet.
2. Install contact switches in the cabinet for detection of main door opening by the VMS 330.
3. Ground all unused cable pairs to the cable shield.

4. Provide adequate means of grounding all shielded cable.
5. Lightning protection in conformance with Article 1074.03 of the Standard Specifications will be required.
6. Install a telephone jack as necessary to provide voice communications to the master computer.
7. Provide a manually switched convenience light mounted to illuminate the front of the controller with the door open and two 120-volt ground fault convenience receptacles which shall be switched separate of the service breakers and protected by a fuse rated at 15 amperes.
8. The controller cabinet shall be wired for a full eight phases.
9. A hand-held control pushbutton shall be provided in the police door of the controller cabinet. Additionally, a controller shut-off switch shall be provided in the controller cabinet.
10. Two days of training on the operation and maintenance of the 820A controller shall be provided. The training shall occur at the City of DeKalb, Engineering Division office and be performed by a trainer approved by the City.
11. The lighting circuit shall be split off the traffic signal service. A 15-amp fuse and shut-off shall be provided for the proposed lighting circuit in the traffic signal cabinet. All work and equipment for this lighting circuit in the cabinet shall be considered incidental to this item.
12. No wiring terminals shall be less than 12" from the bottom of the cabinet.
13. A battery backup system shall be installed in a separate cabinet mounted along the side of the controller cabinet to maintain only traffic signal equipment operations in the event of a power outage. This backup system shall be paid as a separate item.

This work will be paid for at the contract unit price each for FULL-ACTUATED CONTROLLER IN TYPE IV CABINET, which price shall be payment in full for furnishing and installing the controller complete in a new cabinet with the necessary connections for proper operation. The cabinet finish shall be spun aluminum.

DETECTOR LOOP

This work shall consist of furnishing and installing a detector loop in accordance with the requirements of Section 886 of the Standard Specifications, except as follows:

The loop shall be placed in the bituminous concrete binder course if the roadway is being surfaced as part of the project.

Round loops six feet in diameter may be substituted for six-foot square loops, but each round loop shall be paid for at 24 lineal feet of Detector Loop, Type 1.

The cable splice connection of the detector loop and the lead-in cable to the controller shall conform to Section 873 of the Standard Specifications. An epoxy splice kit shall be used for all splices.

Each loop detector lead-in wire shall be labeled in the handhole using a Panduit 250W175C waterproof tag or an approved equal, secured to each wire with nylon ties.

All lead-in wire shall be installed in polyethylene unit duct from edge of pavement to the handhole.

The lead-in wire, including all necessary connections for proper operation from the edge of pavement to the handhole, shall be incidental to the price of the detector loop. Unit duct, trench and backfill, and drilling of pavement or handholes shall be incidental to detector loop quantities.

Loop sealant shall be a two-component, thixotropic chemically cured polyurethane, either Chemque Q-Seal 295, Percol Elastic Cement A/C Grade, or an approved equal. The sealant shall be installed $\frac{1}{8}$ " below the pavement surface. If installed above the surface, the overlap shall be removed immediately.

This work will be paid for at the contract unit price per foot for DETECTOR LOOP.

PEDESTRIAN PUSHBUTTON

This item shall consist of furnishing and installing a pedestrian pushbutton assembly of cast aluminum alloy one-piece-type construction incorporating a heavy-duty pushbutton switch, plaque with raised print legend, and integral banding brackets meeting the requirements of Section 888 of the Standard Specifications.

The aluminum alloy casting shall be approximately $13\frac{1}{4}$ " long, with the upper and lower segments molded to fit $\frac{3}{4}$ " steel banding. It shall also be possible to bolt on the assembly to a mounting surface using two holes that are in the center of the integral banding brackets. Directly below the upper integral banding bracket shall be an integral plaque approximately 5" wide by 8" long. Cast into this plaque shall be a raised print legend taking up the full space of the plaque. This legend shall be as detailed (see plan detail). Directly below the plaque shall be cast a pushbutton switch housing of approximately a $1\frac{1}{2}$ " top radius with flat sides. The housing shall be of sufficient depth to accommodate the pushbutton switch. There shall be an overhang at the top of the pushbutton switch housing to prevent rain from affecting the pushbutton switch actuator. The center of the pushbutton switch housing shall be threaded $\frac{5}{8}$ " x 32 to accommodate the pushbutton switch to be screwed in from the rear. The pushbutton switch shall be mounted at a 3 degree angle to provide additional water runoff. The lower integral banding bracket shall be directly below this pushbutton switch housing. The rear of the casting shall be open to facilitate wiring and inspection and access to pushbutton switch. The extreme upper and lower segments in the rear shall be either flat to fit a flat mounting surface, or curved to fit a round pole. A wide variety of radius curvatures shall be available to fit different size poles. The casting and all features thereof shall be of a one-piece design.

The pushbutton switch shall be of the normally off-momentary contact type with positive action feature. The switch shall be rated at 35 amps at 12 volts or 20 amps at 24 volts. The switch contacts shall be composed of 90% silver and 10% cadmium oxide to minimize arcing and pitting on contact surface. The #8-32 screws shall be provided as terminals to facilitate wiring. The body of the switch shall be of die-cast aluminum and shall be approximately 1" in diameter. The upper body of the switch around the actuator shall be a $\frac{5}{8}$ " threaded collar to allow mounting to the pushbutton switch housing. A variety of protective enclosures shall be available for the actuator to provide a maximum protection for the switch actuator in the event of inclement weather, vandalism, etc.

This work shall be paid for at the contract unit price each for PEDESTRIAN PUSHBUTTON, which price shall be payment in full for installing the pushbutton assembly complete.

GALVANIZED STEEL CONDUIT

The installation of a conduit shall meet the requirements of Section 810 of the Standard Specifications, except as follows:

All conduit installed underground shall have a minimum depth of two feet, six inches below finished grade. See plan for areas that require deeper minimum depths.

UNIT DUCT

All installations of unit duct shall be completely incidental to the Detector Loop, Type 1 and not paid for separately. Polyethylene unit duct shall be used for detector loop raceways to the handholes.

Materials. The duct shall be made of high-density polyethylene which shall meet the requirements of ASTM D-1248, Type III, Class C and the requirements listed in Table 2-1 of NEMA TC7.

ELECTRIC CABLE

The installation of an electric cable shall meet the requirements of Section 873 of the Standard Specifications, except as follows:

The jacket for traffic signal electric cable in this contract shall be of the polyvinyl chloride type. No other type of jacket will be allowed, except as follows:

The service cable may have an XLP Jacket.

This work will be paid for at the contract unit price per foot for ELECTRIC CABLE of the type, size, and number of conductors specified.

SERVICE INSTALLATION, TYPE B

The installation of a service installation shall meet the requirements of Section 805 of the Standard Specifications, except as follows:

The location of the weatherproof box shall be at a height of 5'-6" above the ground.

For the traffic signal service installation, the size of the circuit breaker at the controller cabinet shall be rated at least 125 percent of the signal load and controller load or a minimum of 50 amperes, whichever is greater. The size of the circuit breaker at the service pole shall be rated at least 120 percent of the size of the circuit breaker at the controller or a minimum of 60 amperes, whichever is greater. A weatherproof box shall be of adequate size and meet Commonwealth Edison requirements.

The traffic signal service voltage shall be 120 volts.

For the warning siren service installation, the size of the circuit breaker at the service pole shall be a minimum of 60 amperes. A weatherproof box shall be of adequate size and meet Commonwealth Edison requirements.

The warning siren service voltage shall be 240 volts.

The Contractor shall schedule an inspection of the service installation by the City Electrician from the Building Department prior to hook-up. Once the City Electrician has approved the service installation, he will notify Commonwealth Edison for electric service.

The Contractor shall also notify the Commonwealth Edison Marketing Representative a minimum of 15 working days prior to the anticipated date of hook-up. This 15-day advance notification will begin only after the Commonwealth Edison Marketing Representative has received service charge payments from the Contractor.

The Commonwealth Edison Marketing Representative for this project is:

Mike Lennox, Rockford Office
Telephone: (815) 490-2869

This work will be paid for at the contract unit price each for SERVICE INSTALLATION, TYPE B, which shall be payment in full for furnishing and installing the service installation complete. Any charges by the utility company to provide electrical services to the service installation will be paid for in accordance with Article 109.05 of the Standard Specifications.

CONCRETE FOUNDATION

The installation of a concrete foundation shall meet the requirements of Section 878 of the Standard Specifications and the Standard Drawing for Concrete Foundations, except as follows:

Concrete Foundations, Type A for Traffic Signal Posts shall include anchor bolts meeting the requirements of Article 1006.09 of the Standard Specifications, with the bolt pattern evenly spaced at 12½" to 13" diameter. All Type A foundations shall be a minimum depth of 48".

Concrete Foundations, Type D for Traffic Signal Cabinets shall be a minimum of 48" long and 31" wide. The concrete apron shall be 36" x 48" x 5". Anchor bolts shall meet the requirements of Article 1006.09 of the Standard Specifications with bolt spacing as required by the manufacturer. All Type D foundations shall be a minimum depth of 48".

Concrete Foundations, Type E for Mast Arm and Combination Mast Arm Poles shall meet the following requirements:

**DESIGN TABLE FOR 30-INCH DIAMETER FOUNDATION
 WITH 18" BOLT CIRCLE FOR MAST ARMS THROUGH 40 FEET
 ALL COMBINATION POLES SHALL HAVE A 36-INCH DIAMETER FOUNDATION
 MINIMUM DEPTH OF 15 FEET**

	<u>Description</u>	<u>Type of Soil</u>	<u>Standards</u>	<u>Design Depth of Foundation</u>
1.	Soft Clay		QU = 0.25 - 0.5 T/S.F.	17'-6"
2.	Medium Clay		QU = 0.5 - 1.0 T/S.F.	12'-6"
3.	Stiff Clay		QU = 1.0 - 2.0 T/S.F.	8'-6"
*4.	Loose Sand		N = 4 - 10	10'-0"
*5.	Medium Sand		N = 10 - 30	9'-0"
*6.	Dense Sand		N = 30 - 50	8'-0"

- * Water table assumed below depths specified
- N = Number of blows per foot, standard penetration test
- QU = Unconfined compressive strength

No foundation is to be poured until the Resident Engineer gives his approval as to the depth of the foundation.

This work will be paid for at the contract unit price per foot of depth of CONCRETE FOUNDATION of the type specified, which price shall be payment in full for all necessary excavating or drilling, backfilling, disposal of unsuitable material, form work, and furnishing all materials within the limits of the foundation, except the anchor bolts.

HANDHOLE (TRAFFIC SIGNALS)

The installation of a handhole shall meet the requirements of Section 814 of the Standard Specifications, except as follows:

All concrete handholes are to be cast in place against undisturbed earth. No precast concrete handholes will be accepted.

The words *TRAFFIC SIGNALS* shall be cast into the lid.

All conduits will enter the handhole at a depth of 30" except for the conduits between the curb and first handhole for detector loops when the handhole is less than five feet from the detector loop.

This work will be paid for at the contract unit price each for CONCRETE HANDHOLE, CONCRETE HEAVY-DUTY HANDHOLE, or CONCRETE DOUBLE HANDHOLE, which price shall be payment in full for all necessary excavating, backfilling, disposal of unsuitable materials, and furnishing all materials within the limits of the handhole.

TRENCH AND BACKFILL

The constructing and backfilling of a trench shall meet the requirements of Section 815 of the Standard Specifications, except as follows:

The trench shall not be less than two feet, six inches in depth.

This work will be paid for at the contract unit price per foot for TRENCH AND BACKFILL FOR ELECTRICAL WORK.

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

Add the following to Section 895.05 of the Standard Specifications:

The traffic signal equipment which is to be removed and is to become the property of the Contractor shall be disposed of by them outside the right-of-way at their expense.

The Contractor shall provide five (5) copies of a list of equipment that is to remain the property of the City, including model and serial numbers where applicable. He shall also provide a copy of the contract plan or special provision showing the quantities and type of equipment. Controllers and peripheral equipment from the same location shall be boxed together (equipment from different locations may not be mixed), and all boxes and controller cabinets shall be clearly marked or labeled with the location from which they were removed. If equipment is not returned with these requirements, it will be rejected by the City. The Contractor shall be responsible for the condition of the traffic signal equipment from the time he takes maintenance of the signal installation until the acceptance of a receipt drawn by the City's Public Works Department indicating the items have been received in good condition.

The Contractor shall safely store and arrange for pick up of all equipment to be returned to agencies other than the State or City. The Contractor shall package the equipment and provide all necessary documentation as stated above.

Traffic signal equipment which is lost or is not received by the Department for any reason shall be replaced with new equipment meeting the requirements of these specifications.

Removal of existing traffic signal equipment will be paid for at the contract unit price each for REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT.

TEMPORARY TRAFFIC SIGNAL INSTALLATION

This item shall consist of furnishing, installing, maintaining, and removing a temporary traffic signal installation at an existing intersection as shown on the plans and as described herein. The energy charges for the operation of the traffic signal installation shall be paid for by others.

The installation of a temporary traffic signal installation shall meet the requirements of Sections 850 and 890 of the Standard Specifications and the Standard Drawings, except as follows:

Equipment. The Contractor shall provide the following:

1. All control equipment for the temporary traffic signal(s) shall be furnished by the Contractor, unless otherwise stated in the plans. On projects with multiple signal installations, all controllers shall be from the same manufacturer and model.
2. Controllers used for temporary traffic signals shall be fully actuated NEMA microprocessor-based, capable of supplying 255 seconds of cycle length and individual phase-length settings up to 99 seconds. On projects with one lane open and two-way traffic flow such as bridge deck repairs, the temporary signal controller shall be capable of providing an adjustable all-red clearance setting of up to 30 seconds in length.
3. A digital time-base coordinating unit shall be supplied with each temporary traffic signal. Compatible time-base coordinating units shall be supplied upon request to match adjacent systems or on projects containing multiple signal installations. The controller settings shall be set in the field as directed by the Engineer.
4. All traffic signal sections and pedestrian signal sections shall be of the 12" type. The temporary traffic signal heads shall be placed as indicated on the temporary traffic signal plan or as directed by the Engineer. The Contractor shall furnish enough cable slack to relocate heads to any position on the span wire or at locations illustrated on the plans for construction staging. The temporary traffic signal shall remain in operation during all signal head relocations. Each temporary traffic signal head shall have its own cable from the controller cabinet to the signal head.
5. All existing street name and intersection regulatory signs shall be removed from existing poles and relocated and securely fastened to the signal span wire.
6. All labor and material required to comply with these requirements shall be considered incidental to the bid price of the temporary traffic signal installation.
7. Emergency vehicle priority system with confirmation beacon shall be required in the temporary installation (see detail in plan).
8. A temporary wireless interconnect system on Annie Glidden Road from Taylor Street to Illinois Route 38 shall be required in the temporary installation.

Maintenance Procedures. The Contractor shall perform the following maintenance procedures for each temporary installation designated to remain in operation during construction. The Contractor shall:

1. Patrol and inspect each installation every two (2) weeks for proper alignment of signal heads, lamp failures, and general operation of the traffic signals.
2. Check all controllers every four (4) weeks, which will include visually inspecting all timing intervals, relays, detectors, and preemption equipment to ensure that they are functioning properly. This item includes as routine maintenance all portions of Opticom emergency preemption equipment.
3. Provide immediate corrective action to replace burned-out lamps or damaged sockets. When lamps are replaced, the reflector and lens shall be cleaned. All replacement lamps shall meet the approval of the Engineer. The Contractor shall repair or replace all defective equipment from any cause whatsoever.
4. Maintain in stock at all times a sufficient amount of materials and equipment to provide effective temporary and permanent repairs.

5. Provide immediate corrective action when any part or parts of the system fail to function properly. Two far-side heads facing each approach shall be considered the minimum acceptable signal operation pending permanent repairs. When the distance from the stop line to the far-side signal exceeds 150 feet, a near-right signal must also be maintained. When repairs at a signalized intersection require that the controller be disconnected, and power is available, the Contractor shall place the traffic signal installation on flashing operation or install a flasher if none is provided in the controller cabinet. The signals shall flash RED for all directions, unless a different indication has been specified by the Engineer. The Contractor is required to place stop signs (R1-1-36) at each approach to the intersection as a temporary means of regulating traffic. At approaches where a yellow flashing indication is necessary as directed by the Engineer, stop signs will not be required. The Contractor shall furnish and equip all his vehicles assigned to the maintenance of traffic signal installations with a sufficient number of stop signs as specified herein. The Contractor must maintain a sufficient number of spare stop signs in stock at all times to replace stop signs which may be damaged or stolen.
6. Replace defective or damaged equipment. If the proper sequence with full detection cannot be obtained immediately, a controller which will provide the proper sequence and full detection shall be installed within twelve (12) hours of removal of the original controller.
7. Remove to the Contractor's shop and clean, test, lubricate, and overhaul as required each electrical, mechanical, and electro-mechanical component of each installation at intervals not exceeding twelve (12) months, except as service installations, magnetic detectors, pressure detectors, and such other items as may be specifically exempted by the Engineer. The master control equipment for traffic-adjusted systems may be cleaned and overhauled without removal from the site. A record tag shall be attached to each individual piece of equipment, with the following information: (1) date of overhaul; and (2) the location where originally installed, unless otherwise directed by the Engineer. The interval between successive dates of cleaning and overhauling shall not exceed one year. Any component unit which fails in a manner which affects the intended operation of any installation shall be overhauled before it is returned to service. The Contractor shall be required to maintain the existing type of equipment and sequence of operations during the period of time that the original control equipment is being overhauled. When solid-state controllers malfunction, they shall be removed, repaired, and bench checked. Solid-state controllers shall not be removed for annual maintenance inspections.
8. Provide the Engineer with the names, addresses, and telephone numbers of two (2) persons qualified and assigned to the maintenance of the traffic signal installation. These people must be made available 24 hours per day, each and every day of the year for emergency calls by the Engineer.
9. Respond to all emergency calls from the Illinois Department of Transportation, City of DeKalb, or others within one hour after notification, and provide immediate corrective action. When equipment has been damaged or becomes faulty beyond repair, the Contractor shall replace it with new and identical equipment. The cost of furnishing and installing the replaced equipment shall be borne by the Contractor at no additional charge to the City. The Contractor may institute action to recover damages from a responsible third party. If at any time the Contractor fails to perform all work as specified herein to keep the temporary traffic signal installation in proper operating condition or if the Engineer cannot contact the Contractor's designated personnel, the Engineer shall have the City's Electrical Maintenance Contractor perform the maintenance work required. The City's Electrical Maintenance Contractor shall bill the Contractor for the total cost of the work. The Contractor shall pay this bill within thirty (30) days of the date of receipt of the invoice, or the cost of such work will be deducted from the amount due the Contractor.

When temporary traffic signals are to be installed at locations where existing signals are presently operating, the Contractor shall be fully responsible for the maintenance of the existing signal installation as soon as he begins any physical work on the contract or any portion thereof until the temporary signals are functioning and the existing signals are removed. Maintenance responsibility of the existing signals shall be incidental to those

previously listed for Temporary Traffic Signal Installation. In addition, five days prior to assuming maintenance of the existing traffic signal installation(s) under this contract, the Contractor shall request that the Resident Engineer contact the City for an inspection of the installation(s). The City Engineer shall establish a date and time of inspection and at this time shall check the installation to determine if any corrective work should be done by the City's Electrical Maintenance Contractor or the City's Contractor prior to the Contractor taking over maintenance of the installation. The Resident Engineer, City Engineer, and the Contractor shall mutually agree on the date of maintenance transfer to the Contractor for this section.

COMMUNICATIONS CABLE IN CONDUIT

This work shall consist of furnishing and installing interconnect communications cable in conduit. All work shall comply with the current requirements of the National Electrical Code and the Rural Electrification Administration.

Materials

Communications Cable. Cable shall be 19-gauge copper wire with a minimum of 24 conductors (12 pair twisted). All cable shall meet or exceed REA specification PE 39, be polyethylene insulated and polyethylene jacketed, and be shielded with a corrugated copper or aluminum electrical shield. The cable shall be watertight and gel-filled.

Installation. All cable placed underground shall be installed in galvanized steel conduit and be in conformance with Section 873 of the Standard Specifications insofar as applicable and the following provisions.

Cable Slack. Cable slack will be measured in accordance with Section 873.

Cable Splices. There shall be no splices in the communications cable, unless approved by the Engineer. If splices are allowed, they shall be made in aboveground waterproof junction boxes. Cables shall be terminated at a terminal strip in the waterproof junction box. The junction box shall be a Hoffman Continuous Hinge "CH" Box or approved equal.

Handhole spacing for long runs shall not exceed 350'.

The City of DeKalb will inform the Contractor of the proper cable pair assignments for the intersections so as to maintain proper coding in the master computer.

Measurement for Payment. Communications Cable in Conduit shall be measured for payment using the horizontal distances between changes in direction plus allowances set forth herein for junction boxes, handholes, and controller. Vertical cable on poles will be measured for payment.

Basis of Payment. This work will be paid for at the contract unit price per foot for ELECTRIC CABLE IN CONDUIT, COMMUNICATIONS, NO. 19, 12 PAIR, which price will include splices and junction boxes, if required.

CONTROL OF TRAFFIC SIGNAL MATERIALS

Control of materials shall meet the requirements of Section 802 of the Standard Specifications, except for the following:

Delete Articles 802.03, 802.04, and 802.10 of the Standard Specifications.

Documentation. The Contractor shall submit the following traffic signal material documentation to the City for the Engineer's approval. The material shall be submitted prior to the delivery of equipment to the job site

or within 30 consecutive calendar days after the contract is awarded or within 15 consecutive calendar days after the preconstruction meeting.

1. One (1) complete set of manufacturer's descriptive literature, drawings, and specifications of the traffic signal equipment, handholes, junction box, cable, conduit, and all associated items that will be installed on the contract.
2. Eight (8) complete shop drawings of the mast arm assemblies and poles showing in detail the fabrication, anchor bolts, and reinforcing materials.
3. Eight (8) copies of a letter listing the manufacturer's name and model numbers of the proposed equipment to be supplied, as noted in paragraphs 1 and 2 of this Special Provision. The letter will be reviewed by the Traffic Design Engineer to determine whether the equipment to be used is approved. The letters will be stamped as approved or not approved accordingly and returned to the Contractor.
4. All items in each of the above three paragraphs shall be stamped with the contract number, permit number, or intersection route number for FAU projects, and the section number.

Unless otherwise approved by the Engineer, all of the above items shall be submitted to the Engineer at the same time. Failure to submit the required information above may result in any request for 120-day delay under Article 802.06 being denied.

Acceptance. Acceptance of the traffic signal equipment by the Illinois Department of Transportation and the City shall be based upon inspection results at the traffic signal turn-on. If approved, traffic signal acceptance shall be verbal at the turn-on inspection followed by written correspondence from the Engineer. The Contractor shall be responsible for all traffic signal equipment and associated maintenance thereof until Departmental acceptance is granted.

At or prior to the turn-on inspection of the traffic signal installation, the Contractor shall provide the Traffic Signal Inspector with one (1) copy of the letter described in paragraph 3 above. In addition, the Contractor shall provide the Engineer with one (1) copy of the operation and service manuals of the signal controller and associated control equipment and five (5) copies of the cabinet wiring diagrams. If these items are not delivered, the traffic signal installation(s) will not be placed in operation.

All cost of work and materials required to comply with the above requirements shall be included in the pay item bid prices under which the subject materials and signal equipment are paid, and no additional compensation will be allowed. Materials and signal equipment not complying with the above requirements will be subject to removal and disposal at the Contractor's expense.

VMS 330 MODIFICATION

This work shall consist of furnishing the following materials for the Master Card Cage to expand the network map:

- | | |
|--------|--|
| 2 Each | VMS Master Processor Unit: No. CPU-8085,
U.S. Traffic (California) Part No. 007002 |
| 2 Each | VMS Modem: U.S. Traffic (California) Part No. 8050-8755 |
| 2 Each | VMS Modem Rack Power Supply: MPS-330 8050-8611,
U.S. Traffic (California) Part No. 007167 |

All furnished items shall be delivered to the City of DeKalb Implementation Engineer prior to signal turn-on.

This work will be paid for at the contract lump sum price for VMS 330 MODIFICATION.

MAP PANEL MODIFICATION

This work shall consist of expanding and upgrading the existing VMS 330 Map Panel Display. The following materials for the Map Panel Modification will be furnished by the City of DeKalb:

- 5 Each Eldema D-Holder Light Socket ELDEMA Part No. DHP-15B
- 4 Each Panel Mount Cartridge Lamp LED Green Dome SloanLED Part No. 502-G-D-GTP
- 1 Each Panel Mount Cartridge Lamp LED Red Dome SloanLED Part No. 502-R-D-RTP

The following procedures outline the steps for upgrading the VMS Map Panel Display:

Disconnect power to map panel. Drill and flush mount four (4) leg light sockets and one (1) coordination light socket in the appropriate locations for the Annie Glidden Road/Fairview Drive intersection being added. Determine telemetry assignments for the intersection to be wired. Locate the wire list in the documentation packet in original map panel and locate correct wire groups in spare wire bundle to run up to the added intersection. Wire the correct white control 'A' side with a bare wire, and determine by telemetry assignment the correct buss wire or wires (orange wire) from the map driver or drivers to be wired to intersection buss. If the intersection being added is in the same NPU group of 16 intersections, only one orange wire will need to be run up from the map driver. When lamp holders are wired, install lamps from the front of the map and check for any metal wire that may have fallen into the electronics. Finally, reconnect power to map and test new lamps.

Map panel modifications shall be completed within one week of signal turn-on.

This work will be paid for at the contract unit price each for MAP PANEL MODIFICATION, which price shall include all necessary work and equipment to make the expansion with properly operating lamp indicators.

RELOCATE EMERGENCY VEHICLE PRIORITY SYSTEM

This work shall consist of the removal and relocation of the existing emergency vehicle priority system equipment as shown on the plans. The installation shall be performed in accordance with Section 887 of the Standard Specifications and the manufacturer's recommendations.

All new cable shall be paid for as a separate item.

The work shall be paid for at the contract unit price each for RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT and per each for RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT.

SIGN PANEL, TYPE 1 OR 2

This work shall be done in accordance with Section 720 of the Standard Specifications with the following addition.

The letters shall be in all capitals with spacings as shown in the plans.

This work will be paid for at the contract unit price per square foot for SIGN PANEL of the type specified.

TRAFFIC SIGNAL BATTERY BACKUP SYSTEM

This work shall consist of furnishing and installing a permanent battery backup system capable of automatically maintaining the traffic signal heads and EVP equipment for normal operations in a consecutive three-hour time period during utility outages.

Equipment. The system shall consist of the following components (all as manufactured by Alpha Technologies, offices worldwide or equal as approved by the City of DeKalb.)

- 1. Novus 1000 UPS Power Module 1 Each

- 2. Manual Bypass Switch 1 Each
- 3. Alpha 85 GLX Battery with Separate Auto-regulating Heat Pad 4 Each
- 4. DT-29 All-Weather Aluminum Enclosure 1 Each

Any questions regarding this equipment or its installation can be addressed to:

Steve Englehart
Alpha Technologies
22429 Foxcroft
Woodhaven, MI 48183
Telephone: (734) 676-4163
Fax: (734) 676-4181
e-mail: senglehart@alpha.com

All the equipment shall be mounted within the DT-29 enclosure which shall be side-mounted to the outside of the traffic signal controller cabinet. A separate concrete foundation will not be required for this installation.

Basis of Payment. This work shall be paid for at the contract unit price each for TRAFFIC SIGNAL BATTERY BACKUP SYSTEM, which price shall include all materials, equipment, labor, and wiring/cables needed to install the battery backup system complete.

SIGNAL HEAD, LIGHT EMITTING DIODE

- 1. **General.** Signal Head, Light Emitting Diode (LED), 1-Face, (All Section Quantities), (All Mounting Types) shall meet the requirements of Sections 880 and 881 and Articles 1078.01 and 1078.02 of the "Standard Specifications for Road and Bridge Construction" adopted January 1, 2002, with the following modifications:
 - a. All signal and pedestrian heads shall be 12" glossy black polycarbonate. Connecting hardware and mounting brackets shall be polycarbonate (black) or galvanized steel painted black. A corrosion-resistant, anti-seize lubricant shall be applied to all metallic mounting bracket joints and shall be visible to the inspector at the signal turn-on. Post-top mounting collars are required on all posts and shall be constructed of the same material as the brackets.
 - b. The optical unit of all traffic signal and pedestrian head sections shall be light emitting diodes (LEDs) instead of incandescent bulbs. Each signal head shall conform fully to the "Interim Purchase Specification of the Institute of Transportation Engineers (ITE) for LED Vehicle Traffic Signal Modules" published July 1998 or applicable successor ITE specification. All units in an intersection shall be the same brand.
 - c. The lens of each signal indication shall be tinted with a wavelength-matched color to reduce sun phantom effect and enhance on/off contrast. The tinting shall be uniform across the lens face. Polymeric lens shall provide a surface coating applied to provide abrasion resistance.
 - d. Each pedestrian signal LED module shall provide the ability to actuate the outlined upraised hand and the outlined walking person on one 12-inch section. "Egg crate" type sun shields are not permitted. All figures must be a minimum of 9 inches in height and easily identified from a distance of 120 feet.
 - e. The LED modules shall provide constant light output under power. Modules with dimming capabilities shall have the option disabled or set on a non-dimming operation.
 - f. In the event of a power outage, light output from the LED modules shall cease instantaneously.

- g. In addition to conforming with the requirements for circular LED signal modules, LED arrow-indication modules shall meet existing specifications stated in the ITE Standard: "Vehicle Traffic Control Signal Heads," Section 9.01. The LEDs arrow indication shall be a solid display with a minimum of three (3) outlining rows of LEDs and at least one (1) fill row of LEDs. The LEDs shall be spread evenly across the illuminated portion of the arrow area.
- h. The LED signal modules shall be replaced or repaired if an LED signal module fails to function as intended due to workmanship or material defects within the first **60 months** from the date of delivery. LED signal modules which exhibit luminous intensities less than the minimum values specified in Section 4.1.1 of the Interim Purchase Specification of the ITE for LED Vehicle Traffic Signal Modules within the first **60 months** of the date of delivery shall be replaced or repaired. The manufacturer's written warranty for the LED signal modules shall be dated, signed by an officer of the company, and included in the product submittal to the State.
- i. Each module shall consist of an assembly that utilizes LEDs as the light source in lieu of an incandescent lamp for use in traffic signal sections.
- j. The LEDs utilized in the modules shall be AlInGaP technology for red, yellow, Portland orange (pedestrian), and white (pedestrian) indications, and GaN for green indications and shall be the ultra-bright type rated for 100,000 hours of continuous operation from -40°C to +74°C.
- k. The individual LEDs shall be wired such that a catastrophic loss or the failure of one or more LED will not result in the loss of the entire module.

2. **Electrical:**

- a. Maximum power consumption for LED modules is per Table 1.
- b. LED modules will have EPA Energy Star compliance ratings, if applicable to that shape, size, and color.
- c. The modules shall operate from a 60 Hz \pm 3 Hz AC line over a voltage ranging from 95 volts to 135 volts. The fluctuations of line voltage shall have no visible effect on the luminous intensity of the indications.
- d. Operating voltage of the modules shall be 120 VAC. All parameters shall be measured at this voltage.
- e. The LED signal module shall have a power factor of 0.90 or greater.
- f. Total harmonic distortion (current and voltage) induced into an AC power line by a LED signal module shall not exceed 20 percent.
- g. The signal module on-board circuitry shall include voltage surge protection to withstand high-repetition noise transients as stated in Section 2.1.6 of NEMA Standard TS-2, 1992.
- h. The LED circuitry shall prevent perceptible flicker to the unaided eye over the voltage range specified above.
- i. All wiring and terminal blocks shall meet the requirements of Section 13.02 of the ITE publication: Equipment and Material Standards, Chapter 2 (Vehicle Traffic Control Signal Heads).

- j. The modules shall be operationally compatible with currently used controller assemblies (solid-state load switches, flashers, and conflict monitors).
- k. When a current of 20 mA AC (or less) is applied to the unit, the voltage read across the two leads shall be 15 VAC or less.
- l. The modules and associated on-board circuitry must meet Class A emission limits referred to in Federal Communications Commission (FCC) Title 47, SubPart B, Section 15 regulations concerning the emission of electronic noise.

3. Photometric Requirements

- a. The minimum initial luminous intensity values for the modules shall be as stated in Table 2 and/or Table 4 at 25°C.
- b. The modules shall meet or exceed the illumination values as shown in Table 3 and/or Table 4 throughout the useful life based on normal use in a traffic signal operation over the operating temperature range.
- c. The measured chromaticity coordinates of the modules shall conform to the chromaticity requirements of Table 5 throughout the useful life over the operating temperature range.

4. Environmental Requirements

- a. The LED signal module shall be rated for use in the operating temperature range of -40°C (-40°F) to +74°C (+165°F). The modules shall meet all specifications throughout this range.
- b. The LED signal module shall be protected against dust and moisture intrusion per the requirements of NEMA Standard 250-1991 for Type 4 enclosures to protect all internal components.

5. Construction

- a. The LED signal module shall be a single, self-contained device not requiring on-site assembly for installation. The power supply for the module shall be integral to the unit.
- b. The circuit board and power supply shall be contained inside the module.
- c. The assembly and manufacturing process for the LED signal assembly shall be designed to assure all internal components are adequately supported to withstand mechanical shock and vibration from high winds and other sources.

6. Materials

- a. Material used for the lens and signal module construction shall conform to ASTM specifications for the materials.
- b. Enclosures containing either the power supply or electronic components of the signal module shall be made of UL94VO flame-retardant materials. The lens of the signal module is excluded from this requirement.

7. Traffic Signal and Pedestrian LED Module Identification

- a. Each module shall have the manufacturer's name, trademark, model number, serial number, date of manufacture (month-year), and lot number as identification permanently marked on the back of the module.
- b. The following operating characteristics shall be permanently marked on the back of the module: rated voltage and rated power in Watts and Volt-Ampere.
- c. Each module shall have a symbol of the type of module (i.e., circle, arrow, etc.) in the color of the module. The symbol shall be one inch in diameter. Additionally, the color shall be written out in ½-inch letters next to the symbol.
- d. If a specific mounting orientation is required, each module shall have prominent and permanent marking(s) for correct indexing and orientation within a signal housing. The markings shall consist of an up arrow or the word UP or TOP.

8. Traffic Signal LED Module

- a. Modules can be manufactured under this specification for the following faces:
 - (1) 12 inch circular, multi-section
 - (2) 12 inch arrow, multi-section
 - (3) 12 inch pedestrian, 2 sections
- b. The maximum weight of a module shall be 4 pounds (1.8 kg).
- c. Each module shall be a sealed unit to include all parts necessary for operation (a printed circuit board, power supply, a lens and gasket, etc.) and shall be weatherproof after installation and connection.

9. Retrofit Traffic Signal Module

- a. The following specification requirements apply to the retrofit module only. All general specifications apply, unless specifically superseded in this section.
- b. Retrofit modules can be manufactured under this specification for the following faces:
 - (1) 12-inch (300 mm) circular, multi-section
 - (2) 12-inch (300 mm) arrow, multi-section
 - (3) 12-inch (300 mm) pedestrian, 2 sections
- c. The module shall fit into existing traffic signal section housings built to the specifications detailed in ITE publication: Equipment and Material Standards chapter Vehicle Traffic Control Signal Heads.
- d. Each retrofit module shall be designed to be installed in the door frame of a standard traffic signal housing. The retrofit module shall be sealed in the door frame with a one-piece EPDM (ethylene propylene rubber) gasket.
- e. The maximum weight of a retrofit module shall be 4 pounds (1.8 kg).

- f. Each retrofit module shall be a sealed unit to include all parts necessary for operation (a printed circuit board, supply, a lens and gasket, etc.) and shall be weatherproof after installation and connection.
 - g. The lens of the retrofit module shall be integral to the unit, shall be convex with a smooth outer surface, and made of plastic or of glass.
10. Two secured, color-coded, 600-volt, 20 AWG minimum, jacketed wires conforming to the National Electric Code, rated for service at +105°C, are to be provided for electrical connection for each LED signal module. Conductors for modules, including retrofit modules, shall be 39.4 inches (1 m) in length, with quick-disconnect terminals attached.
11. **Lens**
- a. The lens of the module shall be tinted and integral to the unit, convex with a smooth outer surface, and made of plastic.
 - b. The use of tinting or other materials to enhance ON/OFF contrasts shall not affect chromaticity and shall be uniform across the face of the lens.
 - c. The LED signal module lens shall be UV-stabilized and shall be capable of withstanding ultraviolet (direct sunlight) exposure for a minimum period of 60 months without exhibiting evidence of deterioration.
 - d. The polymeric lens shall have a surface coating or chemical surface treatment to provide front-surface abrasion resistance.
12. The following specification requirements apply to the 12-inch (300 mm) arrow module only. All general specifications apply, unless specifically superceded in this section.
- a. The arrow module shall meet specifications stated in Section 9.01 of the ITE publication: Equipment and Material Standards, Chapter 2 (Vehicle Traffic Control Signal Heads) for arrow indications.
 - b. The LEDs shall be spread evenly across the illuminated portion of the arrow area.
13. The following specification requirements apply to the 12-inch (300 mm) PV module only. All general specifications apply, unless specifically superceded in this section.
- a. The module shall be a module designed and constructed to be installed in a programmed visibility (PV) signal housing without modification to the housing.
 - b. The LEDs shall be spread evenly across the module.

This item shall be paid for at the contract unit price each for SIGNAL HEAD, LED of the type specified, which price shall be payment in full for furnishing the equipment described above including signal head, LED modules, all mounting hardware, and installing them in satisfactory operating condition.

The type specified will indicate the number of signal faces, the number of signal sections, and the method of mounting.

Table 1. Maximum Power Consumption (in Watts)

Temperature	Red		Yellow		Green	
	25°C	74°C	25°C	74°C	25°C	74°C
12-inch (300 mm) circular	11	17	22	25	15	15
12-inch (300 mm) arrow	9	12	10	12	11	11
	Hand-Portland Orange		Person-White			
Pedestrian Indication	6.2		6.3			

Table 2. Minimum Initial Intensities for Circular Indications (in cd)

Angle (v,h)	12 Inch (300 mm)		
	Red	Yellow	Green
2.5, ±2.5	399	798	798
2.5, ±7.5	295	589	589
2.5, ±12.5	166	333	333
2.5, ±17.5	90	181	181
7.5, ±2.5	266	532	532
7.5, ±7.5	238	475	475
7.5, ±12.5	171	342	342
7.5, ±17	105	209	209
7.5, ±22.5	45	90	90
7.5, ±27.5	19	38	38
12.5, ±2.5	59	119	119
12.5, ±7.5	57	114	114
12.5, ±12.5	52	105	105
12.5, ±17.5	40	81	81
12.5, ±22.5	26	52	52
12.5, ±27.5	19	38	38
17.5, ±2.5	26	52	52
17.5, ±7.5	26	52	52
17.5, ±12.5	26	52	52
17.5, ±17.5	26	52	52
17.5, ±22.5	24	48	48
17.5, ±27.5	19	38	38

Table 3. Maintained Minimum Intensities for Circular Indications (in cd)

Angle (v,h)	12 Inch (300 mm)		
	Red	Yellow	Green
2.5, ±2.5	339	678	678
2.5, ±7.5	251	501	501
2.5, ±12.5	141	283	283
2.5, ±17.5	77	154	154
7.5, ±2.5	226	452	452
7.5, ±7.5	202	404	404
7.5, ±12.5	145	291	291
7.5, ±17	89	178	178
7.5, ±22.5	38	77	77
7.5, ±27.5	16	32	32
12.5, ±2.5	50	101	101
12.5, ±7.5	48	97	97
12.5, ±12.5	44	89	89
12.5, ±17.5	34	69	69
12.5, ±22.5	22	44	44
12.5, ±27.5	16	32	32
17.5, ±2.5	22	44	44
17.5, ±7.5	22	44	44
17.5, ±12.5	22	44	44
17.5, ±17.5	22	44	44
17.5, ±22.5	20	41	41
17.5, ±27.5	16	32	32

Table 4. Minimum Initial & Maintained Intensities for Arrow and Pedestrian Indications (in cd/m²)

	Red	Yellow	Green
Arrow Indication	5,500	11,000	11,000

Table 5. Chromaticity Standards (CIE Chart) Section 8.04

Red	Y: Not greater than 0.308, nor less than 0.998 - x
Yellow	Y: Not less than 0.411, nor less than 0.995 - x
Green	Y: Not less than 0.506 - .519x, nor less than 0.150 + 1.068x, nor more than 0.730 - x

PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER

This work shall consist of furnishing and installing a pedestrian signal head in accordance with Section 881 of the Standard Specifications, the Special Provision for Light Emitting Diode (LED) Signal Head, and as specified herein.

The pedestrian signal head shall provide LED Upraised Hand/Walking Man symbols and LED countdown display. The pedestrian signal shall display an overlay message combining full-figure Hand and Man symbols. When illuminated, the Hand or Walking Man symbols shall provide a balanced fully illuminated symbols. The Upraised Hand symbol shall be Portland orange. The Walking Man symbol shall be lunar white.

The two-digit countdown display shall provide two (2) seven-segment digits. The size of each digit shall have an 8" minimum height, 3 $\frac{1}{8}$ " minimum width, and a minimum stroke width of $\frac{11}{16}$ ". The two-digit display shall be Portland orange.

The nominal dimensions of each pedestrian signal display will be 12" x 12".

The Upraised Hand/Walking Man display shall be located above the countdown display.

The LED digits shall provide, at a minimum, the following user-selectable operating modes:

- Mode 1 – Shall count down the entire duration of the walk and pedestrian-clearance intervals.
- Mode 2 – Shall count down the duration of the pedestrian-clearance interval only.
- Mode 3 – Shall count down the duration of the walk interval only.
- Mode 4 – Shall count down the duration of the walk interval followed by another countdown of the pedestrian-clearance interval.

The digit display shall be blank when not counting down.

The pedestrian signal shall contain a countdown timer module that shall continuously monitor the traffic controller for changes to the pedestrian-interval timings and reprogram itself automatically when changes are detected. The countdown module shall have an internal conflict monitor to prevent possible conflicts between the Hand/Man symbols and the countdown digits.

The pedestrian signal head housing shall be black polycarbonate in accordance with Section 1078 of the Standard Specifications.

This work will be paid for at the contract unit price each for PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER, which price shall include the pedestrian head sections, mountings, LED light source module, terminal block, visor, mounting assembly, and incidental fittings necessary to mount the signal assembly, realignments, and optical adjustments.

DECORATIVE BASE FOR COMBINATION MAST ARM ASSEMBLY AND POLE

Description. This item consists of furnishing and installing a cast aluminum split pedestal base on a traffic signal steel combination mast arm assembly and pole located at the intersection of Annie Glidden Road and Taylor Street/South Malta Road.

General Requirements. The base shall be a cast aluminum split pedestal base with two doors at 180 degrees. The design shall be Union Metal Base No. 726, as shown in the plan detail, or an approved equal conforming to the general shape and design. The top opening shall be sized to fit the combination mast arm assemblies and poles for this project. Included in this project are the following mast arm lengths: 42 feet, 48 feet, 52 feet, and 55 feet.

The base shall be powder-coated in the same gloss black color as the traffic signal equipment and light standards.

Installation. The base shall be installed in accordance with the manufacturer's recommendations. The base shall be installed such that one of its doors aligns with the handhole in the pole.

The proposed wire mesh banded around the base of the pole at the foundation shall be deleted as a part of these decorative base installations.

Basis of Payment. This item shall be paid for at the contract unit price each for DECORATIVE BASE FOR COMBINATION MAST ARM ASSEMBLY AND POLE, which shall be payment in full for the work described herein.

RELOCATE CIVIL DEFENSE WARNING SIREN

This work consists of the removal and relocation of an existing pole-mounted civil defense warning siren installation.

The Contractor shall install a 55-foot Class II treated wooden pole and power-ready service for the relocated warning siren prior to removing and relocating the existing siren in an effort to minimize the downtime of the siren. This new Service Installation, Type B shall be paid for separately.

Actual removal and reinstallation of the warning siren and its pole-mounted control equipment shall only be performed by:

Braniff Communications, Inc.
4741 West 136th Street
Crestwood, Illinois 60445

Mr. Manfred Blum
(708) 597-3200

The Contractor shall arrange and schedule the removal and reinstallation by Braniff Communications as part of this item of work.

The Contractor shall also arrange and schedule with ComEd the electrical power connections necessary to handle 7.1 kW draw and 220/240-volt single-phase usage as part of this work. All billing for electrical usage shall remain the same as existing.

This work shall be paid for at the contract lump-sum price for RELOCATE CIVIL DEFENSE WARNING SIREN, which price shall be payment in full for furnishing a new wooden pole and all equipment, labor, and materials necessary to remove and relocate the existing siren complete and in full operating condition.

The new service installation disconnect, conduit, and cable will be for paid separately.

WIRELESS INTERCONNECT SYSTEM

This work consists of furnishing and installing a complete wireless interconnect system from the intersection of Annie Glidden Road and Taylor Street/South Malta Road to the intersection of Annie Glidden Road and Fairview Drive.

This work includes furnishing and installing all coaxial cable, antennas, transceivers, repeater transceivers, software, enclosures, wooden poles, service installations, and all material, labor, and equipment necessary to provide a complete installation.

The wireless interconnect system shall be as manufactured by:
ENCOM Wireless Data Solutions, Inc.
#7, 640 - 42nd Avenue NE
Calgary, Alberta, Canada T2E 7J9
Phone (403) 230-1122
www.encomwireless.com

The wireless interconnect transceivers located at each intersection and the intermediate repeater transceiver shall be COMMPAK Model 5100 S/R Wireless Interconnect Units.

Antenna cable shall be "Elimar #400" 50 ohm coaxial cable or approved equal.

The repeater transceiver and its two antennas shall be mounted on a Class II 30' wooden pole which will also serve as a Service Installation Type B pole. The two antennas shall be mounted a minimum of 25' above finished grade. The repeater transceiver unit shall be housed in a weatherproof pole-mounted enclosure located 6' above finished grade. The enclosure shall conform to Article 1086.02 of the Standard Specifications as applicable and shall be furnished with a key lock and the appropriate hardware for pole-mounting. The Contractor shall arrange and schedule with ComEd the electrical power connection necessary to handle a minimum of one watt and 120-volt single-phase usage for the repeater transceiver as part of this work.

This work will include installing the following items in or on existing traffic signal equipment at the Annie Glidden Road and Fairview Drive intersection.

1. Install new interconnect transceiver in the existing traffic signal controller.
2. Pull approximately 185 feet of new coaxial cable through existing conduit from the existing traffic signal controller to a new antenna.
3. Install new antenna on existing traffic signal mast arm pole located at the northeast corner of the intersection. The antenna shall be mounted a minimum of 25 feet above finished grade, which may require a mounting pole extension.

This work will be paid for at the contract lump sum price for WIRELESS INTERCONNECT SYSTEM, which price shall include all coaxial cable, antennas, transceivers, repeater transceivers, software, enclosures, wooden poles, service installations, and all material, labor, and equipment necessary to provide a complete installation.

GENERAL LANDSCAPING

SUMMARY

This work shall consist of supplying all materials, labor, and equipment to plant shrubs and trees. This work shall be performed in accordance with Section 253 (Planting Woody Plants) of the Standard Specifications unless modified herein.

This work shall consist of supplying all materials, labor, and equipment to plant perennials and grasses. This work shall be performed in accordance with Section 254 (Planting Perennial Plants) of the Standard Specifications unless modified herein.

This work shall consist of purchase, transportation, storage, preparation, and planting of balled and burlapped (B&B) trees and shrubs, container shrubs, perennials, and grasses. Work also consists of purchase, transportation, and placement of shredded bark mulch, two (2) year guarantee and replacement, watering, and all related work necessary to assure healthy and well-established plant material as shown on the plans and as directed by the Engineer.

WORK INCLUDES:

Preparation and fine grading of soil prior to planting.

Planting of trees and shrubs indicated on the drawings including:

1. Deciduous shrubs

2. Shade trees

Planting of plants indicated on the drawings including:

1. Perennials
2. Grasses

Furnishing and installation of miscellaneous landscaping materials.

Initial maintenance of all plants.

REFERENCES:

ANSI Z60.1-1990 American Standard for Nursery Stock; 1996

Illinois Department of Transportation (IDOT) "Standard Specifications for Road and Bridge Construction" adopted January 1, 2002.

SUBMITTALS:

Permits: Contractor shall be responsible for obtaining all required permits.

Contractor shall be responsible for location of all utilities prior to the installation of plant material. Notification of JULIE is required for all planting locations (800) 892-0123.

Certificates of Inspection: Certified product analysis and any certificates required by law to accompany shipments.

Product Data: Submit three (3) sets of manufacturers technical data.

Planting Schedule: Indicate beginning and ending dates of planting for each material.

Maintenance Instruction: Written instructions for the Owner's maintenance of landscaping. Include initial maintenance recommendation, 24-month and long-term recommendations. Submit prior to acceptance of landscaping.

The Contractor shall submit a list of nurseries supplying plant material for the project within 21 days of award of the project.

QUALITY ASSURANCE

General: Comply with government regulations applicable to landscaping.

Employ qualified, experienced landscape personnel.

No substitutions permitted of plant materials without prior approval by Owner. Provide the materials indicated. If specified plants are found to be unavailable, the Contractor must submit to the Owner a list of 15 nurseries or suppliers that have been contacted in the plant search, along with a list of proposed substitutions and their sources. All plant substitutions must be approved in writing by the Owner.

Provide plant materials complying with ANSI Z60.1.

All plants shall be obtained from reputable nurseries in hardiness zones of comparable local climate range of DeKalb, Illinois and approved by the Owner or authorized representative. All trees and shrubs shall be dug prior to leafing out (bud break) in the spring or when plants have gone dormant in the fall, except for the

following species which are only to be dug prior to leafing out in the spring: (The Owner reserves the right to expand this list upon submittal of the planting schedule.)

1. Quercus spp. (Oaks)
2. Ulmus spp. (Elms)

Inspection:

1. The Owner retains the right to inspect planting materials at any time for compliance with the contract documents including but not limited to latent defects and lack of protection or maintenance and to reject defective material.
2. All plant inspections shall take place during normal working hours. The Contractor shall be responsible for giving timely notice to the related parties and making all necessary arrangements for inspection.
3. Immediately and legally dispose of rejected materials off the site.

DELIVERY, STORAGE, AND HANDLING

Packaged Materials: Deliver in original unopened containers displaying weight, guaranteed chemical analysis and supplier's name or furnish in bulk with appropriate certificates. Protect from deterioration.

Plants: Schedule delivery to avoid storage on site. If planting does not occur on the same day as delivery, store in a location protected from sun and weather.

1. Do not shock trees and shrubs by pruning before delivery.
2. Cover to protect stock during transport. Plant material transported without cover shall be automatically rejected.
3. Bind stock to protect branches, bark, and overall shape during transport.
4. Balled and burlapped stock: Provide freshly dug stock unless otherwise approved.
5. Do not drop stock. Load and unload with care.
6. Deliver stock only after soil has been prepared. Schedule harvesting and delivery in quantities suitable for immediate planting upon arrival. Plant immediately. If planting cannot be accomplished immediately, provide shade, protect from wind, protect balls or roots from drying by covering at all times with moist saw dust, wood chips, shredded bark, peat moss, or other similar mulching material.

PROJECT CONDITIONS:

Schedule and coordinate with work of other sections and local seasons.

Utilities: Locate and avoid damage to underground utilities.

1. Excavation: Notify the Owner of any unforeseen conditions affecting plant growth (buried debris, etc.).
2. In order to protect existing trees, excavation in root zones may require the use of an air spade.

Planting Time:

1. For each type of landscape work required, place or install materials during normal planting seasons of the project locale.
 - a. Spring: March 15 through June 30
 - b. Fall: October 1 through November 30
2. For the select tree species requiring digging prior to leafing out in the spring and the affected plants underneath and adjacent: Plant during the spring planting season unless otherwise approved.
3. Frost-sensitive materials: Plant after last frost and well before frost season.
4. Plant only in thawed ground.
5. Dates are dependent on species of plant material and weather. May begin or end prior or after above dates as approved by Owner.

WARRANTIES:

General: Warranties shall be in addition to and not a limitation of other rights the Owner may have against the Contractor under the contract documents.

Upon notification from the Owner of substantial completion and acceptance, the Contractor shall guarantee all plant material be in healthy and flourishing condition for two (2) years, regardless of the time of the year or the conditions under which the plant material was installed.

During this guarantee period, when so directed by the Owner, the Contractor shall repair and replace at his own expense all defective or unsatisfactory landscape plant materials (those that are dead, dying, diseased, or lacking vigor).

Replace immediately unsatisfactory landscape materials (those dead or lacking vigor) with healthy and vigorous materials. Plant only during next occurring specified planting season. At the direction of the Owner, either replace materials in borderline condition or extend the warranty covering such materials for one full growing season. Another inspection will be conducted at the end of the extended warranty period, if any, to determine acceptance or rejection.

INITIAL MAINTENANCE:

Initial Maintenance: The Contractor is responsible for maintenance of each area until it has been accepted by the Owner and the warranty period is formally started. Begin maintenance immediately upon delivery to the site and as each plant and each portion is planted, and continue until substantial completion of all plant materials.

Work Subject to Initial Maintenance: Perform maintenance work for all of the work installed under this contract.

Initial Maintenance of Plant Materials: Maintain all plantings in a healthy and vigorous condition. Watering is required. Initial maintenance of new planting consists of providing all labor, transport, and materials to accomplish watering, pruning, cultivating, replanting, weeding, mulching, tightening, and repairing of supports, repair of wrapping, cleaning, and furnishing and applying sprays as are necessary to keep the plants free of insects and disease. Initial maintenance shall be performed according to the objectives and procedures specified in the Landscape Maintenance Section of this specification.

Initial Maintenance Review: Initial maintenance review shall take place simultaneously with substantial completion review of the landscape plantings. If planting areas are found to be defective, make necessary replacements, as specified, continue initial maintenance for ten days, and request another inspection. If there are any deficiencies in the maintenance, the Contractor will be notified of these deficiencies in writing, and the work shall be subject to review before acceptance of landscape plantings.

PRODUCTS

Trees and Shrubs

Provide nursery or plantation grown stock, unless specifically indicated otherwise.

1. **General:** Well-branched and well-formed, sound, fibrous, healthy, and free from disease, sun-scald, windburn, abrasion, and harmful insects or insect eggs. Plant material shall have healthy, normal, and unbroken root systems.
2. **Deciduous trees and shrubs:** Symmetrically developed of uniform habit of growth with straight trunks or stems and free from objectionable disfigurements.
3. Provide stock complying in all respects with ANSI Z60.1 and in sizes indicated, measured in accordance with ANSI Z60.1. Larger sizes with larger roots and root containment may be furnished if approved by the Owner.
 - a. Do not spread or compress branches when measuring. Measure main body of branches; do not measure extreme tip to tips of single branches.
 - b. Pruning to size is not acceptable.
 - c. Up to 4 inches caliper, measure caliper at 5 inches above ground.
4. Tag each specimen of each variety of tree or shrub to indicate common and botanical name. Untagged specimens will be automatically rejected.

Shade and Ornamental Trees: Balled and burlapped (B & B).

Deciduous Shrubs: Balled and burlapped (B & B).

Equally sized container-grown stock will also be accepted.

Perennial Plants

General: Provide field-grown or acclimatized container-grown plants from a commercial nursery, healthy, vigorous, of sizes indicated, and in accordance with ANSI Z60.1, Section 6, Young Plants.

Perennials: Field-grown plants. Root system shall fill the pot.

MISCELLANEOUS LANDSCAPE MATERIALS

Organic Mulch: Free of deleterious materials, suitable for top dressing of plantings, and consisting of the following:

1. Shredded hardwood bark.
2. Fine southern yellow pine bark fines.

Antidesiccant: Film-forming emulsion, permeable to transpiration yet retarding to excessive moisture loss.

Products: The following products, provided they comply with requirements of the contract documents, will be among those considered acceptable:

1. Wilt-Pruf, Wilt-Pruf Products, Inc.

Staking and Guying Materials: (Per Owner's request only)

Stakes: Pressure-preservative treated lumber of sizes indicated; sound, straight and free of splits and knots larger than $\frac{1}{4}$ of the least nominal dimension of the piece. Sharpen end and chamfer sides of driven end to prevent splitting from off-center hammer strikes.

1. Wire: Galvanized mid steel wire, minimum 12 gauge; provide double strands.
2. Hose: Rubber or plastic garden hose.
3. Turnbuckles: Aluminum or galvanized steel.
4. Warning flaps: Fluorescent orange plastic surveyor's tape.

Tree Wrap Tape: Nurseryman's standard protective tape.

Sod: Source to be approved by the Owner.

EXECUTION

PREPARATION

Layout: Lay out planting locations, mark with stakes, adjust locations if requested, and obtain the Owner's approval of locations before proceeding.

1. Protection of Existing Facilities: Protect all existing service lines and related structures encountered in work. Report any uncharted or incorrectly charted lines to the Owner for further direction.
2. Preparation of Planter Beds: Clean planters of all trash and debris before placement of soil amendment. Remove and legally dispose of debris off site.
3. Confirmation of Grades: Confirm grades prior to the start of work and at each interval requiring a change of operation. Depth of soil amendment mix shall be 12" minimum. Rough grades shall be within $\frac{1}{10}$ foot of specified finish grades.
4. Structure Adjustments: Perform or coordinate final adjustments of any utility structure.
5. Finish Grading: Rake smooth and finish grade all planted areas. Crown of berms shall be raked smooth so that they form a compound, bell-shaped curve, not a point. Any undulations or irregularities on the surface shall be raked to smooth planes prior to planting. All areas shall slope to drain as indicated on drawings. Elevations in landscape areas after planting shall be ± 0.10 foot of the finished grades shown on the drawings. Grade disturbed by irrigation installation shall be restored to finish grade and raked smooth. Promptly plant and mulch all areas of amended soils to alleviate clay conditions (to avoid a cement or adobe crust formation).
6. Final Grades: Final grades of all planting areas, including beds and pits, after settling, shall be as shown on the drawings. Required final grades and elevations shall be as shown; or where none are indicated, final grades and elevations shall be even lines or planes between elevations shown, or between elevations shown and tops of paving or curb elevations shown. Verify grades established during final grading as being true to finish grades shown, and maintain such areas until the effective date to begin any operations.

Excavation for Trees and Shrubs

1. Pits, Beds, and Trenches: Excavate with sides vertical, bottom flat, but with high center for drainage. Deglaze sides and loosen bottom.
2. Minimum dimensions of individual pits (unless prevented by planter wall) are as follows:
 - a. Diameter:
 - (1) Ball or root spreads up to 2 feet: twice root spread.
 - (2) Ball or root spreads 2 to 4 feet: two feet greater than root spread.
 - (3) Ball or root spreads over 4 feet: 1½ times root spread.
 - b. Contractor shall ensure that root ball fits in planter without shaving or trimming.
 - c. Depth: Allow 9 inches of compacted planting soil beneath roots or ball and to set collar 1 inch below finish grade.
3. Remove all excavated subsoil from the site and dispose of legally. Do not backfill excavation with subsoil.

PLANTING TREES AND SHRUBS:

Setting Layer: Place and compact a layer of planting soil, of thickness indicated, in bottom of excavation.

Balled and Burlapped Stock: Set plants in excavation with top of ball to match adjacent finished grade. Add soil as required under ball to achieve plumb.

1. Remove burlap from top and sides of ball; retain burlap on bottom of ball. Untie all cords binding burlap to trunk. Remove all burlap and wire baskets from top ⅓ of the root ball.
2. Place backfill in 2- to 3-inch-thick layers. Work each layer by hand to compact backfill and eliminate voids. Maintain plumb during backfilling.
3. When backfilling is approximately ⅔ complete, saturate backfill with water and repeat until no more can be absorbed.
4. Place and compact remainder of backfill and water again.

Container-Grown Plants: Place and backfill as specified for balled and burlapped stock and as follows:

1. Immediately before placing, remove container.
2. Set and plumb plants. Place initial backfill and remove sides of container, taking care to avoid damage to root systems.

Form watering basin around trunk with backfill holding at least 5 gallons for shrubs and 10 gallons for trees. Apply a moisture retaining mulch.

Antidesiccant: Spray-apply, covering all portions of plant in accordance with manufacturer's instructions. If in full leaf, spray deciduous trees or shrubs at nursery just before and 2 weeks after transplanting.

Pruning: Remove dead or broken branches. Prune to retain typical growth habit of plants with as much height and spread as practicable. Make cuts with sharp instruments and flush with trunk or adjacent branch. Do not remove leaders from trees.

STAKING AND GUYING OF TREES (PER OWNER REQUEST ONLY):

Protection of Tree Trunks:

1. Inspect and, if necessary, treat trunks for physical damage or insect infestation.
2. Wrap trunks of trees of 2 inches and greater caliper using wrapping tape. Wrap from base to first branches.

Guy and stake trees the same day as planting (per Owner request only).

Staking:

1. Tree stakes: Use minimum 2-by-2 size wood stakes of length required to extend from 6 feet above grade to 18 inches below bottom of tree excavation.
2. Ties: Provide length of rubber or plastic hose to prevent wire loop from contracting tree trunk. Adjust to provide firm but not rigid support.

Guying: Place guys equally spaced around trunk, with top of guy 6 to 7 feet above grade, and at 45 degree angle to vertical. Provide length of rubber or plastic hose to prevent wire loop from contracting tree trunk. Provide one turnbuckle per guy. Adjust to provide firm but not rigid support.

Ground Stakes: Anchor guys for trees, of less than 6 inches caliper, using sharpened 2-by-4's not less than 30 inches long. Drive stakes at approximately 45 degree angle, with tops flush with, or slightly below, grade. Securely tie warning flaps at the $\frac{1}{3}$ and $\frac{2}{3}$ points of each guy wire.

Tree Support Schedule (per Owner request only): Stake trees greater than 2 inches in caliper located adjacent to pavement or other obstructions which prevent the installation of guy wires; number of stakes and ties as specified for guys.

PLANTING SMALL PLANTS:

Individual Plants:

1. Space plants as indicated on drawings or in schedule.
2. Open holes sized to accommodate roots, place plants at proper elevation, and backfill with planting soil, working carefully to avoid damage to roots and to leave no voids. Build up a small water basin of planting soil around each plant.

Water well immediately after planting. Do not wash soil onto crowns of plants.

Protection: Provide daily watering, straw mulch, or both, as necessary to protect plants from sun and wind until plants are fully recovered from transporting shock. Remove straw mulch when plants have attained healthy growth.

Weed Killer: At the Owner's request, apply a pre-emergence weed killer, replace plants adversely affected.

INSTALLATION OF MISCELLANEOUS MATERIALS:

Mulching: Mulch all plantings immediately after planting, as planting progresses, the same day as planted. Mulch all tree and shrub planting beds with 3" layer of specified shredded hardwood bark, and mulch with 3" fine southern yellow pine bark fines for all perennials, grasses, and ground covers. Mulch all planters in their entirety. Do not bury trunks, stems, leafy stems, or vines under mulch material.

CLEANUP AND PROTECTION

Cleanup:

1. Excess and waste material shall be removed daily.
2. When planting in an area has been completed, the area shall be cleared of all debris, soil piles, and containers.
3. Paving shall be cleaned when work in adjacent areas is completed.

Repairs: Any damage to existing landscape, paving, or other such features as a result of work related to this contract shall be repaired.

Protection: Protect landscape work and materials from damage due to landscape operations, operations by other subcontractors and trades, and trespassers. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged landscape work as directed.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Trees, shrubs, perennials, and grasses shall be measured as individual units installed at the planting locations indicated and shall be paid for at the contract unit price each for several kinds and sizes of TREES, SHRUBS, GRASSES, or PERENNIALS, as applicable, and such price shall include all labor, materials, and equipment necessary to perform the work as herein specified.

SHREDDED BARK MULCH, 3" shall be measured and paid for at the contract unit price per square yard and shall include all labor, materials, and equipment necessary to perform the work as herein specified. Traffic control and protection shall be considered incidental to the contract unit price. This item will not be paid by load tickets.

Excavation, prepared backfill, fertilizer nutrients, bracing, wrapping, and care of the plants shall be considered included in the contract and shall not be paid for separately.

**City of DeKalb
Water Resources Division**

Supplemental Specifications for Water Main Improvements

Section 2. General Requirements

1. *Scope.* This work shall consist of furnishing and installing water mains, valves, fire hydrants, service stubs, and other required appurtenances of the size, class, and type shown on the plans as specified.
2. *Material Inspection and Certification.* The manufacturer of any materials to be incorporated in the improvement shall, upon request, furnish a sworn statement that all of the tests and inspections have been made and that the product involved has been manufactured in compliance with the applicable specifications thereto. Said statement shall be furnished to the engineer at the time of shipment for materials.

Upon request of the engineer, manufacturers shall furnish all facilities necessary to test their product for compliance with the appropriate specification. All testing of materials shall be done by the manufacturer and witnessed by the engineer.

3. *Material Delivery.* Proper implements, tools, and facilities shall be provided and used by the contractor for unloading and distributing materials along the line of work.

All pipe, fittings, valves, hydrants, and accessories shall be carefully lowered to the ground by means of a derrick, ropes, or other suitable equipment in a manner to prevent damage. Under no circumstances shall water main materials be dropped or dumped.

4. *Responsibility for Safe Storage.* The contractor shall be responsible for the safe storage of material furnished by or to him, accepted by him, and intended for the work.
5. *Underground Structures.* The contractor shall proceed with caution in the excavation and preparation of the trench so the exact locations of underground structures may be determined. When required by the engineer, the contractor shall make such excavations as necessary to determine the location of existing underground structures.

Adequate protection and maintenance of all underground structures and other obstructions encountered in the progress of the work shall be furnished by the contractor. Any structures which are disturbed or otherwise by the contractor shall be restored in an approved manner.

6. *Underground Utilities.* The Engineers have endeavored to locate subsurface obstructions from field surveys and available records. Known structures are shown on the plans or notice given of their presence. While work is carefully done, the accuracy of the information cannot be guaranteed. Invert elevations of sanitary and storm sewers have been obtained from the field surveys and, where possible, elevations shown on the plans. Wherever the contractor

deems it necessary to determine the exact location of existing pipe, valves, or other underground structures, the contractor may make any examinations he determines desirable in advance of the work. No added compensation will be paid for this type of exploration.

In excavating trenches and laying pipe, all existing utilities including water pipes and services, sewer pipes and services, gas pipes and services, electric or telephone transmission pole lines, cables or conduits shall be protected, supported, maintained in service and restored to the condition in which they were found, all at no extra re-numeration. Where any utility facility (including service connections) is endangered or damaged by the work, the utility management shall be notified by the contractor and the contractor shall cooperate with the utility and pay the cost of protection and repairs if damage occurs.

7. *Excavation.* All of the water mains, fire hydrants, gate valves, and house services shall be installed in open cut trenches to the depth and in the locations shown on the plan except as otherwise provided herein. The contractor shall do all excavation of whatever substances encountered to the required depths. In the event excavation is carried to a depth greater than required, the trench shall be brought back to the required grade with a granular material approved by the engineer.

Excavated materials shall be deposited along the side of the trench nearest the center of the public right-of-way unless required for good reason to be placed elsewhere. Care shall be taken to preserve property corners, trees, shrubbery, and existing improvements which are not to be removed. All excavated material shall be piled in a manner that will not endanger the work and will avoid obstruction of sidewalks, driveways, gutters, and natural watercourses.

When a firm foundation is not found to exist for the bottom of the trench at the required depth due to soft, spongy, or other unsuitable soil, such unsuitable soil shall be removed for the full width of the trench or tunnel and replaced with well compacted crushed stone approved by the engineer.

Where rock in either ledge or boulder formation is encountered, it shall be removed below grade and replaced with a well-compacted cushion of crushed stone having a thickness under the pipe of not less than six (6) inches.

When trees, existing walks, water mains, sewers, sewer and water house services, public utilities, or any other obstacle not to be removed are encountered in the trenching work, the excavation shall be made in tunnel without damage to said obstacle.

Surplus excavated material and construction debris shall be disposed of by the contractor. Such materials shall be loaded and trucked away from the site as soon as practical and in a manner to eliminate the storage of such surplus in the streets and parkways of the improvement.

8. *De-watering Trench.* The contractor shall provide and use effective and satisfactory methods to lower the ground water table to a safe plane below the bottom of the work. No pipe shall be laid or jointed unless the trench is completely de-watered.

Water pumped or drained from the work shall be disposed of in a manner that will not damage adjacent private property, other work under construction, street pavements or other municipal property, other work under construction, street pavements or other municipal property. No water shall be discharged into sanitary sewers. No water containing settleable solids shall be discharged into storm sewers.

9. *Bracing and Sheet piling.* Open cut trenches shall be sheeted and braced as required to prevent shifting of installed pipe, prevent damage to structures and adjacent property, and avoid delays to the improvement. Trenches in pavements or in close proximity to improved streets or roadways shall be sheeted or braced in a substantial and effective manner. Sheet piling may be removed after the backfill has been completed to such elevation as to permit its safe removal. Sheet piling and bracing left in place must be removed for a distance of three (3) feet below the established street grade.
10. *Trench Jetting.* When required by the engineer, water shall be introduced into the backfill by jetting methods to a point approximately two (2) feet above the top of the water pipe to accelerate settlement of backfill. The jetting shall continue at intervals of approximately six (6) feet for the entire length of the trench.
11. *Site Cleanup.* During construction, the contractor shall keep the site of the work and adjacent premises free from material, debris, and rubbish. The contractor shall furnish a work crew and equipment as necessary to remove objectionable material, debris, and rubbish from completed portions of the work.

Upon completion of the work, the contractor shall cleanup the entire improvement site to the satisfaction of the City. All roadway ditches filled or partly filled with excavated material shall be cleaned out and re-graded to an acceptable gradient.

Surplus materials around trees, bushes, fences, etc., shall be removed by hand and disposed of. All trenches shall be filled and graded as necessary.

12. *Excavation Protection.* All excavations that are to remain open overnight or for more than one (1) day shall be enclosed by a four (4) feet high fence of either wooden or woven wire construction. The fence shall be so constructed as to prevent access to the excavation by the general public.

The fence shall be supported by metal or wooden post driven into the ground or by portable supporting devices. In either instance, the supporting device shall be adequate to support the pressure applied to the fence by a person's body.

13. *Tree Protection.* All trees within the limits of the improvement that are not scheduled for removal shall be protected by wooden tree guards. Tree guards shall be a minimum of six (6) feet high and of a minimum two (2) inch nominal thickness. All tree guards shall be securely strapped to the trees.

Any tree damaged in the course of the work shall be properly pruned or trimmed and painted with an approved commercial tree dressing.

14. *Basis of Payment.* The preceding paragraphs apply to all items to be incorporated into the improvement. Their cost shall be incidental to and included in the contract unit prices for the various construction items as set forth in the following sections.

Section 2. Water Main Construction Method

1. *Description.* This work shall consist of furnishing and installing water mains of the required material, size, and class together with the necessary fitting, jointing materials, and blocking, complete, as specified herein and in conformance with the detailed plans.
2. *Materials.* Refer to standard specifications for Water Main Construction, Item #2, Water Main, Section A.
3. *Excavation and Foundation.* Unless otherwise specified, the trench shall be excavated to a depth which will provide five and one-half (5½) feet of cover between the top of the water main and the established finished roadway grade or natural ground, whichever is deeper. The trench for the water main shall be excavated with vertical walls and be at least nine (9) inches and not more than fifteen (15) inches wider than the external diameter of the water main.

Pipe bedding shall normally be Type 2, unless the special provisions require Type 4 or 5. The above bedding types will be as follows:

- (1) Type 2. The pipe shall be laid on a flat bottom trench. Backfill shall be select materials tamped in place as specified under Section 2, Item #5.
- (2) Type 4. The pipe shall be laid on a bedding of compacted sand or crushed stone extending the full width of the trench bottom. The bedding shall be placed to a minimum depth of one-eighth ($\frac{1}{8}$) the pipe diameter or four (4) inches whichever is greater. The remaining backfill shall be select materials tamped in place as specified under Section 2, Item #5.
- (3) Type 5. The pipe shall be laid on a minimum four (4) inch compacted thickness bedding of sand or crushed stone extending the full width of the trench bottom. The bedding material shall then be placed in six (6) inch compacted lifts to the top of the pipe for the full width of the trench. The remaining backfill shall be select materials placed as specified under Section 2, Item #5.

Prior to laying pipe, the trench bottom or bedding material shall be shaped to provide continuous support for the pipe barrel. Under no circumstances will the pipe be laid on blocks or wedges. Where pipe with a bell or coupling is used, cross trenches shall be excavated to prevent non-uniform loading at joints. The cross trenches shall not be more than two (2) inches wider than the width of the bell or hub.

If the excavation is carried to a depth deeper than necessary, the foundation shall be brought to the proper elevation by placing bedding material.

4. *Laying Water Main.* All pipe and fittings shall be carefully examined for cracks and other defects just prior to lowering into the trench for installation in final position. Defective pipe or fitting shall be marked and laid aside so as to not be mistakenly used in the improvement. All defective materials shall be removed from the project site upon conclusion of the workday on which they are discovered.

Before lowering pipe and fittings into the trench, all dirt and foreign matter shall be removed from the pipe interior. After lowering the pipe into the trench and prior to joining the pipe, the bottom man shall check the joint being made to assure both ends are free of foreign materials picked up during the lowering operation.

As each length of pipe is placed in the trench, the spigot end shall be centered in the bell of the previously installed pipe and forced home. The pipe shall then be installed to the line and grade established by the engineer. A tolerance of two (2) inches in both horizontal and vertical alignment shall be allowed per pipe length on straight runs. The pipe shall be secured in place by tamping approved backfill material around the pipe except at the bell end.

Every precaution shall be taken to prevent foreign material from entering the open end of the installed pipe prior to installing the next pipe.

If for any reason there is a stoppage in the pipe laying operation, the open end of the last installed pipe shall be sealed by means of a watertight plug. If upon commencement of work there is water in the trench, the plug shall remain in place until the trench is completely de-watered.

Proper implements, tools, and facilities satisfactory to the engineer shall be provided and used by the contractor for efficient execution of the work. All pipe, fittings, and accessories shall be handled by suitable equipment in a manner to prevent damage to the materials. Under no circumstances shall pipe or accessories be dropped or dumped into the trench.

5. *Backfilling.* All trenches and excavation shall be backfilled to the natural line of finished surface as soon as conditions will permit. The backfill material shall consist of the excavated material or trench backfill, except no materials will be allowed which may have any detrimental effect on the pipe, fittings, or other appurtenances.

Backfill up to a level of one (1) foot over the top of the pipe shall be with the selected earthen materials no larger than three (3) inches in its greatest dimension. In the event this material is not readily available at all locations, the contractor shall provide suitable conditioned soil or an approved material for this purpose. Select material shall be placed in equal layers on both sides of the pipe and compacted. Each layer of material so placed shall not exceed six (6) inches in depth until the top of the pipe is covered. Additional select material required to cover the pipe to a compacted depth of one (1) foot may be placed in one lift. All select materials shall be compacted to eighty-five percent (85%) standard laboratory density. No frozen material shall be used as selected backfill.

The remaining backfill required for the trench may be placed by mechanical means. Backfill so placed shall be deposited in the trench in a manner to avoid impact and uneven loading of the water main. Large chunks of earth shall be broken up or placed on top of the soil bank. Debris and rock having any dimension greater than six (6) inches shall be considered unsuitable for backfilling and disposed of in an approved manner. After settlement has taken place, the trenches shall be refilled and graded to a finished condition acceptable to the engineer and the municipality.

6. *Mechanical Joints.* Mechanical joints shall be installed according to the manufacturer's specifications. The pipe bells, spigot ends of pipe, and pipe gaskets shall be clean and free from particles of sand, dirt, or other objectionable matter during jointing. Pipe bolts shall be drawn up uniformly by turning diametrically opposite bolt nuts simultaneously in a manner that the joint gland and rubber gasket are brought to bearing the final seating without ward or eccentricity.
7. *Push-on Joints.* Push-on joints shall be installed according to the manufacturer's specifications. The pipe bells, spigot ends of pipe and pipe gaskets shall be clean and free from particles of sand, dirt, or other objectionable matter during jointing. Pipe shall be assembled by means of a ratchet jack-type tool or other approved method. Jointing by the so-called "stabbing" of the pipe spigot into the coupling will not be permitted.

Field cut pipe shall be conditioned so that it may be used to make up the next joint. The outside of the cut end shall be tapered back one-eighth ($\frac{1}{8}$) inch at an angle of about thirty (30) degrees with the centerline of the pipe by means of a coarse file or portable grinder to remove any sharp, rough edges which otherwise might injure the gasket.

8. *Joint Continuity.* On both mechanical and push on joints, electrical continuity across the joint shall be assured by installing two (2) brass wedges diametrically opposite each other in each joint. The wedges shall be installed in accordance with the manufacturer's instructions after each joint has been completed.

9. *Thrust Blocking and Anchorage.* All cast iron tees and bends shall be anchored with solid concrete thrust blocks 6 x 8 x 16 in size which shall be keyed into solid ground under the respective fittings to a depth of not less than three (3) inches and shall extend to solid ground backing in the direction of the thrust, unless otherwise shown or specified on the plans. Concrete blocking shall extend to a point above the horizontal pipe diameter and in a manner to secure the pipelines from lateral thrust displacement and ensure ability to caulk or tighten all the joints. Fittings at ends of pipelines shall be blocked or harnessed with suitable ties to the pipeline in a manner to permanently anchor the same in place. Plugs shall be blocked in a manner which will facilitate their removal subsequent extension of the water main.

Metal harnesses of adequate strength to prevent movement may be used instead of concrete blocking, if permitted by the engineer. Steel rods or clamps shall be galvanized or otherwise rustproof-treated as approved by the engineer. The cost of metal harnesses shall be incidental to the construction and included in the contract unit price for pipe.

10. *Connections to Existing Water Mains.* Before making any connection to existing water mains, the contractor shall have all necessary tools, materials, pipe, and fittings on hand and sufficient experienced workmen available to preclude any unnecessary delay in making the connection due to adverse conditions of mishap. The actual work of cutting into a main or removal of a fitting shall not be done until all measurements, necessary pipe assembly, and other specified provisions have been completed.

If the connection requires shutting down the existing main, the contractor shall make the necessary arrangements with the Municipal Water Department to accomplish same. In addition, all users to be affected shall be notified twenty-four (24) hours in advance of water main shutdown.

Temporary blocking capable of withstanding the service pressure shall be provided for all existing valves, fittings, and pipe that could be affected by the new connection.

The cost of making connections to existing water mains shall be considered as incidental to and included in the contract unit price for water main, unless otherwise specified.

11. *House Sanitary Sewer and Water Services.* At all locations where the water main crosses house services, adequate precautions shall be taken by the contractor to prevent unnecessary and lengthy shutdown of the service. Wherever possible, the water main shall be constructed so as to not damage the services or interfere with their future operation. Any service that is damaged shall be repaired with new material in such a manner that future operation will not be impaired. All work in connection with house services shall conform to the ordinances and requirements of the City of DeKalb.

Change or adjustment in the line or grade of the pipeline to clear obstructions shall be approved by the engineer. All materials and work required for this purpose and for tunneling, repairing, and reinforcing the sewer crossings shall be furnished by the contractor and shall be incidental to and included in the contract unit price for pipe, unless otherwise specified.

In those instances where house services require adjustment, the work shall be done under the requirements of the "Standard Specifications" and paid for as specified.

12. *Hydrostatic Test.* All newly laid water main, fittings, valves and hydrants shall meet the requirements of the following hydrostatic test before being accepted by the City of DeKalb.

- (1) **Pressure Test.** After completion of the water main as previously outlined, the main shall be filled with water and the air allowed to escape through hydrants, air release valves, blow off, etc. When the main is free of air, the water pressure shall be raised to one hundred fifty (150) pounds per square inch by the addition of water through a force pump and other apparatus. The test pressure shall be maintained for a two (2) hour period by the addition of water through the pump.

The pipeline, all valves, fittings, and hydrants shall be carefully examined during the pressure test to determine if there are any defective pipe, fittings, hydrants, or leaking joints. All defective materials shall be removed and replaced with the sound material and all leaks repaired. The test shall then be repeated until the required results are achieved.

- (2) **Leakage Test.** After satisfactory completion of the pressure test, a leakage test shall be conducted. The water pressure in the main shall be raised to a minimum pressure of one hundred fifty (150) pounds per square inch, unless otherwise specified, by the addition of water to the main. The test pressure shall be maintained in the main for a two (2) hour period. The allowable amount of make up water to maintain the specified test pressure shall not exceed the following rates for each 1000 feet of pipe.

Leakage in GPH for Each 1000 Feet of Pipe

Test	Pipe Size - Inches						
Pressure psi	6"	8"	10"	12"	14"	16"	18"
100	0.90	1.20	1.50	1.80	2.10	2.40	2.70
110	0.94	1.26	1.58	1.89	2.21	2.52	2.83
120	0.99	1.32	1.64	1.98	2.30	2.63	2.96
130	1.03	1.37	1.71	2.06	2.40	2.74	3.08
140	1.07	1.42	1.78	2.13	2.49	2.84	3.20
150	1.10	1.47	1.84	2.20	2.58	2.94	3.31

In order to make the above test, the contractor shall furnish all apparatus, piping, hose, pump, and pressure tank, gauges properly calibrated, a clean barrel or drum to hold water, and a five (5) gallon graduated container calibrated into tenths of a gallon or into one-half (½) pints. The City of DeKalb reserves the right to use their own tanks and gauges when considered necessary to check the contractor's equipment for accuracy.

The above-specified test shall be made on sections not exceeding 2000 feet in length. Mains which fail to meet the requirements of the initial test shall be repaired and retested until all the requirements have been met.

All tests shall be made through one (1) inch corporation cocks tapped into the main.

The cost of all labor, materials, and equipment necessary to make the test shall be incidental to and included in the contract unit price for water main.

13. *Water Main Disinfection.* Prior to chlorination and after completion of the pressure test, each pipeline construction section shall be flushed at a minimum water velocity of 2.5 fps in a manner and for such length of time as the engineer may require to effectively clear the mains, valves, hydrants, leads, and fittings. Temporary flushing risers shall be provided at the terminal of all water mains to assure flushing of the dead ends. All mains and accessories shall be chlorinated under the supervision of the City of DeKalb by the use of either chlorine gas or H.T.H. hypochlorite compound as directed. A solution of proper chlorine concentration shall be prepared with clean tap water and pumped into the section of main to be chlorinated by means of one (1) inch corporation cocks inserted in the top of the new main. In order for the sterilization solution to make proper contact with all interior surfaces, corporation cocks shall be inserted in the top of the new main at the beginning of each pipeline extension and at the ends of any such extension where means of bleeding off water is not available. Chlorine solution shall be applied at both ends of such extension.

The valve controlling water flow from the existing distribution system into the new work shall be opened sufficiently to assure a slow rate of flow into the new pipeline. After regulating the flow from observations at the bleed off point, the chlorine shall be pumped into the new main at a uniformly proportionate rate until the water in the pipeline has a chlorine content of 50 to 100 ppm and until a heavy chlorine concentration at the bleed-off point is evident.

The contractor shall exercise every precaution to prevent the chlorine solution from backing up or flowing beyond the limits of the new pipeline extension into the existing distribution system. All valves and hydrants within the limits of the section being chlorinated shall be operated during the application of the chlorine solution. All terminal valves except the feed in valve shall be kept closed.

On completion of the chlorination process, the feed in valve shall be tightly shutoff and the treated water retained in the line at least twenty-four (24) hours or longer as may be directed by the engineer. After twenty-four (24) hour retention in the pipeline, the residual chlorine at the extremities of the section shall be not less than 25 ppm.

Following chlorination, all treated water shall be thoroughly flushed from the newly laid pipelines as directed by the engineer until the replacement water is chlorine free or has a residual of less than 1.2 ppm, where after, samples for testing and analysis shall be taken from a sterile metal pipe connection with sampling cock attached to the one (1) inch corporation cocks in the new line. Quality of water shall meet the requirements of the Illinois Environmental Protection Agency for drinking water before placing the new pipeline or section in service.

Should the initial chlorine treatment fail the approved laboratory analysis of the sampled water, chlorination shall be repeated until approved water quality is obtained from the new pipeline extensions or sections. The quality of the water shall meet the requirements of the Illinois Environmental Protection Agency for drinking water for at least two (2) consecutive days, with a minimum of twenty-four (24) hours between samples before placing the new pipeline or section in service.

The cost of all labor, materials, and equipment necessary to flush and chlorinate the water main shall be incidental to and included in the contract unit price for water main.

14. *Relation to Sewers.* Water Service Lines, refer to Water Main Specifications (IEPA Water Main Protection).
15. *Method Measurement.* Water main shall be measured for payment in lineal feet along the centerline of the completed water main from center to center of fittings.
16. *Basis of Payment.* The work as outlined in Section 2 will be paid for at the contract unit price per foot for water main of the diameter and class specified, measured in place unless otherwise specified. This price shall include the cost of all materials, pipe, fittings, adaptors, joint materials, blocking, and Corrosion Protection Polyethylene Wrap (if required), and all work and equipment necessary to make a complete and finished installation.

Section 3. Water Main Adjustment

1. *Description.* This work shall consist of adjusting existing water mains where they are in conflict with new improvements. The work shall be in accordance with Section 2, Water Main, insofar as applicable and the detailed plans.
2. *Materials.* All materials used in adjusting water mains shall be ductile iron and in conformance with the current AWWA Standards set forth in The Standard Specifications for Water Main Construction, Section 1, Item 2 (A).

3. *Construction.* All adjustments in the line or grade of the existing water main shall be approved by the engineer.

All materials, labor, and equipment necessary to adjust the water main shall be available and at the site before shut down and cutting the existing main. The contractor shall take every precaution to hold the interruption of service to a minimum.

A minimum clearance of twelve (12) inches shall be maintained between the adjusted main and the improvement for which the adjustment was made.

Adequate precautions shall be taken to prevent contaminants from entering the existing main. The inside surfaces of all new materials used in the adjustment shall be cleaned of all foreign material and swabbed with a solution of efficient bactericide before assembly. The adjusted section shall then be flushed utilizing available fire hydrants.

Pipe removed in this work shall be salvaged and delivered to the municipal yards and shall remain the property of the City of DeKalb.

4. *Basis of Payment.* The work as outlined in Section 3 will be paid for at the contract unit price per foot for water main to be adjusted. This price shall include the cost of all materials, pipe, fittings, adaptors, joint materials, blocking, removal, and delivery of existing main to the City's cold storage area, and all work and equipment necessary to make a complete and finished installation.

Section 4. Casing Pipe

1. *Description.* This work shall consist of furnishing and installing casing pipe of the required material, size, and class as specified, and in conformance with the detailed plans.
2. *Materials.* Refer to Water Specifications, Steel Casing Pipe, and PVC Casing Pipe.

Construction Method

3. *Installation.* Casing pipe of the type specified shall be installed in accordance with the following:
 - (1) *Auger and Jacking.* Steel casing pipe and corrugated metal pipe of the size and thickness specified. Steel casing pipe shall be butt joined and welded all around. Corrugated metal pipe shall be jointed by means of internal connecting bands.

- (2) Tunnel and Jacking. Concrete pipe and corrugated metal pipe of the size and thickness specified. Concrete pipe joints shall be composed of rubber "O" rings with a minimum one-half inch (1/2") cushioning spacer placed between each pipe. Cushioning material shall be of either braided jute or plywood. Upon completion of the push, all internal joint specs shall be filled with Portland cement mortar. At the option of the contractor, the outside joint may be filled with bentonite clay. Corrugated metal pipe shall be joined as in (a) above.

Casing pipe be installed to the line and grade shown on the plans. If required, the outside of the casing shall be lubricated with bentonite clay. The lead pipe of the casing shall be provided with an approved tunneling shield. The work shall be kept de-watered until the carrier pipe has been installed and tested.

The work of installing the casing pipe shall be done by a contractor who is fully experienced and equipment for this specialized construction and is approved by the City of DeKalb and/or other supervisory authorities.

4. *Water Main Installation.* After completion of the casing pipe, the water main shall be installed through the same on guide rails or on pipe skids in a manner which will provide for continuous and smooth installation of the water main without obstructions of any kind. Water main shall be jointed and installed from one end in a manner to keep the entire pipeline under compression during installation.

After completion of installation and testing of the water main, the annular space between the casing and the water main shall be filled with dry sand blown in by approved methods. The casing pipe shall be sealed by constructing masonry bulkheads at each end to preclude entrance of foreign material into the casing which might prevent ready removal of the water main at some future date.

5. *Jacking Pits.* Jacking pits shall be tight sheeted and braced on all sides. Sheeting shall be of the adequate strength to withstand all surcharge loads to be imposed on it and shall be cutoff four (4) feet above existing ground. In lieu of the four (4) feet cutoff height on sheeting, the contractor may erect a four (4) foot high fence around the excavation. Lights and warning signs as necessary shall be erected around all jacking pits.

The reaction block for the jacking mechanism shall be adequately designed to distribute the loads to the soil without excessive soil deflection and in a manner to avoid any disturbance of adjacent structures or utilities.

Hydraulic jacks and jacking frame shall be designed to apply a uniform pressure over the entire circumferential area of the pipes being jacked.

Upon completion of the jacking operation, pipe bedding within the jacking pit shall be placed in accordance with the special plan details and/or special provisions.

6. *Railroad Crossing.* Railway crossing shall be in accordance with the easement, license, and/or accepted grant of the railroad to the City of DeKalb, and said conditions are made a part of these specifications by references. Additional requirements as set forth in the A.R.E.A. Committee I Specifications for pipeline crossings under railway tracks shall govern, except as otherwise shown on the plans or modified herein.

The railway company shall be notified a reasonable time prior to commencing construction. A flagman may be required to protect train operations during the time the pipe is installed underneath the main line tracks. The railroad shall be consulted on this matter, and any costs involved shall be at the contractor's expense and incidental to the construction.

The contractor shall be responsible for the cost of special insurance required by the railroad and cost incurred in repairing damage to railroad property due to the contractor's operations or negligence. All to be incidental to and included in the contract unit price.

7. *Highway Crossing.* Highway crossing shall be in accordance with the permit issued by the responsible highway department, and said permit is made a part of these specifications by references.

The contractor shall be responsible for obtaining the highway bond required by the highway department, the cost of which shall be incidental to and included in the contract unit price for the items of this section.

8. *Alternate Methods of Construction.* Alternate methods of construction meeting all conditions set forth herein will be considered and will be subject to the approval of the City of DeKalb, the railroad, and highway agencies involved.

Compensation for any alternate construction method will be at the contract unit price for casing pipe as set forth in the proposal. No extra compensation will be allowed for additional work incurred because of the alternative method of construction.

Compensation

9. *Method of Measurement.* Casing pipe shall be measured for payment in lineal feet along the centerline of the completed pipe from end to end of casing installed. Under no circumstance will the pay length exceed the staked length.
10. *Basis of Payment.* The work as outlined in Section 4 will be paid for at the contract unit price per foot for Casing Pipe, Auger and Jack or Casing Pipe, Tunnel and Jack of the diameter and thickness specified, measured in place unless so otherwise specified.

The price shall include the cost of all materials, pipe, fittings, joint materials, blocking, skids, sand, bulkheads, and all work and equipment necessary to make a complete and finished installation.

Water main installed within the casing pipe shall be paid for at the contract unit price for Water Main as set forth under Section 2.

Section 5. Valves

1. *Line Stopping.* In the event that an interruption of service is not feasible due to medical or manufacturing facilities, a line stopping system will be used. The City of DeKalb Water Resources Division will determine where line stopping will be used.
2. *Air Release Valves.* Air release valves shall be "APO #200A" or approved equal. Valves shall be furnished with one (1) inch threaded inlet connection and one-half inch (1/2") threaded outlet.

Installation

3. *Main Line Valve Installation.* Valves shall be installed in the pipelines at the locations shown on the plans.
 - (1) Valves shall be installed so that not over 500 to 700 feet of main will be shut off at any given time.
 - (2) Where a "tee" is installed at least two (2) valves will be utilized. Their location will be based upon location of other valves in the system.
 - (3) Where a "cross" is installed, at least three (3) valves will be utilized. Such valves shall be located with relation to other valves in the system.

Where valves are provided with valve vaults, the valves shall be centered in the vaults. On pipelines of eight (8) inches or less in diameter, the connecting pipe nipples shall not be over six (6) feet in length for cast or ductile iron mains.

When cast iron valve boxes are required, their cost shall be incidental to and included in the contract unit price for the type of valve being installed.

When valve vaults are required, they shall be paid for at the contract unit price for Valve Vault.

4. *Air Release Valve Installation.* Air release valves shall be installed as called for on the plan at high points in the water main to preclude entrapment of air in the main.

The air release valve shall be connected to the main by means of a one (1) inch Mueller corporation cock installed in the top of main, together with a pipe nipple, tee, one-half (1/2) inch smooth nose sample cock, outlet pipe with check valve fittings and bronze screen as shown on the plan.

The air release valve shall be housed in a standard valve vault which shall be filled with crushed limestone, commercial grade number 2, to the spring line of the water main passing through the vault. The outlet of the exhaust piping leading from the valve shall be at an elevation approximating the top of the vault masonry and shall be located to one side of the vault to permit ease of entry into the vault.

The cost of the vault shall be paid for as a Valve Vault with the crushed stone, tapping the main, and other equipment listed herein being paid for at the contract unit price for the air release valve.

Compensation

4. *Basis of Payment.* The work, as outlined in Section 5, will be paid for at the contract unit price each for Gate Valve, Butterfly Valve, Tapping Valve and Sleeve, and Air Release Valve of the size and class specified. This price shall include the cost of all materials, fittings, adaptors, joint materials, main tapping, blocking, and all work and equipment necessary to make a complete and finished installation.

Section 6. Fire Hydrants

1. *Description.* This work shall consist of furnishing and installing fire hydrants as specified in the Water Main Specifications and in conformance with the detailed plans.
2. *Installation.* Fire hydrants shall be connected with the water mains by means of ductile iron pipe having an internal diameter of six (6) inches and of the type and quality specified. The joint at the hydrant shall be a mechanical joint connection.

Each hydrant shall rest on a substantial concrete block foundation surface area sufficient to prevent settlement of said hydrant.

There shall be place for a depth of a least fifteen (15) inches below the drip valve to a plane twelve (12) inches above the drip valve crushed stone known to the trade as a number 3 wash stone. Approximately one-third ($\frac{1}{3}$) cubic yards of crushed stone shall be placed for each hydrant. On top of said crushed stone shall be placed a sheet of 6 mil thickness Visqueen (polyethylene) to prevent infiltration of the earth backfill into the crushed stone. Concrete blocking shall be placed between each hydrant and the undisturbed earth end of the trench to prevent the hydrant from being blown off of the connection pipe during testing and until the backfill is sufficiently compacted to serve such purposes. Each hydrant shall be set in a true vertical position and at such height so that the center of the hose or steamer connection will be eighteen (18) to twenty-four (24) inches above finished grade at the hydrant or as shown on the plan. Minimum length of hydrants shall be for six feet (6) depth of trench. The top of the valve box for the auxiliary hydrant valve shall be set one-half ($\frac{1}{2}$) inch above finished grade of the parkway where the hydrant is located.

No fire hydrant shall be installed within forty-eight (48) inches of any object which may hide or impede the use of the hydrant, likewise, it is unlawful to install, maintain, construct, or enlarge any barriers, trees, bushes, walls, or other obstacles which may hide or impede the use of a fire hydrant within forty-eight (48) inches of a fire hydrant and shall not obstruct the use of the hydrant in any way.

Care shall be used where hydrant connections are to be made to be sure that the trench depth is such that the hydrant will be the proper grade when connected to said main without the use of special offset fittings.

If hydrant extension sections are required to achieve the specified hydrant exposure, their cost shall be incidental to and included in the contract unit price for fire hydrants. If any extensions are added, the breakflange connection shall not be more than two (2) inches above finished grade for area in which the hydrant is located.

3. *Basis of Payment.* The work as outlined in Section 6 will be paid for at the contract unit price each for Fire Hydrant as specified. This price shall include the cost of fittings, joint materials, blocking, drainage bed, and all materials, work, and equipment necessary to make a complete and finished installation.

Where auxiliary gate valves and cast iron valve boxes are called for on the plans, the cost for furnishing and installing same shall be incidental to and included in the contract unit price for fire hydrant. Auxiliary gate valves and cast iron valve boxes shall be in accordance with Section 5 of this supplemental specification insofar as applicable.

Hydrant leads shall be paid for at the contract unit price for six (6) inch water main of the class specified for any length of lead in excess of ten (10) linear feet.

Section 7. Copper Water Service Stubs

1. *Description.* This work shall consist of furnishing and installing copper water tubing, corporation stops, curb stops, and curb boxes of the size and in conformance with the detailed plans.
2. *Materials.* Refer to Water Main Specifications.
3. *Installation.* Copper services shall be installed in open cut trenches five and one-half (5½) feet below the centerline elevation of the proposed roadway and shall extend at right angles from the street main to the terminal point.

All taps shall be made after completion of the hydrostatic test and disinfection of the water main and shall be at an angle of forty-five (45) degrees above the horizontal diameter of the water main.

From the connection with the corporation stop, the service line shall be bent down in a manner to form a reverse curve from the top of the stop to the bottom of the service trench and in a manner to provide a reasonable amount of slack or extra length in the service line. The corporation stop and service shall then be blocked up with masonry in a manner to relieve all stress in the connection with the water main. No splicing of the water service beneath the roadway will be allowed. All fittings shall be flanged compression type. All joints when required shall be compression or flared as approved. No soldered buried joints shall be permitted.

A cast iron adjustable curb box shall be centered on and set vertically over the curb stop at the terminal end of each service with the cover of said box set flush with the finished surface. Next to the cast iron box shall be set a 6' x 2" x 4" post with the top two (2) feet painted blue and exposed above the ground.

All work in connection with the house water service stubs shall conform to the ordinances and regulations of the City of DeKalb.

4. *Record of Locations.* The contractor shall reference and keep an accurate record of the location of both ends of each house service installed. Said measurement shall be made as directed by the engineer, and the complete record shall be given to the City of DeKalb, Department of Public Works, upon completion of the work. Final payment for work completed shall be subject to submission of this record.

Compensation

5. *Method of Measurement.* House water services shall be measured for payment in feet of copper, at the unit price each for corporation stops, and at the unit price each for curb stops and cast iron boxes. The pay length of copper shall be determined by measuring from the point of connection with the main to the center of the curb stop.
6. *Basis of Payment.* The work as outlined in Section 7 will be paid for at the contract unit price per foot for Copper Water Service of the diameter specified, at the contract unit price each for Corporation Stop of the size specified, and at the contract unit price each for Curb Stop and Box of the size specified. These prices shall include the cost of all copper tubing, fittings, corporation stop, curb stop, cast iron curb box, tapping, blocking, and all materials, work, and equipment necessary to make a complete and finished installation.

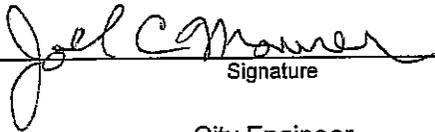


Route FAU 5348
 Section 05-00160-00-WR
 County DeKalb

Marked Annie Glidden Road
 Project No. HPD-2295(001)

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.


 Signature

1-24-06
 Date

City Engineer
 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):

This improvement consists of full-depth bituminous pavement reconstruction, full-depth bituminous widening and resurfacing, bituminous bicycle path, precast box culverts, sidewalk, curb and gutter, storm sewer, water main, traffic signal modernization and interconnect, lighting, pavement marking, landscaping, cleaning and painting steel bridge, and other appurtenant work necessary to complete the project.

- 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):

- (1) Install and maintain temporary erosion control devices such as perimeter erosion barrier, temporary ditch checks, inlet and pipe protection, and temporary seeding.
- (2) Construct temporary sediment trap east of Annie Glidden Road.
- (3) Construct compensatory storage basin to accept proposed storm sewer drainage flows. Establish stockpiling locations within basin for topsoil and embankment.
- (4) Construct the east half of the precast box culverts at Station 97+50.
- (5) Construct storm sewer and water main appurtenances within Stage 1.
- (6) Construct the bituminous pavement, curb and gutter, sidewalk, and bicycle path within Stage 1.
- (7) Construct the west half of the precast box culverts at Station 97+50.
- (8) Construct storm sewer and water main appurtenances within Stage 2.
- (9) Construct the bituminous pavement, curb and gutter, sidewalk, and bicycle path within Stage 2.
- (10) Complete construction of medians in Stage 3.
- (11) Complete final grading and other miscellaneous items.
- (12) Install permanent erosion control including seeding and sodding.

c. The total area of the construction site is estimated to be 27.2 acres.

The total area of the site that it is estimated will be disturbed by excavation, grading or other activities is 25.4 acres.

- 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.

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

(1) 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):

- (a) Temporary seeding will be placed following IDOT Method 2. Seed Mixtures will depend on the time of year it is applied.
- (b) Erosion control blanket will be installed over fill slopes and in high-velocity areas (i.e., ditches) 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 protect the disturbed areas and prevent further erosion.
- (c) Temporary perimeter erosion barrier will be a silt filter fence that is placed adjacent to the areas of construction to intercept waterborne silt and prevent it from leaving the site.
- (d) Temporary ditch checks will be placed in swales and ditches as directed by the Engineer in order to prevent downstream erosion.
- (e) All areas disturbed by construction that aren't otherwise paved will be stabilized with seeding or sodding immediately following the finished grading.

- (2) **Structural Practices.** Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include 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):

Perimeter erosion barrier (silt fence) will be used at all areas where runoff from disturbed areas has the potential to travel offsite. Temporary ditch checks will be placed within proposed drainage swales and ditches as shown on the plans. Inlet protection will be installed where shown on plan at culvert and storm sewer inlets where runoff from disturbed areas is collected. Outlet protection will be furnished at the outfalls of storm sewers and culverts by providing end sections and stone riprap with filter fabric to prevent scouring at the end of the pipes and to prevent downstream erosion. A temporary sediment trap will be excavated to collect site runoff and for de-watering during construction of the proposed concrete box culvert. Stabilized entrances will be constructed to minimize the tracking of soil from within the compensatory storage basin site to the roadway.

b. Storm Water Management

Provided below is a description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

- (1) Such practices may include: storm water detention structures (including wet ponds); storm water retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff on site; and sequential systems (which combine several practices). **The practices selected for implementation were determined on the basis of the technical guidance in Section 10-300 (Design Considerations) in Chapter 10 (Erosion and Sedimentation Control) of the Illinois Department of Transportation Drainage Manual. If practices other than those discussed in Section 10-300 are selected for implementation or if practices are applied to situations different from those covered in Section 10-300, the technical basis for such decisions will be explained below.**
- (2) Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., maintenance of hydrologic conditions, such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Description of Storm Water Management Controls (use additional pages, as necessary):

Catch basins with sumps will collect pavement drainage for sedimentation collection. Stone riprap will be installed at the downstream end of culverts at locations shown on plan to dissipate velocity and provide channel stability. The majority of the roadway drainage system will outlet to a proposed compensatory storage basin.

c. Other Controls

- (1) **Waste Disposal.** No solid materials, including building materials, shall be discharged into Waters of the State, except as authorized by a Section 404 permit.
- (2) The provisions of this plan shall ensure and demonstrate compliance with applicable State and/or 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 or storm water management plans approved by local officials:

All management practices, control, and provisions in this plan are in accordance with the IDOT "Standard Specifications for Road and Bridge Construction," IDOT Highway Standards, and the Illinois Urban Manual.

3. Maintenance

The following is a description of procedures that will be used to maintain, in good and effective operating conditions, vegetation, erosion and sediment control measures and other protective measures identified in this plan (use additional pages, as necessary):

During construction the Contractor shall clean and grade the work area to eliminate concentration of runoff, cover the open ends of pipes in trenches at the close of each working day, maintain or replace erosion and sediment control devices in a timely manner.

Temporary ditch checks, pipe and inlet protection devices, and perimeter erosion barriers shall have the sediment removed and be replaced as directed by the Engineer. Sediment traps shall have the sediment cleaned as directed by the Engineer. Temporary seeding for erosion control shall be continuously implemented as directed by the Engineer.

All maintenance of erosion control systems will be the responsibility of the Contractor.

4. Inspections

Qualified personnel shall inspect disturbed areas of the construction site which have not been finally stabilized, structural control measures, and locations where vehicles enter or exit the site. Such inspections shall be conducted at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inch or greater or equivalent snowfall.

- a. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off site sediment tracking.
- b. Based on the results of the inspection, the description of potential pollutant sources identified in section 1 above and pollution prevention measures identified in section 2 above shall be revised as appropriate as soon as practicable after such inspection. Any changes to this plan resulting from the required inspections shall be implemented within 7 calendar days following the inspection.
- c. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of this storm water pollution prevention plan, and actions taken in accordance with section 4.b. shall be made and retained as part of the plan for at least three (3) years after the date of the inspection. The report shall be signed in accordance with Part VI. G of the general permit.

- d. If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer or Resident Technician shall complete and file an "Incidence of Noncompliance" (ION) report for the identified violation. The Resident Engineer or Resident Technician shall use forms provided by the Illinois Environmental Protection Agency and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of noncompliance shall be signed by a responsible authority in accordance with Part VI. G of the general permit.

The 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 discharges associated with the industrial activity addressed in this plan must be described below. Appropriate pollution prevention measures, as described below, will be implemented for the non-storm water component(s) of the discharge. (Use additional pages as necessary to describe non-storm water discharges and applicable pollution control measures).



This certification statement is a part of the Storm Water Pollution Prevention Plan for the project described below, in accordance with NPDES Permit No. ILR10, issued by the Illinois Environmental Protection Agency on May 14, 1998.

Project Information:

Route	<u>FAU 5348</u>	Marked	<u>Annie Glidden Road</u>
Section	<u>05-00160-00-WR</u>	Project	<u>HPD-2295(001)</u>
County	<u>DeKalb</u>		

I certify under penalty of law that I understand the terms of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR 10) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Signature

Date

Title

Name of Firm

Street Address

City State

Zip Code

Telephone Number

DEPARTMENT OF THE ARMY CORPS OF ENGINEERS PERMIT: The construction of this project shall be performed in accordance with Nationwide Permit Number 14 issued under Section 404 of the Federal Clean Water Act as administered by the U.S. Army Corps of Engineers. The Nationwide Permit Conditions and General Conditions, including Section 401 Water Quality Certification Conditions, are included herein and must be complied with by the Contractor. Should the Contractor plan to undertake construction activities which are not covered by the N.W.P., he shall obtain the necessary permit at his expense and present it to the Engineer prior to starting the work.

The cost of complying with the Department of the Army Corps of Engineers permit(s) will not be paid for separately but shall be considered as incidental to the contract.



DEPARTMENT OF THE ARMY
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS
CLOCK TOWER BUILDING - P.O. BOX 2004
ROCK ISLAND, ILLINOIS 61204-2004

REPLY TO
ATTENTION OF

<http://www.mvr.usace.army.mil>

August 4, 2004

Operations Division

SUBJECT: CEMVR-OD-P-1117

Ms. Tina Nicolussi
ENCAP, Inc.
12961 State Route 38
Cortland, Illinois 60112

Dear Mr. Nicolussi:

Our office reviewed your application dated July 16, 2004, concerning the proposed reconstruction (widening) of Annie Glidden Road in DeKalb, in Section 22, Township 40 North, Range 4 East, DeKalb County, Illinois. The project will impact .22 acres of jurisdictional wetlands.

Your project is covered under Item 14 of the enclosed Fact Sheet No. 5(IL), provided you meet the permit conditions for the nationwide permits which are also included in the Fact Sheet. The Corps has also made a determination of no effect on federally threatened and endangered species or critical habitat. The decision regarding this action is based on information found in the administrative record which documents the District's decision-making process, the basis for the decision, and the final decision. The Illinois Environmental Protection Agency (IEPA) also issued Section 401 Water Quality Certification with conditions for this nationwide permit. Please note these additional conditions included in the Fact Sheet. You must also comply with these conditions.

Our office received comments from the U.S. Department of Interior, Fish and Wildlife Service and the Illinois Department of Natural Resources concerning the proposed project and mitigation plan. Based on the information you provided with your application and the comments provided by the above agencies, we determined that your proposed use of the DeKalb County Forest Preserve Wetland Bank in DeKalb County, Illinois is acceptable.

This permit is contingent upon the transfer of payment in the amount of \$14,301 to the DeKalb County Forest Preserve prior to initiating any work. These funds will be used to purchase 0.34 acres of wetland mitigation bank credits as stated in your application submittal. Our office will require written verification from Mr. Terry Hannan that this transfer of funds has taken place.

This verification is valid for two years from the date of this letter, unless the nationwide permit is modified, reissued, or revoked. It is your responsibility to remain informed of changes to the nationwide permit program. We will issue a public notice announcing the changes if and when they occur. Furthermore, if you commence or are under contract to commence these activities before the date the nationwide permit is modified or revoked, you will have twelve months from the date of the modification or revocation to complete the activity under the present terms and conditions of this nationwide permit.

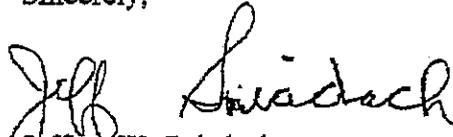
EXHIBIT C-2
Page 3 of 5

Although an individual Department of the Army permit and individual IEPA 401 certification will not be required for the project, this does not eliminate the requirement that you must still acquire other applicable Federal, state, and local permits. If you have not already coordinated your project with the Illinois Department of Natural Resources - Office of Water Resources, please contact them at 217/782-3863 to determine if a floodplain development permit is required for your project.

You are required to complete and return the enclosed "Completed Work Certification" upon completion of your project, in accordance with General Condition No. 14 of the enclosed Fact Sheet.

Should you have any questions, please contact our Regulatory Branch by letter, or telephone me at 309/794-5369.

Sincerely,


Jeffrey W. Sniadach
Project Manager
Enforcement Section

Enclosures

Copies Furnished: (w/o enclosures)

Mr. Dennis L. Kennedy, P.E.
IL Department of Natural Resources
One Natural Resources Way
Springfield, Illinois 62701-1787

Mr. Bruce Yurdin
Illinois Environmental Protection Agency
Watershed Management Section, Permit Sec. 15
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

COMPLETED WORK CERTIFICATION

Permit Number: CEMVR-OD-P-

Name of Permittee:

Date of Issuance:

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

U.S. Army Engineer District, Rock Island
ATTN: Regulatory Branch
Clock Tower Building
Post Office Box 2004
Rock Island, Illinois 61204-2004

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above reference permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISION
FOR
NATIONWIDE No. 14 PERMITS AND CONDITIONS

Effective: February 1, 2004
Revised: March 1, 2005

The following information presents the requirements for the nationwide 404/10 permits No. 14 used on this highway project.

Contractors wishing to conduct activities under the nationwide permits must comply with the terms of the applicable permit and the conditions below.

- A. **Linear Transportation Projects.** Activities required for the construction, expansion, modification, or improvement of linear transportation crossings (e.g., highways, railways, trails, airport runways, and taxiways) in waters of the US, including wetlands, if the activity meets the following criteria:
1. This NWP is subject to the following acreage limits:
 - (a) For linear transportation projects in non-tidal waters, provided the discharge does not cause the loss of greater than 1/2- acre of waters of the US; or
 - (b) For linear transportation projects in tidal waters, provided the discharge does not cause the loss of greater than 1/3-acre of waters of the US.
 2. The permittee must notify the District Engineer in accordance with General Condition 13 if any of the following criteria are met:
 - (a) The discharge causes the loss of greater than 1/10 acre of waters of the US; or
 - (b) There is a discharge in a special aquatic site, including wetlands;
 3. The notification must include a compensatory mitigation proposal to offset permanent losses of waters of the US to ensure that those losses result only in minimal adverse effects to the aquatic environment and a statement describing how temporary losses will be minimized to the maximum extent practicable;
 4. For discharges in special aquatic sites, including wetlands, and stream riffle and pool complexes, the notification must include a delineation of the affected special aquatic sites;
 5. The width of the fill is limited to the minimum necessary for the crossing;
 6. This permit does not authorize stream channelization, and the authorized activities must not cause more than minimal changes to the hydraulic flow characteristics of the stream, increase flooding, or cause more than minimal degradation of water quality of any stream (see General Conditions 9 and 21);
 7. This permit cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars; and
 8. The crossing is a single and complete project for crossing waters of the US. Where a road segment (i.e., the shortest segment of a road with independent utility that is part of a larger project) has multiple crossings of streams (several single and complete projects) the Corps will consider whether it should use its discretionary authority to require an Individual Permit. (Sections 10 and 404)
- B. **Nationwide Permit General Conditions.** The following General Conditions must be followed in order for any authorization by an NWP to be valid:
1. **Navigation.** No activity may cause more than a minimal adverse effect on navigation.
 2. **Proper Maintenance.** Any structure or fill authorized shall be properly maintained, including maintenance to ensure public safety.

3. **Soil Erosion and Sediment Controls.** Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.
4. **Aquatic Life Movements.** No activity may substantially disrupt the necessary life-cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.
5. **Equipment.** Heavy equipment working in wetlands must be placed on mats, or other measures must be taken to minimize soil disturbance
6. **Regional and Case-By-Case Conditions.** The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state or tribe in its Section 401 Water Quality Certification.
7. **Wild and Scenic Rivers.** No activity may occur in a component of the National Wild and Scenic River System; or in a river officially designated by Congress as a "study river" for possible inclusion in the system, while the river is in an official study status; unless the appropriate Federal agency, with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation, or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).
8. **Water Quality.**
 - (a) In certain states and tribal lands an individual 401 Water Quality Certification must be obtained or waived (See 33 CFR 330.4(c)).
 - (b) For NWP 14 where the state 401 certification (either generically or individually) does not require or approve water quality management measures, the permittee must provide water quality management measures that will ensure that the authorized work does not result in more than minimal degradation of water quality (or the Corps determines that compliance with state or local standards, where applicable, will ensure no more than minimal adverse effect on water quality). An important component of water quality management includes stormwater management that minimizes degradation of the downstream aquatic system, including water quality (refer to General Condition 21 for stormwater management requirements). Another important component of water quality management is the establishment and maintenance of vegetated buffers next to open waters, including streams (refer to General Condition 19 for vegetated buffer requirements for the NWPs). This condition is only applicable to projects that have the potential to affect water quality. While appropriate measures must be taken, in most cases it is not necessary to conduct detailed studies identify such measures or to require monitoring.
9. **Notification.**
 - (a) Timing; where required by the terms of the NWP, the prospective permittee must notify the District Engineer with a preconstruction notification (PCN) as early as possible. The District Engineer must determine if the notification is complete within 30 days of the date of receipt and can request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the District Engineer will notify the prospective permittee that the notification is still incomplete and the PCN review process will not commence until all of the requested information has been received by the District Engineer. The prospective permittee shall not begin the activity:
 - (1) Until notified in writing by the District Engineer that the activity may proceed under the NWP with any special conditions imposed by the District or Division Engineer; or
 - (2) If notified in writing by the District or Division Engineer that an Individual Permit is required; or

- (3) Unless 45 days have passed from the District Engineer's receipt of the complete notification and the prospective permittee has not received written notice from the District or Division Engineer. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).
- (b) Contents of Notification: The notification must be in writing and include the following information:
 - (1) Name, address and telephone numbers of the prospective permittee;
 - (2) Location of the proposed project;
 - (3) Brief description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), Regional General Permit(s), or Individual Permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP (Sketches usually clarify the project and when provided result in a quicker decision.);
 - (4) For NWPs 7, 12, 14, 18, 21, 34, 38, 39, 40, 41, 42, and 43, the PCN must also include a delineation of affected special aquatic sites, including wetlands, vegetated shallows (e.g., submerged aquatic vegetation, seagrass beds), and riffle and pool complexes (see paragraph 13(f));
 - (5) For activities that may adversely affect Federally-listed endangered or threatened species, the PCN must include the name(s) of those endangered or threatened species that may be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work; and
 - (6) For activities that may affect historic properties listed in, or eligible for listing in, the National Register of Historic Places, the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property.
- (c) Form of Notification: The standard Individual Permit application form (Form ENG 4345) may be used as the notification but must clearly indicate that it is a PCN and must include all of the information required in (b) (1)-(18) of General Condition 13. A letter containing the requisite information may also be used.
- (d) District Engineer's Decision: In reviewing the PCN for the proposed activity, the District Engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. The prospective permittee may submit a proposed mitigation plan with the PCN to expedite the process. The District Engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. If the District Engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the District Engineer will notify the permittee and include any conditions the District Engineer deems necessary.

The District Engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee is required to submit a compensatory mitigation proposal with the PCN, the proposal may be either conceptual or detailed. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the District Engineer will expeditiously review the proposed compensatory mitigation plan. The District Engineer must review the plan within 45 days of receiving a complete PCN and determine whether the conceptual or specific proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the District Engineer to be minimal, the District Engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP.

If the District Engineer determines that the adverse effects of the proposed work are more than minimal, then the District Engineer will notify the applicant either: (1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an Individual Permit; (2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation proposal that would reduce the adverse effects on the aquatic environment to the minimal level; or (3) that the project is authorized under the NWP with specific modifications or conditions. Where the District Engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation proposal that would reduce the adverse effects on the aquatic environment to the minimal level. When conceptual mitigation is included, or a mitigation plan is required under item (2) above, no work in waters of the US will occur until the District Engineer has approved a specific mitigation plan.

- (e) **Agency Coordination:** The District Engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

For activities requiring notification to the District Engineer that result in the loss of greater than 1/2-acre of waters of the US, the District Engineer will provide immediately (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy to the appropriate Federal or state offices (USFWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the District Engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the District Engineer will wait an additional 15 calendar days before making a decision on the notification. The District Engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The District Engineer will indicate in the administrative record associated with each notification that the resource agencies' concerns were considered. As required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act, the District Engineer will provide a response to NMFS within 30 days of receipt of any Essential Fish Habitat conservation recommendations. Applicants are encouraged to provide the Corps multiple copies of notifications to expedite agency notification.

- (f) **Wetland Delineations:** Wetland delineations must be prepared in accordance with the current method required by the Corps (For NWP 29 see paragraph (b)(9)(iii) for parcels less than 1/4-acre in size). The permittee may ask the Corps to delineate the special aquatic site. There may be some delay if the Corps does the delineation. Furthermore, the 45-day period will not start until the wetland delineation has been completed and submitted to the Corps, where appropriate.

10. Compliance Certification. Every permittee who has received NWP verification from the Corps will submit a signed certification regarding the completed work and any required mitigation. The certification will be forwarded by the Corps with the authorization letter and will include:

- (a) A statement that the authorized work was done in accordance with the Corps authorization, including any general or specific conditions;
- (b) A statement that any required mitigation was completed in accordance with the permit conditions; and
- (c) The signature of the permittee certifying the completion of the work and mitigation.

11. **Endangered Species.** (a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. Non-federal permittees shall notify the District Engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or is located in the designated critical habitat and shall not begin work on the activity until notified by the District Engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that may affect Federally-listed endangered or threatened species or designated critical habitat, the notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. As a result of formal or informal consultation with the FWS or NMFS the District Engineer may add species-specific regional endangered species conditions to the NWPs.
- (b) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the USFWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the USFWS and NMFS or their world wide web pages at <http://www.fws.gov/r9endspp/endspp.html> and http://www.nmfs.noaa.gov/prot_res/overview/es.html respectively
12. **Use of Multiple Nationwide Permits.** The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the US authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit (e.g. if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the US for the total project cannot exceed 1/3-acre).
13. **Water Supply Intakes.** No activity, including structures and work in navigable waters of the US or discharges of dredged or fill material, may occur in the proximity of a public water supply intake except where the activity is for repair of the public water supply intake structures or adjacent bank stabilization.
14. **Suitable Material.** No activity, including structures and work in navigable waters of the US or discharges of dredged or fill material, may consist of unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.) and material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the CWA).
15. **Spawning Areas.** Activities, including structures and work in navigable waters of the US or discharges of dredged or fill material, in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., excavate, fill, or smother downstream by substantial turbidity) of an important spawning area are not authorized.

16. Management of Water Flows. To the maximum extent practicable, the activity must be designed to maintain preconstruction downstream flow conditions (e.g., location, capacity, and flow rates). Furthermore, the activity must not permanently restrict or impede the passage of normal or expected high flows (unless the primary purpose of the fill is to impound waters) and the structure or discharge of dredged or fill material must withstand expected high flows. The activity must, to the maximum extent practicable, provide for retaining excess flows from the site, provide for maintaining surface flow rates from the site similar to preconstruction conditions, and provide for not increasing water flows from the project site, relocating water, or redirecting water flow beyond preconstruction conditions. Stream channelizing will be reduced to the minimal amount necessary, and the activity must, to the maximum extent practicable, reduce adverse effects such as flooding or erosion downstream and upstream of the project site, unless the activity is part of a larger system designed to manage water flows. In most cases, it will not be a requirement to conduct detailed studies and monitoring of water flow.

This condition is only applicable to projects that have the potential to affect waterflows. While appropriate measures must be taken, it is not necessary to conduct detailed studies to identify such measures or require monitoring to ensure their effectiveness. Normally, the Corps will defer to state and local authorities regarding management of water flow.

17. Adverse Effects from Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to the acceleration of the passage of water, and/or the restricting its flow shall be minimized to the maximum extent practicable. This includes structures and work in navigable waters of the US, or discharges of dredged or fill material.

18. Waterfowl Breeding Areas. Activities, including structures and work in navigable waters of the US or discharges of dredged or fill material, into breeding areas for migratory waterfowl must be avoided to the maximum extent practicable.

19. Removal of Temporary Fills. Any temporary fills must be removed in their entirety and the affected areas returned to their preexisting elevation.

20. Designated Critical Resource Waters. Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, National Wild and Scenic Rivers, critical habitat for Federally listed threatened and endangered species, coral reefs, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the District Engineer after notice and opportunity for public comment. The District Engineer may also designate additional critical resource waters after notice and opportunity for comment.

- (a) Except as noted below, discharges of dredged or fill material into waters of the US are not authorized by NWP 14 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters. Discharges of dredged or fill materials into waters of the US may be authorized by the above NWP in National Wild and Scenic Rivers if the activity complies with General Condition 7. Further, such discharges may be authorized in designated critical habitat for Federally listed threatened or endangered species if the activity complies with General Condition 11 and the USFWS or the NMFS has concurred in a determination of compliance with this condition.

C. Regional Conditions within Illinois:

NOTE: The Chicago District has proposed alternate regional conditions for work in McHenry, Kane, Lake, DuPage, Will and Cook Counties in Illinois. Information regarding Chicago District requirements can be accessed through their website at <http://www.lrc.usace.army.mil/co-rl/>. If you have any questions regarding the Chicago District proposal, please contact Ms. Karon Marzec, Senior Project Manager, by telephone at 312/353-6400, ext. 4030 or e-mail karon.m.marzec@usace.army.mil.

1. Bank stabilization projects involving armoring of the streambank with riprap or the construction of retaining walls within High Value Subwatersheds exceeding 250 feet will require a PCN to the Corps of Engineers in accordance with Notification Condition (Number 13).
2. A proposed activity to be authorized under Nationwide Permits 12 or 14 within the Cache River Wetlands Areas (Alexander and Pulaski Counties), Kaskaskia River (Clinton, St. Clair, and Washington Counties), or Wabash River (Gallatin and White Counties) will require a PCN to the Corps of Engineers in accordance with the Notification Condition (Number 13).
3. Stormwater management facilities shall not be located within an intermittent stream.
4. **High Value Subwatersheds** – The state of Illinois has defined these areas through a combination of factors. Various sources of information were used to analyze and rank subwatersheds. Federal Threatened and Endangered Species, % of wetlands in the watershed, Natural Areas Inventory, and Biological Stream Categorization were factors used for High Value designation. A map highlighting these areas is attached with a numerical listing of the 8-digit hydrologic units.

D. Further Information

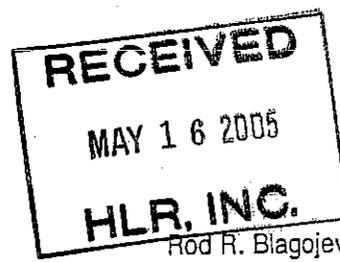
1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other Federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project.

E. Definitions are as provided in the Federal Register Vol. 67, No. 10 dated January 15, 2002.



Illinois Department of Natural Resources

One Natural Resources Way • Springfield, Illinois 62702-1271
<http://dnr.state.il.us>



Rod R. Blagojevich, Governor

Joel Brunsvold, Director

May 12, 2005

SUBJECT: Permit No. DS2005043
Annie Glidden Road Culvert Replacement
Section 01-00160-00-ES
Tributary to South Branch Kishwaukee River
City of DeKalb

City of DeKalb
223 South Fourth Street, Ste. B
DeKalb, Illinois 60115

ATTENTION: Mr. Ralph Tompkins, Director of Public Works

Dear Mr. Tompkins:

Enclosed is Illinois Department of Natural Resources, Office of Water Resources Permit No. DS2005043 authorizing the subject project. This permit does not supersede any other federal, state or local authorizations that may be required for the project. In particular, additional design approval may be required by the Illinois Department of Transportation, Division of Highways. Also, since your county is participating in the National Flood Insurance Program, you should contact the county floodplain management official to ensure that local requirements are met.

We concur with the computation of a 100-year frequency discharge of 754 cfs below an unstricted high water elevation of approximately 846.69 ft NGVD. The proposed structure will provide an effective waterway opening of 123 square ft for the 100-year event. The proposed crossing will result in a maximum water surface profile increase of less than 0.5 ft at the structure and less than 0.1 ft at a point 1000' upstream of the structure as determined by the horizontal projection of the increase and the slope of the hydraulic grade line.

If any changes in the plans or location of the work are found necessary, revised plans should be submitted promptly to this office so that they may receive approval before work thereon is begun. When the work is done, please provide written notification that the project has been completed in accordance with the approved plans and conditions of the permit.

City of DeKalb
Page 2
May 12, 2005

Please feel free to contact Mark McCauley of my staff at 217/524-1047 if you have any questions concerning this authorization.

Sincerely,



Paul Mauer, Jr., P.E.
Acting Manager, Division of Resource Management

JB:GRC:PM:MLM:crw

Enclosure

cc: Hampton, Lenzini and Renwick, Inc. (Robert Murzyn) /
IDOT/Local Bridge Unit (Tom Cartmel)



PERMIT NO. DS2005043

DATE: May 12, 2005

State of Illinois

Department of Natural Resources, Office of Water Resources

Permission is hereby granted to:

CITY OF DEKALB
223 SOUTH FOURTH STREET, SUITE B
DEKALB, ILLINOIS 60115

to construct a replacement culvert for Annie Glidden Road over a tributary to the South Branch Kishwaukee River in the Southwest $\frac{1}{4}$ of Section 22, Township 40 North, Range 4 East of the 3rd Principal Meridian in DeKalb County,

in accordance with an application dated May 17, 2004 and the plans and specifications entitled:

ANNIE GLIDDEN ROAD

Plan & Profile, STA. 92+50 to STA. 98+50, one sheet, received 7/29/04,
Typical Channel Section, one sheet, received 4/29/05, and
Soil Erosion and Sedimentation Control Plan, one sheet, received 4/29/05.

Examined and Recommended:

Paul Mauer, Jr., Acting Manager
Division of Resource Management

Approval Recommended:

Gary R. Clark, Director
Office of Water Resources

Approved:

Joel Brunsvold, Director
Department of Natural Resources

This PERMIT is subject to the terms and special conditions contained herein.

THIS PERMIT IS SUBJECT TO THE FOLLOWING CONDITIONS:

- 1) This permit is granted in accordance with the Rivers, Lakes and Streams Act "615 ILCS 5."
- 2) This permit does not convey title to the permittee or recognize title of the permittee to any submerged or other lands, and furthermore, does not convey, lease or provide any right or rights of occupancy or use of the public or private property on which the activity or any part thereof will be located, or otherwise grant to the permittee any right or interest in or to the property, whether the property is owned or possessed by the State of Illinois or by any private or public party or parties.
- 3) This permit does not release the permittee from liability for damage to persons or property resulting from the work covered by this permit, and does not authorize any injury to private property or invasion of private rights.
- 4) This permit does not relieve the permittee of the responsibility to obtain other federal, state or local authorizations required for the construction of the permitted activity; and if the permittee is required by law to obtain approvals from any federal or other state agency to do the work, this permit is not effective until the federal and state approvals are obtained.
- 5) The permittee shall, at the permittee's own expense, remove all temporary piling, cofferdams, false work, and material incidental to the construction of the project. If the permittee fails to remove such structures or materials, the Department may have removal made at the expense of the permittee.
- 6) In public waters, if future need for public navigation or other public interest by the state or federal government necessitates changes in any part of the structure or structures, such changes shall be made by and at the expense of the permittee or the permittee's successors as required by the Department or other properly constituted agency, within sixty (60) days from receipt of written notice of the necessity from the Department or other agency, unless a longer period of time is specifically authorized.
- 7) The execution and details of the work authorized shall be subject to the review and approval of the Department. Department personnel shall have the right of access to accomplish this purpose.
- 8) Starting work on the activity authorized will be considered full acceptance by the permittee of the terms and conditions of the permit.
- 9) The Department in issuing this permit has relied upon the statements and representations made by the permittee; if any substantive statement or representation made by the permittee is found to be false, this permit will be revoked; and when revoked, all rights of the permittee under the permit are voided.
- 10) In public waters, the permittee and the permittee's successors shall make no claim whatsoever to any interest in any accretions caused by the activity.
- 11) In issuing this permit, the Department does not ensure the adequacy of the design or structural strength of the structure or improvement.
- 12) Noncompliance with the conditions of this permit will be considered grounds for revocation.
- 13) If the construction activity permitted is not completed on or before December 31, 2008, this permit shall cease and be null and void. When all work is constructed, the permittee shall notify the Department so that a final inspection can be completed.

CLEANING AND PAINTING EXISTING STEEL STRUCTURES

Effective: October 2, 2001

Revised: February 7, 2005

Description. This work shall consist of the preparation of all designated metal surfaces by the method(s) specified on the plans. This work also includes the painting of those designated surfaces with the paint system(s) specified on the plans. The Contractor shall furnish all materials, equipment, labor, and other essentials necessary to accomplish this work and all other work described herein and as directed by the Engineer.

Materials. All materials to be used on an individual structure shall be produced by the same manufacturer.

The Bureau of Materials and Physical Research has established a list of all products that have met preliminary requirements. Each batch of material, except for the penetrating sealer, must be tested and approved before use. The specified colors shall be produced in the coating manufacturer's facility. Tinting of the coating after it leaves the manufacturer's facility is not allowed.

The paint materials shall meet the following requirements of the Standard Specification and as noted below:

<u>Item</u>	<u>Article</u>
(a) Waterborne Acrylic	1008.24
(b) Aluminum Epoxy Mastic	1008.25
(c) Organic Zinc Rich Primer (Note 1)	
(d) Epoxy/ Aliphatic Urethane (Note 1)	
(e) Penetrating Sealer (Note 2)	
(f) Moisture Cured Zinc Rich Urethane Primer (Note 3)	
(g) Moisture Cured Aromatic/Aliphatic Urethane (Note 3)	
(h) Moisture Cured Penetrating Sealer (Note 4)	

Note 1: These material requirements shall be according to the Special Provision for the Organic Zinc-Rich Paint System.

Note 2: The Epoxy Penetrating Sealer shall be a cross-linked multi component sealer. The sealer shall have the following properties:

- (a) The volume solids shall be 98%(plus or minus 2%).
- (b) Shall be clear or slightly tinted color.

Note 3: These material requirements shall be according to the Special Provision for the Moisture Cured Urethane Paint System.

Note 4: The Moisture Cured Penetrating Sealer manufacturer's certification will be required.

Submittals. The Contractor shall submit for Engineer review and acceptance, the following plans and information for completing the work. The submittals shall be provided within 30 days of execution of the contract unless given written permission by the Engineer to submit them at a later date. Work cannot proceed until the submittals are accepted by the Engineer. Details for each of the plans are presented within the body of this specification.

- a) Contractor/Personnel Qualifications. Evidence of Contractor qualifications and the names and qualifications/experience/training of the personnel managing and implementing the Quality Control program and conducting the quality control tests.
- b) Quality Control (QC) Program. The QC Program shall identify the following; the instrumentation that will be used, a schedule of required measurements and observations, procedures for correcting unacceptable work, and procedures for improving surface preparation and painting quality as a result of quality control findings. The program shall incorporate at a minimum, the IDOT Quality Control Daily Report form as supplied by the Engineer.
- c) Inspection Access Plan. The inspection access plan for use by Contractor QC personnel for ongoing inspections and by the Engineer during Quality Assurance (QA) observations.
- d) Surface Preparation/Painting Plan. The surface preparation/painting plan shall include the methods of surface preparation and type of equipment to be utilized for washing, hand/power tool cleaning, removal of rust, mill scale, paint or foreign matter, abrasive blast or water jetting, and remediation of chloride. If detergents, additives, or inhibitors are incorporated into the water, the Contractor shall include the names of the materials and Material Safety Data Sheets (MSDS). The Contractor shall identify the solvents proposed for solvent cleaning together with MSDS.

The plan shall also include the methods of coating application and equipment to be utilized.

If the Contractor proposes to heat or dehumidify the containment, the methods and equipment proposed for use shall be included in the Plan for the Engineer's consideration.

- e) Paint Manufacturer Certifications and Letters. When a sealer is used, the Contractor shall provide the manufacturer's certification of compliance with IDOT testing requirements listed under "Materials" above. A certification regarding the compatibility of the sealer with the specified paint system shall also be included.

When rust inhibitors are used, the Contractor shall provide a letter from the coating manufacturer indicating that the inhibitor is compatible with, and will not adversely affect the performance of the coating system.

If the use of a chemical soluble salt remover is proposed by the Contractor, provide a letter from the coating manufacturer indicating that the material will not adversely effect the performance of the coating system.

The paint manufacturer's application and thinning instructions, MSDS and product data sheets shall be provided, with specific attention drawn to storage temperatures, and the temperatures of the material, surface and ambient air at the time of application.

A letter or written instructions from the coating manufacturer shall be provided indicating the length of time that each coat must be protected from cold or inclement weather (e.g., exposure to rain) during its drying period.

- f) Abrasives. Abrasives to be used for abrasive blast cleaning, including MSDS. For expendable abrasives, the Contractor shall provide certification from the abrasive supplier that the abrasive meets the requirements of SSPC-AB1. For steel grit abrasives, the certification shall indicate that the abrasive meets the requirements of SSPC-AB3.
- g) Protective Coverings. Plan for containing or controlling paint debris (droplets, spills, overspray, etc.). Any tarpaulins or protective coverings proposed for use shall be fire retardant. For submittal requirements involving the containment used to remove lead paint, the Contractor shall refer to Special Provision for Containment and Disposal of Lead Paint Cleaning Residues.
- h) Progress Schedule. Progress schedule shall be submitted per Article 108.02 and shall identify all major work items (e.g., installation of rigging/containment, surface preparation, and coating application).

When the Engineer accepts the submittals, the Contractor will receive written notification. The Contractor shall not begin any paint removal work until the Engineer has accepted the submittals. The Contractor shall not construe Engineer acceptance of the submittals to imply approval of any particular method or sequence for conducting the work, or for addressing health and safety concerns. Acceptance of the programs does not relieve the Contractor from the responsibility to conduct the work according to the requirements of Federal, State, or Local regulations and this specification, or to adequately protect the health and safety of all workers involved in the project and any members of the public who may be affected by the project. The Contractor remains solely responsible for the adequacy and completeness of the programs and work practices, and adherence to them.

Contractor Qualifications. Unless indicated otherwise in the contract plans, the painting Contractor shall possess current SSPC-QP1 and SSPC-QP2 certifications at the time of bid, and shall maintain certified status throughout the duration of the painting work under the contract.

Quality Control (QC) Inspections. The Contractor shall perform first line, in process QC inspections. The Contractor shall implement the submitted and accepted QC Program to insure that the work accomplished complies with these specifications. The designated Quality Control

inspector shall be onsite full time during any operations that affect the quality of the coating system (e.g., surface preparation and chloride remediation, coating mixing and application, and evaluations between coats and upon project completion). The Contractor shall use the IDOT Quality Control Daily Report form supplied by the Engineer to record the results of quality control tests. The completed reports shall be turned into the Engineer before work resumes the following day.

Contractor QC inspections shall include, but not be limited to the following:

- Suitability of protective coverings and the means employed to control project debris and paint spills, overspray, etc.
- Ambient conditions
- Surface preparation (solvent cleaning, pressure washing including chalk tests, hand/power tool or abrasive blast cleaning, etc.)
- Chloride remediation
- Coating application (specified materials, mixing, thinning, and wet/dry film thickness)
- Recoat times and cleanliness between coats
- Coating continuity and coverage (freedom from runs, sags, overspray, dryspray, pinholes, shadow-through, skips, misses, etc.)

The personnel managing the Contractor's QC Program shall possess a minimum classification as a National Association of Corrosion Engineers (NACE) Coating Inspector Technician, or shall provide evidence of successful inspection of 3 projects of similar or greater complexity and scope that have been completed in the last 2 years. References shall include the name, address, and telephone number of a contact person employed by the bridge owner.

The personnel performing the QC tests shall be trained in coatings inspection and the use of the testing instruments. Documentation of training shall be provided. The QC personnel shall not perform hands on surface preparation or painting activities. Painters shall perform wet film thickness measurements, with QC personnel conducting random spot checks of the wet film. The Contractor shall not replace the QC personnel assigned to the project without advance notice to the Engineer, and acceptance of the replacement(s), by the Engineer.

The Contractor shall supply all necessary equipment to perform the QC inspections. Equipment shall include the following at a minimum:

- Psychrometer or comparable equipment for the measurement of dew point and relative humidity, together with all necessary weather bureau tables or psychrometric charts.
- Surface temperature thermometer
- Hypodermic Needle Pressure Gage for determining blasting pressure at the nozzle
- SSPC Visual Standards VIS 1 for abrasive blast cleaning, VIS 3 for hand/power tool cleaning, VIS 4 for water jetting, and/or VIS 5 for wet abrasive blast cleaning, as applicable.
- Commercially available putty knife of a minimum thickness of 1mm (40 mils) and a width between 25 and 75 mm (1 and 3 in.) Note that the putty knife is only required for

projects in which the existing coating is being feathered and must be tested with a dull putty knife.

- Testex Press-O-Film Replica Tape and Spring Micrometer
- Bresle Cell Kits or CHLOR*TEST kits for chloride determinations, or equivalent
- Wet Film Thickness Gage
- Blotter paper and plate glass for compressed air cleanliness checks
- Type 2 Magnetic Dry Film Thickness Gage per SSPC - PA2
- Calibration standards for dry film thickness gage
- Light meter for measuring light intensity during paint removal, painting, and inspection activities
- All applicable ASTM and SSPC Standards used for the work (reference list attached)

The instruments shall be calibrated by the Contractor's personnel according to the equipment manufacturer's recommendations and the Contractor's QC Program. All inspection equipment shall be made available to the Engineer for QA observations on an as needed basis.

Hold Point Notification. Specific inspection items throughout this specification are designated as Hold Points. Unless other arrangements are made at the project site, the Contractor shall provide the Engineer with a minimum 4-hour notification before a Hold Point inspection will be reached. If the 4-hour notification is provided and the Work is ready for inspection at that time, the Engineer will conduct the necessary observations. If the Work is not ready at the appointed time, unless other arrangements are made, an additional 4-hour notification is required. Permission to proceed beyond a Hold Point without a QA inspection will be granted solely at the discretion of the Engineer, and only on a case by case basis.

Quality Assurance (QA) Observations. The Engineer will conduct QA observations of any or all phases of the work. The presence or activity of Engineer observations in no way relieves the Contractor of the responsibility to provide all necessary daily QC inspections of his/her own and to comply with all requirements of this Specification.

The Engineer has the right to reject any work that was performed without adequate provision for QA observations.

The Engineer will issue a Non-Conformance Report when work is found to be in violation of the specification requirements, and is not corrected to bring it into compliance before proceeding with the next phase of work.

Inspection Access and Lighting. The Contractor shall facilitate the Engineer's observations as required, including allowing ample time to view the work. The Contractor shall furnish, erect and move scaffolding or other mechanical equipment to permit close observation of all surfaces to be cleaned and painted. This equipment shall be provided during all phases of the work. Examples of acceptable access structures include:

- Mechanical lifting equipment, such as, scissor trucks, hydraulic booms, etc.
- Platforms suspended from the structure comprised of trusses or other stiff supporting members and including rails and kick boards.

- Simple catenary supports are permitted only if independent life lines for attaching a fall arrest system according to Occupational Safety and Health Administration (OSHA) regulations are provided.

When the surface to be inspected is more than 1.8 m (6 ft) above the ground or water surface, the Contractor shall provide the Engineer with a safety harness and a lifeline according to OSHA regulations. The lifeline and attachment shall not direct the fall into oncoming traffic. The Contractor shall provide a method of attaching the lifeline to the structure independent of the inspection facility or any support of the platform. When the inspection facility is more than 800 mm (2 1/2 ft) above the ground, the Contractor shall provide an approved means of access onto the platform.

The Contractor shall provide artificial lighting in areas where natural light is inadequate, as determined by the Engineer, to allow proper cleaning, inspection, and painting. Illumination for inspection shall be at least 325 LUX (30 foot candles). Illumination for cleaning and painting, including the working platforms, access and entryways shall be at least 215 LUX (20 foot candles).

Surface Preparation and Painting Equipment. All cleaning and painting equipment shall include gages capable of accurately measuring fluid and air pressures and shall have valves capable of regulating the flow of air, water or paint as recommended by the equipment manufacturer. The equipment shall be maintained in proper working order.

Diesel or gasoline powered equipment shall be positioned or vented in a manner to prevent deposition of combustion contaminants on any part of the structure.

Hand tools, power tools, pressure washing, water jetting, abrasive blast cleaning equipment, brushes, rollers, and spray equipment shall be of suitable size and capacity to perform the work required by this specification. All power tools shall be equipped with vacuums and High Efficiency Particulate Air (HEPA) filtration. Appropriate filters, traps and dryers shall be provided for the compressed air used for abrasive blast cleaning and conventional spray application. Paint pots shall be equipped with air operated continuous mixing devices unless prohibited by the coating manufacturer.

Test Sections. Prior to surface preparation, the Contractor shall prepare a test section(s) on each structure to be painted in a location(s) which the Engineer considers to be representative of the existing surface condition and steel type for the structure as a whole. More than one test section may be needed to represent the various design configurations of the structure. The purpose of the test section(s) is to demonstrate the use of the tools and degree of cleaning required (cleanliness and profile) for each method of surface preparation that will be used on the project. Each test section shall be approximately 0.93 sq m (10 sq ft). The test section(s) shall be prepared using the same equipment, materials and procedures as the production operations. The Contractor shall prepare the test section(s) to the specified level of cleaning according to the appropriate SSPC visual standards, modified as necessary to comply with the requirements of this specification. The written requirements of the specification prevail in the event of a conflict with the SSPC visual standards. Only after the test section(s) have been approved shall

the Contractor proceed with surface preparation operations. Additional compensation will not be allowed the Contractor for preparation of the test section(s).

For the production cleaning operations, the specifications and written definitions, the test section(s), and the SSPC visual standards shall be used in that order for determining compliance with the contractual requirements.

Protective Coverings and Damage. All portions of the structure that could be damaged by the surface preparation and painting operations (e.g., utilities), including any sound paint that is allowed to remain according to the contract documents, shall be protected by covering or shielding. Tarpaulins drop cloths, or other approved materials shall be employed. The Contractor shall comply with the provisions of the Illinois Environmental Protection Act. Paint drips, spills, and overspray are not permitted to escape into the air or onto any other surfaces or surrounding property not intended to be painted. Containment shall be used to control paint drips, spills, and overspray, and shall be dropped and all equipment secured when sustained wind speeds of 64 kph (40 mph) or greater occur, unless the containment design necessitates action at lower wind speeds. The contractor shall evaluate project-specific conditions to determine the specific type and extent of containment needed to control the paint emissions and shall submit a plan for containing or controlling paint debris (droplets, spills, overspray, etc.) to the Engineer for approval prior to starting the work. Approval shall not relieve the Contractor of their ultimate responsibility for controlling paint debris from escaping the work zone.

When the protective coverings need to be attached to the structure, they shall be attached by bolting, clamping, or similar means. Welding or drilling into the structure is prohibited unless approved by the Engineer in writing. When removing coatings containing lead the containment and disposal of the residues shall be as specified in the Special Provision for Containment and Disposal of Lead Paint Cleaning Residues contained elsewhere in this Contract. When removing coatings not containing lead the containment and disposal of the residues shall be as specified in the Special Provision for Containment and Disposal of Non-Lead Paint Cleaning Residues contained elsewhere in this Contract.

The Contractor shall be responsible for any damage caused to persons, vehicles, or property, except as indemnified by the Response Action Contractor Indemnification Act. Whenever the intended purposes of the controls or protective devices used by the Contractor are not being accomplished, as determined by the Engineer, work shall be immediately suspended until corrections are made. Damage to vehicles or property shall be repaired by the Contractor at the Contractor's expense. Painted surfaces damaged by any Contractor's operation shall be repaired, removed and/or repainted, as directed by the Engineer, at the Contractor's expense.

Weather Conditions. Surfaces to be painted after cleaning shall remain free of moisture and other contaminants. The Contractor shall control his/her operations to insure that dust, dirt, or moisture do not come in contact with surfaces cleaned or painted that day.

- a) The surface temperature shall be at least 3°C (5°F) above the dew point during final surface preparation operations. The manufacturers' published literature shall be followed

for specific temperature, dew point, and humidity restrictions during the application of each coat.

- b) If the Contractor proposes to control the weather conditions inside containment, proposed methods and equipment for heating and/or dehumidification shall be included in the work plans for the Engineer's consideration. Any heating/dehumidification proposals accepted by the Engineer shall be implemented at no additional cost to the department.
- c) Cleaning and painting shall be done between April 15 and October 31 unless authorized otherwise by the Engineer in writing.

The Contractor shall monitor temperature, dew point, and relative humidity every 4 hours during surface preparation and coating application in the specific areas where the work is being performed. The frequency of monitoring shall increase if weather conditions are changing. If the weather conditions after application and during drying are forecast to be outside the acceptable limits established by the coating manufacturer, coating application shall not proceed. If the weather conditions are forecast to be borderline relative to the limits established by the manufacturer, monitoring shall continue at a minimum of 4-hour intervals throughout the drying period. The Engineer has the right to reject any work that was performed, or drying that took place, under unfavorable weather conditions. Rejected work shall be removed, recleaned, and repainted at the Contractor's expense.

Compressed Air Cleanliness. Prior to using compressed air for abrasive blast cleaning, blowing down the surfaces, and painting with conventional spray, the Contractor shall verify that the compressed air is free of moisture and oil contamination according to the requirements of ASTM D 4285. The tests shall be conducted at least one time each shift for each compressor system in operation. If air contamination is evident, the Contractor shall change filters, clean traps, add moisture separators or filters, or make other adjustments as necessary to achieve clean, dry air. The Contractor shall also examine the work performed since the last acceptable test for evidence of defects or contamination caused by the compressed air. Effectuated work shall be repaired at the Contractor's expense.

Low Pressure Water Cleaning and Solvent Cleaning (HOLD POINT). The Contractor shall notify the Engineer 24 hours in advance of beginning surface preparation operations.

- a) Water Cleaning of Lead Containing Coatings Prior to Overcoating. Prior to initiating any mechanical cleaning such as hand/power tool cleaning on surfaces that are painted with lead, all surfaces to be prepared and painted, and the tops of pier and abutment caps shall be washed. Washing is not required if the surfaces will be prepared by water jetting.

Washing shall involve the use of potable water at a minimum of 7 MPa (1000 psi) and less than 34 MPa (5000 psi) according to "Low Pressure Water Cleaning" of SSPC-SP12. Paint spray equipment shall not be used to perform the water cleaning. The cleaning shall be performed in such a manner as to remove dust, dirt, chalk, insect and animal nests, bird droppings, loose paint and other foreign matter prior to solvent

cleaning. The water, debris, and any loose paint removed by water cleaning shall be collected for proper disposal. The washing shall be completed no more than 2 weeks prior to surface preparation.

If detergents or other additives are added to the water, the detergents/additives shall be included in the submittals and not used until accepted by the Engineer. When detergents or additives are used, the surface shall be rinsed with potable water before the detergent water dries.

After washing has been accepted by the Engineer, all traces of asphaltic cement, oil, grease, diesel fuel deposits, and other soluble contaminants which remain on the steel surfaces to be painted shall be removed by solvent cleaning according to SSPC – SP1, supplemented with scraping (e.g., to remove large deposits of asphaltic cement) as required. The solvent(s) used for cleaning shall be compatible with the existing coating system. The Contractor shall identify the proposed solvent(s) in the submittals. If the existing coating is softened, wrinkled, or shows other signs of attack from the solvents, the Contractor shall immediately discontinue their use. The name and composition of replacement solvents, together with MSDS, shall be submitted for Engineer acceptance prior to use.

Under no circumstances shall subsequent hand/power tool cleaning be performed in areas containing surface contaminants or in areas where the Engineer has not accepted the washing and solvent cleaning. Surfaces prepared by hand/power tool cleaning without approval of the washing and solvent cleaning may be rejected by the Engineer. Rejected surfaces shall be re-cleaned with both solvent and the specified mechanical means at the Contractor's expense.

After all washing and mechanical cleaning are completed, representative areas of the existing coating shall be tested to verify that the surface is free of chalk and other loose surface debris or foreign matter. The testing shall be performed according to ASTM D4214. Cleaning shall continue until a chalk rating of 6 or better is achieved in every case.

- b) Water Cleaning of Non-Lead Coatings Prior to Overcoating. Thoroughly clean the surfaces according to the steps defined above for "Water Cleaning of Lead Containing Coatings Prior to Overcoating," except that the wash water does not need to be collected, and if the shop primer is inorganic zinc, the chalk rating does not apply. All other provisions are applicable.
- c) Water Cleaning/Debris Removal Prior to Total Coating Removal. When total coating removal is specified, water cleaning of the surface prior to coating removal is not required by this specification and is at the option of the Contractor. If the Contractor chooses to use water cleaning, and the existing coating contains lead, all water and debris shall be collected for proper disposal.

Whether or not the surfaces are pre-cleaned using water, the tops of the pier caps and abutments shall be cleaned free of dirt, paint chips, insect and animal nests, bird droppings and other foreign matter and the debris collected for proper disposal. If water is used for this cleaning, it shall be collected for disposal.

Prior to mechanical cleaning, oil, grease, and other soluble contaminants on bare steel or rusted surfaces shall be removed by solvent cleaning according to SSPC-SP1.

- d) Water Cleaning Between Coats. When foreign matter has accumulated on a newly applied coat, washing shall be performed prior to the application of subsequent coats. The water does not need to be collected unless it contacts existing lead containing coatings.

Laminar and Stratified Rust. All laminar and stratified rust that has formed on the existing steel surfaces shall be removed. Pack rust formed along the perimeter of mating surfaces of connected plates or shapes of structural steel shall be removed to the extent feasible without mechanically detaching the mating surface. Any pack rust remaining after cleaning the mating surfaces shall be tight and intact when examined using a dull putty knife. The tools used to remove these corrosion products shall be identified in the submittals and accepted by the Engineer. If the surface preparation or removal of rust results in nicks or gouges, the work shall be suspended, and the damaged areas repaired to the satisfaction of the Engineer, at the Contractor's expense. The Contractor shall also demonstrate that he/she has made the necessary adjustments to prevent a reoccurrence of the damage prior to resuming work.

Surface Preparation (HOLD POINT). One or more of the following methods of surface preparation shall be used as specified on the plans. When a method of surface preparation is specified, it applies to the entire surface, including areas that may be concealed by the containment connection points. In each case, as part of the surface preparation process, soluble salts shall be remediated as specified under "Soluble Salt Remediation". The Contractor shall also note that the surface of the steel beneath the existing coating system may contain corrosion and/or mill scale. Removal of said corrosion and/or mill scale, when specified, shall be considered included in this work and no extra compensation will be allowed.

When a particular cleaning method is specified for use in distinct zones on the bridge, the cleaning shall extend into the existing surrounding paint until a sound border is achieved. The edge of the existing paint is considered to be sound and intact if it can not be lifted by probing the edge with a dull putty knife. The sound paint shall be feathered for a minimum of 40 mm (1 1/2 in.) to achieve a smooth transition between the prepared steel and the existing coatings. Sanders with vacuum attachments, which have been approved by the Engineer, shall be used as necessary to accomplish the feathering.

- a) Limited Access Areas: A best effort with the specified methods of cleaning shall be performed in limited access areas such as the backsides of rivets inside built up box members. The equipment being used for the majority of the cleaning may need to be supplemented with other commercially available equipment, such as angle nozzles, to

properly clean the limited access areas. The acceptability of the best effort cleaning in these areas is at the sole discretion of the Engineer.

- b) Near White Metal Blast Cleaning: This surface preparation shall be accomplished according to the requirements of Near White Metal Blast Cleaning SSPC-SP 10. The designated surfaces shall be prepared by dry abrasive blast cleaning, wet abrasive blast cleaning, or water jetting with abrasive injection. A Near White Metal Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining.

Random staining shall be limited to no more than 5 percent of each 58 sq cm (9 sq in.) of surface area and may consist of light shadows, slight streaks, or minor discoloration caused by stains of rust, stains of mill scale, or stains of previously applied paint. With the exception of crevices as defined below, surface discoloration is considered to be a residue that must be removed, rather than a stain, if it possesses enough mass or thickness that it can be removed as a powder or in chips when scraped with a pocketknife.

A surface profile shall be created on the steel as defined later under "Surface Profile."

At the discretion of the Engineer, after a best effort cleaning, slight traces of existing coating may be permitted to remain within crevices such as those created between rivets, bolts, and plates, and the underlying steel. When traces of coating are permitted to remain, the coating shall be tightly bonded when examined by probing with a dull putty knife. The traces of coating shall be confined to the bottom portion of the crevices only, and shall not extend onto the surrounding steel or plate or onto the outer surface of the rivets or bolts. Pitted steel is excluded from exemption considerations and shall be cleaned according to SSPC-SP10.

If hackles or slivers are visible on the steel surface after cleaning, the Contractor shall remove them by grinding followed by reblast cleaning. At the discretion of the Engineer, the use of power tools to clean the localized areas after grinding, and to establish a surface profile acceptable to the coating manufacturer, can be used in lieu of blast cleaning.

If the surfaces are prepared using wet abrasive methods, attention shall be paid to tightly configured areas to assure that the preparation is thorough. After surface preparation is completed, the surfaces, surrounding steel, and containment materials/scaffolding shall be rinsed to remove abrasive dust and debris. Potable water shall be used for all operations. An inhibitor may be added to the supply water and/or rinse water to prevent flash rusting. If a rust inhibitor is proposed, the Contractor shall provide a sample of the proposed inhibitor together with a letter from the coating manufacturer indicating that the inhibitor is suitable for use with their products. The surfaces shall be allowed to completely dry before the application of any coating.

- c) **Commercial Grade Power Tool Cleaning:** This surface preparation shall be accomplished according to the requirements of Commercial Grade Power Tool Cleaning, SSPC-SP15. The designated surfaces shall be completely cleaned with power tools. A Commercial Grade Power Tool Cleaned surface, when viewed without magnification, is free of all visible oil, grease, dirt, rust, coating, oxides, mill scale, corrosion products, and other foreign matter, except for staining. In previously pitted areas, slight residues of rust and paint may also be left in the bottoms of pits.

Random staining shall be limited to no more than 33 percent of each 58 sq cm (9 sq in.) of surface area. Allowable staining may consist of light shadows, slight streaks, or minor discoloration caused by stains of rust, stains of mill scale, or stains of previously applied paint. Surface discoloration is considered to be a residue that must be removed, rather than a stain, if it possesses enough mass or thickness that it can be removed as a powder or in chips when scraped with a pocketknife.

A surface profile shall be created on the steel as defined later under "Surface Profile."

At the Contractor's option, Near White Metal Blast Cleaning may be substituted for Power Tool Cleaning – Commercial Grade, as long as containment systems appropriate for abrasive blast cleaning are utilized and there is no additional cost to the Department.

- d) **Power Tool Cleaning – Modified SP3:** This surface preparation shall be accomplished according to the requirements of SSPC-SP3, Power Tool Cleaning except as modified as follows. The designated surfaces shall be cleaned with power tools. A power tool cleaned surface shall be free of all loose rust, loose mill scale, loose and peeling paint, and loose rust that is bleeding through and/or penetrating the coating. All locations of visible corrosion and rust bleed, exposed or lifting mill scale, and lifting or loose paint shall be prepared using the power tools.

Upon completion of the cleaning, rust, rust bleed, mill scale and surrounding paint are permitted to remain if they can not be lifted using a dull putty knife.

Power Tool Cleaning of Shop Primed Steel. When steel coated with only a prime coat of inorganic or organic zinc is specified to be cleaned, this work shall be accomplished as follows. After cleaning the surface as specified under "Water Cleaning of Non-Lead Coatings Prior to Overcoating," damaged and rusted areas shall be spot cleaned according Power Tool Cleaning -Modified SSPC-SP3. The edges of the coating surrounding the spot repairs shall be feathered.

Abrasives. When abrasive blast cleaning is specified, it shall be performed using either expendable abrasives (other than silica sand) or recyclable steel grit abrasives. Expendable abrasives shall be used one time and disposed of. Abrasive suppliers shall certify that the expendable abrasives meet the requirements of SSPC-AB1 and that recyclable steel grit abrasives meet AB3. The Contractor shall verify that recycled abrasives meet the requirements of SSPC-AB2 during use. All surfaces prepared with abrasives not meeting the SSPC-AB1, AB2, or AB3 requirements, as applicable, shall be solvent cleaned or low pressure water cleaned as directed by the Engineer, and reblast cleaned at the Contractor's expense.

Surface Profile (HOLD POINT). The abrasives used for blast cleaning shall have a gradation such that the abrasive will produce a uniform surface profile of 38 to 90 microns (1.5 to 3.5 mils). If the profile requirements of the coating manufacturer are more restrictive, advise the Engineer and comply with the more restrictive requirements. For recycled abrasives, an appropriate operating mix shall be maintained in order to control the profile within these limits.

The surface profile for the Power Tool Cleaning - Commercial Grade shall be within the range specified by the coating manufacturer, but not less than 50 microns (2.0 mils).

The surface profile produced by the Contractor's surface preparation procedures shall be determined by replica tape and spring micrometer at the beginning of the work, and each day that surface preparation is performed. Areas having unacceptable measurements shall be further tested to determine the limits of the deficient area. The replica tape shall be attached to the daily report.

When unacceptable profiles are produced, work shall be suspended. The Contractor shall submit a plan for the necessary adjustments to insure that the correct surface profile is achieved on all surfaces. The Contractor shall not resume work until the new profile is verified by the QA observations, and the Engineer confirms, in writing, that the profile is acceptable.

Soluble Salt Remediation (HOLD POINT). The Contractor shall implement surface preparation procedures and processes that will remove chloride from the surfaces. Surfaces that may be contaminated with chloride include, but are not limited to, expansion joints and all areas that are subject to roadway splash or run off such as fascia beams and stringers.

Methods of chloride removal may include, but are not limited to, steam cleaning or pressure washing with or without the addition of a chemical soluble salt remover as approved by the coating manufacturer, and scrubbing before or after initial paint removal. The Contractor may also elect to clean the steel and allow it to rust overnight followed by recleaning, or by utilizing blends of fine and coarse abrasives during blast cleaning, wet abrasive/water jetting methods of preparation, or combinations of the above. If steam or water cleaning methods of chloride removal are utilized over surfaces where the coating has been completely removed, and the water does not contact any lead containing coatings, the water does not have to be collected. The Contractor shall provide the proposed procedures for chloride remediation in the Surface Preparation/Painting Plan.

Upon completion of the chloride remediation steps, the Contractor shall use cell methods of field chloride extraction and test procedures (e.g., silver dichromate) accepted by the Engineer, to test representative surfaces that were previously rusted (e.g., pitted steel) for the presence of remaining chlorides. Remaining chloride levels shall be no greater than $7\mu\text{g}/\text{sq cm}$ as read directly from the surface without any multiplier applied to the results. The testing must be performed, and the results must be acceptable, prior to painting each day.

A minimum of 5 tests per 93 sq m (1000 sq ft) or fraction thereof completed in a given day, shall be conducted at project start up. If results greater than $7\mu\text{g}/\text{sq cm}$ are detected, the surfaces

shall be recleaned and retested at the same frequency. If acceptable results are achieved on three consecutive days in which testing is conducted, the test frequency may be reduced to 1 test per 93 sq m (1000 sq ft) prepared each day provided the chloride remediation process remains unchanged. If unacceptable results are encountered, or the methods of chloride remediation are changed, the Contractor shall resume testing at a frequency of 5 tests per 93 sq m (1000 sq ft).

Following successful chloride testing the chloride test areas shall be cleaned. Commercial Grade Power Tool Cleaning can be used to clean the test locations when the specified degree of cleaning is SSPC-SP10.

Surface Condition Prior to Painting (HOLD POINT). Prepared surfaces, shall meet the requirements of the respective degrees of cleaning immediately prior to painting, and shall be painted before rusting appears on the surface. If rust appears or bare steel remains unpainted for more than 12 hours, the affected area shall be prepared again at the expense of the Contractor.

All loose paint and surface preparation cleaning residue on bridge steel surfaces, scaffolding and platforms, containment materials, and tops of abutments and pier caps shall be removed prior to painting. When lead paint is being disturbed, cleaning shall be accomplished by HEPA vacuuming unless it is conducted within a containment that is designed with a ventilation system capable of collecting the airborne dust and debris created by sweeping and blowing with compressed air.

The quality of surface preparation and cleaning of surface dust and debris must be accepted by the Engineer prior to painting. The Engineer has the right to reject any work that was performed without adequate provision for QA observations to accept the degree of cleaning. Rejected coating work shall be removed and replaced at the Contractor's expense.

General Paint Requirements. Paint storage, mixing, and application shall be accomplished according to these specifications and as specified in the paint manufacturer's written instructions and product data sheets for the paint system used. In the event of a conflict between these specifications and the coating manufacturers' instructions and data sheets, the Contractor shall advise the Engineer and comply with the Engineer's written resolution. Until a resolution is provided, the most restrictive conditions shall apply.

Unless noted otherwise, if a new concrete deck or repair to an existing deck is required, painting shall be done after the deck is placed and the forms have been removed.

- a) Paint Storage and Mixing. All Paint shall be stored according to the manufacturer's published instructions, including handling, temperatures, and warming as required prior to mixing. All coatings shall be supplied in sealed containers bearing the manufacturers name, product designation, batch number and mixing/thinning instructions. Leaking containers shall not be used.

Mixing shall be according to the manufacturer's instructions. Thinning shall be performed using thinner provided by the manufacturer, and only to the extent allowed by the manufacturer's written instructions. In no case shall thinning be permitted that would cause the coating to exceed the local Volatile Organic Compound (VOC) emission restrictions. For multiple component paints, only complete kits shall be mixed and used. Partial mixing is not allowed.

The ingredients in the containers of paint shall be thoroughly mixed by mechanical power mixers according to the manufacturer's instructions, in the original containers before use or mixing with other containers of paint. The paint shall be mixed in a manner that will break up all lumps, completely disperse pigment and result in a uniform composition. Paint shall be carefully examined after mixing for uniformity and to verify that no unmixed pigment remains on the bottom of the container. Excessive skinning or partial hardening due to improper or prolonged storage will be cause for rejection of the paint, even though it may have been previously inspected and accepted.

Multiple component coatings shall be discarded after the expiration of the pot life. Single component paint shall not remain in spray pots, painters buckets, etc. overnight. It shall be stored in a covered container and remixed before use.

The Engineer reserves the right to sample field paint (individual components and/or the mixed material) and have it analyzed. If the paint does not meet the product requirements due to excessive thinning or because of other field problems, the coating shall be removed from that section of the structure and replaced as directed by the Engineer.

- b) Application Methods. Unless prohibited by the coating manufacturer's written instructions, paint may be applied by spray methods, rollers, or brushes. If applied with conventional or airless spray methods, paint shall be applied in a uniform layer with overlapping at the edges of the spray pattern.

The painters shall monitor the wet film thickness of each coat during application. The wet film thickness shall be calculated based on the solids by volume of the material and the amount of thinner added. When the new coating is applied over an existing system, routine QC inspections of the wet film thickness shall be performed in addition to the painter's checks in order to establish that a proper film build is being applied.

When brushes or rollers are used to apply the coating, additional applications may be required to achieve the specified thickness per layer.

- c) Painting Shop Primed Steel. After cleaning, rusted and damaged areas shall be touched up using the same primer specified for painting the existing structure. The intermediate and finish coats specified for painting the existing structure shall be applied to the steel. When inorganic zinc has been used as the shop primer, a mist coat of the intermediate coat shall be applied first in order to prevent pinholing and bubbling.

- d) Recoating and Film Continuity (HOLD POINT for each coat). Paint shall be considered dry for recoating according to the time/temperature/humidity criteria provided in the manufacturer's instructions and when an additional coat can be applied without the development of film irregularities; such as lifting, wrinkling, or loss of adhesion of the under coat. If surfaces are contaminated, washing shall be accomplished prior to intermediate and final coats. Wash water does not have to be collected unless the water contacts existing lead containing coatings.

Painting shall be done in a neat and workmanlike manner. Each coat of paint shall be applied as a continuous film of uniform thickness free of defects including, but not limited to, runs, sags, overspray, dryspray, pinholes, voids, skips, misses, and shadow-through. Defects such as runs and sags shall be brushed out immediately during application.

Paint Systems. The paint system(s) from the list below shall be applied as specified.

The paint manufacturer's relative humidity, dew point, and material, surface, and ambient temperature restrictions shall be provided with the submittals and shall be strictly followed. Written recommendations from the paint manufacturer for the length of time each coat must be protected from cold or inclement weather (e.g., exposure to rain), during the drying period shall be included in the submittals. Upon acceptance by the Engineer, these times shall be used to govern the duration that protection must be maintained during drying.

Where stripe coats are indicated, the Contractor shall apply an additional coat to edges, rivets, bolts, crevices, welds, and similar surface irregularities. The stripe coat shall be applied by brush and/or spray to thoroughly work the coating into or on the irregular surfaces, and shall extend onto the surrounding steel a minimum of 25 mm (1 in.) in all directions. The purpose of the stripe coat is to build additional thickness and to assure complete coverage of these areas.

The stripe coat may be applied as part of the application of the full coat unless prohibited by the coating manufacturer. If applied as part of the application process of the full coat, the stripe coat shall be allowed to dry for a minimum of 10 minutes in order to allow Contractor QC personnel to verify that the coat was applied. If a wet-on-wet stripe coat is prohibited by the coating manufacturer or brush or roller application of the full coat pulls the underlying stripe coat, the stripe coat shall dry according to the manufacturers' recommended drying times prior to the application of the full coat. In the case of the prime coat, the full coat can also be applied first to protect the steel, followed by the stripe coat after the full coat has dried.

- a) System 1 – OZ/E/U – for Bare Steel: System 1 shall consist of the application of a full coat of organic (epoxy) zinc-rich primer, a full intermediate coat of epoxy, and a full finish coat of aliphatic urethane. Stripe coats of the prime and finish coats shall be applied. The film thicknesses of the full coats shall be as follows, measured according to SSPC-PA2:
- One full coat of organic zinc-rich primer between 90 and 125 microns (3.5 and 5.0 mils) dry film thickness. The prime coat shall be tinted to a color that contrasts with the steel surface.

- One full intermediate coat of epoxy between 75 and 150 microns (3.0 and 6.0 mils) dry film thickness. The intermediate coat shall be a contrasting color to both the first coat and finish coat.
- One full finish coat of aliphatic urethane between 65 and 100 microns (2.5 and 4.0 mils) dry film thickness. Finish coat color shall be according to contract plans.

The total dry film thickness for this system, exclusive of areas receiving the stripe coats, shall be between 225 and 375 microns (9.0 and 15.0 mils).

- b) System 2 – PS/EM/U – for Overcoating an Existing System: System 2 shall consist of the application of a full coat of epoxy penetrating sealer, a spot intermediate coat of aluminum epoxy mastic and a stripe and full finish coat of aliphatic urethane.

A full coat of epoxy penetrating sealer shall be applied to all surfaces following surface preparation. A spot intermediate coat shall consist of the application of one coat of the aluminum epoxy mastic on all areas where rust is evident and areas where the old paint has been removed, feathered and/or damaged prior to, during or after the cleaning and surface preparation operations. After the spot intermediate, a stripe coat and full finish coat of aliphatic urethane shall be applied. The film thicknesses shall be as follows, measured according to SSPC-PA2:

- One full coat of epoxy penetrating sealer between 25 and 50 microns (1.0 and 2.0 mils) dry film thickness.
- One spot coat of aluminum epoxy mastic between 125 and 175 microns (5.0 and 7.0 mils) dry film thickness. The color shall contrast with the finish coat.
- One full finish coat of aliphatic urethane between 65 and 100 microns (2.5 and 4.0 mils) dry film thickness. Finish coat color shall be according to contract plans.

The total dry film thickness for this system, exclusive of the stripe coat, shall be between 215 and 325 microns (8.5 and 13.0 mils). The existing coating thickness to remain under the overcoat must be verified in order to obtain accurate total dry film thickness measurements.

- c) System 3 – EM/EM/AC – for Bare Steel: System 3 shall consist of the application of two full coats of aluminum epoxy mastic and a full finish coat of waterborne acrylic. Stripe coats for first coat of epoxy mastic and the finish coat shall be applied. The film thicknesses of the full coats shall be as follows, measured according to SSPC-PA2:

- One full coat of aluminum epoxy mastic between 125 and 175 microns (5.0 and 7.0 mils) dry film thickness. The first coat of aluminum epoxy mastic shall be tinted a contrasting color with the blast cleaned surface and the second coat.

- One full intermediate coat of aluminum epoxy mastic between 125 and 175 microns (5.0 and 7.0 mils) dry film thickness. The intermediate coat shall be a contrasting color to the first coat and the finish coat.
- A full finish coat of waterborne acrylic between 50 and 100 microns (2.0 and 4.0 mils) dry film thickness. Finish coat color shall be according to contract plans.

The total dry film thickness for this system, exclusive of areas receiving the stripe coats, shall be between 360 and 450 microns (12.0 and 18.0 mils).

- d) System 4 – PS/EM/AC – for Overcoating an Existing System: System 4 shall consist of the application of a full coat of epoxy penetrating sealer, a spot intermediate coat of aluminum epoxy mastic and a stripe and full finish coat of waterborne acrylic.

A full coat of epoxy penetrating sealer shall be applied to all surfaces following surface preparation. A spot intermediate coat shall consist of the application of one coat of the aluminum epoxy mastic on all areas where rust is evident and areas where the old paint has been removed, feathered and/or damaged prior to, during or after the cleaning and surface preparation operations. After the spot intermediate, a stripe coat and full finish coat of waterborne acrylic shall be applied. The film thicknesses shall be as follows, measured according to SSPC-PA2:

- One full coat of epoxy penetrating sealer between 25 and 50 microns (1.0 and 2.0 mils) dry film thickness.
- One spot coat of aluminum epoxy mastic between 125 and 175 microns (5.0 and 7.0 mils) dry film thickness. The color shall contrast with the finish coat.
- One full finish coat of waterborne acrylic between 50 and 100 microns (2.0 and 4.0 mils) dry film thickness. Finish coat color shall be according to contract plans.

The total dry film thickness for this system, exclusive of the stripe coat, shall be between 200 and 325 microns (8.0 and 13.0 mils). The existing coating thickness to remain under the overcoat must be verified in order to obtain accurate total dry film thickness measurements.

- e) System 5 – MCU – for Bare Steel: System 5 shall consist of the application of a full coat of moisture cure urethane (MCU) zinc primer, a full coat of MCU intermediate, and a full coat of MCU finish. Stripe coats of the prime and finish coats shall be applied. The contractor shall comply with the manufacturer's requirements for drying times between the application of the stripe coats and the full coats. The film thicknesses of the full coats shall be as follows, measured according to SSPC-PA2:

- One full coat of MCU zinc primer between 75 and 125 microns (3.0 and 5.0 mils) dry film thickness. The prime coat shall be tinted to a color that contrasts with the steel surface.

- One full MCU intermediate coat between 75 and 100 microns (3.0 and 4.0 mils) dry film thickness. The intermediate coat shall be a contrasting color to both the first coat and finish coat.
- One full MCU finish coat between 50 and 100 microns (2.0 and 4.0 mils) dry film thickness. Finish coat color shall be according to contract plans.

The total dry film thickness for this system, exclusive of areas receiving the stripe coats, shall be between 200 and 325 microns (8.0 and 13.0 mils).

- f) System 6 – MCU – for Overcoating an Existing System: System 6 shall consist of the application of a full coat of moisture cure urethane (MCU) penetrating sealer, a spot coat of MCU intermediate, and a stripe and full coat of MCU finish.

A full coat of MCU penetrating sealer shall be applied to all surfaces following surface preparation. A spot intermediate coat shall consist of the application of one coat of MCU intermediate on all areas where rust is evident and areas where the old paint has been removed, feathered and/or damaged prior to, during or after the cleaning and surface preparation operations. After the spot intermediate, a stripe coat and full coat of MCU finish shall be applied. The contractor shall comply with the manufacturer's requirements for drying time between the application of the stripe coat and the full finish coat. The film thicknesses shall be as follows, measured according to SSPC-PA2:

- One full coat of MCU sealer between 25 and 50 microns (1.0 and 2.0 mils) dry film thickness.
- One full MCU intermediate coat between 75 and 100 microns (3.0 and 4.0 mils) dry film thickness. The color shall contrast with the finish coat.
- One full MCU finish coat 50 and 100 microns (2.0 and 4.0 mils) dry film thickness. Finish coat color shall be according to contract plans.

The total dry film thickness for this system, exclusive of areas receiving the stripe coats, shall be between 150 and 250 microns (6.0 and 10.0 mils). The existing coating thickness to remain under the overcoat must be verified in order to obtain accurate total dry film thickness measurements.

Repair of Damage to New Coating System and Areas Concealed by Containment. The Contractor shall repair all damage to the newly installed coating system and areas concealed by the containment/protective covering attachment points, at no cost to the Department. If the damage extends to the substrate and the original preparation involved abrasive blast cleaning, the damaged areas shall be prepared to Power Tool Cleaning - Commercial Grade. If the original preparation was other than blast cleaning or the damage does not extend to the substrate, the loose, fractured paint shall be cleaned to Power Tool Cleaning – Modified SP3.

The surrounding coating at each repair location shall be feathered for a minimum distance of 40 mm (1 1/2 in.) to achieve a smooth transition between the prepared areas and the existing coating.

If the bare steel is exposed, all coats shall be applied to the prepared area. If only the intermediate and finish coats are damaged, the intermediate and finish shall be applied. If only the finish coat is damaged, the finish shall be applied.

Special Instructions.

- a) At the completion of the work, the Contractor shall stencil the painting date and the paint code on the bridge. The letters shall be capitals, not less than 50 mm (2 in.) and not more than 75 mm (3 in.) in height.

The stencil shall contain the following wording "PAINTED BY (insert the name of the Contractor)" and shall show the month and year in which the painting was completed, followed by the appropriate code for the coating material applied, all stenciled on successive lines:

CODE U (for field applied System 3 or System 4).

CODE Z (for field applied System 1 or System 2).

CODE AA (for field applied System 5 or System 6).

This information shall be stenciled on the cover plate of a truss end post near the top of the railing, or on the outside face of an outside stringer near one end of the bridge, or at some equally visible surface near the end of the bridge, as designated by the Engineer.

- b) All surfaces painted inadvertently shall be cleaned immediately.

It is understood and agreed that the cost of all work outlined above, unless otherwise specified, has been included in the bid, and no extra compensation will be allowed.

Basis of Payment. This work shall be paid for at the contract Lump Sum price for CLEANING AND PAINTING STEEL BRIDGE, at the designated location, or for CLEANING AND PAINTING the structure or portions thereof described. Payment will not be authorized until all requirements for surface preparation and painting have been fulfilled as described in this specification, including the preparation and submittal of all QC documentation. Payment will also not be authorized for non-conforming work until the discrepancy is resolved in writing.

Appendix 1 – Reference List

The Contractor shall maintain the following regulations and references on site for the duration of the project:

- Illinois Environmental Protection Act
- ASTM D 4214, Standard Test Method for Evaluating Degree of Chalking of Exterior Paint Films
- ASTM D 4285, Standard Test Method for Indicating Oil or Water in Compressed Air
- SSPC-AB 1, Mineral and Slag Abrasives
- SSPC-AB 2, Specification for Cleanliness of Recycled Ferrous Metallic Abrasives
- SSPC-AB 3, Newly Manufactured or Re-Manufactured Steel Abrasives
- SSPC-PA 2, Measurement of Dry Coating Thickness with Magnetic Gages
- SSPC-QP 1, Standard Procedure for Evaluating Painting Contractors (Field Application to Complex Structures)
- SSPC-QP 2, Standard Procedure for Evaluating the Qualifications of Painting Contractors to Remove Hazardous Paint
- SSPC-SP 1, Solvent Cleaning
- SSPC-SP 3, Power Tool Cleaning
- SSPC-SP 10/NACE No. 2, Near White Metal Blast Cleaning
- SSPC-SP 12/NACE No. 5, Surface Preparation and Cleaning of Metals by Waterjetting Prior to Recoating
- SSPC-SP15, Commercial Grade Power Tool Cleaning
- SSPC-VIS 1, Guide and Reference Photographs for Steel Surfaces Prepared by Dry Abrasive Blast Cleaning
- SSPC-VIS 3, Visual Standard for Power- and Hand-Tool Cleaned Steel
- SSPC-VIS 4, Guide and Reference Photographs for Steel Cleaned by Water Jetting

- SSPC-VIS 5, Guide and Reference Photographs for Steel Prepared by Wet Abrasive Blast Cleaning
- The paint manufacturer's application instructions, MSDS and product data sheets

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISION
FOR
COOPERATION WITH UTILITIES

Effective: January 1, 1999
Revised: January 1, 2006

All references to Sections or Articles in this specification shall be construed to mean specific Section or Article of the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation.

When the plans or special provisions include information pertaining to the location of underground utility facilities, such information represents only the opinion of the Department as to the location of such utilities and is only included for the convenience of the bidder. The Department assumes no responsibility in respect to the sufficiency or the accuracy of the information shown on the plans relative to the location of the underground utility facilities. It shall be the Contractor's responsibility to determine the actual location of all such facilities. He shall also obtain from the respective utility companies detailed information relative to the location of their facilities and the working schedules of the utility companies for removing or adjusting them.

Revise Article 105.07 of the Standard Specifications to read:

"105.07 Utility Facilities. Utilities which are within the limits of the proposed construction are to be moved or removed at no cost to the Contractor except as otherwise provided for in the special provisions or as noted in the plans.

- (a) For the purpose of this Article, limits of proposed construction for utilities extending in the same longitudinal direction as the roadway, shall be defined as follows:
- (1) The horizontal limits shall be a plane, outside of, parallel to, and 600 mm (2 ft) distant at right angles from the plan or revised slope limits and the slope limits extended vertically above the point of intersection of the slope limits and the original cross-section surface.

In cases where the limits of excavation for structures are not shown on the plans, the horizontal limits shall be a vertical plane 1.2 m (4 ft) outside the edges of structure footings or the structure where no footings are required.
 - (2) The upper vertical limits shall be the regulations governing the roadbed clearance for the specific utility involved.
 - (3) The lower vertical limits shall be the limits of excavation.
- (b) For the purpose of this Article, limits of proposed construction for utilities crossing the roadway in a generally transverse direction shall be defined as follows:

- (1) Utilities crossing excavations for structures that are normally made by trenching such as sewers, underdrains, etc., and all minor structures such as manholes, inlets, foundations for signs, foundations for traffic signals, etc., the limits shall be the space to be occupied by the proposed permanent construction unless otherwise required by the regulations governing the specific utility involved.
- (2) For utilities crossing the proposed site of major structures such as bridges, sign trusses, etc., the limits shall be as defined above for utilities extending in the same general longitudinal direction as the roadway.

All reasonable adjustments, as determined by the Engineer, of utilities not shown on the plans, or visible or not identified by markers will be made at no cost to the Contractor except that traffic structures, light poles, etc., that are normally located within the construction limits will not be adjusted unless required by the proposed improvement.

The Contractor may make arrangements for adjustment of utilities outside the limits of proposed construction as defined above provided the Contractor furnishes the Department with a signed agreement with the utility owner covering the adjustments to be made. The cost of any adjustments made outside the limits of proposed construction as defined above shall be the responsibility of the Contractor unless otherwise provided for.

It is understood and agreed that the Contractor has considered in his bid all of the permanent and temporary utility appurtenances in their present or relocated positions and that no additional compensation will be allowed for any delays, inconvenience, or damage sustained by him due to any interference from the said utility appurtenances or the operation of moving them either by the utility company or by him; or on account of any special construction methods required in prosecuting his work due to the existence of said appurtenances either in their present or relocated positions."

AGGREGATE SHIPPING TICKETS (BDE)

Effective: January 1, 2006

Add the following to Article 1003.01 of the Standard Specifications:

- “(f) Shipping Tickets. Shipping tickets for the material shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, “Designation of Aggregate Information on Shipping Tickets”.”

Add the following to Article 1004.01 of the Standard Specifications:

- “(f) Shipping Tickets. Shipping tickets for the material shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, “Designation of Aggregate Information on Shipping Tickets”.”

Add the following to Article 1005.01 of the Supplemental Specifications:

- “(d) Shipping Tickets. Shipping tickets for the material shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, “Designation of Aggregate Information on Shipping Tickets”.”

80156

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."

80128

BITUMINOUS BASE COURSE / WIDENING SUPERPAVE (BDE)

Effective: April 1, 2002

| Revised: August 1, 2005

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 (Note 3)"

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 Gyrotory 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:

<u>Ingredient</u>	<u>Percent by Dry Weight</u>
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:

<u>Ingredient</u>	<u>Percent by Dry Weight</u>
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 Non-Class I Mixtures	Test Method
Aggregate Gradation Hot bins for batch and continuous plants. Individual cold-feeds or combined belt-feed for drier-drum plants. (% passing sieves: 12.5 mm (1/2 In.), 4.75 mm (No. 4), 75 µm (No. 200))	1 gradation per day of production. 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. 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		
Bulk Specific Gravity of Gyratory Sample	1 per day	Illinois-Modified AASHTO T 312
Maximum Specific Gravity of Mixture	1 per day	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 and density shall be plotted on the control charts within the following control limits:

Individual Test Control Limits	
Voids	±1.2%
Density ^{1/}	93.0 – 97.4% of G _{mm}

- 1/ Except when placed as first lift over unimproved subgrade. When the exception applies, the first lift over unimproved subgrade shall be compacted to an average density of not less than 95 percent nor greater than 102 percent of the target density obtained on the growth curve.

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-19.0 meeting the requirements of the special provision, "Superpave Bituminous Concrete Mixtures" may also be used. The minimum compacted lift thickness specified therein shall apply."

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."

80065

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.”

80050

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 distribution 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 placement of the surface course or at other times throughout the work."

80142

BUTT JOINTS (BDE)

Effective: April 1, 2004

Revised: April 1, 2005

Revise Article 406.18 of the Standard Specifications to read:

"406.18 Butt Joints. Butt joints shall be constructed according to the details shown on the plans. The surface removal shall be performed according to Section 440. Construction of butt joints shall not begin prior to beginning general operations on the project.

When butt joints are to be constructed under traffic, temporary ramps shall be constructed and maintained at both the upstream and downstream ends of the surface removal areas immediately upon completion of the surface removal operation. The temporary ramps shall be constructed by the following methods.

- (a) Temporary Bituminous Ramps. Temporary bituminous ramps shall have a minimum taper rate of 1:40 (V:H). The bituminous material used shall meet the approval of the Engineer. Cold-milled bituminous tailings will not be acceptable.
- (b) Temporary Rubber Ramps. Temporary rubber ramps shall only be used on roadways with permanent posted speeds of 55 mph or less. The ramps shall have a minimum taper rate of 1:30 (V:H). The leading edge of the rubber ramp shall have a maximum thickness of 6 mm (1/4 in.) and the trailing edge shall match the height of the adjacent pavement \pm 6 mm (1/4 in.).

The rubber material shall conform to the following.

Property	Test Method	Requirement
Durometer Hardness, Shore A	ASTM D 2240	80 \pm 10
Tensile Strength	ASTM D 412	5500 kPa (800 psi) min.
Elongation, percent	ASTM D 412	100 min.
Specific Gravity	ASTM D 297	1.1-1.3
Brittleness	ASTM D 746	-40 °C (-40 °F)

The rubber ramps shall be installed according to the manufacturer's specifications and fastened with the anchors provided. Rubber ramps that fail to stay in place or create a traffic hazard shall be replaced immediately with temporary bituminous ramps at the Contractor's expense.

The temporary ramps shall be removed just prior to placing the proposed surface course. If work is suspended for the winter season prior to completion of surface course construction, precut butt joints shall be filled to the elevation of the existing pavement surface with compacted bituminous concrete surface course or binder course."

80118

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"

80051

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)"

80094

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."

80102

CURING AND PROTECTION OF CONCRETE CONSTRUCTION (BDE)

Effective: January 1, 2004

Revised: November 1, 2005

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 Shoulder	1020.13(a)(1)(2)(3)(4)(5) ^{3/ 5/}	3	1020.13(c)
Base Course Base Course Widening	1020.13(a)(1)(2)(3)(4)(5) ^{1/ 2/}	3	1020.13(c)
Driveway Median Curb Gutter Curb and Gutter Sidewalk Slope Wall	1020.13(a)(1)(2)(3)(4)(5) ^{4/ 5/}	3	1020.13(c) ^{16/}
Paved Ditch Catch Basin Manhole Inlet 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 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 Piles Bridge Slabs 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 at no additional cost to the Department."

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 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 be according to the following.

- (a) Temperature Control other than Structures. The temperature of the concrete immediately before placement shall be a minimum of 10 °C (50 °F) and a maximum of 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 between 20 °C (70 °F) and 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 the concrete, as placed in the forms, shall be a minimum of 10 °C (50 °F) and a maximum of 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). 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 between 20 °C (70 °F) and 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."

80114

DETECTABLE WARNINGS (BDE)

Effective: August 1, 2005

Replace Articles 424.08 – 424.12 of the Standard Specifications with the following:

424.08 Curb Ramps. Curb ramps shall be constructed according to the Americans with Disabilities Act Accessibility Guidelines (ADAAG), the Illinois Accessibility Code, and as shown on the plans.

Curb ramps shall be constructed to the same thickness as the adjacent sidewalk with a minimum thickness of 100 mm (4 in.).

424.09 Detectable Warnings. Detectable warnings shall consist of a surface of truncated domes meeting the requirements of the ADAAG and the details shown on the plans.

Detectable warnings shall be installed at curb ramps, medians and pedestrian refuge islands, at-grade railroad crossings, transit platform edges, and other locations where pedestrians are required to cross a hazardous vehicular way. Detectable warnings shall also be installed at alleys and commercial entrances when permanent traffic control devices are present. The installation shall be an integral part of the walking surface and only the actual domes shall project above the walking surface.

The product or method used for installing detectable warnings shall come with the following documents which shall be given to the Engineer prior to use.

- (a) Manufacturer's certification stating the product is fully compliant with the ADAAG.
- (b) Manufacturer's five year warranty.
- (c) Manufacturer's specifications stating the required materials, equipment, and installation procedures.

Products that are colored shall be colored their entire thickness.

The materials, equipment, and installation procedures used shall be according to the manufacturer's specifications.

424.10 Backfill. After the concrete has been cured, the spaces along the edges of the sidewalk and ramps shall be backfilled with approved material. The material shall be compacted until firm and the surface neatly graded.

424.11 Disposal of Surplus Material. Surplus or waste material shall be disposed of according to Article 202.03.

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

Detectable warnings will be measured for payment in place and the area computed in square meters (square feet).

Earth excavation will be measured for payment according to Article 202.07.

424.13 Basis of Payment. This work will be paid for at the contract unit price per square meter (square foot) for PORTLAND CEMENT CONCRETE SIDEWALK, of the thickness specified.

Detectable warnings will be paid for at the contract unit price per square meter (square foot) for DETECTABLE WARNINGS.

Earth excavation will be paid for according to Article 202.08."

80146

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION

Effective: September 1, 2000

Revised: June 22, 2005

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

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

CONTRACTOR ASSURANCE. The Contractor makes the following assurance and agrees to include the assurance in each subcontract that the Contractor signs with a subcontractor:

The Contractor, subrecipient, or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of contracts funded in whole or in part with federal or state funds. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

OVERALL GOAL SET FOR THE DEPARTMENT. As a requirement of compliance with 49 CFR part 26, the Department has set an overall goal for DBE participation in its federally assisted contracts. That goal applies to all federal-aid funds the Department will expend in its federally assisted contracts for the subject reporting fiscal year. The Department is required to make a good faith effort to achieve the overall goal. The dollar amount paid to all approved DBE 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 10 % 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 not responsive.

- (a) In order to assure the timely award of the contract, the as-read low bidder shall 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 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 not responsive. In the event the bid is declared not responsive 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 contract. 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 bidder to perform the work of a contract with its own

organization does not relieve the bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from DBE companies if the price difference is excessive or unreasonable.

- (5) Not rejecting DBE companies as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.
 - (6) Making efforts to assist interested DBE companies in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.
 - (7) Making efforts to assist interested DBE companies in obtaining necessary equipment, supplies, materials, or related assistance or services.
 - (8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBE companies.
- (b) If the Department determines that the bidder has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided that it is otherwise eligible for award. If the Department determines that 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 not responsive.

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 Regional 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.
- (e) Notwithstanding any other provision of the contract, including but not limited to Article 109.09 of the Standard Specifications, the Contractor may request administrative reconsideration of a decision to deduct the amount of the goal not achieved as liquidated damages. A request to reconsider shall be delivered to the Contract Compliance Section and shall be handled and considered in the same manner as set forth in paragraph (c) of "Good Faith Effort Procedures" of this Special Provision, except a final decision that a good faith effort was not made during contract performance to achieve the goal agreed to in the Utilization Plan shall be the final administrative decision of the Department.

EPOXY COATING ON REINFORCEMENT (BDE)

Effective: April 1, 1997

Revised: January 1, 2003

For work outside the limits of bridge approach pavement, all references to epoxy coating in the Highway Standards and Standard Specifications for reinforcement, tie bars and chair supports will not apply for pavement, shoulders, curb, gutter, combination curb and gutter and median.

31578

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.

80055

EXPANSION JOINTS (BDE)

Effective: August 1, 2003

Add the following paragraph after the second paragraph of Article 420.10(e) of the Standard Specifications:

"After the dowel bars are oiled, plastic expansion caps shall be secured to the bars maintaining a minimum expansion gap of 50 mm (2 in.) between the end of the bar and the end of the cap. The caps shall fit snugly on the bar and the closed end shall be watertight. For expansion joints formed using dowel bar basket assemblies, the caps shall be installed on the alternating free ends of the bars. For expansion joints formed using a construction header, the caps shall be installed on the exposed end of each bar once the header has been removed and the joint filler material has been installed."

80103

FLAGGER VESTS (BDE)

Effective: April 1, 2003

Revised: January 1, 2006

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 107-2004 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. Flaggers shall be illuminated by an overhead light source providing a minimum vertical illuminance of 108 lux (10 fc) measured 300 mm (1 ft) out from the flagger's chest. The bottom of any luminaire shall be a minimum of 3 m (10 ft) above the pavement. Luminaire(s) shall be shielded to minimize glare to approaching traffic and trespass light to adjoining properties.

The flagger vest shall be a fluorescent orange or fluorescent orange and fluorescent yellow/green vest meeting the requirements of the American National Standards Institute specification ANSI/ISEA 107-1999 for Conspicuity Class 3 garments."

80101

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."

80079

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."

80072

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."

80054

IMPACT ATTENUATORS, TEMPORARY (BDE)

Effective: November 1, 2003

Revised: August 1, 2006

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 Cementitious 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 (FULLY REDIRECTIVE, RESETTABLE); 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.

80110

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 μ m (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) \pm 15%
Whales (holes)	ASTM D 3887	7.5 \pm 2 holes/25 mm (1 in.)
Chorses (holes)	ASTM D 3887	15.5 \pm 2holes/25 mm (1 in.)
Instronball Burst	ASTM D 3887	830 kPa (120 psi) min.
Thickness	ASTM D 1777	1.0 \pm 0.1 mm (0.040 \pm 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."

80104

LIGHT EMITTING DIODE (LED) PEDESTRIAN SIGNAL HEAD (BDE)

Effective: November 1, 2005

Add the following paragraph to the end of Article 802.03 of the Standard Specifications:

"The warranty for light emitting diode (LED) modules, including the maintained minimum luminous intensities, shall cover a minimum of 60 months from the date of delivery."

Revise Article 881.01 of the Standard Specifications to read:

"881.01 Description. This work shall consist of furnishing and installing a conventional pedestrian signal head or light emitting diode (LED) pedestrian signal head."

Revise Article 881.02(a) of the Standard Specifications to read:

"(a) Signal Heads.....1078.01"

Revise the first paragraph of Article 881.04 of the Standard Specifications to read:

"881.04 Basis of Payment. This work will be paid for at the contract unit price each for PEDESTRIAN SIGNAL HEAD or PEDESTRIAN SIGNAL HEAD, LED of the type specified and of the material type when specified."

Revise Article 1078.02(b) of the Standard Specifications to read:

"(b) Optical Unit. Only symbolic walk (walking person) and don't walk (upraised palm) indications shall be used.

(1) Conventional Pedestrian Signal. Each signal section shall have an optical unit according to Article 1078.01(c), except the lamp for a 300 mm (12 in.) section shall be nominal 90 W, 1040 lumens with a minimum average rated life of 8,000 hours (0.91 years) and the lamp for a 225 mm (9 in.) section shall be nominal 54 W, 530 lumens with a minimum average rated life of 8,000 hours (0.91 years).

(2) LED Pedestrian Signal. The pedestrian LED signal heads shall meet the requirements of the Institute of Transportation Engineers (ITE) LED purchase specification, "Pedestrian Traffic Control Signal Indications - Part 2: LED Pedestrian Traffic Signal Modules", or applicable successor ITE specifications, except as modified herein. The LEDs utilized in the modules shall not be Aluminum Gallium Arsenide (AlGaAs) material technology. The LED signal heads shall also meet the following requirements:

a. Physical and Mechanical Requirements. The power supply for the LED module shall be integrated with the unit.

- b. Photometric Requirements. The illuminated portion of the module shall be uniformly and completely dispersed with the LEDs.
- c. Electrical Requirements. The pedestrian LED signal module shall be EPA Energy Star qualified.

The individual LEDs shall be wired such that a catastrophic loss or the failure of one LED will result in the loss of not more than five percent of the signal module light output.

- d. Warranty. The LED modules shall be warrantied according to Article 802.03.”

80150

LIGHT EMITTING DIODE (LED) SIGNAL HEAD (BDE)

Effective: April 1, 2002

Revised: November 1, 2005

Add the following paragraph to the end of Article 802.03 of the Standard Specifications:

“The warranty for light emitting diode (LED) modules, including the maintained minimum luminous intensities, shall cover a minimum of 60 months from the date of delivery.”

Revise Article 880.01 of the Standard Specifications to read:

“**880.01 Description.** This work shall consist of furnishing and installing a conventional signal head, optically programmed signal head or light emitting diode (LED) signal head.”

Revise Article 880.02(a) of the Standard Specifications to read:

“(a) Signal Heads.....1078.01”

Revise the first sentence of the first paragraph of Article 880.03 of the Standard Specifications to read:

“The signal head shall be installed on a post, bracket, span wire or mast arm as shown on the plans.”

Revise the first paragraph of Article 880.04 of the Standard Specifications to read:

“**880.04 Basis of Payment.** This work will be paid for at the contract unit price each for SIGNAL HEAD, OPTICALLY PROGRAMMED SIGNAL HEAD, or SIGNAL HEAD, LED of the type specified and of the material type when specified.”

Revise Article 1078.01 of the Standard Specifications to read:

“**1078.01 Signal Head, Optically Programmed Signal Head and Light Emitting Diode (LED) Signal Head.**”

Add the following to Article 1078.01(c) of the Standard Specifications:

“(3) The LED signal section shall be according to the following:

- a. General Requirements. The LED signal head shall meet the requirements of the Institute of Transportation Engineers (ITE) LED purchase specification, “Vehicle Traffic Control Signal Heads, Part 2: LED Vehicle Traffic Signal Modules”, and “Vehicle Traffic Control Signal Heads, Part 3: LED Vehicle Arrow Traffic Signal Modules”, or applicable successor ITE specifications, except as modified herein. The LEDs utilized in the modules shall not be Aluminum Gallium Arsenide (AlGaAs) material technology.

- b. Physical and Mechanical Requirements. The power supply for the LED module shall be integrated with the unit.
- c. Photometric Requirements. The candlepower values for yellow 300 mm (12 in.) circular modules shall be equal to the corresponding values for green 300 mm (12 in.) circular modules as listed in Table 1 of Section 4 of the aforementioned ITE specification based on normal use in traffic signal operation over the operating temperature range.

The illuminated portion of the arrow module shall be uniformly and completely dispersed with the LEDs.

- d. Electrical Requirements. When applicable to the particular module type, the LED signal module shall be EPA Energy Star qualified. For yellow 300 mm (12 in.) circular and arrow modules, the wattage requirements shall be as follows:

Module Type	Maximum Watts (W) at 74 °C (165 °F)	Nominal Watts (W) at 25 °C (77 °F)
300 mm (12 in.) Yellow Circular	25	22
300 mm (12 in.) Yellow Arrow	12	10

The individual LEDs shall be wired such that a catastrophic loss or the failure of one LED will result in the loss of not more than five percent of the signal module light output.

- e. Warranty. The LED modules shall be warrantied according to Article 802.03."

80067

MULCHING SEEDED AREAS (BDE)

Effective: January 1, 2005

Delete Article 251.02(a) of the Standard Specifications.

Add the following to Article 251.02 of the Standard Specifications:

“(h) Compost 1081.05(b)”

Delete Article 251.03(b)(1) of the Standard Specifications.

Add the following to Article 251.03 of the Standard Specifications:

“(d) Method 4. This method shall consist of applying compost combined with a performance additive designed to bind/stabilize the compost. The compost/performance additive mixture shall be applied to the surface of the slope using a pneumatic blower at a depth of 50 mm (2 in.).”

Revise the first sentence of the first paragraph of Article 251.06(b) of the Standard Specifications to read:

“Mulch Methods 1, 2, 3, and 4 will be measured for payment in hectares (acres) of surface area mulched.”

Revise Article 251.07 of the Standard Specifications to read:

“251.07 Basis of Payment. This work will be paid for at the contract unit price per hectare (acre) for MULCH, METHOD 1; MULCH, METHOD 2; MULCH, METHOD 3; or MULCH, METHOD 4; and at the contract unit price per square meter (square yard) for EROSION CONTROL BLANKET or HEAVY DUTY EROSION CONTROL BLANKET.”

Add the following after the second paragraph of Article 1081.05(b) of the Standard Specifications:

“Chemical Compost Binder. Chemical compost binder shall be a commercially available product specifically recommended by the manufacturer for use as a compost stabilizer.

The compost binder shall be nonstaining and nontoxic to vegetation and the environment. It shall disperse evenly and rapidly and remain in suspension when agitated in water.

Prior to use of the compost binder, the Contractor shall submit a notarized certification by the manufacturer stating that it meets these requirements. Chemical compost binder shall be packaged, stored, and shipped according to the manufacturer’s recommendations with the net quantity plainly shown on each package or container.”

MULTILANE PAVEMENT PATCHING (BDE)

Effective: November 1, 2002

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

80082

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 Cementitious 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 subplot and lot will be the width from the pavement edge to the adjacent lane line, from one lane line to the next, or between pavement edges for single-lane pavements.

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 subplot. 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:

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

Determine the Lower Quality Index to the nearest two decimal places using:

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

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.

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

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:

$$\text{Total Payment} = \text{TPF}[\text{CUP} (\text{TOTPAVT} - \text{DEFFPAVT})]$$

TPF = Total Pay Factor

CUP = Contract Unit Price

TOTPAVT = Area of Pavement Subject to Coring

DEFFPAVT = 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 subplot 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.

53600

Percent Within Limits

Quality Index (Q)*	Percent in Limits (PWL)	Quality Index (Q)*	Percent in Limits (PWL)	Quality Index (Q)*	Percent in Limits (PWL)	Quality Index (Q)*	Percent in Limits (PWL)	Quality Index (Q)*	Percent in Limits (PWL)	Quality Index (Q)*	Percent in Limits (PWL)	Quality Index (Q)*	Percent in Limits (PWL)
0.00	50.00	.040	65.07	0.80	78.43	1.20	88.76	1.60	95.46	2.00	98.83	2.40	99.89
0.01	50.38	0.41	65.43	0.81	78.72	1.21	88.97	1.61	95.58	2.01	98.88	2.41	99.90
0.02	50.77	0.42	65.79	0.82	79.02	1.22	89.17	1.62	95.70	2.02	98.92	2.42	99.91
0.03	51.15	0.43	66.15	0.83	79.31	1.23	89.38	1.63	95.81	2.03	98.97	2.43	99.91
0.04	51.54	0.44	66.51	0.84	79.61	1.24	89.58	1.64	95.93	2.04	99.01	2.44	99.92
0.05	51.92	0.45	66.87	0.85	79.90	1.25	89.79	1.65	96.05	2.05	99.06	2.45	99.93
0.06	52.30	0.46	67.22	0.86	80.19	1.26	89.99	1.66	96.16	2.06	99.10	2.46	99.94
0.07	52.69	0.47	67.57	0.87	80.47	1.27	90.19	1.67	96.27	2.07	99.14	2.47	99.94
0.08	53.07	0.48	67.93	0.88	80.76	1.28	90.38	1.68	96.37	2.08	99.18	2.48	99.95
0.09	53.46	0.49	68.28	0.89	81.04	1.29	90.58	1.69	96.48	2.09	99.22	2.49	99.95
0.10	53.84	0.50	68.63	0.90	81.33	1.30	90.78	1.70	96.59	2.10	99.26	2.50	99.96
0.11	54.22	0.51	68.98	0.91	81.61	1.31	90.96	1.71	96.69	2.11	99.29	2.51	99.96
0.12	54.60	0.52	69.32	0.92	81.88	1.32	91.15	1.72	96.78	2.12	99.32	2.52	99.97
0.13	54.99	0.53	69.67	0.93	82.16	1.33	91.33	1.73	96.88	2.13	99.36	2.53	99.97
0.14	55.37	0.54	70.01	0.94	82.43	1.34	91.52	1.74	96.97	2.14	99.39	2.54	99.98
0.15	55.75	0.55	70.36	0.95	82.71	1.35	91.70	1.75	97.07	2.15	99.42	2.55	99.98
0.16	56.13	0.56	70.70	0.96	82.97	1.36	91.87	1.76	97.16	2.16	99.45	2.56	99.98
0.17	56.51	0.57	71.04	0.97	83.24	1.37	92.04	1.77	97.25	2.17	99.48	2.57	99.98
0.18	56.89	0.58	71.38	0.98	83.50	1.38	92.22	1.78	97.33	2.18	99.50	2.58	99.99
0.19	57.27	0.59	71.72	0.99	83.77	1.39	92.39	1.79	97.42	2.19	99.53	2.59	99.99
0.20	57.65	0.60	72.06	1.00	84.03	1.40	92.56	1.80	97.51	2.20	99.56	2.60	99.99
0.21	58.03	0.61	72.39	1.01	84.28	1.41	92.72	1.81	97.59	2.21	99.58	2.61	99.99
0.22	58.40	0.62	72.72	1.02	84.53	1.42	92.88	1.82	97.67	2.22	99.61	2.62	99.99
0.23	58.78	0.63	73.05	1.03	84.79	1.43	93.05	1.83	97.75	2.23	99.63	2.63	100.00
0.24	59.15	0.64	73.38	1.04	85.04	1.44	93.21	1.84	97.83	2.22	99.66	2.64	100.00
0.25	59.53	0.65	73.72	1.05	85.29	1.45	93.37	1.85	97.91	2.25	99.68	≥ 2.65	100.00
0.26	59.90	0.66	74.04	1.06	85.53	1.46	93.52	1.86	97.98	2.26	99.70		
0.27	60.28	0.67	74.36	1.07	85.77	1.47	93.67	1.87	98.05	2.27	99.72		
0.28	60.65	0.68	74.69	1.08	86.02	1.48	93.83	1.88	98.11	2.28	99.73		
0.29	61.03	0.69	75.01	1.09	86.26	1.49	93.98	1.89	98.18	2.28	99.75		
0.30	61.40	0.70	75.33	1.10	86.50	1.50	94.13	1.90	98.25	2.30	99.77		
0.31	61.77	0.71	75.64	1.11	86.73	1.51	94.27	1.91	98.31	2.31	99.78		
0.32	62.14	0.72	75.96	1.12	86.96	1.52	94.41	1.92	98.37	2.32	99.80		
0.33	62.51	0.73	76.27	1.13	87.20	1.53	94.54	1.93	98.44	2.33	99.81		
0.34	62.88	0.74	76.59	1.14	87.43	1.54	94.68	1.94	98.50	2.34	99.83		
0.35	63.25	0.75	76.90	1.15	87.66	1.55	94.82	1.95	98.56	2.35	99.84		
0.36	63.61	0.76	77.21	1.16	87.88	1.56	94.95	1.96	98.61	2.36	99.85		
0.37	63.98	0.77	77.51	1.17	88.10	1.57	95.08	1.97	98.67	2.37	99.86		
0.38	64.34	0.78	77.82	1.18	88.32	1.58	95.20	1.98	98.72	2.38	99.87		
0.39	64.71	0.79	78.12	1.19	88.54	1.59	95.33	1.99	98.78	2.39	99.88		

*For Q values less than zero, subtract the table value from 100 to obtain PWL.

PAYMENTS TO SUBCONTRACTORS (BDE)

Effective: June 1, 2000

Revised: January 1, 2006

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

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

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

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

This Special Provision does not create any rights in favor of any subcontractor or material supplier against the State or authorize any cause of action against the State on account of any payment, nonpayment, delayed payment, or interest claimed by application of the State Prompt Payment Act. The Department will not approve any delay or postponement of the 15 day requirement except for reasonable cause shown after notice and hearing pursuant to Section

| 7(b) of the State Prompt Payment Act. State law creates other and additional remedies available to any subcontractor or material supplier, regardless of tier, who has not been paid for work properly performed or material furnished. These remedies are a lien against public funds set forth in Section 23(c) of the Mechanics Lien Act, 770 ILCS 60/23(c), and a recovery on the Contractor's payment bond according to the Public Construction Bond Act, 30 ILCS 550.

80022

PAYROLLS AND PAYROLL RECORDS (BDE)

Effective: August 10, 2005

FEDERAL AID CONTRACTS. Add the following State of Illinois requirements to the Federal requirements contained in Section V of Form FHWA-1273:

"The payroll records shall include each worker's name, address, telephone number, social security number, classification, rate of pay, number of hours worked each day, starting and ending times of work each day, total hours worked each week, itemized deductions made, and actual wages paid.

The Contractor and each subcontractor shall submit payroll records to the Engineer each week from the start to the completion of their respective work. The submittals shall be on the Department's form SBE 48, or an approved facsimile. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate box ("No Work", "Suspended", or "Complete") checked on the form."

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

"IV. COMPLIANCE WITH THE PREVAILING WAGE ACT

1. **Prevailing Wages.** All wages paid by the Contractor and each subcontractor shall be in compliance with The Prevailing Wage Act (820 ILCS 130), as amended, except where a prevailing wage violates a federal law, order, or ruling, the rate conforming to the federal law, order, or ruling shall govern. The Contractor shall be responsible to notify each subcontractor of the wage rates set forth in this contract and any revisions thereto. If the Department of Labor revises the wage rates, the Contractor will not be allowed additional compensation on account of said revisions.
2. **Payroll Records.** The Contractor and each subcontractor shall make and keep, for a period of three years from the date of completion of this contract, records of the wages paid to his/her workers. The payroll records shall include each worker's name, address, telephone number, social security number, classification, rate of pay, number of hours worked each day, starting and ending times of work each day, total hours worked each week, itemized deductions made, and actual wages paid. Upon two business days' notice, these records shall be available, at all reasonable hours at a location within the State, for inspection by the Department or the Department of Labor.
3. **Submission of Payroll Records.** The Contractor and each subcontractor shall submit payroll records to the Engineer each week from the start to the completion of their respective work. The submittals shall be on the Department's form SBE 48, or an approved facsimile. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate box ("No Work", "Suspended", or "Complete") checked on the form.

Each submittal shall be accompanied by a statement signed by the Contractor or subcontractor which avers that: (i) such records are true and accurate; (ii) the hourly rate paid to each worker is not less than the general prevailing rate of hourly wages required by the Act; and (iii) the Contractor or subcontractor is aware that filing a payroll record that he/she knows to be false is a Class B misdemeanor.

4. Employee Interviews. The Contractor and each subcontractor shall permit his/her employees to be interviewed on the job, during working hours, by compliance investigators of the Department or the Department of Labor."

80155

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.

80130

PLANTING WOODY PLANTS (BDE)

Effective: January 1, 2006

Revise the first and second paragraphs of Article 253.14 of the Standard Specifications to read:

"253.14 Period of Establishment. Prior to being accepted, the plants shall endure a period of establishment. This period shall begin in June and end in September of the same year. To qualify for inspection, plants shall have been in place, in a live healthy condition, on or before June 1 of the year of inspection. To be acceptable, plants shall be in a live healthy condition, representative of their species, at the time of inspection in the month of September.

When the planting work is performed by a subcontractor, this delay in inspection and acceptance of plants shall not delay acceptance of the entire project and final payment due if the Contractor requires and receives from the subcontractor a third party performance bond naming the Department as obligee in the full amount of the planting quantities listed in the contract, multiplied by their contract unit prices. The bond shall be executed prior to acceptance and final payment of the non-planting items and shall be in full force and effect until final inspection and acceptance of all plants including replacements. Execution of the third party bond shall be the option of the prime Contractor."

Revise Article 253.16 of the Standard Specifications to read:

"253.16 Method of Measurement. This work will be measured for final payment, in place, after the period of establishment. Trees, shrubs, and vines will be measured as each individual plant. Seedlings will be measured in units of 100 plants."

Revise Article 253.17 of the Standard Specifications to read:

"253.17 Basis of Payment. This work will be paid for at the contract unit price per each for TREES, SHRUBS, and VINES, of the species, root type, and plant size specified; and per unit for SEEDLINGS. Payment will be made according to the following schedule.

- (a) Initial Payment. Upon planting, 75 percent of the pay item(s) will be paid.
- (b) Final Payment. Upon inspection and acceptance of the plant material, or upon execution of a third party bond, the remaining 25 percent of the pay item(s) will be paid."

80148

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.

80124

PORTLAND CEMENT (BDE)

Effective: January 1, 2005

Revised: November 1, 2005

Add the following paragraph after the last paragraph of Article 1001.01 of the Standard Specifications.

"For portland cement according to ASTM C 150, the bill of lading shall state if limestone has been added. The bill of lading shall also state that the limestone addition is not in excess of five percent by mass (weight) of the cement."

80139

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"."

80083

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.

419.doc

PREFORMED RECYCLED RUBBER JOINT FILLER (BDE)

Effective: November 1, 2002

Revise Article 503.02(c) of the Standard Specifications to read:

“(c) Prefomed Expansion Joint Filler.....1051”

Revise Article 637.02(d) of the Standard Specifications to read:

“(d) Prefomed Expansion Joint Filler.....1051”

Add the following Article to Section 1051 of the Standard Specifications:

“1051.10 Prefomed Recycled Rubber Joint Filler. Prefomed 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.”

80084

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

Effective: January 1, 2006

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

<u>NAMED INSURED & ADDRESS</u>	<u>NUMBER & SPEED OF PASSENGER TRAINS</u>	<u>NUMBER & SPEED OF FREIGHT TRAINS</u>
Union Pacific Railroad 1400 Douglas Street, MS 1690 Omaha, NE 68179-1690	0	60 trains day/ at 50 mph
DOT/AAR No.: 175047E RR Division: Chicago	RR Mile Post: 59.70 RR Sub-Division: Geneva	
For Freight/Passenger Information Contact: For Insurance Information Contact:	Gary Wilwerding Paul Farrell	Phone: (708) 649-5210 Phone: (402) 544-8620

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

Illinois Department of Transportation
Bureau of Design and Environment
2300 South Dirksen Parkway, Room 326
Springfield, Illinois 67264

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

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

80157

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.

80011

REINFORCEMENT BARS (BDE)

Effective: November 1, 2005

Revised: November 2, 2005

Revise Article 1006.10(a) of the Supplemental Specifications to read:

"(a) Reinforcement Bars. Reinforcement bars will be accepted according to the current Bureau of Materials and Physical Research Policy Memorandum, "Reinforcement Bar and Dowel Bar Plant Certification Procedure". The Department will maintain an approved list of producers.

(1) Reinforcement Bars (Non-Coated). Reinforcement bars shall be according to ASTM A 706M (A 706), Grade 420 (60) for deformed bars and the following.

a. Chemical Composition. The chemical composition of the bars shall be according to the following table.

CHEMICAL COMPOSITION		
Element ^{1/}	Heat Analysis (% maximum)	Product Analysis (% maximum)
Carbon	0.30	0.33
Manganese	1.50	1.56
Phosphorus	0.035	0.045
Sulfur	0.045	0.055
Silicon	0.50	0.55
Nickel	2/	2/
Chromium	2/	2/
Molybdenum	2/	2/
Copper	2/	2/
Titanium	2/	2/
Vanadium	2/	2/
Columbium	2/	2/
Aluminum	2/, 3/	2/, 3/
Tin ^{4/}	0.040	0.044

Note 1/. The bars shall not contain any traces of radioactive elements.

Note 2/. There is no composition limit but the element must be reported.

Note 3/. If aluminum is not an intentional addition to the steel for deoxidation or killing purposes, residual aluminum content need not be reported.

Note 4/. If producer bar testing indicates an elongation of 15 percent or more and passing of the bend test, the tin composition requirement may be waived.

- b. Heat Numbers. Bundles or bars at the construction site shall be marked or tagged with heat identification numbers of the bar producer.
 - c. Guided Bend Test. Bars may be subject to a guided bend test across two pins which are free to rotate, where the bending force shall be centrally applied with a fixed or rotating pin of a certain diameter as specified in Table 3 of ASTM A 706M (A 706). The dimensions and clearances of this guided bend test shall be according to ASTM E 190.
 - d. Spiral Reinforcement. Spiral reinforcement shall be deformed or plain bars conforming to the above requirements or cold-drawn steel wire conforming to AASHTO M 32.
- (2) Epoxy Coated Reinforcement Bars. Epoxy coated reinforcement bars shall be according to Article 1006.10(a)(1) and shall be epoxy coated according to AASHTO M 284M (M 284) and the following.
- a. Certification. The epoxy coating applicator shall be certified under the Concrete Reinforcing Steel Institute's (CRSI) Epoxy Plant Certification Program.
 - b. Coating Thickness. The thickness of the epoxy coating shall be 0.18 to 0.30 mm (7 to 12 mils). When spiral reinforcement is coated after fabrication, the thickness of the epoxy coating shall be 0.18 to 0.50 mm (7 to 20 mils).
 - c. Cutting Reinforcement. Reinforcement bars may be sheared or sawn to length after coating, providing the end damage to the coating does not extend more than 13 mm (0.5 in.) back and the cut is patched before any visible rusting appears. Flame cutting will not be permitted."

80151

SEEDING AND SODDING (BDE)

Effective: July 1, 2004
 Revised: August 1, 2006

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	70 (60)
	Perennial Ryegrass	20 (20)
	Audubon Red Fescue	20 (20)
	Rescue 911 Hard Fescue	20 (20)
	Fults Salt Grass*	70 (60)
2A Salt Tolerant Roadside Mixture 7/	Alta Fescue or Ky 31	70 (60)
	Perennial Ryegrass	20 (20)
	Audubon Red Fescue	20 (30)
	Rescue 911 Hard Fescue	20 (30)
	Fults Salt Grass 1/	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 uniform growth 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 uniform 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 °C (80 °F) 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 °C (80 °F) 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	30%
Buchloe Dactyloides	
Inferno 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/

80131

SELF-CONSOLIDATING CONCRETE FOR PRECAST PRODUCTS (BDE)

Effective: July 1, 2004

Revised: November 1, 2005

Definition. Self-consolidating concrete is a flowable mixture that does not require mechanical vibration for consolidation.

Usage. Self-consolidating concrete may be used for precast concrete products.

Materials. Materials shall be according to the following.

- (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 concrete that can flow around reinforcement and consolidate under its own weight without additional effort and without segregation.

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:

$$\text{Aggregate Blend Expansion} = (a/100 \times A) + (b/100 \times B) + (c/100 \times C) + \dots \text{etc.}$$

Where: a, b, c, ... = percent of aggregate blend
A, B, C, ... = aggregate expansion according to ASTM C 1260

Mix Design Criteria. The mix design criteria shall be as follows:

- (a) The minimum cement factor shall be according to Article 1020.04 of the Standard Specifications or as specified. The maximum cement factor shall be 418 kg/cu m (7.05 cwt/cu yd).
- (b) The maximum allowable water/cement ratio shall be according to Article 1020.04 of the Standard Specifications or 0.44, whichever is lower.
- (c) The slump requirements of Article 1020.04 of the Standard Specifications shall not apply.
- (d) The coarse aggregate gradations shall be CA 11, CA 13, CA 14, CA 16, or a blend of these gradations. CA 11 shall not be used when the Engineer approves a horizontal flow distance greater than 9 m (30 ft). The fine aggregate proportion shall be a maximum 50 percent by mass (weight) of the total aggregate used.
- (e) The slump flow range shall be ± 50 mm (± 2 in.) of the Contractor target value, and within the overall Department range of 510 mm (20 in.) minimum to 710 mm (28 in.) maximum.
- (f) The visual stability index shall be a maximum of 1.
- (g) The J-ring value shall be a maximum of 100 mm (4 in.). The Contractor may specify a lower maximum in the mix design.
- (h) The L-box blocking ratio shall be a minimum of 60 percent. The Contractor may specify a higher minimum in the mix design.
- (i) The column segregation index shall be a maximum 15 percent.
- (j) The hardened visual stability index shall be a maximum of 1.

Mix Design Approval. The Contractor shall obtain mix design approval according to the Department's Policy Memorandum "Quality Control/Quality Assurance Program for Precast Concrete Products".

80132

STABILIZED SUBBASE AND BITUMINOUS SHOULDERS SUPERPAVE (BDE)

Effective: April 1, 2002

Revised: August 1, 2005

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 Gyrotory 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:

<u>Ingredient</u>	<u>Percent by Dry Weight</u>
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:

<u>Ingredient</u>	<u>Percent by Dry Weight</u>
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 Non-Class I Mixtures	Test Method
Aggregate Gradation Hot bins for batch and continuous plants. Individual cold-feeds or combined belt-feed for drier-drum plants. (% passing sieves: 12.5 mm (1/2 In.), 4.75 mm (No. 4), 75 µm (No. 200))	1 gradation per day of production. 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. 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		
Bulk Specific Gravity of Gyratory Sample	1 per day	Illinois-Modified AASHTO T 312
Maximum Specific Gravity of Mixture	1 per day	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 and density shall be plotted on the control charts within the following control limits:

Individual Test Control Limits	
Voids	±1.2%
Density ^{1/}	93.0 – 97.4% of G _{mm}

1/ Except when placed as first lift over unimproved subgrade. When the exception applies, the first lift over unimproved subgrade shall be compacted to an average density of not less than 95 percent nor greater than 102 percent of the target density obtained on the growth curve.

Replace Article 312.10 of the Standard Specifications with the following:

312.10 Placing. 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. This work shall be according to Article 312.10 as modified herein. 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".

80070

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:** _____

80127

SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)

Effective: April 2, 2005

To account for the preparatory work and operations necessary for the movement of subcontractor personnel, equipment, supplies, and incidentals to the project site and for all other work or operations that must be performed or costs incurred when beginning work approved for subcontracting in accordance with Article 108.01 of the Standard Specifications, the Contractor shall make a mobilization payment to each subcontractor.

This mobilization payment shall be made at least 14 days prior to the subcontractor starting work. The amount paid shall be equal to 3 percent of the amount of the subcontract reported on form BC 260A submitted for the approval of the subcontractor's work.

This provision shall be incorporated directly or by reference into each subcontract approved by the Department.

80143

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.”

80086

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 $N_{design} \geq 90$, 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 ± 3 °C (325 ± 5 °F) and a gyratory compaction temperature of 152 ± 3 °C (305 ± 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 Gyrotory Compactor. The superpave gyrotory 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 Gyrotory 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					
Ndesign	Voids in the Mineral Aggregate (VMA), % minimum				Voids Filled with Asphalt (VFA), %
	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 Hot bins for batch and continuous plants Individual cold-feeds or combined belt-feed for drier drum plants. (% passing sieves: 12.5 mm (1/2 in.), 4.75 mm (No. 4), 2.36 mm (No. 8), 600 µm (No. 30), 75 µm (No. 200))	1 dry gradation per day of production (either morning or afternoon sample). and 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). 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). 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	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 \geq 90	92.0 – 96.0%
12.5 mm / 9.5 mm	Ndesign < 90	92.5 – 97.4%
19.0 mm / 25.0 mm	Ndesign \geq 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.

80010

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 Cementitious 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." |

80092

TEMPORARY EROSION CONTROL (BDE)

Effective: November 1, 2002

Revise the fifth sentence of the third paragraph of Article 280.04(a) of the Standard Specifications to read:

"This work may be constructed of hay or straw bales, extruded UV resistant high density polyethylene panels, erosion control blanket, mulch barrier, aggregate barriers, excavation, seeding, or mulch used separately or in combination, as approved, by the Engineer."

Add the following paragraphs after the fifth paragraph of Article 280.04(a) of the Standard Specifications.

"A ditch check constructed of extruded, UV resistant, high density polyethylene panels, "M" pins and erosion control blanket shall consist of the following materials:

Extruded, UV resistant, high density polyethylene panels shall have a minimum height of 250 mm (10 in.) and minimum length of 1.0 m (39.4 in.). The panels shall have a 51 mm (2 in.) lip along the bottom of the panel. Each panel shall have a single rib thickness of 4 mm (5/32 in.) with a 12 mm (1/2 in.) distance between the ribs. The panels shall have an average apparent opening size equal to 4.75 mm (No. 4) sieve, with an average of 30 percent open area. The tensile strength of each panel shall be 26.27 kN/m (1800 lb/ft) in the machine direction and 7.3 kN/m (500 lb/ft) in the transverse direction when tested according to ASTM D 4595.

"M" pins shall be at least 76 mm (3 in.) by 686 mm (27 in.), constructed out of deformed grade C1008 D3.5 rod (0.211 in. diameter). The rod shall have a minimum tensile strength of 55 MPa (8000 psi).

Erosion control blanket shall conform to Article 251.04.

A section of erosion control blanket shall be placed transverse to the flowline direction of the ditch prior to the construction of the polyethylene ditch check. The length of the section shall extend from the top of one side of the ditch to the top of the opposite side of the ditch, while the width of the section shall be one roll width of the blanket. The upstream edge of the erosion control blanket shall be secured in a 100 mm (4 in.) trench. The blanket shall be secured in the trench with 200 mm (8 in.) staples placed at 300 mm (1 ft) intervals along the edge before the trench is backfilled. Once the upstream edge of the blanket is secured, the downstream edge shall be secured with 200 mm (8 in.) staples placed at 300 mm (1 ft) intervals along the edge. The polyethylene ditch check shall be installed in the middle of the erosion control blanket, with the lip of each panel facing outward.

The ditch check shall consist of two panels placed back to back forming a single row. Placement of the first two panels shall be at the toe of the backslope or sideslope, with the panels extending across the bottom of the ditch. Subsequent panels shall extend both across the bottom of the ditch and up the opposite sideslope, as well as up the original backslope or sideslope at the distance determined by the Engineer.

The M pins shall be driven through the panel lips to secure the panels to the ground. M pins shall be installed in the center of the panels with adjacent panels overlapping the ends a minimum of 50 mm (2 in.). The pins shall be placed through both sets of panels at each overlap. They shall be installed at an interval of three M pins per one meter (39 in.) length of ditch check. The panels shall be wedged into the M pins at the top to ensure firm contact between the entire bottom of the panels and the soil."

80087

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.

57291

TRAINING SPECIAL PROVISIONS (BDE) This Training Special Provision supersedes Section 7b of the Special Provision entitled "Specific Equal Employment Opportunity Responsibilities," and is in implementation of 23 U.S.C. 140(a).

As part of the contractor's equal employment opportunity affirmative action program, training shall be provided as follows:

The contractor shall provide on-the-job training aimed at developing full journeyman in the type of trade or job classification involved. The number of trainees to be trained under this contract will be two . In the event the contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this Training Special Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the contractor's needs and the availability of journeymen in the various classifications within the reasonable area of recruitment. Prior to commencing construction, the contractor shall submit to the Illinois Department of Transportation for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the contractor shall specify the starting time for training in each of the classifications. The contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g. by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent such persons are available within a reasonable area of recruitment. The contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a journeyman. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used the contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the contractor and approved by the Illinois Department of Transportation and the Federal Highway Administration. The Illinois Department of Transportation and the Federal Highway Administration shall approve a program, if it is reasonably calculated to meet the equal employment opportunity obligations of the contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved by not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the Illinois Department of Transportation and the Federal Highway Administration. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the contractor will be reimbursed 80 cents per hour of training given an employee on this contract in accordance with an approved training program. As approved by the Engineer, reimbursement will be made for training of persons in excess of the number specified herein. This reimbursement will be made even though the contractor receives additional training program funds from other sources, provided such other source does not specifically prohibit the contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the contractor where he does one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the offsite training period.

No payment shall be made to the contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the contractor and evidences a lack of good faith on the part of the contractor in meeting the requirement of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program.

It is not required that all trainees be on board for the entire length of the contract. A contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The contractor shall furnish the trainee a copy of the program he will follow in providing the training. The contractor shall provide each trainee with a certification showing the type and length of training satisfactorily complete.

The contractor will provide for the maintenance of records and furnish periodic reports documenting his performance under this Training Special Provision.

METHOD OF MEASUREMENT The unit of measurement is in hours.

BASIS OF PAYMENT This work will be paid for at the contract unit price of 80 cents per hour for TRAINEES. The estimated total number of hours, unit price and total price have been included in the schedule of prices.

20338

TRANSIENT VOLTAGE SURGE SUPPRESSION (BDE)

Effective: August 1, 2003

Revise the first paragraph of Article 1074.03(a)(4) of the Standard Specifications to read:

"(4) Transient Voltage Surge Suppression. The cabinet shall be provided with transient voltage surge suppression. Transient surge suppression unit leads shall be kept as short as possible and ground shall be made directly to the cabinet wall or ground plate as near as possible to the object being grounded. All transient surge suppression units shall be tested and certified as meeting this specification by an independent testing laboratory. One copy of each of the full testing report shall be submitted to the Engineer."

Revise Article 1074.03(a)(4)a. of the Standard Specifications to read:

- "a. Surge Suppressor. The suppressor protecting the solid state controller, conflict monitor, and detection equipment shall consist of two stages: stage one which shall include a controller cabinet AC power protection assembly and stage two which shall include AC circuit protection.

The design of the stage one suppressor shall be modular and it shall be installed in such a way that it may be removed and replaced with the intersection under power and in flashing operation. It shall have a permanently mounted and wired base and a removable circuit package. The stage one suppressor shall have two LED failure indicators for power 'on' and suppression 'failure' and shall meet the following properties:

Stage One Suppressor	
Properties	Criteria
"Plug-in" suppression module	12 pin connector assembly
Clamp voltage	250 V at 20,000 A typical
Response time	Less than 5 nanoseconds
Maximum continuous service current	15 A at 120 VAC 60 Hz
High frequency noise attenuation	At least 50 dB at 100,000 Hz
Operating temperature	-40 °C (-40 °F) to 85 °C (185 °F)

If the controller assembly includes a system telemetry module or remote intersection monitor, the status of the stage one suppressor shall be continuously and remotely monitored by an appropriate alarm circuit.

The stage two, high speed, solid state, transient suppressor shall protect the system from transient over voltage without affecting power at the load. It shall suppress transients of either polarity and from either direction (source or load). The suppressor shall have a visual "on" indicator lamp when the unit is operating normally. It shall also have a UL plastic enclosure, a four position terminal strip for

power connection, and it shall utilize silicon avalanche diode technology. The stage two suppressor shall meet the following properties:

Stage Two Suppressor	
Properties	Criteria
Nominal service voltage	120 V at 50/60 Hz
Maximum voltage protection level	± 330 V
Minimum voltage protection level	± 220 V $\pm 5\%$
Minimum surge current rating	700 A
Stand by power	Less than 0.5 Watts
Hot to neutral leakage current at 120 V RMS	Less than $5\mu\text{A}$
Maximum response time	5 nanoseconds
Operating and Storage temperature	-20 °C (-4 °F) to 50 °C (122 °F)"

80107m

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."

80123

WEIGHT CONTROL DEFICIENCY DEDUCTION (BDE)

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:

$$\text{Adjusted Net Weight} = A \times \text{Delivery Ticket Net Weight}$$

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.

80048

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.

80097

WORKING DAYS

Effective: January 1, 2002

The Contractor shall complete the work within * working days.

* Project has a completion date of **October 31, 2007** for all contract items and an allowance of **10** guaranteed working days after this date for clean-up and punch list work.

80071

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

	Page
I. General	1
II. Nondiscrimination	1
III. Nonsegregated Facilities	3
IV. Payment of Predetermined Minimum Wage.....	3
V. Statements and Payrolls	6
VI. Record of Materials, Supplies, and Labor.....	7
VIII. Safety: Accident Prevention	7
IX. False Statements Concerning Highway Projects.....	7
X. Implementation of Clean Air Act and Federal Water Pollution Control Act	8
XI. Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion	8
XII. Certification Regarding Use of Contract Funds for Lobbying	9

ATTACHMENTS

- A. Employment Preference for Appalachian Contracts
(included in Appalachian contracts only)

I. GENERAL

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

- Section I, paragraph 2;
- Section IV, paragraphs 1, 2, 3, 4 and 7;
- Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6 and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

6. Selection of Labor: During the performance of this contract, the contractor shall not:

- a. Discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or
- b. Employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60 (and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

b. The contractor will accept as his operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job-training."

2. EEO Officer: The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for an must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above

agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employees referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish which such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any

evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to

the SHA and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or quailifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General:

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the

contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or

disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the question, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any cost reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

a. Apprentices:

(1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not

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

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

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

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits

Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which cases such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV. 2. Any worker listed on a payroll at a helper wage rate, who is not a helper under a approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

5. Apprentices and Trainees (Programs of the U.S. DOT):

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

6. Withholding:

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainee's and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

7. Overtime Requirements:

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. Violation:

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. Withholding for Unpaid Wages and Liquidated Damages:

The SHA shall; upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. Compliance with Copeland Regulations (29 CFR 3):

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. Payrolls and Payroll Records:

a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan

or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period).

The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V.

This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

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

(1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

(2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;

(3) that each laborer or mechanic has been paid not less than the applicable wage rate and fringe benefits or cash equivalent for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U/S. C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for

inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all federal-aid contracts on the national highway system, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:

- a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.
- b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.
- c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).

- a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.
- b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a

whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract.

Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S. C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification,

distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined not more than \$10,000 or imprisoned not more than 5 years or both."

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more).

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of

any communication from the Director, Office of Federal Activities, EPA indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. Instructions for Certification - Primary Covered Transactions:

(Applicable to all Federal-aid contracts - 49 CFR 29)

a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled

"Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded from Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and
- d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Covered Transactions:

(Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

- a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.
- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
- c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.
- d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
- e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
- f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
- g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.
- h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealing.
- i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification Regarding Debarment, Suspension, Ineligibility And Voluntary Exclusion-Lower Tier Covered Transactions:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

MINIMUM WAGES FOR FEDERAL AND FEDERALLY ASSISTED CONSTRUCTION CONTRACTS

This project is funded, in part, with Federal-aid funds and, as such, is subject to the provisions of the Davis-Bacon Act of March 3, 1931, as amended (46 Sta. 1494, as amended, 40 U.S.C. 276a) and of other Federal statutes referred to in a 29 CFR Part 1, Appendix A, as well as such additional statutes as may from time to time be enacted containing provisions for the payment of wages determined to be prevailing by the Secretary of Labor in accordance with the Davis-Bacon Act and pursuant to the provisions of 29 CFR Part 1. The prevailing rates and fringe benefits shown in the General Wage Determination Decisions issued by the U.S. Department of Labor shall, in accordance with the provisions of the foregoing statutes, constitute the minimum wages payable on Federal and federally assisted construction projects to laborers and mechanics of the specified classes engaged on contract work of the character and in the localities described therein.

General Wage Determination Decisions, modifications and supersedes decisions thereto are to be used in accordance with the provisions of 29 CFR Parts 1 and 5. Accordingly, the applicable decision, together with any modifications issued, must be made a part of every contract for performance of the described work within the geographic area indicated as required by an applicable DBRA Federal prevailing wage law and 29 CFR Part 5. The wage rates and fringe benefits contained in the General Wage Determination Decision

NOTICE

The most current **General Wage Determination Decisions** (wage rates) are available on the IDOT web site. They are located on the Letting and Bidding page at <http://www.dot.il.gov/desenv/delett.html>.

In addition, ten (10) days prior to the letting, the applicable Federal wage rates will be e-mailed to subscribers. It is recommended that all contractors subscribe to the Federal Wage Rates List or the Contractor's Packet through IDOT's subscription service.

PLEASE NOTE: if you have already subscribed to the Contractor's Packet you will automatically receive the Federal Wage Rates.

The instructions for subscribing are at <http://www.dot.il.gov/desenv/subsc.html>.

If you have any questions concerning the wage rates, please contact IDOT's Chief Contract Official at 217-782-7806.