

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

PREQUALIFICATION

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

REQUESTS FOR AUTHORIZATION TO BID

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

WHO CAN BID ?

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

WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID?: When a prospective prime bidder submits a "Request for Authorization to Bid/or Not For Bid Status"(BDE 124INT) he/she must indicate at that time which items are being requested For Bidding purposes. Only those items requested For Bidding will be analyzed. After the request has been analyzed, the bidder will be issued 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 bidders check IDOT's website at <http://www.dot.il.gov/desenv/delett.html> before submitting final bid information.

IDOT IS NOT RESPONSIBLE FOR ANY E-MAIL FAILURES.

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

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

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

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

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

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

WHO SHOULD BE CALLED IF ASSISTANCE IS NEEDED?

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

ADDENDUMS AND REVISIONS TO THE PROPOSAL FORMS

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

RETURN WITH BID

184

Proposal Submitted By
Name
Address
City

Letting June 12, 2009

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. 63074
KANE County
Section 06-00214-15-BR
Route FAP 361 (Stearns Road)
Project ARA-TE-CMM-HPP-1527(012)
District 1 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. 63074
KANE County
Section 06-00214-15-BR
Project ARA-TE-CMM-HPP-1527(012)
Route FAP 361 (Stearns Road)
District 1 Construction Funds**

Construction of new roadway and roadway improvements totaling approximately 2.22 miles for the extension and realignment of Stearns Road from the DuPage County line to IL Route 25 including a new intersection with IL Route 25 and Dunham Road. Project also includes four new structures and the rehabilitation of another structure. Two new structures will carry IL Route 25/Dunham and IL Route 25/ Stearns over the east branch of Brewster Creek, two new underpasses to accommodate relocated multi-use trail and the rehabilitation to a structure over the Chicago Central and Pacific Railroad.

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.

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.

COUNTY NAME	CODE	DIST	SECTION NUMBER	PROJECT NUMBER	ROUTE
KANE	089	01	06-00214-15-BR	ARA-TE-CMM-H1527/012/000	FAP 361

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
K0038000	PEREN PL WETLND EM TY	UNIT	273.000 X				
K1004485	PERENNIAL PLANTS W-TY	UNIT	276.000 X				
XX000366	CLAY LINER	CU FT	356,248.000 X				
XX000610	RELOCATE EX MAILBOX	EACH	5.000 X				
XX003988	TEMP CONC BARRIER REM	FOOT	1,290.000 X				
XX004801	BIT BIKE PATH REM	SQ YD	1,270.000 X				
XX005277	SS SEWER PVC SDR 26 8	FOOT	50.000 X				
XX005449	AGG SUBGRADE 16	SQ YD	19,300.000 X				
XX005963	ANTI-GRAFFITI COATING	SQ FT	8,995.000 X				
XX005968	TURBIDITY CURTAIN	SQ YD	100.000 X				
XX006257	REC REF PVT MARKER	EACH	290.000 X				
XX006490	LETTERING	L SUM	1.000 X				
XX006701	SEED CL 4 MOD MES PRA	ACRE	7.000 X				
XX006702	SEED CL 4 MOD WET MP	ACRE	0.360 X				
XX006706	SEED CL 4 MOD DET BAS	ACRE	4.790 X				

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
XX006709	SEED CL 5 MOD MES PRA	ACRE	6.860 X				
XX006710	SEED CL 5 MOD WET MP	ACRE	0.360 X				
XX006722	TEMP AGG BRM-COUR AGG	TON	1,048.000 X				
XX006723	TEMP AGG BRM-RIPRAP	TON	2,299.000 X				
XX006727	TEMP DTCH CHKS ROL EX	FOOT	963.000 X				
XX006761	JUN BOX EM S 4X4X3	EACH	22.000 X				
XX006821	CONC TRUCK WASHOUT	L SUM	1.000 X				
XX006937	GROUND ROD 5/8 X 10	EACH	3.000 X				
XX007878	EROSION CON BLANK SP1	SQ YD	20,971.000 X				
XX007879	EROSION CON BLANK SP2	SQ YD	31,320.000 X				
XX007880	EROSION CON BLANK SP3	SQ YD	26,114.000 X				
XX008001	AGGREGATE PATH 8	SQ YD	1,206.000 X				
XX008002	CON P 3 GALVS SPL	FOOT	140.000 X				
XX008003	FORM LINER TEX SUR SP	SQ FT	8,277.000 X				
XX008004	MAN T1 6D REST PLATE	EACH	6.000 X				

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
XX008005	REM & REL PED BRIDGE	L SUM	1.000 X	=			
XX008007	FILL EX SEPTIC TNK SP	EACH	1.000 X	=			
XX008008	FILL EXIST WELLS SP	EACH	9.000 X	=			
X0300062	GRAFFITI REMOVAL	SQ YD	1,150.000 X	=			
X0301699	STORM SEW JKD SPL	FOOT	127.000 X	=			
X0322033	STORM SEW WM REQ 12	FOOT	74.000 X	=			
X0322089	STORM SEW WM REQ 36	FOOT	253.000 X	=			
X0322090	STORM SEW WM REQ 42	FOOT	65.000 X	=			
X0322125	STORM SEW WM REQ 24	FOOT	101.000 X	=			
X0322671	STAB CONSTR ENTRANCE	SQ YD	1,610.000 X	=			
X0322925	ELCBL C TRACER 14 1C	FOOT	4,697.000 X	=			
X0322936	REMOV EX FLAR END SEC	EACH	2.000 X	=			
X0323426	SED CONT DR ST INL CL	EACH	128.000 X	=			
X0323670	PREFORM DETECT LOOP	FOOT	1,846.000 X	=			
X0323974	SED CONT SILT FN MAIN	FOOT	36,776.000 X	=			

FAP 361
 06-00214-15-BR
 KANE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63074

ECMS002 DTGECM03 ECMR003 PAGE 4
 RUN DATE - 05/11/09
 RUN TIME - 203508

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
X0323988	TEMP SOIL RETEN SYSTM	SQ FT	148.000 X	=	=	=	=
X0324045	SED CON STAB CON EN R	EACH	5.000 X	=	=	=	=
X0324775	SED CON STAB CON EN M	SQ YD	1,608.000 X	=	=	=	=
X0325096	OPTIM TRAF SIGNAL SYS	L SUM	1.000 X	=	=	=	=
X0325598	DRAIN SCUPPR DS-12M10	EACH	6.000 X	=	=	=	=
X0325714	FL BEACON P MTD SP IN	EACH	2.000 X	=	=	=	=
X0326331	CLEAN/PAINT BEARINGS	EACH	13.000 X	=	=	=	=
X0350810	BOLLARD REMOVAL	EACH	21.000 X	=	=	=	=
X3120050	STAB SUBBSE HMA 4 1/2	SQ YD	3,841.000 X	=	=	=	=
X4067107	POL LB MM IL4.75 N50	TON	208.000 X	=	=	=	=
X5020501	UNWAT STR EX PROT L1	EACH	2.000 X	=	=	=	=
X5020502	UNWAT STR EX PROT L2	EACH	2.000 X	=	=	=	=
X8620020	UNINTER POWER SUPPLY	EACH	2.000 X	=	=	=	=
X8730027	ELCBL C GROUND 6 1C	FOOT	1,516.000 X	=	=	=	=
Z0007601	BLDG REMOV NO 1	L SUM	1.000 X	=	=	=	=

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
Z0007602	BLDG REMOV NO 2	L SUM	1.000 X	=			
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000 X	=			
Z0018800	DRAINAGE SYSTEM	L SUM	1.000 X	=			
Z0019600	DUST CONTROL WATERING	UNIT	1,073.000 X	=			
Z0022800	FENCE REMOVAL	FOOT	5,521.000 X	=			
Z0023800	FILL EX SEPTIC TANK	EACH	1.000 X	=			
Z0023900	FILL EXIST WELLS	EACH	1.000 X	=			
Z0029999	IMPACT ATTENUATOR REM	EACH	2.000 X	=			
Z0030150	IMPACT ATTEN NRD TL3	EACH	2.000 X	=			
Z0030240	IMP ATTN TEMP NRD TL2	EACH	7.000 X	=			
Z0030340	IMP ATTN REL NRD TL2	EACH	6.000 X	=			
Z0048665	RR PROT LIABILITY INS	L SUM	1.000 X	=			
Z0049801	R&D FRIABL ASB BLD 1	L SUM	1.000 X	=			
Z0049802	R&D FRIABL ASB BLD 2	L SUM	1.000 X	=			
Z0049901	R&D NON-FR ASB BLD 1	L SUM	1.000 X	=			

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				DOLLARS	CENTS	DOLLARS	CTS
Z0049902	R&D NON-FR ASB BLD 2	L SUM	1.000 X				
Z0076600	TRAINEES	HOUR	5,000.000 X		0.80	4,000.00	
20100110	TREE REMOV 6-15	UNIT	2,034.000 X				
20100210	TREE REMOV OVER 15	UNIT	2,135.000 X				
20101000	TEMPORARY FENCE	FOOT	1,000.000 X				
20101100	TREE TRUNK PROTECTION	EACH	104.000 X				
20101200	TREE ROOT PRUNING	EACH	32.000 X				
20101400	NITROGEN FERT NUTR	POUND	2,598.000 X				
20101500	PHOSPHORUS FERT NUTR	POUND	2,598.000 X				
20101600	POTASSIUM FERT NUTR	POUND	2,598.000 X				
20200100	EARTH EXCAVATION	CU YD	252,275.000 X				
20200300	EARTH EXC - EROS CONT	CU YD	5,095.000 X				
20201200	REM & DISP UNS MATL	CU YD	4,920.000 X				
20201550	SUB GRAN MAT B	CU YD	23,353.000 X				
20700220	POROUS GRAN EMBANK	CU YD	3,185.000 X				

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
20700400	POROUS GRAN EMB SPEC	CU YD	537.000 X				
20700420	POROUS GRAN EMB SUBGR	CU YD	4,885.000 X				
20800150	TRENCH BACKFILL	CU YD	2,509.000 X				
21101505	TOPSOIL EXC & PLAC	CU YD	25,967.000 X				
25000350	SEEDING CL 7	ACRE	28.000 X				
25100115	MULCH METHOD 2	ACRE	71.000 X				
28000250	TEMP EROS CONTR SEED	POUND	5,773.000 X				
28000400	PERIMETER EROS BAR	FOOT	36,776.000 X				
28000500	INLET & PIPE PROTECT	EACH	4.000 X				
28000510	INLET FILTERS	EACH	128.000 X				
28100105	STONE RIPRAP CL A3	SQ YD	355.000 X				
28100107	STONE RIPRAP CL A4	SQ YD	3,820.000 X				
28200200	FILTER FABRIC	SQ YD	4,174.000 X				
35101800	AGG BASE CSE B 6	SQ YD	8,250.000 X				
35102000	AGG BASE CSE B 8	SQ YD	2,911.000 X				

FAP 361
 06-00214-15-BR
 KANE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
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ECMS002 DTGECM03 ECMR003 PAGE 8
 RUN DATE - 05/11/09
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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
35300410	PCC BSE CSE 9 1/2	SQ YD	17,974.000 X	=		=	
40201000	AGGREGATE-TEMP ACCESS	TON	800.000 X	=		=	
40600100	BIT MATLS PR CT	GALLON	5,701.000 X	=		=	
40600300	AGG PR CT	TON	23.000 X	=		=	
40600635	LEV BIND MM N70	TON	255.000 X	=		=	
40600895	CONSTRUC TEST STRIP	EACH	3.000 X	=		=	
40603080	HMA BC IL-19.0 N50	TON	592.000 X	=		=	
40603085	HMA BC IL-19.0 N70	TON	10,121.000 X	=		=	
40603240	P HMA BC IL19.0 N90	TON	2,265.000 X	=		=	
40603310	HMA SC "C" N50	TON	1,646.000 X	=		=	
40603535	P HMA SC "D" N50	TON	277.000 X	=		=	
40603595	P HMA SC "F" N90	TON	4,078.000 X	=		=	
42000400	PCC PVT 9	SQ YD	1,152.000 X	=		=	
42000501	PCC PVT 10 JOINTED	SQ YD	36,639.000 X	=		=	
42001300	PROTECTIVE COAT	SQ YD	88,046.000 X	=		=	

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				DOLLARS	CENTS	DOLLARS	CTS
44000100	PAVEMENT REM	SQ YD	37,862.000 X	=			
44000198	HMA SURF REM VAR DP	SQ YD	7,549.000 X	=			
44000200	DRIVE PAVEMENT REM	SQ YD	4,319.000 X	=			
44000500	COMB CURB GUTTER REM	FOOT	514.000 X	=			
44000915	HMA SURFACE RM (DECK)	SQ YD	605.000 X	=			
48101600	AGGREGATE SHLDS B 8	SQ YD	2,909.000 X	=			
48203021	HMA SHOULDERS 6	SQ YD	1,290.000 X	=			
48203029	HMA SHOULDERS 8	SQ YD	9,974.000 X	=			
48300100	PCC SHOULDERS 6	SQ YD	287.000 X	=			
50100200	REM EXIST STRUCT	L SUM	1.000 X	=			
50105220	PIPE CULVERT REMOV	FOOT	825.000 X	=			
50200100	STRUCTURE EXCAVATION	CU YD	5,121.000 X	=			
50300225	CONC STRUCT	CU YD	2,725.000 X	=			
50300255	CONC SUP-STR	CU YD	1,231.000 X	=			
50300260	BR DECK GROOVING	SQ YD	2,724.000 X	=			

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
50300280	CONCRETE ENCASEMENT	CU YD	37.000 X				
50300300	PROTECTIVE COAT	SQ YD	3,151.000 X				
50400905	F & E P CON I-BM 42	FOOT	1,668.000 X				
50401005	F & E P CON I-BM 48	FOOT	479.000 X				
50800205	REINF BARS, EPOXY CTD	POUND	711,640.000 X				
50800515	BAR SPLICERS	EACH	1,332.000 X				
50901115	STEEL RAILING SPL	FOOT	290.000 X				
50901720	BICYCLE RAILING	FOOT	749.000 X				
50901750	PARAPET RAILING	FOOT	212.000 X				
51201600	FUR STL PILE HP12X53	FOOT	6,672.000 X				
51202305	DRIVING PILES	FOOT	6,672.000 X				
51203600	TEST PILE ST HP12X53	EACH	6.000 X				
51204650	PILE SHOES	EACH	104.000 X				
51500100	NAME PLATES	EACH	4.000 X				
54213657	PRC FLAR END SEC 12	EACH	5.000 X				

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
54213660	PRC FLAR END SEC 15	EACH	21.000 X	=		=	
54213663	PRC FLAR END SEC 18	EACH	8.000 X	=		=	
54213669	PRC FLAR END SEC 24	EACH	17.000 X	=		=	
54213681	PRC FLAR END SEC 36	EACH	2.000 X	=		=	
54244405	FL INLT BX MED 542546	EACH	1.000 X	=		=	
54247130	GRATING-C FL END S 24	EACH	17.000 X	=		=	
54247170	GRATING-C FL END S 36	EACH	2.000 X	=		=	
550A0050	STORM SEW CL A 1 12	FOOT	314.000 X	=		=	
550A0070	STORM SEW CL A 1 15	FOOT	322.000 X	=		=	
550A0090	STORM SEW CL A 1 18	FOOT	183.000 X	=		=	
550A0120	STORM SEW CL A 1 24	FOOT	848.000 X	=		=	
550A0160	STORM SEW CL A 1 36	FOOT	89.000 X	=		=	
550A0340	STORM SEW CL A 2 12	FOOT	4,042.000 X	=		=	
550A0360	STORM SEW CL A 2 15	FOOT	1,096.000 X	=		=	
550A0380	STORM SEW CL A 2 18	FOOT	1,291.000 X	=		=	

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
550A0410	STORM SEW CL A 2 24	FOOT	788.000 X	=			
550A0660	STORM SEW CL A 3 15	FOOT	126.000 X	=			
550A0680	STORM SEW CL A 3 18	FOOT	96.000 X	=			
550A0700	STORM SEW CL A 3 21	FOOT	43.000 X	=			
550A1000	STORM SEW CL A 4 21	FOOT	148.000 X	=			
55039700	SS CLEANED	FOOT	505.000 X	=			
552A0900	SS JKD CL A 24	FOOT	139.000 X	=			
59100100	GEOCOMPOSITE WALL DR	SQ YD	1,511.000 X	=			
60109580	P UNDR FOR STRUCT 4	FOOT	1,336.000 X	=			
60200105	CB TA 4 DIA T1F OL	EACH	1.000 X	=			
60200305	CB TA 4 DIA T3F&G	EACH	6.000 X	=			
60200805	CB TA 4 DIA T8G	EACH	15.000 X	=			
60201105	CB TA 4 DIA T11F&G	EACH	15.000 X	=			
60201340	CB TA 4 DIA T24F&G	EACH	83.000 X	=			
60212814	CB TD 4 DIA T24F&G	EACH	9.000 X	=			

FAP 361
 06-00214-15-BR
 KANE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63074

ECMS002 DTGECM03 ECMR003 PAGE 13
 RUN DATE - 05/11/09
 RUN TIME - 203508

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
60218400	MAN TA 4 DIA T1F CL	EACH	42.000 X				
60221100	MAN TA 5 DIA T1F CL	EACH	11.000 X				
60223800	MAN TA 6 DIA T1F CL	EACH	3.000 X				
60500040	REMOV MANHOLES	EACH	1.000 X				
60500050	REMOV CATCH BAS	EACH	1.000 X				
60600605	CONC CURB TB	FOOT	30.000 X				
60603800	COMB CC&G TB6.12	FOOT	1,013.000 X				
60605000	COMB CC&G TB6.24	FOOT	15,596.000 X				
60619100	CONC MED TSB SPL	SQ FT	1,702.000 X				
60624600	CORRUGATED MED	SQ FT	1,399.000 X				
60625600	ISLAND PAVEMENT 6	SQ YD	283.000 X				
60625900	PCC RAMP MED TERM	EACH	10.000 X				
63000001	SPBGR TY A 6FT POSTS	FOOT	1,859.000 X				
63000003	SPBGR TY A 9FT POSTS	FOOT	2,855.000 X				
63000025	SPBGR ATTACH TO STR	FOOT	103.000 X				

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
63100045	TRAF BAR TERM T2	EACH	7.000 X	=	=	=	=
63100070	TRAF BAR TERM T5	EACH	6.000 X	=	=	=	=
63100085	TRAF BAR TERM T6	EACH	7.000 X	=	=	=	=
63100089	TRAF BAR TERM T6B	EACH	3.000 X	=	=	=	=
63100167	TR BAR TRM T1 SPL TAN	EACH	9.000 X	=	=	=	=
63100169	TR BAR TRM T1 SPL FLR	EACH	5.000 X	=	=	=	=
63200310	GUARDRAIL REMOV	FOOT	1,113.000 X	=	=	=	=
63700279	CONC BAR 1F 42HT SPL	FOOT	82.000 X	=	=	=	=
63700805	CONC BAR TRANS	FOOT	30.000 X	=	=	=	=
67000400	ENGR FIELD OFFICE A	CAL MO	16.000 X	=	=	=	=
67100100	MOBILIZATION	L SUM	1.000 X	=	=	=	=
70101700	TRAF CONT & PROT	L SUM	1.000 X	=	=	=	=
70106800	CHANGEABLE MESSAGE SN	CAL MO	64.000 X	=	=	=	=
70400100	TEMP CONC BARRIER	FOOT	4,050.000 X	=	=	=	=
70400200	REL TEMP CONC BARRIER	FOOT	1,812.000 X	=	=	=	=

FAP 361
 06-00214-15-BR
 KANE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63074

ECMS002 DTGECM03 ECMR003 PAGE 15
 RUN DATE - 05/11/09
 RUN TIME - 203508

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
72000100	SIGN PANEL T1	SQ FT	371.000 X	=		=	
72000200	SIGN PANEL T2	SQ FT	20.000 X	=		=	
72400310	REMOV SIGN PANEL T1	SQ FT	213.000 X	=		=	
72400320	REMOV SIGN PANEL T2	SQ FT	32.000 X	=		=	
72500100	OBJECT MARKER T1	EACH	2.000 X	=		=	
72800100	TELES STL SIN SUPPORT	FOOT	546.000 X	=		=	
73100100	BASE TEL STL SIN SUPP	EACH	37.000 X	=		=	
78000100	THPL PVT MK LTR & SYM	SQ FT	858.000 X	=		=	
78000200	THPL PVT MK LINE 4	FOOT	24,597.000 X	=		=	
78000400	THPL PVT MK LINE 6	FOOT	2,349.000 X	=		=	
78000600	THPL PVT MK LINE 12	FOOT	608.000 X	=		=	
78000650	THPL PVT MK LINE 24	FOOT	201.000 X	=		=	
78005100	EPOXY PVT MK LTR-SYM	SQ FT	183.000 X	=		=	
78005110	EPOXY PVT MK LINE 4	FOOT	10,556.000 X	=		=	
78005130	EPOXY PVT MK LINE 6	FOOT	626.000 X	=		=	

FAP 361
 06-00214-15-BR
 KANE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63074

ECMS002 DTGECM03 ECMR003 PAGE 16
 RUN DATE - 05/11/09
 RUN TIME - 203508

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
78005140	EPOXY PVT MK LINE 8	FOOT	240.000 X	=	=	=	=
78005150	EPOXY PVT MK LINE 12	FOOT	397.000 X	=	=	=	=
78005180	EPOXY PVT MK LINE 24	FOOT	27.000 X	=	=	=	=
78008200	POLYUREA PM T1 LTR-SY	SQ FT	803.000 X	=	=	=	=
78008210	POLYUREA PM T1 LN 4	FOOT	7,665.000 X	=	=	=	=
78008230	POLYUREA PM T1 LN 6	FOOT	4,223.000 X	=	=	=	=
78008240	POLYUREA PM T1 LN 8	FOOT	664.000 X	=	=	=	=
78008250	POLYUREA PM T1 LN 12	FOOT	621.000 X	=	=	=	=
78008270	POLYUREA PM T1 LN 24	FOOT	279.000 X	=	=	=	=
78100100	RAISED REFL PAVT MKR	EACH	281.000 X	=	=	=	=
78100105	RAISED REF PVT MKR BR	EACH	31.000 X	=	=	=	=
78200200	BIDIR PRIS BAR REFL	EACH	8.000 X	=	=	=	=
78200405	GUARDRAIL MARKERS	EACH	154.000 X	=	=	=	=
80400100	ELECT SERV INSTALL	EACH	3.000 X	=	=	=	=
81000500	CON T 1 1/2 GALVS	FOOT	23.000 X	=	=	=	=

FAP 361
 06-00214-15-BR
 KANE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63074

ECMS002 DTGECM03 ECMR003 PAGE 17
 RUN DATE - 05/11/09
 RUN TIME - 203508

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
81000600	CON T 2 GALVS	FOOT	3,709.000 X	=			
81000700	CON T 2 1/2 GALVS	FOOT	151.000 X	=			
81000800	CON T 3 GALVS	FOOT	257.000 X	=			
81001000	CON T 4 GALVS	FOOT	140.000 X	=			
81012300	CON T 1 PVC	FOOT	395.000 X	=			
81018500	CON P 2 GALVS	FOOT	374.000 X	=			
81018700	CON P 3 GALVS	FOOT	158.000 X	=			
81018900	CON P 4 GALVS	FOOT	747.000 X	=			
81100600	CON AT ST 2 GALVS	FOOT	85.000 X	=			
81200210	CON EMB STR 1 PVC	FOOT	540.000 X	=			
81300610	JUN BX SS AS 14X12X6	EACH	2.000 X	=			
81400100	HANDHOLE	EACH	24.000 X	=			
81400200	HD HANDHOLE	EACH	6.000 X	=			
81400300	DBL HANDHOLE	EACH	4.000 X	=			
81700110	EC C EPR RHW 1C 10	FOOT	925.000 X	=			

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
81700125	EC C EPR RHW 1C 4	FOOT	150.000 X	=			
81700315	EC C EPR RHW 3-1C 10	FOOT	925.000 X	=			
81700345	EC C EPR RHW 3-1C 4	FOOT	150.000 X	=			
81900200	TR & BKFIL F ELECT WK	FOOT	4,684.000 X	=			
82107100	UNDERPAS LUM 70W HPS	EACH	22.000 X	=			
82500510	LT CONT CBRCS 60-240	EACH	1.000 X	=			
85000200	MAIN EX TR SIG INSTAL	EACH	2.000 X	=			
85700300	FAC T5 CAB	EACH	2.000 X	=			
86000105	MASTER CONTROLLER SPL	EACH	1.000 X	=			
86400100	TRANSCEIVER - FIB OPT	EACH	2.000 X	=			
87100160	FO CAB C 62.5/125 24F	FOOT	4,697.000 X	=			
87301215	ELCBL C SIGNAL 14 2C	FOOT	409.000 X	=			
87301225	ELCBL C SIGNAL 14 3C	FOOT	409.000 X	=			
87301245	ELCBL C SIGNAL 14 5C	FOOT	7,795.000 X	=			
87301255	ELCBL C SIGNAL 14 7C	FOOT	3,244.000 X	=			

FAP 361
 06-00214-15-BR
 KANE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63074

ECMS002 DTGECM03 ECMR003 PAGE 19
 RUN DATE - 05/11/09
 RUN TIME - 203508

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
87301305	ELCBL C LEAD 14 1PR	FOOT	7,743.000 X	=			
87301805	ELCBL C SERV 6 2C	FOOT	220.000 X	=			
87502440	TS POST GALVS 10	EACH	1.000 X	=			
87502480	TS POST GALVS 14	EACH	4.000 X	=			
87502500	TS POST GALVS 16	EACH	6.000 X	=			
87700220	S MAA & P 36	EACH	1.000 X	=			
87700300	S MAA & P 52	EACH	1.000 X	=			
87700414	S MAA & P 66	EACH	3.000 X	=			
87700430	S MAA & P 75	EACH	1.000 X	=			
87800100	CONC FDN TY A	FOOT	44.000 X	=			
87800150	CONC FDN TY C	FOOT	8.000 X	=			
87800400	CONC FDN TY E 30D	FOOT	15.000 X	=			
87800415	CONC FDN TY E 36D	FOOT	15.000 X	=			
87800420	CONC FDN TY E 42D	FOOT	100.000 X	=			
88030020	SH LED 1F 3S MAM	EACH	18.000 X	=			

FAP 361
 06-00214-15-BR
 KANE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63074

ECMS002 DTGECM03 ECMR003 PAGE 20
 RUN DATE - 05/11/09
 RUN TIME - 203508

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
88030050	SH LED 1F 3S BM	EACH	10.000	X	=		
88030100	SH LED 1F 5S BM	EACH	9.000	X	=		
88030110	SH LED 1F 5S MAM	EACH	4.000	X	=		
88102717	PED SH LED 1F BM CDT	EACH	2.000	X	=		
88200210	TS BACKPLATE LOU ALUM	EACH	22.000	X	=		
88500100	INDUCTIVE LOOP DETECT	EACH	21.000	X	=		
88600100	DET LOOP T1	FOOT	354.000	X	=		
88800100	PED PUSH-BUTTON	EACH	2.000	X	=		
89000100	TEMP TR SIG INSTALL	EACH	1.000	X	=		
89502375	REMOV EX TS EQUIP	EACH	2.000	X	=		
89502380	REMOV EX HANDHOLE	EACH	3.000	X	=		
89502385	REMOV EX CONC FDN	EACH	6.000	X	=		
				TOTAL		\$	

NOTE:
 *** PLEASE TURN PAGE FOR IMPORTANT NOTES ***

FAP 361
06-00214-15-BR
KANE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 63074

ECMS002 DTGECM03 ECMR003 PAGE 21
RUN DATE - 05/11/09
RUN TIME - 203508

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 \$177,412.00. Sixty percent of the salary is \$106,447.20.

RETURN WITH BID

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

D. Negotiations

1. The Illinois Procurement Code provides in pertinent part:

Section 50-15. Negotiations.

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

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

E. Inducements

1. The Illinois Procurement Code provides:

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

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

F. Revolving Door Prohibition

1. The Illinois Procurement Code provides:

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

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

G. Reporting Anticompetitive Practices

1. The Illinois Procurement Code provides:

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

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

H. Confidentiality

1. The Illinois Procurement Code provides:

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

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

RETURN WITH BID

I. Insider Information

1. The Illinois Procurement Act provides:

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

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

III. CERTIFICATIONS

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

B. Bribery

1. The Illinois Procurement Code provides:

Section 50-5. Bribery.

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

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

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

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

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

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

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

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

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

C. Educational Loan

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

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

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

D. Bid-Rigging/Bid Rotating

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

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

RETURN WITH BID

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

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

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

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

E. International Anti-Boycott

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

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

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

F. Drug Free Workplace

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

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

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

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

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

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

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

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

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

RETURN WITH BID

G. Debt Delinquency

1. The Illinois Procurement Code provides:

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

The contractor or bidder certifies that it, or any affiliate, is not barred from being awarded a contract under 30 ILCS 500. Section 50-11 prohibits a person from entering into a contract with a State agency if it knows or should know that it, or any affiliate, is delinquent in the payment of any debt to the State as defined by the Debt Collection Board. Section 50-12 prohibits a person from entering into a contract with a State agency if it, or any affiliate, has failed to collect and remit Illinois Use Tax on all sales of tangible personal property into the State of Illinois in accordance with the provisions of the Illinois Use Tax Act. The contractor further acknowledges that the contracting State agency may declare the contract void if this certification is false or if the contractor, or any affiliate, is determined to be delinquent in the payment of any debt to the State during the term of the contract.

H. Sarbanes-Oxley Act of 2002

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

The contractor certifies in accordance with 30 ILCS 500/50-10.5 that no officer, director, partner or other managerial agent of the contracting business has been convicted of a felony under the Sarbanes-Oxley Act of 2002 or a Class 3 or Class 2 felony under the Illinois Securities Law of 1953 for a period of five years prior to the date of the bid or contract. The contractor acknowledges that the contracting agency shall declare the contract void if this certification is false.

I. Addenda

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

J. Section 42 of the Environmental Protection Act

The contractor certifies in accordance with 30 ILCS 500/50-12 that the bidder or contractor is not barred from being awarded a contract under this Section which prohibits the bidding on or entering into contracts with the State of Illinois or a State agency by a person or business found by a court or the Pollution Control Board to have committed a willful or knowing violation of Section 42 of the Environmental Protection Act for a period of five years from the date of the order. The contractor acknowledges that the contracting agency may declare the contract void if this certification is false.

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

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

NA - FEDERAL

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

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

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

RETURN WITH BID

M. Disclosure of Business Operations in Iran

Section 50-36 of the Illinois Procurement Code, 30ILCS 500/50-36 provides that each bid, offer, or proposal submitted for a State contract shall include a disclosure of whether or not the Company acting as the bidder, offer or, or proposing entity, or any of its corporate parents or subsidiaries, within the 24 months before submission of the bid, offer, or proposal had business operations that involved contracts with or provision of supplies or services to the Government of Iran, companies in which the Government of Iran has any direct or indirect equity share, consortiums or projects commissioned by the Government of Iran, or companies involved in consortiums or projects commissioned by the Government of Iran and either of the following conditions apply:

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

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

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

Check the appropriate statement:

Company has no business operations in Iran to disclose.

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

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

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

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

The undersigned business entity certifies that it has registered as a business with the State Board of Elections and acknowledges a continuing duty to update the registration in accordance with the above referenced statutes. A copy of the certificate of registration shall be submitted with the bid. The bidder is cautioned that the Department will not award a contract without submission of the certificate of registration.

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

TO BE RETURNED WITH BID

IV. DISCLOSURES

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

B. Financial Interests and Conflicts of Interest

1. Section 50-35 of the Illinois Procurement Code provides that all bids of more than \$10,000 shall be accompanied by disclosure of the financial interests of the bidder. This disclosed information for the successful bidder, will be maintained as public information subject to release by request pursuant to the Freedom of Information Act.

The financial interests to be disclosed shall include ownership or distributive income share that is in excess of 5%, or an amount greater than 60% of the annual salary of the Governor, of the bidding entity or its parent entity, whichever is less, unless the contractor or bidder is a publicly traded entity subject to Federal 10K reporting, in which case it may submit its 10K disclosure in place of the prescribed disclosure. If a bidder is a privately held entity that is exempt from Federal 10K reporting, but has more than 400 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. The disclosure shall include the names, addresses, and dollar or proportionate share of ownership of each person making the disclosure, their instrument of ownership or beneficial relationship, and notice of any potential conflict of interest resulting from the current ownership or beneficial interest of each person making the disclosure having any of the relationships identified in Section 50-35 and on the disclosure form.

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

2. Disclosure Forms. Disclosure Form A is attached for use concerning the individuals meeting the above ownership or distributive share requirements. Subject individuals should be covered each by one form. In addition, a second form (Disclosure Form B) provides for the disclosure of current or pending procurement relationships with other (non-IDOT) state agencies. **The forms must be included with each bid or incorporated by reference.**

C. Disclosure Form Instructions

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

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

CERTIFICATION STATEMENT

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

(Bidding Company)



Signature of Authorized Representative

Date

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

If the bidder is a publicly traded entity subject to Federal 10K reporting, the 10K Report may be submitted to meet the requirements of Form A. If a bidder is a privately held entity that is exempt from Federal 10K reporting, but has more than 400 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. If a bidder is not subject to Federal 10K reporting, the bidder must determine if any individuals are required by law to complete a financial disclosure form. To do this, the bidder should answer each of the following questions. A "YES" answer indicates Form A must be completed. If the answer to each of the following questions is "NO", then the NOT APPLICABLE STATEMENT on the second page of Form A must be signed and dated by a person that is authorized to execute contracts for the bidding company. Note: These questions are for assistance only and are not required to be completed.

1. Does anyone in your organization have a direct or beneficial ownership share of greater than 5% of the bidding entity or parent entity? YES ___ NO ___
2. Does anyone in your organization have a direct or beneficial ownership share of less than 5%, but which has a value greater than \$102,600.00? YES ___ NO ___
3. Does anyone in your organization receive more than \$106,447.20 of the bidding entity's or parent entity's distributive income? (Note: Distributive income is, for these purposes, any type of distribution of profits. An annual salary is not distributive income.) YES ___ NO ___
4. Does anyone in your organization receive greater than 5% of the bidding entity's or parent entity's total distributive income, but which is less than \$106,447.20? YES ___ NO ___
(Note: Only one set of forms needs to be completed per person per bid even if a specific individual would require a yes answer to more than one question.)

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

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

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

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

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

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

D. Bidders Submitting More Than One Bid

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

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

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**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

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

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

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

DISCLOSURE OF FINANCIAL INFORMATION

1. Disclosure of Financial Information. The individual named below has an interest in the BIDDER (or its parent) in terms of ownership or distributive income share in excess of 5%, or an interest which has a value of more than \$106,447.20 (60% of the Governor's salary as of 3/1/09). **(Make copies of this form as necessary and attach a separate Disclosure Form A for each individual meeting these requirements)**

FOR INDIVIDUAL (type or print information)

NAME: _____

ADDRESS _____

Type of ownership/distributable income share:

stock _____ sole proprietorship _____ Partnership _____ other: (explain on separate sheet):
% or \$ value of ownership/distributable income share: _____

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

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

Yes ___ No ___

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

- Are you currently an officer or employee of either the Capitol Development Board or the Illinois Toll Highway Authority? Yes ___ No ___
- Are you currently appointed to or employed by any agency of the State of Illinois? If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds \$106,447.20, (60% of the Governor's salary as of 3/1/09) provide the name the State agency for which you are employed and your annual salary. _____

RETURN WITH BID/OFFER

3. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds \$106,447.20, (60% of the Governor's salary as of 3/1/09) are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of the salary of the Governor? Yes ___ No ___
4. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds \$106,447.20, (60% of the Governor's salary as of 3/1/09) are you and your spouse or minor children entitled to receive (i) more than 15% in aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of 2 times the salary of the Governor? Yes ___ No ___

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

Yes ___ No ___

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

1. Is your spouse or any minor children currently an officer or employee of the Capitol Development Board or the Illinois Toll Highway Authority? Yes ___ No ___
2. Is your spouse or any minor children currently appointed to or employed by any agency of the State of Illinois? If your spouse or minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds \$106,447.20, (60% of the Governor's salary as of 3/1/09) provide the name of the spouse and/or minor children, the name of the State agency for which he/she is employed and his/her annual salary. _____
-
3. If your spouse or any minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds \$106,447.20.00, (60% of the salary of the Governor as of 3/1/09) are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of the salary of the Governor? Yes ___ No ___
4. If your spouse or any minor children are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds \$106,447.20, (60% of the Governor's salary as of 3/1/09) are you and your spouse or any minor children entitled to receive (i) more than 15% in the aggregate of the total distributable income from your firm, partnership, association or corporation, or (ii) an amount in excess of 2 times the salary of the Governor? Yes ___ No ___

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

Yes ___ No ___

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

Yes ___ No ___

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

Yes ___ No ___

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

Yes ___ No ___

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

Yes ___ No ___

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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: _____ Date _____
Signature of Individual or Authorized Representative

NOT APPLICABLE STATEMENT

I have determined that no individuals associated with this organization meet the criteria that would require the completion of this Form A.
This Disclosure Form A is submitted on behalf of the CONTRACTOR listed on the previous page.
 _____ Date _____
Signature of Authorized Representative

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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 CHECKED

<input type="checkbox"/>	_____	_____
	Signature of Authorized Representative	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. 63074
KANE County
Section 06-00214-15-BR
Project ARA-TE-CMM-HPP-1527(012)
Route FAP 361 (Stearns Road)
District 1 Construction Funds**

PART II. WORKFORCE PROJECTION - continued

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

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

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

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

PART III. AFFIRMATIVE ACTION PLAN

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

Company _____ Telephone Number _____

Address _____

NOTICE REGARDING SIGNATURE

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

Signature: _____ Title: _____ Date: _____

Instructions: All tables must include subcontractor personnel in addition to prime contractor personnel.

Table A - Include both the number of employees that would be hired to perform the contract work and the total number currently employed (Table B) that will be allocated to contract work, and include all apprentices and on-the-job trainees. The "Total Employees" column should include all employees including all minorities, apprentices and on-the-job trainees to be employed on the contract work.

Table B - Include all employees currently employed that will be allocated to the contract work including any apprentices and on-the-job trainees currently employed.

Table C - Indicate the racial breakdown of the total apprentices and on-the-job trainees shown in Table A.

RETURN WITH BID

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. 63074
KANE County
Section 06-00214-15-BR
Project ARA-TE-CMM-HPP-1527(012)
Route FAP 361 (Stearns Road)
District 1 Construction Funds**

PROPOSAL SIGNATURE SHEET

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

(IF AN INDIVIDUAL)

Firm Name _____
Signature of Owner _____
Business Address _____

(IF A CO-PARTNERSHIP)

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

(IF A CORPORATION)

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 _____ day of _____ A.D., _____ .

PRINCIPAL

SURETY

(Company Name)

(Company Name)

By _____
(Signature & Title)

By: _____
(Signature of Attorney-in-Fact)

Notary Certification for Principal and Surety

STATE OF ILLINOIS,
County of _____

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

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

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

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

My commission expires _____

Notary Public

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

Electronic Bid Bond ID# _____

Company / Bidder Name _____



Signature and Title _____

PROPOSAL ENVELOPE



PROPOSALS

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

Item No.	Item No.	Item No.

Submitted By:

Name:
Address:
Phone No.

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

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

NOTICE

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

CONTRACTOR OFFICE COPY OF CONTRACT SPECIFICATIONS

NOTICE

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

**Contract No. 63074
KANE County
Section 06-00214-15-BR
Project ARA-TE-CMM-HPP-1527(012)
Route FAP 361 (Stearns Road)
District 1 Construction Funds**



Illinois Department of Transportation



- 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., June 12, 2009. 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. 63074
KANE County
Section 06-00214-15-BR
Project ARA-TE-CMM-HPP-1527(012)
Route FAP 361 (Stearns Road)
District 1 Construction Funds**

Construction of new roadway and roadway improvements totalling approximately 2.22 miles for the extension and realignment of Stearns Road from the DuPage County line to IL Route 25 including a new intersection with IL Route 25 and Dunham Road. Project also includes four new structures and the rehabilitation of another structure. Two new structures will carry IL Route 25/Dunham and IL Route 25/ Stearns over the east branch of Brewster Creek, two new underpasses to accommodate relocated multi-use trail and the rehabilitation to a structure over the Chicago Central and Pacific Railroad.

- 3. INSTRUCTIONS TO BIDDERS.** (a) This Notice, the invitation for bids, proposal and letter of award shall, together with all other documents in accordance with Article 101.09 of the Standard Specifications for Road and Bridge Construction, become part of the contract. Bidders are cautioned to read and examine carefully all documents, to make all required inspections, and to inquire or seek explanation of the same prior to submission of a bid.

(b) State law, and, if the work is to be paid wholly or in part with Federal-aid funds, Federal law requires the bidder to make various certifications as a part of the proposal and contract. By execution and submission of the proposal, the bidder makes the certification contained therein. A false or fraudulent certification shall, in addition to all other remedies provided by law, be a breach of contract and may result in termination of the contract.
- 4. AWARD CRITERIA AND REJECTION OF BIDS.** This contract will be awarded to the lowest responsive and responsible bidder considering conformity with the terms and conditions established by the Department in the rules, Invitation for Bids and contract documents. The issuance of plans and proposal forms for bidding based upon a prequalification rating shall not be the sole determinant of responsibility. The Department reserves the right to determine responsibility at the time of award, to reject any or all proposals, to readvertise the proposed improvement, and to waive technicalities.

By Order of the
Illinois Department of Transportation

Gary Hannig,
Acting Secretary

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2009

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

ERRATA Standard Specifications for Road and Bridge Construction (Adopted 1-1-07) (Revised 1-1-09)

SUPPLEMENTAL SPECIFICATIONS

<u>Std. Spec. Sec.</u>	<u>Page No.</u>
201 Clearing, Tree Removal and Protection	1
205 Embankment	2
251 Mulch	3
253 Planting Woody Plants	4
280 Temporary Erosion Control	6
443 Reflective Crack Control Treatment	7
502 Excavation for Structures	10
503 Concrete Structures	11
504 Precast Concrete Structures	12
505 Steel Structures	13
540 Box Culverts	14
581 Waterproofing Membrane System	15
633 Removing and Reerecting Guardrail and Terminals	16
669 Removal and Disposal of Regulated Substances	17
672 Sealing Abandoned Water Wells	18
701 Work Zone Traffic Control and Protection	19
733 Overhead Sign Structures	20
783 Pavement Marking and Marker Removal	21
801 Electrical Requirements	22
805 Electrical Service Installation – Traffic Signals	23
836 Pole Foundation	24
838 Breakaway Devices	25
862 Uninterruptable Power Supply	26
873 Electric Cable	28
878 Traffic Signal Concrete Foundation	30
1004 Coarse Aggregates	31
1008 Structural Steel Coatings	32
1010 Finely Divided Materials	33
1020 Portland Cement Concrete	34
1022 Concrete Curing Materials	43
1024 Nonshrink Grout	44
1042 Precast Concrete Products	45
1062 Reflective Crack Control System	47
1069 Pole and Tower	49
1074 Control Equipment	52
1076 Wire and Cable	57
1081 Materials for Planting	58
1083 Elastomeric Bearings	60
1094 Overhead Sign Structures	61
1101 General Equipment	62
1102 Hot-Mix Asphalt Equipment	63
1106 Work Zone Traffic Control Devices	64

RECURRING SPECIAL PROVISIONS

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

<u>CHECK SHEET #</u>	<u>PAGE NO.</u>
1 <input checked="" type="checkbox"/>	Additional State Requirements For Federal-Aid Construction Contracts (Eff. 2-1-69) (Rev. 1-1-07) 65
2 <input checked="" type="checkbox"/>	Subletting of Contracts (Federal-Aid Contracts) (Eff. 1-1-88) (Rev. 5-1-93) 67
3 <input checked="" type="checkbox"/>	EEO (Eff. 7-21-78) (Rev. 11-18-80) 68
4 <input type="checkbox"/>	Specific Equal Employment Opportunity Responsibilities Non Federal-Aid Contracts (Eff. 3-20-69) (Rev. 1-1-94) 78
5 <input type="checkbox"/>	Required Provisions - State Contracts (Eff. 4-1-65) (Rev. 1-1-07) 83
6 <input type="checkbox"/>	Reserved 88
7 <input type="checkbox"/>	Reserved 89
8 <input checked="" type="checkbox"/>	Haul Road Stream Crossings, Other Temporary Stream Crossings, and In-Stream Work Pads (Eff. 1-2-92) (Rev. 1-1-98) 90
9 <input type="checkbox"/>	Construction Layout Stakes Except for Bridges (Eff. 1-1-99) (Rev. 1-1-07) 91
10 <input checked="" type="checkbox"/>	Construction Layout Stakes (Eff. 5-1-93) (Rev. 1-1-07) 94
11 <input type="checkbox"/>	Use of Geotextile Fabric for Railroad Crossing (Eff. 1-1-95) (Rev. 1-1-07) 97
12 <input type="checkbox"/>	Subsealing of Concrete Pavements (Eff. 11-1-84) (Rev. 1-1-07) 99
13 <input checked="" type="checkbox"/>	Hot-Mix Asphalt Surface Correction (Eff. 11-1-87) (Rev. 1-1-09) 103
14 <input checked="" type="checkbox"/>	Pavement and Shoulder Resurfacing (Eff. 2-1-00) (Rev. 1-1-09) 105
15 <input type="checkbox"/>	PCC Partial Depth Hot-Mix Asphalt Patching (Eff. 1-1-98) (Rev. 1-1-07) 106
16 <input type="checkbox"/>	Patching with Hot-Mix Asphalt Overlay Removal (Eff. 10-1-95) (Rev. 1-1-07) 108
17 <input type="checkbox"/>	Polymer Concrete (Eff. 8-1-95) (Rev. 1-1-08) 109
18 <input type="checkbox"/>	PVC Pipeliner (Eff. 4-1-04) (Rev. 1-1-07) 111
19 <input checked="" type="checkbox"/>	Pipe Underdrains (Eff. 9-9-87) (Rev. 1-1-07) 112
20 <input checked="" type="checkbox"/>	Guardrail and Barrier Wall Delineation (Eff. 12-15-93) (Rev. 1-1-97) 113
21 <input type="checkbox"/>	Bicycle Racks (Eff. 4-1-94) (Rev. 1-1-07) 117
22 <input type="checkbox"/>	Temporary Modular Glare Screen System (Eff. 1-1-00) (Rev. 1-1-07) 119
23 <input type="checkbox"/>	Temporary Portable Bridge Traffic Signals (Eff. 8-1-03) (Rev. 1-1-07) 121
24 <input checked="" type="checkbox"/>	Work Zone Public Information Signs (Eff. 9-1-02) (Rev. 1-1-07) 123
25 <input type="checkbox"/>	Night Time Inspection of Roadway Lighting (Eff. 5-1-96) 124
26 <input type="checkbox"/>	English Substitution of Metric Bolts (Eff. 7-1-96) 125
27 <input type="checkbox"/>	English Substitution of Metric Reinforcement Bars (Eff. 4-1-96) (Rev. 1-1-03) 126
28 <input type="checkbox"/>	Calcium Chloride Accelerator for Portland Cement Concrete (Eff. 1-1-01) 127
29 <input type="checkbox"/>	Reserved 128
30 <input type="checkbox"/>	Quality Control of Concrete Mixtures at the Plant (Eff. 8-1-00) (Rev. 1-1-09) 129
31 <input checked="" type="checkbox"/>	Quality Control/Quality Assurance of Concrete Mixtures (Eff. 4-1-92) (Rev. 1-1-09) 137
32 <input type="checkbox"/>	Asbestos Bearing Pad Removal (Eff. 11-1-03) 149
33 <input type="checkbox"/>	Asbestos Hot-Mix Asphalt Surface Removal (Eff. 6-1-89) (Rev. 1-1-09) 150
LRS 1	Reserved 152
LRS 2 <input type="checkbox"/>	Furnished Excavation (Eff. 1-1-99) (Rev. 1-1-07) 153
LRS 3 <input checked="" type="checkbox"/>	Work Zone Traffic Control (Eff. 1-1-99) (Rev. 1-1-07) 154
LRS 4 <input checked="" type="checkbox"/>	Flaggers in Work Zones (Eff. 1-1-99) (Rev. 1-1-07) 155
LRS 5 <input type="checkbox"/>	Contract Claims (Eff. 1-1-02) (Rev. 1-1-07) 156
LRS 6 <input type="checkbox"/>	Bidding Requirements and Conditions for Contract Proposals (Eff. 1-1-02) 157
LRS 7 <input type="checkbox"/>	Bidding Requirements and Conditions for Material Proposals (Eff. 1-1-02) (Rev. 1-1-03) 163
LRS 8 <input type="checkbox"/>	Failure to Complete the Work on Time (Eff. 1-1-99) 169
LRS 9 <input type="checkbox"/>	Bituminous Surface Treatments (Eff. 1-1-99) 170
LRS 10 <input type="checkbox"/>	Reflective Sheeting Type C (Eff. 1-1-99) (Rev. 1-1-02) 171
LRS 11 <input type="checkbox"/>	Employment Practices (Eff. 1-1-99) 172
LRS 12 <input type="checkbox"/>	Wages of Employees on Public Works (Eff. 1-1-99) (Rev. 4-1-06) 174
LRS 13 <input type="checkbox"/>	Selection of Labor (Eff. 1-1-99) 175
LRS 14 <input type="checkbox"/>	Paving Brick and Concrete Paver Pavements and Sidewalks (Eff. 1-1-04) (Rev. 1-1-09) 176
LRS 15 <input type="checkbox"/>	Partial Payments (Eff. 1-1-07) 179

SPECIAL PROVISIONS

NEW STEARNS ROAD – STAGE 3
(F.A.P. 361 ROUTE IL-25 /
STEARNS ROAD DUNHAM ROAD)
SECTION: 06-00214-15-BR
PROJECT NO. HPP-1527(012)
JOB NO.: C-91-246-06
CONTRACT NO. 63074
KANE / DUPAGE COUNTY

100% SUBMITTAL

Prepared by:

benesch
alfred benesch & company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601

April 27, 2009

INDEX OF SPECIAL PROVISIONS

LOCATION AND DESCRIPTION OF PROJECT 1
SUBSURFACE EXPLORATION DATA..... 1
SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK..... 2
MATERIALS QC/QA POLICY NOT SPECIFICATIONS 2
SPECIAL / NON-SPECIAL WASTE POLICY NOT SPECIFICATIONS 3
SPECIAL INSTRUCTIONS TO THE BIDDER 3
COMPLETION DATE PLUS GUARANTEED WORKING DAYS..... 3
CORRIDOR SPECIFICATIONS..... 5
 COORDINATION AND COOPERATION 6
 DRAINAGE AND EROSION CONTROL..... 12
 ENVIRONMENTAL CONSIDERATIONS AND COMMITMENTS 14
 EROSION AND SEDIMENT CONTROLS..... 16
 EROSION AND SEDIMENT CONTROL SCHEDULE..... 24
 LANDSCAPE COORDINATION AND TRANSFER OF EROSION CONTROL DEVICES 25
 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM / EROSION AND
 SEDIMENT CONTROL DEFICIENCY DEDUCTION 26
 RAILROAD PROTECTIVE LIABILITY INSURANCE 27
 RAILROAD RIGHT OF ENTRY (CCP)..... 29
 RAILROAD RIGHT OF ENTRY (UP) 30
 SCHEDULE 31
 INSURANCE 35
DISTRICT 1 SPECIAL PROVISIONS 36
 ASBESTOS REMOVAL..... 37
 AGGREGATE SURFACE COURSE FOR TEMPORARY ACCESS..... 50
 CLEANING EXISTING DRAINAGE STRUCTURES 52
 EMBANKMENT I 53
 EPOXY COATING ON REINFORCEMENT (DISTRICT ONE)..... 54
 FINE AGGREGATE FOR HOT-MIX ASPHALT (HMA) (DISTRICT ONE) 55
 GROUND ROD..... 56
 HOT MIX ASPHALT – DENSITY TESTING OF LONGITUDINAL JOINTS (D-1) 57
 MAINTENANCE OF ROADWAYS..... 59
 POROUS GRANULAR-EMBANKMENT, SUBGRADE..... 60
 RECLAIMED ASPHALT PAVEMENT FOR NON-POROUS EMBANKMENT AND BACKFILL 62
 TEMPERATURE CONTROL FOR CONCRETE PLACEMENT (DISTRICT ONE) 63

SLOTTED DRAIN.....	64
STATUS OF UTILITIES TO BE ADJUSTED.....	65
UNDERGROUND RACEWAYS (DISTRICT ONE).....	66
UNIT DUCT (DISTRICT ONE).....	67
USE OF RAP (DIST 1)	69
WIRE AND CABLE (DISTRICT ONE).....	75
PROJECT SPECIFIC SPECIAL PROVISIONS	77
POROUS GRANULAR EMBANKMENT (SUBGRADE)	78
HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	79
BRIDGE DECK OVERLAY REMOVAL.....	79
REMOVAL OF EXISTING STRUCTURE.....	79
CONCRETE MEDIAN, TYPE SB (SPECIAL).....	82
ISLAND PAVEMENT (6").....	82
P.C.C. RAMPED MEDIAN TERMINAL	82
TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT).....	82
TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (FLARED).....	83
TRAFFIC BARRIER TERMINAL TYPE 6B	83
CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT (SPECIAL)	83
CONCRETE BARRIER TRANSITION	84
TRAFFIC CONTROL AND PROTECTION	84
CHARGE FOR TRAFFIC CONTROL DEFICIENCY	87
GUARDRAIL REFLECTORS	87
MASTER CONTROLLER (SPECIAL).....	88
REMOVE EXISTING HANDHOLE.....	88
REMOVE EXISTING CONCRETE FOUNDATION	88
PERENNIAL PLANTS, WETLAND EMERGENT TYPE	88
PERENNIAL PLANTS, WETLAND TYPE	89
STORM SEWER JACKED IN PLACE SPECIAL.....	90
STORM SEWERS, (WATER MAIN REQUIREMENTS), 12".....	90
STORM SEWERS, (WATER MAIN REQUIREMENTS), 24".....	90
STORM SEWERS, (WATER MAIN REQUIREMENTS), 36".....	90
STORM SEWERS, (WATER MAIN REQUIREMENTS), 42".....	90
STABILIZED CONSTRUCTION ENTRANCE	91
REMOVE EXISTING FLARED END SECTION	92
FLASHING BEACON, POST MOUNTED, SOLAR POWERED INSTALLATION	92
BOLLARD REMOVAL	92
CLEANING AND PAINTING BEARINGS.....	93

CLAY LINER.....	93
RELOCATE EXISTING MAILBOX.....	94
TEMPORARY CONCRETE BARRIER REMOVAL	95
BITUMINOUS BIKE PATH REMOVAL	95
STORM SEWER, PVC SDR 26, 8".....	95
AGGREGATE SUBGRADE, 16".....	96
TURBIDITY CURTAIN.....	97
RECESSED REFLECTIVE PAVEMENT MARKER.....	98
SEEDING, CLASS 4 (MODIFIED) MESIC PRAIRIE	98
SEEDING, CLASS 4 (MODIFIED) WET TO MESIC PRAIRIE	99
SEEDING, CLASS 4 (MODIFIED) DETENTION BASIN	100
SEEDING, CLASS 5 (MODIFIED) MESIC PRAIRIE	101
SEEDING, CLASS 5 (MODIFIED) WET TO MESIC PRAIRIE	102
TEMPORARY AGGREGATE BERM - COARSE AGGREGATE.....	104
TEMPORARY AGGREGATE BERM – RIPRAP	104
TEMPORARY DITCH CHECK, ROLLED EXCELSIOR	105
CONCRETE TRUCK WASHOUT	105
BUILDING REMOVAL NO. 1	107
BUILDING REMOVAL NO. 2	107
DRAINAGE SYSTEM	107
DUST CONTROL WATERING	108
FENCE REMOVAL.....	109
FILLING EXISTING SEPTIC TANK.....	109
FILLING EXISTING SEPTIC TANK (SPECIAL).....	109
FILLING EXISTING WELLS	110
FILLING EXISTING WELLS (SPECIAL).....	110
IMPACT ATTENUATOR REMOVAL.....	111
IMPACT ATTENUATORS (NON-REDIRECTIVE), TEST LEVEL 3.....	111
IMPACT ATTENUATORS, TEMPORARY (NON-DIRECTIVE), TEST LEVEL 2	112
IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 2.....	113
AGGREGATE PATH, 8"	114
ANTI-GRAFFITI COATING.....	114
ARCHITECTURAL LETTERING.....	115
CONCRETE FOUNDATION TYPE 42-INCH DIAMETER.....	118
CONDUIT PUSHED UNDER RAILROAD, 3" DIA., GALVANIZED STEEL	118
EROSION CONTROL BLANKET (SPECIAL 1)	119
EROSION CONTROL BLANKET (SPECIAL 2)	119

EROSION CONTROL BLANKET (SPECIAL 3)	120
FORM LINER TEXTURED SURFACE (SPECIAL)	120
GRAFFITI REMOVAL (SPECIAL).....	123
MH TYPE 1-4" DIAMETER WITH RESTRICTOR.....	126
STEEL RAILING (SPECIAL).....	127
RAILROAD FLAGGING (CC&P RR).....	128
RAILROAD FLAGGING (UP RR).....	129
REMOVAL AND RELOCATION OF EXISTING PEDESTRIAN BRIDGE	130
TRAFFIC SIGNALS SPECIFICATIONS	131 thru 195 TS-1 thru TS-44
CC & PRR / CN REQUIREMENTS FOR WORK NEAR OR UNDER CN RR	176
COMPREHENSIVE ASBESTOS SURVEY REPORTS	195
- Residential Property 33W012 Stearns Road Elgin, IL 60120	
- Residence 32W772 Stearns Road Elgin, IL 60120	
ARMY CORP PERMIT	256
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY PERMIT	265

INDEX LOCAL ROADS AND STREETS SPECIAL PROVISIONS

LR #	Pg #	Special Provision Title	Effective	Revised
LR SD 12		<input type="checkbox"/> Slab Movement Detection Device	Nov. 11, 1984	Jan. 1, 2007
LR SD 13		<input type="checkbox"/> Required Cold Milled Surface Texture	Nov. 1, 1987	Jan. 1, 2007
LR 102		<input type="checkbox"/> Protests on Local Lettings	Jan. 1, 2007	
LR 105		<input type="checkbox"/> Cooperation with Utilities	Jan. 1, 1999	Jan. 1, 2007
LR 107-2		<input type="checkbox"/> Railroad Protective Liability Insurance for Local Lettings	Mar. 1, 2005	Jan. 1, 2006
LR 107-3		<input type="checkbox"/> Disadvantaged Business Enterprise Participation	Jan. 1, 2007	Nov. 1, 2008
LR 107-4	269	<input checked="" type="checkbox"/> Insurance	Feb. 1, 2007	Aug. 1, 2007
LR 107-5		<input type="checkbox"/> Substance Abuse Prevention Program	Jan. 1, 2008	Jan. 8, 2008
LR 108		<input type="checkbox"/> Combination Bids	Jan. 1, 1994	Mar. 1, 2005
LR 212		<input type="checkbox"/> Shaping Roadway	Aug. 1, 1969	Jan. 1, 2002
LR 355-1		<input type="checkbox"/> Asphalt Stabilized Base Course, Road Mix or Traveling Plant Mix	Oct. 1, 1973	Jan. 1, 2007
LR 355-2		<input type="checkbox"/> Asphalt Stabilized Base Course, Plant Mix	Feb. 2, 1963	Jan. 1, 2007
LR 400-1		<input type="checkbox"/> Bituminous Treated Earth Surface	Jan. 1, 2008	
LR 400-2		<input type="checkbox"/> Bituminous Surface Mixture (Class B)	Jan. 1, 2008	
LR 400-3		<input type="checkbox"/> Pavement Rehabilitation by the Heat-Scarify-Overlay Method	Jan. 1, 2008	
LR 402		<input type="checkbox"/> Salt Stabilized Surface Course	Feb. 20, 1963	Jan. 1, 2007
LR 403-2		<input type="checkbox"/> Bituminous Hot Mix Sand Seal Coat	Aug. 1, 1969	Jan. 1, 2007
LR 406		<input type="checkbox"/> Filling HMA Core Holes with Non-shrink Grout	Jan. 1, 2008	
LR 420		<input type="checkbox"/> PCC Pavement (Special)	May 12, 1964	Jan. 2, 2007
LR 442		<input type="checkbox"/> Bituminous Patching Mixtures for Maintenance Use	Jan. 1, 2004	Jun. 1, 2007
LR 451		<input type="checkbox"/> Crack Filling Bituminous Pavement with Fiber-Asphalt	Oct. 1, 1991	Jan. 1, 2007
LR 503-1		<input type="checkbox"/> Furnishing Class SI Concrete	Oct. 1, 1973	Jan. 1, 2002
LR 503-2		<input type="checkbox"/> Furnishing Class SI Concrete (Short Load)	Jan. 1, 1989	Jan. 1, 2002
LR 542		<input type="checkbox"/> Pipe Culverts, Type _____ (Furnished)	Sep. 1, 1964	Jan. 1, 2007
LR 663		<input type="checkbox"/> Calcium Chloride Applied	Jun. 1, 1958	Jan. 1, 2007
LR 702		<input type="checkbox"/> Construction and Maintenance Signs	Jan. 1, 2004	Jun. 1, 2007
LR 1004		<input type="checkbox"/> Coarse Aggregate for Bituminous Surface Treatment	Jan. 1, 2002	Jan. 1, 2007
LR 1013		<input type="checkbox"/> Rock Salt (Sodium Chloride)	Aug. 1, 1969	Jan. 1, 2002
LR 1030		<input type="checkbox"/> Growth Curve	Mar. 1, 2008	
LR 1032-1		<input type="checkbox"/> Penetrating Emulsions	Jan. 1, 2007	Feb. 1, 2007
LR 1032-2		<input type="checkbox"/> Multigrade Cold Mix Asphalt	Jan. 1, 2007	Feb. 1, 2007
LR 1102		<input type="checkbox"/> Road Mix or Traveling Plan Mix Equipment	Jan. 1, 2007	

BDE SPECIAL PROVISIONS
For the April 24 and June 12, 2009 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.

File Name	Pg#		Special Provision Title	Effective	Revised
80099			Accessible Pedestrian Signals (APS)	April 1, 2003	Jan. 1, 2007
80186	270	X	Alkali-Silica Reaction for Cast-in-Place Concrete	Aug. 1, 2007	Jan. 1, 2009
80213	273	X	Alkali-Silica Reaction for Precast and Precast Prestressed Concrete	Jan. 1, 2009	
* 80243	276	X	American Recovery and Reinvestment Act Provisions	April 1, 2009	
* 80236	277	X	American Recovery and Reinvestment Act Signing	April 1, 2009	April 2, 2009
80207	283	X	Approval of Proposed Borrow Areas, Use Areas, and/or Waste Areas Inside Illinois State Borders	Nov. 1, 2008	
80192	284	X	Automated Flagger Assistance Device	Jan. 1, 2008	
* 80173	286	X	Bituminous Materials Cost Adjustments	Nov. 2, 2006	April 1, 2009
50261			Building Removal-Case I (Non-Friable and Friable Asbestos)	Sept. 1, 1990	Jan. 1, 2007
50481			Building Removal-Case II (Non-Friable Asbestos)	Sept. 1, 1990	Jan. 1, 2007
50491			Building Removal-Case III (Friable Asbestos)	Sept. 1, 1990	Jan. 1, 2007
50531			Building Removal-Case IV (No Asbestos)	Sept. 1, 1990	Jan. 1, 2007
* 80166	289	X	Cement	Jan. 1, 2007	April 1, 2009
80198			Completion Date (via calendar days)	April 1, 2008	
80199			Completion Date (via calendar days) Plus Working Days	April 1, 2008	
* 80094	292	X	Concrete Admixtures	Jan. 1, 2003	April 1, 2009
80193			Concrete Barrier	Jan. 1, 2008	
80214			Concrete Gutter, Type A	Jan. 1, 2009	
80215	296	X	Concrete Joint Sealer	Jan. 1, 2009	
* 80226	298	X	Concrete Mix Designs	April 1, 2009	
* 80237	300	X	Construction Air Quality – Diesel Vehicle Emissions Control	April 1, 2009	
* 80239	302	X	Construction Air Quality – Idling Restrictions	April 1, 2009	
* 80227	304	X	Determination of Thickness	April 1, 2009	
80177	316	X	Digital Terrain Modeling for Earthwork Calculations	April 1, 2007	
80029	318	X	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	Nov. 1, 2008
80178	326	X	Dowel Bars	April 1, 2007	Jan. 1, 2008
80179	327	X	Engineer's Field Office Type A	April 1, 2007	Aug. 1, 2008
80205			Engineer's Field Office Type B	Aug. 1, 2008	
80175	330	X	Epoxy Pavement Markings	Jan. 1, 2007	
80189	332	X	Equipment Rental Rates	Aug. 2, 2007	Jan. 2, 2008
* 80228	334	X	Flagger at Side Roads and Entrances	April 1, 2009	
* 80229	335	X	Fuel Cost Adjustment	April 1, 2009	
80169			High Tension Cable Median Barrier	Jan. 1, 2007	
80194	339	X	HMA – Hauling on Partially Completed Full-Depth Pavement	Jan. 1, 2008	
80181	341	X	Hot-Mix Asphalt – Field Voids in the Mineral Aggregate	April 1, 2007	April 1, 2008
80201	343	X	Hot-Mix Asphalt – Plant Test Frequency	April 1, 2008	
80202	345	X	Hot-Mix Asphalt – Transportation	April 1, 2008	
80136	346	X	Hot-Mix Asphalt Mixture IL-4.75	Nov. 1, 2004	Jan. 1, 2008
80195			Hot-Mix Asphalt Mixture IL-9.5L	Jan. 1, 2008	
80109	352	X	Impact Attenuators	Nov. 1, 2003	Nov. 1, 2008
80110	354	X	Impact Attenuators, Temporary	Nov. 1, 2003	Jan. 1, 2007
* 80230	356	X	Liquidated Damages	April 1, 2009	
80196	357	X	Mast Arm Assembly and Pole	Jan. 1, 2008	Jan. 1, 2009
80045			Material Transfer Device	June 15, 1999	Jan. 1, 2009
* 80203	359	X	Metal Hardware Cast into Concrete	April 1, 2008	April 1, 2009
80165			Moisture Cured Urethane Paint System	Nov. 1, 2006	Jan. 1, 2007
* 80238	360	X	Monthly Employment Report	April 1, 2009	
80082	362	X	Multilane Pavement Patching	Nov. 1, 2002	
80180	363	X	National Pollutant Discharge Elimination System / Erosion and Sediment Control Deficiency Deduction (NOTE: This special provision was previously named "Erosion and Sediment Control Deficiency Deduction".)	April 1, 2007	Nov. 1, 2008
80208			Nighttime Work Zone Lighting	Nov. 1, 2008	
80129	364	X	Notched Wedge Longitudinal Joint	July 1, 2004	Jan. 1, 2007
80182	366	X	Notification of Reduced Width	April 1, 2007	

File Name	Pg#		Special Provision Title	Effective	Revised
80069			Organic Zinc-Rich Paint System	Nov. 1, 2001	Jan. 1, 2008
80216			Partial Exit Ramp Closure for Freeway/Expressway	Jan. 1, 2009	
* 80231			Pavement Marking Removal	April 1, 2009	
80022	367	X	Payments to Subcontractors	June 1, 2000	Jan. 1, 2006
* 80235	369	X	Payrolls and Payroll Records	Mar. 1, 2009	
80209	371	X	Personal Protective Equipment	Nov. 1, 2008	
* 80232			Pipe Culverts	April 1, 2009	
80134	372	X	Plastic Blockouts for Guardrail	Nov. 1, 2004	Jan. 1, 2007
80119	373	X	Polyurea Pavement Marking	April 1, 2004	Jan. 1, 2009
80210			Portland Cement Concrete Inlay or Overlay	Nov. 1, 2008	
80170	380	X	Portland Cement Concrete Plants	Jan. 1, 2007	
80217			Post Clips for Extruded Aluminum Signs	Jan. 1, 2009	
80171	382	X	Precast Handling Holes	Jan. 1, 2007	
* 80218			Preventive Maintenance – Bituminous Surface Treatment	Jan. 1, 2009	April 1, 2009
* 80219			Preventive Maintenance – Cape Seal	Jan. 1, 2009	April 1, 2009
80220			Preventive Maintenance – Micro-Surfacing	Jan. 1, 2009	
80221			Preventive Maintenance – Slurry Seal	Jan. 1, 2009	
80211			Prismatic Curb Reflectors	Nov. 1, 2008	
80015			Public Convenience and Safety	Jan. 1, 2000	
34261			Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
80157			Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	
80223			Ramp Closure for Freeway/Expressway	Jan. 1, 2009	
* 80172			Reclaimed Asphalt Pavement (RAP)	Jan. 1, 2007	April 1, 2009
80183	384	X	Reflective Sheeting on Channelizing Devices	April 1, 2007	Nov. 1, 2008
* 80151	385	X	Reinforcement Bars	Nov. 1, 2005	April 1, 2009
* 80206	387	X	Reinforcement Bars – Storage and Protection	Aug. 1, 2008	April 1, 2009
80224			Restoring Bridge Approach Pavements Using High-Density Foam	Jan. 1, 2009	
80184	388	X	Retroreflective Sheeting, Nonreflective Sheeting, and Translucent Overlay Film for Highway Signs	April 1, 2007	
* 80233			Right-of-Entry Permit	April 1, 2009	
80131	394	X	Seeding	July 1, 2004	Jan. 1, 2009
80152	396	X	Self-Consolidating Concrete for Cast-In-Place Construction	Nov. 1, 2005	Jan. 1, 2009
80132	401	X	Self-Consolidating Concrete for Precast Products	July 1, 2004	Jan. 1, 2007
80212	403	X	Sign Panels and Sign Panel Overlays	Nov. 1, 2008	
80197	404	X	Silt Filter Fence	Jan. 1, 2008	
* 80127	405	X	Steel Cost Adjustment	April 2, 2004	April 1, 2009
80153	409	X	Steel Plate Beam Guardrail	Nov. 1, 2005	Aug. 1, 2007
80191	410	X	Stone Gradation Testing	Nov. 1, 2007	
* 80234			Storm Sewers	April 1, 2009	
80143	411	X	Subcontractor Mobilization Payments	April 2, 2005	
80075	412	X	Surface Testing of Pavements	April 1, 2002	Jan. 1, 2007
80087	419	X	Temporary Erosion Control	Nov. 1, 2002	Jan. 1, 2008
80225			Temporary Raised Pavement Marker	Jan. 1, 2009	
80176	420	X	Thermoplastic Pavement Markings	Jan. 1, 2007	
20338	422	X	Training Special Provisions	Oct. 15, 1975	
80185			Type ZZ Retroreflective Sheeting, Nonreflective Sheeting, and Translucent Overlay Film for Highway Signs	April 1, 2007	
80149	425	X	Variable Spaced Tining	Aug. 1, 2005	Jan. 1, 2007
80071			Working Days	Jan. 1, 2002	
80204			Woven Wire Fence	April 1, 2008	

The following special provisions are in the 2009 Supplemental Specifications and Recurring Special Provisions:

File Name	Special Provision Title	New Location	Effective	Revised
80108	Asbestos Bearing Pad Removal	Check Sheet #32	Nov. 1, 2003	
72541	Asbestos Waterproofing Membrane and Asbestos Hot-Mix Asphalt Surface Removal	Check Sheet #33	June 1, 1989	Jan. 2, 2007
80167	Electrical Service Installation – Traffic Signals	Section 805	Jan. 1, 2007	
80164	Removal and Disposal of Regulated Substances	Section 669	Aug. 1, 2006	Jan. 1, 2007
80161	Traffic Signal Grounding	Sections 873 and 1076	April 1, 2006	Jan. 1, 2007
80162	Uninterruptable Power Supply (UPS)	Sections 801, 862 and 1074	April 1, 2006	Jan. 1, 2007

<u>File Name</u>	<u>Special Provision Title</u>	<u>New Location</u>	<u>Effective</u>	<u>Revised</u>
80163	Water Blaster with Vacuum Recovery	Articles 783.02 and 1101.12	April 1, 2006	Jan. 1, 2007

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
- Completion Date
- Completion Date Plus Working Days
- DBE Participation
- Material Transfer Device
- Railroad Protective Liability Insurance
- Right-of-Entry Permit
- Training Special Provisions
- Working Days

GUIDE BRIDGE SPECIAL PROVISION INDEX/CHECK SHEET
Effective: March 6, 2009

√	Pg #	File Name	Title	Effective	Revised
		GBSP4	Polymer Modified Portland Cement Mortar	June 7, 1994	June 1, 2007
		GBSP11	Permanent Steel Sheet Piling	Dec 15, 1993	Jan 1, 2007
		GBSP12	Drainage System	June 10, 1994	Jan 1, 2007
		GBSP13	High-Load Multi-Rotational Bearings	Oct 13, 1988	Mar 6, 2009
		GBSP14	Jack and Remove Existing Bearings	April 20, 1994	Jan 1, 2007
		GBSP15	Three Sided Precast Concrete Structure	July 12, 1994	Mar 6, 2009
		GBSP16	Jacking Existing Superstructure	Jan 11, 1993	Jan 1, 2007
		GBSP17	Bonded Preformed Joint Seal	July 12, 1994	Jan 1, 2007
		GBSP18	Modular Expansion Joint	May 19, 1994	Jan 1, 2007
		GBSP21	Cleaning and Painting Contact Surface Areas of Existing Steel Structures	June 30, 2003	Jan 1, 2007
		GBSP22	Cleaning and Painting New Metal Structures	Sept 13, 1994	Mar 6, 2009
X	426	GBSP25	Cleaning and Painting Existing Steel Structures	Oct 2, 2001	July 9, 2008
		GBSP26	Containment and Disposal of Lead Paint Cleaning Residues	Oct 2, 2001	Mar 6, 2009
		GBSP28	Deck Slab Repair	May 15, 1995	Jan 12, 2009
		GBSP29	Bridge Deck Microsilica Concrete Overlay	May 15, 1995	June 1, 2007
		GBSP30	Bridge Deck Latex Concrete Overlay	May 15, 1995	June 1, 2007
		GBSP31	Bridge Deck High-Reactivity Metakaolin (HRM) Conc Overlay	Jan 21, 2000	June 1, 2007
		GBSP32	Temporary Sheet Piling	Sept 2, 1994	Jan 1, 2007
		GBSP33	Pedestrian Truss Superstructure	Jan 13, 1998	Mar 6, 2009
		GBSP34	Concrete Wearing Surface	June 23, 1994	Jan 12, 2009
		GBSP35	Silicone Bridge Joint Sealer	Aug 1, 1995	Jan 1, 2007
		GBSP36	Surface Preparation and Painting Req. for Weathering Steel	Nov 21, 1997	Mar 6, 2009
X	448	GBSP37	Underwater Structure Excavation Protection	April 1, 1995	Mar 6, 2009
		GBSP38	Mechanically Stabilized Earth Retaining Walls	Feb 3, 1999	Mar 6, 2009
		GBSP42	Drilled Soldier Pile Retaining Wall	Sept 20, 2001	Feb 2, 2007
		GBSP43	Driven Soldier Pile Retaining Wall	Nov 13, 2002	Feb 2, 2007
X	449	GBSP44	Temporary Soil Retention System	Dec 30, 2002	Jan 1, 2007
		GBSP45	Bridge Deck Thin Polymer Overlay	May 7, 1997	Jan 1, 2007
		GBSP46	Geotextile Retaining Walls	Sept 19, 2003	June 1, 2007
		GBSP47	High Performance Concrete Structures	Aug 5, 2002	Jan 1, 2007
		GBSP50	Removal of Existing Non-composite Bridge Decks	June 21, 2004	Jan 1, 2007
X	451	GBSP51	Pipe Underdrain for Structures	May 17, 2000	Jan 1, 2007
X	452	GBSP52	Porous Granular Embankment (Special)	Sept 28, 2005	Nov 14, 2008
		GBSP53	Structural Repair of Concrete	Mar 15, 2006	April 2, 2008
		GBSP55	Erection of Curved Steel Structures	June 1, 2007	
		GBSP56	Setting Piles in Rock	Nov 14, 1996	Jan 1, 2007
		GBSP57	Temporary Mechanically Stabilized Earth Retaining Walls	Jan 6, 2003	April 2, 2008
		GBSP58	Mechanical Splicers	Sep 21, 1995	Mar 6, 2009
		GBSP59	Diamond Grinding and Surface Testing Bridge Sections	Dec 6, 2004	July 9, 2008
		GBSP60	Containment and Disposal of Non-Lead Pain Cleaning Residues	Nov 25, 2004	Mar 6, 2009
		GBSP61	Slipform Parapet	June 1, 2007	Jan 12, 2009
		GBSP62	Concrete Deck Beams	June 13, 2008	Nov 14, 2008
		GBSP63	Demolition Plans for Removal of Existing Structures	Sept 5, 2007	
		GBSP64	Segmental Concrete Block Wall	Jan 7, 1999	July 9, 2008
		GBSP65	Precast Modular Retaining Walls	Mar 19, 2001	Nov 14, 2008
		GBSP66	Wave Equation Analysis of Piles	Nov 14, 2008	
		GBSP67	Structural Assessment Reports for Contractor's Means and Methods	Mar 6, 2009	

LIST ADDITIONAL SPECIAL PROVISIONS BELOW

SPECIAL PROVISIONS
STEARNS ROAD FROM IL ROUTE 25 TO STEARNS (DUPAGE) AND DUNHAM (KANE)

The following provisions supplement the "Standard Specifications for Road and Bridge Construction," adopted January 1, 2007 (referred to hereinafter as the "Standard Specifications"); the "Supplemental Specifications and recurring Special Provisions," adopted January 1, 2009 (as indicated on the check sheet included herein); the latest edition of the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways" (IMUTCD); "The Standard Specifications for Sewer and Water Construction in Illinois, May 1996, Fifth Edition and the "Manual of Test Procedures of Materials" for the proposed improvement designated 06-00214-15-BR. In case of conflict with any part or parts of said specifications, these special provisions shall take precedent and shall govern where no conflict exists, the named specifications shall apply to this contract as if repeated in there entirely herein.

LOCATION AND DESCRIPTION OF PROJECT

This project is located at Stearns and Dunham/IL 25 Roads in Kane County and DuPage County.

The Stearns Road from IL 25 to east of County Line Project consists of the realignment of two existing 3- legged intersections into one four-legged intersection. This realignment relocates Stearns Road north of its current location and relocates the connecting Illinois Route 25 south of its current location. The Stearns/IL 25/Dunham intersection will be built as shown in the contract documents. Stearns Road and portions of IL 25 and Dunham will be constructed as 4-lane roadway and includes a 10 ft. wide multi-use path along the north side of Stearns and IL 25. The IL 25/Gilbert Street intersection will be widened to 3-lane section following the existing alignment and includes widening and resurfacing of existing IL 25 and Gilbert Street. The work also includes extensive drainage designs, traffic signals, lighting and detailed traffic control and staging.

In addition to the extensive civil and roadway work, the project includes four new structures and one modified structure: two new bridges that will carry IL Route 25/Dunham and IL 25/Stearns over the East Branch of Brewster Creek; two new underpasses that will accommodate a relocated multi-use trail; and modifications to an existing structure over the CCP railroad that will serve as a pedestrian/bicycle structure.

SUBSURFACE EXPLORATION DATA

Limited investigation of subsurface conditions at the proposed site of Work has been made for the purpose of design. Kane County Department of Transportation, Geo Services and Alfred Benesch & Company assume no responsibility whatsoever with respect to the sufficiency or accuracy of these preliminary investigations, nor their interpretation, and there is no guarantee, either expressed or implied that conditions indicated are representative of those existing throughout the work or any part of it, or that unforeseen developments may occur.

SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

The BIDDER acknowledges that, prior to submission of its bid, it has taken steps necessary to ascertain the nature and location of the Work, and that it has investigated, confirmed, verified as correct and satisfied itself as to the general and local conditions which can affect the Work or its costs, including but not limited to (1) location and load capacity of existing roadways, utilities, corresponding pavement, shoulders, curb and gutter, sanitary sewer, storm sewers, and water main, bearing upon transportation, disposal, handling and storage of materials; (2) the availability of labor, water, electric power and roads; (3) uncertainties of weather, river stages, tides, or similar physical conditions at the site; (4) the conformation and conditions of the ground and existing detention ponds; (5) the character of equipment and facilities needed prior to and during work performance; (6) subsurface conditions at the site of Work; (7) the quantities and qualities of all materials, equipment, and labor set forth in the Bid Proposal, plans and drawings and specifications that are necessary to complete all of the Work as required under the Contract Documents; and (8) the location, condition, compatibility, configuration of all existing utilities and infrastructure. The BIDDER also acknowledges that it has verified as correct, confirmed and satisfied itself as to the character, quality and quantity of surface and subsurface materials, obstacles or conditions to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done, if any, as well as from the drawings, plans and specifications made a part of the bidding documents. The BIDDER further acknowledges that it has reviewed, investigated, confirmed, verified as correct and satisfied itself as to the _____ (*list any exceptional items here: may include geotechnical reports on file, existing mass grading plan from prior earthwork contract, environmental reports, etc.*). Any failure of the BIDDER to take the actions described and acknowledged in this paragraph will not relieve the BIDDER from responsibility for estimating properly the difficulty and cost of successfully performing the Work, or for proceeding to successfully perform the Work without additional expense to Kane County Department of Transportation.

Alfred Benesch & Company and Kane County Department of Transportation assume no responsibility for any conclusions or interpretations made by the BIDDER based on information made available by Alfred Benesch & Company, Kane County, DuPage County, Department of Transportation of the project. Nor does Alfred Benesch & Company, Kane County, Department of Transportation assume responsibility for any understanding reached or representation made concerning conditions which can affect the Work by any of its officers or agents before the acceptance of the bid offer and execution of the contract, unless that understanding or representation is expressly stated in this contract.

MATERIALS QC/QA POLICY NOT SPECIFICATIONS

All Hot-Mix Asphalt and P.C. Concrete materials used on this project shall be tested and inspected in accordance with the Illinois Department of Transportation's QC/QA requirements. The Contractor shall provide QC testing to the Illinois Department of Transportation Bureau of Materials order board (Phone 847-705-4337 or Fax 847-705-4529) by 4:00pm, 24-hours in advance of construction for inspection of all Hot-Mix Asphalt and concrete materials used on this project.

The Contractor is responsible for QC and will submit a QC plan for HMA and concrete materials to the QA Manager for approval prior to construction operations commencing. The QA Manager will approve this plan and copy the District by Materials office on the approval letter. QA is the responsibility of the Engineer.

QC and QA reports for concrete will be sent to the District Bureau of Materials office after review and approval by the QA Manager.

QC reports for bituminous mixtures will be transmitted directly by the Contractor daily during production. The District will review and retain the QA plant reports. The QA field reports can be submitted by the QA Manager to the District via the District Local Roads office.

SPECIAL / NON-SPECIAL WASTE POLICY NOT SPECIFICATIONS

From information provided in the soils report, the Special Waste Assessment Screening Criteria Report (per IDOT's Special Waste Procedures for Local Highway Improvements) as well as general history provided by Owner, Special Waste and Non-Special Waste are not anticipated to be encountered during work performed as part of this contract.

If the Contractor encounters materials within the project limits that the Contractor believes may be classified as Special Waste or Non-Special Waste, the Contractor will immediately halt work that may disturb the suspected waste and immediately notify the Engineer and Owner. None of the suspected waste will be removed from the in-situ location on jobsite prior to Engineer's approval. The Contractor will protect the jobsite from potential contamination from the suspected waste. Standard Specification Article 104.03 will apply.

The Owner will have the suspected waste material tested to determine if the suspected waste meets the criteria of Special Waste or Non-Special Waste. If the materials testing service classifies the material as Special Waste or Non-Special Waste, the Contractor and Owner will use Standard Specifications Section 669 as the basis for dealing with the suspected waste.

SPECIAL INSTRUCTIONS TO THE BIDDER

Contractor shall be IDOT Pre-Qualified.

Addenda will be provided only to Companies who have submitted a Certificate of Eligibility and have paid plan/proposal fee.

COMPLETION DATE PLUS GUARANTEED WORKING DAYS

The Contractor shall complete all contract items and safely open all roadways and multi-use paths to traffic by 11:59 PM, May 1, 2011, except as specified herein.

This contract includes an interim completion date. The Contractor shall complete all work for IL 25/Stearns Road, Dunham Road, Stearns Road and Old Stearns Road as shown in the plans in order to accept traffic safely on all lanes by 11:59 pm November 23, 2010 except as specified herein.

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

work in accordance with the Traffic Control Plan may be allowed during the allowable hours at the discretion of the Engineer.

The Special Provision for Failure to Complete the Work on Time, if included in this contract, shall apply to both the completion date and the interim milestones.

CORRIDOR SPECIFICATIONS

COORDINATION AND COOPERATION

The Stearns Road Corridor Project encompasses various construction contracts which will be performed concurrently. Contracts may abut and/or overlap others. Therefore, each contract includes work items that require close coordination between contractors regarding the sequence and timing for execution of work items.

CONTRACT PACKAGING SUMMARY.

Contract	General Work	Target Letting Date
1	Construction of structures: <ul style="list-style-type: none"> • IL Route 31 over New Stearns Road. • New Stearns over Brewster Creek. • Dunham Road over CC&P. 	Already bid
2-63073	McLean Blvd. and IL Route 31.	Summer/2009
3-63074	Stearns Road, Dunham Road and IL Route 25.	Summer/2009
4-63075	Fox River Bridge, New Stearns Road from McLean Blvd. to IL Route 25.	Spring/2009
5-63076	Stearns Road, Randall Road to McLean Blvd.	Summer/2009
Corridor Landscaping	Landscaping encompasses all previous contracts.	Spring 2011

GENERAL COORDINATION. The contractor is directed and shall comply with Section 105.08 of the Standard Specifications and as herein described.

WEEKLY MEETINGS. All Contractors shall attend a weekly corridor meeting coordinating timing and sequence of work activities. These meetings shall be in addition to meetings required per individual contract.

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

A critical work item is defined as an item requiring adjacent and/or overlapping contractor cooperation.

SIGNING COOPERATION WITH KANE COUNTY. Existing Kane County Department of Transportation (KDOT) signage shall be removed by the KDOT Sign Shop. The Contractor

shall provide a list of these signs and give KDOT 72 hours notice prior to required removal. The Contractor will be required to replace all damaged signs if 72 hour notice was not provided to KDOT at no additional cost to the Contract. The contractor shall contact Ray Johnson (630)669-7912 a minimum of 72 hours prior to the desired time of removal.

All new signs to be located within the county right-of-way shall be supplied and installed by the KDOT sign shop. The contractor shall contact Ray Johnson (630) 669-7912 a minimum of fifteen (15) working days prior to the desired time of installation.

The Contractor shall fully cooperate at all times with KDOT for the removal and installation of KDOT signage.

Signage along IDOT routes is the responsibility of the contractor in accordance with Article 107.25 of the Standard Specifications.

SIGNING COOPERATION WITH DuPage COUNTY. Existing traffic control signs and devices will be removed by the DuPage County Division of Transportation after the traffic control requirements are met or as authorized by the Engineer; any signs or devices left in place at this time are to be relocated, maintained and protected from damage by the contractor and any damaged or lost signs will be replaced by the contractor. The Contractor shall provide a list of these signs and give DuPage County Division of Transportation 72 hours notice prior to required removal. The Contractor will be required to replace all damaged signs if 72 hour notice was not provided to Dupage County Division of Transportation at no additional cost to the Contract. The contractor shall contact (630) 407-6920 a minimum of 72 hours prior to the desired time of removal.

All new signs to be located within the county right-of-way shall be supplied and installed by the DuPage County Maintenance Department. The contractor shall contact (630) 407-6920 a minimum of fifteen (15) working days prior to the desired time of installation.

The Contractor shall fully cooperate at all times with DuPage County Division of Transportation for the removal and installation of County's signage.

Signage along IDOT routes is the responsibility of the contractor in accordance with Article 107.25 of the Standard Specifications.

AGENCY COOPERATION. The Contractor shall coordinate and cooperate as necessary with the Illinois Department of Transportation, Kane and DuPage County Division of Transportation, the Kane/DuPage Soil/Water Conservation District, the US Army Corps of Engineers and other agencies that are appropriate for work activities.

FIELD OFFICE. Two resident engineering field offices will be established for the corridor (one west of the Fox River and the other east). The west field office will be provided in the County's Construction Corridor Management engineering contract, which will accommodate contracts 2, 4 and 5 and include a conference room for meetings. The east field office will be in contract 3 which will accommodate contract 3 and portions of contract 4. In addition, the contract 4 field office will provide space for the corridor management team. Corridor meetings will be held in the west field office on the west side of the Fox River.

DETOURS. As part of corridor construction, detours will be placed to facilitate construction. The following suggested detours are provided to give advance knowledge to the Contractor (Final detour routes will be reviewed and approved by the appropriate agencies). Contractors

should coordinate with the appropriate contractor to determine schedules if this route impacts their operations:

- Contract 2 – 63073 – Southbound Direction (Detour): During the closure of McLean Boulevard, the detour route will be Spring Street/Hopps Roads, Randall Road, Silver Glen Road and IL Route 31.
- Contract 2 – 63073 – Northbound Direction (Detour): During the closure of McLean Boulevard, the detour route will be IL Route 31 and Sundown Road.
- Contract 3 – 63074 – During the closure of Dunham Road (north of Stearns to IL Route 25) the detour route will be US Route 20, IL Route 59 (Sutton Road) and Stearns Road.
- Contract 3 – 63074 – During the closure of the at grade rail crossing on IL 25, the detour route will be IL 25, IL 64 and Dunham Road.

For closures that involve a state route, the contractor is responsible for the following:

- 30 days prior to placing detour submit District 1 OPER 2410
- 72 hours advanced notification to District 1’s Traffic Bureau

Duration of detours are indicated in the contract plans.

UTILITY COOPERATION. A Subsurface Utility Exploration (S.U.E.) study has been conducted for the corridor and has been included as part of the Contract Documents. Although the S.U.E. study is being provided, the Contractor shall be responsible for all arrangements necessary to verify the location of utilities and protection of the utilities in compliance with Articles 105.07 and 107.31 of the Standard Specifications.

The Contractor is responsible for verifying the nature and status of all utility relocation work prior to preparation of the Construction Progress Schedule (Article 108.02 of the Standard Specifications). The Construction Progress Schedule shall reflect construction sequencing which coordinates with all utility relocation work. The Contractor shall be required to adjust the order of its work from time to time, to coordinate same with utility relocation work, and shall prepare a revised Construction Progress Schedule as directed by the Engineer.

The following have been contacted in reference to utilities they own and operate within the right-of-way limits for this project:

Utility Company	Contact
Village of South Elgin	Mr. Charlton Behm Village of South Elgin 735 Martin Drive South Elgin, IL 60177 cbehm@southelgin.com 847-695-2742
Com Ed	Joe Stacho Com Ed 1N423 Swift Road Lombard, IL 60148 Joseph.stacho@comed.com

	John Pribich Program Manager, Public Relocation ComEd Three Lincoln Center, 4 th Floor Oakbrook Terrace, IL 60181-4260
Otter Creek Reclamation District	Bill Rickert Otter Creek WRD c/o RHMG Engineers Libertyville, IL 60048 847-362-5959 wrickert@rhmg.com
Nicor Gas	Chris Winters NICOR Gas Crystal Lake, IL cwinter@nicor.com 815-455-0271 x 203 Ms. Constance Lane Utility Consultant NICOR Gas Engineering Department 1844 Ferry Road Naperville, IL 60563-9600
AT&T	Mr. David Phelps AT&T 100 Commerce Drive Oak Brook, IL 60523
Comcast Cable	Mrs. Martha Gieras Comcast Cable Communications, Inc. Design/Drafting Department 688 Industrial Drive Elmhurst, IL 60126
Fox River Water Reclamation District	Mr. Douglas Haacker Supt of Public Works Fox River Water Reclamation District 100 Purify Drive Elgin, IL 60120

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY NOTICE OF INTENT (NOI).

The notice of intent for construction form must be filed by the Contractor electronically (preferred) or by mail at least 30 days prior to the start of construction. The website address for this process is www.epa.state.il.us. An electronic copy of the Stormwater Pollution Prevention Plan (SWPPP) can be furnished by the design engineer and should be requested with a 48 hour notice to allow adequate time for delivery or transmission to the Contractor. The NOI is required to be submitted at least 30 days prior to the start of construction and requires coordination with IDNR and IHPA.

CONTRACTOR ACCESS COORDINATION. At times one Contractor may have to access the jobsite through an adjacent Contractor's project. In accordance with Section 105.08 of the

Standard Specifications the Contractors shall coordinate this access. The Contractor requiring access will have the general responsibility of barricade maintenance, daily cleanup, maintenance of traffic and flagman and other associated work with this access.

Contractors shall also be responsible for coordination of lane closures among the respective contracts.

McLean Boulevard will be fully closed to through traffic at IL 31 from approximately September 2009 to the end of project completion. The Contract 2 contractor will be responsible for providing and maintaining access to adjacent contracts through or across McLean Boulevard at all times. Other contractors needing to use McLean for access to their respective sites shall coordinate their schedules and needs with the Contract 2 contractor in sufficient time to accommodate their project requirements. No additional compensation will be allowed on any contract due to the failure to coordinate and communicate among contractors for McLean Boulevard access.

ELECTRONIC DOCUMENT MANAGEMENT SYSTEM. Contractor shall participate and utilize an electronic document management system as implemented by the Corridor Management Resident Engineer. Contractor shall provide internet access and email systems in their field office for their personnel to respond to requests and utilize this system in an electronic fashion.

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

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

WORK RESTRICTIONS. The Contractor shall not proceed with any construction operations, which would require permanent (24 hour per day) lane closures, lane shifts, and/or shoulder closures on the arterial and local streets between December 1 and March 1 unless approved by the Engineer.

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

The Contractor, the Erosion and Sediment Control Manager, and all sub-contractors are required to attend an Erosion and Sediment Control/Environmental Training Meeting. No work shall be performed on this contract before this meeting has taken place and all erosion control and environmental issues have been completed to the satisfaction of the Engineer. Any workers on the site shall be required to attend a mandatory training session regarding environmental and erosion issues prior to working on site.

MEASUREMENT AND PAYMENT. There will be no separate measurement or payment for fulfilling the COORDINATION AND COOPERATION requirements described herein, and all costs, direct or indirect, shall be included in the prices for other items. Failure to provide

satisfactory schedule submittals within the time specified herein will result in the withholding of Contractor payments until the requirements of this sub-section are met.

DRAINAGE AND EROSION CONTROL

INTERIM DRAINAGE. Sufficient drainage facilities shall be maintained throughout construction to facilitate surface runoff. When any loose material is deposited in the flow line of ditches, gutter or drainage structures so that the natural flow of water is obstructed, it shall be removed at the close of each working day. At the conclusion of the construction operations all drainage structures so affected shall be free from dirt and debris. This work shall be incidental in the cost of other items and not paid for separately. It shall be the Contractor's responsibility to plan his operations, with the approval of the Engineer in the field, so as to utilize the facilities provided to prevent local flooding and insure proper surface runoff. Any minor ditch grading as directed by the Engineer, necessary to provide for the interim drainage will not be paid for separately but shall be included as incidental to cost of other items as well.

PROTECTION OF EXISTING DRAINAGE FACILITIES DURING CONSTRUCTION.

Unless otherwise noted in the contract plans, the existing drainage facilities shall remain in use during the period of construction.

Locations of existing drainage structures and sewers as shown on the contract plans are approximate. Prior to commencement of work, the Contractor, at his own expense, shall determine the exact location of existing structures which are within the proposed construction site.

All drainage structures are to be kept free from any debris resulting from construction operations. All work and materials necessary to prevent accumulation of debris in the drainage structure resulting from construction operations shall be removed at the Contractor's own expense, and no extra compensation will be allowed.

Unless reconstruction or adjustment of an existing manhole, catch basin, or inlet is called for in the contract plans or ordered by the Engineer, the proposed work shall meet the existing elevations of these structures. 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.

Existing frames and grates are to remain unless otherwise noted in the contract plans or as directed by the Engineer. Frames and grates that are missing or damaged prior to construction shall be replaced. The type of replacements frame or grate shall be determined by the Engineer, and replacement and payment for same shall be in accordance with Section 604 and Article 104.02 respectively, of the Standard Specifications unless otherwise noted in the plans or Special Provisions.

EROSION AND SEDIMENT CONTROL MANAGER. This Special Provision revises Section 105 (Control of Work) of the Standard Specifications for Road and Bridge Construction, creating a requirement for a designated erosion and sediment control manager to be present full time at this project.

Add the following to Article 105.06:

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

At least 10 days prior to beginning any work on this project, the name and credentials of the ESCM shall be submitted to the Engineer. Any changes in the ESCM shall require a resubmission of the above. The resubmission shall be timed to ensure that an ESCM is assigned to the project at all times. This ESCM is considered to be included in the base bid and no separate pay item shall be provided.

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

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

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

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

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

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

ENVIRONMENTAL CONSIDERATIONS AND COMMITMENTS

The entire Stearns Corridor is a highly sensitive environmental corridor. As such, a number of commitments were agreed upon during the development of this project, and it is required that the contractor honor these commitments to the fullest. The following is a list of environmental consideration and commitments established for this project:

Agency	Commitment
US Department of Transportation Federal Highway Administration Illinois Department of Transportation Record of Decision FHWA-IL-EIS-93-01-F/4(f)	Allow Midwest Groundcovers access to Brewster Creek
US Department of Transportation Federal Highway Administration Illinois Department of Transportation Record of Decision FHWA-IL-EIS-93-01-F/4(f)	Bicycle Facility coordination will be maintained throughout the development of the project with the Kane County Forest Preserve, the Illinois Department of Natural Resources and the DuPage County Forest Preserve.
US Department of Transportation Federal Highway Administration Illinois Department of Transportation Record of Decision FHWA-IL-EIS-93-01-F/4(f)	Maintain minimum 10' vertical clearance for recreational boating on the Fox River at the Bolz Road and CCP/Stearns Road Bridges.
US Department of Transportation Federal Highway Administration Illinois Department of Transportation Record of Decision FHWA-IL-EIS-93-01-F/4(f)	Archeological artifacts – potential archeological interest was identified. If a site is identified and impacted by the construction, and it is determined that the site is eligible for inclusion on the National Register of Historic Places, a data recovery plan and Memorandum of Agreement will be developed in consultation with the State Historic Preservation Officer.
US Department of Transportation Federal Highway Administration Illinois Department of Transportation Record of Decision FHWA-IL-EIS-93-01-F/4(f)	Groundwater Protection – maintain lining of swales minimizing groundwater contamination. Any modifications will require all agency approval.
US Department of Transportation Federal Highway Administration Illinois Department of Transportation Record of Decision FHWA-IL-EIS-93-01-F/4(f)	Shallow Groundwater Aquifer Protection – maintain swales and other drainage facilities not to intercept groundwater,
US Department of Transportation Federal Highway Administration Illinois Department of Transportation Record of Decision FHWA-IL-EIS-93-01-F/4(f)	Prevent sources of contaminant from affecting groundwater.
US Department of Transportation Federal Highway Administration Illinois Department of Transportation Record of Decision FHWA-IL-EIS-93-01-F/4(f)	Maintain erosion and sedimentation devices as identified in the plan documents.
US Department of Transportation Federal Highway Administration Illinois Department of	Compliance with the Environmental Corridor Plan.

Agency	Commitment
Transportation Record of Decision FHWA-IL-EIS-93-01-F/4(f)	
US Department of Transportation Federal Highway Administration Illinois Department of Transportation Record of Decision FHWA-IL-EIS-93-01-F/4(f)	Any disturbance to the Fox River occur only between June 8 and February 29 only.
US Department of Transportation Federal Highway Administration Illinois Department of Transportation Record of Decision FHWA-IL-EIS-93-01-F/4(f)	Construction noise be attenuated in accordance with Section 107.35 of the Standard Specifications.
US Department of Transportation Federal Highway Administration Illinois Department of Transportation Record of Decision FHWA-IL-EIS-93-01-F/4(f)	Dust and air-born dirt control shall be in accordance with Section 107.36 of the Standard Specifications.
Intergovernmental Agreement Between the Counties of DuPage and Kane	DuPage County shall be named as additional insured in the contract documents.
Intergovernmental Agreement Between the Counties of DuPage and Kane	Work in DuPage County will require DuPage County be provided insurance coverage as specified in the Standard Specifications.
Intergovernmental Agreement Between the Counties of DuPage and Kane	Copies of insurance for DuPage County shall be provided to the DuPage County Engineer prior to work commencement.
Intergovernmental Agreement Between the Counties of DuPage and Kane	Any change order work in DuPage County shall be approved by the DuPage County Engineer.

It is the Contractor's responsibility to comply with these considerations and commitments and coordinate activities with other corridor contractors to assure overall compliance in accordance with Section 105.08 of the Standard Specifications.

A copy of the US Army Corps of Engineer's Permit and the Illinois Division of Natural Resources 401 Certification are included as a part of this Special Provision. The General Conditions, Special Conditions and Permit Restrictions of these documents are incorporated and a part of this contract. Compliance with the requirements contained therein is required as a part of the completion of this project.

MEASUREMENT AND PAYMENT. There will be no separate measurement or payment for fulfilling the ENVIRONMENTAL CONSIDERATIONS AND COMMITMENTS requirements described herein, and all costs, direct or indirect, shall be included in the prices for other items.

EROSION AND SEDIMENT CONTROLS

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

Include the following as the third paragraph of Article 280.01:

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

Revise Article 280.02 (f) to read:

(f) Silt Fence Article 1080.02

Add the following as Article 280.02:

- (k) Course Aggregate..... Article 1004.01 gradation CA-3
- (l) Geotextile Fabric Article 1080.03
- (m) Seeding Class 2A Article 250.07 & 1081.04
- (n) Excelsior Blanket Article 1081.10 (a)
- (o) Riprap, Gradation 3 Article 1005.01
- (p) Cellular Confinement Grid..... Article 1080.06

Delete Article 280.04 (b) and replace with:

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

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

Add the following as Article 280.04:

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

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

accounted for either by installation of a pipe culvert under the entrance, or if piping is impractical, a mountable berm will be permitted.

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

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

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

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

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

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

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

An anchor slot shall be placed at the upslope and downslope ends of the geotextile fabric perpendicular to the flow of water. At least 30 cm (12 in) of the end of the geotextile fabric shall be buried vertically in the anchor slot. The geotextile fabric shall be secured in the anchor slot by pins at 1 meter (3 feet) or less on center prior to burying. The soil shall be firmly compacted against the geotextile fabric in the anchor slot. This shall be accomplished by placing the geotextile fabric into the slot, folding it over to expose the underside, pinning the fabric through both layers, backfilling the anchor slot, and compacting the soil.

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

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

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

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

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

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

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

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

slopes and ditches can be brought to finish grade, topsoil placed, and landscaped prior to the end of the workday, whenever possible.

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

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

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

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

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

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

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

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

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

Add the following to Article 280.05:

Sediment Control, Silt Fence Maintenance shall consist of maintaining silt fence that has fallen down or become ineffective as a result of natural forces. This work shall include the removal of sediment buildup from behind the silt fence when the sediment has reached a level of half the above ground height of the fence, or as directed by the Engineer. Silt fence damaged by the Contractor's operations or negligence shall be repaired at the Contractor's expense, or as directed by the Engineer.

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

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

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

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

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

Revise Article 280.06 (c) to read:

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

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

Add the following as Article 280.06:

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

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

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

- (i) Erosion Control, Temporary Pipe Slope Drains. This work will be measured for payment by each complete system installed and maintained, regardless of pipe diameter and length. This work will be measured only once per location installed. All connections, anchors, extensions, geotextile materials, and temporary berms used to install, reinstall, or operate the temporary pipe slope drains will not be measured for payment.
- (j) Erosion Control, Temporary Channel Diversion. This work will be measured for payment along the centerline of the channel in meters (feet) of temporary channel diversion installed, maintained, and removed. Earth Excavation, Earth Plug, Riprap, geotextile materials for channel lining, and backfill will not be measured separately for payment, but be included in cost of temporary channel diversion. Sediment Control, Silt Fence shall be paid for separately.
- (k) Same-Day Stabilization. This work will not be measured for payment, but included in the cost of the items utilized shown on the Plans or as directed by the Engineer.
- (l) Sediment Control, Stone Outlet Structure Sediment Trap. This work will not be measured for payment separately, but included in the price for each item of work performed as shown in the Details in the Plans.
- (m) Sediment Control, Drainage Structure Inlet Filter Cleaning. This work will be measure for payment each time that the cleaning work is performed at each of the drainage structure inlet filter locations.

Revise Article 280.07 (a) to read:

- (a) Excavation for Sediment and Dewatering Basins, Temporary Ditches, and Diversion Dikes.

This work will be paid for at the contract unit price per cubic meter (cubic yard) for EARTH EXCAVATION FOR EROSION CONTROL. The various required linings shall be paid for at the contract unit price for the various items of work as detailed on the plans.

Revise Article 280.07 (c) to read:

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

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

Revise Article 280.07 (h) to read:

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

Add the following as Article 280.07:

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

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

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

- (j) Erosion Control, Temporary Pipe Slope Drains. This work will be paid for at the contract unit price each, for EROSION CONTROL, TEMPORARY PIPE SLOPE DRAINS.
- (k) Erosion Control, Temporary Channel Diversion. This work will be paid for at the contract unit price, per meter (feet), for EROSION CONTROL, TEMPORARY CHANNEL DIVERSION.
- (l) Same-Day Stabilization. This work will be paid for at the contract unit price for the various items of work performed and will not be paid for separately.
- (m) Sediment Control, Stone Outlet Structure Sediment Trap. This work will be paid for at the contract unit price for the work measured and will not be paid for separately. Riprap will be paid for according to Article 281.07. Earth Excavation for Erosion Control will be paid for according to Article 280.07 (a).

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

EROSION AND SEDIMENT CONTROL SCHEDULE

This Special Provision revises Section 108 (Prosecution and Progress) of the Standard Specifications for Road and Bridge Construction, creating a requirement that erosion and sediment control work items be included in the overall Progress Schedule.

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

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

The Erosion and Sediment Control Schedule shall include the following:

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

LANDSCAPE COORDINATION AND TRANSFER OF EROSION CONTROL DEVICES

LANDSCAPE COORDINATION. Contractor shall install the proposed seeding as shown on the Plans. The proposed seeding and erosion control shall be maintained (i.e. mowed, weeded, stones removed and erosion problems repaired) until May 2011 or until the corridor landscaping contract begins if prior to May 2011.

Prior to the commencement of the work under the corridor landscaping contract, a meeting between the contractor and the corridor landscape contractor shall occur. At this meeting, the Contractor shall transfer over maintenance of the landscaping to the corridor landscaping Contractor. Prior to this transfer, all dead or damaged materials shall be replaced or repaired to the satisfaction of the engineer by the Contractor at no additional cost to the County. In addition, all erosion control measures (i.e. ditch checks straw bales, filter fabric etc.) shall be performing as required at the time of this transfer. Replacement of measures with new materials will not be required, but they must be functional to qualify for transfer.

MEASUREMENT AND PAYMENT. There will be no separate measurement or payment for fulfilling the requirements described herein, and all costs, direct or indirect, shall be included in the prices for other items. Failure to successfully transfer erosion control devices will result in the withholding of Contractor payments until the requirements of this sub-section are met.

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

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

“ (a) National Pollutant Discharge Elimination System (NPDES) / Erosion and Sediment Control Deficiency Deduction.

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

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

If the Contractor fails to correct a deficiency within the specified time, a daily monetary deduction will be imposed for each calendar day or 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 \$2500.00 or 0.05 percent of the awarded contract value, whichever is greater. For those deficiencies where corrective action was not an option, the monetary deduction will be immediate and will be valued at one calendar day.”

RAILROAD PROTECTIVE LIABILITY INSURANCE

Work on these contracts will cross or be adjacent to the Chicago Central and Pacific Railroad Company (CCP) and Union Pacific Railroad (UP) Railroads. The Contractor shall meet the insurance and liability requirements in accordance with Section 107.11 of the Standard Specifications and/or required by the CCP and UP Railroads. In addition, the Contractor shall comply with Section 107.12 of the Standard Specifications for all work on the Railroads right-of-way.

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.

NAMED INSURED & ADDRESS	NUMBER & SPEED OF PASSENGER TRAINS	NUMBER & SPEED OF FREIGHT TRAINS
Chicago Central and Pacific Railroad Company and its Parents 17641 S. Ashland Ave. Homewood, IL 60430-1345	-0-	2 trains/day@30 mph
DOT/AAR No.: 289 908W RR Division: Eastern	RR Mile Post: 40.07 RR Sub-Division: Chicago	
For Freight/Passenger Information Contact: John Henriksen		Phone: 708/332-3557
For Insurance Information Contact: Terry Lee		Phone: 715/345-2501
Union Pacific Railroad Insurance Group M/C 10049 1416 Dodge St. Omaha NE 68179	-0-	2 trains/day@49 mph
DOT/AAR No.: 174540B RR Division: Chicago/Illinois	RR Mile Post: 37.79 RR Sub-Division: Belvedere	
For Freight/Passenger Information Contact: Rich Ellison		Phone: 708/649-5214
For Insurance Information Contact: Connie Prokupek		Phone: 402/544-2215

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

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

The Contractor will be advised when the Department has received approval of the insurance from the railroads. 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 railroads. The Contractor shall also provide the Engineer with the expiration date of each required policy.

Method Of Measurement. This work will be measured as a lump sum item for each applicable railroad.

Basis of Payment. RAILROAD PROTECTIVE LIABILITY INSURANCE .

RAILROAD RIGHT OF ENTRY (CCP)

Any contractors working on CC&P/CN right of way will need to apply for a right-of-entry permit and pay the \$750 fee. The prime contractor would apply for this permit and all subcontractors and subconsultants will be covered under the prime's policy and permit. This is only required in instances where the contract will require work on the CN right of way.

Contractors shall comply with the following language directly from CC&P/CN

The Grantee, Licensee, Permittee and/or its Contractor shall, before entering upon the property of the Railroad for performance of any work, secure a right of entry agreement and permission from the Engineering Superintendent of the Railroad Company or his authorized representative at john.henricksen@cn.ca for the occupancy and use of the Railroad's property and shall confer with the Railroad relative to requirements for railroad clearances, operation and general safety regulations. Grantee, Licensee, Permittee and/or its Contractor shall have all employees doing work on CN's property or its subcontractors doing work on CN's property go through Railroad Safety Training at <http://www.e-railsafe.com/>.

METHOD OF MEASUREMENT. There will be no separate measurement or payment for fulfilling the requirements described herein, and all costs, direct or indirect, shall be included in the prices for other items.

RAILROAD RIGHT OF ENTRY (UP)

Any contractors working on Union Pacific (UP) right of way will need to apply for a right-of-entry permit and pay the estimated \$750 fee. The prime contractor would apply for this permit and all subcontractors and subconsultants will be covered under the prime's policy and permit. This is only required in instances where the contract will require work on the UP right of way.

Contractors shall comply with the following language directly from UP

The Grantee, Licensee, Permittee and/or its Contractor shall, before entering upon the property of the Railroad for performance of any work, secure a right of entry agreement and permission from the Engineering Superintendent of the Railroad Company or his authorized representative for the occupancy and use of the Railroad's property and shall confer with the Railroad relative to requirements for railroad clearances, operation and general safety regulations. Grantee, Licensee, Permittee and/or its Contractor shall have all employees doing work on UP's property or its subcontractors doing work on UP's property go through Railroad Safety Training at <http://www.e-railsafe.com/>.

METHOD OF MEASUREMENT. There will be no separate measurement or payment for fulfilling the requirements described herein, and all costs, direct or indirect, shall be included in the prices for other items.

SCHEDULE

A progress schedule shall be developed and submitted in conformance with Article 108.02 of the Standard Specifications. The following additional requirements shall also apply:

PROGRESS SCHEDULE REQUIREMENTS

PRELIMINARY DETAILED PROGRESS SCHEDULE. At the preconstruction conference, the Contractor shall submit to the Owner for review and acceptance a Preliminary Detailed Progress Schedule. The Preliminary Detailed Progress Schedule shall be sufficiently complete in detail to indicate the sequence of operations, submittals, critical material deliveries and durations showing the first 60 Days. Work beyond 60 Days shall be in summary form.

The Preliminary Detailed Progress Schedule shall be prepared to the same level of effort required to produce the Detailed Progress Schedule and to the same standards for quality and detail. The Schedule shall be a summary level schedule for completion of the entire work in accordance with the Contract Milestones, which incorporates the Contractor's detailed work activities for the first 60 days of the contract. The summary level schedule shall be in sufficient detail and content to show the Contractor's general plan for completing the work and to identify the anticipated critical and near critical paths and to permit delay and impact analysis.

The Preliminary Detailed Progress Schedule will be used for a period not to exceed 60 days as measured from the date the Contract is signed. Following its review and acceptance by the Owner, this schedule will be reflected in the Detailed Progress Schedule. The Contractor will submit the Preliminary Detailed Progress Schedule to the Owner for acceptance. The Contractor will be required to make corrections to the schedule as necessary to comply with the contract requirements and will adjust the schedule to incorporate any missing information requested by the Owner.

No payment for Mobilization will be paid until the Preliminary Detailed Progress Schedule is accepted by the Owner. The Preliminary Detailed Progress Schedule submittal shall include a schedule narrative, which will itemize and describe the critical path (i.e. access limitations, constraints, shift work, etc.), identify any critical resources and compare early and late dates.

DETAILED PROGRESS SCHEDULE. At the preconstruction conference, the Contractor shall submit the proposed Schedule Engineer's qualifications for approval by the Owner. The Scheduling Engineer shall have experience in developing and updating project schedules of similar magnitude and scope and will be responsible for developing the initial Detailed Progress Schedule submittal and subsequent Revised Detailed Progress Schedule submittals as required.

Within 30 Days after the date the Contract is signed, the Contractor shall provide a Detailed Progress Schedule in accordance with the provisions outlined herein. This Project shall be planned and constructed utilizing the latest version of Primavera P5 or Primavera Contractor 5.0, as the scheduling software package. The Detailed Progress Schedule shall clearly and separately define the progression of Work from the date the Contract is signed to Final Acceptance by using separate activities for all work components. The schedule shall be in sufficient detail to allow evaluation of progress and to facilitate payment of all work items. The Owner will not consider processing any Contractor payments after 60 Days from the date the Contract is signed without the acceptance of the Detailed Progress Schedule, unless

otherwise agreed to by the Owner. The Detailed Progress Schedule submittal is to be accompanied by a narrative that describes the critical path(s) of the project, outlines the Contractors approach to the work, defines the project calendars and identifies critical resources.

The Detailed Progress Schedule shall consist of the following items as defined herein;

- 1) Activity description, including location of work.
- 2) Activity duration: Durations in excess of one month will require approval by the Owner's Project Manager.
- 3) Activity Calendar-type (provide various calendars as required to comply with the work area/work times provided.) The Contractor must coordinate working hours with local townships and municipalities and plan its work in accordance with local ordinances unless waivers can be obtained by the Contractor.
- 4) Activity codes as provided by Owner: once the Contract is signed, the Owner will provide a project code dictionary which must be used by the Contractor when preparing and updating its schedule. This code dictionary may dictate, in part, the Contractors ability to structure its schedule activities (i.e. each activity shall only be coded with a single Contractor; in other words you cannot assign 2 Contractors to the identical activity). The Contractor is responsible to completely populate all applicable code fields, as defined by the Engineer, within each of the scheduled activities.
- 5) Incorporating of Unit Prices & Quantities in accordance with the Contractors bid. This will be used by the Owner to compare planned progress to actual progress {earned value} and assist the Owner with its cash flow analysis. Each schedule activity shall include the total cost of performing each activity and shall show the intended rate of production for each item. The sum of cost for all activities shall equal the total Contract value.
- 6) The schedule shall establish provisions for continuous work, with special emphasis on the completion of major work elements impacting local communities/ local traffic. The Contractor will not be permitted to schedule work stoppages without prior approval by the Owner.
- 7) The Contractor shall consider and include in the Contract Schedule planning and scheduling of all work, seasonal weather conditions, utility coordination, expected job learning curves, the work of other Contractors and any other foreseeable delays. The Detailed Progress Schedule will be formulated to absorb adverse weather conditions normally anticipated. The Contract time has been predicated assuming a normal amount of adverse weather.
- 8) Predecessor and Successor Activity Logic the Detailed Progress Schedule shall include, in addition to all activities required to execute the work, such tasks as permits, owner defined access constraints, mobilization, demobilization, submittal and approval of material samples and shop drawings, procurement of significant materials and fabrication of special items, as well as installation and testing. A period of fourteen (14) Days from receipt to release of the submittal by the Owner, or as otherwise specified, shall be allowed for the Owner's review of all drawings. The activities shall be sufficiently detailed so that a reviewer can readily follow the sequence. The activities are to be described so that the work is readily identifiable. All activities, with the exception of the date the Contract is signed and project completion milestone, shall have a predecessor and successor. No open-ended schedules will be permitted without prior approval of the Owner. No more than 25% of the schedule activities shall be critical or near critical. "Near critical" will be defined as float in the range of 1 to 21 Days. "Critical" will be defined as having zero days of Total Float. Contractor imposed constraints will not be allowed without the prior approval of the Tollway. Neither the Owner nor the Contractor owns the schedule float. The Project owns the float. As such, liability for delay of the Completion dates will rest with the party actually causing delay to the Completion dates.

Delays to non-critical activities are to be absorbed by the project schedule and will not be considered as schedule delays, unless the delay causes a non-critical activity to become critical. The activities shall be organized and described so as to conform to the contract bid items, a comprehensive written description of the activity may be required. The Contractor's accepted Detailed Progress Schedule shall be subject to updates in accordance with 4, the Monthly Progress Schedule section. A delay of thirty (30) Days or more, based on the original Detailed Progress Schedule critical paths shall be sufficient cause for the Owner to notify the Contractor's bonding firms and other involved parties.

REVISED DETAILED PROGRESS SCHEDULE. If the Contractor requests changes to the accepted Detailed Progress Schedule in logic, durations, resources, constraints, etc., or, in the event, in the sole judgment of the Owner such changes become necessary in the best interest of The Work due to circumstances not known by the Owner at the time the Contract was entered into or arising thereafter, or if the Contractor has failed to comply with the accepted Detailed Progress Schedule, the Contractor shall submit a Revised Detailed Progress Schedule, which shall show how the Contractor proposes to complete the balance of The Work by the Completion Date. The Revised Detailed Progress Schedule shall be submitted within 10 Days of an Engineer's request for an Adjustment and shall be subject to the acceptance of the Owner. Upon Acceptance of the Revised Detailed Progress Schedule, this schedule will be deemed the current Detailed Progress Schedule and used for all future Monthly Progress Schedule updates. The Revised Detailed Progress Schedule submittal is to be accompanied by a narrative that details the Contractor's intentions on how to recover lost time and how the Contractor proposes to bring the project back on schedule. The Revised Detailed Progress Schedule submittal shall be consistent with the requirements of the Detailed Progress Schedule submittal.

MONTHLY PROGRESS SCHEDULE. After acceptance of the Contractor's Detailed Progress Schedule, the Contractor shall monitor progress of Work and update the schedule to reflect actual progress for each pay period. The Monthly Progress Schedule will be used as the basis for managing the weekly progress and for evaluating job progress and time extension requests. The purpose of the Monthly Progress Schedule is to report progress and is not to be used to revise the schedule logic, resources, durations, constraints, etc. as defined by the current Detailed Progress Schedule. Monthly Progress Schedule submittals are required at minimum every 30 Days and shall be due with and be a requisite to each Pay Estimate.

A Monthly Progress Report shall be submitted along with the Contractor's schedule update. The Owner will not release the progress payments until the progress schedule update has been accepted. The Monthly Progress Schedule update shall support the basis of the Pay Estimate amount. The Contractor shall make every Monthly Progress Schedule submitted consistent with all Contract requirements, including the order and time of performance of specified portion of The Work. Every Monthly Progress Schedule submittal shall be accompanied with a schedule narrative, which describes progress made since the last Monthly Progress Schedule submittal with special emphasis on critical and near critical activities, actual and potential delays to contract milestones and the utilization of any critical resources.

Monthly Progress Schedules shall not be accepted if more than 35% of the scheduled activities are deemed to be critical or near critical as defined in section Detailed Progress Schedule section above. The Contractor shall use all practicable means to make the progress of The Work conform to the original logic included in the latest accepted Detailed Progress Schedule. If the Contractor falls behind the scheduled progress, it shall take such measures as may be necessary to bring its work into compliance with the latest accepted Detailed Progress Schedule. The Contractor shall identify and promptly report to the Owner progress delays during the prosecution of the work. The Contractor shall promptly take appropriate action to provide

schedule recovery plans whenever the Contractor's actual physical progress is behind schedule. The Contractor must demonstrate through the submission of a progress schedule and narrative how it intends to modify production to achieve the necessary schedule gains to complete the affected milestone completion dates.

In the event the Contractor fails to bring its Work into such compliance, the Owner may, at its discretion, require the Contractor to take any or all of the actions listed in Section 108.10 of the Owner's Standard Specifications, at no additional cost to the Owner. The Contractor shall not be entitled to payment for any work performed if the Contractor is delinquent in the submission of a Monthly Progress Schedule which is acceptable to the Owner and, should the Contractor fail to submit a Monthly Progress Schedule in compliance with this Section, such failure shall in and of itself also be grounds for default as provided in Section 108.7 of the Owner's Standard Specifications.

The Contractor will be responsible for requesting a time extension for any delay or occurrence that, in the opinion of the Contractor, impacts the critical path of the Monthly Progress Schedule update. The Contractor shall submit a separate fragnet for each change order request, whether or not the work impacts the Project's critical path. The fragnet will consist of activities with durations and will depict the estimated float change to the assigned activities, and should show how the Contractor proposes to incorporate the changes in the schedule, and how it impacts the current schedule update critical path. Once agreement has been reached, the fragnet will be incorporated into the next monthly schedule update. Delays to non-critical activities will not be the basis for a time extension. The Owner will not be liable for any additional costs associated with the Contractor's obligation to complete the project in accordance with the contract requirements.

MEASUREMENT AND PAYMENT. There will be no separate measurement or payment for fulfilling the requirements described herein, and all costs, direct or indirect, shall be included in the prices for other items. Failure to provide satisfactory schedule submittals within the time specified herein will result in the withholding of Contractor payments until the requirements of this sub-section are met.

LIQUIDATED DAMAGES. The Contractor shall be subject to liquidated damages in the amount of \$1000 per day for each and every day the Contractor is delinquent in the submission of the Preliminary Detailed Progress Schedule, the Detailed Progress Schedule, the Revised Detailed Progress Schedule or the Monthly Progress Schedule.

INSURANCE

The Contractor shall name the County of DuPage as additional insured for any insurance coverage required by the contract. There will be no separate measurement or payment for this item.

DISTRICT 1 SPECIAL PROVISIONS

ASBESTOS REMOVAL

**BUILDING REMOVAL - CASE I (NON-FRIABLE AND FRIABLE ASBESTOS ABATEMENT)
(BDE)**

Effective: September 1, 1990

Revised: January 1, 2007

BUILDING REMOVAL: This work shall consist of the removal and disposal of 2 building(s), together with all foundations, retaining walls, and piers, down to a plane 1 ft (300 mm) below the ultimate or existing grade in the area and also all incidental and collateral work necessary to complete the removal of the building(s) in a manner approved by the Engineer. Any holes, such as basements, shall be filled with a suitable granular material. The building(s) are identified as follows:

Bldg. No.	Parcel No.	Location	Description
1	1ST0007	33 W012 Stearns Road	One-story wood structure with full basement constructed in 1960's.
2	1ST0005	32 W772 Stearns Road	2-story plus full basement brick building constructed in 1940's.

Discontinuance of Utilities: The Contractor shall arrange for the discontinuance of all utility services that serve the building(s) according to the respective requirements and regulations of the City, County, or utility companies involved. The Contractor shall disconnect and seal, in an approved manner, all service outlets that serve any building(s) he/she is to remove.

Signs: Immediately upon execution of the contract and prior to the wrecking of any structures, the Contractor shall be required to paint or stencil, in contrasting colors of an oil base paint, on all four sides of each residence and two opposite sides of other structures, the following sign:

PROPERTY ACQUIRED FOR
HIGHWAY CONSTRUCTION
TO BE DEMOLISHED BY THE

VANDALS WILL BE PROSECUTED

The signs shall be positioned in a prominent location on the structure so that they can be easily seen and read and at a sufficient height to prevent defacing. The Contractor shall not paint signs nor start demolition of any building(s) prior to the time that the State becomes the owner of the respective building(s).

All friable asbestos shall be removed from the building(s) prior to demolition. The Contractor has the option of removing the non-friable asbestos prior to demolition or demolishing the building(s) with the non-friable asbestos in place. Refer to the Special Provisions titled "Asbestos Abatement (General Conditions)", "Removal and Disposal of Friable Asbestos Building No. _____", and "Removal and Disposal of Non-Friable Asbestos Building No. _____" contained herein.

Basis of Payment: This work will be paid for at the contract lump sum unit price for BUILDING REMOVAL, numbers as listed above, which price shall be payment in full for complete removal of the buildings and structures, including any necessary backfilling material as specified herein. The lump sum unit price(s) for this work shall represent the cost of demolition and disposal assuming all asbestos, friable and non-friable, is removed prior to demolition. Any salvage value shall be reflected in the contract unit price for this item.

EXPLANATION OF BIDDING TERMS: Three separate contract unit price items have been established for the removal of each building. They are:

1. BUILDING REMOVAL NO. 1
2. BUILDING REMOVAL NO. 2
3. REMOVAL AND DISPOSAL OF FRIABLE ASBESTOS, BUILDING NO. 1
4. REMOVAL AND DISPOSAL OF FRIABLE ASBESTOS, BUILDING NO. 2
5. REMOVAL AND DISPOSAL OF NON-FRIABLE ASBESTOS, BUILDING NO. 1
6. REMOVAL AND DISPOSAL OF NON-FRIABLE ASBESTOS, BUILDING NO. 2

The Contractor shall have two options available for the removal and disposal of the non-friable asbestos.

The pay item for removal and disposal of non-friable asbestos will not be deleted regardless of the option chosen by the Contractor.

ASBESTOS ABATEMENT (GENERAL CONDITIONS): This work consists of the removal and disposal of friable and non-friable asbestos from the building(s) to be demolished. All work shall be done according to the requirements of the U.S. Environmental Protection Agency (USEPA), the Illinois Environmental Protection Agency (IEPA), the Occupational Safety and Health Administration (OSHA), the Special Provisions for "Removal and Disposal of Friable Asbestos, Building No. 1", and "Removal and Disposal of Friable Asbestos, Building No. 2" and "Removal and Disposal of Non-Friable Asbestos, Building No. 1, and "Removal and Disposal of Non-Friable Asbestos, Building No. 2", and as outlined herein.

An asbestos survey for each building has been completed. The results are summarized in the reports contained herein the Contract Specifications, and includes sketches indicating the location of Asbestos Containing Material (ACM) and Materials Description Table, a Materials Quantities Table. The table states whether the ACM is friable or non-friable and gives the approximate quantity. The quantities are given only for information and it shall be the Contractor's responsibility to determine the exact quantities prior to submitting his/her bid.

The Contractor shall provide a shipping manifest, similar to the one shown in these special provisions to the Engineer for the disposal of all ACM wastes.

Permits: The Contractor shall apply for permit(s) in compliance with applicable regulations of the Illinois Environmental Protection Agency. Any and all other permits required by other federal, state, or local agencies for carrying on the work shall be the responsibility of the Contractor. Copies of these permits shall be sent to the district office and the Engineer.

Notifications: The "Demolition/Renovation Notice" form, which can be obtained from the IEPA office, shall be completed and submitted to the address listed below at least ten days prior to commencement of any asbestos removal or demolition activity. Separate notices shall be sent for the asbestos removal work and the building demolition if they are done as separate operations.

Asbestos Demolition/Renovation Coordinator Illinois Environmental Protection
Agency Division of Air Pollution Control
P. O. Box 19276 Springfield, Illinois 62794-9276 (217)785-1743

Notices shall be updated if there is a change in the starting date or the amount of asbestos changes by more than 20 percent.

Submittals:

- A. All submittals and notices shall be made to the Engineer, except where otherwise specified herein.
- B. Submittals that shall be made prior to start of work:
 1. Submittals required under Asbestos Abatement Experience.
 2. Submit documentation indicating that all employees have had medical examinations and instruction on the hazards of asbestos exposure, on use and fitting of respirators, on protective dress, on use of showers, on entry and exit from work areas, and on all aspects of work procedures and protective measures as specified in Worker Protection Procedures.
 3. Submit manufacturer's certification stating that vacuums, ventilation equipment, and other equipment required to contain airborne fibers conform to ANSI 29.2.
 4. Submit to the Engineer the brand name, manufacturer, and specification of all sealants or surfactants to be used. Testing under existing conditions will be required at the direction of the Engineer.
 5. Submit proof that all required permits, site locations, and arrangements for transport and disposal of asbestos-containing or asbestos-contaminated materials, supplies, and the like have been obtained (i.e., a letter of authorization to utilize designated landfill).
 6. Submit a list of penalties, including liquidated damages, incurred through non-compliance with asbestos abatement project specifications.

7. Submit a detailed plan of the procedures proposed for use in complying with the requirements of this specification. Include in the plan the location and layout of decontamination units, the sequencing of work, the respiratory protection plan to be used during this work, a site safety plan, a disposal plan including the location of an approved disposal site, and a detailed description of the methods to be used to control pollution. The plan shall be submitted to the Engineer prior to the start of work.
 8. Submit proof of written notification and compliance with Paragraph "Notifications".
- C. Submittals that shall be made upon completion of abatement work:
1. Submit copies of all waste chain-of-custodies, trip tickets, and disposal receipts for all asbestos waste materials removed from the work area;
 2. Submit daily copies of work site entry logbooks with information on worker and visitor access;
 3. Submit logs documenting filter changes on respirators, HEPA vacuums, negative pressure ventilation units, and other engineering controls; and
 4. Submit results of any bulk material analysis and air sampling data collected during the course of the abatement including results of any on-site testing by any federal, state, or local agency.

Certificate of Insurance:

- A. The Contractor shall document general liability insurance for personal injury, occupational disease and sickness or death, and property damage.
- B. The Contractor shall document current Workmen's Compensation Insurance coverage.
- C. The Contractor shall supply insurance certificates as specified by the Department.

Asbestos Abatement Experience:

- A. Company Experience: Prior to starting work, the Contractor shall supply evidence that he/she has been prequalified with the Illinois Capital Development Board and that he/she has been included on the Illinois Department of Public Health's list of approved Contractors.
- B. Personnel Experience:
 1. For Superintendent, the Contractor shall supply:
 - a. Evidence of knowledge of applicable regulations in safety and environmental protection is required as well as training in asbestos abatement as evidenced by the successful completion of a training course in supervision of asbestos abatement as specified in 40 CFR 763, Subpart E, Appendix C, EPA Model

Contractor Accreditation Plan. A copy of the certificate of successful completion shall be provided to the Engineer prior to the start of work.

- b. Documentation of experience with abatement work in a supervisory position as evidenced through supervising at least two asbestos abatement projects; provide names, contact, phone number, and locations of two projects in which the individual(s) has worked in a supervisory capacity.
2. For workers involved in the removal of friable and non-friable asbestos, the Contractor shall provide training as evidenced by the participation and successful completion of an accredited training course for asbestos abatement workers as specified in 40 CFR 763, Subpart E, Appendix C, EPA Model Contractor Accreditation Plan. A copy of the certificate of successful completion shall be provided to all employees who will be working on this project.

ABATEMENT AIR MONITORING: The Contractor shall comply with the following:

- A. Personal Monitoring: All personal monitoring shall be conducted per specifications listed in OSHA regulation, Title 29, Code of Federal Regulation 1926.58. All area sampling shall be conducted according to 40 CFR Part 763.90. All air monitoring equipment shall be calibrated and maintained in proper operating condition. Excursion limits shall be monitored daily. Personal monitoring is the responsibility of the Contractor. Additional personal samples may be required by the Engineer at any time during the project.
- B. Contained Work Areas for Removal of Friable Asbestos: Area samples shall be collected for the department within the work area daily. A minimum of one sample shall be taken outside of the abatement area removal operations. The Engineer will also have the option to require additional personal samples and/or clearance samples during this type of work.
- C. Interior Non-Friable Asbestos-Containing Materials: The Contractor shall perform personal air monitoring during removal of all nonfriable Transite and floor tile removal operations. The Engineer will also have the option to require additional personal samples and/or clearance samples during this type of work.
- D. Exterior Non-Friable Asbestos-Containing Materials: The Contractor shall perform personal air monitoring during removal of all nonfriable cementitious panels, piping, roofing felts, and built up roofing materials that contain asbestos.

The Contractor shall conduct down wind area sampling to monitor airborne fiber levels at a frequency of no less than three per day.

- E. Air Monitoring Professional
 1. All air sampling shall be conducted by a qualified Air Sampling Professional supplied by the Contractor. The Air Sampling Professional shall submit documentation of successful completion of the National Institute for Occupational Safety and Health (NIOSH) course #582 - "Sampling and Evaluating Airborne Asbestos Dust".

2. Air sampling shall be conducted according to NIOSH Method 7400. The results of these tests shall be provided to the Engineer within 24 hours of the collection of air samples.

REMOVAL AND DISPOSAL OF FRIABLE ASBESTOS, BUILDING NO. 1 and REMOVAL AND DISPOSAL OF FRIABLE ASBESTOS BUILDING NO. 2: This work consists of the removal and disposal of all friable asbestos from the building(s) prior to demolition. The work shall be done according to the Special Provision titled "Asbestos Abatement (General Conditions)" and as outlined herein.

This work will be paid for at the contract unit price per lump sum for REMOVAL AND DISPOSAL OF FRIABLE ASBESTOS, BUILDING NO. 1, and REMOVAL AND DISPOSAL OF FRIABLE ASBESTOS BUILDING NO. 2 as shown, which price shall include furnishing all labor, materials, equipment and services required to remove and dispose of the friable asbestos.

REMOVAL AND DISPOSAL OF NON-FRIABLE ASBESTOS, BUILDING NO. 1 and REMOVAL AND DISPOSAL OF NON-FRIABLE ASBESTOS, BUILDING NO. 2: The Contractor has the option of removing and disposing of the non-friable asbestos prior to demolition of the building(s) or demolishing the building(s) with the non-friable asbestos in place.

Option #1 - If the Contractor chooses to remove all non-friable asbestos prior to demolition, the work shall be done according to the Special Provision titled "Asbestos Abatement (General Conditions)".

Option #2 - If the Contractor chooses to demolish the building(s) with the non-friable asbestos in place, the following provisions shall apply:

1. Continuously wet all non-friable ACM and other building debris with water during demolition.
2. Dispose of all demolition debris as asbestos containing material by placing it in lined, covered transport haulers and placing it in an approved landfill.

This work will be paid for at the contract unit price per lump sum for REMOVAL AND DISPOSAL OF NON-FRIABLE ASBESTOS, BUILDING NO. 1, and REMOVAL AND DISPOSAL OF NON-FRIABLE ASBESTOS, BUILDING NO. 2, as shown.

The cost for this work shall be determined as follows:

Option #1 - Actual cost of removal and disposal of non-friable asbestos.

Option #2 - The difference in cost between removing and disposing of the building if all non-friable asbestos is left in place and removing and disposing of the building assuming all non-friable asbestos is removed prior to demolition.

The cost of removing and disposing of the building(s), assuming all asbestos, friable and non-friable is removed first, shall be represented by the pay item "BUILDING REMOVAL NO. 1 and BUILDING REMOVAL NO. 2.

Regardless of the option chosen by the Contractor, this pay item will not be deleted, nor will the pay item BUILDING REMOVAL NO. 1 and BUILDING REMOVAL NO. 2.

EXAMPLE

Attached are Appendixes A - D. These appendixes are examples of the information to be included in the proposal and referred to on page 3 of the Special Provision. Appendix A are the sketches of the building(s) noted on page 1 of the Special Provision. These sketches show the location of asbestos on each floor of the building(s).

Appendix B provides a "Material Description Table" also referred to on page 3 of the Special Provision. Appendix C is a "Material Quantities Table" and is referred to on page 3 of the Special Provision.

Appendix D is a sample of a Shipping Manifest form referred to on page 3.

Appendix E is a sample of the building(s) identification needed on page 1.

APPENDIX B

MATERIAL DESCRIPTION TABLE

Material Description	% And type Of Asbestos	Location, Description, Sample Number (If Applicable)
I. Ike and Swannies Tap		
Pipe Insulation	55% & 60% chrysotile	Typical of all insulated piping in Basement area and in wall on 1st Floor. Fair condition. Some debris present in Basement.
Freezer cork Mastic	10% chrysotile	Cork wall and ceiling mastic is in Freezer Room in Basement area. Poor condition. Sample AX656.
Floor tile	10% chrysotile	First floor in west portion of building. Floor tile is located under carpet. Poor condition. Sample AX652.
II. Peoria Hotel Building		
Pipe Insulation	20% & 30% chrysotile	Typical of most insulated piping in Basement area. 1st Floor and 2nd Floor. Fair condition. Abundant debris present in Basement. Sample AX660 and Sample AX663.
HW Tank Insulation	55% chrysotile	Tank located in Mechanical Room on the Basement Floor. Tank insulation is in fair condition. ACM debris is throughout Mechanical Room. Sample AX664.
Freezer Cork Mastic	10% chrysotile	Cork wall and ceiling mastic is in Freezer Room in Basement area. Poor condition. Same as Sample AX656.
Floor tile	10% chrysotile 12% chrysotile	First floor in the main hotel building. Floor tile is in poor condition. Sample AX561 and Sample AX662.

Transite
Siding

25% chrysotile

Located on an out building in back
of main hotel, 1st Floor. Debris on
ground and in Basement area
Sample AX666.

APPENDIX C

MATERIAL QUANTITIES TABLE

The following are approximate quantities of ACM to be removed from the building indicated. These material quantities do not indicate the cleaning required to remove asbestos debris and resulting contamination from the work areas.

I. Ike and Swanies Tap

Material	Floor	Quantity Present	Friable
Pipe Insulation	Basement	140 L.F.	Yes
Pipe Insulation	1st Floor	20 L.F.	Yes
Cork Mastic	Basement	900 S.F.	No
Floor Tile	1st Floor	1225 S.F.	No
Carpet	1st Floor	1225 S.F.	No

II. Peoria Hotel Building

Material	Floor	Quantity Present	Friable
Tank Insulation	Basement Mech RM	115 L.F.	Yes
Pipe Insulation	Basement Mech RM	335 L.F.	Yes
Pipe Insulation	Basement (remaining)	770 L.F.	Yes
Pipe Insulation	1st Floor	120 S.F.	Yes
Pipe Insulation	2nd Floor	40 S.F.	Yes
Cork Mastic	Basement	400 S.F.	No
Floor Tile	1st Floor	1300 S.F.	No
Linoleum	1st Floor	75 S.F.	No
Transite Siding	1st Floor	225 S.F.	No

APPENDIX D
SHIPPING MANIFEST Generator
Transporter

1. Work Site Name and Mailing Address	Owner's Name	Owner's Telephone No.
2. Operator's Name and Address		Operator's Telephone No
3. Waste Disposal Site (WDS) Name Mailing Address, and Physical Site Location		WDS Telephone No.
4. Name and Address of Responsible Agency		
5. Description of Materials		
6. Containers	No.	Type
7. Total Quantity	M3	(Yd3)
8. Special Handling Instructions and Additional Information		
9. OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.		
Printed/Typed Name & Title	Signature	Month Day Year

Transporter

10. Transporter 1 (Acknowledgement of Receipt of Materials)		
Printed/Typed Name & Title Address and Telephone No.	Signature	Month Day Year
11. Transporter 2 (Acknowledgement of Receipt of Materials)		
Printed/Typed Name & Title Address and Telephone No.	Signature	Month Day Year

Disposal Site

12. Discrepancy Indication Space		
13. Waste Disposal Site Owner or Operator: Certification of Receipt of Asbestos Materials covered By This manifest Except As Noted In Item 12		
Printed/Typed Name & Title	Signature	Month Day Year

APPENDIX D

INSTRUCTIONS

Waste Generator Section (Items 1-9)

1. Enter the name of the facility at which asbestos waste is generated and the address where the facility is located. In the appropriate spaces, also enter the name of the owner of the facility and the owner's phone number.
2. If a demolition or renovation, enter the name and address of the Company and authorized agent responsible for performing the asbestos removal. In the appropriate spaces, also enter the phone number of the operator.
3. Enter the name, address, and physical site location of the waste disposal site (WDS) that will be receiving the asbestos materials. In the appropriate spaces, also enter the phone number of the WDS. Enter "on-site" if the waste will be disposed of on the generator's property.
4. Provide the name and address of the local, State, or EPA Regional Office responsible for administering the asbestos NESHAP program.
5. Indicate the types of asbestos waste materials generated. If from a demolition or renovation, indicate the amount of asbestos that is
 - Friable asbestos material
 - Nonfriable asbestos material
6. Enter the number of containers used to transport the asbestos materials listed in Item 5. Also enter one of the following container codes used in transporting each type of asbestos material (specify any other type of container used if not listed below):

DM -Metal drums, barrels
DP -Plastic drums, barrels
BA -6 mil plastic bags or wrapping
7. Enter the quantities of each type of asbestos material removed in units of cubic meters (cubic yards).
8. Use this space to indicate special transportation, treatment, storage or disposal or Bill of Lading information. If an alternate waste disposal site is designated, note it here. Emergency response telephone numbers or similar information may be included here.
9. The authorized agent of the waste generator shall read and then sign and date this certification. The date is the date of receipt by transporter.

NOTE: The waste generator shall retain a copy of this form.

APPENDIX D

INSTRUCTIONS

Transporter Section (Items 10 & 11)

10. & 11. Enter name, address, and telephone number of each transporter used, if applicable. Print or type the full name and title of person accepting responsibility and acknowledging receipt of materials as listed on this waste shipment record for transport.

NOTE: The transporter shall retain a copy of this form.

Disposal Site Section (Items 12 & 13)

12. The authorized representative of the WDS shall note in this space any discrepancy between waste described on this manifest and waste actually received as well as any improperly enclosed or contained waste. Any rejected materials should be listed and destination of those materials provided. A site that converts asbestos-containing waste material to nonasbestos material is considered a WDS.
13. The signature (by hand) of the authorized WDS agent indicates acceptance and agreement with statements on this manifest except as noted in Item 12. The date is the date of signature and receipt of shipment.

NOTE: The WDS shall retain a completed copy of this form. The WDS shall also send a completed copy to the operator listed in Item 2.

AGGREGATE SURFACE COURSE FOR TEMPORARY ACCESS

Effective: April 1, 2001
Revised: January 2, 2007

Revise Article 402.10 of the Standard Specifications to read:

"402.10 For Temporary Access. The contractor shall construct and maintain aggregate surface course for temporary access to private entrances, commercial entrances and roads according to Article 402.07 and as directed by the Engineer.

The aggregate surface course shall be constructed to the dimensions and grades specified below, except as modified by the plans or as directed by the Engineer.

- (a) Private Entrance. The minimum width shall be 12 ft (3.6 m). The minimum compacted thickness shall be 6 in. (150 mm). The maximum grade shall be eight percent, except as required to match the existing grade.
- (b) Commercial Entrance. The minimum width shall be 24 ft (7.2 m). The minimum compacted thickness shall be 9 in. (230 mm). The maximum grade shall be six percent, except as required to match the existing grade.
- (c) Road. The minimum width shall be 24 ft (7.2 m). The minimum compacted thickness shall be 9 in. (230 mm). The grade and elevation shall be the same as the removed pavement, except as required to meet the grade of any new pavement constructed.

Maintaining the temporary access shall include relocating and/or regrading the aggregate surface course for any operation that may disturb or remove the temporary access. The same type and gradation of material used to construct the temporary access shall be used to maintain it.

When use of the temporary access is discontinued, the aggregate shall be removed and utilized in the permanent construction or disposed of according to Article 202.03."

Add the following to Article 402.12 of the Standard Specifications:

"Aggregate surface course for temporary access will be measured for payment as each for every private entrance, commercial entrance or road constructed for the purpose of temporary access. If a residential drive, commercial entrance, or road is to be constructed under multiple stages, the aggregate needed to construct the second or subsequent stages will not be measured for payment but shall be included in the cost per each of the type specified."

Revise the second paragraph of Article 402.13 of the Standard Specifications to read:

"Aggregate surface course for temporary access will be paid for at the contract unit price per each for TEMPORARY ACCESS (PRIVATE ENTRANCE), TEMPORARY ACCESS (COMMERCIAL ENTRANCE) or TEMPORARY ACCESS (ROAD).

Partial payment of the each amount bid for temporary access, of the type specified, will be paid according to the following schedule:

- (a) Upon construction of the temporary access, sixty percent of the contract unit price per each, of the type constructed, will be paid.
- (b) Subject to the approval of the Engineer for the adequate maintenance and removal of the temporary access, the remaining forty percent of the pay item will be paid upon the permanent removal of the temporary access."

CLEANING EXISTING DRAINAGE STRUCTURES

Effective: September 30, 1985

Revised: January 1, 2007

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

All existing drainage structures which are to be adjusted or reconstructed shall be cleaned in accordance with Article 602.15. This work will be paid for in accordance with Article 602.16.

All other existing drainage structures which are specified to be cleaned on the plans will be cleaned according to Article 602.15.

Basis of Payment. This work will be paid for at the contract unit price each for DRAINAGE STRUCTURES TO BE CLEANED and at the contract unit price per foot (meter) for STORM SEWERS TO BE CLEANED.

EMBANKMENT I

Effective: January 1, 2007

Description. This work shall be according to Section 205 of the Standard Specifications except for the following.

Material. All material shall be approved by the District Geotechnical Engineer. The proposed material must meet the following requirements.

- a) The laboratory Standard Dry Density shall be a minimum of 1450 kg/cu m (90 lb/cu ft) when determined in accordance with AASHTO T 99.
- b) The organic content shall be less than ten percent determined in accordance with AASHTO designation T 194 (Wet Combustion).
- c) Soils which demonstrate the following properties should be restricted to the interior of the embankment and shall be covered on both the sides and top of the embankment by a minimum of 900 mm (3 ft) of soil not considered detrimental in terms of erosion potential or excess volume change.
 - 1) A grain size distribution with less than 35 percent passing the number 75 um (#200) sieve.
 - 2) A plasticity index (PI) of less than 11.
 - 3) A liquid limit (LL) in excess of 45.
- d) Reclaimed asphalt shall not be used within the ground water table or as a fill if ground water is present.

CONSTRUCTION REQUIREMENTS

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

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

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

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

- a) A maximum of 110 percent of the optimum moisture for all forms of clay soils.
- b) A maximum of 105 percent of the optimum moisture for all forms of clay loam soils.

EPOXY COATING ON REINFORCEMENT (DISTRICT ONE)

Effective: January 1, 2007

For work outside the limits of bridge approach pavement, all references in the Highway Standards and Standard Specifications for reinforcement, dowel bars, tie bars and chair supports for pavement, shoulders, curb, gutter, combination curb and gutter and median shall be epoxy coated, unless noted on the plan.

FINE AGGREGATE FOR HOT-MIX ASPHALT (HMA) (DISTRICT ONE)

Effective: May 1, 2007

Revise Article 1003.03 (c) to read:

“Gradation. The fine aggregate gradation for all HMA shall be FA1, FA 2, FA 20, or FA 21. When Reclaimed Asphalt Pavement (RAP) is incorporated in the HMA design, the use of FA 21 Gradation will not be permitted.

GROUND ROD

Effective: January 1, 2007

Description. This item shall consist of furnishing, installing and connecting ground rods for the grounding of service neutral conductors and for supplementing the equipment grounding system via connection at poles or other equipment throughout the system. All materials and work shall be in accordance with Article 250 of the NEC.

Materials. Materials shall be according to the following Articles of Section 1000 – Materials

Item	Article/Section
(a) Grounding Electrodes.....	1087.01(b)
(b) Grounding Electrode Conductors.....	1087.01(a)
(c) Access Well.....	1087.01(c)

CONSTRUCTION REQUIREMENTS

General. All connections to ground rods, structural steel or fencing shall be made with exothermic welds. Where such connections are made to insulated conductors, the connection shall be wrapped with at least 4 layers of electrical tape extended 152.4 mm (six inches) onto the conductor insulation.

Ground rods shall be driven so that the tops of the rod are 609.6 mm (24 inches) below finished grade. Where indicated, ground wells shall be included to permit access to the rod connections.

Where indicated, ground rods shall be installed through concrete foundations.

Where ground conditions, such as rock, preclude the installation of the ground rod, the ground rod may be deleted with the approval of the Engineer.

Where a ground field of "made" electrodes is provided, such as at control cabinets, the exact locations of the rods shall be documented by dimensioned drawings as part of the Record Drawings.

Ground rod connection shall be made by exothermic welds. Ground wire for connection to foundation steel or as otherwise indicated shall be stranded uncoated bare copper in accordance the applicable requirements of ASTM Designation B-3 and ASTM Designation B-8 and shall be included in this item. Unless otherwise indicated, the wire shall not be less than No. 2 AWG.

Where connections are made to epoxy coated reinforcing steel, the epoxy coating shall be sufficiently removed to facilitate the exothermic weld.

Method of Measurement. Ground rods shall be counted, each. Ground wires and connection of ground rods at poles shall be included in this pay item.

Basis of Payment. This item shall be paid at the contract unit price each for **GROUND ROD**, of the diameter and length indicated which shall be payment in full for the material and work described herein.

HOT MIX ASPHALT – DENSITY TESTING OF LONGITUDINAL JOINTS (D-1)

Effective: January 1, 2007

Revised: January 8, 2009

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

Definitions:

Density Test Location: The station location used for density testing.

Density Test Site: Individual test site where a single density value is determined.

Density Reading: A single, one minute nuclear density reading.

Density Value: The density determined at a given density test site from the average of two "density readings".

Quality Control / Quality Assurance (QC/QA)

[t1]

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

Longitudinal joint density testing shall be performed at each random "density test location". Longitudinal joint testing shall be located at a distance equal to the lift thickness, or a minimum of two inches, from each pavement edge. For Example, on a four inch HMA lift the near edge of the nuclear gauge or core barrel shall be within four inches from the edge of pavement. The remaining 3 density test sites shall be equally spaced between the two edge readings. Documentation shall indicate whether the joint was confined or unconfined.

The joint density value shall be determined using either a correlated nuclear gauge or cores. When using a correlated nuclear gauge, two [t2]"density readings" shall be taken at the given density test site. The gauge shall be rotated 180 degrees between "density readings". If the two "density readings" are not within 1.5 lb/cu ft (23 kg/cu m) then one additional "density reading" shall be taken. Additional "density readings" taken at a given site shall not be allowed to replace the original "density readings" unless an error has occurred (i.e. the nuclear gauge was sitting on debris).

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

DENSITY CONTROL LIMITS			
Mixture Composition	Parameter	Individual Test ^{2/}	Minimum Unconfined Test
IL-9.5, IL-12.5	N _{design} ≥ 90	92.0 – 96.0 %	90.0 %
IL-9.5, IL-9.5L, IL-12.5	N _{design} < 90	92.5 – 97.4 %	90.0 %
IL-19.0, IL-25.0	N _{design} ≥ 90	93.0 – 96.0 %	90.0 %
IL-19.0, IL-19.0L, IL-25.0	N _{design} < 90	93.0 – 97.4 %	90.0 %
All Other	N _{design} = 30	93.0 ^{1/} - 97.4 %	90.0 %

1/ 92.0 % when placed as first lift on an unimproved subgrade.

2/ "Density values" shall meet the "Individual Test" density control limits specified herein.

MAINTENANCE OF ROADWAYS

Effective: September 30, 1985

Revised: November 1, 1996

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

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

POROUS GRANULAR EMBANKMENT, SUBGRADE

Effective: September 30, 1985

Revised: August 1, 2008

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 1004.05 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>
*6 in. (150 mm)	97 ± 3
*4 in. (100 mm)	90 ± 10
2 in. (50 mm)	45 ± 25
No. 200 (75 µm)	5 ± 5

2. Gravel** and Crushed Gravel

<u>Sieve Size</u>	<u>Percent Passing</u>
*6 in. (150 mm)	97 ± 3
*4 in. (100 mm)	90 ± 10
2 in. (50 mm)	55 ± 25
No. 4 (4.75 mm)	30 ± 20
No. 200 (75 µm)	5 ± 5

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

** Not to be used in 30 or 40 year extended life concrete pavement or extended life bituminous concrete pavement (full depth).

The porous granular material shall be placed in one lift when the total thickness to be placed is 2 feet (600 mm) 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(g) of the Standard Specifications to obtain the desired keying or interlock and compaction. The Engineer shall verify that adequate keying has been obtained.

A 3 inch (75 mm) nominal thickness top lift of capping aggregate having a gradation of CA 6 will be required when Aggregate Subgrade is not specified in the contract and Porous Granular Embankment, Subgrade will be used under the pavement and shoulders. Capping aggregate will not be required when embankment meeting the requirements of Section 207 of the Standard Specifications or granular subbase is placed on top of the porous granular material.

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 subgrade.

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

foot (300 mm) longitudinal per 1 inch (25 mm) depth below the proposed subgrade or bottom of the proposed aggregate subgrade when included in the contract.

Method of Measurement. This work will be measured for payment in accordance with Article 207.04 of the Standard Specifications. When specified on the contract, the theoretical elevation of the bottom of the aggregate subgrade shall be used to determine the upper limit of Porous Granular Embankment, Subgrade. The volume will be computed by the method of average end areas.

Basis of Payment. This work shall be paid for at the contract unit price per cubic yard (cubic meter) for POROUS GRANULAR EMBANKMENT, SUBGRADE.

The Porous Granular Embankment, Subgrade shall be used as field conditions warrant at the time of construction. No adjustment in unit price will be allowed for an increase or decrease in quantities from the estimated quantities shown on the plans.

RECLAIMED ASPHALT PAVEMENT FOR NON-POROUS EMBANKMENT AND BACKFILL

Effective: April 1, 2001
Revised: January 1, 2007

Add the following sentence to Article 1004.05 (a) of the Standard Specifications:

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

Add the following sentence to Article 1004.05 (c)(2) of the Standard Specifications:

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

TEMPERATURE CONTROL FOR CONCRETE PLACEMENT (DISTRICT ONE)

Effective: May 1, 2007

Delete the second and third sentences of the second paragraph of Article 1020.14(a) of the Standard Specifications.

SLOTTED DRAIN

Effective: September 30, 1985

Revised: January 1, 2007

This work consists of furnishing and installing slotted drains at the locations shown in the plans.

Slotted drain shall be corrugated steel pipe conforming with the applicable requirements of Section 542, the details shown in the plans and as described herein.

The pipe shall be cut along the longitudinal axis and reinforced with a grate of solid spacer bars. The grate assembly shall be made from structural steel suitably welded to form the open slot and shall be hot-dip galvanized to meet the provisions of AASHTO M 111. The slot depth shall be as shown in the plans. The slot width shall be 1-3/4 inches (44 mm). Spacer bars shall be 3/16 inch (4.7 mm) solid web spacers on 6 inch (150 mm) centers for the full depth of the grating.

Joints and couplers for slotted drain shall provide ring compression capability across the full width of the joint. The band coupler shall butt up against the grating. A single band bolt shall be provided for band tensioning.

The slotted drain shall be installed in a trench excavated to the required grade, wide enough to accommodate the drain pipe. If the trench is excavated too deep, the additional depth shall be filled with approved fine aggregate and compacted to the satisfaction of the Engineer. The slotted drain must be properly positioned in the trench prior to backfilling. The upper end of the drain shall be capped as directed by the Engineer.

After the slotted drain has been leveled to grade a lean grout shall be used as backfill. The grout backfill shall extend upward one half the diameter of the drain pipe. The rest of the backfill may be aggregate base course material Type B meeting the requirements of Article 351.05(b) and shall be placed and compacted as directed by the Engineer. This backfill material shall extend upward to the top of the subgrade. Once the slotted drain is backfilled it should be covered prior to placing the final surfacing.

Method of Measurement. This work will be measured in feet (meters) in place.

Basis of Payment. This work will be paid for at the contract unit price per foot (meter) for SLOTTED DRAIN, of the pipe diameter and slot height specified, which price shall include all accessories required for connecting the slotted drain pipes and connections to drainage structures where necessary.

STATUS OF UTILITIES TO BE ADJUSTED

Effective: January 30, 1987

Revised: July 1, 1994

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

<u>Name of Utility</u>	<u>Type</u>	<u>Location</u>	<u>Estimated Dates for Start and Completion of Relocation or Adjustments</u>	<u>Date Received of Revised Relocation Plans for Stage 3</u>
<u>NICOR</u>	<u>Gas</u>	<u>See plans</u>	<u>Prior to Fall 2009</u>	<u>-</u>
<u>ComEd</u>	<u>Power Poles</u>	<u>See plans</u>	<u>Prior to Fall 2009</u>	<u>April 23, 2009</u>
<u>ComCast Cable Communications, Inc.</u>	<u>Fiber Optic</u>	<u>See plans</u>	<u>Prior to Fall 2009</u>	<u>-</u>
<u>AT&T</u>	<u>Telephone, fiber optic</u>	<u>See plans</u>	<u>Prior to Fall 2009</u>	<u>-</u>

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.

UNDERGROUND RACEWAYS (DISTRICT ONE)

Effective: January 1, 2007

Revise Article 810.03 of the Standard Specifications to read:

“Installation. All underground conduit shall have a minimum depth of 30-- inches (700 mm) below the finished grade.”

Add the following to Article 810.03 of the Standard Specifications:

“All metal conduit installed underground shall be Rigid Steel Conduit unless otherwise indicated on the plans.”

Add the following to Article 810.03 of the Standard Specifications:

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

Add the following to Article 810.03(c) of the Standard Specifications:

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

UNIT DUCT (DISTRICT ONE)

Effective: January 1, 2007

Revise the second paragraph of Article 816.03(a) to read:

“The unit duct shall be installed at a minimum depth of 760 mm (30-inches) unless otherwise directed by the Engineer.”

Revise Article 1088.01(c) to read:

“(c) Coilable Nonmetallic Conduit.

General:

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

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

The duct shall be UL Listed per 651-B for continuous length HDPE coiled conduit. The duct shall also comply with NEC Article 354.100 and 354.120.

Submittal information shall demonstrate compliance with the details of these requirements.

Dimensions:

Duct dimensions shall conform to the standards listed in ASTM D2447. Submittal information shall demonstrate compliance with these requirements.

Nominal Size		Nominal I.D.		Nominal O.D.		Minimum Wall	
mm	in	mm	in	mm	in	mm	in
31.75	1.2	35.05	1.38	42.16	1.66	3.556	0.140
	5		0		0	+0.51	+0.020
38.1	1.5	40.89	1.61	48.26	1.90	3.683	0.145
	0		0		0	+0.51	+0.020

Nominal Size		Pulled Tensile	
mm	in	N	Lbs
31.75	1.25	3322	747
38.1	1.50	3972	893

Marking:

As specified in NEMA Standard Publication No. TC-7, the duct shall be clearly and durably marked at least every 3.05 meters (10 feet) with the material designation (HDPE for high density polyethylene), nominal size of the duct and the name and/or trademark of the manufacturer.

Performance Tests:

Polyethylene Duct testing procedures and test results shall meet the requirements of UL 651. Certified copies of the test report shall be submitted to the Engineer prior to the installation of the duct. Duct crush test results shall meet or exceed the following requirements:

Duct Diameter		Min. force required to deform sample 50%	
mm	in	N	Lbs
35	1.25	4937	1110
41	1.5	4559	1025

USE OF RAP (dist 1)

Effective: January 1, 2007

Revised: January 7, 2009

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

Revise Section 1031 of the Standard Specifications to read:

"SECTION 1031. RECLAIMED ASPHALT PAVEMENT

1031.01 Description. Reclaimed asphalt pavement (RAP) results from the cold milling or crushing of an existing hot-mix asphalt (HMA) pavement. The Contractor shall supply written documentation that the RAP originated from routes or airfields under federal, state, or local agency jurisdiction. The contractor can also request that a processed pile be tested by the Department to determine the aggregate quality.

1031.02 Stockpiles. The Contractor shall construct individual, sealed RAP stockpiles meeting one of the following definitions. No additional RAP shall be added to the pile after the pile has been sealed. Stockpiles shall be sufficiently separated to prevent intermingling at the base. Stockpiles shall be identified by signs indicating the type and size as listed below (i.e. "Homogenous Surface").

Prior to milling or removal of an HMA pavement, the Contractor may request the District to provide verification of the existing mix composition to clarify appropriate stockpile.

- (a) Homogeneous. Homogeneous RAP stockpiles shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures and represent:
1) the same aggregate quality, but shall be at least C quality; 2) the same type of crushed aggregate (either crushed natural aggregate, ACBF slag, or steel slag); 3) similar gradation; and 4) similar asphalt binder content. If approved by the Engineer, combined single pass surface/binder millings may be considered "homogenous" with a quality rating dictated by the lowest coarse aggregate quality present in the mixture.
- (b) Conglomerate 5/8. Conglomerate 5/8 RAP stockpiles shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate 5/8 RAP shall be processed prior to testing by crushing to where all RAP shall pass the 5/8 in. (16 mm) or smaller screen. Conglomerate 5/8 RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.
- (c) Conglomerate 3/8. Conglomerate 3/8 RAP stockpiles shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least B quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate 3/8 RAP shall be processed prior to testing by crushing to where all RAP shall pass the 3/8 in. (9.5 mm) or smaller screen. Conglomerate 3/8 RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.

- (d) Conglomerate Variable Size. Conglomerate variable size RAP shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least B quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate variable size RAP shall be processed prior to testing by crushing and screening to where all RAP is separated into various sizes. All the conglomerate variable size RAP shall pass the 3/4 in. (19 mm) screen and shall be a minimum of two sizes. Conglomerate variable size RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.
- (e) Conglomerate "D" Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP from Class I, Superpave (High or Low ESAL), HMA (High or Low Esal), or equivalent mixtures. The coarse aggregate in this RAP may be crushed or round but shall be at least D quality. This RAP may have an inconsistent gradation and/or asphalt binder content. Conglomerate DQ Rap stockpiles shall not contain steel slag or other expansive material as determined by the Department.
- (f) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as "Non-Quality".

RAP containing contaminants, such as earth, brick, sand, concrete, sheet asphalt, bituminous surface treatment (i.e. chip seal), pavement fabric, joint sealants, etc., will be unacceptable unless the contaminants are removed to the satisfaction of the Engineer. Sheet asphalt shall be stockpiled separately.

1031.03 Testing. When used in HMA, the RAP shall be sampled and tested either during or after stockpiling.

For testing during stockpiling, washed extraction samples shall be run at the minimum frequency of one sample per 500 tons (450 metric tons) for the first 2000 tons (1800 metric tons) and one sample per 2000 tons (1800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4000 tons (3600 metric tons).

For testing after stockpiling, the Contractor shall submit a plan for approval to the District proposing a satisfactory method of sampling and testing the RAP pile either in-situ or by restockpiling. The sampling plan shall meet the minimum frequency required above and detail the procedure used to obtain representative samples throughout the pile for testing.

Before extraction, each field sample shall be split to obtain two samples of test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall extract the other test sample according to Department procedure. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

- (a) Testing Conglomerate 3/8 and Conglomerate Variable Size. In addition to the requirements above, conglomerate 3/8 and variable size RAP shall be tested for maximum theoretical specific gravity (G_{mm}) at a frequency of one sample per 500 tons (450 metric tons) for the first 2000 tons (1800 metric tons) and one sample per 2000 tons (1800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4000 tons (3600 metric tons).

- (b) Evaluation of Test Results. All of the extraction results shall be compiled and averaged for asphalt binder content and gradation and, when applicable G_{mm} . Individual extraction test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	Homogeneous/ Conglomerate	Conglomerate "D" Quality
1 in. (25 mm)		$\pm 5 \%$
3/4 in. (19mm)		
1/2 in. (12.5mm)	$\pm 8 \%$	$\pm 15 \%$
No. 4 (4.75 mm)	$\pm 6 \%$	$\pm 13 \%$
No. 8 (2.36 mm)	$\pm 5 \%$	
No. 16 (1.18 mm)		$\pm 15 \%$
No. 30 (600 μ m)	$\pm 5. \%$	
No. 200 (75 μ m)	$\pm 2.0 \%$	$\pm 4.0 \%$
Asphalt Binder	$\pm 0.4 \%$ ^{1/}	$\pm 0.5 \%$
G_{mm}	$\pm 0.02 \%$ ^{2/}	
G_{mm}	$\pm 0.03 \%$ ^{3/}	

- 1/ The tolerance for conglomerate 3/8 shall be $\pm 0.3 \%$.
- 2/ Applies only to conglomerate 3/8. When variation of the G_{mm} exceeds the $\pm 0.02 \%$ tolerance, a new conglomerate 3/8 stockpile shall be created which will also require an additional mix design.
- 3/ Applies only to conglomerate variable size. When variation of the G_{mm} exceeds the ± 0.03 tolerance, a new conglomerate variable size stockpile shall be created which will also require an additional mix design.

If more than 20 percent of the individual sieves are out of the gradation tolerances, or if more than 20 percent of the asphalt binder content test results fall outside the appropriate tolerances, the RAP shall not be used in HMA unless the RAP representing the failing tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

With the approval of the Engineer, the ignition oven may be substituted for extractions according to the Illinois Test Procedure, "Calibration of the Ignition Oven for the Purpose of Characterizing Reclaimed Asphalt Pavement (RAP)".

1031.04 Quality Designation of Aggregate in RAP. The quality of the RAP shall be set by the lowest quality of coarse aggregate in the RAP stockpile and are designated as follows.

- (a) RAP from Class I, Superpave (High ESAL), or HMA (High ESAL) surface mixtures are designated as containing Class B quality coarse aggregate.
- (b) RAP from Superpave (Low ESAL)/HMA (Low ESAL) IL-19.0L binder and IL-9.5L surface mixtures are designated as Class D quality coarse aggregate.

- (c) RAP from Class I, Superpave (High ESAL), or HMA (High ESAL) binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate.
- (d) RAP from bituminous stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate.

1031.05 Use of RAP in HMA. The use of RAP in HMA shall be as follows.

- (a) Coarse Aggregate Size. The coarse aggregate in all RAP shall be equal to or less than the nominal maximum size requirement for the HMA mixture to be produced.
- (b) Steel Slag Stockpiles. RAP stockpiles containing steel slag or other expansive material, as determined by the Department, shall be homogeneous and will be approved for use in HMA (High ESAL and Low ESAL) surface mixtures only.
- (c) Use in HMA Surface Mixtures (High and Low ESAL). RAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall be either homogeneous or conglomerate 3/8 or variable size in which the coarse aggregate is Class B quality or better.
- (d) Use in HMA Binder Mixtures (High and Low ESAL), HMA Base Course, and HMA Base Course Widening. RAP stockpiles for use in HMA binder mixtures (High and Low ESAL), HMA base course, and HMA base course widening shall be homogeneous, conglomerate 5/8, or conglomerate 3/8, conglomerate variable size, in which the coarse aggregate is Class C quality or better.
- (e) Use in Shoulders and Subbase. RAP stockpiles for use in HMA shoulders and stabilized subbase (HMA) shall be homogeneous, conglomerate 5/8, conglomerate 3/8, conglomerate variable size, or conglomerate DQ.
- (f) The use of RAP shall be a contractor's option when constructing HMA in all contracts. When the contractor chooses the RAP option, the percentage of RAP shall not exceed the amounts indicated in the table for a given N Design.

Max Mix Rap Percentage

HMA Mixtures ^{1/3/}		Maximum % Rap	
Ndesign	Binder/Leveling Binder	Surface	Polymer Modified
30	30/40 ^{2/}	30	10
50	25/40 ^{2/}	15/25 ^{2/}	10
70	25/30 ^{2/}	10/20 ^{2/}	10
90	10/15 ^{2/}	10/15 ^{2/}	10
105	10/15 ^{2/}	10/15 ^{2/}	10

- 1/ For HMA Shoulder and Stabilized Sub-Base (HMA) N-30, the amount of RAP shall not exceed 50% of the mixture.
- 2/ Value of Max % RAP If 3/8 Rap or conglomerate variable size RAP is utilized.

3/ When RAP exceeds 20% the AC shall be PG58-22. However, when RAP exceeds 20% and is used in full depth HMA pavement the AC shall be PG58-28.

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

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 HMA mix 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.

1031.07 HMA Production. The coarse aggregate in all RAP used shall be equal to or less than the nominal maximum size requirement for the HMA mixture being produced.

To remove or reduce agglomerated material, a scalping screen, 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. When producing mixtures containing conglomerate 3/8 or conglomerate variable size RAP, a positive dust control system shall be utilized.

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

(a) Drier Drum Plants

(1) Date, month, year, and time to the nearest minute for each print.

(2) HMA Mix number assigned by the Department

(3) Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton)

(4) Accumulated dry weight of RAP in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton)

(5) Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.

(6) Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.

(7) Residual asphalt binder in the RAP material (per size) as a percent of the total mix to the nearest 0.1 unit.

(8) Aggregate and RAP moisture compensators in percent as set on the control panel (Required when accumulated or individual aggregate and RAP are printed in wet condition).

(b) Batch Plants

- (1) Date, month, year, and time to the nearest minute for each print.
- (2) HMA mix number assigned by the Department.
- (3) Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram)
- (4) Mineral filler weight to the nearest pound (kilogram).
- (5) Individual RAP Aggregate weight to the nearest pound (kilogram).
- (6) Virgin asphalt binder weight to the nearest pound (kilogram)
- (7) Residual asphalt binder of each RAP size material as a percent of the total mix to the nearest 0.1 percent.

The printouts shall be maintained in a file at the plant for a minimum of one year or as directed by the Engineer and shall be made available upon request. The printing system will be inspected by the Engineer prior to production and verified at the beginning of each construction season thereafter.

1031.08 RAP in Aggregate Surface Course and Aggregate Shoulders. The use of RAP in aggregate surface course and aggregate shoulders shall be as follows.

- (a) Stockpiles and Testing. RAP stockpiles may be any of those listed in Article 1031.02, except "Other". The testing requirements of Article 1031.03 shall not apply.
- (b) Gradation. One hundred percent of the RAP material shall pass the 1 1/2 in. (37.5 mm) sieve. The RAP material shall be reasonably well graded from coarse to fine. RAP material that is gap-graded or single sized will not be accepted."

WIRE AND CABLE (DISTRICT ONE)

Effective: January 1, 2007

Revise the second sentence of the first paragraph of Article 1066.02(a) to read:

“The cable shall be rated at a minimum of 90°C dry and 75°C wet and shall be suitable for installation in wet and dry locations, and shall be resistant to oils and chemicals.”

Revise the second paragraph of Article 1066.02(b) to read:

“Uncoated conductors shall be according to ASTM B3, ICEA S-95-658/NEMA WC70, and UL Standard 44. Coated conductors shall be according to ASTM B 33, ASTM B 8, ICEA S-95-658/NEMA WC70 and UL Standard 44.”

Revise the third paragraph of Article 1066.02(b) to read:

“All conductors shall be stranded. Stranding meeting ASTM B 8, ICEA S-95658/NEMA WC70 and UL Standard 44. Uncoated conductors meeting ASTM B 3, ICEA S-95-658/NEMA WC70 and UL Standard 44.”

Revise the first sentence of Article 1066.03(a)(1) to read:

“General. Cable insulation designated as XLP shall incorporate cross-linked polyethylene (XLP) insulation as specified and shall meet or exceed the requirements of ICEA S-95-658, NEMA WC70, U.L. Standard 44.”

Add the following to Article 1066.03(a)(1) of the Standard Specifications:

“The cable shall be rated 600 volts and shall be UL Listed Type RHH/RHW/USE.”

Revise the Aerial Electric Cable Properties table of Article 1066.03(a)(3) to read:

Aerial Electric Cable Properties

Size AWG	Stranding	Phase Conductor		Messenger Wire	
		Average Insulation Thickness		Minimum Size AWG	Stranding
		mm	mils		
6	7	1.1	(45)	6	6/1
4	7	1.1	(45)	4	6/1
2	7	1.1	(45)	2	6/1
1/0	19	1.5	(60)	1/0	6/1
2/0	19	1.5	(60)	2/0	6/1
3/0	19	1.5	(60)	3/0	6/1
4/0	19	1.5	(60)	4/0	6/1

Revise the first paragraph of Articles 1066.03(b) to read:

“EPR Insulation. Cable insulation shall incorporate ethylene propylene rubber (EPR) as specified and the insulation shall meet or exceed the requirements of ICEA S-95-658, NEMA Standard Publication No. WC70, and U.L. Standard 44, as applicable.”

Add the following to Article 1066.03(b) of the Standard Specifications:

“Cable size No. 2 AWG and smaller shall be U.L. listed Type RHH/RHW and may be Type RHH/RHW/USE. Cable sized larger than No. 2 AWG shall be U.L. listed Type RHH/RHW/USE.

Revise Article 1066.04 to read:

“Aerial Cable Assembly. The aerial cable shall be an assembly of insulated aluminum conductors according to section 1066.02 and 1066.03. Unless otherwise indicated, the cable assembly shall be composed of three insulated conductors and a steel reinforced bare aluminum conductor (ACSR) to be used as the ground conductor. Unless otherwise indicated, the code word designation of this cable assembly is “Palomino”. The steel reinforced aluminum conductor shall conform to ASTM B-232. The cable shall be assembled according to ANSI/ICEA S-76-474.”

Revised the second paragraph of Article 1066.05 to read:

“The tape shall have reinforced metallic detection capabilities consisting of a woven reinforce polyethylene tape with a metallic core or backing.”

Revise Article 1066.08 to read:

“Electrical Tape. Electrical tape shall be all weather vinyl plastic tape resistant to abrasion, puncture, flame, oil, acids, alkalies, and weathering, conforming to Federal Specification MIL-I-24391, ASTM D1000 and shall be listed under UL 510 Standard. Thickness shall not be less than 0.215 mm (8.5 mils and width shall not be less than 20 mm (3/4-inch).”

PROJECT SPECIFIC SPECIAL PROVISIONS

POROUS GRANULAR EMBANKMENT (SUBGRADE)

Description: This work shall consist of furnishing, and placing porous granular embankment (subgrade) material as detailed on the plans or as per the direction of the Engineer. This work shall be done according to Section 207 except as modified herein.

Remedial treatment of the subgrade should consist of removal and replacement of the subgrade to a minimum depth of 6" and as indicated on the plans and as shown on the table below and as determined by the Engineer and replacement with a CA-6 crushed granular fill or Porous Granular Embankment Subgrade.

Station (Boring)	Subgrade Description (water content)	Unconfined Compressive Strength (tsf)	Remedial Treatment Depth (inches)*	Remedial Treatment (Widening Area Only)
Sta. 150+50 to 153+50 (B-10)	Clay (w=25%)	1.5	6	CA-6 or PGES
Sta 159+50 to 162+50 (B-13)	Clay (w=28%)	1.5	6	CA-6 or PGES
Sta 167+00 to 173+50 (B-15,16)	Clay to Clay Loam (w=28%)	1.75	6	CA-6 or PGES
Sta 177+50 to 182+50 (B-18)	Topsoil (w=28%)	-	18	CA-6 or PGES

* Remedial Treatment should be verified in the field.

Method of Measurement: This work will be measured for payment in cubic yards compacted in place and the volume measured by the method of average end areas.

Basis of Payment: This work will be paid for at the contract unit price per cubic yard for POROUS GRANULAR EMBANKMENT (SUBGRADE).

HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH

Description: This work shall consist of profile milling the existing HMA pavement in accordance with applicable portions of the Standard Specifications and Special Provisions contained herein at locations shown on the plans or as directed by the Engineer.

Method of Measurement: This work will be measured for payment in square yards regardless of depth as called for on the plans.

Basis of Payment: This work will be paid for at the contract unit price per square yard for HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH, which price shall include all material and labor required to complete the work as herein specified.

BRIDGE DECK OVERLAY REMOVAL

Description: This work consists of the removal of the bridge deck overlay at the location and to the details as shown in the plan for SN 045-3021. All work shall be in accordance with the applicable portions of Section 440 of the standard Specifications.

Method of Measurement: This work will be measured for payment in square yards.

Basis of Payment: This work will be paid at the contract unit price per square yard for BRIDGE DECK OVERLAY REMOVAL which price shall include all material and labor required to complete the work as here in specified.

REMOVAL OF EXISTING STRUCTURE

Work under this item must be performed in accordance with the requirements of Section 501 of the Standard Specifications except as herein modified. The last sentence in Article 501.04 shall include box culverts.

Description: This Work consists of removal of the existing box culvert under existing IL 25/Dunham Road in Stage 2 as depicted in the Plans for proposed IL 25/Dunham Road over the East Branch of Brewster Creek. This work will require a temporary diversion of Brewster Creek as specified below. No work shall be performed in flowing water.

General Requirements: Add to the beginning of Article 501.02 of the Standard Specifications. "The Contractor shall submit a demolition plan to the Engineer and KDSWCD for approval, detailing the proposed methods of demolition and the amount, location(s) and type(s) of equipment to be used." Contractor's submittal will also address construction access to the work at or near Brewster Creek with consideration given for either a stabilized haul road or stone access pad on the bank or within the excavation support area for equipment access.

Temporary Diversion: A Temporary Diversion is a temporary ridge or excavated channel, or combination of the two, constructed across sloping land to protect work areas from upslope runoff. Two examples are shown in Figures 1 and 2.

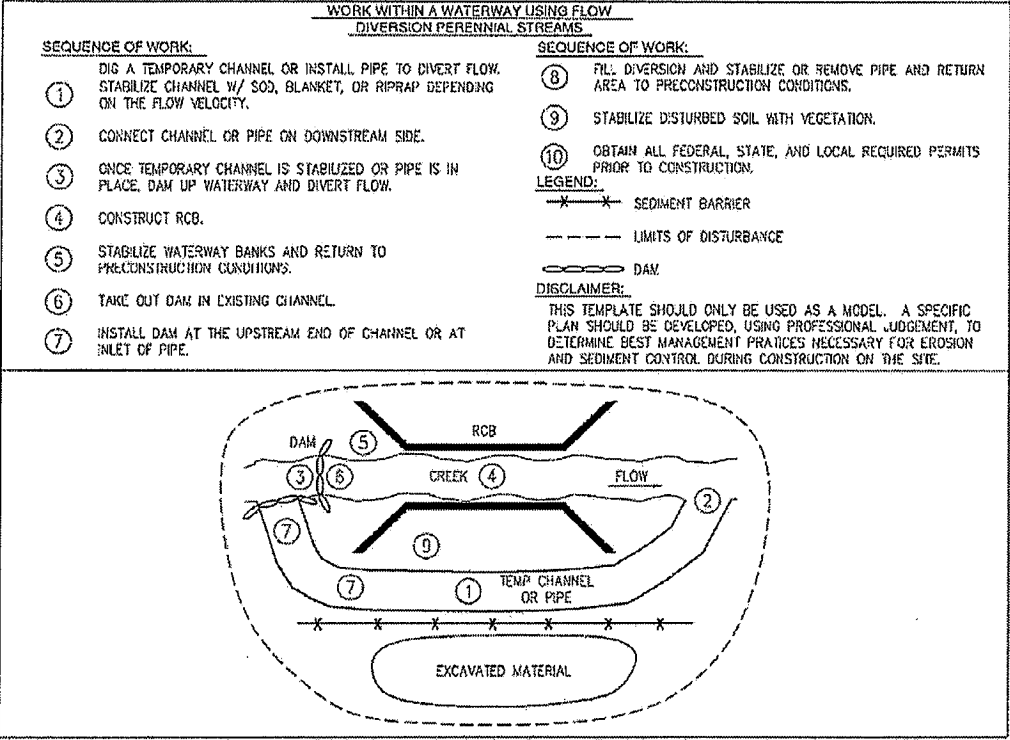


Figure 1: Temporary Diversion Schematic with Channel

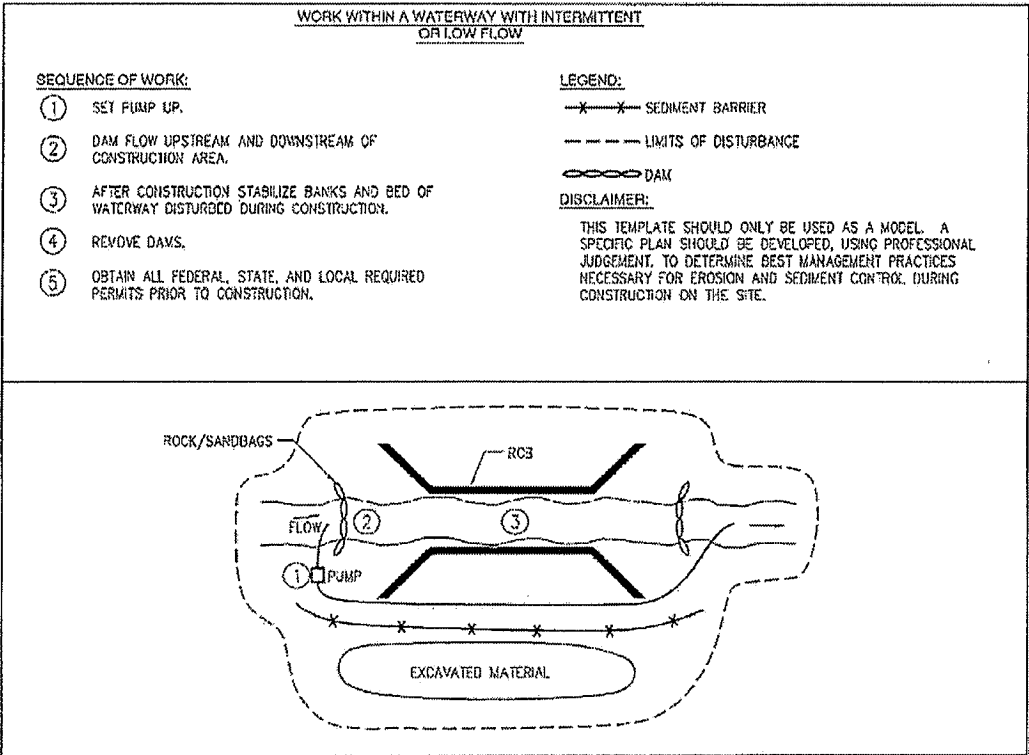


Figure 2: Temporary Diversion Schematic with Pump

Design Criteria:

- Follow these cross sectional guidelines:

Top Width	Height	Side Slope	Bot. Width
30 ft.	7 ft.	2:1	2 ft.

- The diversion channel grade will be dependent upon topography and must be graded to the outlet. Grade of the diversion should not exceed 1%.
- Temporary diversions must be stabilized with non-erodible materials.

Inspection / Maintenance:

- All temporary diversions are to be inspected every 7 calendar days and after a storm event of ½" or greater (including snowfall).
- When the protected area is stabilized, remove the temporary diversion, grade the area to match surrounding topography, and stabilize appropriately.

Method of Measurement: The work under this item will be measured for payment on a Lump Sum basis.

Basis of Payment: This item which includes but is not limited to the removal of existing box culvert and the construction of the temporary diversion and restoration of Brewster Creek will be paid for at the contract lump sum price for REMOVAL OF EXISTING STRUCTURE, which payment will be full compensation for the work described herein.

CONCRETE MEDIAN, TYPE SB (SPECIAL)

Description: This item consists of a concrete median at the locations shown on the plans, including the types of curb and gutter used. All work shall be in accordance with the applicable Sections of 606 of the Standard Specifications.

Method of Measurement: This work will be measured for payment in lineal feet along the face of the concrete curb on the baseline side of the concrete median.

Basis of Payment: This work will be paid for at the contract unit price per LINEAL FOOT for CONCRETE MEDIAN, TYPE SB (SPECIAL), which price shall include all material and labor required to complete the work as herein specified.

ISLAND PAVEMENT (6")

Description: Island pavement shall be constructed according to Article 606 of the Standard Specifications.

See Intersection Details sheet for location and dimensions of island pavements.

Method of Measurement: This work shall be measured for payment in square yards for the area inside the island back of curb.

Basis of Payment: The work shall be paid at the contract price per square yard for ISLAND PAVEMENT (6"). The price shall include the island concrete curb and gutter as shown on the plans.

P.C.C. RAMPED MEDIAN TERMINAL

Description: This work shall be constructed in accordance with Article 606 of the Standard Specifications, at the locations shown in the contract plans, as detailed on the Intersection Details and the Standard Detail.

Method of Measurement: This work shall be measured for payment by EACH.

Basis of Payment: The work shall be paid at the contract price per each for P.C.C. RAMPED MEDIAN TERMINAL. The price shall include the concrete curb and gutter or median as shown on the plans.

TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)

Description: This work shall consist of a parallel guardrail terminal installation in accordance IDOT standard plan 630301-04 and Section 631 of the Standard Specifications.

Method of Measurement: This work will be measured for per Section 631 of the Standard Specifications.

Basis of Payment: This work will be paid for at the contract unit price per EACH terminal for TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT), which price shall include all material and labor required to complete the work as herein specified.

TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (FLARED)

Description: This work shall consist of a parallel guardrail terminal installation in accordance IDOT standard plan and Section 631 of the Standard Specifications.

Method of Measurement: This work will be measured for per Section 631 of the Standard Specifications.

Basis of Payment: This work will be paid for at the contract unit price per EACH terminal for TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (FLARED), which price shall include all material and labor required to complete the work as herein specified.

TRAFFIC BARRIER TERMINAL TYPE 6B

Description: This work shall consist of a parallel guardrail terminal installation in accordance IDOT standard plan and Section 631 of the Standard Specifications.

Method of Measurement: This work will be measured for per Section 631 of the Standard Specifications.

Basis of Payment: This work will be paid for at the contract unit price per EACH terminal for TRAFFIC BARRIER TERMINAL TYPE 6B, which price shall include all material and labor required to complete the work as herein specified.

CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT (SPECIAL)

Description: This work shall be performed in accordance with Section 637 of the Standard Specifications except as modified herein and as shown in Roadway Detail Plan sheet.

Materials: Materials shall be in according to the following:

- a. Portland Cement Concrete (Notes 1 and 2) – Article 1020
- b. Reinforcement Bars – Article 508
- c. Curing Compound – Article 1022

Note 1 – Concrete shall be Class SI concrete

Note 2 – If the concrete barrier is slip-formed the maximum slump of the concrete shall be 1 ½ inches

Method of Measurement: This work, including installation of reinforcement and concrete median barrier bases, shall be measured for payment in lineal feet in place.

Basis of Payment: This work will be paid for at the contract unit price per lineal foot for CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT (SPECIAL).

CONCRETE BARRIER TRANSITION

Description: This work shall be performed in accordance with Section 637 of the Standard Specifications except as modified herein and as shown in Roadway Detail Plan sheet.

Materials: Materials shall be in according to the following:

- a. Portland Cement Concrete (Notes 1 and 2) – Article 1020
- b. Reinforcement Bars – Article 508
- c. Curing Compound – Article 1022

Note 1 – Concrete shall be Class SI concrete

Note 2 – If the concrete barrier is slip-formed the maximum slump of the concrete shall be 1 ½ inches

Method of Measurement: This work, including installation of reinforcement and concrete median barrier bases, shall be measured for payment in lineal feet in place.

Basis of Payment: This work will be paid for at the contract unit price per lineal foot for CONCRETE BARRIER TRANSITION.

TRAFFIC CONTROL AND PROTECTION

Work under this item will be performed in accordance with Section 701 of the Standard Specifications.

Description: This item of work will include furnishing, installation, maintenance, relocation and subsequent removal of all signs, signals, markings, traffic cones, barricades, warning lights, flaggers and other devices which are to be used for the purpose of regulating, warning or guiding traffic during the construction of this improvement. Including the removal of any existing pavement markings which conflict with the maintenance of traffic.

General Requirements: Traffic Control will be in accordance with the applicable section of the Standard Specifications, the applicable guidelines contained in the Illinois Manual on Uniform Traffic Control Devices for Streets and Highways, the Special Provision, Interim Special Provisions and any Special Details and Highway Standards contained herein and in the plans.

At the preconstruction meeting the Contractor will furnish the name of the individual in his/her 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 will be requested of the Department and County at the time of the preconstruction meeting in accordance with Article 108.01 of the Standard Specifications. This

will not relieve the Contractor of the foregoing requirement for a responsible individual in his/her direct employ. The Department will provide to the Contractor the name of its representative who will be responsible for the administration of the Traffic Control Plan. The Contractor will notify the County 72 hrs. before commencing construction or changing traffic flow.

Special attention is called to Articles 107.09 and 107.14 of the Standard Specifications and the following Highway Standards, Details, Recurring Supplemental Specifications and Special Provisions, and Special Provisions contained herein relating to traffic control.

Placement of short term and temporary pavement markings will not be paid for separately. Permanent pavement markings will be paid for under appropriate contract line items.

Special attention must be given to advance guide signs during these operations in order to keep barricade placement consistent with lane assignment. The Contractor will cover all traffic control devices which may be inconsistent with traffic patterns during the transfer from one construction stage to another.

The Contractor's vehicle will always move with and not against or across the flow of traffic. These vehicles will enter or leave work areas in a manner which will not be hazardous to or interfere with normal traffic and will not park or stop except within designated work areas. Personal vehicles will not be permitted to park within the right of way except in specific areas designated by the Engineer.

Traffic Control and Protection details are included in the standard drawings to specify the minimum required combination of traffic control devices in construction areas. Revisions, by the Engineer, to work or in the phasing of construction operations may require traffic control to be installed in accordance with a standard other than those included in the plans; in such cases, the standards will be made available to the Contractor at least one week in advance of the change in traffic control. Payment for traffic control required by these added standards will be in accordance with the Article 109.04 of the Standard Specifications. Revisions or modifications to increase the traffic control protection shown in the contract will be submitted by the Contractor for approval by the Engineer. A reduction of the traffic control shown in the contract will not be allowed.

If the Contractor requests and receives approval from the Engineer to revise or change the staging of the project from that specified on the plans any additional traffic control required due to that request will be considered included in the cost of the contract and no additional payment will be made.

The Contractor will immediately furnish a certified flagger or flaggers if, in the opinion of the Engineer, the Contractor's construction means or methods warrant. No additional compensation will be made for flaggers. If no flaggers are available the Contractor will cease operations until they become available.

All signs, signals, markings, traffic cones, barricades, warning lights, flaggers, and other traffic control devices must conform to the plans, specifications, special provisions and the latest edition of the "State of Illinois Manual on Uniform Traffic Control Devices." The Contractor will obtain, erect, maintain, and remove all traffic control devices in accordance with Article 107.14 of the Standard Specifications. Placement and maintenance of all traffic control devices will be as directed by the Engineer. The Engineer will be the sole judge as to the acceptability of placement and maintenance of the traffic control devices prescribed in the appropriate standards.

The Contractor will ensure that all barricades, signs, lights and other devices installed by him are operational every day, including Sundays and holidays. In the event of severe weather conditions, the Contractor must furnish any additional personnel required to properly maintain all traffic control devices as directed by the Engineer.

At the completion of each stage of construction or whenever operations indicate that a relocation of a proposed or existing traffic control device is advisable as determined by the Engineer, the Contractor will remove all traffic control devices which were furnished, installed and maintained by him/her under this contract, and such devices will remain the property of the Contractor. Any traffic control devices furnished, installed and maintained by the County will be removed by County forces and will remain the property of the County. All traffic control devices must remain in place until specific authorization for relocation or removal is received from the Engineer.

The Contractor must be aware of the requirements for coordination of all work in this project and adjoining or overlapping projects and for coordination of barricade placement necessary to provide a uniform traffic detour pattern. The Contractor will not be permitted to erect, change or remove his/her detour barricade system without the prior approval of the Engineer.

The placement of barricades and warning signs for the required lane closures will be as specified herein and will proceed in the direction of the flow of traffic. The removal of all signs and barricades will begin at the end of the construction areas and proceed toward oncoming traffic.

Maintenance of Roadways: Beginning on the date when the Contractor begins work on this project he/she will assume responsibility for the normal maintenance of all existing roadways within the limits of the improvement. This normal maintenance will include all repair work deemed necessary by the Engineer but will not include snow removal operations.

The work involved in maintaining the existing pavement will be considered as extra work, in accordance with Article 109.04 of the Standard Specifications. Traffic control and protection required for this work will be considered included in the lump sum price for TRAFFIC CONTROL AND PROTECTION.

Arrow Boards: A flashing arrow board meeting the requirements of Article 1106.03 of the Standard Specifications will be operating at all times when a lane is closed to traffic on a multi-lane highway. Arrow boards will be provided and located in ahead-on position within each lane closure taper. The cost of furnishing and maintaining arrow boards will be considered included in the contract lump sum price for TRAFFIC CONTROL AND PROTECTION.

Delays to the Contractor caused by complying with these requirements will be considered included in the cost of Traffic Control and Protection and no additional compensation will be allowed.

Existing Multi-use Path: The County is responsible for closing the existing multi-use path. The Contractor shall coordinate with the County to determine the exact date that the path will be closed. The County will provide the necessary signs and barricades to close the path. The Contractor shall coordinate with the County to determine the date that the path may be opened to the public.

CHARGE FOR TRAFFIC CONTROL DEFICIENCY

To ensure a prompt response to incidents involving the integrity of the work zone traffic control devices, the Contractor will provide a telephone number where a responsible individual can be contacted on a 24-hour-a-day basis. When the Engineer is notified or determines a deficiency exists, (s)he will be the sole judge as to whether the deficiency is an immediate safety hazard. The Contractor will dispatch sufficient resources within 2 hours of notification to make needed corrections of deficiencies that constitute an immediate safety hazard. Other deficiencies will be corrected within 12 hours. If the Contractor fails to restore the required traffic control and protection within the time limits specified above, the Engineer will impose a daily monetary deduction for each 24-hour period (or portion thereof) the deficiency exists. This time period will begin with the time of notification to the Contractor and end with the Engineer's acceptance of the corrections. For this project, the daily deduction will be ___* per day. In addition, if the Contractor fails to respond, the Engineer may correct the deficiencies 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.

In addition any work performed by the Contractor within the work zone that presents a hazard to vehicular or pedestrian traffic will be subject to charges for TRAFFIC CONTROL DEFICIENCY. Debris removal, fly dumping, proper access to abutting property, timely and correct placement of short term, temporary and permanent pavement markings, along with all items of work contained within this item are also subject to this charge.

* CHARGE PER CALENDAR DAY =
$$\frac{\text{Original contract amount for all items}}{\text{Number of Calendar days in contract}} \times 5\%$$

Method of Measurement: Traffic control and protection will be measured for payment on a lump sum basis.

Basis of Payment: This work will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, which price will be payment in full for all labor, materials, transportation, handling and incidentals necessary to furnish, install, maintain, and remove all traffic control devices required by the appropriate standards and as approved by the Engineer. No adjustment or additional compensation will be allowed except as specified herein. The salvage value of the materials removed will be reflected in the bid price for this item.

GUARDRAIL REFLECTORS

Description: Work under this item shall be the installation of Guardrail Reflectors at the locations and to the details shown on the plans. All work shall be in accordance with the applicable portion of Section 782 of the Standard Specifications.

Method of Measurement: Guardrail reflectors will be paid for by each reflector installed complete as per applicable standards and shall include all labor and materials for furnishing and installing the guardrail reflectors.

Basis of Payment: **TERMINAL MARKER-DA** will be paid EACH.

MASTER CONTROLLER (SPECIAL)

Description. Work under this item shall consist of furnishing and installing a master controller in accordance with the applicable portions of Section 860 of the Standard Specifications and in accordance with the Illinois Department of Transportation (IDOT) District 1, Traffic Signal Specifications with the following addition.

The Master Controller shall be required to coordinate the local controllers at all traffic signal controlled intersections in this contract and the intersection of Stearns Road at Illinois Route 25 (IL-25), being constructed under a separate contract, with the full functionality required under the IDOT District 1 Traffic Signal Specifications for a master Controller. Any work necessary to insure a coordinated system of traffic signals, including cabinet modifications and replacement of the local controller on the adjacent separate contract, will not be paid for separately, but shall be considered incidental to this pay item.

Basis of Payment. This work will be paid for at the contract unit price per each for MASTER CONTROLLER.

REMOVE EXISTING HANDHOLE

Description: Work under this item shall be the removal and disposal of all existing handholes. It is the contractor's responsibility to verify the nature of all removals prior to bid. All work shall be in accordance with the applicable portions of Section 895 of the Standard Specifications.

Method of Measurement: REMOVE EXISTING HANDHOLE will be measured for payment by each.

Basis of Payment: REMOVE EXISTING HANDHOLE will be paid by each.

REMOVE EXISTING CONCRETE FOUNDATION

Description: Work under this item shall be the removal and disposal of all Concrete Foundation. It is the contractor's responsibility to verify the nature of all removals prior to bid. All work shall be in accordance with the applicable portions of Section 895 of the Standard Specifications.

Method of Measurement: REMOVE CONCRETE FOUNDATIONS will be measured for payment by EACH.

Basis of Payment: REMOVE CONCRETE FOUNDATIONS will be paid by EACH.

PERENNIAL PLANTS, WETLAND EMERGENT TYPE

Description: All work, materials and equipment shall conform to Sections 254 and 1081 of the Standard Specifications except as modified herein.

Perennial plants shall be spaced 12" on center and planted in groups with 1 species per group. Size of groups shall be a minimum of 40 sf. and a maximum of 200 sf.

All native species will be local genotype and will be from within a radius of 150 miles from the site.

Materials: Revise Article 254.03 Types and Mixtures - Add the following:

Perennial Plants, Wetland Emergent Type – Emergent Aquatic

Scientific Name	Common Name	Plants/Acre
Acorus calamus	sweet flag	850
Pontedaria cordata	pickerel weed	850
Polygonum amphibium	knotweed	850
Scirpus acutus	hard stemmed bulrush	850
Scirpus atrovirens	dark green bulrush	850
Scirpus fluviatilis	river bulrush	850
Sparganium americanum	bur reed	850
Total		5,950

Method of Measurement: Revise Article 254.10 to include the following, Perennial Plants, Wetland Emergent Type will be measured for payment in units of 100 perennial plants of the type specified.

Basis of Payment: This work will be paid for at the contract unit price per unit for PERENNIAL PLANTS, WETLAND EMERGENT TYPE.

PERENNIAL PLANTS, WETLAND TYPE

Description: All work, materials and equipment shall conform to Sections 254 and 1081 of the Standard Specifications except as modified herein.

Perennial plants shall be spaced 12" on center and planted in groups with 1 species per group.

Size of groups shall be a minimum of 40 sf. and a maximum of 200 sf. All native species will be local genotype and will be from within a radius of 150 miles from the site.

Materials: Revise Article 254.03 Types and Mixtures - Add the following:
Perennial Plants, Wetland Type - Detention Basin

Ind. Status	Scientific name	Common Name	Plants/Acre
OBL	Alisma subcordatum	water plantian	500
OBL	Justicia americana	water willow common	1,000
OBL	Sagittaria latifolia	arrowhead hardstem	500
OBL	Scirpus acutus	bulrush river bulrush	1,500
OBL	Scirpus fluviatilis	common bur reed	1,000
OBL	Sparganium eurycarpum		1,500
Total			6,000

Method of Measurement: Revise Article 254.10 to include the following, Perennial Plants, Wetland Type will be measured for payment in units of 100 perennial plants of the type specified.

Basis of Payment: This work will be paid for at the contract unit price per unit for PERENNIAL PLANTS, WETLAND TYPE.

STORM SEWER JACKED IN PLACE SPECIAL

Description: This work consists of jacking steel storm sewer of the specified diameter under the CN Railroad at the locations shown on the plans or as directed by the Engineer, meeting the material and installation requirements of CN Railroad, the latest edition of the "Standard Specifications for Water and Sewer Main Construction in Illinois", and the applicable portions of Section 552 of the Standard Specifications and as detailed in the plans. The contractor is to coordinate this work with the rail road and follow the specifications for RAILROAD PROTECTIVE LIABILITY INSURANCE, RAILROAD RIGHT OF ENTRY and CN / CPP RR REQUIREMENTS FOR WORK NEAR OR UNDER CN RR.

Materials: Pipe material shall be steel with a minimum wall thickness of 0.531 inches with a yield strength of at least 35,000 psi. Pipe joints shall be welded in accordance with AWWA C-206. No hydrostatic test is required but joints shall be water tight. Steel pipe shall meet or exceed ASTM A-139, Grade B.

Method of Measurement: This work shall be measured for payment in place per lineal feet, in accordance with Article 552.07 of the Standard Specifications.

Basis of Payment: This work shall be paid for at the contract unit price per foot, in accordance with Article 552.08 of the Standard Specifications, except the pay item shall be STORM SEWER JACKED IN PLACE SPECIAL, of the diameter specified, and shall include all materials, labor, and equipment.

STORM SEWERS, (WATER MAIN REQUIREMENTS), 12" **STORM SEWERS, (WATER MAIN REQUIREMENTS), 24"** **STORM SEWERS, (WATER MAIN REQUIREMENTS), 36"** **STORM SEWERS, (WATER MAIN REQUIREMENTS), 42"**

Description. This work consists of constructing storm sewer of the specified diameter adjacent to or crossing water main, at the locations shown on the plans or as directed by the Engineer, meeting the material and installation requirements of the latest edition of the "Standard Specifications for Water and Sewer Main Construction in Illinois", and the applicable portions of Section 550 of the Standard Specifications and as detailed in the plans.

Materials. Pipe materials shall be:
Reinforced concrete pipe, steel cylinder type, with rubber and steel joints, or
Reinforced concrete pressure pipe with rubber and steel joints.

Method of Measurement. This work shall be measured in accordance with Article 550.08 of the Standard Specifications.

Basis of Payment. This work shall be paid for in accordance with Article 550.09 of the Standard Specifications, except the pay item shall be STORM SEWER (WATER MAIN REQUIREMENTS), of the diameter specified, and shall include all materials, labor, equipment, concrete collars and saddles, and encasing pipe with seals.

STABILIZED CONSTRUCTION ENTRANCE

Description: This work shall consist of furnishing, installing, maintaining and removing a stabilized pad of aggregate underlain with filter fabric as shown on the plans or directed by the Engineer.

Materials: Materials shall conform to the following:

Aggregate size: IDOT Coarse Aggregate Graduation: CA-3 per Section 1004.

Filter Fabric shall consist of synthetic polymers composed of at least 85 percent by weight polypropylene, polyesters, polyamides, polyethylene, polyolefins, or polyvinylidene-chlorides: The geotextile shall be free of any chemical treatment or coating that significantly reduces its porosity. Fibers shall contain stabilizers and/or inhibitors to enhance resistance to ultraviolet lights.

Construction Requirements: The course aggregate shall be a thickness of 6 inches or more. The stone entrance should not be filled until the area has been inspected and approved by the Engineer.

The rock shall be dumped and spread into place in approximately horizontal layers not more than 3 feet in thickness. It shall be placed in a manner to produce a reasonable homogeneous stable fill that contains no segregated pockets or larger or small fragments or large unfilled space caused by bridging of larger fragments. No compaction will be required beyond that resulting from the placing and spreading operations.

The minimum width and length shall be 25 and 100 feet, respectively.

All surface water flowing or diverted toward the construction entrance shall be piped across the entrance. Any pipe used for this will be considered incidental to the stabilized construction entrance.

Maintenance of this pay item may include cleaning, reshaping/grading, as well as additional aggregate at the direction of the engineer. Maintenance shall be included in the cost of this pay item. The entrance shall remain in place and be maintained until the disturbed area is stabilized. Any sediment spilled onto public right-of-ways must be removed immediately.

Method of Measurement: The work shall be measured for payment for at the contract unit price square yard for STABILIZED CONSTRUCTION ENTRANCE.

Basis of Payment: The work shall be paid for at the contract unit price square yard for

STABILIZED CONSTRUCTION ENTRANCE, which price shall be payment in full for all material, labor and any other items required to complete the work.

REMOVE EXISTING FLARED END SECTION

Description: Work shall be performed in compliance with Section 501 of the Standard Specifications.

Method of Measurement: When paid for as a separate item, removal of existing flared sections will be measured for payment in units of each at the location designated on the plans.

Basis of Payment: Removal of existing flared end section will be paid for at the contract unit price per EACH for REMOVE EXISTING FLARED END SECTION.

FLASHING BEACON, POST MOUNTED, SOLAR POWERED INSTALLATION

Description: This work shall consist of furnishing and installing a new pole mounted, solar powered flashing beacon in accordance with Standard Drawing No. 880001-01, the Illinois Department of Transportation District 1 Traffic Signal Specifications, latest edition and this specification.

This item shall consist of furnishing and installing a 12 inch single yellow flashing module on a new post as shown on the plans or as directed by the Engineer. This item shall include furnishing and installing a flasher controller that is integrated within the signal head, with discrete solar panels, LED module, battery, electronics, compact housing and be capable of operating 24 hours, 7 days a week. The flasher unit shall be installed on standard wood or metal posts. The flash pattern shall be MUTCD complaint and have alternate flash patterns available. The LED module shall be ITE VTCSH-STD Part-2 complaint. The flasher unit shall operate over a maximum temperature range of -40 °F to 176 °F. The battery shall have a life span of a minimum of 5 years and be field replaceable. The battery and electronics may be located inside the solar panel housing or signal head. The sections of the flasher unit shall be secured with tamper resistant stainless steel hardware and unless otherwise noted, the housing shall be black in color.

Method of Measurement: This work shall be measured for payment at the contract unit price each for POST MOUNTED FLASHING BEACON – SOLAR POWERED INSTALLATION.

Basis of Payment: This work shall be paid for at the contract unit price each for POST MOUNTED FLASHING BEACON – SOLAR POWERED INSTALLATION. The price shall be payment in full for all labor and material necessary to complete the work described above.

BOLLARD REMOVAL

Description: This work shall consist of removing existing bollards in accordance with applicable portions of the Standard Specifications contained herein at locations shown on the plans or as directed by the Engineer.

Existing bollards shall be removed to at least 1 ft below the proposed elevation of subgrade or ground surface.

Method of Measurement: This work shall be measured for payment per each bollard removed.

Basis of Payment: This work will be paid for at the contract unit price per EACH unit for BOLLARD REMOVAL, which price shall include all material and labor required to complete the work as herein specified.

CLEANING AND PAINTING BEARINGS

Description: This work shall follow IDOT GBSP 25 as revised July 9, 2008 except as noted herein. This work shall consist of the preparation of the bearings at the abutments of SN 045-3021 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.

Method of Measurement: This work will be measured for payment at the contract unit price each for CLEANING AND PAINTING BEARINGS.

Basis of Payment: This work shall be paid for at the contract unit price EACH for CLEANING AND PAINTING BEARINGS, at the designated locations. 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.

CLAY LINER

Description: This work consists of providing suitable material obtained from locations furnished by the Contractor, transporting the material to the jobsite, and placing the material at the location shown on the plans and in the manner described within this specification.

Requirements:

A. References:

- ASSHTO T-99 (Method C)
- ASTM D 2487 – Classification of Soils for Engineering Purposes
- ASTM D 2922 – Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
- ASTM D 4318 – Liquid Limit, Plastic Limit, and Plasticity Index of Soils

B. Materials:

Clay Pond Liner shall be excavated clay material classified as CL according to ASTM D 2487 and free of organic matter and debris which might cause settlement. The clay shall have a liquid limit of less than 45% and a plasticity index less than 25% as defined by ASTM D 4318.

C. Placing Material:

Begin placement of the clay liner at low points and spread uniformly in approximately horizontal layers not exceeding 6 inches in thickness before compaction. Shape clay liner to conform to details in plans.

To minimize saturation of newly constructed clay liner, seal the clay liner with smooth wheeled equipment at the end of each work day. Before the placement of the next clay layer over the previously sealed area, scarify the surface to insure bonding. Protect exposed clay liner from drying, erosion or frost, or recompact any areas disturbed by drying, erosion, or frost.

After spreading, thoroughly manipulate each layer by plowing, disking, or other approved methods, to the full depth of the layer being placed to assure uniform density and moisture distribution for proper compaction.

The moisture content for the clay liner should be within 3% of optimum on the high side during placement.

Suspend earthwork operations whenever satisfactory results cannot be obtained because of rain, freezing or other conditions. Do not place the clay liner on saturated or frozen surfaces.

D. Compaction:

Compact the clay liner to 90% of maximum dry density in accordance with ASSHTO T99 (Method C) or as determined by the Engineer. Tests will be according to ASTM D 2922.

The roller being used must be able to readily remold soil clods into a new homogenous mass. Soil clods must be destroyed and lifts must be properly bonded. The lift should be thin enough so that the roller feet penetrate sufficiently and thoroughly remold the soil. The roller shall make enough passes to ensure that all of the lift is remolded.

The clay liner shall be compacted to the satisfaction of the Engineer.

Method of Measurement: Clay Liner will be measured for payment in place and the area computed in cubic feet.

Basis of Payment: This work will be paid for at the contract unit price per cubic foot for CLAY LINER.

RELOCATE EXISTING MAILBOX

Description: This work shall consist of removing and relocating existing mailboxes as shown on the plans or as directed by the Engineer.

Method of Measurement: This work will be measured for payment per each mailbox relocated. Work shall include all labor and materials needed to remove and relocate the mailboxes as identified.

Basis of Payment: This work will be paid for at the contract unit price per EACH for RELOCATE EXISTING MAILBOX, which price shall include all material and labor required to complete the work as herein specified.

TEMPORARY CONCRETE BARRIER REMOVAL

Description: Temporary concrete barrier along west side of existing Dunham Road shall be removed and transported to the Seavey storage facility at 44W500 Seavey Road in Elburn, IL. Prior to delivery, contractor is to contact the Kane County Division of Transportation Road Maintenance Supervisor, Scott Ver Vynck, at (630) 330-2886. Storage facility hours of operation are Monday-Friday, 7AM-2:30PM.

See Removal Plans for location of temporary concrete barrier to be removed.

Method of Measurement: This work shall be measured for payment in feet in place along the centerline of the barrier.

Basis of Payment: The work shall be paid at the contract price per foot for TEMPORARY CONCRETE BARRIER REMOVAL. The price shall include loading, transporting, and unloading the temporary concrete barrier wall that is currently in place along Dunham Road.

BITUMINOUS BIKE PATH REMOVAL

Description: This work shall consist of the removal the existing multi-use path with applicable portions of the Standard Specifications and Special Provisions contained herein at locations shown on the plans or as directed by the Engineer.

Pavement removal should conform to Section 440 of the Standard Specifications.

Method of Measurement: This work will be measured for payment in square yards for the removal of the bike path.

Basis of Payment: This work will be paid for at the contract unit price per SQUARE YARD for BITUMINOUS BIKE PATH REMOVAL, which price shall include all material and labor required to complete the work as herein specified.

STORM SEWER, PVC SDR 26, 8"

Description. This work consists of installing a PVC storm sewer connection from the bridge scupper drainage system to the roadway drainage system of the specified diameter at the locations shown on the plans or as directed by the Engineer, meeting the material and installation requirements of the applicable portions of Section 550 of the Standard Specifications and as detailed in the plans.

Materials. Pipe materials shall be Polyvinyl Chloride Pipe.

Method of Measurement. This work shall be measured for payment in place per lineal feet in accordance with Article 550.08 of the Standard Specifications.

Basis of Payment. This work shall be paid for at contract union price per foot, in accordance with Article 550.09 of the Standard Specifications, except the pay item shall be STORM SEWER, PVC SDR 26, 8", and shall include all materials, labor, and equipment.

AGGREGATE SUBGRADE, 16"

Description: This work shall be done in accordance with Section 207 of the Standard Specifications. The material shall conform to Article 1004.05 of the Standard Specifications except as follows:

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

<u>Sieve Size</u>	<u>Percent Passing</u>
6"	97 +/-3
4"	90 +/-10
2"	45+/-25
#200	5+/-5

2. Gravel, Crushed Gravel, and Pit Run Gravel

<u>Sieve Size</u>	<u>Percent Passing</u>
6"	97 +/-3
4"	90 +/-10
2"	30+/-20
#4	30+/-20
#200	5+/-5

3. Crushed Concrete with Bituminous Materials**

6"	97 +/-3
4"	90 +/-10
2"	45+/-25
#200	5+/-5

** The bituminous material shall be separated and mechanically blended with the crushed concrete so 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 4 inches.

The Aggregate Subgrade shall be placed in two (2) courses consisting of a 12 inch nominal thickness lower course and a 4 inch nominal thickness top course of capping aggregate having a gradation of CA-6.

Reclaimed Asphalt Pavement (RAP) meeting the requirements of Article 1004.05 of the Standard Specifications and having 100% passing the 3 inch sieve and well-graded down through fines may also be used as capping aggregate. A vibratory roller meeting the requirements of Article I 101.01 (g) 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 course of Aggregate Subgrade may be placed simultaneously with the material for Porous Granular Embankment, Special when the total depth to be placed is 2 feet or less.

Method of Measurement:

- (a) Contract Quantities. Contract quantities shall be in accordance with Article 202.07 of the Standard Specifications.
- (b) Measured Quantities. Aggregate Subgrade shall 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, 16" which price shall include all equipment, labor and materials (including the capping aggregate) necessary to complete the work as specified.

TURBIDITY CURTAIN

Description: This work shall include all labor, materials, and equipment necessary for the installation of the TURBIDITY CURTAIN.

Cleaning and maintenance of the turbidity curtain will be completed as required.

The development and maintenance of the turbidity curtain and dewatering basin shall be coordinated with the IDOT Erosion and Sediment Control representative on site.

Style 250EX, a nonwoven polypropylene fabric supplied by Thrace-LINQ, Inc., meets the fabric properties listed below:

PROPERTY	TEST PROCEDURE	METRIC		ENGLISH	
		MARV		MARV	
Grab Tensile Strength	ASTM D-4632	1202	N	270	lbs
Grab Elongation	ASTM D-4632	50	%	50	%
Trapezoid Tear	ASTM D-4533	445	N	100	lbs
Puncture	ASTM D-4833	690	N	155	lbs
Puncture (CBR)	ASTM D-6241	3226	N	725	lbs
Mullen Burst	ASTM D-3786	3171	kPa	460	psi
Permittivity	ASTM D-4491	1.2	sec ⁻¹	1.2	sec ⁻¹
A.O.S.	ASTM D-4751	0.15	mm	100	U.S. Sieve
UV Stavity (500 hrs)	ASTM D-4355	70	%	70	%
Water Flow Rate	ASTM D-4491	3463	Lpm/m ²	85	gpm/ft ²

MARV: Minimum Average Roll Value

Apparent Opening Size (AOS) properties are Maximum Average Roll Values

Method of Measurement: This work is measured for payment in square yards in place.

Basis of Payment: This work will be paid for at the contract unit price per SQUARE YARD for TURBIDITY CURTAIN.

RECESSED REFLECTIVE PAVEMENT MARKER

Description: This work shall be in accordance with the applicable sections of Article 781 of the Standard Specifications, and the details and at the locations shown in the contract plans for the DuPage County section.

Method of Measurement: This work shall be measured for payment by EACH.

Basis of Payment: The work shall be paid at the contract price per each for RECESSED REFLECTIVE PAVEMENT MARKER.

SEEDING, CLASS 4 (MODIFIED) MESIC PRAIRIE

Description: All work, materials and equipment shall conform to Sections 250 and 1081 of the Standard Specifications except as modified herein.

The seed mix shall be supplied in pounds of Pure Live Seed. All native species will be local genotype and will be from within a radius of 150 miles from the site. Fertilizer is not required.

Materials: Revise Article 250.07 Seeding Mixtures – Add the following to Table 1: Seeding, Class 4 (Modified) Mesic Prairie

Ind. Status	Scientific Name	Common Name	LB PLS per Acre
FAC-	Andropogon gerardii	big bluestem	2.000
FACU-	Andropogon scoparius	little bluestem	0.500
UPL	Bouteloua curtipendula	side oats	0.250
FAC-	Elymus canadensis	Canada wild rye	1.000
FAC+	Panicum virgatum	switch grass	0.750
FACU+	Sorghastrum nutans	Indian grass	1.500
UPL	Carex bicknellii	Bicknell's sedge	0.062
		Total Weight of Seeds (LB PLS)	6.062
Cover Crop:			
		oats	32.000

UPL	Lolium multi florum	annual rye	3.000
		Total Weight of Seeds (LB PLS)	35.000

Notes:

1. Purity and germination tests no older than twelve months must be submitted for all seed supplied to verify quantities of bulk seed required to achieve the LB PLS specified.
2. Horticultural grade vermiculite shall be added at a rate of one bushel per acre to facilitate the equal spreading of the seeds over an entire acre.

Method of Measurement: Seeding, Class 4 (Modified) Mesic Prairie will be measured for payment in acres of surface area of seeding.

Basis of Payment: This work will be paid for at the contract unit price per acre for SEEDING, CLASS 4, (MODIFIED) MESIC PRAIRIE.

SEEDING, CLASS 4 (MODIFIED) WET TO MESIC PRAIRIE

Description: All work, materials and equipment shall conform to Sections 250 and 1081 of the Standard Specifications except as modified herein.

The seed mix shall be supplied in pounds of Pure Live Seed. All native species will be local genotype and will be from within a radius of 150 miles from the site. Fertilizer is not required.

Materials: Revise Article 250.07 Seeding Mixtures – Add the following to Table 1: Seeding, Class 4 (Modified) Wet to Mesic Prairie

Ind. Status	Scientific Name	Common Name	LB PLS per Acre
FAC-	Andropogon gerardii Calamagrostis	big bluestem	1.500
OBL	canadensis	blue joint grass	0.350
FACW-	Elymus virginicus	Virginia wild rye	1.000
FACW	Glyceria striata	fowl manna grass	0.500
FACW	Hierchloe odorata	vanilla grass	0.500
OBL	Leersia oryzoides	rice cut grass	1.000
FAC+	Panicum virgatum	switch grass	0.250
FACW+	Spartina pectinata carex annectens	cord grass	0.250
FAC	xanthocarpa	yellow fruited sedge	0.125
OBL	Carex bebbii	Bebb's sedge	0.125
OBL	Carex buxbaumii	sedge	0.063
FAC	Carex normalis	normal sedge	0.125
OBL	Carex vulpinoidea	fox sedge	0.125
		Total Weight of Seeds (LB PLS)	5.913

Cover Crop:			
OBL	Agrostis alba palustris	bent grass	1.000
UPL	Lolium multiflorum	annual rye	3.000
FACW+	Pennsylvanicum	Pennsylvania knotweed	0.250
		Total Weight of Seeds (LB PLS)	4.250

Notes:

1. Purity and germination tests no older than twelve months must be submitted for all seed supplied to verify quantities of bulk seed required to achieve the LB PLS specified.
2. Horticultural grade vermiculite shall be added at a rate of one bushel per acre to facilitate the equal spreading of the seeds over an entire acre.

Method of Measurement: Seeding, Class 4 (Modified) Mesic Prairie will be measured for payment in acres of surface area of seeding.

Basis of Payment: This work will be paid for at the contract unit price per acre for SEEDING, CLASS 4 (MODIFIED) WET TO MESIC PRAIRIE.

SEEDING, CLASS 4 (MODIFIED) DETENTION BASIN

Description: All work, materials and equipment shall conform to Sections 250 and 1081 of the Standard Specifications except as modified herein.

The seed mix shall be supplied in pounds of Pure Live Seed. All native species will be local genotype and will be from within a radius of 150 miles from the site. Fertilizer is not required.

Materials: Revise Article 250.07 Seeding Mixtures – Add the following to Table 1: Seeding, Class 4 (Modified) Mesic Prairie

Ind. Status	Scientific Name	Common Name	LB PLS per Acre
OBL-	Agrostis alba palustris	bent grass	1.500
FACW-	Elymus virginicus	Virginia wild rye	2.250
FACW	Glyceria striata	fowl manna grass	1.250
OBL	Leersia oryzoides	rice cut grass	1.250
FACW	Carex blanda	common wood sedge	0.125
OBL	Carex stipata	awl fruited sedge	0.125
OBL	Carex vulpinoidea	fox sedge	1.000
OBL	Cyperus erythrorhizos	red-rooted nut sedge	0.125
		Total Weight of Seeds (LB PLS)	7.625
Cover Crop:			

FACW	Agrostis albe	red top grass	1.500
FACW	Echinochloa crusgalli	barnyard grass	3.000
		Total Weight of Seeds (LB PLS)	4.500

Notes:

1. Purity and germination tests no older than twelve months must be submitted for all seed supplied to verify quantities of bulk seed required to achieve the LB PLS specified.
2. Horticultural grade vermiculite shall be added at a rate of one bushel per acre to facilitate the equal spreading of the seeds over an entire acre.

Method of Measurement: Seeding, Class 4 (Modified) Detention Basin will be measured for payment in acres of surface area of seeding.

Basis of Payment. This work will be paid for at the contract unit price per acre for SEEDING, CLASS 4 (MODIFIED) DETENTION BASIN.

SEEDING, CLASS 5 (MODIFIED) MESIC PRAIRIE

Description: All work, materials and equipment shall conform to Sections 250 and 1081 of the Standard Specifications except as modified herein.

The seed mix shall be supplied in pounds of Pure Live Seed. All native species will be local genotype and will be from within a radius of 150 miles from the site. The seed mix shall be supplied with the appropriate inoculants. Fertilizer is not required.

Materials: Revise Article 250.07 Seeding Mixtures – Add the following to Table 1: Seeding, Class 5 (Modified) Mesic Prairie.

Ind. Status	Scientific Name	Common Name	LB PLS per Acre
UPL-	Amorpha canescens	leadplant	0.125
UPL	Aster laevis	smooth blue aster	0.062
FACW	Aster novae-angliae	New England aster	0.062
FACU+	Baptisia leucantha	white wild indigo	0.062
FACU-	Cassia fasciculate	partridge pea	0.125
UPL	Echinacea purpurea	purple coneflower	0.420
FAC+	Eryngium yuccifolium	rattlesnake master	0.188
UPL	Heliopsis helianthoides	ox-eye sunflower	0.031
FACU	Lespedeza capitata*	roundhead bushclover	0.125
UPL	Liatris aspera	button blazing star	0.125
FAC-	Liatris pycnostachya	prairie blazing star	0.188
FACU	Monarda fistulosa	bergamot	0.031
UPL	Parthenium integrifolium	wild quinine	0.063
FAC-	Penstemon digitalis	foxglove beardtongue	0.125
UPL	Petalostemum purpureum	purple prairie clover	0.063

OBL	<i>Physostegia virginiana</i>	false dragonhead	0.063
FACU-	<i>Potentilla arguta</i>	prairie cinquefoil	0.063
UPL	<i>Ratibida pinnata</i>	yellow coneflower	0.125
FACU	<i>Rosa blanda</i>	early wild rose	0.125
FACU	<i>Rudbeckia hirta</i>	black-eyed susan	0.250
FACU+	<i>Rudbeckia subtomentosa</i>	sweet coneflower	0.250
UPL	<i>Silphium integrifolium</i>	rosin weed	0.188
UPL	<i>Silphium laciniatum</i>	compass plant	0.188
FACU	<i>Silphium terebinthinaceum</i>	prairie dock	0.188
UPL	<i>Solidago nemoralis</i>	old-field goldenrod	0.125
OBL	<i>Solidago riddellii</i>	Riddell's goldenrod	0.063
FACW-	<i>Solidago rigida</i>	still goldenrod	0.063
UPL	<i>Solidago speciosa</i>	showy goldenrod	0.063
FACU+	<i>Tradescantia ohiensis</i>	spiderwort	0.063
UPL	<i>Verbena stricta</i>	hoary vervain	0.125
FACW	<i>Vernonia fasciculata</i>	common ironweed	0.188
FAC	<i>Veronicastrum virginicum</i>	Culver's root	0.013
		Total Weight of Seeds (LB PLS)	3.938
	* = inoculant required		

Notes:

1. Purity and germination tests no older than twelve months must be submitted for all seed supplied to verify quantities of bulk seed required to achieve the LB PLS specified.
2. Horticultural grade vermiculite shall be added at a rate of one bushel per acre to facilitate the equal spreading of the seeds over an entire acre.

Method of Measurement: Seeding, Class 5 (Modified) Mesic Prairie will be measured for payment in acres of surface area of seeding.

Basis of Payment: This work will be paid for at the contract unit price per acre for SEEDING, CLASS 5 (MODIFIED) MESIC PRAIRIE.

SEEDING, CLASS 5 (MODIFIED) WET TO MESIC PRAIRIE

Description: All work, materials and equipment shall conform to Sections 250 and 1081 of the Standard Specifications except as modified herein.

The seed mix shall be supplied in pounds of Pure Live Seed. All native species will be local genotype and will be from within a radius of 150 miles from the site. Fertilizer is not required.

Materials: Revise Article 250.07 Seeding Mixtures – Add the following to Table 1: Seeding, Class 5 (Modified) Wet to Mesic Prairie.

Ind. Status	Scientific Name	Common Name	LB PLS per Acre
OBL	<i>Asclepias incarnate</i>	swamp milkweed	0.063
UPL	<i>Aster laevis</i>	smooth blue aster	0.125
FACW	<i>Aster novae-angliae</i>	New England aster	0.031
OBL	<i>Aster prealtius</i>	willow aster	0.031
FACU+	<i>Baptisia leucantha</i>	wild white indigo	0.025
OBL	<i>Chelone glabra</i>	turtle head	0.031
FAC-	<i>Desmodium canadense</i>	showy tick trefoil	0.150
OBL	<i>Eupatorium maculatum</i>	spotted joe pye weed	0.259
FACW+	<i>Eupatorium perfoliatum</i>	boneset	0.115
FACW+	<i>Helenium autumnale</i>	sneezeweed	0.500
FAC+	<i>Hypericum pyramidatum</i>	great St. John's wort	0.063
OBL	<i>Iris virginica shrevei</i>	blue flag	0.125
FAC	<i>Juncus dudleyi</i>	Dudley's rush	0.031
FACW	<i>Juncus torreyi</i>	Torrey rush	0.062
FAC	<i>Liatris spicata</i>	spiked gayfeather	0.188
FAC-	<i>Liatris pycnostachya</i>	prairie gayfeather	0.313
FACW+	<i>Lobelia siphilitica</i>	great blue lobelia	0.031
OBL	<i>Lycopus americanus</i>	water horehound	0.063
OBL	<i>Lythrum alatum</i>	winged loosestrife	0.015
OBL	<i>Mimulus ringens</i>	monkey flower	0.031
FACU	<i>Monarda fistulosa</i>	bergamot	0.016
OBL	<i>Penthorum sedoides</i>	ditch stonecrop	0.001
OBL	<i>Physostegia virginiana</i>	false dragonhead	0.063
FACW+	<i>Pycnanthemum virginianum</i>	common mountain mint	0.160
FACU	<i>Rudbeckia hirta</i>	black-eyed susan	0.250
FACW+	<i>Rudbeckia laciniata</i>	wild golden glow	0.063
OBL	<i>Scirpus atrovirens</i>	dark green rush	0.500
FACW-	<i>Silphium perfoliatum</i>	cup plant	0.125
OBL	<i>Solidago riddellii</i>	Riddell's goldenrod	0.063
FACW-	<i>Solidago rigida</i>	stiff goldenrod	0.125
FACW+	<i>Verbena hastate</i>	blue vervain	0.046
FACW	<i>Vernonia fasciculata</i>	common ironweed	0.018
FAC	<i>Veronicasturm virginicum</i>	Culver's root	0.063
FAC+	<i>Zizia aurea</i>	golden Alexander	0.031
		Total Weight of Seeds (LB PLS)	4.001

Notes:

1. Purity and germination tests no older than twelve months must be submitted for all seed supplied to verify quantities of bulk seed required to achieve the LB PLS specified.
2. Horticultural grade vermiculite shall be added at a rate of one bushel per acre to facilitate the equal spreading of the seeds over an entire acre.

Method of Measurement: Seeding, Class 5 (Modified) Mesic Prairie will be measured for payment in acres of surface area of seeding.

Basis of Payment: This work will be paid for at the contract unit price per acre for SEEDING, CLASS 5 (MODIFIED) WET TO MESIC PRAIRIE.

TEMPORARY AGGREGATE BERM - COARSE AGGREGATE
TEMPORARY AGGREGATE BERM – RIPRAP

Description: This work shall consist of excavation, placing a filter fabric and a protective coating of dumped or hand-laid stone riprap and coarse aggregate for Stone Culvert Inlet Protection and Rock Check Dams as shown on the Plans and the removal of the coarse aggregate, riprap, and filter fabric upon the completion of the need for these temporary facilities.

Materials: All materials shall meet the requirements of the following Articles of Section 1000
Materials:

Riprap	1005.01
Coarse Aggregate Filter Fabric	1004.01
Filter Fabric	1080.03

General Requirements: The Temporary Aggregate Berm shall be constructed to the width, length and depth shown on the Plans. Filter Fabric shall be placed under the Riprap and Coarse Aggregate. The Riprap and Coarse Aggregate shall be placed to the lines, grades, and details as shown on the Plans.

Once the Engineer determines the berm is no longer necessary the Contractor shall remove the materials.

Method of Measurement: Temporary Aggregate Berm-Riprap and Temporary Aggregate Berm-Coarse Aggregate will be measured for payment in tons; payment will not be made for riprap or coarse aggregate placed outside of the plan dimensions. Payment will only be made for the initial placement of the Temporary Aggregate Berm-Riprap or Temporary Aggregate Berm-Coarse Aggregate. The filter fabric will not be measured separately for payment.

Basis of Payment: TEMPORARY AGGREGATE BERM-RIPRAP and TEMPORARY AGGREGATE BERM-COARSE AGGREGATE measured as specified will be made at the contract unit price per ton which payment shall constitute full compensation for excavation as required, furnishing and placing riprap and final removal of riprap and the furnishing, placing and removal of the filter fabric.

TEMPORARY DITCH CHECK, ROLLED EXCELSIOR

Description: This work shall consist of constructing a temporary ditch check at locations and of the type as shown on the plans, or as directed by the Engineer during the life of the project, and the removal and disposal of the temporary ditch check upon the direction of the engineer. This work will be completed per Section 280 of the Standard Specification for Road and Bridge Construction.

Construction Requirements: The Temporary Ditch Check shall be staked in the ditch with wooden stakes spaced 2 feet on center as shown on the detail. Maintenance of the ditch check includes replacement of ditch check cleaning and disposal of sediment as directed by the Engineer.

Method of Measurement. Temporary Ditch Checks, Rolled Excelsior will be measured for payment in feet in place.

Basis of Payment. TEMPORARY DITCH CHECKS, ROLLED EXCELSIOR will be paid for at the contract unit price per foot constructed and maintained as specified herein.

CONCRETE TRUCK WASHOUT

Description: CONCRETE TRUCK WASHOUT are used to contain concrete liquids when the chutes of concrete trucks are rinsed out after delivery of concrete to the construction site. These washout facilities function to consolidate solids for disposal and prevent runoff liquids associated with concrete. Details of the construction of the non portable facilities are included in the plans as "temporary concrete washout facilities". Failure to comply with appropriate washout location requirements will result in monetary deficiency deduction against the contractor.

General Requirements:

- The contractor must submit a plan of his/her proposed temporary concrete washout facility to the resident engineer for his/her approval at least 10 days prior to the first concrete pour.
- Temporary concrete washout facilities are to be in place before any delivery of concrete to the construction site.
- Temporary concrete washout facilities are to be located at least 50 feet from storm drain inlets, open drainage facilities, or water bodies. Each facility is to be located away from construction traffic or access areas to prevent disturbance or tracking.
- A sign is to be installed adjacent to each temporary concrete washout facility to inform concrete equipment operators of the designated washout facility.

DESIGN:

Two types of temporary concrete washouts are available for use on IDOT construction projects with details provided in the plans:

- Prefabricated Portable Facilities
 - Various products are now being marketed specifically for this purpose.
- Non-Portable Facilities – see details
 - Above Grade
 - Constructed using a barrier wall and polyethylene sheeting.
 - Barrier walls are constructed to create a berm, then lined with a single sheet of 10-

- mil. Polyethylene sheeting, which is free of holes, tears, or other defects which may compromise the impermeability of the material. Sandbags are used to hold the sheeting in place on top of the berm.
- Sheeting must extend over entire basin and berm to prevent escape of discharge.
 - Below Grade
 - Constructed via excavation and the use of polyethylene sheeting and sandbags.
 - A pit is first excavated in a designated location and then lined with a single sheet of 10-mil polyethylene sheeting which is free of holes, tears, or other defects, which may compromise the impermeability of the material.
 - Sandbags are then to hold the sheeting in place.

SIZE OF WASHOUTS:

- The number and size of each washout facility is to be determined by the contractor. It is his/her responsibility to provide enough storage for the excess concrete and water produced on the target.
- Non-portable facilities are to have a minimum length and width of 10'.

INSPECTION/MAINTENANCE/REMOVAL:

- Temporary concrete washout facilities are to be inspected by the resident engineer during his/her weekly erosion and sediment control inspection, after a storm event of ½" or greater and at the end of any day when concrete has been poured on the construction site. The inspector is to ensure that there are no leaks, no spills, and that the facilities' capacity has not yet been compromised.
- Any overflowing of the washout facilities onto the ground must be cleaned up and removed within 24 hours of discovery.
- If a rain or snow event is forecasted, a non-collapsing, non-water collecting cover shall be placed over the washout facility and secured to prevent accumulation and overflow of precipitation.
- Contents of each concrete washout facility are not to exceed 75% of its designed capacity. If the contents reach 75% capacity, discontinue pouring concrete into the facility until it has been cleaned out.
- Allow slurry to evaporate or remove the site in a safe manner (i.e., vacuum truck). All hardened material can then be removed and disposed of properly.
- If a lined basin is used, immediately replace the liner if it becomes damaged.
- Remove temporary concrete washout facilities when they are no longer needed and restore the disturbed areas to their original condition.
- Note the locations of temporary concrete washout facilities and any changes to these facilities on the SWPPP.

Basis of Payment: The work shall be paid for at the contract unit price lump sum for CONCRETE TRUCK WASHOUT, which price shall be payment in full for all material, labor, excavation, inspection, and maintenance of the facility.

BUILDING REMOVAL NO. 1
BUILDING REMOVAL NO. 2

Description: This work shall consist of the removal and disposal of all buildings, and foundations, retaining walls, and piers, down to a plane 1ft (300 mm) below the ultimate or existing grade in the locations as designated below and also all incidental and collateral work necessary to complete the removal of the buildings in a manner approved by the Engineer and in accordance with the Standard Specifications. Any holes, such as basements, shall be filled with a suitable granular material. The buildings are identified as follows:

<u>Bldg. No.</u>	<u>Parcel No.</u>	<u>Location</u>	<u>Description</u>
1	1ST0007	33W012 Stearns Road	One-story wood structure with full basement constructed in 1960's.
2	1ST0005	32W772 Stearns Road	2-story plus full basement brick building constructed in 1940's.

An asbestos survey for each building has been completed. The results are summarized in the reports contained herein these Contract Specifications.

Method of Measurement: Work for this item will be paid for by contract unit price per building.

Basis of Payment: This work will be paid for at the contract LUMP SUM unit price for BUILDING REMOVAL, numbers as listed above, which price shall be payment in full for complete removal of the buildings and structures, including any necessary backfilling material as specified herein. The lump sum unit prices for this work shall represent the cost of demolition. Any salvage value shall be reflected in the contract unit price for this item.

DRAINAGE SYSTEM

Description. This work shall consist of furnishing and installing a bridge drainage system for the proposed Dunham Road bridge over the East Branch of Brewster Creek (S.N. 045-2032) as shown on the plans, including all piping, fittings, support brackets, inserts, bolts, and splash blocks when specified. This work shall also consist of making the connection between the fiberglass bridge drainage system and the PVC drainage pipe behind the proposed wingwall as shown on the plans.

Material. The pipe and fittings shall be reinforced fiberglass according to ASTM D 2996 RTRP with a 30,000 psi minimum short-time rupture strength hoop tensile stress. The reinforced fiberglass shall also have an apparent stiffness factor at 5 percent deflection exceeding 200 cu in.-lbf/sq. in. and a minimum wall thickness of 0.10 in. All pipe supports and associated hardware shall be hot dip galvanized according to AASHTO M 232. The fiberglass pipe and fittings furnished shall be pigmented throughout, or have a resin-rich pigmented exterior coat, specifically designed for overcoating fiberglass, as recommended by the manufacturer. The color shall be as specified by the Engineer. The resin in either case shall have an ultraviolet absorber designed to prevent ultraviolet degradation. The supplier shall certify the material supplied meets or exceeds these requirements.

Design. The drainage system shall be designed as an open system with allowances for the differential expansion and contraction expected between the superstructure and the substructure to which the drainage system is attached.

Installation. All connections of pipes and fittings shown on the plans to facilitate future removal for maintenance cleanout or flushing shall be made with a threaded, gasketed coupler or a bolted gasketed flange system. Adhesive bonded joints will be permitted for runs of pipe between such connections. The end run connection shall feature a minimum nominal 6 in. (150 mm) female threaded fiberglass outlet. Straight runs may utilize a 45 degree reducing saddle bonded to the pipe. The female outlet shall be filled with a male threaded PVC plug.

Runs of pipe shall be supported at spacings not exceeding those recommended by the manufacturer of the pipe. Supports that have point contact or narrow supporting areas shall be avoided. Standard slings, clamps, clevis hangers and shoe supports designed for use with steel pipe may be used. A minimum strap width for hangers shall be 1 1/2 in. for all pipes under 12 in. in diameter and 2 in. for diameters 12 in. or greater. Straps shall have 120 degrees of contact with the pipe. Pipes supported on less than 120 degrees of contact shall have a split fiberglass pipe protective sleeve bonded in place with adhesive.

All reinforced fiberglass pipe, fittings, and expansion joints shall be handled and installed according to guidelines and procedures recommended by the manufacturer or supplier of the material.

The connection between the fiberglass drainage system and the PVC drainage pipe shall occur behind the wingwall and be watertight with a protective sleeve to protect the connection. The annulus between the drainage pipe and wingwall blockout where the pipe penetrates the wingwall shall be sealed with mortar.

Method of Measurement: The work under this item will be measured for payment on a Lump Sum basis.

Basis of Payment: This work will be paid for at the contract lump sum price for DRAINAGE SYSTEM.

DUST CONTROL WATERING

Description: This work shall consist of the control of dust resulting from the construction operations exclusively. This item shall not be used in the compaction of earth embankments.

The dust shall be controlled by the uniform application of sprinkled water and shall be applied only when directed and in a manner approved by 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 discharge. All water used shall be properly documented by ticket or other approved means.

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

Basis of Payment: This work will be paid for at the contract unit price per unit as DUST CONTROL WATERING, which price shall be payment in full for furnishing all labor, water and equipment for controlling dust as specified.

FENCE REMOVAL

Description: This work shall consist of removing and disposing the existing fences as shown on the removal plans or as directed by the Engineer. The Contractor shall be responsible for inspecting and determining the kind and condition of existing fences to be removed.

Method of Measurement: This work will be measured for payment per foot of fence removed and disposed offsite. Work shall include all labor and equipment needed to remove and dispose of the existing fence to the satisfaction of the Engineer.

Basis of Payment: This work will be paid for at the contract unit price per FOOT for FENCE REMOVAL, which price shall include all labor, equipment, and material required to complete the work as herein specified.

FILLING EXISTING SEPTIC TANK

Description: Contractor must be registered with DuPage County as of March, 2008. Septic must be pumped by a state licensed registered pumper. It may be cracked and filled, or cracked and crushed. No septic requirement needed for the demolition permit.

Contractor is required to provide a minimum 5 days advance notice prior to the start of demolition. DuPage County DOT will require that no infrastructure be left on the site.

Contractor must provide Bruce Schroer (630) 682-7400 Ext. 7186 24 hours advance notice for septic pumping, for an opportunity to witness.

See Removal Plans for location of existing septic tanks to be filled.

Method of Measurement: This work shall be measured for payment as each.

Basis of Payment: The work shall be paid at the contract price per each for FILLING EXISTING SEPTIC TANK.

FILLING EXISTING SEPTIC TANK (SPECIAL)

Description: Septic tanks must be thoroughly pumped and either smashed so no water can accumulate inside or filled with clay to achieve the same purpose.

Contractor is required to provide a minimum 5 days advance notice prior to the start of demolition. Kane County DOT will require that no infrastructure be left on the site.

See Removal Plans for location of existing septic tanks to be filled.

Method of Measurement: This work shall be measured for payment as each.

Basis of Payment: The work shall be paid at the contract price per each for FILLING EXISTING SEPTIC TANK (SPECIAL).

FILLING EXISTING WELLS

Description: Contractor must be registered with DuPage County as of March, 2008. Wells must be sealed by a licensed water well driller before a permit to demolish the residence is given. A Well seal witness application must be filled out along with payment fee and submitted to Bruce Schroer (630) 682-7400 Ext. 7186 for Wayne Township properties.

Contractor is required to provide a minimum 5 days advance notice prior to the start of property demolition. DuPage County DOT will require that no infrastructure be left on the site.

Contractor must provide Bruce Schroer 24 hours advance notification of well sealing, for an opportunity to witness.

See Removal Plans for location of existing wells to be filled.

Method of Measurement: This work shall be measured for payment as each.

Basis of Payment: The work shall be paid at the contract price per each for FILLING EXISTING WELLS

FILLING EXISTING WELLS (SPECIAL)

Description: Wells must be sealed by a licensed water well driller before a permit to demolish the residence is given.

Contractor is required to provide a minimum 5 days advance notice prior to the start of property demolition. Kane County DOT will require that no infrastructure be left on the site.

See Removal Plans for location of existing wells to be filled.

Method of Measurement: This work shall be measured for payment as each.

Basis of Payment: The work shall be paid at the contract price per each for FILLING EXISTING WELLS (SPECIAL).

IMPACT ATTENUATOR REMOVAL

Description: Impact attenuators at each end of temporary concrete barrier along west side of existing Dunham Road shall be removed and transported to the Seavey storage facility at 44W500 Seavey Road in Elburn, IL. Prior to delivery, contractor is to contact the Kane County Division of Transportation Road Maintenance Supervisor, Scott Ver Vynck, at (630) 330-2886. Storage facility hours of operation are Monday-Friday, 7AM-2:30PM.

See Removal Plans for location of impact attenuators to be removed.

Method of Measurement and Basis of Payment: The work shall be paid for at the contract price per each for IMPACT ATTENUATOR REMOVAL. The price shall include loading, transporting, and unloading the impact attenuators that are currently in place along Dunham Road.

IMPACT ATTENUATORS (NON-REDIRECTIVE), TEST LEVEL 3

Description: This work shall consist of furnishing, installing and maintaining impact attenuators of the category and test level specified herein and as detailed in the contract documents.

Materials: Use only sand that meets ASTM C-33, washed concrete sand or equivalent. Use only sand that contains less than 3% moisture. In freezing conditions, add a minimum of 5% rock salt. In all cases, sand must meet state specifications.

Construction Requirements: The contractor shall submit the appropriate manufacturer documentation for approval by the Engineer. The system shall meet the requirements of the NCHRP-350 criteria, test level 3 for non -redirective, gating crash cushions. Impacts that exceed design capabilities may not result in acceptable crash performances as described in NCHRC-350.

The system shall be designed and installed in accordance with the approved manufacturer specifications and requirements. Installers will position the systems in front of a hazard in an array format as shown in the contract documents. Each array shall be designed to reduce the rate of deceleration of the impacting vehicle.

Design and placement of arrays will adhere to guidelines established in:

American Association of State Highway and Transportation Officials (AASHTO) publication "Roadside Design Guide", 2002 edition.

FHWA Report N5040.16, "Crash Cushions, Selection Criteria and Design", February, 1975.

System to the requirements set forth in NCHRP-350, Test Level 3.

Method of Measurement: This work shall be measured for payment by each, where each is defined as one complete installation.

Basis of Payment: The work shall be paid at the contract price per each for IMPACT ATTENUATORS (NON-REDIRECTIVE), TEST LEVEL 3.

Regrading of the slopes or approaches will be paid for according to Section 202 and/or Section 204 of the Standard Specifications.

IMPACT ATTENUATORS, TEMPORARY (NON-DIRECTIVE), TEST LEVEL 2

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 Articles of the IDOT Standard Specifications:

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 Material 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. And 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 impact attenuators shall be the responsibility of the Contractor unit 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 locations. 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 Payment. 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 (NON-REDIRECTIVE), TEST LEVEL 2.

Regrading of slopes or approaches will be paid for according to Section 202 and/or Section 204 of the Standard Specifications.

IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 2

Description: This work shall consist of relocating the impact attenuators of the category and test level specified herein during staged construction as detailed in the contract documents.

Method of Measurement: This work shall be measured for payment by each relocation, where each is defined as one complete installation.

Basis of Payment: The work shall be paid at the contract price per each relocation for IMPACT ATTENUATORS RELOCATE (NON-REDIRECTIVE), TEST LEVEL 2.

Regrading of the slopes or approaches will be paid for according to Section 202 and/or Section 204 of the Standard Specifications.

AGGREGATE PATH, 8"

Description: This work shall consist of an aggregate path in accordance with applicable portions of the Standard Specifications and Special Provisions contained herein at locations shown on the plans or as directed by the Engineer.

The path will consist of 6" of compacted sub-base granular material, Type B with 2" compacted limestone screenings (FA-5) surface and geotechnical fabric for ground stabilization.

The cost of furnishing and placing aggregate for the path shall include all labor, material, and water required to excavate, place, compact and backfill the path as specified.

Method of Measurement: This work will be measured for payment in square yards for the aggregate path in place. The 2' graded area on either side of the path will not be measured for payment but shall be included in the applicable earthwork items.

Basis of Payment: This work will be paid for at the contract unit price per SQUARE YARD for AGGREGATE PATH 8", which price shall include all material and labor required to complete the work as herein specified.

ANTI-GRAFFITI COATING

Description. This work shall consist of the furnishing and application of an anti-graffiti coating to exposed concrete surfaces that are color stained.

General Requirements. The anti-graffiti protection system shall consist of a permanent, color stable, UV, stain, chemical and abrasion resistant coating. The removal of graffiti from the protected surfaces shall be accomplished by applying a separate removal agent as recommended by the manufacturer of the permanent coating. The removal agent shall have the capability of completely removing all types of paints and stains. After graffiti removal there shall be no damage to the anti-graffiti coating or the surface to which it is applied. Additionally there shall be no evidence of ghosting, shadowing, or staining of the protected surface.

Qualifications. The anti-graffiti protection system shall be a product that has been commercially available for a period of at least five (5) years. Samples of the proposed material shall be supplied to the Engineer for testing. The Contractor shall apply the material to a test patch following the manufacturer's recommendation. After the manufacturer's recommended curing period, the Engineer will apply various types of graffiti materials to the coating. After three (3) days the removal agent shall be used to remove the graffiti. If after graffiti removal the anti-graffiti coating is clean and undamaged, with no evidence of ghosting, shadowing or staining, then the anti-graffiti coating is approved for use.

Surface Preparation. Prior to application of the anti-graffiti coating, all designated surfaces shall be cleaned of all loose debris, previous coatings and all foreign matter by a method as recommended by the coating manufacturer and approved by the Engineer. All surfaces shall be thoroughly clean, dry and free of dust that might prevent penetration of the coating. New concrete should be thoroughly cured before application of the coating. Concrete surfaces shall be properly sealed according to the manufacturer's recommendations so the application of the system does not produce any noticeable long-term

change in the color of the surfaces being treated. A technical representative of the manufacturer shall be present to approve surface preparation and application of the antigraffiti protection system.

Weather Conditions. Coatings shall not be applied in the rain, snow, fog or mist, nor shall they be applied if these conditions are expected within twelve (12) hours of application. Coatings shall not be applied when surface or air temperatures are less than 40° F nor greater than 100° F, or is expected to exceed these temperatures within twelve (12) hours of application.

Application. The manufacturer's product data sheets and application guides shall be submitted to the Engineer prior to coating application. All information contained in the data sheets and application guides shall be strictly followed. All coatings shall be applied in the presence of the Engineer. The wet film thickness will be measured by the Engineer and shall be according to the manufacturer's recommendation. Application of the clear protective coating shall take place after the application and curing of the FORM LINER TEXTURED SURFACE (SPECIAL) item as appropriate for the surface to be treated.

In a contrasting color of the same anti-graffiti system, the name of the system used and the date of application shall be stenciled in letters not to exceed 2 inches high. The location of the stencil shall be near one end of the work at the bottom of the surface to be protected. For projects greater than 3,000 sq. ft. near the bottom at the locations designated by the Engineer.

Cleaning Agent. The Contractor shall supply the Engineer with an initial quantity of the removal agent and written instructions for its use, as recommended by the manufacturer for graffiti removal. The amount shall be furnished at the rate of one (1) gallon per 81 sq. yd of treated surface.

Method of Measurement. This work will be measured in place per square feet of surface area upon which the anti-graffiti protection system has been applied and accepted by the Engineer. No surface area will be measured for payment for areas below final grade.

Basis of Payment. This work will be paid for at the contract unit price per square feet for ANTI-GRAFFITI COATING which price shall be payment in full for the cleaning of designated surfaces, the application of the anti-graffiti coating, supplying the manufacturer's technical representative and supplying the initial quantity of cleaning agent.

ARCHITECTURAL LETTERING

Description: This work shall consist of the construction of architectural lettering and colored formed concrete surface using simulated molds and color stain system designated to duplicate closely the appearance described herein.

General: Form liners shall be used for the architectural lettering specified on the headwalls as shown in the plans and shall be installed in conformance with the manufacturer's recommendations, unless other methods of forming textured concrete surfaces are approved by the Engineer. Form liners shall be in conformance with this special provision as well as section 503.06(a) of the Standard Specifications. Form liners shall leave crisp, sharp definition of the architectural lettering surface. Recurring textural configurations exhibited by repeating,

recognizable shadow patterns shall be prevented by proper casting of form liner patterns. Textured concrete surfaces with such recurring textural configurations shall be reworked to remove such patterns until approved by the Engineer or the concrete shall be replaced.

Cuts and tears in form liners shall be sealed and repaired in conformance with the manufacturer's recommendations. Form liners that are delaminated from the form liner shall not be used. Form liners with deformations to the manufactured surface caused by improper storage practices or any other reason shall not be used. Clean forms and make free of buildup prior to each pour.

Adhesives shall be compatible with the form liner material and with concrete. Adhesives shall be approved by the form liner manufacturer. Adhesives shall not cause swelling of the form liner material.

Form ties shall be made of either metal or fiberglass. Using metal ties, which result in a portion of the tie permanently embedded in the concrete, shall be designed to separate at least 1" back from the finished surface, leaving only a neat hole that can be plugged with patching material. Contractor shall submit the type of form ties to the Engineer for approval prior to use in this work. Place form ties at thinnest points of molds. Neatly patch the remaining hole after disengaging the protruding portion of the tie so that it will not be visible after coloring the concrete surface.

Releasing Form Liners: Products and application procedures for form liner release agents shall be approved by the form liner manufacturer. Release agents shall not cause swelling of the form liner material or delamination of the form liner. Release agents shall not stain the concrete or react with the form liner material. Release agent shall coat form liner with a thin film. Following application of release agent, the form liner surface shall be cleaned of excess amounts of release agent using compressed air. Buildup of release agent caused by reuse of a form liner shall be removed at least every 5 uses.

Form liners shall release without leaving particles or pieces of form liner material on concrete and without pulling or breaking concrete from the textured surface. The concrete and textured surfaces exposed by removing form liners shall be protected from damage. Form stripping and related construction shall avoid creating defects in the concrete.

All concrete shall be cured in conformance with the Standard Specifications.

Coloration: Concrete surface shall be cleaned prior to applying color stain materials to assure that surface is free of latency, dirt, dust, grease, efflorescence, paint, or other foreign material, following manufacturer's instructions for surface preparation. Do not sandblast. Preferred method to remove latency is pressure washing with water, minimum 3,000 psi (a rate of three to four gallons per minute), using a fan nozzle perpendicular to and at a distance of one or two feet from surface. Completed surface shall be free of blemishes, discoloration, surface voids, and unnatural form marks.

Color stain shall create a surface finish that is breathable (allowing water vapor transmission), and that resists deterioration from water, acid, alkali, fungi, sunlight, and weathering. Stain mix shall be a waterborne, low V.O.C. material, less than 180 grams / liter. All simulated surfaces that are to be stained shall be at least 30 days old. Apply color stain when ambient temperature is between 50 and 100 degrees F. Consult manufacturer and Engineer if conditions differ from this requirement. The color stain shall match that applied to the textured surface of the side walls and wingwalls as described in the FORM LINER TEXTURED SURFACE (SPECIAL).

Furthermore, application of the color stain shall be performed at the same period when the side walls and wingwalls are stained to have color uniformity.

Use the following colors from Federal Color Standard 595B for areas of concrete to be stained:

Base color - 33446 (Medium Tan)

Test samples of the stain on concrete shall be submitted for acceptance to the owner and the Engineer before any staining is to start on the structure. The stains shall contain an integral silane or siloxane penetrating concrete sealer.

The following products or approved equal may be used to stain the concrete surface:

Tri-Sheen Pigmented Stain
XL 70 Bridge Cote with Silane by Texcote
Custom Rock Stain. by CRI

Submittals: Within 30 days of receiving the general contract, contractor shall submit to the Engineer for approval the following: Catalogue cuts of the proposed liner, including bonding and release agents. Verification Sample Panel. Submit a 2' x 2' sample of the simulated finish which demonstrates the finishes, colors, and textures specified.

Thirty days prior to starting construction of any form lined surface, provide a mock-up to remain on the site as a basis for comparison of the work constructed on the project. Duplicate in form and appearance (texture, joint dimension, and coloration) all work constructed on the project matching the sample panel. Remove any sample rejected by the Engineer from the project and submit a new sample at no additional expense to the County. The mock-up shall be 4' x 10' x 6" and shall include color staining.

Shop drawing plan, elevation, and details to show overall pattern, joint locations, form tie locations, and end, edge, as well as other special conditions.

Quality Assurance: Manufacturer of custom coloring system shall have a minimum of five years of experience making molds and color stains to create formed concrete surfaces to match required shapes, surface textures, and colors.

Contractor shall schedule a pre-installation meeting with manufacturer representative to assure understanding of simulated molds use, color application, requirements for construction mockup, and to coordinate the work.

Formed concrete construction shall require five years experience pouring vertically formed architectural concrete. Manufacturer or manufacturer's authorized representative shall perform the color stain system application.

Method of Measurement: This work will be measured for payment in lump sum. The total area for all four headwalls, two at each underpass, is 719 square feet. Payment shall be made in 0.25 increments of the lump sum after construction of each headwall. Measurement will include all costs associated with providing the aesthetic treatment including furnishing, installing, stripping and reusing the form liner as well as all costs for furnishing and applying the color stain system.

Basis of Payment: The work will be paid for at the contract unit price lump sum for LETTERING.

CONCRETE FOUNDATION TYPE 42-INCH DIAMETER

Description: This Work shall consist of constructing a Portland cement concrete (PCC) steel reinforced traffic signal mast arm pole foundation in accordance with the requirements of the Illinois Department of Transportation District 1 Traffic signal Specifications revised January 1, 2007 incorporated herein by reference and pursuant to Illinois Department of Transportation Highway Standard No. 878001-07.

Method of Measurement: The work shall be measured for payment at the contract unit price per foot of depth of CONCRETE FOUNDATION TYPE E. 42-INCH DIAMETER

Basis of Payment: The work shall be paid for at the contract unit price per foot of depth of CONCRETE FOUNDATION TYPE E. 42-INCH DIAMETER as described in Section 878 of the Standard Specifications and specified in the Illinois Department of Transportation District 1 Traffic Signal Specifications.

CONDUIT PUSHED UNDER RAILROAD, 3" DIA., GALVANIZED STEEL

Description: Work under this item shall consist of furnishing and installing rigid metal conduit of the diameter specified under existing railroad tracks and railroad right-of-way. Conduit pushed under railroad tracks shall be installed at a minimum vertical clearance of 10 feet as measured between the bottom of the rail and the top of the conduit. The 10-foot vertical clearance shall be maintained for a longitudinal distance of 10 feet from any rail before the conduit installation depth can be decreased. At no point within the railroad right-of-way shall the conduit be installed at a depth of less than three (3) feet.

All material and work shall be in accordance with the applicable portions of Section 810 of the Standard Specifications and in accordance with the Illinois Department of Transportation, District 1, Traffic Signal Specifications.

The Kane County Division of Transportation (KDOT) is responsible for obtaining the necessary permits for installation of the conduit from the railroad. It is the contractor's responsibility to provide the necessary railroad protective liability insurance and coordinate with the railroad for right of entry and any required railroad flaggers. Railroad right-of-entry coordination, insurance, and railroad flaggers, shall be paid for separately under RAILROAD PROTECTIVE LIABILITY INSURANCE, RAILROAD FLAGMAN, and RAILROAD RIGHT OF ENTRY.

Method of Measurement: This work will be measured for payment in feet in place as specified in Section 810 of the Standard Specifications.

Basis of Payment: This work will be paid for at the contract unit price per foot for CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL, *SPECIAL*.

EROSION CONTROL BLANKET (SPECIAL 1)

Description: This Work shall conform to Article 251.04 of the Standard Specifications, except as modified herein or on the plans.

Erosion control blanket shall be installed in all seeded areas as shown in the plans. The erosion control blanket shall be "North American Green S75BN" as manufactured by North American Green, Inc. or an approved equal. The blanket shall be placed within 24 hours after seeding operations have been completed on the areas specified. Prior to placing the blanket, the areas to be covered shall be relatively free of all rocks or clods over 40mm in diameter, and all sticks or other foreign material which will prevent the close contact of the blanket with the seed bed. The blanket shall be placed perpendicular to the slope. The top of the blanket shall be toed into the top of slope in a 6" (min.) deep trench and backfilled. Staples shall be placed at a rate of 3.5 staples per square yard. The blanket shall overlap 4" (min.) with adjacent blanket. Staples in organic soils shall be a "North American Green a 12-inch ECO-Stake" as manufactured by North American Green, Inc. or an approved equal to ensure adequate anchorage in the organic soils.

Method of Measurement: This work shall be measured for payment in place per square yards of actual surface area covered.

Basis of Payment: The work shall be paid at the contract price per square yard for EROSION CONTROL BLANKET (SPECIAL 1). The price shall include all necessary labor, material and equipment needed to install the work described herein and as specified on the plans.

EROSION CONTROL BLANKET (SPECIAL 2)

Description: This Work shall conform to Article 251.04 of the Standard Specifications, except as modified herein or on the plans.

Erosion control blanket shall be installed in all seeded areas as shown in the plans. The erosion control blanket shall be "North American Green SC150" as manufactured by North American Green, Inc. or an approved equal. The blanket shall be placed within 24 hours after seeding operations have been completed on the areas specified. Prior to placing the blanket, the areas to be covered shall be relatively free of all rocks or clods over 40mm in diameter, and all sticks or other foreign material which will prevent the close contact of the blanket with the seed bed. The blanket shall be placed perpendicular to the slope. The top of the blanket shall be toed into the top of slope in a 6" (min.) deep trench and backfilled. Staples shall be placed at a rate of 3.5 staples per square yard. The blanket shall overlap 4" (min.) with adjacent blanket. Staples in organic soils shall be a "North American Green a 12-inch ECO-Stake" as manufactured by North American Green, Inc. or an approved equal to ensure adequate anchorage in the organic soils.

Method of Measurement. This work shall be measured for payment in place per square yards of actual surface area covered.

Basis of Payment. The work shall be paid at the contract price per square yard for EROSION CONTROL BLANKET (SPECIAL 2). The price shall include all necessary labor, material and equipment needed to install the work described herein and as specified on the plans.

EROSION CONTROL BLANKET (SPECIAL 3)

Description: This Work shall conform to Article 251.04 of the Standard Specifications, except as modified herein or on the plans.

Erosion control blanket shall be installed in all seeded areas as shown in the plans. The erosion control blanket shall be "North American Green DS75" as manufactured by North American Green, Inc. or an approved equal. The blanket shall be placed within 24 hours after seeding operations have been completed on the areas specified. Prior to placing the blanket, the areas to be covered shall be relatively free of all rocks or clods over 40mm in diameter, and all sticks or other foreign material which will prevent the close contact of the blanket with the seed bed. The blanket shall be placed perpendicular to the slope. The top of the blanket shall be toed into the top of slope in a 6" (min.) deep trench and backfilled. Staples shall be placed at a rate of 3.5 staples per square yard. The blanket shall overlap 4" (min.) with adjacent blanket. Staples in organic soils shall be a "North American Green a 12-inch ECO-Stake" as manufactured by North American Green, Inc. or an approved equal to ensure adequate anchorage in the organic soils.

Method of Measurement: This work shall be measured for payment in place per square yards of actual surface area covered.

Basis of Payment: The work shall be paid at the contract price per square yard for EROSION CONTROL BLANKET (SPECIAL 3). The price shall include all necessary labor, material and equipment needed to install the work described herein and as specified on the plans.

FORM LINER TEXTURED SURFACE (SPECIAL)

Description: This work shall consist of the construction of textured and colored formed concrete surface using simulated stone masonry molds and color stain system designated to duplicate closely the appearance of natural stone.

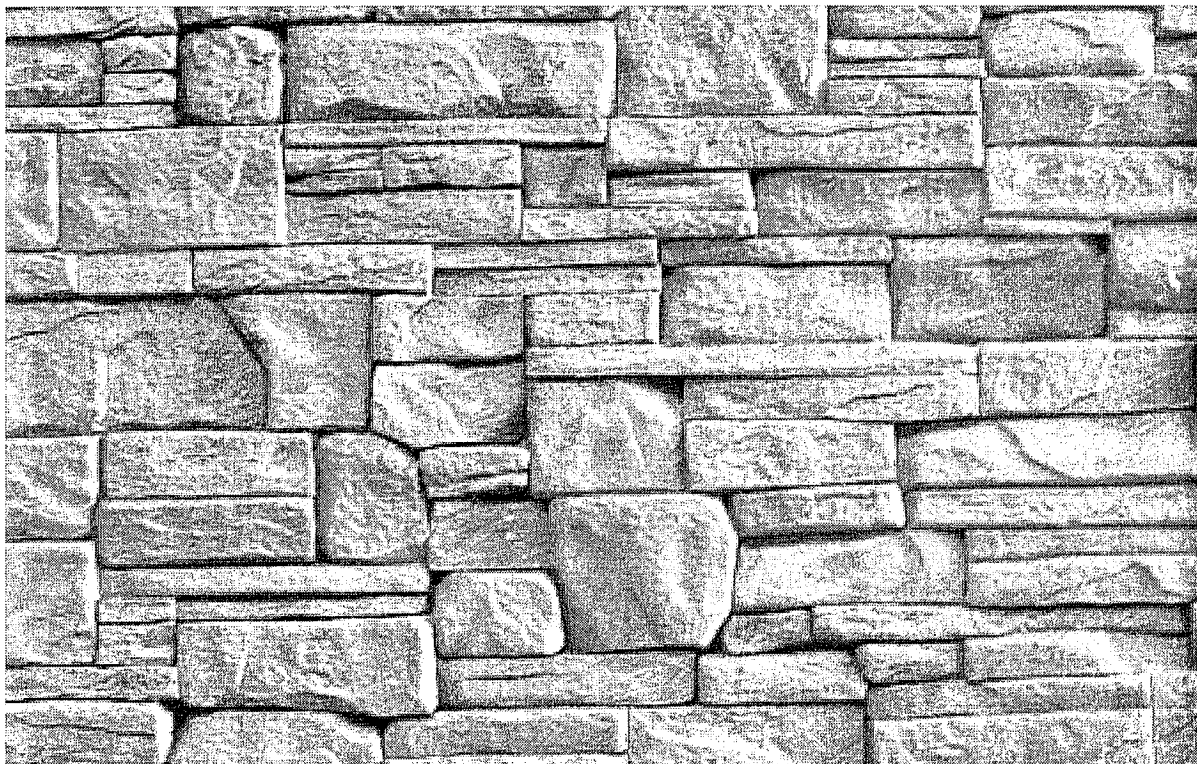
General: Form liners shall be used for the textured concrete surfaces specified on the plans and shall be installed in conformance with the manufacturer's recommendations, unless other methods of forming textured concrete surfaces are approved by the Engineer. Form liners shall be in conformance with this special provision as well as section 503.06(a) of the Standard Specifications. Form liners shall be manufactured from an elastomeric material or a semi-elastomeric polyurethane material by a manufacturer of commercially available concrete form liners. No substitution of other types of form liner material will be allowed. Form liners shall leave crisp, sharp definition of the architectural surface. Recurring textural configurations exhibited by repeating, recognizable shadow patterns shall be prevented by proper casting of form liner patterns. Textured concrete surfaces with such recurring textural configurations shall be reworked to remove such patterns until approved by the Engineer or the concrete shall be replaced.

Cuts and tears in form liners shall be sealed and repaired in conformance with the manufacturer's recommendations. Form liners that are delaminated from the form liner shall not be used. Form liners with deformations to the manufactured surface caused by improper storage practices or any other reason shall not be used. Clean forms and make free of buildup prior to each pour. Molds shall not compress more than 1/4" when concrete is poured at a rate of 10 vertical feet per hour.

Form liners shall extend the full length of texturing with 1'-0" smooth bands at each construction joint as shown on plans. Small pieces of form liners shall not be used. Grooves shall be aligned straight and true. Joints in the direction of grooves in grooved patterns shall be located only in the depressed portion of the textured concrete. Adjoining form liners shall be butted together without distortion, open cracks or offsets at the joints. Joints between liners shall be cleaned before each use to remove any mortar in the joint.

If the form pattern selected has molds connecting through the middle of stones, carefully remove the seam line created by abutting molds. Match the texture and shape of the surrounding stone, avoiding visible seems or mold marks. The form liner pattern shall be Spec Formliners Incorporated Custom Rock Pattern #1548 (shown below) or an equivalent to be submitted to KDOT for approval.

Adhesives shall be compatible with the form liner material and with concrete. Adhesives shall be approved by the form liner manufacturer. Adhesives shall not cause swelling of the form liner material. Form ties shall be made of either metal or fiberglass. Using metal ties, which result in a portion of the tie permanently embedded in the concrete, shall be designed to separate at least 1" back from the finished surface, leaving only a neat hole that can be plugged with patching material. Contractor shall submit the type of form ties to the Engineer for approval prior to use in this work. Place form ties at thinnest points of molds. Neatly patch the remaining hole after disengaging the protruding portion of the tie so that it will not be visible after coloring the concrete surface.



Releasing Form Liners: Products and application procedures for form liner release agents shall be approved by the form liner manufacturer. Release agents shall not cause swelling of the form liner material or delamination of the form liner. Release agents shall not stain the

concrete or react with the form liner material. Release agent shall coat form liner with a thin film. Following application of release agent, the form liner surface shall be cleaned of excess amounts of release agent using compressed air. Buildup of release agent caused by reuse of a form liner shall be removed at least every 5 uses.

Form liners shall release without leaving particles or pieces of form liner material on concrete and without pulling or breaking concrete from the textured surface. The concrete and textured surfaces exposed by removing form liners shall be protected from damage. Form stripping and related construction shall avoid creating defects in the concrete.

All concrete shall be cured in conformance with the Standard Specifications.

Coloration: All patterning of simulated stone masonry shall appear natural and non-repeating. Seam lines and or match lines caused from two or more molds coming together shall not be apparent when viewing final wall. Final coloration of cast stone concrete surface shall accurately simulate the appearance of real stone including the multiple colors, shades, flecking, and veining that is apparent in real stone. It shall also demonstrate the colors that may be apparent from aging, such as staining from oxidation or rusting. Joints shall be colored to simulate real mortar.

Concrete surface shall be cleaned prior to applying color stain materials to assure that surface is free of latency, dirt, dust, grease, efflorescence, paint, or other foreign material, following manufacturer's instructions for surface preparation. Do not sandblast. Preferred method to remove latency is pressure washing with water, minimum 3,000 psi (a rate of three to four gallons per minute), using a fan nozzle perpendicular to and at a distance of one or two feet from surface. Completed surface shall be free of blemishes, discoloration, surface voids, and unnatural form marks.

Color stain shall create a surface finish that is breathable (allowing water vapor transmission), and that resists deterioration from water, acid, alkali, fungi, sunlight, and weathering. Stain mix shall be a waterborne, low V.O.C. material, less than 180 grams / liter. All simulated stone surfaces that are to be stained shall be at least 30 days old. Apply color stain when ambient temperature is between 50 and 100 degrees F. Consult manufacturer and Engineer if conditions differ from this requirement. The color staining process shall be coordinated with that for the headwalls as described in ARCHITECTURAL LETTERING (SPECIAL).

Use the following colors from Federal Color Standard 595B for areas of concrete to be stained:

Base color - 33446 (Medium Tan)

Test samples of the stain on concrete shall be submitted for acceptance to the owner and the Engineer before any staining is to start on the structure. The stains shall contain an integral silane or siloxane penetrating concrete sealer.

The following products or approved equal may be used to stain the concrete surface:

Tri-Sheen Pigmented Stain
XL 70 Bridge Cote with Silane by Texcote
Custom Rock Stain. by CRI

Submittals: Within 30 days of receiving the general contract, contractor shall submit to the Engineer for approval the following: Catalogue cuts of the proposed liner, including bonding and

release agents. Verification Sample Panel. Submit a 2' x 2' sample of the simulated stone masonry finish which demonstrates the finishes, colors, and textures specified.

Thirty days prior to starting construction of any form lined surface, provide a mock-up to remain on the site as a basis for comparison of the work constructed on the project. Duplicate in form and appearance (texture, joint dimension, stone size and coloration) all work constructed on the project matching the sample panel. Remove any sample rejected by the Engineer from the project and submit a new sample at no additional expense to the County. The mock-up shall be 4' x 10' x 6" and shall include color staining.

Shop drawing plan, elevation, and details to show overall pattern, joint locations, form tie locations, and end, edge, as well as other special conditions.

Quality Assurance: Manufacturer of simulated stone masonry molds and custom coloring system shall have a minimum of five years of experience making stone masonry molds and color stains to create formed concrete surfaces to match natural stone shapes, surface textures, and colors.

Contractor shall schedule a pre-installation meeting with manufacturer representative to assure understanding of simulated stone masonry, molds use, color application, requirements for construction mockup, and to coordinate the work.

Formed concrete construction shall require five years experience pouring vertically formed architectural concrete. Manufacturer or manufacturer's authorized representative shall perform the color stain system application.

Method of Measurement: This work will be measured for payment in place and the area computed in square feet. Measurement will include all costs associated with providing the aesthetic treatment including the furnishing, installing, stripping and reusing the form liner as well as all costs for furnishing and applying the color stain system.

Basis of Payment: The work will be paid for at the contract unit price per square foot for FORM LINER TEXTURED SURFACE (SPECIAL).

GRAFFITI REMOVAL (SPECIAL)

Description: This work shall consist of removing graffiti from the underside of the top slab of the underpasses along Dunham and Stearns roads or other locations as directed by the Engineer, by the methods described in this specification.

Materials: All materials and equipment shall be subject to the Engineer's approval before any work can begin. Abrasive material for blast cleaning shall meet the requirements of IEPA.

Power Wash: Soluble, abrasive blast media shall be a large crystal sodium bicarbonate or a magnesium sulfate based media. Solubility of the media in water shall meet the requirements of IEPA.

The equipment with the media shall be a soluble media injector type power washer. The Contractor shall submit catalog cuts or other documentation for all equipment proposed for use in this work. The Engineer may require demonstration of the equipment's capabilities.

No work shall begin until the equipment have been demonstrated to, and accepted by the Engineer.

Solvent Wash: The cleaning compound shall be a blend of an organic solvent of emulsifiers and surfactants. It shall be a bio-degradable water-based mixture developed from non-toxic and non-corrosive substances. This may be a soybean solution or other, satisfactory to the Engineer. Mineral spirits are also acceptable for this usage. The cleaner shall lift graffiti from the substrate surface, and emulsify and dissolve the paint constituents; pigments; oils; binders and fillers. The material(s) used shall not damage, mar or reduce the reflectivity of the substrate, when used on a sign panel. Acceptance of the cleaning compound will be based on the manufacturer's certification that the material conforms to the requirements of this specification. No work shall begin until these materials have been delivered to, and accepted by the Engineer.

Construction Details: All work must conform to the OSHA standards. Unless otherwise directed by the Engineer, the following methods shall be used to remove graffiti from various surfaces. If one of these prescribed methods is used, and the graffiti still remains visible, the contractor shall use an alternate method approved by the Engineer. Painting over graffiti is the preferred option on previously painted surfaces, and where solvents were unsuccessful at removing graffiti. Unless otherwise noted or directed by the Engineer, graffiti shall be removed within five (5) working days of written notification. If a lift device will be necessary, the removal date will be extended to ten (10) working days.

GRAFFITI SURFACE SUGGESTED GRAFFITI REMOVAL METHOD

Steel (smooth, non-porous)
Wood (painted or unpainted)
Solvent wash with Enviro-Solutions Paint Stripper & Graffiti Remover; SOY solv; Mineral Spirits or Painting Over Graffiti or Power Washing
Brick, Stone, Concrete, Paving blocks (porous, unpainted)
Solvent Wash with Taginator, or Power Washing, or Painting Over Graffiti or Abrasive Blasting
Painted Masonry Painting Over Graffiti or Power Wash
Sign Panel Faces & Aluminum (unpainted mill finish or anodized finish)
Solvent Washing with Enviro-Solutions Paint Stripper & Graffiti Remover; SOY solv; EZ Solv or Mineral Spirits.

Painting Over Graffiti: The Contractor shall primer paint over all graffiti on the concrete surfaces within project limits and take appropriate precautions to prevent paint from falling onto traffic.

The substrate surfaces shall be thoroughly cleaned before painting. All dust, dirt, oil, grease, and other substances which might prevent the adhesion of the paint to the substrate shall be removed. No sandblasting will be allowed. Paint shall be applied as soon as practicable after cleaning is completed. If in the opinion of the Engineer, the substrate surface has become soiled, or otherwise contaminated, prior to the application of the paint, the surface shall be re-cleaned at no additional cost to the State. The paint shall

be applied evenly in a neat and workmanlike manner by a roller or other suitable method, as approved by the Engineer. The rolling shall be done at such a pace that no spinning of the roller or throwing off of paint occurs when the roller is lifted from the surface. The paint shall be feathered out by using light pressure at the end of the stroke to promote uniformity. The first time a surface is painted, it shall be painted from column to column, post to post, and from top to bottom for panels and from joint to joint or scoremark to scoremark for other concrete surfaces. After the first time, which includes previous painting for graffiti removal, the substrate surface shall be painted in small rectangular patterns in order to minimize the area painted and ensure that the graffiti will no longer be "readable" when the painting is complete. If the paint to be applied requires more stringent or additional surface preparation than stated in this specification, the Contractor shall prepare the surface in accordance with the paint manufacturer's recommendations. The graffiti must be completely hidden before the painted area will be measured for payment. The Contractor will be required to repaint areas if the graffiti remains visible after painting at no additional cost to the State. New graffiti at the same location will be measured for payment when the painting meets the requirements of this specification. The Engineer may require sand be added to the paint to provide a texture to the final surface.

Power Washing Graffiti Surfaces: All graffitied surfaces shall be cleaned with a soluble, abrasive blasting media applied with a soluble media injector or a compressed air delivery system, whichever is satisfactory to the Engineer. No particulate matter of any nature shall be permitted to remain on the cleaned surface. After cleaning, the surface shall be rinsed with tap water applied with a power washer. All visible media shall be removed from the surface.

After rinsing, the Contractor shall repeat the cleaning process in areas where graffiti or paint is still visible. If the second cleaning process fails to remove the graffiti or paint to the Engineer's satisfaction, the equipment and methods used by the Contractor will again be subject to review and approved by the Engineer. Cleaned surfaces shall bear no evidence of graffiti paint layers.

Solvent Washing Graffiti Surfaces:

Pre-Cleaning Materials: A wet, non-abrasive cleanser is recommended. This cleanser shall not contain strong solvents or alcohols.

Pre-Cleaning Procedure: Cleanse the surface of loose dirt particles with clean water. Use a soft sponge or brush to wash the graffitied surface with detergent and water. Avoid scrubbing the surface unnecessarily. After the cleaner has been utilized, apply a steady stream of water on the cleaned surface to wash the dirt particles away. Allow to dry.

Cleaning Procedure: The Contractor shall supply the instructions of the cleaning procedure, to the Engineer, at least two weeks prior to starting this work. Graffiti Removal material shall be applied to surfaces as per the manufacturer's instructions. Graffiti Removal material shall not be applied to silk screen processed areas.

After the solvent is applied, the surfaces shall then be wiped with a non-abrasive material. The wiped surfaces shall then be rinsed with a water wash.

The cleanliness of the surfaces is subject to the approval by the Engineer.

After rinsing, the Contractor shall repeat the cleaning process in areas where graffiti is still visible. If the second cleaning process fails to remove the graffiti to the Engineer's satisfaction, the equipment and methods used by the Contractor will again be subject to review and approval by the Engineer.

Cleaned surfaces shall bear no evidence of graffiti. The cleaning of the graffiti image shall be feathered out by using light pressure at the end of the stroke to promote uniformity on the surrounding surface.

Abrasive Blasting off Graffiti: Due to the potential of abrasive blasting to damage the substrate, this method of graffiti removal may only be performed as a last resort, at the direction of the Engineer, after all other methods to remove graffiti have failed. Graffiti should be removed using vacuum-shrouded blasting or power-tool equipment that has the appropriate attachments for the surface being cleaned to ensure that no dust or abrasive escapes during operation. This equipment should be capable of cleaning all the graffiti off the surface at a rate acceptable to the engineer while producing no detectable dust. The equipment should operate in a manner such that all dust or abrasive/dust mix generated is simultaneously drawn away from the contact surface into attached vacuum hoses leading to a vacuum that utilizes HEPA filters. The vacuum and its hoses should be sufficiently rated for the volume of debris and/or abrasive/debris generated. The equipment, its method of use, and efficiency shall be demonstrated to the Engineer prior to the start of work. Power tool cleaning should remove the graffiti without causing undue damage to the surface being cleaned.

Graffiti Removal From Overhead Structures: If the use of a mechanical aerial lift is required to safely access the graffitied surface, the Contractor shall obtain the necessary equipment and use it in conjunction with the other graffiti removal items.

Method of Measurement: This work will be measured in square yards of surface area that graffiti is either removed from, or painted over, in accordance with this specification. There will be no payment for removing graffiti that is not done within the time limitations stated in this specification.

Basis of Payment: This work will be paid for at the contract unit price per square yard for GRAFFITI REMOVAL.

MH TYPE 1-4" DIAMETER WITH RESTRICTOR

Description: Work under this item will be performed in accordance with the applicable portions of section 602 of the Standard Specifications. This work shall consist of constructing manholes with restrictor plates, together with the necessary cast iron frames and gates or lids.

Materials. This work shall be completed in accordance with applicable portions of Section 602 of the Standard Specifications, applicable portions of Standard 602406-02 and drainage details in the contract plans.

Add the following to Sub-Section 602.02 – Materials:

MH TYPE 1-4/ DIA. W/ RESTRICTOR shall include a steel restrictor plate constructed as shown on the Plans. The restrictor plate should have a sharp-edged opening, centered horizontally, of the diameter and vertical location shown on the Plans.

The steel restrictor plate shall be placed between pairs of 3"x3"x3/8" steel angles placed along the bottom and both vertical edges of the restrictor plate. Vertical steel angles should extend from vertical angle to vertical angle. All steel angles and the restrictor plate shall be galvanized after fabrication. Each section of steel angle shall be fastened

to the manhole wall and base using 3/8" stainless steel studs with nuts and expansion anchors. Fasteners shall be uniformly spaced along each angle with a 6" space from each end. A minimum of 3 fasteners shall be used on each horizontal angle and a minimum of 6 fasteners shall be used on each vertical angle.

Method of Measurement: Work for this item will be measured for payment in place per each

Basis of Payment: Work for this item will be paid for by contract unit price for each M.H. TYPE 1-4" DIAMETER WITH RESTRICTOR complete in place and accepted and measured as specified.

STEEL RAILING (SPECIAL)

Work under this item must be performed in accordance with the requirements of Section 509 of the Standard Specifications except as modified in the contract plan sheets.

Description: This Work consists of furnishing, erecting and painting metal railings over head walls and wingwalls of the underpasses beneath IL 25/Dunham Road and Stearns Road.

General Requirements: All work shall be according to the applicable requirements of Section 509 of the Standard Specifications and the requirements detailed in the plans.

Paint Requirements. The steel to be painted shall receive one primer coat, one finish coat and a second clear finish coat with the dry film thickness (DFT) of each coat measured according to SSPC-PA2 and conforming to the following:

- prime coat having a DFT such as the following or an approved equal:
 - Carboguard 888, polyamide epoxy primer (3 - 5 mils) – Carboline Company (Herman Rodriguez 847-289-3767)
 - ZRU Primer, moisture cured zinc rich urethane (2 - 5 mils) – Freda Inc. (Richard Milheim 800-348-4621)
 - KL3200, Kolor-Poxy Red, polyamide epoxy primer (3 - 5 mils) – PPG/Keeler & Long (Wayne Bell Jr. 724-272-5040)
 - Macropoxy 646, polyamide epoxy primer, (4 - 6 mils) – Sherwin-Williams (Vince Thomas 312-371-0709)
- semi gloss finish coat matching Munsell Color N1 Black and having a DFT such as the following or an approved equal:
 - Carbothane 133 HB (satin), aliphatic acrylic-polyester polyurethane (3 - 5 mils) – Carboline
 - I2 Topcoat (semi gloss), aliphatic polyurethane (2.5 - 5 mils) – Freda Inc.
 - KLN2-Series (semi gloss), neothane hi-solids urethane (2.5 - 5 mils) – PPG/Keeler & Long
 - Acrolon 218HS (semi gloss), polyester mod acrylic polyurethane (3 - 5 mils) – Sherwin-Williams
- clear, semi gloss second finish coat having a DFT such as the following or an approved equal:
 - Carbothane Clear Coat (satin), aliphatic acrylic polyurethane (1 - 2 mils) – Carboline
 - I2 Topcoat (semi gloss), aliphatic polyurethane (1.5 - 5 mils) – Freda Inc

- KLN25227 (semi gloss), neothane hi-solids urethane (2.5 - 5 mils) – PPG/Keeler & Long
- Diamond-Clad Clear (SGB65T115 Series), waterbased acrylic polyurethane (1 - 2 mils) – Sherwin-Williams

As an alternative to the paint system outlined above, the steel to be painted shall receive one coat of a polyamide epoxy primer and one finish coat with the dry film thickness (DFT) of each coat measured according to SSPC-PA2 and conforming to the following:

- prime coat having a DFT such as the following or an approved equal:
 - Carboguard 888, polyamide epoxy primer (3 - 5 mils) – Carboline Company
 - Corafon ADS High Build Epoxy, polyamide epoxy (2.5 - 6 mils) – PPG/Keeler & Long
 - Macropoxy 646, polyamide epoxy primer (4 - 6 mils) – Sherwin-Williams
- finish coat matching Munsell Color N1 Black and having a DFT such as the following or an approved equal:
 - Carboxane 2000 (gloss), modified siloxane hybrid (3 - 7 mils) – Carboline
 - Corafon ADS (semi gloss), fluoropolymer (1.5 - 3 mils) – PPG/Keeler & Long
 - Polysiloxane XLE (gloss), epoxy siloxane (3 - 7 mils) – Sherwin-Williams

All cleaning, preparation for painting and painting shall be done in the same shop to ensure single source responsibility of the entire coating system. Also, all paint materials shall be from a single source to ensure compatibility and samples of components submitted for approval by the Department, before use.

Method of Measurement: The work under this item will be measured for payment in feet.

Basis of Payment: This item which included furnishing, erecting and painting metal railings will be paid for at the contract price per foot for STEEL RAILING (SPECIAL), which payment will be full compensation for the work described herein.

RAILROAD FLAGGING (CC&P RR)

Description. This work shall be performed as in accordance with Section 107.12 and 109.05 of the Standard Specifications, except that the CHICAGO CENTRAL AND PACIFIC RAILROAD COMPANY (CC& P RR) will bill the Contractor directly for this Work performed at the following locations only:

- Existing Dunham Road over the CC&P RR (converted to multi-use path)
- IL Prairie Path Bridge over the CC&P RR
- Proposed multi-use path (at-grade crossing) at the CC&P RR

Separate Agreements between Kane County and the Railroad have been executed for the aforementioned locations.

The Contractor is required to conduct their operations at all times in full compliance with the rules, regulations and requirements of the CC&P RR SPECIAL PROVISIONS contained in the Contract Specifications.

General Requirements. The Contractor is responsible for payment to the Railroad for aforementioned work described above.

The flagging costs incurred for the work associated at the location of IL Rte 25 and the CCP RR grade crossing will be reimbursed by IDOT in accordance with a separate agreement between IDOT and the Railroad. The Contractor is not responsible for the flagging costs incurred or for processing payment. However, the Contractor is required to conduct their operations at all times in full compliance with the rules, regulations and requirements of the CC&P RR SPECIAL PROVISIONS contained in the Contract Specifications and as described below.

The Contractor shall give thirty (30) days advance written notice to the Engineering Superintendent of the Railroad or his authorized representative prior to commencement of any construction work on the Improvement affecting the railroad property. The Contractor shall notify the Railroad sufficiently in advance of when the protective services are required. The Contractor shall make every effort to notify the Railroad in advance if a previously requested flagger will not be needed for any reason. Any costs for flagging protection provided by the Railroad at the Contractor's request for those days when the Contractor does not work shall be borne by the Contractor.

Basis of Payment. Payment for RAILROAD FLAGGING (CC&P RR) will be paid for according to Article 109.05.

RAILROAD FLAGGING (UP RR)

Description. This work shall be performed as in accordance with Section 107.12 and 109.05 of the Standard Specifications, except that the Union Pacific Railroad will bill the Contractor directly for this Work.

This special provision shall apply to following locations only:

- Underneath the existing UP RR bridge west of the IL Rte 25 and Gilbert Street Intersection

The Contractor is required to conduct their operations at all times in full compliance with the rules, regulations and requirements of the UP RR Special Provisions.

General Requirements. The Contractor is responsible for payment to the Railroad for the work performed under this item.

The Contractor shall give thirty (30) days advance written notice to the Engineering Superintendent of the Railroad or his authorized representative prior to commencement of any construction work on the Improvement affecting the railroad property. The Contractor shall notify the Railroad sufficiently in advance of when the protective services are required. The Contractor shall make every effort to notify the Railroad in advance if a previously requested flagger will not be needed for any reason. Any costs for flagging protection provided by the Railroad at the Contractor's request for those days when the Contractor does not work shall be borne by the Contractor.

Basis of Payment. Payment for RAILROAD FLAGGING (UP RR) will be paid for according to Article 109.05.

REMOVAL AND RELOCATION OF EXISTING PEDESTRIAN BRIDGE

Work under this item must be performed in accordance with the requirements of Section 501 of the Standard Specification except as herein modified.

Description: This Work consists of removal and relocation of the existing pedestrian bridge over the Chicago Central and Pacific Railroad (hereafter CCPRR). The contractor will be required to relocate the existing superstructure in four (4) segments. The relocated bridge segments include one segment each for the outer two spans, and the two segments that comprise the center span shall be separated at the splice with no damage to the structure. The contractor will be required to offload the bridge spans at the storage site.

The existing substructure units for the pedestrian bridge (both abutments and both piers) shall be demolished and removed to one foot below the proposed final grade. The abandoned south abutment and wingwall near the existing south pier shall also be removed to one foot below existing grade. The contractor is responsible for disposal of these elements.

General Requirements: Add to the beginning of Article 501.02 of the Standard Specifications, "The Contractor shall submit a demolition plan to the Engineer for approval, detailing the proposed methods of demolition and the amount, location(s) and type(s) of equipment to be used." The plan shall also include Contractor's work area and proposed access. The Contractor is responsible for all required coordination with the CCPRR prior to starting work. The Contractor shall be responsible for all permits required to transfer the structure from the existing location to the proposed storage sites.

The Contractor shall deliver all four segments of the pedestrian truss structure to the Raceway Woods Forest Preserve (Dundee side off Huntley Road). The Contractor is responsible for offloading the segments on to an unimproved site. The Contractor will not be responsible for re-assembling the center spans or re-setting the spans on new substructure elements. However, the Contractor is responsible for providing adequate cribbing, shoring or blocking in order to eliminate any deflection or instability of the structure at the delivery locations. The Contractor shall provide 72 hours notice in advance of the delivery date. This time period shall not include weekends or holidays. The contact is Kevin Ahern (312) 498-8940.

The Contractor shall be responsible for all coordination required to gain access to the site. The Contractor shall contact Elmhurst Chicago Stone Company 60 days prior to beginning work in order for Elmhurst Chicago Stone to create access to the Contractor Staging Area as outlined in the removal plans. The Contractor shall provide a work schedule to Elmhurst Chicago Stone 30 days prior to beginning work on the removal and relocation of the existing pedestrian bridge. Contractor shall restore the staging area on the Elmhurst Chicago Stone property to the original conditions (clean from all dirt and debris).

Method of Measurement: The work under this item will be measured for payment on a Lump Sum basis.

Basis of Payment. The work described herein will be paid for at the contract lump sum price for REMOVAL AND RELOCATION OF EXISTING PEDESTRIAN BRIDGE.

TRAFFIC SIGNALS SPECIFICATIONS

TRAFFIC SIGNAL SPECIFICATIONS

Effective: May 22, 2002

Revised: January 1, 2007

These Traffic Signal Special Provisions and the "District One Standard Traffic Signal Design Details" supplement the requirements of the State of Illinois "Standard Specifications for Road and Bridge Construction." The intent of these Special Provisions is to prescribe the materials and construction methods commonly used for 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. The work to be done under this contract consists of furnishing and installing all traffic signal work as specified in the Plans and as specified herein in a manner acceptable and approved by the Engineer.

SECTION 720 SIGNING

MAST ARM SIGN PANELS.

Add the following to Section 720.02 of the Standard Specifications:

Signs attached to poles or posts (such as mast arm signs) shall have mounting brackets and sign channels which are equal to and completely interchangeable with those used by the District Sign Shops. Signfix Aluminum Channel Framing System is currently recommended, but other brands of mounting hardware are acceptable based upon the Department's approval.

DIVISION 800 ELECTRICAL

INSPECTION OF ELECTRICAL SYSTEMS.

Add the following to Article 801.10 of the Standard Specifications:

All cabinets including temporary traffic signal cabinets shall be assembled by an approved equipment supplier in District One. The Department reserves the right to request any controller and cabinet to be tested at the equipment supplier facilities prior to field installation, at no extra cost to this contract. All railroad interconnected (including temporary railroad interconnect) controllers and cabinets shall be new, built, tested and approved by the controller equipment vendor, in the vendor's District One facility, prior to field installation. The vendor shall provide the technical equipment and assistance as required by the Engineer to fully test this equipment.

DAMAGE TO TRAFFIC SIGNAL SYSTEM.

Add the following to Article 801.12(b) of the Standard Specifications to read:

Any damaged equipment or equipment not operating properly from any cause whatsoever shall be repaired with new equipment provided by the Contractor at no additional cost to the Contract and or owner of the traffic signal system, all as approved by the Engineer. Final repairs or replacement of damaged equipment must meet the approval of the Engineer prior to or at the time of final inspection otherwise the traffic signal installation will not be accepted. Cable splices outside the controller cabinet shall not be allowed.

RESTORATION OF WORK AREA.

Add to Section 801 of the Standard Specifications:

Restoration of the traffic signal work area shall be included in the related pay items such as foundation, conduit, handhole, trench and backfill, etc. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded. Restoration of the work area shall be included in the contract without any extra compensation allowed to the Contractor.

SUBMITTALS.

Revise Article 801.05 of the Standard Specifications to read:

The Contractor shall provide:

- a. All material approval requests shall be submitted at the preconstruction meeting, including major traffic signal items listed in the table in Article 801.05.
- b. All material or equipment which are similar or identical shall be the product of the same manufacturer, unless necessary for system continuity. Traffic signal materials and equipment shall bear the U.L. label whenever such labeling is available.
- c. Seven (7) copies of a letter from the Traffic Signal Contractor on company letterhead listing the contract number or permit number, project location/limits, pay item description, pay code number, manufacturer's name and model numbers of the proposed equipment and stating that the proposed equipment meets all contract requirements. The letter will be reviewed by the Traffic Design Engineer to determine whether the equipment to be used is approvable.
- d. Seven (7) copies of shop drawings for mast arm poles and assemblies, including combination mast arm poles, are required. A minimum of two (2) copies of all other material catalog cuts are required. Submittals for equipment and materials shall be complete. Partial or incomplete submittals will be returned without review.
- e. Certain non-standard mast arm poles and assemblies will require additional review from IDOT's Central Office. Examples include ornamental/decorative and non-standard length mast arm pole assemblies. The Contractor shall account for the additional review time in his schedule.

- f. The contract number or permit number, project location/limits and corresponding pay code number must be on each sheet of the letter, material catalog cuts and mast arm poles and assemblies drawings.
- g. Where certifications and/or warranties are specified, the information submitted for approval shall include certifications and warranties. Certifications involving inspections, and/or tests of material shall be complete with all test data, dates, and times.
- h. After the Engineer reviews the submittals for conformance with the design concept of the project, the Engineer will stamp the drawings indicating their status as 'Approved', 'Approved-As-Noted', 'Disapproved', or 'Information Only'. Since the Engineer's review is for conformance with the design concept only, it is the Contractor's responsibility to coordinate the various items into a working system as specified. The Contractor shall not be relieved from responsibility for errors or omissions in the shop, working, layout drawings, or other documents by the Department's approval thereof. The Contractor must still be in full compliance with contract and specification requirements.
- i. All submitted items reviewed and marked 'APPROVED AS NOTED', or 'DISAPPROVED' are to be resubmitted in their entirety, unless otherwise indicated within the submittal comments, with a disposition of previous comments to verify contract compliance at no additional cost to the contract.
- j. Exceptions, Deviations and Substitutions. In general, exceptions to and deviations from the requirements of the Contract Documents will not be allowed. It is the Contractor's responsibility to note any deviations from Contract requirements at the time of submittal and to make any requests for deviations in writing to the Engineer. In general, substitutions will not be acceptable. Requests for substitutions must demonstrate that the proposed substitution is superior to the material or equipment required by the Contract Documents. No exceptions, deviations or substitutions will be permitted without the approval of the Engineer.

MAINTENANCE AND RESPONSIBILITY.

Revise Article 801.11 of the Standard Specifications to read:

- a) Existing traffic signal installations and/or any electrical facilities at all or various locations may be altered or reconstructed totally or partially as part of the work on this Contract. 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, Division of Highways, County, Private Developer, or the Municipality in which they are located. 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.
- b) When the project has a pay item for "Maintenance of Existing Traffic Signal Installation," "Temporary Traffic Signal Installation(s)" and/or "Maintenance of Existing Flashing Beacon Installation," the Contractor must notify both the Area Traffic Signal Maintenance and Operations Engineer at (847) 705-4424 and the Department's Electrical Maintenance

Contractor, of their intent to begin any physical construction work on the Contract or any portion thereof. This notification must be made a minimum of seven (7) working days prior to the start of construction to allow sufficient time for inspection of the existing traffic signal installation(s) and transfer of maintenance to the Contractor. If work is started prior to an inspection, maintenance of the traffic signal installation(s) will be transferred to the Contractor without an inspection. The Contractor will become responsible for repairing or replacing all equipment that is not operating properly or is damaged at no cost to the owner of the traffic signal. Final repairs or replacement of damaged equipment must meet the approval of the Engineer prior to or at the time of final inspection otherwise the traffic signal installation will not be accepted.

- c) Contracts such as pavement grinding or patching which result in the destruction of traffic signal loops do not require maintenance transfer, but require a notification of intent to work and an inspection. A minimum of seven (7) working days prior to the loop removal, the Contractor shall notify the Area Traffic Signal Maintenance and Operations Engineer at (847) 705-4424 and the Department's Electrical Maintenance Contractor, at which time arrangements will be made to adjust the traffic controller timing to compensate for the absence of detection. See additional requirements in these specifications under Inductive Loop Detector.
- d) The Contractor is advised that the existing and/or temporary traffic signal installation must remain in operation during all construction stages, except for the most essential down time. Any shutdown of the traffic signal installation, which exceeds fifteen (15) minutes, must have prior approval of the Engineer. Approval to shutdown the traffic signal installation will only be granted during the period extending from 10:00 a.m. to 3:00 p.m. on weekdays. Shutdowns shall not be allowed during inclement weather or holiday periods.
- e) The Contractor shall be fully responsible for the safe and efficient operation of the traffic signals. Any inquiry, complaint or request by the Department, the Department's Electrical Maintenance Contractor or the public, shall be investigated and repairs begun within one hour. Failure to provide this service will result in liquidated damages of \$500 per day per occurrence. In addition, the Department reserves the right to assign any work not completed within this timeframe to the Electrical Maintenance Contractor. All costs associated to repair this uncompleted work shall be the responsibility of the Contractor. Failure to pay these costs to the Electrical Maintenance Contractor within one month after the incident will result in additional liquidated damages of \$500 per month per occurrence. Unpaid bills will be deducted from the cost of the Contract. The District's Electrical Maintenance Contractor may inspect any signaling device on the Department's highway system at any time without notification.

TRAFFIC SIGNAL INSPECTION (TURN-ON).

Revise Article 801.15(b) of the Standard Specifications to read:

It is the intent to have all electric work completed and equipment field tested by the vendor prior to the Department's "turn-on" field inspection. If in the event the Engineer determines work is not complete and the inspection will require more than two (2) hours to complete, the inspection shall be canceled and the Contractor will be required to reschedule at another date. The maintenance of the traffic signals will not be accepted until all punch list work is corrected and re-inspected.

When the road is open to traffic, except as otherwise provided in Section 850 of the Standard Specifications, the Contractor may request a turn-on and inspection of the completed traffic signal installation at each separate location. This request must be made to the Area Traffic Signal Maintenance and Operations Engineer at (847) 705-4424 a minimum of seven (7) working days prior to the time of the requested inspection. The Department will not grant a field inspection until notification is provided from the Contractor that the equipment has been field tested and the intersection is operating according to Contract requirements. The Department's facsimile number is (847) 705-4089. The Contractor must invite local fire department personnel to the turn-on when Emergency Vehicle Preemption (EVP) is included in the project. The Contractor must notify the SCAT Consultant of the turn-on schedule, as well as stage changes and phase changes during construction.

The Contractor must have all traffic signal work completed and the electrical service installation connected by the utility company prior to requesting an inspection and turn-on of the traffic signal installation. The Contractor shall be responsible to provide a police officer to direct traffic at the time of testing.

The Contractor shall provide a representative from the control equipment vendor's office to attend the traffic signal inspection for both permanent and temporary traffic signal turn-ons. 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. The Agency that is responsible for the maintenance of each traffic signal installation will assume the maintenance upon successful completion of this inspection.

The District requires the following from the Contractor at traffic signal turn-ons.

1. One set of signal plans of record with field revisions marked in red ink.
2. Notification from the Contractor and the equipment vendor of satisfactory field testing.
3. A knowledgeable representative of the controller equipment supplier shall be required at the traffic signal turn-on. The representative shall be knowledgeable of the cabinet design and controller functions.
4. A copy of the approved material letter.
5. One (1) copy of the operation and service manuals of the signal controller and associated control equipment.
6. Five (5) copies 11" x 17" (280 mm X 430 mm) of the cabinet wiring diagrams.
7. The controller manufacturer shall supply a printed form, not to exceed 11" x 17" (280 mm X 430 mm) for recording the traffic signal controller's timings; backup timings; coordination

splits, offsets, and cycles; TBC Time of Day, Week and Year Programs; Traffic Responsive Program, Detector Phase Assignment, Type and Detector Switching; and any other functions programmable from the keyboard. The form shall include a location, date, manufacturer's name, controller model and software version. The form shall be approved by the Engineer and a minimum of three (3) copies must be furnished at each turn-on. The manufacturer must provide all programming information used within the controller at the time of turn-on.

Acceptance of the traffic signal equipment by the Department 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.

All equipment and/or parts to keep the traffic signal installation operating shall be furnished by the Contractor. No spare traffic signal equipment is available from the Department.

All punch list work shall be completed within two (2) weeks after the final inspection. The Contractor shall notify the Electrical Maintenance Contractor to inspect all punch list work. Failure to meet these time constraints shall result in liquidated damage charges of \$500 per month per incident.

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 shall be subject to removal and disposal at the Contractor's expense.

LOCATING UNDERGROUND FACILITIES.

Revise Section 803 to the Standard Specifications to read:

If this Contract requires the services of an Electrical Contractor, the Contractor shall be responsible at his/her own expense for locating existing IDOT electrical facilities prior to performing any work. If this Contract does not require the services of an Electrical Contractor, the Contractor may request one free locate for existing IDOT electrical facilities from the District One Electrical Maintenance Contractor prior to the start of any work. Additional requests may be at the expense of the Contractor. The location of underground traffic facilities does not relieve the Contractor of their responsibility to repair any facilities damaged during construction at their expense.

The exact location of all utilities shall be field verified by the Contractor before the installation of any components of the traffic signal system. For locations of utilities the local Counties or Municipalities may need to be contacted, in the City of Chicago contact D.I.G.G.E.R. at (312) 744-7000 and for all other locations contact J.U.L.I.E. at 1-800-892-0123.

ELECTRIC SERVICE INSTALLATION.

Revise Section 805 of the Standard Specifications to read:

Description: This work shall consist of all materials and labor required to install, modify, or extend the electric service installation. All installations shall meet the requirements of the details in the "District One Standard Traffic Signal Design Details" and applicable portions of the Specifications.

General: The electric service installation shall be the electric service disconnecting means and it shall be identified as suitable for use as service equipment.

The electric utility contact information is noted on the plans and represents the current information at the time of contract preparation. The Contractor must request in writing for service and/or service modification within 10 days of contract award and must follow-up with the electric utility to assure all necessary documents and payment are received by the utility. The Contractor shall forward copies of all correspondence between the contractor and utility company. The service agreement and sketch shall be submitted for signature to the Traffic Program's engineer.

Materials:

1. General. The completed control panel shall be constructed in accordance with UL Std. 508A, Industrial Control Panel, and carry the UL label. Wire terminations shall be UL listed.
2. Enclosures.
 - a. Pole Mounted Cabinet. The cabinet shall be UL 50, NEMA Type 4X, unfinished single door design, fabricated from minimum 0.080-inch (2.03 mm) thick Type 5052 H-32 aluminum. Seams shall be continuous welded and ground smooth. Stainless steel screws and clamps shall secure the cover and assure a watertight seal. The cover shall be removable by pulling the continuous stainless steel hinge pin. The cabinet shall have an oil-resistant gasket and a lock kit shall be provided with an internal O-ring in the locking mechanism assuring a watertight and dust-tight seal. The cabinet shall be sized to adequately house all required components with extra space for arrangement and termination of wiring. A minimum size of 14-inches (350 mm) high, 9-inches (225 mm) wide and 8-inches (200 mm) in depth is required. The cabinet shall be channel mounted to a wooden utility pole using assemblies recommended by the manufacturer.
 - b. Ground Mounted Cabinet. The cabinet shall be UL 50, NEMA Type 3R unfinished single door design with back panel. The cabinet shall be fabricated from Type 5052 H-32 aluminum with the frame and door 0.125-inch (3.175 mm) thick, the top 0.250-inch (6.350 mm) thick and the bottom 0.500-inch (12.70 mm) thick. Seams shall be continuous welded and ground smooth. The door and door opening shall be double flanged. The door shall be approximately 80% of the front surface, with a full length tamperproof stainless steel .075-inch (1.91 mm) thick hinge bolted to the cabinet with stainless steel carriage bolts and nylocks nuts. The locking mechanism shall be slam-latch type with a keyhole cover. The cabinet shall be sized to adequately house all required components with extra space for arrangement and termination of wiring. A minimum size of 40-inches (1000 mm) high, 16-inches (400 mm) wide and 15-inches (375 mm) in

depth is required. The cabinet shall be mounted upon a square Type A concrete foundation as indicated on the plans. The foundation is paid for separately.

- c. Surge Protector. Overvoltage protection, with LED indicator, shall be provided for the 120 volt load circuit by the means MOV and thermal fusing technology. The response time shall be <5n seconds and operate within a range of -40C to +85C. The surge protector shall be UL 1449 Listed.
 - d. Circuit Breakers. Circuit breakers shall be standard UL listed molded case, thermal-magnetic bolt-on type circuit breakers with trip free indicating handles. 120 volt circuit breakers shall have an interrupting rating of not less than 65,000 rms symmetrical amperes. Unless otherwise indicated, the main disconnect circuit breaker for the traffic signal controller shall be rated 60 amperes, 120 V and the auxiliary circuit breakers shall be rated 10 amperes, 120 V.
 - e. Fuses, Fuseholders and Power Indicating Light. Fuses shall be small-dimensional cylindrical fuses of the dual element time-delay type. The fuses shall be rated for 600 V AC and shall have a UL listed interrupting rating of not less than 10,000 rms symmetrical amperes at rated voltage. The power indicating light shall be LED type with a green colored lens and shall be energized when electric utility power is present.
 - f. Ground and Neutral Bus Bars. A single copper ground and neutral bus bar, mounted on the equipment panel shall be provided. Ground and neutral conductors shall be separated on the bus bar. Compression lugs, plus 2 spare lugs, shall be sized to accommodate the cables with the heads of the connector screws painted green for ground connections and white for neutral connections.
 - g. Utility Services Connection. The Contractor shall notify the Utility Company marketing representative a minimum of 30 working days prior to the anticipated date of hook-up. This 30 day advance notification will begin only after the Utility Company marketing representative has received service charge payments from the Contractor. Prior to contacting the Utility Company marketing representative for service connection, the service installation controller cabinet and cable must be installed for inspection by the Utility Company.
 - h. Ground Rod. Ground rods shall be copper-clad steel, a minimum of 10 feet (3.0m) in length, and 3/4 inch (20mm) in diameter. Ground rod resistance measurements to ground shall be 25 ohms or less. If necessary additional rods shall be installed to meet resistance requirements at no additional cost to the contract.
3. Installation.
- a. General. The Contractor shall confirm the orientation of the traffic service installation and its door side with the engineer, prior to installation. All conduit entrances into the service installation shall be sealed with a pliable waterproof material.
 - b. Pole Mounted. Brackets designed for pole mounting shall be used. All mounting hardware shall be stainless steel. Mounting height shall be as noted on the plans or as directed by the Engineer.

- c. Ground Mounted. The service installation shall be mounted plumb and level on the foundation and fastened to the anchor bolts with hot-dipped galvanized or stainless steel nuts and washers. The space between the bottom of the enclosure and the top of the foundation shall be caulked at the base with silicone.

Basis of Payment: The service installation shall be paid for at the contract unit price each for SERVICE INSTALLATION of the type specified which shall be payment in full for furnishing and installing the service installation complete. The type A foundation which includes the ground rod shall be paid for separately. SERVICE INSTALLATION, POLE MOUNTED shall include the 3/4 inch (20mm) grounding conduit, ground rod, and pole mount assembly. Any charges by the utility companies shall be approved by the engineer and paid for as an addition to the contract according to Article 109.05 of the Standard Specifications.

GROUNDING OF TRAFFIC SIGNAL SYSTEMS.

General Requirements: All traffic signal systems, equipment and appurtenances shall be properly grounded in strict conformance with the NEC. See IDOT District One Traffic Signal detail plan sheets for additional information.

The grounding electrode system shall include a ground rod installed with each traffic signal controller concrete foundation and all mast arm and post concrete foundations. An additional ground rod will be required at locations where measured resistance exceeds 25 ohms. Ground rods are included in the applicable foundation pay item and will not be paid for separately.

Testing shall be according to Article 801.13 (a) (4) and (5).

- (a) The grounded conductor (neutral conductor) shall be white color coded. This conductor shall be bonded to the equipment grounding conductor only at the Electric Service Installation. All power cables shall include one neutral conductor of the same size.
- (b) The equipment grounding conductor shall be green color coded. The following is in addition to Article 801.04 of the Standard Specifications.
 1. Equipment grounding conductors shall be bonded to the grounded conductor (neutral conductor) only at the Electric Service Installation. The equipment grounding conductor is paid for separately and shall be continuous. The Earth shall not be used as the equipment grounding conductor.
 2. Equipment grounding conductors shall be bonded, using a Listed grounding connector, to all traffic signal mast arm poles, traffic signal posts, pedestrian posts, pull boxes, handhole frames and covers and other metallic enclosures throughout the traffic signal wiring system, except where noted herein. Bonding shall be made with a splice and pigtail connection, using a sized compression type copper sleeve, sealant tape, and heat-shrinkable cap. A Listed electrical joint compound shall be applied to all conductors' terminations, connector threads and contact points.
 3. All metallic and non-metallic raceways containing traffic signal circuit runs shall have a continuous equipment grounding conductor, except raceways containing only detector loop lead-in circuits, circuits under 50 volts and/or fiber optic cable will not be required to include an equipment grounding conductor.

4. Individual conductor splices in handholes shall be soldered and sealed with heat shrink. When necessary to maintain effective equipment grounding, a full cable heat shrink shall be provided over individual conductor heat shrinks.

(c) The grounding electrode conductor shall be similar to the equipment grounding conductor in color coding (green) and size. The grounding electrode conductor is used to connect the ground rod to the equipment grounding conductor and is bonded to ground rods via exothermic welding, listed pressure connectors, listed clamps or other approved listed means.

HANDHOLES.

Add the following to Section 814 of the Standard Specifications:

All handholes shall be concrete, poured in place, with inside dimensions of 21-1/2 inches (549mm) minimum. Frames and lid openings shall match this dimension. The cover of the handhole frame shall be labeled "Traffic Signals" with legible raised letters.

For grounding purposes the handhole frame shall have provisions for a 7/16 inch (15.875mm) diameter stainless bolt cast into the frame. The covers shall have a stainless steel threaded stint extended from the eye hook assembly for the purpose of attaching the grounding conductor to the handhole cover.

The minimum wall thickness for heavy duty hand holes shall be 12 inches (300mm).

All conduits shall enter the handhole at a depth of 30 inches (760mm) except for the conduits for detector loops when the handhole is less than 5 feet (1.52 m) from the detector loop. All conduit ends should be sealed with a waterproof sealant to prevent the entrance of contaminants into the handhole.

Steel cable hooks shall be coated with hot-dipped galvanization in accordance with AASHTO Specification M111. Hooks shall be a minimum of 1/2 inch (12.7 mm) diameter with two 90 degree bends and extend into the handhole at least 6 inches (150 mm). Hooks shall be placed a minimum of 12 inches (300 mm) below the lid or lower if additional space is required.

FIBER OPTIC TRACER CABLE.

The cable shall meet the requirements of Section 817 of the "Standard Specifications," except for the following:

Add the following to Article 817.03 of the Standard Specifications:

In order to trace the fiber optic cable after installation, the tracer cable shall be installed in the same conduit as the fiber optic cable in locations shown on the plans. The tracer cable shall be continuous, extended into the controller cabinet and terminated on a barrier type terminal strip mounted on the side wall of the controller cabinet. The barrier type terminal strip and tracer cable shall be clearly marked and identified. The tracer cable will be allowed to be spliced at the handholes only. All tracer cable splices shall be kept to a minimum and shall incorporate maximum lengths of cable supplied by the manufacturer. The tracer cable splice shall use a Western Union Splice soldered with resin core flux. All exposed surfaces of the solder shall be smooth. Splices shall be soldered using a soldering iron. Blow torches or other devices which oxidize copper cable shall not be allowed for soldering operations. The splice shall be covered

with WCSMW 30/100 heat shrink tube, minimum length 4 inches (100 mm) and with a minimum 1 inch (25 mm) coverage over the XLP insulation, underwater grade.

Add the following to Article 817.05 of the Standard Specifications:

Basis of Payment: The tracer cable shall be paid for separately as ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C per foot (meter), which price shall include all associated labor and material for installation.

GROUNDING CABLE.

The cable shall meet the requirements of Section 817 of the "Standard Specifications," except for the following:

Add to Article 817.02 (b) of the Standard Specifications:

Unless otherwise noted on the Plans, traffic signal grounding conductor shall be one conductor, #6 gauge copper, with a green color coded XLP jacket.

The traffic signal grounding conductor shall be bonded, using a Listed grounding connector (Burdy type KC/K2C, as applicable, or approved equal), to all proposed and existing traffic signal mast arm poles and traffic/pedestrian signal posts, including push button posts. The grounding conductor shall be bonded to all proposed and existing pull boxes, handhole frames and covers and other metallic enclosures throughout the traffic signal wiring system and noted herein and detailed on the plans. Bonding to existing handhole frames and covers shall be paid for separately.

Add the following to Article 817.05 of the Standard Specifications:

Basis of Payment: Grounding cable shall be measured in place for payment in foot (meter). Payment shall be at the contract unit price for ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6, 1C, which price includes all associated labor and material including grounding clamps, splicing, exothermic welds, grounding connectors, and other hardware.

RAILROAD INTERCONNECT CABLE

The cable shall meet the requirements of Section 817 of the "Standard Specifications," except for the following:

Add to Article 817.02 of the Standard Specifications:

The railroad interconnect cable shall be three conductor stranded #14 copper cable in a clear polyester binder, shielded with #36 AWG tinned copper braid with 85% coverage, and insulated with .016" polyethylene (black, blue, red). The jacket shall be black 0.045 PVC or polyethylene.

Add the following to Article 817.05 of the Standard Specifications:

Basis of Payment: This work shall be paid for at the contract unit price per foot (meter) for ELECTRIC CABLE IN CONDUIT, RAILROAD, NO. 14 3C, which price shall be payment in full

for furnishing, installing, and making all electrical connections in the traffic signal controller cabinet. Connections in the railroad controller cabinet shall be performed by railroad personnel.

MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION.

Revise Section 850 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 pre-emption equipment, master controllers, uninterruptible power supply (UPS and batteries), telephone service installations, communication cables and conduits to adjacent intersections.

The maintenance shall be according to District One revised Article 801.11 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 pre-emption equipment to ensure that they are functioning properly. This item includes, as routine maintenance, all portions of emergency vehicle pre-emption 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. 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 contract. 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.

Basis of Payment: This work shall be paid for at the contract unit price each for MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION.

TRAFFIC ACTUATED CONTROLLER.

Add the following to Article 857.02 of the Standard Specifications:

Controllers shall be NEMA TS2 Type 1, Econolite ASC/2S-1000 or Eagle/Siemens M41 unless specified otherwise on the plans or elsewhere on these specifications. Only controllers supplied by one of the District One approved closed loop equipment manufacturers will be allowed. The controller shall be the most recent model and software version supplied by the manufacturer at the time of the approval. The traffic signal controller shall provide features to inhibit simultaneous display of a circular yellow ball and a yellow arrow display. Individual load switches shall be provided for each vehicle, pedestrian, and right turn over lap phase. The controller shall prevent phases from being skipped during program changes and after all preemption events.

MASTER CONTROLLER.

Revise Articles 860.02 - Materials and 860.03 - Installation of the Standard Specifications to read:

Only controllers supplied by one of the District approved closed loop equipment manufacturers will be allowed. Only NEMA TS 2 Type 1 Eagle/Siemens and Econolite closed loop systems shall be supplied. The latest model and software version of master controller shall be supplied. Functional requirements in addition to those in Section 863 of the Standard Specification include:

The system commands shall consist of, as a minimum, six (6) cycle lengths, five (5) offsets, three (3) splits, and four (4) special functions. The system commands shall also include commands for free or coordinated operation.

Traffic Responsive operation shall consist of the real time acquisition of system detector data, data validation, and the scaling of acquired volumes and occupancies in a deterministic fashion so as to cause the selection and implementation of the most suitable traffic plan.

Upon request by the Engineer, each master shall be delivered with up to three (3) complete sets of the latest edition of registered remote monitoring software with full manufacture's support. Each set shall consist of software on CD, DVD, or other suitable media approved by the Engineer, and a bound set of manuals containing loading and operating instruction. One copy

of the software and support data shall be delivered to the Agency in charge of system operation, if other than IDOT. One of these two sets will be provided to the Agency Signal Maintenance Contractor for use in monitoring the system.

The approved manufacturer of equipment shall loan the District one master controller and two intersection controllers of the most recent models and the newest software version to be used for instructional purposes in addition to the equipment to be supplied for the Contract.

The Contractor shall arrange to install a standard voice-grade dial-up telephone line to the master controller. This shall be accomplished through the following process utilizing District One staff. This telephone line may be coupled with a DSL line and a phone filter to isolate the dial-up line. An E911 address is required.

The cabinet shall be provided with an Outdoor Network Interface for termination of the telephone service. It shall be mounted to the inside of the cabinet in a location suitable to provide access for termination of the telephone service at a later date.

Full duplex communication between the master and its local controllers is recommended, but at this time not required. The data rate shall be 1200 baud minimum and shall be capable of speeds to 38,400 or above as technology allows. The controller, when installed in an Ethernet topology, may operate non-serial communications.

The cabinet shall be equipped with a 9600 baud, auto dial/auto answer modem. It shall be a US robotics 33.6K baud rate or equal.

As soon as practical or within one week after the contract has been awarded, the Contractor shall contact (via phone) the Administrative Support Manager in the District One Business Services Section at (847) 705-4011 to request a phone line installation.

A follow-up fax transmittal to the Administrative Support Manager (847-705-4712) with all required information pertaining to the phone installation is required from the Contractor as soon as possible or within one week after the initial request has been made. A copy of this fax transmittal must also be faxed by the Contractor to the Traffic Signal Systems Engineer at (847) 705-4089. The required information to be supplied on the fax shall include (but not limited to): A street address for the new traffic signal controller (or nearby address); a nearby existing telephone number; what type of telephone service is needed; the name and number of the Contractor's employee for the telephone company to contact regarding site work and questions. The usual time frame for the activation of the phone line is 4-6 weeks after the Business Services Section has received the Contractor supplied fax. It is, therefore, imperative that the phone line conduit and pull-string be installed by the Contractor in anticipation of this time frame. On jobs which include roadway widening in which the conduit cannot be installed until this widening is completed, the Contractor will be allowed to delay the phone line installation request to the Business Services Section until a point in time that is 4-6 weeks prior to the anticipated completion of the traffic signal work. The contractor shall provide the Administrative Support Manager with an expected installation date considering the 4-6 week processing time.

The telephone line shall be installed and activated one month before the system final inspection.

All costs associated with the telephone line installation and activation (not including the Contract specified conduit installation between the point of telephone service and the traffic signal controller cabinet) shall be paid for by the District One Business Services Section (i.e., this will be an IDOT phone number not a Contractor phone number).

FIBER OPTIC CABLE.

Add the following to Articles 871.01, 872.02, 871.04, and 871.05 of the Standard Specifications:

This work shall consist of furnishing and installing Fiber Optical cable in conduit with all accessories and connectors according to Section 871 of the Standard Specifications. The cable shall be of the type, size, and the number of fiber specified.

The control cabinet distribution enclosure shall be CSC FTWO12KST-W/O 12 Port Fiber Wall Enclosure or an approved equivalent. The fiber optic cable shall provide six fibers per tube for the amount of fibers called for in the Fiber Optic Cable pay item in the Contract. A minimum of six multimode fibers from each cable shall be terminated with approved mechanical connectors at the distribution enclosure. Fibers not being used shall be labeled "spare." Fibers not attached to the distribution enclosure shall be capped and sealed. A minimum of 13.0 feet (4m) of extra cable length shall be provided for the controller cabinet. The controller cabinet extra cable length shall be stored as directed by the Engineer.

Fiber Optic cable may be gel filled or have an approved water blocking tape.

Basis of Payment: The work shall be paid for at the contract unit price for FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F, per foot (meter) for the cable in place, including distribution enclosure and all connectors.

CONCRETE FOUNDATIONS.

Add the following to Article 878.03 of the Standard Specifications:

All anchor bolts shall be according to Article 1006.09, except all anchor bolts shall be hot dipped galvanized the full length of the anchor bolt including the hook.

Concrete Foundations, Type "A" for Traffic Signal Posts shall provide anchor bolts with the bolt pattern specified within the "District One Standard Traffic Signal Design Details." All Type "A" foundations shall be a minimum depth of 48 inches (1.22 m).

Concrete Foundations, Type "C" for Traffic Signal Cabinets with Uninterruptible Power Supply (UPS) cabinet installations shall be a minimum of 48 inches (1.22 m) long and 31 inches (790 mm) wide. All Type "C" foundations shall be a minimum depth of 48 inches (1.22 m). An integral concrete pad to support the UPS cabinet shall be constructed a minimum of 20 inches (510 mm) long and a minimum depth of 10 inches (250 mm). The concrete apron in front of the Type IV or V cabinet shall be 36 in. x 48 in. x 5 in. (910 mm X 1220 mm X 130 mm). The concrete apron in front of the UPS cabinet shall be 36 in. x 31 in. x 5 in. (910 mm X 790 mm X 130 mm). Anchor bolts shall provide bolt spacing as required by the manufacturer.

Concrete Foundations, Type "D" for Traffic Signal Cabinets shall be a minimum of 48 inches (1.22 m) long and 31 inches (790 mm) wide. All Type "D" foundations shall be a minimum depth of 48 inches (1.22 m). The concrete apron shall be 36 in. x 48 in. x 5 in. (910 mm X 1220 mm X 130 mm). Anchor bolts shall provide bolt spacing as required by the manufacturer.

Concrete Foundations, Type "E" for Mast Arm and Combination Mast Arm Poles shall meet the following requirements:

Table 1
DESIGN TABLE FOR MAST ARM FOUNDATIONS

MAST ARM LENGTH	FOUNDATION DEPTH*	FOUNDATION DIAMETER	SPIRAL DIAMETER	QUANTITY OF NO. 15 (NO. 5) BARS
Less than 9.1m (30')	10'-0" (3.0m)	30" (750mm)	24" (600mm)	8
Greater than or equal to 9.1m (30') and less than 12.2m (40')	13'-6" (4.1m)	30" (750mm)	24" (600mm)	8
	11'-0" (3.4m)	36" (900mm)	30" (750mm)	12
Greater than or equal to 12.2m (40') and less than 15.2m (50')	13'-0" (4.0m)	36" (900mm)	30" (750mm)	12
Greater than or equal to 15.2m (50') and up to 16.8m (55')	15'-0" (4.6m)	36" (900mm)	30" (750mm)	12

Foundation depths specified are for sites which have cohesive soils (clayey, silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive strength of (Qu)>1.0 tsf (100kPa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.

Concrete Foundations, Type "E" for Combination Mast Arm Poles shall be 36 inch (900 mm) diameter, regardless of mast arm length. Foundations used for Combination Mast Arm Poles shall provide an extra 2-1/2 inch (65 mm) raceway.

No foundation is to be poured until the Resident Engineer gives his/her approval as to the depth of the foundation.

DETECTOR LOOP.

Revise Section 886 of the Standard Specifications to read:

A minimum of seven (7) working days prior to the Contractor cutting loops, the Contractor shall have the proposed loop locations marked and contact the Area Traffic Signal Maintenance and Operations Engineer (847) 705-4424 to inspect and approve the layout. When preformed detector loops are installed, the Contractor shall have them inspected and approved prior to the pouring of the Portland cement concrete surface, using the same notification process as above.

Loop detectors shall be installed according to the requirements of the "District One Standard Traffic Signal Design Details." Saw-cuts (homeruns on preformed detector loops) from the loop to the edge of pavement shall be made perpendicular to the edge of pavement when possible in order to minimize the length of the saw-cut (homerun on preformed detector loops) unless directed otherwise by the Engineer or as shown on the plan.

The detector loop cable insulation shall be labeled with the cable specifications.

Each loop detector lead-in wire shall be labeled in the handhole using a Panduit 250W175C water proof tag, or an approved equal, secured to each wire with nylon ties.

Resistance to ground shall be a minimum of 100 mega-ohms under any conditions of weather or moisture. Inductance shall be more than 50 and less than 700 microhenries. Quality readings shall be more than 5.

- (a) Type I. All loops installed in new asphalt pavement shall be installed in the binder course and not in the surface course. The edge of pavement, curb and handhole shall be cut with a 1/4 inch (6.3 mm) deep x 4 inches (100 mm) saw cut to mark location of each loop lead-in.

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 1/8 inch (3 mm) below the pavement surface, if installed above the surface the overlap shall be removed immediately.

Detector loop measurements shall include the saw cut and the length of the loop lead-in to the edge of pavement. The lead-in wire, including all necessary connections for proper operations, from the edge of pavement to the handhole, shall be included in the price of the detector loop. Unit duct, trench and backfill, and drilling of pavement or handholes shall be included in detector loop quantities.

- (b) Preformed. This work shall consist of furnishing and installing a rubberized heat resistant preformed traffic signal loop in accordance with the Standard Specifications, except for the following:

Preformed detector loops shall be installed in new pavement constructed of Portland cement concrete using mounting chairs or tied to re-bar or the preformed detector loops may be placed in the sub-base. Loop lead-ins shall be extended to a temporary enclosure near the proposed handhole location with ends capped and sealed against moisture and other contaminants.

Handholes shall be placed next to the shoulder or back of curb when preformed detector loops enter the handhole. Non-metallic coilable duct, included in this pay item, shall be used to protect the preformed lead-ins from back of curb to the handhole.

Preformed detector loops shall be factory assembled. Homeruns and interconnects shall be pre-wired and shall be an integral part of the loop assembly. The loop configurations and homerun lengths shall be assembled for the specific application. The loop and homerun shall be constructed using 11/16 inch (17.2 mm) outside diameter (minimum), 3/8 inch (9.5 mm) inside diameter (minimum) Class A oil resistant synthetic cord reinforced hydraulic hose with 250 psi (1,720 kPa) internal pressure rating. Hose for the loop and homerun assembly shall be one continuous piece. No joints or splices shall be allowed in the hose except where necessary to connect homeruns or interconnects to the loops. This will provide maximum wire protection and loop system strength. Hose tee connections shall be heavy duty high temperature synthetic rubber. The tee shall be of proper size to attach directly to the hose, minimizing glue joints. The tee shall have the same flexible properties as the hose to insure that the whole assembly can conform to pavement movement and shifting without cracking or breaking. The wire used shall be #16 THWN stranded copper. The number of turns in the loop shall be application specific. Homerun wire pairs shall be twisted a minimum of four turns per foot. No wire splices will be allowed in the preformed loop assembly. The loop and homeruns shall be filled and sealed with a flexible sealant to insure complete moisture blockage and further protect the wire. The preformed loops shall be constructed to allow a minimum of 6.5 feet of extra cable in the handhole.

Basis of Payment: This work shall be paid for at the contract unit price per foot (meter) for DETECTOR LOOP, TYPE I or PREFORMED DETECTOR LOOP as specified in the plans,

which price shall be payment in full for furnishing and installing the detector loop and all related connections for proper operation.

EMERGENCY VEHICLE PRIORITY SYSTEM.

Revise Section 887 of the Standard Specifications to read:

It shall be the Contractor's responsibility to contact the municipality or fire district to verify the brand of emergency vehicle pre-emption equipment to be installed prior to the contract bidding. The equipment must be completely compatible with all components of the equipment currently in use by the Agency.

All new installations shall be equipped with Confirmation Beacons as shown on the "District One Standard Traffic Signal Design Details." The Confirmation Beacon shall consist of a 6 watt Par 38 LED flood lamp with a 30 degree light spread, maximum 6 watt energy consumption at 120V, and a 2,000 hour warranty for each direction of pre-emption. The lamp shall have an adjustable mount with a weatherproof enclosure for cable splicing. All hardware shall be cast aluminum or stainless steel. Holes drilled into signal poles, mast arms, or posts shall require rubber grommets. In order to maintain uniformity between communities, the confirmation beacons shall indicate when the control equipment receives the pre-emption signal. The pre-emption movement shall be signalized by a flashing indication at the rate specified by Section 4D-11 of the "Manual on Uniform Traffic Control Devices." The stopped pre-empted movements shall be signalized by a continuous indication.

All light operated systems shall include security and transit preemption software and operate at a uniform rate of 14.035 Hz \pm 0.002, or as otherwise required by the Engineer, and provide compatible operation with other light systems currently being operated in the District.

Basis of Payment: The work shall be paid for at the contract unit price each for furnishing and installing LIGHT DETECTOR and LIGHT DETECTOR AMPLIFIER. Furnishing and installing the confirmation beacon shall be included in the cost of the Light Detector. The preemption detector amplifier shall be paid for on a basis of (1) one each per intersection controller and shall provide operation for all movements required in the pre-emption phase sequence.

RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM.

Description: This work shall consist of re-optimizing a closed loop traffic signal system according to the following Levels of work.

LEVEL I applies when improvements are made to an existing signalized intersection within an existing closed loop traffic signal system. The purpose of this work is to integrate the improvements to the subject intersection into the signal system while minimizing the impacts to the existing system operation. This type of work would be commonly associated with the addition of signal phases, pedestrian phases, or improvements that do not affect the capacity at an intersection.

LEVEL II applies when improvements are made to an existing signalized intersection within an existing closed loop traffic signal system and detailed analysis of the intersection operation is desired by the engineer, or when a new signalized or existing signalized intersection is being added to an existing system, but optimization of the entire system is not required. The purpose

of this work is to optimize the subject intersection, while integrating it into the existing signal system with limited impact to the system operations. This item also includes an evaluation of the overall system operation, including the traffic responsive program.

For the purposes of re-optimization work, an intersection shall include all traffic movements operated by the subject controller and cabinet.

After the signal improvements are completed, the signal shall be re-optimized as specified by an approved Consultant who has previous experience in optimizing Closed Loop Traffic Signal Systems for District One of the Illinois Department of Transportation. The Contractor shall contact the Traffic Signal Engineer at (847) 705-4424 for a listing of approved Consultants. Traffic signal system optimization work, including fine-tuning adjustments of the optimized system, shall follow the requirements stated in the most recent IDOT District 1 SCAT Guidelines, except as note herein.

A listing of existing signal equipment, interconnect information, phasing data, and timing patterns may be obtained from the Department, if available and as appropriate. The existing SCAT Report is available for review at the District One office and if the Consultant provides blank computer disks, copies of computer simulation files for the existing optimized system and a timing database that includes intersection displays will be made for the Consultant. The Consultant shall confer with the Traffic Signal Engineer prior to optimizing the system to determine if any extraordinary conditions exist that would affect traffic flows in the vicinity of the system, in which case, the Consultant may be instructed to wait until the conditions return to normal or to follow specific instructions regarding the optimization.

(a) LEVEL I Re-Optimization

1. The following tasks are associated with LEVEL I Re-Optimization.
 - a. Appropriate signal timings shall be developed for the subject intersection and existing timings shall be utilized for the rest of the intersections in the system.
 - b. Proposed signal timing plan for the new or modified intersection(s) shall be forwarded to IDOT for review prior to implementation.
 - c. Consultant shall conduct on-site implementation of the timings at the turn-on and make fine-tuning adjustments to the timings of the subject intersection in the field to alleviate observed adverse operating conditions and to enhance operations.
2. The following deliverables shall be provided for LEVEL I Re-Optimization.
 - a. Consultant shall furnish to IDOT a cover letter describing the extent of the re-optimization work performed.
 - b. Consultant shall furnish an updated intersection graphic display for the subject intersection to IDOT and to IDOT's Traffic Signal Maintenance Contractor.

(b) LEVEL II Re-Optimization

1. In addition to the requirements described in the LEVEL I Re-Optimization above, the following tasks are associated with LEVEL II Re-Optimization.
 - a. Traffic counts shall be taken at the subject intersection after the traffic signals are approved for operation by the Area Traffic Signal Operations Engineer. Manual turning movement counts shall be conducted from 6:30 a.m. to 9:30 a.m., 11:00 a.m.

- to 1:00 p.m., and 3:30 p.m. to 6:30 p.m. on a typical weekday from midday Monday to midday Friday. The turning movement counts shall identify cars, and single-unit, multi-unit heavy vehicles, and transit buses.
- b. As necessary, the intersections shall be re-addressed and all system detectors reassigned in the master controller according to the current standard of District One.
 - c. Traffic responsive program operation shall be evaluated to verify proper pattern selection and lack of oscillation and a report of the operation shall be provided to IDOT.
2. The following deliverables shall be provided for LEVEL II Re-Optimization.
- a. Consultant shall furnish to IDOT one (1) copy of a technical memorandum for the optimized system. The technical memorandum shall include the following elements:
 - (1) Brief description of the project
 - (2) Printed copies of the analysis output from Synchro (or other appropriate, approved optimization software file)
 - (3) Printed copies of the traffic counts conducted at the subject intersection
 - b. Consultant shall furnish to IDOT two (2) CDs for the optimized system. The CDs shall include the following elements:
 - (1) Electronic copy of the technical memorandum in PDF format
 - (2) Revised Synchro files (or other appropriate, approved optimization software file) including the new signal and the rest of the signals in the closed loop system
 - (3) Traffic counts conducted at the subject intersection
 - (4) New or updated intersection graphic display file for the subject intersection
 - (5) The CD shall be labeled with the IDOT system number and master location, as well as the submittal date and the consultant logo. The CD case shall include a clearly readable label displaying the same information securely affixed to the side and front.

Basis of Payment: This work shall be paid for at the contract unit price each for RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM – LEVEL I or RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM – LEVEL II, which price shall be payment in full for performing all work described herein per intersection. Following completion of the timings and submittal of specified deliverables, 100 percent of the bid price will be paid.

OPTIMIZE TRAFFIC SIGNAL SYSTEM.

Description: This work shall consist of optimizing a closed loop traffic signal system.

OPTIMIZE TRAFFIC SIGNAL SYSTEM applies when a new or existing closed loop traffic signal system is to be optimized and a formal Signal Coordination and Timing (SCAT) Report is to be prepared. The purpose of this work is to improve system performance by optimizing traffic signal timings, developing a time of day program and a traffic responsive program.

After the signal improvements are completed, the signal system shall be optimized as specified by an approved Consultant who has previous experience in optimizing Closed Loop Traffic Signal Systems for District One of the Illinois Department of Transportation. The Contractor shall contact the Traffic Signal Engineer at (847) 705-4424 for a listing of approved Consultants. Traffic signal system optimization work, including fine-tuning adjustments of the optimized

system, shall follow the requirements stated in the most recent IDOT District 1 SCAT Guidelines, except as note herein.

A listing of existing signal equipment, interconnect information, phasing data, and timing patterns may be obtained from the Department, if available and as appropriate. The existing SCAT Report is available for review at the District One office and if the Consultant provides blank computer disks, copies of computer simulation files for the existing optimized system and a timing database that includes intersection displays will be made for the Consultant. The Consultant shall confer with the Traffic Signal Engineer prior to optimizing the system to determine if any extraordinary conditions exist that would affect traffic flows in the vicinity of the system, in which case, the Consultant may be instructed to wait until the conditions return to normal or to follow specific instructions regarding the optimization.

- (a) The following tasks are associated with OPTIMIZE TRAFFIC SIGNAL SYSTEM.
1. Appropriate signal timings and offsets shall be developed for each intersection and appropriate cycle lengths shall be developed for the closed loop signal system.
 2. Traffic counts shall be taken at all intersections after the permanent traffic signals are approved for operation by the Area Traffic Signal Operations Engineer. Manual turning movement counts shall be conducted from 6:30 a.m. to 9:30 a.m., 11:00 a.m. to 1:00 p.m., and 3:30 p.m. to 6:30 p.m. on a typical weekday from midday Monday to midday Friday. The turning movement counts shall identify cars, and single-unit and multi-unit heavy vehicles.
 3. As necessary, the intersections shall be re-addressed and all system detectors reassigned in the master controller according to the current standard of District One.
 4. A traffic responsive program shall be developed, which considers both volume and occupancy. A time-of-day program shall be developed for used as a back-up system.
 5. Proposed signal timing plan for the new or modified intersection shall be forwarded to IDOT for review prior to implementation.
 6. Consultant shall conduct on-site implementation of the timings and make fine-tuning adjustments to the timings in the field to alleviate observed adverse operating conditions and to enhance operations.
 7. Speed and delay studies shall be conducted during each of the count periods along the system corridor in the field before and after implementation of the proposed timing plans for comparative evaluations. These studies should utilize specialized electronic timing and measuring devices.
- (b) The following deliverables shall be provided for OPTIMIZE TRAFFIC SIGNAL SYSTEM.
1. Consultant shall furnish to IDOT one (1) copy of a SCAT Report for the optimized system. The SCAT Report shall include the following elements:

Cover Page in color showing a System Map	
Figures	<ol style="list-style-type: none"> 1. System overview map – showing system number, system schematic map with numbered system detectors, oversaturated movements, master location, system phone number, cycle lengths, and date of completion. 2. General location map in color – showing signal system location in the metropolitan area. 3. Detail system location map in color – showing cross street names and local controller addresses. 4. Controller sequence – showing controller phase sequence diagrams.
Table of Contents	
Tab 1: Final Report	<ol style="list-style-type: none"> 1. Project Overview 2. System and Location Description (Project specific) 3. Methodology 4. Data Collection 5. Data Analysis and Timing Plan Development 6. Implementation <ol style="list-style-type: none"> a. Traffic Responsive Programming (Table of TRP vs. TOD Operation) 7. Evaluation <ol style="list-style-type: none"> a. Speed and Delay runs
Tab 2: Turning Movement Counts	<ol style="list-style-type: none"> 1. Turning Movement Counts (Showing turning movement counts in the intersection diagram for each period, including truck percentage)
Tab 3: Synchro Analysis	<ol style="list-style-type: none"> 1. AM: Time-Space diagram in color, followed by intersection Synchro report (Timing report) summarizing the implemented timings. 2. Midday: same as AM 3. PM: same as AM
Tab 4: Speed and Delay Studies	<ol style="list-style-type: none"> 1. Summary of before and after runs results in two (2) tables showing travel time and delay time. 2. Plot of the before and after runs diagram for each direction and time period.
Tab 5: Electronic Files	<ol style="list-style-type: none"> 1. Two (2) CDs for the optimized system. The CDs shall include the following elements: <ol style="list-style-type: none"> a. Electronic copy of the SCAT Report in PDF format b. Copies of the Synchro files for the optimized system c. Traffic counts for the optimized system d. New or updated intersection graphic display files for each of the system intersections and the system graphic display file including system detector locations and addresses.

Basis of Payment: The work shall be paid for at the contract unit each for OPTIMIZE TRAFFIC SIGNAL SYSTEM, which price shall be payment in full for performing all work described herein for the entire traffic signal system. Following the completion of traffic counts, 25 percent of the bid price will be paid. Following the completion of the Synchro analysis, 25 percent of the bid price will be paid. Following the setup and fine tuning of the timings, the speed-delay study, and the TRP programming, 25 percent of the bid price will be paid. The remaining 25 percent will be

paid when the system is working to the satisfaction of the engineer and the report and CD have been submitted.

TEMPORARY TRAFFIC SIGNAL TIMINGS.

Description: This work shall consist of developing and maintaining appropriate traffic signal timings for the specified intersection for the duration of the temporary signalized condition.

All timings and adjustments necessary for this work shall be performed by an approved Consultant who has previous experience in optimizing Closed Loop Traffic signal Systems for District One of the Illinois Department of Transportation. The Contractor shall contact the Traffic Signal Engineer at (847) 705-4424 for a listing of approved Consultants.

The following tasks are associated with TEMPORARY TRAFFIC SIGNAL TIMINGS.

- (a) Consultant shall attend temporary traffic signal inspection (turn-on) and conduct on-site implementation of the traffic signal timings. Make fine-tuning adjustments to the timings in the field to alleviate observed adverse operating conditions and to enhance operations.
- (b) Consultant shall provide monthly observation of traffic signal operations in the field.
- (c) Consultant shall provide on-site consultation and adjust timings as necessary for construction stage changes, temporary traffic signal phase changes, and any other conditions affecting timing and phasing, including lane closures, detours, and other construction activities.
- (d) Consultant shall make timing adjustments and prepare comment responses as directed by the Area Traffic Signal Operations Engineer.

Basis of Payment: The work shall be paid for at the contract unit price each for TEMPORARY TRAFFIC SIGNAL TIMINGS, which price shall be payment in full for performing all work described herein per intersection. When the temporary traffic signal installation is turned on, 50 percent of the bid price will be paid. The remaining 50 percent of the bid price will be paid following the removal of the temporary traffic signal installation.

TEMPORARY TRAFFIC SIGNAL INSTALLATION.

Revise Section 890 of the Standard Specifications to read:

General: Only an approved equipment vendor will be allowed to assemble the temporary traffic signal cabinet. Also, an approved equipment vendor shall assemble and test a temporary railroad traffic signal cabinet. (Refer to the "Inspection of Controller and Cabinet" specification). A representative of the approved control equipment vendor shall be present at the temporary traffic signal turn-on inspection.

Construction Requirements:

- (a) Controllers.
 - 1. Only controllers supplied by one of the District approved closed loop equipment manufacturers will be approved for use at temporary signal locations. All controllers used for temporary traffic signals shall be fully actuated NEMA microprocessor based with RS232 data entry ports compatible with existing monitoring software approved by

IDOT District 1, installed in NEMA TS1 or TS2 cabinets with 8 phase back panels, 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. All controllers used for temporary traffic signals shall meet or exceed the requirements of Section 857 of the Standard Specifications with regards to internal time base coordination and preemption.

2. 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 temporary traffic signal installations, all controllers shall be the same manufacturer brand and model number with current software installed.
- (b) Cabinets. All temporary traffic signal cabinets shall have a closed bottom made of aluminum alloy. The bottom shall be sealed along the entire perimeter of the cabinet base to ensure a water, dust and insect-proof seal. The bottom shall provide a minimum of two (2) 4 inch (100 mm) diameter holes to run the electric cables through. The 4 inch (100 mm) diameter holes shall have a bushing installed to protect the electric cables and shall be sealed after the electric cables are installed.
- (c) Grounding. Grounding shall be provided for the temporary traffic signal cabinet meeting or exceeding the applicable portions of the National Electrical Code, Section 807 of the Standard Specifications and shall meet the requirements of the District 1 Traffic Signal Specifications for "Grounding of Traffic Signal Systems".
- (d) Traffic Signal Heads. All traffic signal sections and pedestrian signal sections shall be 12 inches (300 mm). Traffic signal sections shall be LED with expandable view, unless otherwise approved by the Engineer. 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 extra cable length 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.
- (e) Interconnect.
1. Temporary traffic signal interconnect shall be provided using fiber optic cable or wireless interconnect technology as specified in the plans. The Contractor may request, in writing, to substitute the fiber optic temporary interconnect indicated in the contract documents with a wireless interconnect. The Contractor must provide assurances that the radio device will operate properly at all times and during all construction staging. If approved for use by the Engineer, the Contractor shall submit marked-up traffic signal plans indicating locations of radios and antennas and installation details. If wireless interconnect is used, and in the opinion of the engineer, it is not viable, or if it fails during testing or operations, the Contractor shall be responsible for installing all necessary poles, fiber optic cable, and other infrastructure for providing temporary fiber optic interconnect at no cost to the contract.
 2. The existing system interconnect and phone lines are to be maintained as part of the Temporary Traffic Signal Installation specified for on the plan. The interconnect shall be installed into the temporary controller cabinet as per the notes or details on the plans. All labor and equipment required to install and maintain the existing interconnect as part of the Temporary Traffic Signal Installation shall be included in the item Temporary

Traffic Signal Installation. When shown in the plans, temporary traffic signal interconnect equipment shall be furnished and installed. The temporary traffic signal interconnect shall maintain interconnect communications throughout the entire signal system for the duration of the project.

3. Temporary wireless interconnect, compete. The radio interconnect system shall be compatible with Eagle or Econolite controller closed loop systems. This item shall include all materials, labor and testing to provide the completely operational closed loop system as shown on the plans. The radio interconnect system shall include the following components:
 - a. Rack or Shelf Mounted RS-232 Frequency Hopping Spread Spectrum (FHSS) Radio
 - b. Software for Radio Configuration (Configure Frequency and Hopping Patterns)
 - c. Antennas (Omni Directional or Yagi Directional)
 - d. Antenna Cables, LMR400, Low Loss. Max. 100-ft from controller cabinet to antenna
 - e. Brackets, Mounting Hardware, and Accessories Required for Installation
 - f. RS232 Data Cable for Connection from the radio to the local or master controller
 - g. All other components required for a fully functional radio interconnect system

All controller cabinet modifications and other modifications to existing equipment that are required for the installation of the radio interconnect system components shall be included in this item.

The radio interconnect system may operate at 900Mhz (902-928) or 2.4 Ghz depending on the results of a site survey. The telemetry shall have an acceptable rate of transmission errors, time outs, etc. comparable to that of a hardwire system.

The proposed master controller and telemetry module shall be configured for use with the radio interconnect at a minimum rate of 9600 baud.

The radio interconnect system shall include all other components required for a complete and fully functional telemetry system and shall be installed in accordance to the manufacturers recommendations.

The following radio equipment is currently approved for use in Region One/District One: Encon Model 5100 and Intuicom Communicator II.

- (f) Emergency Vehicle Pre-Emption. All emergency vehicle preemption equipment (light detectors, light detector amplifiers, confirmation beacons, etc.) as shown on the temporary traffic signal plans shall be provided by the Contractor. It shall be the Contractor's responsibility to contact the municipality or fire district to verify the brand of emergency vehicle preemption equipment to be installed prior to the contract bidding. The equipment must be completely compatible with all components of the equipment currently in use by the Agency. All light operated systems shall operate at a uniform rate of 14.035 hz \pm 0.002, or as otherwise required by the Engineer, and provide compatible operation with other light systems currently being operated in the District. All labor and material required to install and maintain the Emergency Vehicle Preemption installation shall be included in the item Temporary Traffic Signal Installation.
- (g) Vehicle Detection. All temporary traffic signal installations shall have vehicular detection installed as shown on the plans or as directed by the Engineer. Pedestrian push buttons shall be provided for all pedestrian signal heads/phases as shown on the plans or as

directed by the Engineer. All approaches shall have vehicular detection provided by Video Vehicle Detection System as shown on the plans or as directed by the Engineer. The microwave vehicle sensor or video vehicle detection system shall be approved by IDOT before furnishing and installing. The Contractor shall install, wire, and adjust the alignment of the microwave vehicle sensor or video vehicle detection system in accordance to the manufacturer's recommendations and requirements. The Contractor shall be responsible for adjusting the alignment of the microwave vehicle sensor or video vehicle detection system for all construction staging changes and for maintaining proper alignment throughout the project. A representative of the approved control equipment vendor shall be present and assist the contractor in setting up and maintaining the microwave vehicle sensor or video vehicle detection system. An in-cabinet video monitor shall be provided with all video vehicle detection systems and shall be included in the item Temporary Traffic Signal Installation.

- (h) Signs. All existing street name and intersection regulatory signs shall be removed from existing poles and relocated to the temporary signal span wire. If new mast arm assembly and pole(s) and posts are specified for the permanent signals, the signs shall be relocated to the new equipment at no extra cost.
- (i) Energy Charges. The electrical utility energy charges for the operation of the traffic signal installation shall be paid for by others if the installation replaces an existing signal. Otherwise charges shall be paid for under 109.05 of the Standard Specifications.
- (j) Maintenance. Maintenance shall meet the requirements of the Traffic Specifications and District Specifications for "Maintenance of Existing Traffic Signal Installation." Maintenance of temporary signals and of the existing signals shall be included to the cost of this item. 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. Maintenance responsibility of the existing signals shall be included to the item Temporary Traffic Signal Installation(s). In addition, a minimum of seven (7) 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 Bureau of Traffic (847) 705-4424 for an inspection of the installation(s).
- (k) Temporary Traffic Signals for Bridge Projects. Temporary Traffic Signals for bridge projects shall follow the State Standards, Standard Specifications, District 1 Traffic Signal Specifications and any plans for Bridge Temporary Traffic Signals included in the plans. The installation shall meet the above requirements for "Temporary Traffic Signal Installation". In addition all electric cable shall be aerially suspended, at a minimum height of 18 feet (5.5m), on temporary wood poles (Class 5 or better) of 45 feet (13.7 m), minimum height. The signal heads shall be span wire mounted or bracket mounted to the wood pole or as directed by the Engineer. The Controller cabinet shall be mounted to the wood pole or as directed by the Engineer. Microwave vehicle sensors or video vehicle detection may be used in place of the detector loops as approved by the Engineer.
- (l) Temporary Portable Traffic Signal for Bridge Projects.
 - 1. Unless otherwise directed by the Engineer, temporary portable traffic signals shall be restricted to use on roadways of less than 8000 ADT that have limited access to electric utility service, shall not be installed on projects where the estimated need exceeds ten (10) weeks, and shall not be in operation during the period of November through March.

The Contractor shall replace the temporary portable traffic signals with temporary span wire traffic signals noted herein at no cost to the contract if the bridge project or Engineer requires temporary traffic signals to remain in operation into any part of period of November through March. If, in the opinion of the engineer, the reliability and safety of the temporary portable traffic signal is not similar to that of a temporary span wire traffic signal installation, the Contractor shall replace the temporary portable traffic signals with temporary span wire traffic signals noted herein at no cost to the contract.

2. The controller and LED signal displays shall meet the above requirements for "Temporary Traffic Signal Installation".
3. Work shall be according to Article 701.18(b) of the Standard Specifications except as noted herein.
4. General.
 - a. The temporary portable bridge traffic signals shall be trailer-mounted units. The trailer-mounted units shall be set up securely and level. Each unit shall be self-contained and consist of two signal heads. The left signal head shall be mounted on a mast arm capable of extending over the travel lane. Each unit shall contain a solar cell system to facilitate battery charging. There shall be a minimum of 12 days backup reserve battery supply and the units shall be capable of operating with a 120 V power supply from a generator or electrical service.
 - b. All signal heads located over the travel lane shall be mounted at a minimum height of 17 feet (5m) from the bottom of the signal back plate to the top of the road surface. All far right signal heads located outside the travel lane shall be mounted at a minimum height of 8 feet (2.5m) from the bottom of the signal back plate to the top of the adjacent travel lane surface.
 - c. The long all red intervals for the traffic signal controller shall be adjustable up to 250 seconds in one-second increments.
 - d. As an alternative to detector loops, temporary portable bridge traffic signals may be equipped with microwave sensors or other approved methods of vehicle detection and traffic actuation.
 - e. All portable traffic signal units shall be interconnected using hardwire communication cable. Radio communication equipment may be used only with the approval of the Engineer. If radio communication is used, a site analysis shall be completed to ensure that there is no interference present that would affect the traffic signal operation. The radio equipment shall meet all applicable FCC requirements.
 - f. The temporary portable bridge traffic signal system shall meet the physical display and operational requirements of conventional traffic signals as specified in Part IV of the Manual on Uniform Traffic Control Devices (MUTCD). The signal system shall be designed to continuously operate over an ambient temperature range between -30 °F (-34 °C) and 120 °F (48 °C). When not being utilized to inform and direct traffic, portable signals shall be treated as non-operating equipment according to Article 701.11.
 - g. Basis of Payment. This work will be paid for according to Article 701.20(c).

Basis of Payment: This work shall be paid for at the contract unit price each for TEMPORARY TRAFFIC SIGNAL INSTALLATION, TEMPORARY BRIDGE TRAFFIC SIGNAL INSTALLATION, or TEMPORARY PORTABLE BRIDGE TRAFFIC SIGNAL INSTALLATION. The price of which shall include all costs for the modifications required for traffic staging, changes in signal phasing as required in the Contract plans, microwave vehicle sensors, video vehicle detection system, any maintenance or adjustment to the microwave vehicle sensors/video vehicle detection system, all material required, the installation and complete removal of the temporary traffic signal.

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT.

Add the following to Article 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 outside the right-of-way at the Contractor's expense.

All equipment to be returned to the State shall be delivered by the Contractor to the State's Traffic Signal Maintenance Contractor's main facility. The Contractor shall contact the State's Electrical Maintenance Contractor to schedule an appointment to deliver the equipment. No equipment will be accepted without a prior appointment. All equipment shall be delivered within 30 days of removing it from the traffic signal installation. The Contractor shall provide 5 copies of a list of equipment that is to remain the property of the State, 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 State's Electrical Maintenance Contractor. 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 State's Electrical Maintenance Contractor indicating the items have been returned 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. The Contractor shall package the equipment and provide all necessary documentation as stated above.

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.

TRAFFIC SIGNAL PAINTING.

Description: This work shall include surface preparation, powder type painted finish application and packaging of new galvanized steel traffic signal mast arm poles and posts assemblies. All work associated with applying the painted finish shall be performed at the manufacturing facility for the pole assembly or post or at a painting facility approved by the Engineer. Traffic signal mast arm shrouds and post bases shall also be painted the same color as the pole assemblies and posts.

Surface Preparation: All weld flux and other contaminates shall be mechanically removed. The traffic mast arms and post assemblies shall be degreased, cleaned, and air dried to assure all moisture is removed.

Painted Finish: All galvanized exterior surfaces shall be coated with a urethane or triglycidyl isocyanurate (TGIC) polyester powder to a dry film thickness of 2.0 mils. Prior to application, the surface shall be mechanically etched by brush blasting (Ref. SSPC-SP7) and the zinc coated substrate preheated to 450 degrees F for a minimum one (1) hour. The coating shall be electrostatically applied and cured by elevating the zinc-coated substrate temperature to a minimum of 400 degrees F.

The finish paint color shall be one of the manufacturer's standard colors and shall be as selected by the local agency responsible for paint costs. The Contractor shall confirm, in writing, the color selection with the local responsible agency and provide a copy of the approval to the Engineer and a copy of the approval shall be included in the material catalog submittal.

Traffic signal heads, pedestrian signal heads and controller cabinets are not included in this pay item.

Any damage to the finish after leaving the manufacturer's facility shall be repaired to the satisfaction of the Engineer using a method approvable by the Engineer and manufacturer. If while at the manufacturer's facility the finish is damaged, the finish shall be re-applied.

Warranty: The Contractor shall furnish in writing to the Engineer, the paint manufacturer's standard warranty and certification that the paint system has been properly applied.

Packaging: Prior to shipping, the poles and posts shall be wrapped in ultraviolet-inhibiting plastic foam or rubberized foam.

Basis of Payment: This work shall be paid for at the contract unit price each for PAINT NEW MAST ARM POLE, UNDER 40 FEET (12.19 METER); PAINT NEW MAST ARM POLE, 40 FEET (12.19 METER) AND OVER; PAINT NEW COMBINATION MAST ARM POLE, UNDER 40 FEET (12.19 METER); PAINT NEW COMBINATION MAST ARM POLE, 40 FEET (12.19 METER) AND OVER; or TRAFFIC SIGNAL POST of any height, which shall be payment in full for painting and packaging the traffic signal mast arm poles and posts described above including all shrouds, bases and appurtenances.

DIVISION 1000 MATERIALS

PEDESTRIAN PUSH-BUTTON.

Revise Article 1074.02 of the Standard Specifications to read:

- (a) General. Push-button assemblies shall be ADA compliant, highly vandal resistant, be pressure activated with minimal movement and cannot be stuck in a closed or constant call position. A red LED and audible tone shall be provided for confirmation of an actuation call.
- (b) Housing. The push-button housing shall be solid 6061 aluminum and powder coated yellow, unless otherwise noted on the plans.
- (c) Actuator. The actuator shall be stainless steel with a solid state electronic Piezo switch rated for a minimum of 20 million cycles with no moving plunger or moving electrical contacts. The operating voltage shall be 12-24 V AC/DC.
- (d) Pedestrian Station. Stations shall be designed to be mounted directly to a post, mast arm pole or wood pole. The station shall be aluminum and accept a 3-inch round push button assembly and 5 X 7 $\frac{3}{4}$ -inch R10-3b or R10-3d sign. A larger station will be necessary to accommodate the sign, R10-3e, for a count-down pedestrian signal.

CONTROLLER CABINET AND PERIPHERAL EQUIPMENT.

Add the following to Article 1074.03 of the Standard Specifications:

- (a) Cabinets shall be designed for NEMA TS2 Type 1 operation. All cabinets shall be pre-wired for a minimum of eight (8) phases of vehicular, four (4) phases of pedestrian and four (4) phases of overlap operation.
- (b)(5) Cabinets – Provide 1/8" (3.2 mm) thick unpainted aluminum alloy 5052-H32. The surface shall be smooth, free of marks and scratches. All external hardware shall be stainless steel.
- (b) (6) Controller Harness – Provide a TS2 Type 2 "A" wired harness in addition to the TS2 Type 1 harness.
- (b) (7) Surge Protection – EDCO Model 1210 IRS with failure indicator.
- (b) (8) BIU – Containment screw required.
- (b) (9) Transfer Relays – Solid state or mechanical flash relays are acceptable.
- (b) (10) Switch Guards – All switches shall be guarded.
- (b) (11) Heating – Two (2) porcelain light receptacles with cage protection controlled by both a wall switch and a thermostat or a thermostatically controlled 150 watt strip heater.
- (b) (12) Plan & Wiring Diagrams – 12" x 16" (3.05mm x 4.06mm) moisture sealed container attached to door.
- (b) (13) Detector Racks – Fully wired and labeled for four (4) channels of emergency vehicle pre-emption and sixteen channels (16) of vehicular operation.
- (b) (14) Field Wiring Labels – All field wiring shall be labeled.
- (b) (15) Field Wiring Termination – Approved channel lugs required.
- (b) (16) Power Panel – Provide a nonconductive shield.
- (b) (17) Circuit Breaker – The circuit breaker shall be sized for the proposed load but shall not be rated less than 30 amps.
- (b) (18) Police Door – Provide wiring and termination for plug in manual phase advance switch.
- (b) (19) Railroad Pre-Emption Test Switch – Eaton 8830K13 SHA 1250 or equivalent.

RAILROAD, FULL-ACTUATED CONTROLLER AND CABINET.

Add the following to Article 857.02 of the Standard Specifications:

Controller shall comply with Article 1073.01 as amended in these Traffic Signal Special Provisions.

Controller Cabinet and Peripheral Equipment shall comply with Article 1074.03 as amended in these Traffic Signal Special Provisions.

Add the following to Articles 1073.01 (c) (2) and 1074.03 (a) (5) (e) of the Standard Specifications:

Controllers and cabinets shall be new and NEMA TS2 Type 1 design.

A method of monitoring and/or providing redundancy to the railroad preemptor input to the controller shall be included as a component of the Railroad, Full Actuated Controller and Cabinet installation and be verified by the traffic signal equipment supplier prior to installation.

Railroad interconnected controllers and cabinets shall be assembled only by an approved traffic signal equipment supplier. The equipment shall be tested and approved in the equipment supplier's District One facility prior to field installation.

ELECTRIC CABLE.

Delete "or stranded, and No. 12 or" from the last sentence of Article 1076.04 (a) of the Standard Specifications.

MAST ARM ASSEMBLY AND POLE.

Add the following to Article 1077.03 (a) of the Standard Specifications:

Traffic signal mast arms shall be one piece construction, unless otherwise approved by the Engineer. All poles shall be galvanized. If the Department approves painting, powder coating by the manufacturer will be required over the galvanization.

This work shall consist of furnishing and installing a galvanized steel or extruded aluminum shroud for protection of the mast arm pole base plate similar to the dimensions detailed in the "District One Standard Traffic Signal Design Details." The shroud shall be of sufficient strength to deter pedestrian and vehicular damage. The shroud shall allow air to circulate throughout the mast arm but not allow infestation of insects or other animals. The shroud shall be constructed, installed and designed not to be hazardous to probing fingers and feet. All mounting hardware shall be stainless steel. The shroud shall not be paid for separately but shall be included in the cost of the mast arm assembly and pole.

TRAFFIC SIGNAL POST.

Add the following to Article 1077.01 (b) of the Standard Specifications:

All posts and bases shall be steel and hot dipped galvanized. If the Department approves painting, powder coating by the manufacturer will be required over the galvanization.

SIGNAL HEADS.

Add the following to Section 1078 of the Standard Specifications to read:

All signal and pedestrian heads shall provide 12" (300 mm) displays with glossy yellow or black polycarbonate housings. All head housings shall be the same color (yellow or black) at the intersection. For new signalized intersections and existing signalized intersections where all signal and/or pedestrian heads are being replaced, the proposed head housings shall be black. Where only selected heads are being replaced, the proposed head housing color (yellow or black) shall match existing head housings. Connecting hardware and mounting brackets shall be polycarbonate (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.

Pedestrian signal heads shall be furnished with the international symbolic "Walking Person" and "Upraised Palm" lenses. Egg crate sun shields are not permitted.

Signal heads shall be positioned according to the "District One Standard Traffic Signal Design Details."

SIGNAL HEAD, BACKPLATE.

Delete 1st sentence of Article 1078.03 of the Standard Specifications and add "All backplates shall be aluminum and louvered".

INDUCTIVE LOOP DETECTOR.

Add the following to Article 1079.01 of the Standard Specifications:

Contracts requiring new cabinets shall provide for card mounted detector amplifiers. Loop amplifiers shall provide LCD displays with loop frequency, inductance, and change of inductance readings.

ILLUMINATED SIGN, LIGHT EMITTING DIODE.

Revise Sections 891 of the Standard Specifications to read:

Description: This work shall consist of furnishing and installing an illuminated sign with light emitting diodes.

General: The light emitting diode (LED) blank out signs shall be manufactured by National Sign & Signal Company, or an approved equal and consist of a weatherproof housing and door, LEDs and transformers.

(a) Display.

1. The LED blank out sign shall provide the correct symbol and color for "NO LEFT TURN" OR "NO RIGHT TURN" indicated in accordance with the requirements of the "Manual on Uniform Traffic Control Devices". The message shall be formed by rows of LEDs.
2. The message shall be clearly legible. The message shall be highly visible, anywhere and under any lighting conditions, within a 15 degree cone centered about the optic axis.

The sign face shall be 24 inches (600 mm) by 24 inches (600 mm). The sign face shall be completely illegible when not illuminated. No symbol shall be seen under any ambient light condition when not illuminated.

3. All LEDs shall be T-1 3/4 (5mm) and have an expected lamp life of 100,000 hours. Operating wavelengths will be Red-626nm, Amber-590nm, and Bluish/Green-505nm. Transformers shall be rated for the line voltage with Class A insulation and weatherproofing. The sign shall be designed for operation over a range of temperatures from -35F to +165 F (-37C to +75C).
4. The LED module shall include the message plate, high intensity LEDs and LED drive electronics. Door panels shall be flat black and electrical connections shall be made via barrier-type terminal strip. All fasteners and hardware shall be corrosion resistant stainless steel.

(b) Housing.

1. The housing shall be constructed of extruded aluminum. All corners and seams shall be heli-arc welded to provide a weatherproof seal around the entire case. Hinges shall be continuous full-length stainless steel. Signs shall have stainless steel hardware and provide tool free access to the interior of the sign. Doors shall be 0.125-inch thick extruded aluminum with a 3/16-inch x 1-inch neoprene gasket and sun hood. The sign face shall have a polycarbonate, matte clear, lexan face plate. Drainage shall be provided by four drain holes at the corners of the housing. The finish on the sign housing shall include two coats of exterior enamel applied after the surface is acid-etched and primed with zinc-chromate primer.
2. Mounting hardware shall be black polycarbonate or galvanized steel and similar to mounting Signal Head hardware and brackets specified herein.

Basis of Payment: This work shall be paid for at the unit price each for ILLUMINATED SIGN, L.E.D.

GROUNDING EXISTING HANDHOLE FRAME AND COVER.

Description: This work shall consist of all materials and labor required to bond the equipment grounding conductor to the existing handhole frame and handhole cover. All installations shall meet the requirements of the details in the "District One Standard Traffic Signal Design Details" and applicable portions of the Specifications.

The equipment grounding conductor shall be bonded to the handhole frame and to the handhole cover. Two (2) ½-inch diameter x 1 ¼-inch long hex-head stainless steel bolts, spaced 1.75-inches apart center-to-center shall be fully welded to the frame and to the cover to accommodate a heavy duty Listed grounding compression terminal (Burndy type YGHA or approved equal). The grounding compression terminal shall be secured to the bolts with stainless steel split-lock washers and nylon-insert locknuts.

Welding preparation for the stainless steel bolt hex-head to the frame and to the cover shall include thoroughly cleaning the contact and weldment area of all rust, dirt and contaminates. The Contractor shall assure a solid strong weld. The welds shall be smooth and thoroughly cleaned of flux and spatter. The grounding installation shall not affect the proper seating of the cover when closed.

The grounding cable shall be paid for separately.

Method of Measurement: Units measured for payment will be counted on a per handhole basis, regardless of the type of handhole and its location.

Basis of Payment: This work shall be paid for at the contract unit price each for GROUNDING EXISTING HANDHOLE FRAME AND COVER which shall be payment in full for grounding the handhole complete.

UNIT DUCT.

All installations of Unit Duct shall be included in the contract and not paid for separately. Polyethylene unit duct shall be used for detector loop raceways to the handholes. On temporary traffic signal installations with detector loops, polyethylene unit duct shall be used for detector loop raceways from the saw-cut to 10 feet (3m) up the wood pole, unless otherwise shown on the plans. Unit duct shall meet the requirements of NEC Article 343.

UNINTERRUPTIBLE POWER SUPPLY (UPS).

Description: This work shall consist of furnishing and installing an uninterruptible power supply (UPS).

The UPS shall have the power capacity to provide normal operation of a signalized intersection that utilizes all LED type signal head optics, for a minimum of six hours.

The UPS shall include, but not be limited to the following: inverter/charger, power transfer relay, batteries, battery cabinet, a separate manually operated non-electronic bypass switch, and all necessary hardware and interconnect wiring according to the plans. The UPS shall provide reliable emergency power to the traffic signals in the event of a power failure or interruption. The transfer from utility power to battery power and visa versa shall not interfere with the normal operation of traffic controller, conflict monitor/ malfunction management unit, or any other peripheral devices within the traffic controller assembly.

The UPS shall be designed for outdoor applications, and shall meet the environmental requirements of, "NEMA Standards Publication No. TS 2 – Traffic Controller Assemblies", except as modified herein.

Materials: The UPS shall be line interactive and provide voltage regulation and power conditioning when utilizing utility power. The UPS shall be sized appropriately for the intersection's normal traffic signal operating connected load, plus 20 percent (20%). The total connected traffic signal load shall not exceed the published ratings for the UPS. The UPS shall provide a minimum of six (6) hours of normal operation run-time for signalized intersections with LED type signal head optics at 77 °F (25 °C) (minimum 700 WVA active output capacity, with 90 percent minimum inverter efficiency).

The maximum transfer time from loss of utility power to switchover to battery backed inverter power shall be 65 milliseconds.

The UPS shall have a minimum of three (3) sets of normally open (NO) and normally closed (NC) single-pole double-throw (SPDT) relay contact closures, available on a panel mounted terminal block or locking circular connectors, rated at a minimum 120 V/1 A, and labeled so as to identify each contact according to the plans. Contact closures shall be energized whenever the unit:

- Switches to battery power. Contact shall be labeled or marked "On Batt".
- Has been connected to battery power for two (2) hours. Contact shall be labeled or marked "Timer".
- Has an inverter/charger failure. Contact shall be labeled or marked "UPS Fail".

Operating temperature for the inverter/charger, power transfer relay, and manual bypass switch shall be -35 to 165 °F (-37 to +74 °C).

Both the power transfer relay and manual bypass switch shall be rated at 240 VAC/30 amps, minimum.

The UPS shall use a temperature-compensated battery charging system. The charging system shall compensate over a range of 1.4 – 2.2 mV/°F (2.5 - 4.0 mV/°C) per cell. The temperature sensor shall be external to the inverter/charger unit. The temperature sensor shall come with 6.5 ft (2 m) of wire.

Batteries shall not be recharged when battery temperature exceeds 122 °F ± 5 °F (50 °C ± 3 °C).

The UPS shall bypass the utility line power whenever the utility line voltage is outside of the following voltage range: 85 VAC to 135 VAC (± 2 VAC).

When utilizing battery power, the UPS output voltage shall be between 110 and 125 VAC, pure sine wave output, ≤ 3 percent THD, 60 Hz ± 3 Hz.

The UPS shall be compatible with the District's approved traffic controller assemblies utilizing NEMA TS 1 or NEMA TS 2 controllers and cabinet components for full time operation.

When the utility line power has been restored at above 90 VAC ± 2 VAC for more than 30 seconds, the UPS shall dropout of battery backup mode and return to utility line mode.

When the utility line power has been restored at below 130 VAC ± 2 VAC for more than 30 seconds, the UPS shall dropout of battery backup mode and return to utility line mode.

The UPS shall be equipped to prevent a malfunction feedback to the cabinet or from feeding back to the utility service.

In the event of inverter/charger failure, the power transfer relay shall revert to the NC state, where utility line power is reconnected to the cabinet. In the event of an UPS fault condition, the UPS shall always revert back to utility line power.

Recharge time for the battery, from "protective low-cutoff" to 80 percent or more of full battery charge capacity, shall not exceed twenty hours.

The manual bypass switch shall be wired to provide power to the UPS when the switch is set to manual bypass.

When the intersection is in battery backup mode, the UPS shall bypass all internal cabinet lights, ventilation fans, service receptacles, any lighted street name signs, any automated enforcement equipment and any other devices directed by the Engineer.

As the battery reserve capacity reaches 50 percent, the intersection shall automatically be placed in all-red flash. The UPS shall allow the controller to automatically resume normal operation after the power has been restored. The UPS shall log an alarm in the controller for each time it is activated.

A blue LED indicator light shall be mounted on the front of the traffic signal cabinet or on the side of the UPS cabinet facing traffic and shall turn on to indicate when the cabinet power has been disrupted and the UPS is in operation. The light shall be a minimum 1 in. (25 mm) diameter, be viewable from the driving lanes, and able to be seen from 200 ft (60 m) away.

All 24 volt and 48 volt systems shall include an external or internal component that monitors battery charging to ensure that every battery in the string is fully charged. The device shall compensate for the effects of adding a new battery to an existing battery system by ensuring that the charge voltage is spread equally across all batteries.

Mounting/Configuration: The inverter/charger unit shall be rack or shelf-mounted.

All interconnect wiring provided between the power transfer relay, manual bypass switch, and cabinet terminal service block shall be at least 6.5 ft (2 m) of #10 AWG wire.

Relay contact wiring provided for each set of NO/NC relay contact closure terminals shall be 6.5 ft (2 m) of #18 AWG wire.

Battery Cabinet: Batteries, inverter/charger and power transfer relay shall be housed in a separate NEMA Type 3R cabinet. The cabinet shall be Aluminum alloy, 5052-H32, 0.125-inch thick and have a natural mill finish.

The door shall open to the entire cabinet, have a neoprene gasket, an Aluminum continuous piano hinge with stainless steel pin, and a three point locking system. The cabinet shall be provided with a main door lock which shall operate with a traffic industry conventional No. 2 key. Provisions for padlocking the door shall be provided.

The manually bypass switch shall be installed inside the traffic signal cabinet.

No more than three batteries shall be mounted on individual shelves for a cabinet housing six batteries and no more than four batteries per shelf for a cabinet housing eight batteries.

A minimum of three shelves shall be provided. Each shelf shall support a load of 132 lb (60 kg) minimum.

The battery cabinet housing shall have the following nominal outside dimensions: a width of 25 in. (785 mm), a depth of 16 in. (440 mm), and a height of 41 to 48 in. (1.1 to 1.3 m). Clearance between shelves shall be a minimum of 10 in. (250 mm).

The battery cabinet shall be ventilated through the use of louvered vents, filters, and one thermostatically controlled fan. The cabinet fan shall not be energized when the traffic signals are on UPS power.

The battery cabinet shall have provisions for an external generator connection.

The UPS with battery cabinet shall come with all bolts, conduits and bushings, gaskets, shelves, and hardware needed for mounting. A warning sticker shall be placed on the outside of the cabinet indicating that there is an uninterruptible power supply inside the cabinet.

Maintenance, Displays, Controls, and Diagnostics: The UPS shall include a display and/or meter to indicate current battery charge status and conditions.

The UPS shall have lightning surge protection compliant with IEEE/ANSI C.62.41.

The UPS shall be equipped with an integral system to prevent battery from destructive discharge and overcharge.

The UPS hardware and batteries shall be easily replaced without requiring any special tools or devices.

The UPS shall include a resettable front-panel event counter display to indicate the number of times the UPS was activated. The total number of hours the unit has operated on battery power shall be available from the controller unit or UPS unit.

The UPS shall be equipped with an RS-232 port.

The UPS shall include tip or kill switch installed in the battery cabinet, which shall completely disconnect power from the UPS when the switch is manually activated.

The UPS shall incorporate a flanged electric generator inlet for charging the batteries and operating the UPS. The generator connector shall be male type, twist-lock, rated as 15A, 125VAC with a NEMA L5-15P configuration and weatherproof lift cover plate (Hubbell model HBL4716C or approved equal). Access to the generator inlet shall be from a secured weatherproof lift cover plate or behind a locked battery cabinet police panel.

The manufacturer shall include two sets of equipment lists, operation and maintenance manuals, board-level schematic and wiring diagrams of the UPS, and battery data sheets. The manufacturer shall include any software needed to monitor, diagnose, and operate the UPS. The manufacturer shall include any required cables to connect the UPS to a laptop computer.

Battery System: Individual batteries shall be 12 V type, 65 amp-hour minimum capacity at 20 hours, and shall be easily replaced and commercially available off the shelf.

The UPS shall consist of an even number of batteries that are capable of maintaining normal operation of the signalized intersection for a minimum of six hours. Calculations shall be provided showing the number of batteries of the type supplied that are needed to satisfy this requirement. A minimum of four batteries shall be provided.

All batteries supplied in the UPS shall be either gel cell or AGM type, deep cycle, completely sealed, prismatic leadcalcium based, silver alloy, valve regulated lead acid (VRLA) requiring no maintenance. All batteries in a UPS installation shall be the same type; mixing of gel cell and AGM types within a UPS installation is not permitted.

Batteries shall be certified by the manufacturer to operate over a temperature range of -13 to 160 °F (-25 to + 71 °C) for gel cell batteries and -40 to 140 °F (-40 to + 60 °C) for AGM type batteries.

The batteries shall be provided with appropriate interconnect wiring and corrosion resistant mounting trays and/or brackets appropriate for the cabinet into which they will be installed.

Batteries shall indicate maximum recharge data and recharging cycles.

Battery interconnect wiring shall be via a modular harness. Batteries shall be shipped with positive and negative terminals pre-wired with red and black cabling that terminates into a typical power-pole style connector. The harness shall be equipped with mating power-pole style connectors for the batteries and a single, insulated plug-in style connection to the inverter/charger unit. The harness shall allow batteries to be quickly and easily connected in any order and shall be keyed and wired to ensure proper polarity and circuit configuration.

Battery terminals shall be covered and insulated so as to prevent accidental shorting.

Warranty: The warranty for an uninterruptible power supply (UPS) shall cover a minimum of two years from date the equipment is placed in operation; however, the batteries of the UPS shall be warranted for full replacement for a minimum of five years from the date the traffic signal and UPS are placed into service.

Installation: When a UPS is installed at an existing traffic signal cabinet, the UPS cabinet shall partially rest on the lip of the existing controller cabinet foundation and be secured to the existing controller cabinet by means of at least four (4) stainless steel bolts. The UPS cabinet shall be completely enclosed with the bottom and back constructed of the same material as the cabinet.

When a UPS is installed at a new signal cabinet and foundation, it shall be mounted as shown on the plans.

Basis of Payment: This work will be paid for at the contract unit price per each for UNINTERRUPTABLE POWER SUPPLY.

SIGNAL HEAD, LIGHT EMITTING DIODE.

Description: This work shall consist of furnishing and installing a traffic signal head or pedestrian signal head with light emitting diodes (LED) of the type specified in the plan or retrofitting an existing traffic signal head with a traffic signal module or pedestrian signal module with LEDs as specified in the plans.

General: LED signal heads (All Face and Section Quantities), (All Mounting Types) shall conform fully to 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, 2007, and amended herein:

1. 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 Table 1 of the ITE Vehicle Traffic Control Signal Heads: Light Emitting Diode (LED) Circular Signal Supplement (June 27, 2005) [VTSCH] or show signs of entrance of moisture or contaminants 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.
2. 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.

(a) Physical and Mechanical Requirements

1. Modules can be manufactured under this specification for the following faces:
 - a. 12 inch (300 mm) circular, multi-section
 - b. 12 inch (300 mm) arrow, multi-section
 - c. 12 inch (300 mm) pedestrian, 2 sections
2. The maximum weight of a module shall be 4 lbs. (1.8 kg).
3. 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 weather proof after installation and connection.
4. Material used for the lens and signal module construction shall conform to ASTM specifications for the materials.
5. The lens of the module 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 or chemical surface treatment applied to provide abrasion resistance. The lens of the module shall be integral to the unit, convex with a smooth outer surface and made of plastic. The lens shall have a textured surface to reduce glare.
6. 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.

7. 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 1 inch (25.4 mm) in diameter. Additionally, the color shall be written out in 1/2 inch (12.7mm) letters next to the symbol.

(b) Photometric Requirements

1. The minimum initial luminous intensity values for the modules shall conform to the values in Table 1 of the VTCSH (2005) for circular signal indications, and as stated in Table 3 of these specifications for arrow and pedestrian indications at 25°C.
2. The modules shall meet or exceed the illumination values stated in Article 1078.01(3)c of the "Standard Specifications for Road and Bridge Construction," Adopted January 1, 2007 for circular signal indications, and Table 3 of these specifications for arrow and pedestrian indications, throughout the useful life based on normal use in a traffic signal operation over the operating temperature range.
3. The measured chromaticity coordinates of the modules shall conform to the chromaticity requirements of Section 4.2 of the VTCSH (2005).
4. 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.

(c) Electrical

1. Maximum power consumption for LED modules is per Table 2.
2. LED modules will have EPA Energy Star compliance ratings, if applicable to that shape, size and color.
3. Operating voltage of the modules shall be 120 VAC. All parameters shall be measured at this voltage.
4. The modules shall be operationally compatible with currently used controller assemblies (solid state load switches, flashers, and conflict monitors).
5. 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.
6. 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.
7. 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.

(d) Retrofit Traffic Signal Module

1. The following specification requirements apply to the Retrofit module only. All general specifications apply unless specifically superseded in this section.

2. Retrofit modules can be manufactured under this specification for the following faces:
 - a. 12 inch (300 mm) circular, multi-section
 - b. 12 inch (300 mm) arrow, multi-section
 - c. 12 inch (300 mm) pedestrian, 2 sections
 3. Each Retrofit module shall be designed to be installed in the doorframe of a standard traffic signal housing. The Retrofit module shall be sealed in the doorframe with a one-piece EPDM (ethylene propylene rubber) gasket.
 4. The maximum weight of a Retrofit module shall be 4 lbs. (1.8 kg).
 5. Each Retrofit 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 weather proof after installation and connection.
 6. Electrical conductors for modules, including Retrofit modules, shall be 39.4 inches (1m) in length, with quick disconnect terminals attached.
 7. 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.
- (e) The following specification requirements apply to the 12 inch (300 mm) arrow module only. All general specifications apply unless specifically superseded in this section.
1. The arrow module shall meet specifications stated in Section 9.01 of the Equipment and Material Standards of the Institute of Transportation Engineers (November 1998) [ITE Standards], Chapter 2 (Vehicle Traffic Control Signal Heads) for arrow indications.
 2. 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.
- (f) The following specification requirement applies to the 12 inch (300 mm) programmed visibility (PV) module only. All general specifications apply unless specifically superseded in this section.
1. The LED module shall be a module designed and constructed to be installed in a programmed visibility (PV) signal housing without modification to the housing.
- (g) The following specification requirements apply to the 12 inch (300 mm) Pedestrian module only. All general specifications apply unless specifically superseded in this section.
1. Each pedestrian signal LED module shall provide the ability to actuate the solid upraised hand and the solid walking person on one 12 inch (300mm) section.
 2. Two (2) pedestrian sections shall be installed. The top section shall be wired to illuminate only the upraised hand and the bottom section shall be the walking man.
 3. "Egg Crate" type sun shields are not permitted. All figures must be a minimum of 9 inches (225mm) in height and easily identified from a distance of 120-feet (36.6m).

Basis of Payment: 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(s) 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.

Pedestrian head(s) shall be paid for at the contract unit price each for PEDESTRIAN SIGNAL HEAD, LED, of the type specified and of the particular kind of material when specified.

The type specified will indicate the number of faces and the method of mounting.

When installed in an existing signal head, this item shall be paid for at the contract unit price each for SIGNAL HEAD, LED of the type specified, RETROFIT, which price shall be payment in full for furnishing the equipment described above including LED(s) 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.

When installed in an existing signal head, this item shall be paid for at the contract unit price each for PEDESTRIAN SIGNAL HEAD, LED, of the type specified, RETROFIT, which price shall be payment in full for furnishing the equipment described above including LED(s) modules, all mounting hardware, and installing them in satisfactory operating condition.

The type specified will indicate the number of faces and the method of mounting.

TABLES

Table 2 Maximum Power Consumption (in Watts)

	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 3 Minimum Initial & Maintained Intensities for Arrow and Pedestrian Indications (in cd/m²)

	Red	Yellow	Green
Arrow Indication	5,500	11,000	11,000

PEDESTRIAN COUNTDOWN SIGNAL HEAD, LIGHT EMITTING DIODE.

Description: This work shall consist of furnishing and installing a pedestrian countdown signal head, with light emitting diodes (LED) of the type specified in the plan.

Pedestrian Countdown Signal Head, Light Emitting Diode, shall conform fully to the SIGNAL HEAD, LIGHT EMITTING DIODE specification, with the following modifications:

(a) Application.

1. Pedestrian Countdown Signal Heads, shall not be used at signalized intersections where traffic signals and railroad warning devices are interconnected.
2. All pedestrian signals at an intersection shall be the same type and have the same display. No mixing of countdown and other types of pedestrian traffic signals will be permitted.

(b) General.

1. The module shall operate in one mode: Clearance Cycle Countdown Mode Only. The countdown module shall display actual controller programmed clearance cycle and shall start counting when the flashing clearance signal turns on and shall countdown to "0" and turn off when the steady Upraised Hand (symbolizing Don't Walk) signal turns on. Module shall not have user accessible switches or controls for modification of cycle.
2. At power on, the module shall enter a single automatic learning cycle. During the automatic learning cycle, the countdown display shall remain dark.
3. The module shall re-program itself if it detects any increase or decrease of Pedestrian Timing. The counting unit will go blank once a change is detected and then take one complete pedestrian cycle (with no counter during this cycle) to adjust its buffer timer.
4. The module shall allow for consecutive cycles without displaying the steady Upraised Hand.
5. The module shall recognize preemption events and temporarily modify the crossing cycle accordingly.
6. If the controller preempts during the Walking Person (symbolizing Walk), the countdown will follow the controller's directions and will adjust from Walking Person to flashing Upraised Hand. It will start to count down during the flashing Upraised Hand.
7. If the controller preempts during the flashing Upraised Hand, the countdown will continue to count down without interruption.
8. The next cycle, following the preemption event, shall use the correct, initially programmed values.
9. If the controller output displays Upraised Hand steady condition and the unit has not arrived to zero or if both the Upraised Hand and Walking Person are dark for some reason, the unit suspends any timing and the digits will go dark.
10. The digits will go dark for one pedestrian cycle after loss of power of more than 1.5 seconds.
11. The countdown numerals shall be two (2) "7 segment" digits forming the time display utilizing two rows of LEDs.

12. The LED module 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.
13. 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.
14. In the event of a power outage, light output from the LED modules shall cease instantaneously.
15. The LEDs utilized in the modules shall be AllnGaP technology for Portland Orange (Countdown Numerals and Upraised Hand) and GaN technology for Lunar White (Walking Person) indications.
16. 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.

(c) Pedestrian Countdown Signal Heads.

1. Pedestrian Countdown Signal Heads shall be 16 inch (406mm) x 18 inch (457mm), for single units with the housings glossy black polycarbonate. Connecting hardware and mounting brackets shall be polycarbonate (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.
2. Each pedestrian signal LED module shall be fully MUTCD compliant and shall consist of double overlay message combining full LED symbols of an Upraised Hand and a Walking Person. "Egg Crate" type sun shields are not permitted. Numerals shall measure 9 inches (229mm) in height and easily identified from a distance of 120 feet (36.6m).

(d) Electrical.

1. Maximum power consumption for LED modules is 29 watts.
2. The measured chromaticity shall remain unchanged over the input line voltage range listed of 80 VAC to 135 VAC.

Basis of Payment: This item shall be paid for at the contract unit price each for PEDESTRIAN COUNTDOWN SIGNAL HEAD, LED; of the type specified, which shall be payment in full for furnishing the equipment described above including LED(s) modules, all mounting hardware, and installing them in satisfactory operating condition. The type specified will indicate the number of faces and the method of mounting.

CC&P RR / CN REQUIREMENTS FOR WORK NEAR OR UNDER CN RR

CC&P / CN RR REQUIREMENTS FOR THE WORK NEAR OF UNDER CN RR

This section includes the CC&P & RR (CN) Special Provisions and requirements for working near or under Railroad at the following locations:

- IL 25 Grade Crossing at CCP&RR west of Gilbert Street
- Proposed multi-use path (at-grade crossing) at the CC&P RR
- Conversion of existing Dunham Road Bridge over CN RR to mixed use bridge
- Removal of existing IL Prairie Path Bridge over CN RR

Applications for the installation of new storm sewer and fiber optic (interconnect) has been submitted to CN RR for review and approval.

SPECIAL PROVISIONS

RELATIVE TO FLAGGING AND OTHER PROTECTION OF RAILROAD TRAFFIC AND FACILITIES DURING CONSTRUCTION ADJACENT AND ABOVE, ON OR ACROSS, THE PROPERTY OF, OR ON, ABOVE AND BENEATH THE TRACKS OF THE CHICAGO CENTRAL & PACIFIC RAILWAY COMPANY

The Grantee, Licensee, Permittee and/or its Contractor shall, before entering upon the property of the Railroad for performance of any work, secure a right of entry agreement and permission from the Engineering Superintendent of the Railroad Company or his authorized representative at john.henriksen@cn.ca for the occupancy and use of the Railroad's property and shall confer with the Railroad relative to requirements for railroad clearances, operation and general safety regulations. Grantee, Licensee, Permittee and/or its Contractor shall have all employees doing work on CN's property or its subcontractors doing work on CN's property go through Railroad Safety Training at <http://www.e-railsafe.com/>. Railroad Company reserves the right to bar any of Licensee's employees or agents from Railroad Company's property at any time for any reason. Prior to contacting eRailSafe in order to access CN Property, all Contractors need to call James Conroy at 708-332-5947 or email at James.Conroy@cn.ca in order to get a "Vendor Number". When they have their vendor number, they can then get into eRailSafe. Mr. Conroy will determine if Grantee, Licensee, Permittee and/or its Contractor need only the CN based Safety Training, or if they will have to endure the background checks as well, depending upon the work that they will be engaged to complete. Minimum information required is Company Name, Address, Telephone Number, Contact Person for State Projects the IDOT Contract No. and AAR/DOT Number must be included.

The Grantee, Licensee, Permittee and/or its or any Contractor engaged on its behalf, shall at all times conduct their work in a manner satisfactory to the Engineering Superintendent of the Railroad Company, or his authorized representative, and shall exercise care so as to not damage the property of the Railroad Company, or that belonging to any other grantees, licensees, permittees or tenants of the Railroad Company, or to interfere with railroad operations.

The Engineering Superintendent of the Railroad Company, or his authorized representative, will at all times have jurisdiction over the safety of railroad operations, and the decision of the Engineering Superintendent or his authorized representative as to procedures which may affect the safety of railroad operations shall be final, and the Licensee, and/or any contractor engaged on its behalf shall be governed by such decision.

All work shall be conducted in such a manner as will assure the safety of the Railroad. The Railroad's authorized representative shall have the right, but not the duty, to require certain procedures to be used or to supervise the work on the Railroad's property.

Should any damage occur to Railroad property as a result of the unauthorized or negligent operations of any Grantee, Licensee, Permittee and/or any Contractor engaged on its behalf, and the Railroad deems it necessary to repair such damage or perform any work for the protection of its property or operations, the Grantee, Licensee, Permittee and/or Contractor, as the case may be, shall promptly reimburse the Railroad Company for the actual cost of such repairs or work. For the purpose of these Special Provisions, cost shall be deemed to include the direct cost of any labor, materials, equipment, or contract expense plus the Railroad's then current customary additives in each instance.

If the work requires the construction of a temporary grade crossing across the track(s) of the Railroad, the Grantee, Licensee, Permittee and/or its Contractor shall make the necessary arrangements with the Railroad for the construction, protection, maintenance, and

later removal of such temporary grade crossing. The cost of such temporary grade crossing construction, protection, maintenance, and later removal shall be promptly reimbursed to the Railroad upon receipt of bill(s) therefor.

The Grantee, Licensee, Permittee and/or its Contractor shall at no time cross the Railroad's property or tracks with vehicles or equipment of any kind or character, except at such temporary grade crossing as may be constructed as outlined herein, or at any existing and open public grade crossing.

Any flagging protection, watchmen service or standby personnel required by the Railroad for the safety of railroad operations because of work being conducted by a Grantee, Licensee, Permittee and/or its Contractor, or in connection therewith, will be provided by the Railroad and the cost thereof shall be reimbursed to the Railroad by the respective Grantee, Licensee, Permittee or Contractor upon receipt of bill(s) therefor. The requirements of the Railroad are as follows:

The services of a flagman will be required during any operation involving direct interference with the Railroad's tracks or traffic, fouling of railroad operating clearances, or reasonable proximity of accidental hazard to railroad traffic, generally when work takes place within twenty-five feet (25') from the nearest rail. Additional flagmen will also be furnished whenever, in the opinion of Railroad's Engineering Superintendent, such protection is needed.

Before any digging, trenching, or boring activities on Railroad property, or beneath any railroad track, an on-site meeting shall be conducted with the Railroad's Signal Supervisor or Signal Maintainer to ascertain, to the extent possible, the location of any buried railroad signal cables near the proposed work. No digging, trenching or boring activities shall be conducted in the proximity of any known buried Railroad signal cables without the Railroad's Signal Maintainer being present.

In order that the Railroad Company may be prepared to furnish protective services, it is incumbent upon the Grantee, Licensee, Permittee, and/or its Contractor to notify the Railroad Company sufficiently in advance of when the protective services are required. For work activities which require a flagman, Signal Maintainer or other Railroad personnel to be present while said work is being conducted, should the Railroad be unable to furnish the flagman or other personnel at the desired time or on the desired date(s), the Grantee, Licensee,

Permittee and/or its Contractor shall not perform the said operation or work until such time and date(s) that appropriate Railroad personnel can be made available. It is understood the Railroad Company shall not be liable for any increased costs incurred by the Grantee, Licensee, Permittee and/or its Contractor owing to Railroad's inability or failure to have appropriate Railroad personnel available at the time or on the date requested.

The rate of pay for the Railroad employees will be the prevailing hourly rate for an eight (8) hour day for the class of labor during regularly assigned work hours, overtime rates in accordance with Labor Agreements and Schedules and the Railroad's standard additives, all as in effect at the time the work is performed.

Wage rates are subject to change, at any time, by law or by agreement between the Railroad and employees, and may be retroactive because of negotiations or a ruling by an authorized Governmental Agent. If the wage rates are changed, the Grantee, Licensee, Permittee, and/or its Contractor shall pay on the

basis of the new rates.

No digging, trenching, or boring on Railroad property shall be conducted without Railroad's written approval of the plans that were furnished in advance of the excavation.

The following temporary clearances are the minimum that must be maintained at all times during any operation:

Vertical: 23'-0" (7.0 m) above top of highest rail within 8'-0" (2.44 m) of the centerline of any track

Horizontal: 8'-6" (2.59 m) from centerline of the nearest track, measured at right angles thereto

If lesser clearances than the above are required for any part of the work, the Grantee, Licensee, Permittee and/or its Contractor shall secure written authorization from the Railroad's Engineering Superintendent for such lesser clearances in advance of the start of that portion of the work.

No materials, supplies, or equipment will be stored within 15 feet of the centerline of any railroad track, measured at right angles thereto.

The Grantee, Licensee, Permittee and/or its Contractor will be required upon the completion of the work to remove from within the limits of the Railroad's property all machinery, equipment, surplus materials, false work, rubbish or temporary buildings, and to leave said property in a condition satisfactory to the Engineering Superintendent of the Railroad Company or his authorized representative.

Nothing in these Special Provisions shall be construed to place any responsibility on the Railroad for the quality or conduct of the work performed by the Grantee, Licensee, Permittee and/or its Contractor hereunder. Any approval given or supervision exercised by Railroad hereunder, or failure of Railroad to object to any work done, material used, or method of operation shall not be construed to relieve the Grantee, Licensee, Permittee and/or its Contractor of any obligations pursuant hereto or under the Agreement these Special Provisions are appended to.

**REQUIREMENTS REGARDING FLAGGING AND CABLE
LOCATION FOR CONSTRUCTION ON CN**
(Hereinafter called "Railroad")

NOTE: Flagging and/or Cable Locate fees may apply

A utility or contractor shall not commence, or carry on, any work for installation, maintenance, repair, changing or renewal of any FACILITY, under, over or on RAILROAD property at any location without giving at least five (5) working days prior notice to the RAILROAD authorized representative at the RAILROAD's office located at Troy, Michigan, Phone (248) 740-6227; and if, in the opinion of the RAILROAD the presence of an authorized representative of the RAILROAD is required to supervise the same, the RAILROAD shall render bills to the utility or contractor for all expenses incurred by it for such supervision. This includes all labor costs for flagmen or cable locate supplied by the RAILROAD to protect RAILROAD operation, and for the full cost of furnishing, installation and later removal of any temporary supports for said tracks, as the RAILROAD's Chief Engineer's Office may deem necessary.

A flagman is required anytime a utility or contractor does any work on or near RAILROAD property within twenty-five (25) feet horizontally of the centerline or any work over any railroad track. The RAILROAD, however, also reserves the right to require a flagman for work on RAILROAD property, which is more than twenty-five (25) feet from the centerline of a railroad track when there are other conditions, or considerations that would dictate the need for a flagman to safeguard the RAILROAD's operations, property and safety of working personnel.

A cable locate of RAILROAD owned facilities may be required to identify and protect Signal & Communication cables that have been installed to provide power, signal control, wayside communications. These cables are vital to a safe and reliable railway operation. The cable locate will be performed by a qualified RAILROAD employee.

Outside contractors are prohibited from driving on, along, or across any track that does not have a CN installed crossing. They may utilize an existing public crossing. The practice of allowing rubber tired equipment to operate over track with no crossing has been banned.

Exceptions to this rule will require the express approval from CN Engineering.

Prior to any project being started, the RAILROAD requires a "Request for flagging services" form to be completed and submitted, including check for prepayment based on the number of days flagman protection will be required.

Request for flagging services Southern Region

TO: Tom Tucker
Audit Officer
CN
2800 Livernois, Suite 220
Troy, Michigan 48083
(248) 740-6227
(248) 740-6031 fax
tom.tucker@cn.ca

Date submitted: _____

FROM: _____
(Name)

I am requesting a flagman for the following project. **All blanks below must be completely filled in before any flagman request will be honored. Proof of Insurance must accompany this form. Flagman will be provided within five (5) business days, at your cost, depending on availability. Direct your calls concerning availability and problems to (248) 740-6227.**

Project Location: _____

RR milepost, Street, etc. _____

Company: _____

Billing Address: _____

City: _____ State: _____ Zip: _____

Company Phone: _____ Company Fax: _____

**Agreement or Authorization No.: _____ Dated: _____

With: _____

Contractor's Contact Person: _____ Phone: _____

Date(s) Flagging needed: _____

Starting time: _____ Ending Time: _____

Location for flagman to report: _____

Based on the number of days a flagman is required, prepayment for flagman protection, at the base rate of \$700.00 per day (1 – 8 hours) plus overtime at \$125.00 per hour, any hours in excess of eight (8) hours must be received prior to beginning of this project.

Weekend flagman protection will be billed at the minimum rate of eight hours (8) at \$125.00 per hour.

*** You must have an agreement with CN railroad subsidiary, such as a Right of Entry Permit, Formal Agreement or State, County, City Project Number and proof of insurance before you can enter the property.*

Description of work to be performed:

Will you receive State or Federal Funds as reimbursement for this project? Yes__ No__

I agree to pay for flagging services as requested: _____

Attach map or other location info and fax completed form with cover letter on your company's letterhead and proof of insurance to Tom Tucker (248) 740-6031



PIPELINE CROSSING SPECIFICATIONS

1. GENERAL REQUIREMENTS

Pipe lines under railroad tracks or across or along railroad right-of-way shall conform to current American Railway Engineering Association Specifications. If laws or orders of public authority prescribe a higher degree of protection than specified herein, then the higher degree of protection so specified shall be adhered to.

Plans and specifications for proposed installation shall be submitted to the CE (Chief Engineer) and meet the approval of the railroad company before construction is begun. Plans shall be drawn to scale showing the relation of the proposed pipeline, angle of crossing, location of valves, railway survey station, right-of-way line and general layout of tracks and railway facilities. Plan should also show a cross-section (or sections) from field survey, showing pipe in relation to actual profile of ground and tracks, complete description of materials to be used, and location of jacking and receiving pits. If open cutting or tunneling is necessary, details of sheeting and method of supporting tracks or driving tunnel should be shown. The execution of the work on the railway right-of-way, including the supporting of tracks, shall be subject to the inspection and direction of the CE office.

Pipelines shall be installed under tracks by boring or jacking, if practicable, boring excavation must not exceed the outside diameter of the pipe. Jacking or boring of corrugated metal pipe, cast iron pipe or pipe with flanges, bells or couplings will not be permitted. Directional boring will be allowed at the discretion of the Railroad. Soils investigation and a geotechnical report may be required.

Pipeline shall be located, where practicable, to cross tracks at approximately right angles thereto but preferably at not less than 45 degrees. Pipelines shall not be placed within a culvert, under railway bridges, nor closer than 100 feet to any portion of any railway bridge, building or other important structure, except in special cases and then be of special design as approved by the CE of the railway company.

Pipelines laid longitudinally in railway right-of-way shall be located as far as practicable from any tracks or other important structures. Pipelines carrying flammable products or products under pressure located within 25 feet of the centerline of any track or where there is danger of damage from leakage to any bridge, building or other important structure, shall be encased or of special design as approved by the CE of the railway company.

Pipelines laid longitudinally on the railway right-of-way, 50 feet or less from the centerline of track shall be buried not less than 4'6" from the ground surface to the top of pipe. If distance is more than 50 feet from centerline of track, minimum cover shall be 3 feet.

If additional tracks are constructed in the future and the Railway company determines that the roadbed requires widening, then the casing shall be extended correspondingly by the Licensee at the Licensee's cost.

All casing pipes, except those laid longitudinally, shall be sloped not less than 0.3%.

Pipelines shall not be installed on wood trestles but consideration will be given to permitting attachment to steel spans where unreasonable expense would be required to provide separate crossing over waterway, public way or railroad as approved by the CE.

The ends of casing pipe shall be securely and permanently sealed to outside of carrier pipe with approved joint material against encroachment of outside elements. The vent pipes shall be connected to the top surface of casing pipe at both ends of the casing pipe.

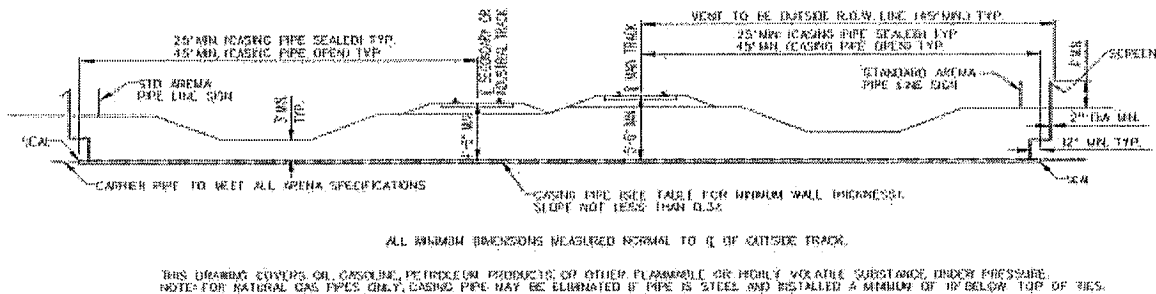


PIPELINE CROSSING SPECIFICATIONS

1. PIPELINES CARRYING FLAMMABLE SUBSTANCES

This includes oil, gas, gasoline, petroleum products or other flammable or highly volatile substance under pressure.

PIPE LINES CARRYING FLAMMABLE SUBSTANCES.

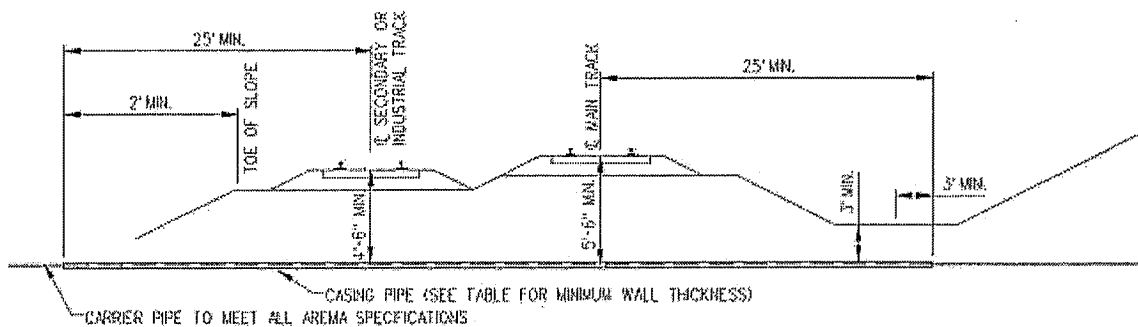


At all other locations on the right-of-way the minimum ground cover for uncased steel natural gas pipes must be six (6) feet.

2. PIPELINES CARRYING NON-FLAMMABLE SUBSTANCES

This includes steam, water or any non-flammable substance, which from its nature or pressure might cause damage if escaping on or in the vicinity of railway property. Sewers and drains do not require casing pipe unless conditions exist which will endanger security of track, but must be of sufficient strength to withstand E-80 railway loading.

PIPE LINES CARRYING NON-FLAMMABLE SUBSTANCES.



ALL MINIMUM DIMENSIONS MEASURED NORMAL TO ϕ OF OUTSIDE TRACK.

THIS DRAWING COVERS STEAM, WATER OR ANY NONFLAMMABLE SUBSTANCE WHICH FROM ITS NATURE OR PRESSURE MIGHT CAUSE DAMAGE IF ESCAPING ON OR IN THE VICINITY OF RAILWAY PROPERTY. SEWERS AND DRAINS DO NOT REQUIRE CASING PIPE UNLESS CONDITIONS EXIST WHICH WILL ENDANGER SECURITY OF TRACK, BUT MUST BE OF SUFFICIENT STRENGTH TO WITHSTAND E-80 LOADING.



PIPELINE CROSSING SPECIFICATIONS

CASING PIPE FOR E-80 LOADING

STEEL PIPE (REFERENCE SOURCE: AREMA, CHAPTER 1, PART 51, WALL THICKNESS FOR STEEL CASING PIPE (MINIMUM YIELD STRENGTH 35,000 psi)		
DIAMETER OF PIPE (INCHES)	PIPE COATED OR CATHODICALLY PROTECTED NOMINAL THICKNESS (INCHES)	PIPE NOT COATED OR CATHODICALLY PROTECTED NOMINAL THICKNESS (INCHES)
12 3/4 AND UNDER	0.188	0.188
14	0.188	0.250
16	0.219	0.281
18	0.250	0.312
20 AND 22	0.251	0.344
24	0.312	0.375
26	0.344	0.406
28	0.375	0.438
30	0.406	0.469
32	0.438	0.500
34 AND 36	0.469	0.531
38	0.500	0.562
40	0.531	0.594
42	0.562	0.625
44 AND 46	0.594	0.656
48	0.625	0.688
50	0.656	0.719
52	0.688	0.750
54	0.719	0.781
56 AND 58	0.750	0.812
60	0.781	0.844
62	0.812	0.875
64	0.844	0.906
66 AND 68	0.875	0.938
70	0.906	0.969
72	0.938	1.000

REINFORCED CONCRETE PIPE PIPE SHALL CONFORM TO A.S.T.M. DESIGNATION C-76. CLASS IV, WALL "B" (MIN.). ROUND PIPE SHALL HAVE CIRCULAR, NOT ELLIPTICAL, REINFORCEMENT.	
CORRUGATED METAL PIPE PIPE SHALL BE GALVANIZED, BONDED AND ASPHALT COATED.	
GAGE OF METAL BEFORE GALVANIZING U.S. STD. GAGE	DIAMETER OF PIPE (INCHES)
14	18 AND UNDER
12	24, 30, AND 36
10	42 AND 48

Additional Resources for Underground Crossings

<http://www.undergroundfocus.com/onecalldir.php>

Provides links and information on state calls for cable locates

<http://www.ntdpc.com/>

National Telecommunications Damage Prevention Council

<http://www.commongroundalliance.com>

Common Ground Alliance



WIRELINE CROSSING AND ENCROACHMENT SPECIFICATIONS

UNDERGROUND WIRELINE CROSSINGS

1. Must be a minimum of 5'6" feet below base of rail.
2. Must be enclosed in casing or conduit adequate to protect the line.
3. Wherever located on railroad right-of-way outside the track ballast section, the following are minimum burial depths below ground line:

<u>Line Voltage</u>	<u>Depth Below Ground Line</u>
0-600	24 inches
601 - 22,000	30 inches
22,001 - 40,000	36 inches
40,001 - Above	42 inches

OVERHEAD WIRELINE CROSSINGS

1. Must not be located within 300' of a bridge in either direction
2. Must not be attached to a company pole line or pole lines licensed to others except where specifically authorized.
3. All poles extending in height above ground equal to or greater than the distance from pole to end of cross line will be anchored and guyed against tipping toward track.
4. Guys will be guarded to a distance of 8' above ground line and the guards shall be orange in color.
5. All clearances and safety provisions are subject to the applicable National and State codes. Provisions of that portion of the National Electric Safety Code (American National Standard Institute) pertaining to railroads apply.

GENERAL NOTES

1. All power or communication line crossings are subject to license agreements with the railroad company.
2. All clearances and safety provisions are subject to the applicable national and State Codes. Provisions of that portion of The National Electrical Safety Code (American National Standard Institute) pertaining to railroads apply.



WIRELINE CROSSING AND ENCROACHMENT SPECIFICATIONS

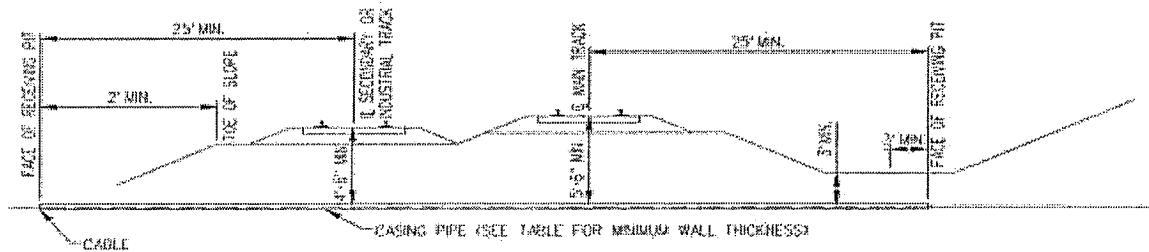
OVERHEAD WIRELINE CLEARANCE CHART

FORMULA: .5" increase for every 1,000 volts in excess of 50 KV
6" increase for every 12,000 volts in excess of 50 KV

Voltage (to ground)	Minimum Clearance Required above top Of rail	Minimum Clearance (Including Static Wires) Required above Communication and Signal Lines
0 to 750	27'0"	4'0"
8,700	28'0"	4'0"
15,000	28'0"	6'0"
50,000	30'0"	6'0"
74,000	31'0"	7'0"
98,000	32'0"	8'0"
122,000	33'0"	9'0"
146,000	34'0"	10'0"
170,000	35'0"	11'0"
194,000	36'0"	12'0"
218,000	37'0"	13'0"
242,000	38'0"	14'0"
266,000	39'0"	15'0"
290,000	40'0"	16'0"
THESE CLEARANCES ARE TO INCLUDE ALL TRACKS OPERATED AS MAIN TRACKS, SIDINGS, AND OTHER AUXILIARY TRACKAGE.		

WIRELINE CROSSING AND ENCROACHMENT SPECIFICATIONS

CABLE CROSSING

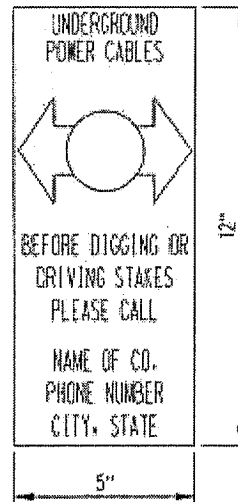


ALL MINIMUM DIMENSIONS MEASURED NORMAL TO C. OF OUTSIDE TRACK.

NOTE: LOW VOLTAGE CABLE SUCH AS TELEPHONE OR CABLE TV MAY BE INSTALLED IN PVC CARRIER PIPE

MARKING OF BURIED POWER CABLES ON RAILROAD RIGHT OF WAY

CABLE ROUTE MUST BE MARKED AT EDGE OF RIGHT OF WAY WHERE CABLE ENTERS OR LEAVES RAILROAD PROPERTY. IN CASES OF PARALLEL CABLE ROUTE, SIGNS AS INDICATED IN FIGURE 1 ON THIS EXHIBIT WILL BE PLACED APPROXIMATELY EVERY 200 FEET. SIGNS TO BE OF A PERMANENT VERTICAL TYPE, NOT SMALLER THAN 5 INCHES WIDE BY 12 INCHES HEIGHT. YELLOW BACKGROUND WITH BOLD BLACK LETTERING. SIGNS TO BE MOUNTED ON METAL POSTS OR AS OTHERWISE AGREED TO AT A HEIGHT OF 3 FEET ABOVE GROUND LEVEL.





INSURANCE REQUIREMENTS

1. By Licensee

Before commencing work, and until this Agreement shall be terminated or the FACILITY shall be removed (whichever date is later), the LICENSEE shall provide and maintain the following insurance in form and amount with companies satisfactory to and as approved by the RAILROAD.

- a. Statutory Workers Compensation and Employer's Liability insurance.
- b. Automobile Liability in an amount not less than \$1,000,000 dollars combined single limit.
- c. Comprehensive General Liability in an amount not less than \$5,000,000 dollars combined single limit. In the event the policy is a Claim Made policy coverage shall include an aggregate of \$10,000,000 dollars. The Policy must name the appropriate RAILROAD as an Additional Insured and must not contain any exclusions related to:
 1. Doing business on, near, or adjacent to railroad facilities.
 2. Loss or damage resulting from surface, subsurface pollution contamination or seepage, or handling, treatment, disposal, or dumping of waste materials or substances.

Before commencing work, the LICENSEE shall deliver to the RAILROAD a certificate of insurance evidencing the foregoing coverage and upon request the LICENSEE shall deliver a certified, true and complete copy of the policy or policies. The policies shall provide for not less than ten (10) days prior written notice to the RAILROAD of cancellation of or any material change in, the policies; and shall contain the waiver of right of subrogation.

It is understood and agreed that the foregoing insurance coverage is not intended to, and shall not, relieve the LICENSEE from or serve to limit LICENSEE's liability under the indemnity provisions of any applicable agreement.

It is further understood and agreed that, so long as the Agreement shall remain in force or the FACILITY shall have been removed (whichever shall be later), the RAILROAD shall have the right, from time to time, to revise the amount or form of insurance coverage provided as circumstances or changing economic conditions may require. The RAILROAD shall give the LICENSEE written notice of any such requested change at least thirty (30) days prior to the date of expiration of the then existing policy or policies; and the LICENSEE agrees to, and shall, thereupon provide the RAILROAD with such revised policy or policies thereof.

- d. Notwithstanding the above, LICENSEE shall have the right to self-insure any portion of this obligation. If LICENSEE elects to self-insure any portion of such insurance, LICENSEE shall provide the RAILROAD with such documentation as the RAILROAD may require in support of LICENSEE's ability to do so.



INSURANCE REQUIREMENTS

2. By the Licensee's Contractor

If a contractor is to be employed by the Licensee for the installation of the FACILITY, then, before commencing work, the contractor shall provide and maintain the following insurance, in form and amount and with companies satisfactory to, and as approved by, the RAILROAD.

- a. Statutory Workers' Compensation and Employer's Liability insurance.
- b. Automobile Liability in an amount not less than \$1,000,000 dollars combined single limit.
- c. An Occurrence Form Railroad Protective Policy with limits of not less than \$5,000,000 dollars per occurrence for Bodily Injury Liability, Property Damage Liability and Physical Damage to Property with \$10,000,000 dollars aggregate for the term of the policy with respect of Bodily Injury Liability, Property Damage Liability and Physical Damage to Property. The policy must name the appropriate RAILROAD as the insured, and shall provide for not less than ten (10) days prior written notice to the RAILROAD'S as cancellation of, or any material change, in the policy.



PIPELINE/WIRELINE CROSSING CONTACTS

CROSSING PERMITS

Name: Daryl Lang
Address: Canadian National
Daryl Lang
2800 Livernois Rd
Troy, Michigan 48083
Phone: 248-740-6545
Fax: 248-740-6031
Email: daryl.lang@cn.ca

FLAGGING AND/OR CABLE LOCATE

Name: Tom Tucker
Address: Canadian National
Tom Tucker
2800 Livernois Rd
Troy, Michigan 48083
Phone: 248-740-6227
Fax: 248-740-6031
Email: tom.tucker@cn.ca

INITIAL NOTIFICATION OF INTENT TO CONSTRUCT PIPELINE CROSSING/ENCROACHMENT
 Complete this form and return it along with a **COPY OF YOUR PLAT, LEGAL DESCRIPTION AND DETAILED
 CROSS SECTIONS** and a non-refundable preparation fee of \$750 made out to CN.

DATE: _____

1. Owner/Applicant Information

Name and Address: _____

Authorized Representative: _____ Title _____

Phone Number: _____ Fax Number _____ Email _____

2. Location Of Pipeline

Pipeline Location Mile Post: _____ plus _____ feet (if

parallel) to Mile Post: _____ plus _____ feet

At or Near _____ (Name of City, Town, Village)

3. Commodity to be transmitted in pipe line: _____

(steam, air, water, gasoline or other petroleum products, chemical-specify: natural or artificial gas. If sewer, identify as to force or gravity line, sanitary, storm or chemical waste – specify)

4. Pipe Data

CARRIER PIPE

CASING PIPE

A. Inside Diameter: _____

B. Outside Diameter: _____

C. Wall Thickness: _____

D. Pipe Material: _____

E. Specification/Grade or class: _____

F. Min. Yield Point of Material _____

G. Process of Manufacture _____

H. Name of Manufacturer _____

I. Type of Joint _____

J. Working Pressure _____

K. Maximum operating pressure in pipeline: _____ (psi by gauge)

L. Length of Casing pipe: _____ Feet

M. Will casing pipe/uncased carrier pipe be cathodically protected: _____

N. Hydrostatic pressure carrier pipe will be tested with before using _____ (psi)

O. Will casing pipe be vented? _____ Size: _____

P. Will casing pipe/uncased carrier pipe have a protective coating? _____ Type: _____

Q. Depth of top of casing or uncased carrier pipe below base of rail or top of ground _____ feet.

(Minimum at closest point)

R. Method of installing casing pipe /uncased carrier pipe _____
 (dry bore & jack, directional, tunnel, other – specify)

Attach to this application (3 copies) showing north arrow and a location sketch with crossings measured from the nearest railroad mile post and a profile sketch of actual situations showing relationship of tracks, contour of ground, the buried pipe, etc. Distance from each facility (encroachment) to the centerline of nearest road, crossing, bridge or other Railroad structures, must be clearly indicated. Right of way lines of railroad and labeled Street or highway, if involved, should also be shown.

INITIAL NOTIFICATION OF INTENT TO CONSTRUCT PIPELINE CROSSING/ENCROACHMENT
Complete this form and return it along with a COPY OF YOUR PLAT, LEGAL DESCRIPTION AND DETAILED
CROSS SECTIONS and a non-refundable preparation fee of \$750 made out to CN.

DATE: _____

<p>1. Owner/Applicant Information</p> <p>Name and Address: _____ _____</p> <p>Authorized Representative: _____ Title _____</p> <p>Phone Number: _____ Fax Number _____</p> <p>Email Address: _____</p>	
<p>2. Engineer/Consultant Information</p> <p>Name and Address: _____ _____</p> <p>Authorized Representative: _____ Title _____</p> <p>Phone Number: _____ Fax Number _____</p> <p>Email Address: _____</p>	
<p>3. Location Description (Attach a Copy of a Sketch Showing Location)</p> <p>_____ 1/4 _____ 1/4 Sec. _____, Township _____, Range _____</p> <p>(Circle One)</p> <p>City / Village /Township: _____</p> <p>County: _____ State: _____</p> <p>Wireline Location Mile Post: _____ plus _____ feet (if parallel) to Mile Post: _____ plus _____ feet</p>	
<p>4. Indicate Type of Utility/Facility:</p> <p>Power Line _____</p> <p>Telephone _____ Fiber Optic _____ Copper Pair _____</p> <p>Cable TV _____ Fiber Optic _____ Coaxial _____</p> <p>Other _____ _____</p>	<p>5. Desired Method of Installation/Construction</p> <p>Underground _____</p> <p>Overhead _____</p> <p>Crossing _____</p> <p>Longitudinal _____</p> <p>Copper Pairs _____ # of Wires _____</p> <p>Fiber Optic _____ # of Strands _____</p> <p>Other _____</p>

6. Wire/Cable Data

- a. Number of Poles/Towers on Property _____
- b. Number of Guys/Anchors on Property _____
- c. Crossarm Overhang (feet & quantity) _____
- d. Maximum Voltage _____
- e. Number of Wires/Cables/Pairs/Strands (circle one) _____
- f. Depth of Top of Wire/Cable/Casing below base of Rail or Top of Ground _____
- g. Clearance Over Railroad Company's Wires _____
- h. Clearance Over Railroad Company's Tracks _____
- i. Casing Length (Property Line to Property Line) _____
- j. Size & Kind of Pipe or Duct _____
- k. Method: How is Pipe or Duct to be installed under the track (dry bore & jack, directional, tunnel, other – specify) _____
- l. Size and Type of Wire/Cable _____
- m. Insulated _____
- n. Bare/Open Wire _____
- o. Stranded _____
- p. Solid _____
- q. Angle of Crossing _____
- r. Length of Span Crossing Tracks _____

7. Location References and Clearances of Facility (Encroachment)

- a. Name of Public Road (crossing track) _____
- b. Width of Public Road (crossing track) _____
- c. Distance From Each Facility (Encroachment) to Center Line of Main Track _____
- d. Distance From Each Facility (Encroachment) to Center Line of any Adjacent Track _____
- e. Side Clearance from Railroad Company's Wire to Nearest Pole/Tower _____
- f. Distance and Direction From Bridge Abutment, Culvert, Switch, Road Crossing, etc. _____

(Do Not Use Milepost Sign as Reference) (Enclose plans of proposed facility with North Arrow and a vicinity map)

Attach to this application (3 copies) showing north arrow and a location sketch with crossings measured from the nearest railroad mile post and a profile sketch of actual situations showing relationship of tracks, contour of ground, the buried pipe, etc. Distance from each facility (encroachment) to the centerline of nearest road, crossing, bridge or other Railroad structures, must be clearly indicated. Right of way lines of railroad and labeled Street or highway, if involved, should also be shown.

COMPREHENSIVE ASBESTOS SURVEY REPORTS

- Residential Property
33W012 Stearns Road
Elgin, IL 60120
- Residence
32W772 Stearns Road
Elgin, IL 60120

**Midwest
Environmental
Consulting Services, Inc.**

**COMPREHENSIVE
ASBESTOS SURVEY**

Performed for:

**KANE COUNTY DIVISION OF TRANSPORTATION
41W011 Burlington Road
St. Charles, IL 60175**

Project Location:

***RESIDENTIAL PROPERTY
33W012 Stearns Road
Elgin, IL 60120***

Inspection Date: October 6, 2006
Report Date: October 16, 2006

MEC PROJECT #: 06-09-374-INSP

1ST0008

1ST0008

196

KANE COUNTY DIVISION OF TRANSPORTATION
Residential Property
33W012 Stearns Road
Elgin, IL 60120

Table of Contents
MEC Project #: 06-09-374-INSP

<i>Narrative</i>	<i>Section One</i>
<i>ACM Table</i>	<i>Section Two</i>
<i>Pictures of Homogeneous Areas</i>	<i>Section Three</i>
<i>Final Analytical Report</i>	<i>Section Four</i>
<i>Certifications</i>	<i>Section Five</i>

Section 1:

Introduction:

Midwest Environmental Consulting Services, Inc., (MEC) was retained by the Kane County Department of Transportation to conduct a comprehensive asbestos inspection for the vacant residential property located at 33W012 Stearns Road, in Elgin, Illinois, 60120. The asbestos inspection was conducted on October 6, 2006. This inspection was intended to address the potential existence of asbestos containing materials (ACM) within the residence.

Section 2:

Protocol:

The bulk sampling strategy is based upon the protocol of homogeneous areas established by the United States Environmental Protection Agency (USEPA). A homogeneous sampling area (HSA) is defined as an area of material that is uniform in color, texture, construction, general appearance, and date of installation.

Bulk samples of suspect ACM were analyzed by Polarized Light Microscopy (PLM) utilizing the EPA-600/M4-82-020 Method. Bulk samples were analyzed using Asbestos Hazard Emergency Response Act (AHERA) "positive stop" protocol, meaning each sample of each HSA group is analyzed until asbestos is found in the HSA or all samples in the group are analyzed and are negative for asbestos content.

Section 3:

Building Description:

This property consists of a one-story wood structure building with a full basement. The house was constructed in approximately 1960's. The walls consist of plaster and drywall. Flooring consists of carpet (with plywood sub floor), linoleum, ceramic tile, and vinyl floor tile. The house is pitched asphalt shingles. The house is currently scheduled to be demolished.

Section 4:

Scope of Work:

The purpose of the inspection was to address the following objectives:

- Inspect friable and non-friable asbestos containing building materials within the specific scope of work.
- The survey was intended to identify all suspect asbestos containing homogeneous areas, and did not attempt to identify or address any other environmental health hazards.
- The scope of work did not include identifying all potential concerns or eliminate possible risks.

A total of twelve (12) homogeneous areas were identified within the scope of work. Out of the twelve (12) homogeneous areas, three (3) of the homogeneous areas have tested positive for asbestos, and none were assumed to contain asbestos.

Asbestos Containing Materials:

- TDA – Thermal Duct Insulation
- MFD – Linoleum – White & Tan Marble Pattern
- MMA – Window Caulking

Assumed Asbestos Containing Materials:

- None

Section 5:

Executive Summary:

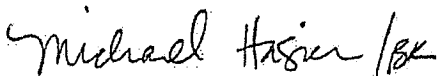
Standard practice requires that the owner provide Certified-As-Built drawings for review by the inspector. At the time of the inspection, these drawings were not available. Therefore, the accuracy of the inspection can only be based on the materials that were accessible or known about prior to the inspection. If a suspect material is identified during demolition, all work shall stop immediately until the materials can be sampled for asbestos.

During demolition, it is recommended that a project design, project oversight, and air monitoring be in place prior to any work being conducted. An Illinois Department of Public Health licensed asbestos abatement contractor must be in place prior to any asbestos abatement activities.

Prior to any planned renovation taking place, Midwest Environmental Consulting Services, Inc., strongly recommends that either the client contact Midwest Environmental Consulting Services, Inc., or the Illinois Department of Public Health in regards to current rules and regulations.

Although Midwest Environmental Consulting Services, Inc., has attempted to identify all suspect asbestos materials located inside of the building; some materials may have been inaccessible. Midwest Environmental Consulting Services, Inc., makes no warranty, expressed or implied.

Sincerely,
Midwest Environmental Consulting Services, Inc.



Michael Hasier
Building Inspector
(IDPH #100-09106)

Midwest Environmental Consulting Services, Inc.
 4 Bonnie Lane
 Yorkville, IL 60560
 630-553-3989

Project Date: 10/06/06

Asbestos Bulk Sample Field Summary

Client: Kane County Division of Transportation
 Project Location: Vacant Residential Property
 Address: 33W012 Stearns Road, Elgin, IL
 MEC Project #: 06-09-374-INSP
 Inspector: Michael Hasler #100-09106

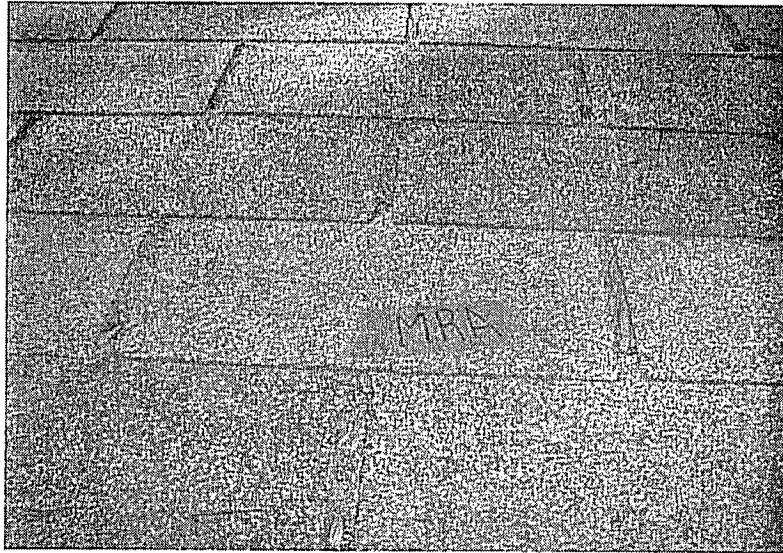
Sample #	Material Description	Location	Approx. Quantity	ACM Yes/No	Comments
MRA	Roofing Shingles – Red	Roof	3,000 S.F.	No	
TDA	Thermal Duct Insulation	Basement	40 L.F.	Yes	Material Found Above Drywall Ceiling.
SPA	Plaster	Throughout	N/A	No	
MFA	Linoleum – White Square Pattern	Kitchen	150 S.F.	No	
MFB	12x12 Floor Tile/Mastic – Brown Square Pattern	Garage Entrance Hallway	40 S.F.	No	
MFC	12x12 Floor Tile/Mastic – Cream w/ Gray Specks	Basement	500 S.F.	No	
MFD	Linoleum – White & Tan Marble Pattern	Living Room Closet	10 S.F.	Yes	
MDA	Textured Drywall w/Tape & Joint Compound	Garage	N/A	No	
WMA	Window Caulking	Exterior Windows	15 Windows	Yes	
MMB	9x9 Ceramic Floor Tile w/Grout – White	1 st Floor Bathroom	30 S.F.	No	
MMC	Window Glazing	Exterior Windows	15 Windows	No	
MMD	Blown-In Attic Insulation	Attic	1,000 S.F.	No	No photo available.

200

Inspection performed for:
 KANE COUNTY DIVISION OF TRANSPORTATION
 41W011 Burlington Road
 St. Charles, IL 60175
 MEC Project #: 06-09-374-INSP

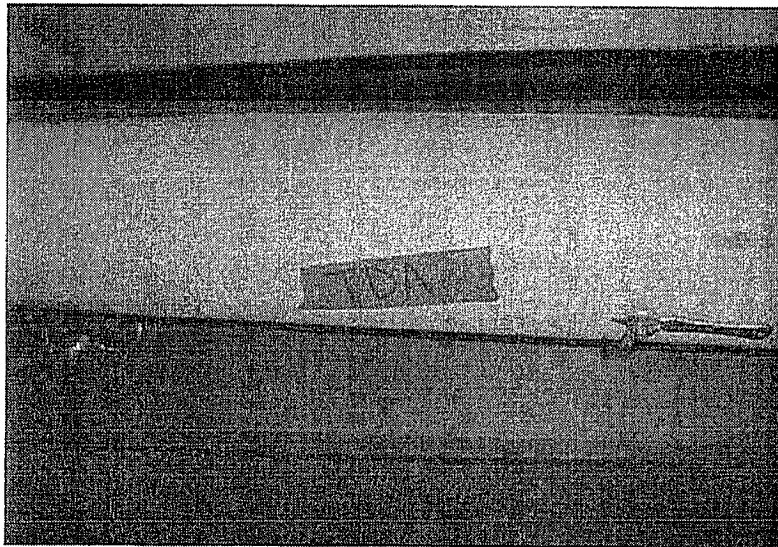
KANE COUNTY DIVISION OF TRANSPORTATION

Residential Property
 33W012 Stearns Road
 Elgin, IL 60120



Homogeneous Area:	MRA
Material Description:	Roofing Shingles - Red
Location:	Roof
ACM Y/N:	No

Comments:

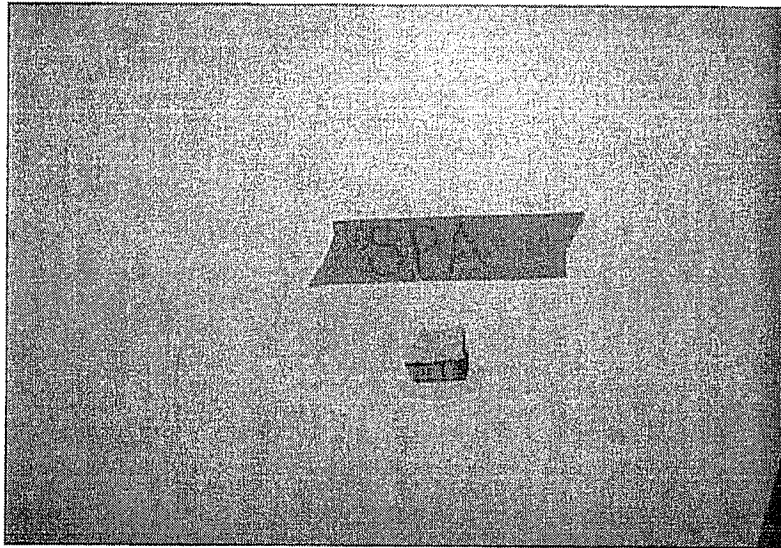


Homogeneous Area:	TDA
Material Description:	Thermal Duct Insulation
Location:	Basement
ACM Y/N:	Yes

Comments: Material Found Above Drywall Ceiling.

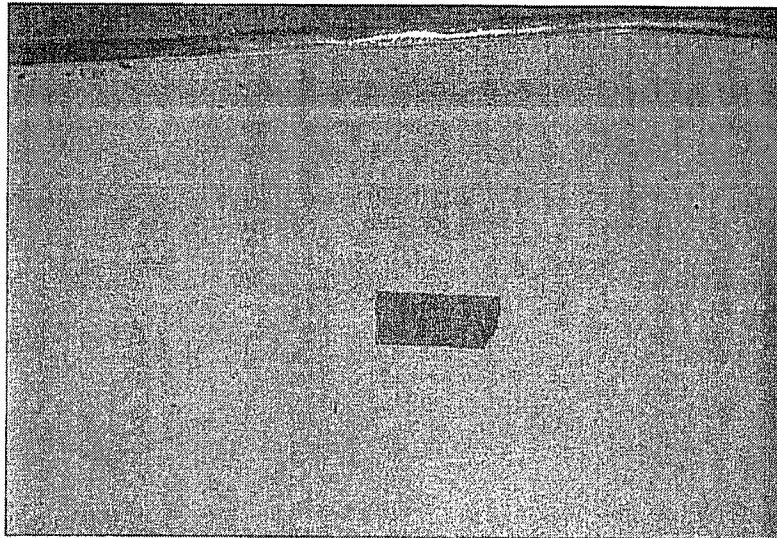
KANE COUNTY DIVISION OF TRANSPORTATION

Residential Property
 33W012 Stearns Road
 Elgin, IL 60120



Homogeneous Area:	SPA
Material Description:	Plaster
Location:	Throughout
ACM Y/N:	No

Comments:

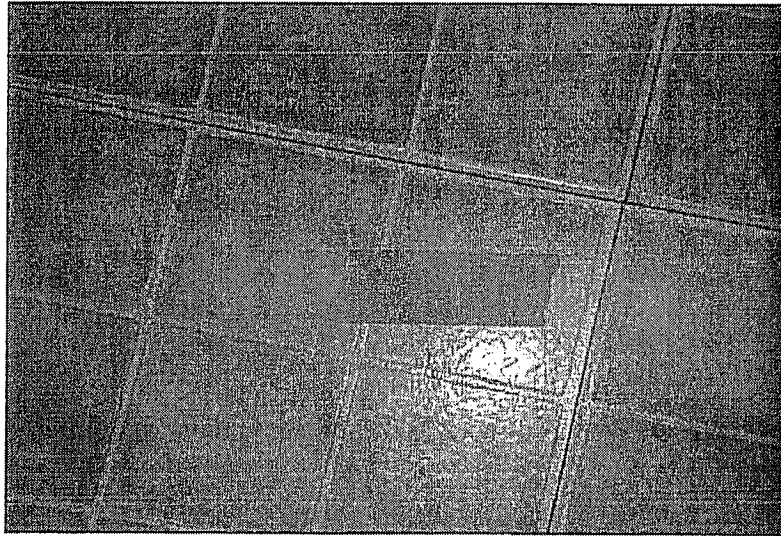


Homogeneous Area:	MFA
Material Description:	Linoleum - White Square Pattern
Location:	Kitchen
ACM Y/N:	No

Comments:

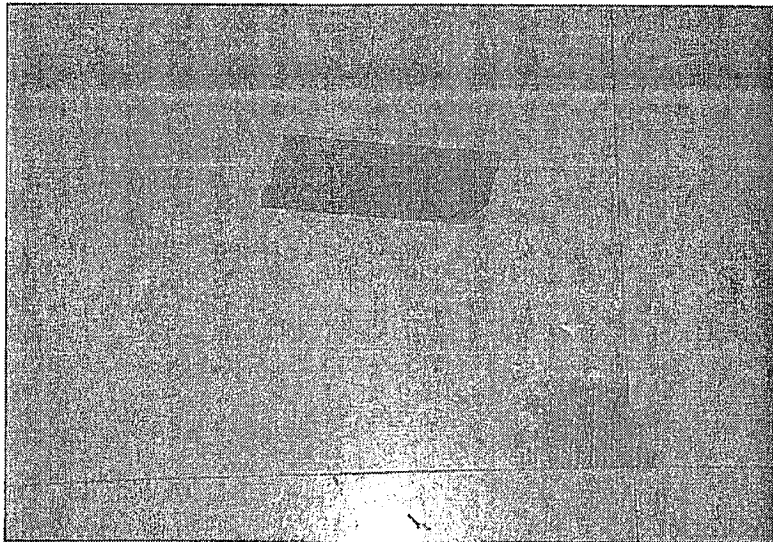
KANE COUNTY DIVISION OF TRANSPORTATION

Residential Property
33W012 Stearns Road
Elgin, IL 60120



Homogeneous Area:	MFB
Material Description:	12x12 Floor Tile/Mastic – Brown Square Pattern
Location:	Garage Entrance Hallway
ACM Y/N:	No

Comments:

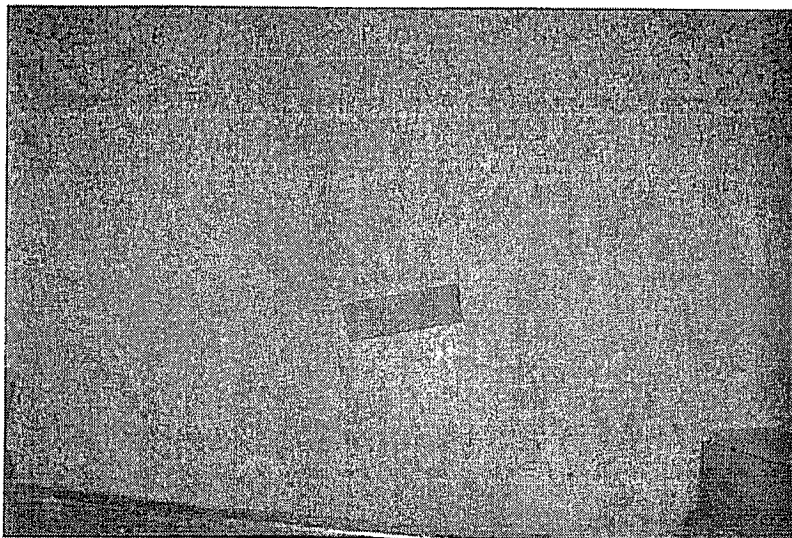


Homogeneous Area:	MFC
Material Description:	12x12 Floor Tile/Mastic – Cream w/Gray Specks
Location:	Basement
ACM Y/N:	No

Comments:

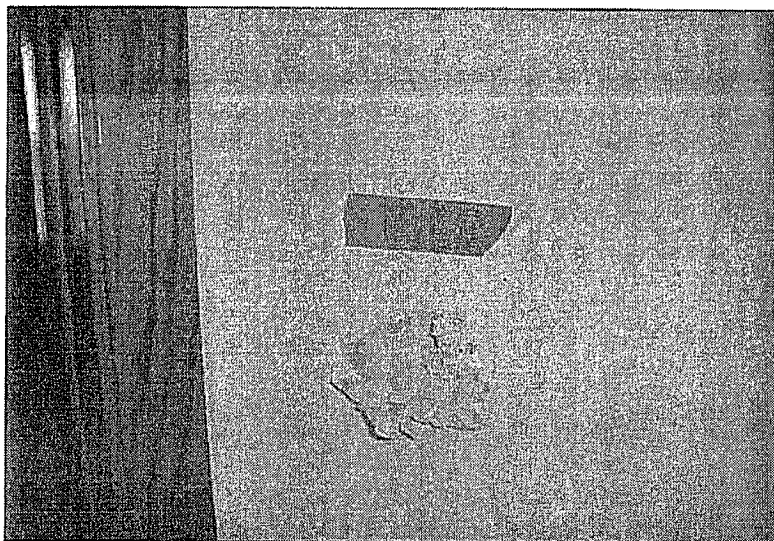
KANE COUNTY DIVISION OF TRANSPORTATION

Residential Property
 33W012 Stearns Road
 Elgin, IL 60120



Homogeneous Area:	MFD
Material Description:	Linoleum – White & Tan Marble Pattern
Location:	Living Room Closet
ACM Y/N:	Yes

Comments:



Homogeneous Area:	MDA
Material Description:	Textured Drywall w/Tape & Joint Compound
Location:	Garage
ACM Y/N:	No

Comments:

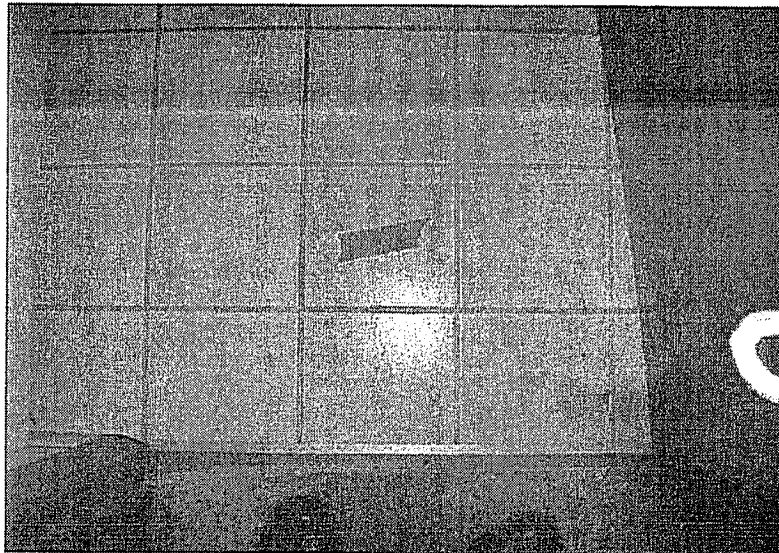
KANE COUNTY DIVISION OF TRANSPORTATION

Residential Property
33W012 Stearns Road
Elgin, IL 60120



Homogeneous Area:	MMA
Material Description:	Window Caulking
Location:	Exterior Windows
ACM Y/N:	Yes

Comments:



Homogeneous Area:	MMB
Material Description:	9x9 Ceramic Floor Tile w/Grout - White
Location:	1 st Floor Bathroom
ACM Y/N:	No

Comments:

KANE COUNTY DIVISION OF TRANSPORTATION

Residential Property
33W012 Stearns Road
Elgin, IL 60120



Homogeneous Area:	MMC
Material Description:	Window Glazing
Location:	Exterior Windows
ACM Y/N:	No

Comments:

NO PHOTO AVAILIABLE

Homogeneous Area:	MMD
Material Description:	Blown-In Attic Insulation
Location:	Attic
ACM Y/N:	No

Comments:

STAT Analysis Corporation

2201 West Campbell Park Drive Chicago, IL 60612-3547

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

AIHA Accreditation # 101160 ; NVLAP Lab Code # 101202-0

NVLAP &

**ASBESTOS ANALYSIS BY POLARIZED LIGHT MICROSCOPY**

Method: EPA-600/M4-82-020

Midwest Environmental Consulting Serv., Inc.

4 Bonnie Lane

Yorkville, IL 60560

Phone: (630) 553-3989

Fax: (630) 553-3990

Client Reference: 06.09.374

Location: 33W012 Steams Rd

STAT Batch No.: 268091

STAT Client No.: 244

Date Received: 10/10/2006

Date Analyzed: 10/13/2006

Date Reported: 10/13/2006

Turn Around Time: 5 Days

Laboratory Sample	Client Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
268091001	MRA-1	ND	Binder 99-100%
268091002	MRA-2	ND	Binder 99-100%
268091003	MRA-3	ND	Binder 99-100%
268091004	TDA-1	Chrysotile 10-15%	Binder 85-90%
268091005	TDA-2	NA	
268091006	TDA-3	NA	
268091007	SPA-1	ND	Cellulose 5-10% Binder 90-95%
268091008	SPA-2	ND	Cellulose 5-10% Binder 90-95%
268091009	SPA-3	ND	Cellulose 5-10% Binder 90-95%
268091010	SPA-4	ND	Binder 99-100%
268091011	SPA-5	ND	Binder 99-100%
268091012	MFA-1	ND	Binder 99-100%
268091013	MFA-2	ND	Binder 99-100%
268091014	MFA-3	ND	Binder 99-100%
268091015	MFA-1M	ND	Binder 99-100%

ND = Asbestos Not Detected, NA - Not Analyzed, NS = Not Submitted

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Page 1 of 4

Analyzed by Name :

Date: 10/13/2006



Analysis Corporation

2201 West Campbell Park Drive Chicago, IL 60612-3547

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

AIHA Accreditation # 101160 ; NVLAP Lab Code # 101202-0



ASBESTOS ANALYSIS BY POLARIZED LIGHT MICROSCOPY

Method: EPA-600/M4-82-020

Midwest Environmental Consulting Serv., Inc.

4 Bonnie Lane

Yorkville, IL 60560

Phone: (630) 553-3989

Fax: (630) 553-3990

Client Reference: 06.09.374

Location: 33W012 Steams Rd

STAT Batch No.: 268091

STAT Client No.: 244

Date Received: 10/10/2006

Date Analyzed: 10/13/2006

Date Reported: 10/13/2006

Turn Around Time: 5 Days

Laboratory Sample	Client Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
268091016	MFA-2M	ND	Binder 99-100%
268091017	MFA-3M	ND	Binder 99-100%
268091018	MFB-1	ND	Binder 99-100%
268091019	MFB-2	ND	Binder 99-100%
268091020	MFB-3	ND	Binder 99-100%
268091021	MFB-1M	ND	Binder 99-100%
268091022	MFB-2M	ND	Binder 99-100%
268091023	MFB-3M	ND	Binder 99-100%
268091024	MFC-1	ND	Binder 99-100%
268091025	MFC-2	ND	Binder 99-100%
268091026	MFC-3	ND	Binder 99-100%
268091027	MFC-1M	ND	Binder 99-100%
268091028	MFC-2M	ND	Binder 99-100%
268091029	MFC-3M	ND	Binder 99-100%
268091030	MFD-1	Chrysotile 5-10%	Binder 90-95%
268091031	MFD-2	NA	
268091032	MFD-3	NA	

ND = Asbestos Not Detected. NA = Not Analyzed. NS = Not Submitted

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Page 2 of 4

Analyzed by Name :

Date: 10/13/2006

STAT Analysis Corporation

2201 West Campbell Park Drive Chicago, IL 60612-3547

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

AIHA Accreditation # 101160 ; NVLAP Lab Code # 101202-0

NVLAP &

**ASBESTOS ANALYSIS BY POLARIZED LIGHT MICROSCOPY**

Method: EPA-600/M4-82-020

Midwest Environmental Consulting Serv., Inc.

4 Bonnie Lane

Yorkville, IL 60560

Phone: (630) 553-3989

Fax: (630) 553-3990

Client Reference: 06.09.374

Location: 33W012 Steams Rd

STAT Batch No.: 268091

STAT Client No.: 244

Date Received: 10/10/2006

Date Analyzed: 10/13/2006

Date Reported: 10/13/2006

Turn Around Time: 5 Days

Laboratory Sample	Client Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
268091033	MFD-1M	No Mastic	
268091034	MFD-2M	No Mastic	
268091035	MFD-3M	No Mastic	
268091036	MDA-1	ND	Cellulose 5-10% Binder 90-95%
268091037	MDA-2	ND	Cellulose 5-10% Binder 90-95%
268091038	MDA-3	ND	Cellulose 5-10% Binder 90-95%
268091039	MMA-1	Chrysotile 1-5%	Binder 95-99%
268091040	MMA-2	NA	
268091041	MMA-3	NA	
268091042	MMB-1	ND	Binder 99-100%
268091043	MMB-2	ND	Binder 99-100%
268091044	MMB-3	ND	Binder 99-100%
268091045	MMC-1	ND	Binder 99-100%
268091046	MMC-2	ND	Binder 99-100%
268091047	MMC-3	ND	Binder 99-100%

ND = Asbestos Not Detected. NA = Not Analyzed NS = Not Submitted

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Page 3 of 4

Analyzed by Name :

Date: 10/13/2006

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Client Reference: 06.09.374

Location: 33W012 Stearns Rd

STAT Batch No.: 268091

STAT Client No.: 244

Date Received: 10/10/2006

Date Analyzed: 10/13/2006

Date Reported: 10/13/2006

Turn Around Time: 5 Days

Laboratory Sample	Client Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
268091048	MMD-1	ND	Binder 99-100%
268091049	MMD-2	ND	Binder 99-100%
268091050	MMD-3	ND	Binder 99-100%

ND = Asbestos Not Detected, NA - Not Analyzed, NS = Not Submitted

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Page 4 of 4

Analyzed by Name :

210

Date: 10/13/2006

Illinois Department of
PUBLIC HEALTH



ASBESTOS PROFESSIONAL LICENSE

ID NUMBER ISSUED EXPIRES
100 - 09106 8/11/2006 05/15/2007

MICHAEL S HASLER
1857 Texas Street
Chesterton, IN 46304
Environmental Health



DUPLICATE

See Reverse for Endorsements

State of Illinois A 169176
Department of Public Health
LICENSE, PERMIT, CERTIFICATION, REGISTRATION

EXPIRATION DATE	CATEGORY	I.D. NUMBER
01/31/2007	5317	L- 007636

Michael S Hasler
LEAD INSPECTOR/RISK ASSESSOR LICENSE

TC CERTIFICATE EXPIRES 05/16/2009

State of Illinois A 169176

Department of Public Health

LICENSE, PERMIT, CERTIFICATION, REGISTRATION

The person, firm or corporation whose name appears on this certificate has complied with the provisions of the Illinois Statutes and/or rules and regulations and is hereby authorized to engage in the activity as indicated below:

ERIC E. WHITAKER, M.D. M.P.H. Issued under the authority of
DIRECTOR The State of Illinois
Department of Public Health

EXPIRATION DATE	CATEGORY	I.D. NUMBER
01/31/2007	5317	L- 007636

Michael S Hasler
LEAD INSPECTOR/RISK ASSESSOR

BUSINESS ADDRESS

Alliance Environmental Control, Inc
18050 Exchange
Lansing IL 60438
YOUR CURRENT TRAINING COURSE
CERTIFICATE EXPIRES 05/16/2009

Printed by Authority of the State of Illinois • 205 •

ENDORSEMENTS
SUPERVISOR/WORKER
INSPECTOR

TC EXPIRES
5/6/2007
6/2/2007

PROJECT MANAGER
AIR SAMPLING PROFESSIONAL

5/6/2007

Alteration of this license shall result in legal action
This license issued under authority of the State of Illinois - Department of Public Health
This license is valid only when accompanied by a valid training course certificate
Environmental Health
Department of Public Health
If found return to 525 W. Jefferson St Springfield, IL 62761

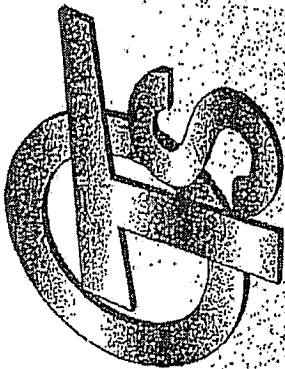
THE PERSON, FIRM OR CORPORATION WHOSE NAME APPEARS ON THIS CERTIFICATE HAS COMPLIED WITH THE PROVISIONS OF THE ILLINOIS STATUTES AND/OR RULES AND REGULATIONS AND IS HEREBY AUTHORIZED TO ENGAGE IN THE ACTIVITY INDICATED ON THE FACE OF THIS CARD.



ISSUED UNDER THE AUTHORITY OF
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC HEALTH

SIGNATURE OF LICENSEE

State of Illinois			A 169176
Department of Public Health			
LICENSE, PERMIT, CERTIFICATION, REGISTRATION			
The person, firm or corporation whose name appears on this certificate has complied with the provisions of the Illinois Statutes and/or rules and regulations and is hereby authorized to engage in the activity as indicated below.			
ERIC E. WHITAKER, M.D. M.P.H. DIRECTOR		Issued under the authority of The State of Illinois Department of Public Health	
EXPIRATION DATE 01/31/2007	CATEGORY 5317	I.D. NUMBER L- 007636	
Michael S Hasler LEAD INSPECTOR/RISK ASSESSOR			
BUSINESS ADDRESS			
Alliance Environmental Control, Inc 1805 Exchange Lansing IL 60438 YOUR CURRENT TRAINING COURSE CERTIFICATE EXPIRES 05/16/2009			
Printed by Authority of the State of Illinois • 2/05 •			



Occupational Training & Supply, Inc.

7233 Adams Street ♦ Willowbrook, IL 60527 ♦ (630) 655-3900

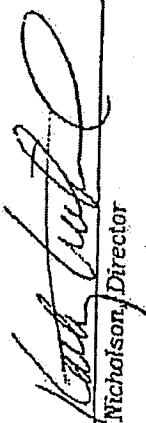
Michael S. Hasier

has successfully completed the 4 hour Asbestos Building Inspector Refresher course and has passed the competency exam with a minimum score of 70%. This course is accredited by the Illinois Department of Public Health and the Indiana Department of Environmental Management for purposes of accreditation in accordance with EPA 40 CFR 763, Asbestos Hazard Emergency Response Act (AHERA) and TSCA Title II.

Asbestos Building Inspector Refresher

Course Date: June 2, 2006

Expiration Date: June 2, 2007


Kathy Nicholson, Director

Exam Date: June 2, 2006

Certificate: BJR0606021412

2006



UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899-

May 25, 2006

Dr. Surendra N. Kumar
STAT Analysis Corporation
2201 W. Campbell Park Dr.
Chicago, IL 60612

NVLAP Lab Code: 101202-0

Dear Dr. Kumar:

I am pleased to inform you that continuing accreditation for specific test methods in Bulk Asbestos Fiber Analysis (PLM) is granted to your organization under the National Voluntary Laboratory Accreditation Program (NVLAP). This accreditation is effective until June 30, 2007, provided that your organization continues to comply with accreditation requirements contained in the NVLAP Procedures.

Your Certificate of Accreditation is enclosed along with a statement of your Scope of Accreditation. You may reproduce these documents in their entirety and announce your organization's accreditation status using the NVLAP logo in business publications, the trade press, and other business-oriented literature. Accreditation does not relieve your organization from observing and complying with any applicable existing laws and/or regulations.

We are pleased to have you participate in NVLAP and look forward to your continued association with this program. If you have any questions concerning your NVLAP accreditation, please direct them to Thomas R. Davis, Sr. Program Manager, Laboratory Accreditation Program, National Institute of Standards and Technology, 100 Bureau Dr. Stop 2140, Gaithersburg, MD 20899-2140; (301) 975-4016.

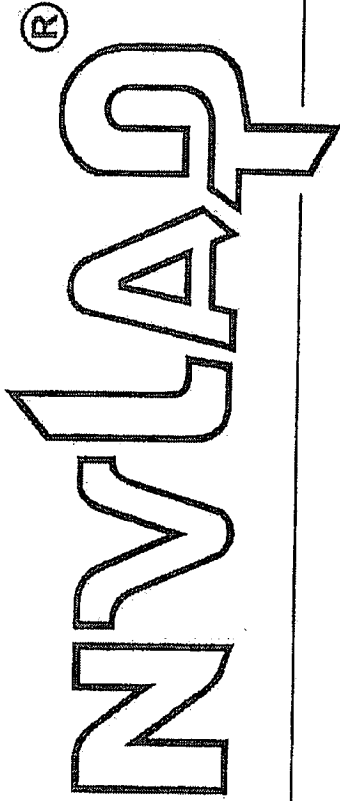
Sincerely,

Sally S. Bruce, Chief
Laboratory Accreditation Program

Enclosure(s)

NIST

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:1999

NVLAP LAB CODE: 101202-0

STAT Analysis Corporation
Chicago, IL

is recognized by the National Voluntary Laboratory Accreditation Program for conformance with criteria set forth in
NIST Handbook 150:2001 and all requirements of ISO/IEC 17025:1999.
Accreditation is granted for specific services, listed on the Scope of Accreditation, for:

BULK ASBESTOS FIBER ANALYSIS



2006-07-01 through 2007-06-30

Effective dates

Dolly A. Bruce
For the National Institute of Standards and Technology



**National Voluntary
Laboratory Accreditation Program**



SCOPE OF ACCREDITATION TO ISO/IEC 17025:1999

STAT Analysis Corporation
2201 W. Campbell Park Dr.
Chicago, IL 60612
Dr. Surendra N. Kumar
Phone: 312-733-0551 Fax: 312-733-2386
E-Mail: SKumar@STATAnalysis.com
URL: <http://www.STATAnalysis.com>

BULK ASBESTOS FIBER ANALYSIS (PLM)

NVLAP LAB CODE 101202-0

<i>NVLAP Code</i>	<i>Designation / Description</i>
18/A01	EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples

2006-07-01 through 2007-06-30

Effective dates

Sally A. Bruce

For the National Institute of Standards and Technology

**Midwest
Environmental
Consulting Services, Inc.**

**NESHAP
ASBESTOS SURVEY**

Performed for:

**DuPAGE COUNTY OF TRANSPORTATION
421 N. County Farm Road
Wheaton, IL 60187**

Project Location:

***RESIDENCE
32W772 Stearns Road
Elgin, IL 60120***

Inspection Date: December 31, 2008
Report Date: January 19, 2009

MEC PROJECT # 08-11-555-INSP

217

DuPAGE COUNTY OF TRANSPORTATION

Residence

32W772 Stearns Road

Elgin, IL 60120

Table of Contents

MEC Project #08-11-555-INSP

Narrative

Section One

ACM Table

Section Two

Pictures of Homogeneous Areas

Section Three

Final Analytical Report

Section Five

Certifications

Section Six

SECTION 1:
NARRATIVE

Section 1:

Introduction:

Midwest Environmental Consulting Services, Inc., (MEC) was retained by the DuPage County Division of Transportation, Wheaton, Illinois, to conduct a NESHAP asbestos building survey with bulk material sampling of suspect asbestos containing materials (ACM) at the residence located at 32W772 Stearns Road in Elgin, Illinois. The asbestos inspection was performed on December 31, 2008. This inspection/sampling was intended to address the potential existence of ACMs within accessible areas at the residence so that they may be removed prior to demolition of this residence.

Section 2:

Inspection Protocol:

The bulk sampling strategy is based upon the protocol of homogeneous areas established by the United States Environmental Protection Agency (USEPA). A homogeneous sampling area (HSA) is defined as an area of material that is uniform in color, texture, construction, general appearance, and date of installation.

Bulk samples of suspect ACM forwarded to an independent laboratory for analysis using Polarized Light Microscopy (PLM) in conformance with the EPA-600/M4-82-020 Method. Bulk samples were analyzed using Asbestos Hazard Emergency Response Act (AHERA) "positive stop" protocol, meaning each sample of each HSA group is analyzed until asbestos is found in the HSA or all samples in the group are analyzed and are negative for asbestos content.

Section 3:

Building Description:

The residence is a two-story plus full basement, brick building. A garage is contiguous with the residence to the east. The residence has a pitched roof. The building was constructed in the 1940's, according to building occupants.

Section 4:

Scope of Work:

The inspection was to address the following objectives:

- Observe, assess, and collect bulk samples of friable and non-friable asbestos containing building materials within the specific scope of work.
- The inspection was intended to identify all homogeneous areas, and did not attempt to identify or address any other environmental health hazards.
- The scope of work did not include identifying all potential concerns or eliminate possible risks.

A total of seventeen (17) homogeneous areas were identified within the scope of work. Out of the seventeen (17) homogeneous areas, three (3) of the homogeneous areas tested positive for asbestos content and no homogeneous areas were assumed to contain asbestos:

Asbestos Containing Materials:

- MFE - 12 x 12 Floor Tile At The Kitchen
- MME - Exhaust Flue Packing At The Basement West Wall
- MMI - Exterior Window & Door Caulk

Assumed Asbestos Containing Materials:

- None

Section 5:

Recommendations and Limitations:

Standard practice requires that the owner provide Certified-As-Built drawings for review by the inspector. At the time of the inspection, these drawings were not available. Therefore, the accuracy of the inspection can only be based on the materials that were accessible or known about prior to the inspection. If a suspect material is identified during demolition, all work shall stop immediately until the materials can be sampled for asbestos content.

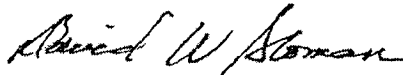
During demolition, it is recommended that a project design, project oversight, and air monitoring be in place prior to any asbestos abatement work being conducted. An Illinois Department of Public Health (IDPH) licensed asbestos abatement contractor must be in place prior to any asbestos abatement activities.

Prior to any planned demolition taking place, Midwest Environmental Consulting Services, Inc., strongly recommends that either the client contact Midwest Environmental Consulting Services, Inc., or the Illinois Department of Public Health in regards to current rules and regulations.

Although Midwest Environmental Consulting Services, Inc., has attempted to identify all suspect asbestos materials located on the inside of the building; some materials may have been inaccessible. Midwest Environmental Consulting Services, Inc. makes no warranty, expressed or implied.

Sincerely,

MIDWEST ENVIRONMENTAL CONSULTING SERVICES, INC.



David W. Sloman
Asbestos Building Inspector
(IDPH #100-04883)

SECTION 2:
ACM TABLE

Midwest Environmental Consulting Services, Inc.
 4 Bonnie Lane
 Yorkville, IL 60560
 630-553-3989

Project Date: 12/31/08

Asbestos Bulk Sample Field Summary

Client: DuPage County Division of Transportation

Location: Residence

Project #: 08-11-555-INSP

Address: 32W772 Stearns Road, Elgin, IL

Inspector: Dave Sloman #100-048883

HSA #	Material Description	Location	Approx. Quantity	ACM Yes/No	Comments
SPA	Plaster Walls/Ceilings	Throughout Residence	5,000 S.F.	No	
MMA	Loose Attic Insulation	Attic	400 S.F.	No	
MFA	9x9 Floor Tile/Mastic -- Brown Tile/Yellow Mastic	Throughout 2 nd Level, Including Below Carpeting	400 S.F.	No	
MMB	4x4 Cream-Colored Ceramic Tile/Yellow Mastic	2 nd Level Bathroom Walls	40 L.F.	No	
MFB	9x9 Ceramic Tile/Mastic	2 nd Level Bathroom Floor	48 S.F.	No	
MFC	9x9 Ceramic Tile/Mastic	1 st Level Foyer	20 S.F.	No	
MFD	12x12 Floor Tile/Mastic	1 st Level Bathroom	20 S.F.	No	
MFE	12x12 Floor Tile/Mastic	Kitchen	68 S.F.	Yes	
MMC	Tar Paper Underlayment	Kitchen	68 S.F.	No	
MMD	Tile Residue	Kitchen/Basement Stairway Landing	40 S.F.	No	
MME	Flue Packing	Basement Wall	1 S.F.	Yes	

Inspection performed for:
 DUPAGE COUNTY DEPARTMENT OF TRANSPORTATION
 421 North County Farm Road
 Wheaton, IL 60187
 MEC Project #08-11-555-INSP

Midwest Environmental Consulting Services, Inc.
 4 Bonnie Lane
 Yorkville, IL 60560
 630-553-3989

Project Date: 12/31/08

Asbestos Bulk Sample Field Summary

Client: DuPage County Division of Transportation

Location: Residence

Project #: 08-11-555-INSP

Address: 32W772 Stearns Road, Elgin, IL

Inspector: Dave Sloman #100-04883

HSA #	Material Description	Location	Approx. Quantity	ACM Yes/No	Comments
MFF	9x9 Ceramic Tile/Mastic - Cream	1 st Level (Center Area)	15 S.F.	No	
MMF	Roof Shingles	House & Garage	800 S.F.	No	
MMG	Loose Insulation	Garage Ceiling Plenum	400 S.F.	No	
MMH	Gypsum Wallboard	Garage Walls/Ceilings	900 S.F.	No	No Joint Compound Noted
MMI	Exterior Caulk	Windows/Door Frames	14 Windows	Yes	
MMJ	Mortar	Exterior Brick At House & Garage	500 S.F.	No	

224

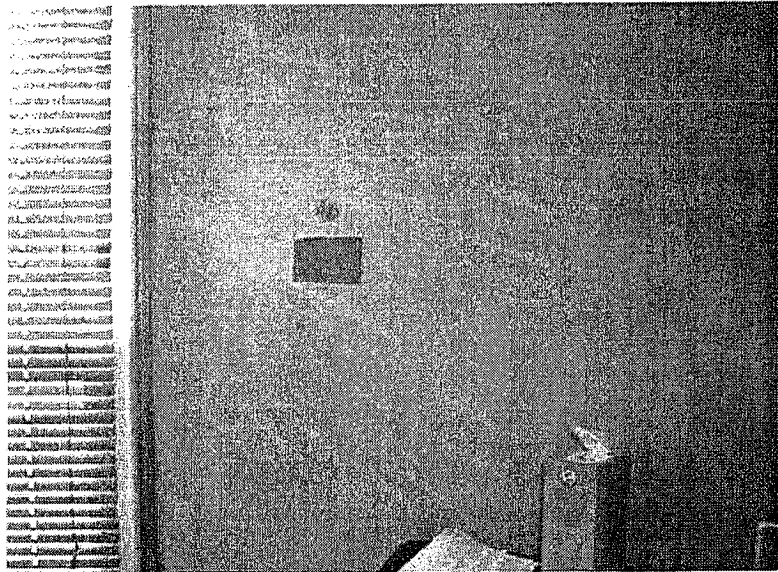
Inspection performed for:
 DUPAGE COUNTY DEPARTMENT OF TRANSPORTATION
 421 North County Farm Road
 Wheaton, IL 60187
 MEC Project #08-11-555-INSP

SECTION 3:

**PHOTOS OF
HOMOGENEOUS AREAS**

DUPAGE COUNTY DIVISION OF TRANSPORTATION

Residence
32W772 Stearns Road, Elgin, IL



Homogeneous Area:	SPA
Material Description:	Plaster Walls/Ceilings
Location:	Throughout Residence
ACM Y/N:	No

Comments:

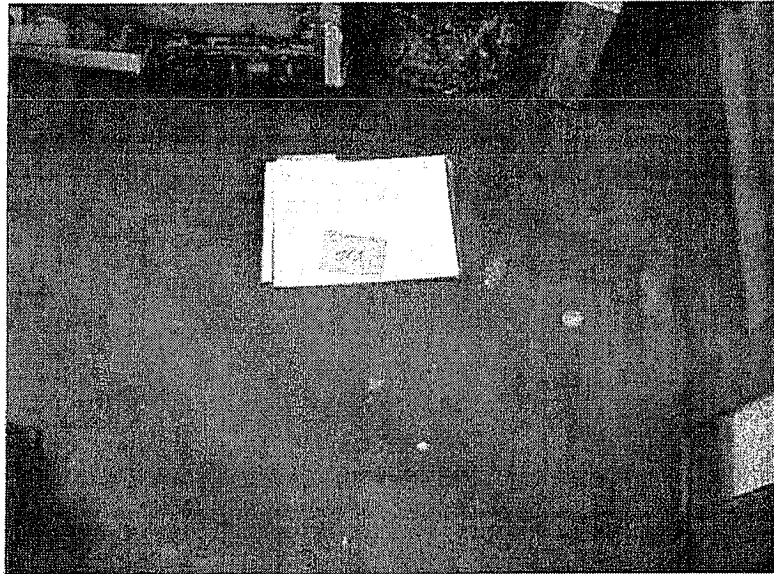


Homogeneous Area:	MMA
Material Description:	Loose Attic Insulation
Location:	Attic
ACM Y/N:	No

Comments:

DUPAGE COUNTY DIVISION OF TRANSPORTATION

Residence
32W772 Stearns Road, Elgin, IL



Homogeneous Area:	MFA
Material Description:	9x9 Floor Tile/Mastic – Brown Tile/Yellow Mastic
Location:	Throughout 2 nd Level, Including Below Carpeting
ACM Y/N:	No

Comments:

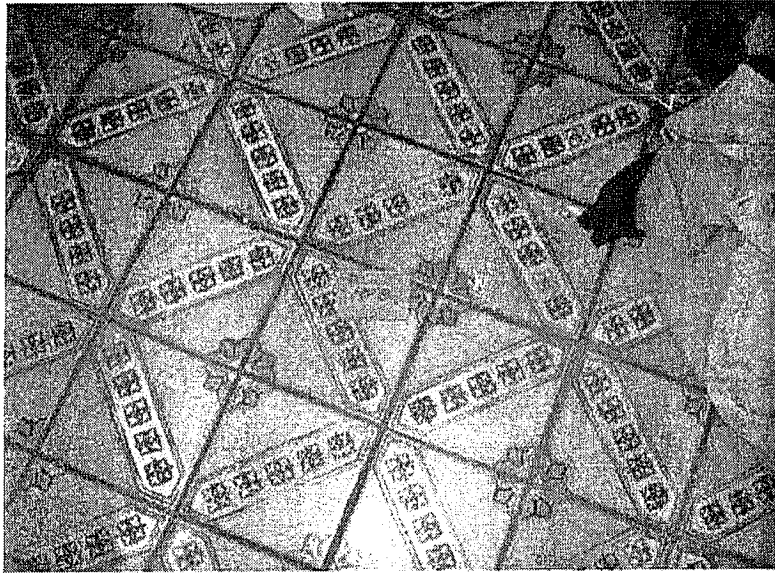


Homogeneous Area:	MMB
Material Description:	4x4 Cream-Colored Ceramic Tile/Yellow Mastic
Location:	2 nd Level Bathroom Walls
ACM Y/N:	No

Comments:

DUPAGE COUNTY DIVISION OF TRANSPORTATION

Residence
32W772 Stearns Road, Elgin, IL



Homogeneous Area:	MFB
Material Description:	9x9 Ceramic Tile/Mastic
Location:	2 nd Level Bathroom Floor
ACM Y/N:	No

Comments:

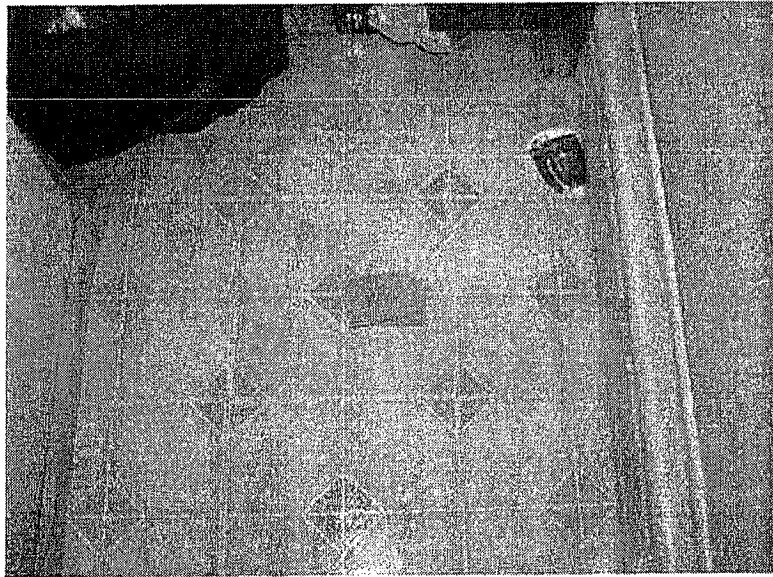


Homogeneous Area:	MFC
Material Description:	9x9 Ceramic Tile/Mastic
Location:	1 st Level Foyer
ACM Y/N:	No

Comments:

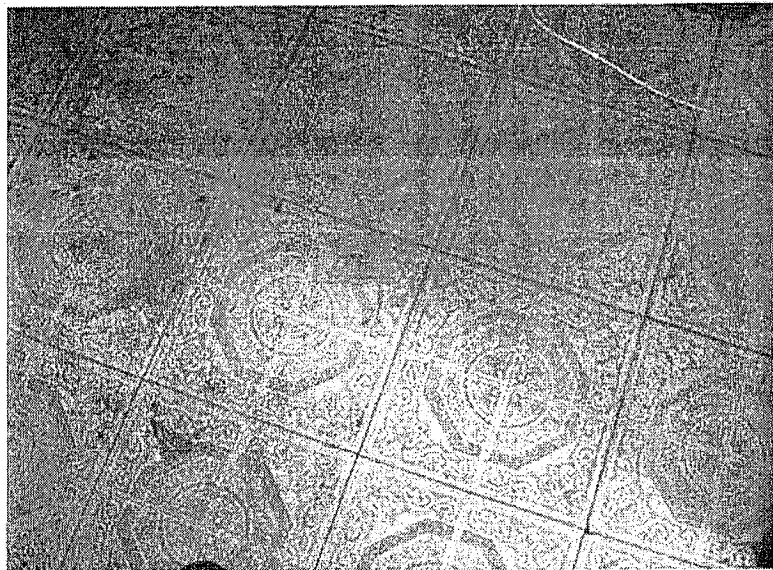
DUPAGE COUNTY DIVISION OF TRANSPORTATION

Residence
32W772 Stearns Road, Elgin, IL



Homogeneous Area:	MFD
Material Description:	12x12 Floor Tile/Mastic
Location:	1 st Level Bathroom
ACM Y/N:	No

Comments:

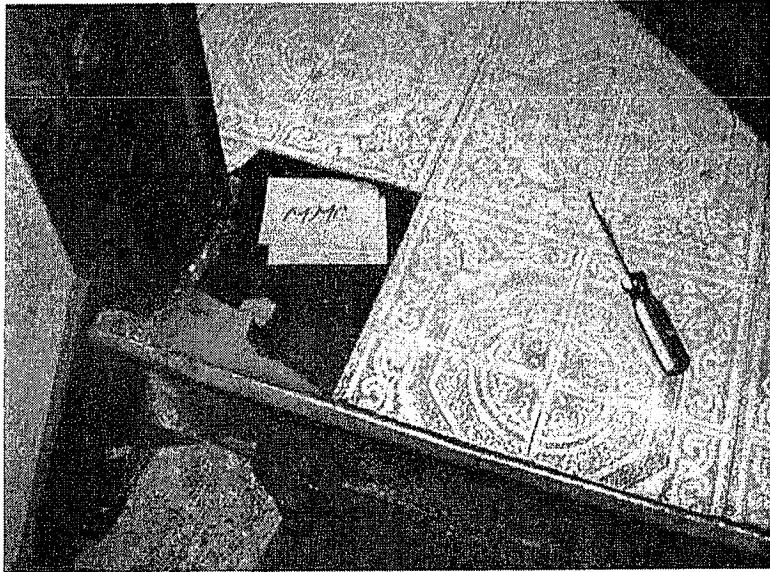


Homogeneous Area:	MFE
Material Description:	12x12 Floor Tile/Mastic
Location:	Kitchen
ACM Y/N:	Yes

Comments:

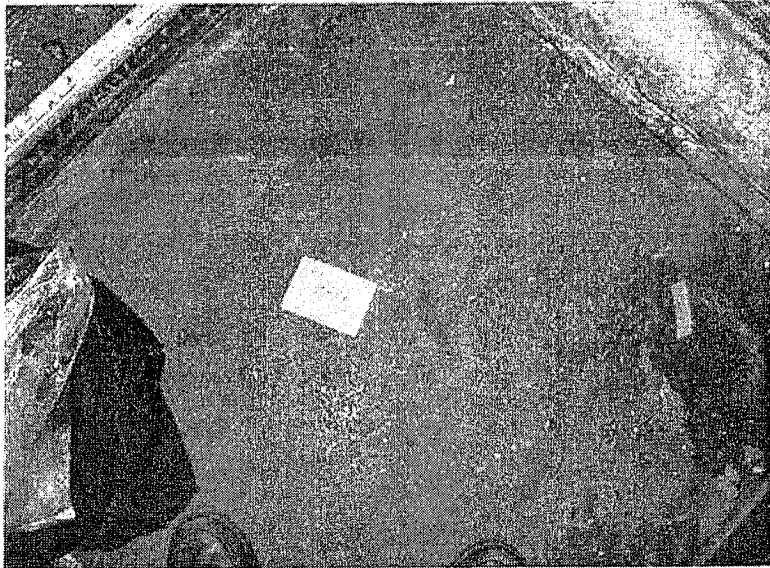
DUPAGE COUNTY DIVISION OF TRANSPORTATION

Residence
32W772 Stearns Road, Elgin, IL



Homogeneous Area:	MMC
Material Description:	Tar Paper Underlayment
Location:	Kitchen
ACM Y/N:	No

Comments:

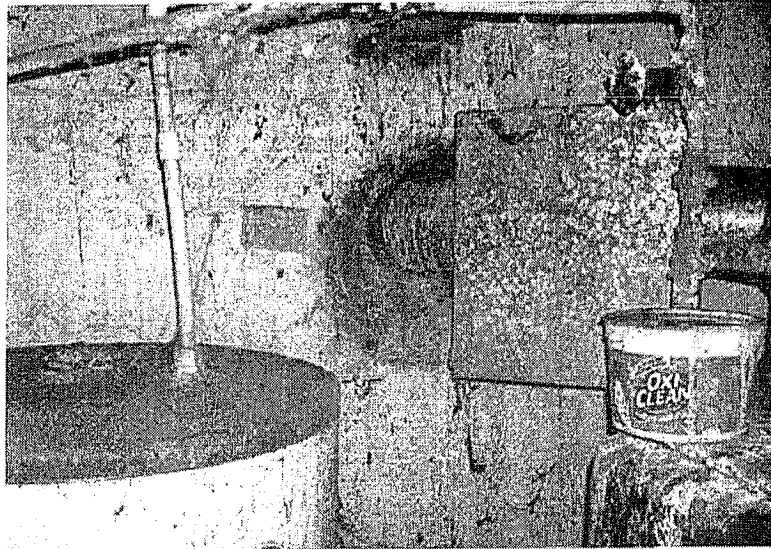


Homogeneous Area:	MMD
Material Description:	Tile Residue
Location:	Kitchen/Basement Stairway Landing
ACM Y/N:	No

Comments:

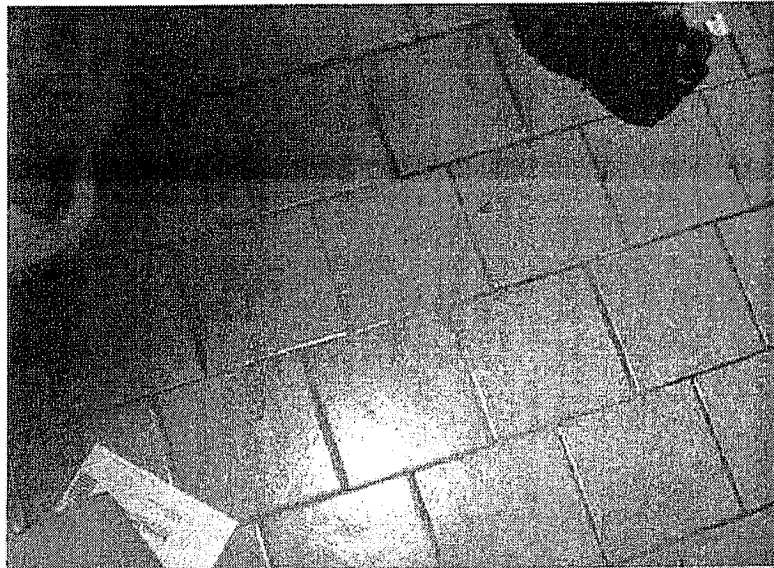
DUPAGE COUNTY DIVISION OF TRANSPORTATION

Residence
32W772 Stearns Road, Elgin, IL



Homogeneous Area:	MME
Material Description:	Flue Packing
Location:	Basement Wall
ACM Y/N:	Yes

Comments:



Homogeneous Area:	MFF
Material Description:	9x9 Ceramic Tile/Mastic - Cream
Location:	1 st Level (Center Area)
ACM Y/N:	No

Comments: Picture Notes MMF Should Be MFF.

DUPAGE COUNTY DIVISION OF TRANSPORTATION

Residence
32W772 Stearns Road, Elgin, IL



Homogeneous Area:	MMF
Material Description:	Roof Shingles
Location:	House & Garage
ACM Y/N:	No

Comments:

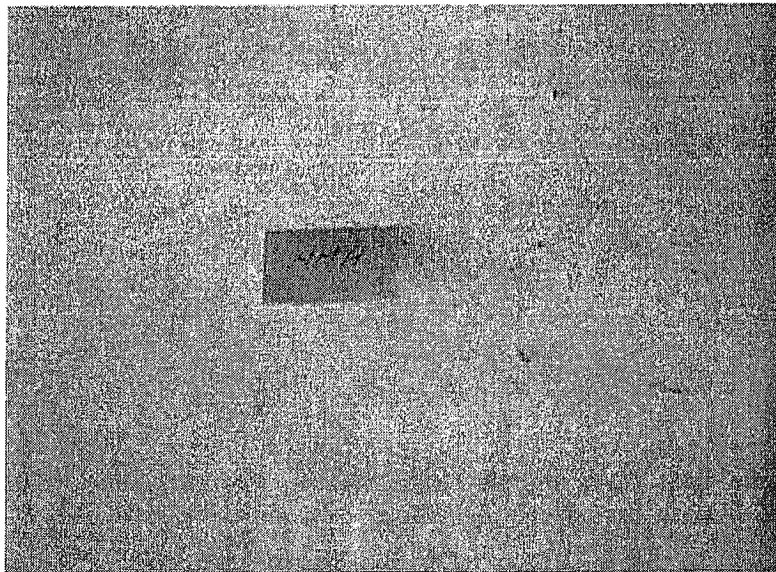


Homogeneous Area:	MMG
Material Description:	Loose Insulation
Location:	Garage Ceiling Plenum
ACM Y/N:	No

Comments:

DUPAGE COUNTY DIVISION OF TRANSPORTATION

Residence
32W772 Stearns Road, Elgin, IL



Homogeneous Area:	MMH
Material Description:	Gypsum Wallboard
Location:	Garage Walls/Ceilings
ACM Y/N:	No

Comments: No Joint Compound Noted

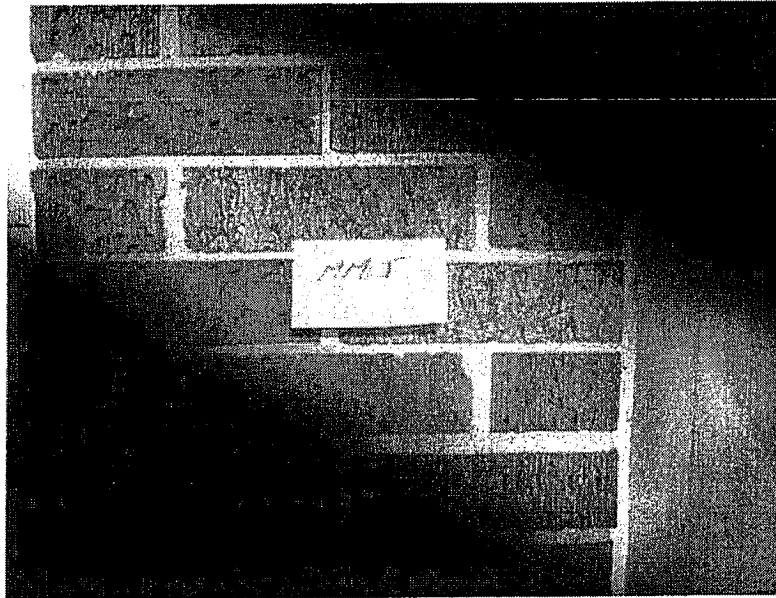


Homogeneous Area:	MMI
Material Description:	Exterior Caulk
Location:	Windows/Door Frames
ACM Y/N:	Yes

Comments:

DUPAGE COUNTY DIVISION OF TRANSPORTATION

Residence
32W772 Stearns Road, Elgin, IL



Homogeneous Area:	MMJ
Material Description:	Mortar
Location:	Exterior Brick At House & Garage
ACM Y/N:	No

Comments:

SECTION 4:
FINAL ANALYTICAL REPORT

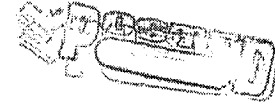
STAT Analysis Corporation
 2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com



ASBESTOS ANALYSIS BY POLARIZED LIGHT MICROSCOPY

Method: EPA-600/M4-82-020

Midwest Environmental Consulting Serv., Inc.
 4 Bonnie Lane
 Yorkville, IL 60560
 Phone: (630) 553-3989
 Fax: (630) 553-3990



Reference: 08-11-555 Date Received: 01/05/2009
 Location: Elgin, IL Date Analyzed: 01/12/2009
 Batch No.: 281749 Date Reported: 01/12/2009
 Customer No.: 244 Turn Around Time: 5 Days

Laboratory Sample	Customer Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
281749001	SPA-1	ND	Binder 90-95% Other 5-10%
281749002	SPA-2	ND	Binder 90-95% Other 5-10%
281749003	SPA-3	ND	Binder 90-95% Other 5-10%
281749004	SPA-4	ND	Binder 90-95% Other 5-10%
281749005	SPA-5	ND	Binder 90-95% Other 5-10%
281749006	SPA-6	ND	Binder 90-95% Other 5-10%
281749007	SPA-7	ND	Binder 90-95% Other 5-10%
281749008	MMA-1	ND	Glass 99-100%
281749009	MMA-2	ND	Glass 99-100%
281749010	MMA-3	ND	Glass 99-100%
281749011	MFA-1	ND	Binder 99-100%
281749012	MFA-2	ND	Binder 99-100%
281749013	MFA-3	ND	Binder 99-100%

ND = Asbestos Not Detected (Not Present) NA = Not Analyzed NS = Not Submitted
 Components of inhomogeneous samples are analyzed per our Standard Operating Procedure, or per customer request.

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Analyzed by Name :
 Henry Robateau Microscopist

Date: 01/12/2009

236

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com



NVLAP Lab Code 101202-0

ASBESTOS ANALYSIS BY POLARIZED LIGHT MICROSCOPY

Method: EPA-600/M4-82-020

Midwest Environmental Consulting Scrv., Inc.

4 Bonnie Lane
 Yorkville, IL 60560
 Phone: (630) 553-3989
 Fax: (630) 553-3990

Reference: 08-11-555 Date Received: 01/05/2009
 Location: Elgin, IL Date Analyzed: 01/12/2009
 Batch No.: 281749 Date Reported: 01/12/2009
 Customer No.: 244 Turn Around Time: 5 Days

Laboratory Sample	Customer Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
281749014	MFA-1M	ND	Binder 99-100%
281749015	MFA-2M	ND	Binder 99-100%
281749016	MFA-3M	ND	Binder 99-100%
281749017	MMB-1	ND	Binder 99-100%
281749018	MMB-2	ND	Binder 99-100%
281749019	MMB-3	ND	Binder 99-100%
281749020	MMB-1M	ND	Binder 99-100%
281749021	MMB-2M	ND	Binder 99-100%
281749022	MMB-3M	ND	Binder 99-100%
281749023	MFB-1	ND	Binder 99-100%
281749024	MFB-2	ND	Binder 99-100%
281749025	MFB-3	ND	Binder 99-100%
281749026	MFB-1G	ND	Binder 95-99% Other 1-5%
281749027	MFB-2G	ND	Binder 95-99% Other 1-5%
281749028	MFB-3G	ND	Binder 95-99% Other 1-5%
281749029	MFC-1	ND	Binder 99-100%

ND = Asbestos Not Detected (Not Present) NA - Not Analyzed NS = Not Submitted

Components of inhomogeneous samples are analyzed per our Standard Operating Procedure, or per customer request.

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Analyzed by Name:

Henry Robateau Microscopist

Date: 01/12/2009

STAT Analysis Corporation

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com



NVLAP Lab Code 101202-0

ASBESTOS ANALYSIS BY POLARIZED LIGHT MICROSCOPY

Method: EPA-600/M4-R2-020

Midwest Environmental Consulting Serv., Inc.

4 Bonnie Lane

Yorkville, IL 60560

Phone: (630) 553-3989

Fax: (630) 553-3990

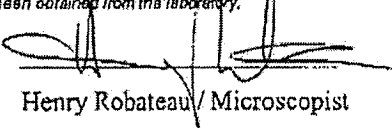
Reference: 08-11-555
 Location: Elgin, IL
 Batch No.: 281749
 Customer No.: 244

Date Received: 01/05/2009
 Date Analyzed: 01/12/2009
 Date Reported: 01/12/2009
 Turn Around Time: 5 Days

Laboratory Sample	Customer Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
281749030	MFC-2	ND	Binder 99-100%
281749031	MFC-3	ND	Binder 99-100%
281749032	MFC-1G	ND	Binder 95-99% Other 1-5%
281749033	MFC-2G	ND	Binder 95-99% Other 1-5%
281749034	MFC-3G	ND	Binder 95-99% Other 1-5%
281749035	MFD-1	ND	Binder 99-100%
281749036	MFD-2	ND	Binder 99-100%
281749037	MFD-3	ND	Binder 99-100%
281749038	MFD-1M	ND	Binder 99-100%
281749039	MFD-2M	ND	Binder 99-100%
281749040	MFD-3M	ND	Binder 99-100%
281749041	MFE-1	Chrysotile 1-5%	Binder 95-99%
281749042	MFE-2	NA	
281749043	MFE-3	NA	
281749044	MFE-1M	ND	Binder 99-100%
281749045	MFE-2M	ND	Binder 99-100%

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Analyzed by Name: 
 Henry Robateau / Microscopist

Date: 01/12/2009

238

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com



NVLAP Lab Code 101202-0

ASBESTOS ANALYSIS BY POLARIZED LIGHT MICROSCOPY

Method: EPA-600/M4-82-020

Midwest Environmental Consulting Scr., Inc.

4 Bonnie Lane
Yorkville, IL 60560
Phone: (630) 553-3989
Fax: (630) 553-3990

Reference: 08-11-555 Date Received: 01/05/2009
Location: Elgin, IL Date Analyzed: 01/12/2009
Batch No.: 281749 Date Reported: 01/12/2009
Customer No.: 244 Turn Around Time: 5 Days

Laboratory Sample	Customer Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
281749046	MFE-3M	ND	Binder 99-100%
281749047	MMC-1	ND	Cellulose 80-85% Binder 15-20%
281749048	MMC-2	ND	Cellulose 80-85% Binder 15-20%
281749049	MMC-3	ND	Cellulose 80-85% Binder 15-20%
281749050	MMD-1	ND	Cellulose 80-85% Binder 15-20%
281749051	MMD-2	ND	Cellulose 80-85% Binder 15-20%
281749052	MMD-3	ND	Cellulose 80-85% Binder 15-20%
281749053	MME-1	Chrysotile 5-10%	Binder 90-95%
281749054	MME-2	NA	
281749055	MME-3	NA	
281749056	MFF-1	ND	Binder 99-100%
281749057	MFF-2	ND	Binder 99-100%
281749058	MFF-3	ND	Binder 99-100%

ND = Asbestos Not Detected (Not Present) NA - Not Analyzed NS - Not Submitted
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Analyzed by Name: 

Henry Robateau / Microscopist

Date: 01/12/2009

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com



NVLAP Lab Code 101202-0

ASBESTOS ANALYSIS BY POLARIZED LIGHT MICROSCOPY

Method: EPA-600/M4-82-020

Midwest Environmental Consulting Serv., Inc.

4 Bonnie Lane

Yorkville, IL 60560

Phone: (630) 553-3989

Fax: (630) 553-3990

Reference: 08-11-555

Location: Elgin, IL

Batch No.: 281749

Customer No.: 244

Date Received: 01/05/2009

Date Analyzed: 01/12/2009

Date Reported: 01/12/2009

Turn Around Time: 5 Days

Laboratory Sample	Customer Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
281749059	MFF-1G	ND	Binder 95-99% Other 1-5%
281749060	MFF-2G	ND	Binder 95-99% Other 1-5%
281749061	MFF-3G	ND	Binder 95-99% Other 1-5%
281749062	MMF-1	ND	Cellulose 5-10% Binder 80-85% Glass 5-10%
281749063	MMF-2	ND	Cellulose 5-10% Binder 80-85% Glass 5-10%
281749064	MMF-3	ND	Cellulose 5-10% Binder 80-85% Glass 5-10%
281749065	MMG-1	ND	Glass 99-100%
281749066	MMG-2	ND	Glass 99-100%
281749067	MMG-3	ND	Glass 99-100%
281749068	MMH-1	ND	Cellulose 5-10% Binder 90-95%


ND - Asbestos Not Detected (Not Present) NA - Not Analyzed NS - Not Submitted

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Analyzed by Name :


Henry Robateau / Microscopist

Date: 01/12/2009

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 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com



ASBESTOS ANALYSIS BY POLARIZED LIGHT MICROSCOPY

Method: EPA-600/M4-82-020

Midwest Environmental Consulting Serv., Inc.
 4 Bonnie Lane
 Yorkville, IL 60560
 Phone: (630) 553-3989
 Fax: (630) 553-3990

Reference: 08-11-555 Date Received: 01/05/2009
 Location: Elgin, IL Date Analyzed: 01/12/2009
 Batch No.: 281749 Date Reported: 01/12/2009
 Customer No.: 244 Turn Around Time: 5 Days

Laboratory Sample	Customer Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
281749069	MMH-2	ND	Cellulose 5-10% Binder 90-95%
281749070	MMH-3	ND	Cellulose 5-10% Binder 90-95%
281749071	MMI-1	ND	Binder 99-100%
281749072	MMI-2	Chrysotile 1-5%	Binder 95-99%
281749073	MMI-3	NA	
281749074	MMJ-1	ND	Binder 90-95% Other 5-10%
281749075	MMJ-2	ND	Binder 90-95% Other 5-10%
281749076	MMJ-3	ND	Binder 90-95% Other 5-10%

ND = Asbestos Not Detected (Not Present) NA = Not Analyzed NS = Not Submitted
 Components of inhomogeneous samples are analyzed per our Standard Operating Procedure, or per customer request.
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Analyzed by Name:

Henry Robateau / Microscopist

Date: 01/12/2009

241

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 e-mail address: STATinfo@STATAnalysis.com AIBA accredited 101160 NVLAP accredited 101202-0



NVLAP

Page: 1 of 5

CHAIN OF CUSTODY RECORD

Client: MEC
 Street Address: 4 Business Lines
 City, State, Zip: Springfield, IL 60056
 Phone: 618-790-0271
 Fax: 630-553-3970
 e-mail/Alt. Fax: indigent@statmail.com
 Project Number: 08-11-555
 Project Name: Residues
 Project Location: Elgin, IL
 Project Manager: Debra
 P.O. Number:

Tum Around: Incomplete: 4 Hrs 8 Hrs 12 Hrs 24 Hrs 48 Hrs 72 Hrs 5 Days

Date Due: _____ Time Due: _____
 Note: Not all tum around times are available for all analysis

Relinquished by: Debra Date/Time: 12/2/09 PM
 Received by: URS Date/Time: 11/19/09
 Relinquished by: _____ Date/Time: _____
 Received by: _____ Date/Time: _____
 Relinquished by: _____ Date/Time: _____
 Received by: _____ Date/Time: _____

Batch No.: 281749 Yes/No: /
 Samples Acceptable: _____
 Collected by (Initial/Date): DEB/11/19/09
 QC by (Initial/Date): DEB/11/19/09
 Reported By (Initial/Date: Turn-In/Reb. Date): DEB/11/21/09

Comments:

Client Sample Number/Description	Date Taken		Time		Rate (ipm)	Volume (Liters)	Area Wiped (ft ²)	Laboratory Sample No.	Comments
	On	Off	On	Off					
SPA - 1									
- 2									
- 3									
- 4									
- 5									
- 6									
- 7									
MPA - 1									
- 2									
- 3									
MPA - 1									
- 2									
- 3									

Comments: Id one sample per RA in photos - SEP



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 Phone: (312) 733-0551 Fax: (312) 733-2386
 e-mail address: STATinfo@STATAnalysis.com AIBA accredited 101160 NVLAP accredited 101202-0



NVLAP
 ACCREDITED LABORATORY

CHAIN OF CUSTODY RECORD

Page: 2 of 5

Client: MCC
 Street Address:
 City, State, Zip: 847-920-0274
 Phone: 281749
 Fax:
 e-mail/Alt. Fax:
 Project Number: 08-11-153
 Project Name: Rebar
 Project Location: Elgin, IL
 Project Manager: D. Thomas
 P.O. Number:

Turn Around: Immediate 4 Hrs 8 Hrs 12 Hrs 24 Hrs 48 Hrs 72 Hrs 5 Days

Date Due: _____ Time Due: _____
 Note: Not all turn around times are available for all analysis.

Relinquished by: D. Thomas Date/Time: 12/24/08
 Received by: UPS Date/Time: 12/24/08
 Relinquished by: _____ Date/Time: _____
 Received by: _____ Date/Time: _____
 Relinquished by: _____ Date/Time: _____
 Received by: _____ Date/Time: _____

Client Sample Number/Description	Date Taken	Time		Rate (ppm)	Volume (Liters)	Area Wiped (ft ²)	Laboratory Sample No.	Received by:								
		On	Off					PCM Asbestos (Bulk)	PCM Asbestos	PLM Point Count	TEM Air Asbestos	TEM Bulk Asbestos	TEM Organic Asb	TEM Micro Asb	TRM Water	Other
MFB-1	12/24/08							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-2								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-3								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MFB-1								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-2								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-3								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MFC-1								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-2								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-3								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MFD-1								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-2								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-3								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Comments: If one sample per RA is positive - STOP

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 e-mail address: STATInfo@STATAnalysis.com AIHA accredited 101160 NVLAP accredited 101202-0



NVLAP

Page: 3 of 5

CHAIN OF CUSTODY RECORD

Client: <u>MEC</u>	Turn Around: Immediate: <input type="checkbox"/> 4 Hrs <input type="checkbox"/> 8 Hrs <input type="checkbox"/> 12 Hrs <input type="checkbox"/> 24 Hrs <input type="checkbox"/> 48 Hrs <input type="checkbox"/> 72 Hrs <input checked="" type="checkbox"/> 5 Days
Street Address:	Date Due: _____
City, State, Zip: <u>842-970-0274</u>	Note: Not all turn around times are available for all analysis.
Phone: <u>630-513-3990</u>	Relinquished by: <u>DLB</u> Date/Time: <u>12/29/08</u>
Fax: <u>advisors@statanalysis.com</u>	Received by: <u>URS</u> Date/Time: <u>1/5/09 1:30 PM</u>
e-mail/Alt. Fax: <u>108-11-511</u>	Relinquished by: _____
Project Number: <u>Reservoirs</u>	Received by: _____
Project Name: <u>Elgin, IL</u>	Relinquished by: _____
Project Location: <u>DLB</u>	Received by: _____
Project Manager: _____	Relinquished by: _____
P.O. Number: _____	Received by: _____
Batch No.: <u>281749</u>	Relinquished by: _____
Samples Acceptable: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	QC by (Initial/Date): <u>DLB 1/12/09</u>
Checked by (Initial/Date): _____	Reported By (Initial/Date/Units/Method): _____
Comments: _____	

Client Sample Number/Description	Date Taken	Time		Rate (ipm)	Volume (Liters)	Area Wiped (ft ²)	Laboratory Sample No.
		On	Off				
MFE-1	12/29/08						
-2							
-3							
MPE-1							
-2							
-3							
MAD-1							
-2							
-3							
MME-1							
-2							
-3							

Comments: If one sample per HRA is possible - STOP

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 e-mail address: STATinfo@STATAnalysis.com AIHA accredited 101160 NVLAP accredited 101202-0



NVLAP

CHAIN OF CUSTODY RECORD

Page: 4 of 5

Client: MEC

Street Address: _____

City, State, Zip: 872-920-0227

Phone: 630-573-3990

Fax: _____

e-mail/Alt. Fax: mech@statanalysis.com

Project Number: 68-01-577

Project Name: Residence

Project Location: Edin, IL

Project Manager: B. Stoyan

P.O. Number: _____

Turn Around: Immediate 4 Hrs 8 Hrs 12 Hrs 24 Hrs 48 Hrs 72 Hrs 5 Days

Date Due: _____

Time Due: _____

Note: Not all turn around times are available for all analysis.

Relinquished by: D. Lane Date/Time: 12/29/08

Received by: UB Date/Time: 1/5/09

Relinquished by: _____ Date/Time: _____

Received by: _____ Date/Time: _____

Relinquished by: _____ Date/Time: _____

Received by: _____ Date/Time: _____

DO NOT USE UNLESS INDICATED BELOW

Batch No.: 281749

Samples Acceptable: Yes: No:

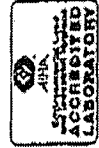
Checked by (Initial/Date): [Signature] / 1/2/09

QC by (Initial/Date): [Signature] / 1/2/09

Reported By (Initial/Date/Time/Method): _____

Client Sample Number/Description	Date Taken		Time		Rate (µm)	Volume (Liters)	Area Wiped (ft ²)	Laboratory Sample No.	Comments
	On	Off	On	Off					
MFF-1									
-2									
-3									
MFF-1									
-2									
-3									
MFG-1									
-2									
-3									
MMA-1									
-2									
-3									

Comments: If one sample per HAA is positive - S 907



Page: 5 of 5

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 e-mail address: STATInfo@STATAnalysis.com AIHA accredited 101160 NVLAP accredited 101202-0

CHAIN OF CUSTODY RECORD

Client: HCC

Street Address: _____

City, State, Zip: 847.970-0234

Phone: 630-253-3980

Fax: _____

e-mail/Alt. Fax: 1.mall@statanalysis.com

Project Number: 08-11-555

Project Name: Kellogg

Project Location: Elgin, IL

Project Manager: D. Schmal

P.O. Number: _____

Turn Around: Immediate 4 Hrs 8 Hrs 12 Hrs 24 Hrs 48 Hrs 72 Hrs 5 Days

Date Due: _____

Notes: Not all turn around times are available for all analysis.

Relinquished by: B. Blom Date/Time: 12-3-05

Received by: UPS Date/Time: 12/09/05

Relinquished by: _____ Date/Time: _____

Received by: _____ Date/Time: _____

Relinquished by: _____ Date/Time: _____

Received by: _____ Date/Time: _____

Client Sample Number/Description	Date Taken		Rate (ppm)	Volume (Liters)	Area Wiped (ft ²)	Laboratory Sample No.	Comments
	On	Off					
MRE -1		12/3/05					
MRE -2							
MRE -3							
MRE -1							
MRE -2							
MRE -3							

Comments: If one sample per RAB is positive - STAT

SECTION 5:
CERTIFICATIONS

ASBESTOS
PROFESSIONAL
LICENSE

ID NUMBER

ISSUED
5/6/2008

EXPIRES

DAVID W SLOMAN
40 W 745 STONERIDGE CT
ELGIN, IL 60124

ENDORSEMENTS

TC EXPIRES

INSPECTOR	4/15/2009
PROJECT DESIGNER	4/1/2009
MANAGEMENT PLANNER	2/4/2009
PROJECT MANAGER	4/4/2009
AIR SAMPLING PROFESSIONAL	

Alteration of this license shall result in legal action
This license issued under authority of the State of Illinois
Department of Public Health
This license is valid only when accompanied by a valid
training course certificate.

CERTIFICATE OF ACHIEVEMENT ASBESTOS ABATEMENT

Accredited by the Illinois Department of Public Health

This is to certify that DAVID W. SLOMAN
has completed the ASBESTOS INSPECTOR'S REFRESHER course and successfully passed the
examination on 04/15/2008 with a minimum score of 70% or better. Training was in accordance
with U.S. E.P.A. 40 CFR 763 Subpart E, Appendix C, Asbestos Containing Materials in Schools:
Model Accreditation Plan, TSCA II, Authorized by both AHERA & ASHARA.



N. Penneff

04/15/2008

Course Dates:

04/15/2009

Expires:

0804BIRJ6

Certificate Number:

Phone Number: (312) 421-7397

Director of Training

Nicholas J. Penneff

Doctor of Public Health

FORM # A-010



UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899

June 4, 2008

Dr. Pinaki Banerjee
HI-TEK Environmental, Inc. dba.
STAT Analysis Corporation
2242 W. Harrison
Chicago, IL 60612

NVLAP Lab Code: 101202-0

Dear Dr. Banerjee:

I am pleased to inform you that continuing accreditation for specific test methods in Bulk Asbestos Fiber Analysis (PLM) is granted to your organization under the National Voluntary Laboratory Accreditation Program (NVLAP). This accreditation is effective until June 30, 2009, provided that your organization continues to comply with accreditation requirements contained in the NVLAP Procedures.

Your Certificate of Accreditation is enclosed along with a statement of your Scope of Accreditation. You may reproduce these documents in their entirety and announce your organization's accreditation status using the NVLAP logo in business publications, the trade press, and other business-oriented literature. Accreditation does not relieve your organization from observing and complying with any applicable existing laws and/or regulations.

We are pleased to have you participate in NVLAP and look forward to your continued association with this program. If you have any questions concerning your NVLAP accreditation, please direct them to Thomas R. Davis, Sr. Program Manager, Laboratory Accreditation Program, National Institute of Standards and Technology, 100 Bureau Dr. Stop 2140, Gaithersburg, MD 20899-2140; (301) 975-4016.

Sincerely,

Sally S. Bruce, Chief
Laboratory Accreditation Program

Enclosure(s)



NIST/NVLAP • 100 Bureau Drive, Stop 2140 • Gaithersburg, MD 20899-2140
<http://www.nist.gov/nvlap>





SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

STAT Analysis Corporation
STAT Analysis Corporation
2242 W. Harrison
Chicago, IL 60612
Dr. Pinaki Banerjee
Phone: 312-733-0551 Fax: 312-733-2386
E-Mail: Pbanerjee@STATAnalysis.com
URL: <http://www.STATAnalysis.com>

BULK ASBESTOS FIBER ANALYSIS (PLM)

NVLAP LAB CODE 101202-0

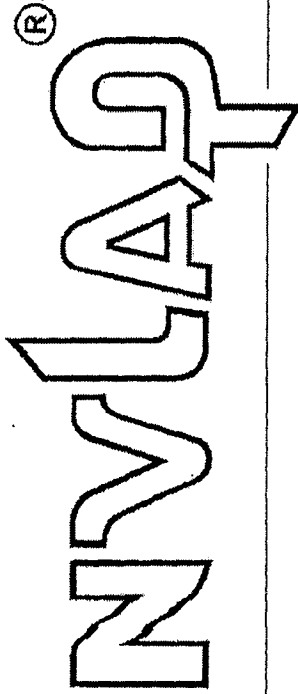
<i>NVLAP Code</i>	<i>Designation / Description</i>
18/A01	EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples

2008-07-01 through 2009-06-30

Effective dates

Sally S. Bruce
For the National Institute of Standards and Technology

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101202-0

STAT Analysis Corporation
Chicago, IL

is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:

BULK ASBESTOS FIBER ANALYSIS

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communiqué dated 18 June 2005).*

2008-07-01 through 2009-06-30

Effective dates



Sally A. Bruce
For the National Institute of Standards and Technology



UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899

June 4, 2008

Dr. Pinaki Banerjee
HI-TEK Environmental, Inc. dba.
STAT Analysis Corporation
2242 W. Harrison
Chicago, IL 60612

NVLAP Lab Code: 101202-0

Dear Dr. Banerjee:

I am pleased to inform you that continuing accreditation for specific test methods in Airborne Asbestos Fiber Analysis (TEM) is granted to your organization under the National Voluntary Laboratory Accreditation Program (NVLAP). This accreditation is effective until June 30, 2009, provided that your organization continues to comply with accreditation requirements contained in the NVLAP Procedures.

Your Certificate of Accreditation is enclosed along with a statement of your Scope of Accreditation. You may reproduce these documents in their entirety and announce your organization's accreditation status using the NVLAP logo in business publications, the trade press, and other business-oriented literature. Accreditation does not relieve your organization from observing and complying with any applicable existing laws and/or regulations.

We are pleased to have you participate in NVLAP and look forward to your continued association with this program. If you have any questions concerning your NVLAP accreditation, please direct them to Thomas R. Davis, Sr. Program Manager, Laboratory Accreditation Program, National Institute of Standards and Technology, 100 Bureau Dr. Stop 2140, Gaithersburg, MD 20899-2140; (301) 975-4016.

Sincerely,

Sally S. Bruce, Chief
Laboratory Accreditation Program

Enclosure(s)



NIST/NVLAP • 100 Bureau Drive, Stop 2140 • Gaithersburg, MD 20899-2140
<http://www.nist.gov/nvlap>





**National Voluntary
Laboratory Accreditation Program**



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

STAT Analysis Corporation
STAT Analysis Corporation
2242 W. Harrison
Chicago, IL 60612
Dr. Pinaki Banerjee
Phone: 312-733-0551 Fax: 312-733-2386
E-Mail: Pbanerjee@STATAnalysis.com
URL: <http://www.STATAnalysis.com>

AIRBORNE ASBESTOS FIBER ANALYSIS (TEM)

NVLAP LAB CODE 101202-0

NVLAP Code Designation / Description

18/A02 U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.

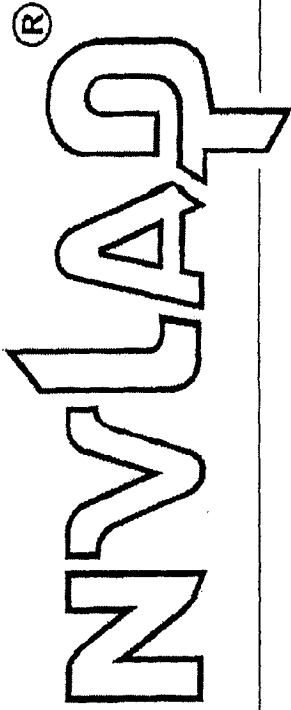
2008-07-01 through 2009-06-30

Effective dates

Sally S. Bruce
For the National Institute of Standards and Technology

NVLAP-01S (REV. 2005-05-19)

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101202-0

STAT Analysis Corporation
Chicago, IL

is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:

AIRBORNE ASBESTOS FIBER ANALYSIS

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communiqué dated 18 June 2005).*

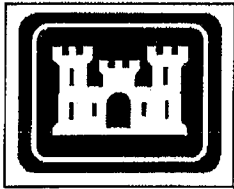
2008-07-01 through 2009-06-30

Effective dates



Dolly S. Buce
For the National Institute of Standards and Technology

ARMY CORP PERMIT



DEPARTMENT OF THE ARMY

PERMIT

Permittee: Kane County Division of Transportation
Application No.: 199600199
Issuing Office: CHICAGO DISTRICT, U.S. ARMY CORPS OF ENGINEERS

DEFINITIONS: The term "you" and its derivatives, as used in this permit means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform the work in accordance with the terms and conditions specified below.

Project Description: Proposed Extension of Stearns Road From East of IL Route 25 to West of Randall Road, New Bridge Placement over the Fox River, and Realignment and Improvements along Dunham Road, IL Route 25, IL Route 31, McLean Boulevard and Randall Road Located in South Elgin, Kane County, Illinois. The approved project construction plans are entitled, "Plans For Proposed Federal Aid Highway", dated September 14, 2006, prepared by CBBEL. The approved mitigation and Best Management Plan documents are entitled, "Fox River Bridges - Stearns Road Corridor Vision Doc" dated May 8, 2003, revised January 30, 2004, the "Fox River Bridges CCP/Stearns Road Environmental Roadway Corridor, prepared by CBBEL and the "Wetland Compensation Plan Fox River Bridges - Stearns Road Corridor (FAP361) Randall Road to Dunham Road South Elgin, Kane County, Illinois, dated September 2006, prepared by CBBEL and Huff & Huff.

Project Location: South Elgin, Kane County, Illinois, Brewster Creek/Fox River Watershed, (Se $\frac{1}{4}$ of Section 6, S $\frac{1}{2}$ & Ne $\frac{1}{4}$ of Section 1, Ne & Nw $\frac{1}{4}$ of Section 12, S $\frac{1}{2}$ of Section 2, N & S $\frac{1}{2}$ of Section 3, Ne & Nw $\frac{1}{4}$ of Section 4, Township 40 North, Range 8 East, and Nw $\frac{1}{4}$ of Section 5, Se $\frac{1}{4}$ of Section 32 and Sw $\frac{1}{4}$ of Section 33, Township 41 North, Range 8 East

Permit Conditions:

General Conditions

1. The time limit for completing the authorized work ends on November 1, 2011. If you find that you need more time to complete the authorized activity(s), submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archaeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. You shall comply with the water quality certification issued under Section 401 of the Clean Water Act by the Illinois Environmental Protection Agency for the project. Conditions of the certification are conditions of this authorization. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being accomplished in accordance with the terms and conditions of your permit.

Special Conditions

1. This permit is based on all material submitted as part of application number 199600199. You must comply with all applicable regulations and requirements in carrying out this project. Failure to comply with the terms and conditions of this permit may result in suspension and revocation of your permit.
2. You shall undertake and complete the project as described in the approved project construction plans entitled, "Plans For Proposed Federal Aid Highway", dated September 14, 2006, prepared by CBEL, and including all relevant documentation to the project plans as proposed.
3. You shall fully implement the approved mitigation and Best Management Plan documents entitled, "Fox River Bridges - Stearns Road Corridor Vision Document" dated May 8, 2003, revised January 30, 2004, the "Fox River Bridges CCP/Stearns Road Environmental Roadway Corridor, prepared by CBEL and the "Wetland Compensation Plan Fox River Bridges - Stearns Road Corridor (FAP361) Randall Road to Dunham Road South Elgin, Kane County, Illinois, dated September 2006, prepared by CBEL and Huff & Huff.

All created wetlands shall meet the performance criteria in accordance with the Corps approved mitigation plans.

4. Throughout the project's duration, you shall adhere to all soil erosion and sediment control plans as recommended by the Kane/DuPage Soil and Water Conservation District (KDSWCD). Work authorized herein may not commence until you provide evidence to this office that the KDSWCD has determined that your plan meets technical standards. In addition, you shall enter into an agreement with the KDSWCD where as the SWCD shall oversee construction of the mitigation areas and Best Management Practice (BMP) areas and, if necessary, provide corrective measures to the applicant and to the Corps project manager. Please contact the SWCD for further instructions.

5. As they become available, you shall submit to this office and to the KDSWCD grading plans for each subsequent phase of the project. This office shall approve the construction plans prior to commencement of each additional phase. The KDSWCD sign-off letter and an approved set of stamped plans shall serve to certify that the erosion and sediment control plans has met all applicable soil erosion & sediment control (SESC) Technical Standards. A copy of the District's letter(s) shall be submitted to this office to inform us that you have completed the SESC portion of the permitting process. Please note that the letter confirming the adequacy of the plans applies to the overall principles and practices on the site and not to the individual construction packages. In addition, the more detailed soil erosion and sediment control plans of the individual construction packages shall be reviewed by the KDSWCD as the construction package level plans are designed and completed. The subsequent plans shall be reviewed in detail and held to the same technical standards as the overall plans. Work authorized herein may not commence until you provide evidence to this office that the SWCD

has determined that each construction package meets technical standards

6. You shall insure that mitigated wetlands and adjacent upland buffers are protected through a permanent deed restriction. The approved construction drawings and USACE authorization number shall be included as an exhibit in the deed, and recorded with the Registrar of Deeds or other appropriate office charged with the responsibility for maintaining records of title or interest in real estate property. Within 30 days of receipt of this authorization, you shall submit to this office for review a draft copy of the deed restriction. Recording of the approved deed restriction shall occur upon this office approving the document(s) and within 180 days of permit issuance.

7. You shall submit as-built drawings of the Phase I mitigation area, and all proposed BMP's to be constructed. The as-builts shall be approved by this office and by the KDSWCD prior to the area(s) being seeded.

8. You shall install signs which identify the presence of Federally-protected wetlands and the prohibited activities in the mitigation and BMP areas. The signs shall be spaced every 300 - 400 feet at the boundary of all adjacent upland buffers. The signs shall be installed at completion of seeding and planting activities.

9. You shall provide the informational brochure entitled "Living with Wetlands" to all property owners situated adjacent to the wetlands and BMP's. The brochure discusses the importance of wetlands, the entities that have jurisdiction over the areas, the relevant rules and regulations, and the potential indirect impacts to the wetlands resulting from common land practices, such as the use of lawn fertilizers and chemicals. You can obtain copies of this brochure by contacting Susan Rose with the Wetland Initiative at 53 W. Jackson Blvd. #1015, Chicago, Illinois 60604, (312) 922-0777, email: twi@wetlandsinitiative.org.

10. You shall transfer the mitigated wetlands (the McLean Boulevard Fen Recharge Area, South Elgin Sedge Meadow Buffer, the Sandhill Annex and the Direct Impact Mitigation Site) to the Forest Preserve District of Kane County following the 7-year mitigation management and monitoring plan for all mitigation areas and a determination by this office that all performance

criteria have been met. The Forest Preserve District shall ensure that the mitigation areas are maintained and protected as a natural area in perpetuity.

11. You shall ensure that any wetland areas created or preserved as mitigation for work authorized by this permit shall not be made subject to any future construction and/or fill activities, except for the purposes of enhancing or restoring the mitigation area associated with this permit. All plans are to be approved by this office prior to commencement of any work.

12. You are responsible for all work authorized herein and for ensuring that all contractors are aware of the terms and conditions of this authorization. A copy of this authorization must be present at the project site during all phases of construction.

13. You shall notify this office of any proposed modifications to the project, including revisions to any of the plans or documents cited in this authorization. You must receive approval from this office before work affected by the proposed modification is performed.

14. You shall notify this office prior to the transfer of this authorization and liabilities associated with compliance with its terms and conditions. The transferee must sign the authorization in the space provided and forward a copy of the authorization to this office.

Further Information:

1. Congressional Authorities. You have been authorized to undertake the activity described above pursuant to:

(X) Section 10 of the Rivers and Harbors Act of 1899 (33 D.S.C. 403).

(X) Section 404 of the Clean Water Act (33 D.S.C. 1344).

() Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 D.S.C. 1413).

2. Limits of this Authorization.

a. This permit does not obviate the need to obtain other federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. The Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on the behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modifications, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in the reliance on the information you provided.

5. Reevaluation of Permit Decision. The office may reevaluate its decision on this permit at any time the circumstances warrant. circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

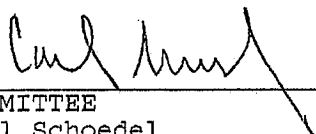
b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General Condition 1 established a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as a permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.



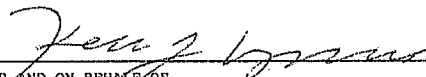
PERMITTEE
Carl Schoedel
Kane County Division of Transportation
221 Burlington Road
St. Charles, Illinois 60175

JANUARY 5, 2007
DATE

This authorization becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

199600199

Corps Authorization Number



FOR AND ON BEHALF OF
John D. Drolet
Colonel, U.S. Army
District Commander

JAN. 11, 2007
DATE

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

TRANSFEEE DATE

ADDRESS

TELEPHONE

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY PERMIT

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 - (217) 782-3397
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601 - (312) 814-6026

217/782-3362 ROD R. BLAGOJEVICH, GOVERNOR DOUGLAS P. SCOTT, DIRECTOR

SEP 22 2006

Chicago District
Corps of Engineers
111 North Canal Street, 6th Floor
Chicago, IL 60606

Re: Kane County Department of Transportation (Kane & DuPage Counties)
Stearns Road Extension (Route 25 to Randall Road) - Unnamed Wetlands, Fox River and Tributaries
Log # C-0959-05 [CoE appl. # 199600199]

Gentlemen:

This Agency received a request on December 8, 2005 from the Kane County Department of Transportation requesting necessary comments concerning the extension of Stearns Road from Route 25 to Randall Road impacting wetlands, Fox River and tributaries. We offer the following comments.

Based on the information included in this submittal, it is our engineering judgment that the proposed project may be completed without causing water pollution as defined in the Illinois Environmental Protection Act, provided the project is carefully planned and supervised.

These comments are directed at the effect on water quality of the construction procedures involved in the above described project and are not an approval of any discharge resulting from the completed facility, nor an approval of the design of the facility. These comments do not supplant any permit responsibilities of the applicant toward the Agency.

This Agency hereby issues certification under Section 401 of the Clean Water Act (PL 95-217), subject to the applicant's compliance with the following conditions:

1. The applicant shall not cause:
 - a. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulations;
 - b. water pollution defined and prohibited by the Illinois Environmental Protection Act; or
 - c. interference with water use practices near public recreation areas or water supply intakes.
2. The applicant shall provide adequate planning and supervision during the project construction period for implementing construction methods, processes and cleanup procedures necessary to prevent water pollution and control erosion.

ROCKFORD - 4302 North Main Street, Rockford, IL 61103 - (815) 987-7760 • DES PLAINES - 9511 W. Harrison St., Des Plaines, IL 60016 - (847) 294-4000
ELGIN - 595 South State, Elgin, IL 60123 - (847) 608-3131 • PEORIA - 5415 N. University St., Peoria, IL 61614 - (309) 693-5463
BUREAU OF LAND - PEORIA - 7620 N. University St., Peoria, IL 61614 - (309) 693-5462 • CHAMPAIGN - 2125 South First Street, Champaign, IL 61820 - (217) 278-5800
SPRINGFIELD - 4500 S. Sixth Street Rd., Springfield, IL 62706 - (217) 786-6892 • COLLINSVILLE - 2009 Mall Street, Collinsville, IL 62234 - (618) 346-5120
MARION - 2309 W. Main St., Suite 116, Marion, IL 62959 - (618) 993-7200

3. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by this Agency. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
4. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of staked straw bales, sedimentation basins and temporary mulching. All construction within the waterway shall be constructed during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) or more acres, total land area on or after March 10, 2003. An NPDES Storm Water Permit may be obtained by submitting a properly completed Notice of Intent (NOI) form by certified mail to the Agency's Division of Water Pollution Control, Permit Section.
5. The applicant shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2002).
6. The Asphalt, bituminous material and concrete with protruding material such as reinforcing bar or mesh shall not be 1) used for backfill, 2) placed on shorelines/streambanks, or 3) placed in waters of the State.
7. The proposed work shall be constructed with adequate erosion control measures (i.e., silt fences, straw bales, etc.) to prevent transport of sediment and materials to the adjoining wetlands and downstream.
8. The wetland mitigation plan received by the Agency on December 8, 2005 shall be implemented. Modifications to the wetland mitigation plan must be submitted to the Agency for approval. The permittee shall submit annual reports by July 1 of each calendar year on the status of the mitigation. The first annual report shall include a hydric soils determination that represents the soils at the completion of initial construction for the wetland mitigation site(s). The permittee shall monitor the mitigation for 5 years after the completion of initial construction. A final report shall be submitted within 90 days after completion of a 5-year monitoring period. Each annual report and the final report shall include the following: IEPA Log No., date of completion of initial construction, representative photographs, floristic quality index, updated topographic maps, description of work in the past year, the performance standards for the mitigation as stated in the mitigation plan, and the activities remaining to complete the mitigation plan. For wetland mitigation sites containing non-hydric soils at the time of initial construction, the final report shall include a hydric soils determination that represents the soils at the end of the 5-year monitoring period. For wetland mitigation provided by purchase of wetland mitigation banking credits, in lieu of the above monitoring and reporting, the permittee shall submit written proof from the wetland mitigation bank that the wetland credits have been purchased within thirty (30) days of said purchase. The subject reports and proof of purchase of mitigation credits shall be submitted to:

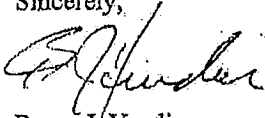
Illinois Environmental Protection Agency
Bureau of Water
Watershed Management Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

9. The applicant shall submit finalized plans for each phase of the proposed project to the Agency for approval.

This certification becomes effective when the Department of the Army, Corps of Engineers, includes the above conditions # 1 through # 9 as conditions of the requested permit issued pursuant to Section 404 of PL 95-217.

This certification does not grant immunity from any enforcement action found necessary by this Agency to meet its responsibilities in prevention, abatement, and control of water pollution.

Sincerely,



Bruce J. Yurdin
Manager, Watershed Management Section
Bureau of Water

BY:TJF:0959-05.doc

cc: IEPA, Records Unit
IEPA, DWPC, FOS, Des Plaines
IDNR, OWR, Bartlett
USEPA, Region 5
Mr. Carl Schoedel, Kane County Department of Transportation
Mr. Jim Novak, Huff & Huff, Inc.
Mr. Pat Kelsey, Christopher B. Burke Engineering
Mr. Mike Okrent, Alfred Benesch & Associates ✓

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISION
FOR
INSURANCE

Effective: February 1, 2007
Revised: August 1, 2007

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.

The Contractor shall name the following entities as additional insured under the Contractor's general liability insurance policy in accordance with Article 107.27:

Kane County

The entities listed above and their officers, employees, and agents shall be indemnified and held harmless in accordance with Article 107.26.

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

Effective: August 1, 2007
 Revised: January 1, 2009

Description. This special provision is intended to reduce the risk of a deleterious alkali-silica reaction in concrete exposed to humid or wet conditions. The special provision is not intended or adequate for concrete exposed to potassium acetate, potassium formate, sodium acetate or sodium formate. The special provision shall not apply to the dry environment (humidity less than 60 percent) found inside buildings for residential or commercial occupancy. The special provision shall also not apply to precast products or precast prestressed products.

Aggregate Expansion Values. Each coarse and fine aggregate will be tested by the Department for alkali reaction according to ASTM C 1260. The test will be performed with Type I or II cement having a total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.90 percent or greater. The Engineer will determine the assigned expansion value for each aggregate, and these values will be made available on the Department's Alkali-Silica Potential Reactivity Rating List. The Engineer may differentiate aggregate based on ledge, production method, gradation number, or other factors. An expansion value of 0.05 percent will be assigned to limestone or dolomite coarse aggregates and 0.03 percent to limestone or dolomite fine aggregates (manufactured stone sand); however the Department reserves the right to perform the ASTM C 1260 test.

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

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

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

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

Group IV - Mixture options 1, 2 and 4 combined, or 5 shall be used.

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

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

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

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

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

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

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

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

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

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

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

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

- 4) Microsilica or High Reactivity Metakaolin. Microsilica solids or high reactivity metakaolin shall be added to the mixture at a minimum 25 lb/cu yd (15 kg/cu m) or 27 lb/cu yd (16 kg/cu m) respectively.
- c) Mixture Option 3. The cement used shall have a maximum total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.60 percent. When aggregate in Group II is involved, any finely divided mineral may be used with a portland cement.
- d) Mixture Option 4. The cement used shall have a maximum total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.45 percent. When aggregate in Group II or III is involved, any finely divided mineral may be used with a portland cement.
- e) Mixture Option 5. The proposed cement or finely divided mineral may be used if the ASTM C 1567 expansion value is ≤ 0.16 percent when performed on the aggregate in the concrete mixture with the highest ASTM C 1260 test result. The ASTM C 1567 test will be valid for two years, unless the Engineer determines the materials have changed significantly. For latex concrete, the ASTM C 1567 test shall be performed without the latex. The 0.20 percent autoclave expansion limit in ASTM C 1567 shall not apply.

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

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

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

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

80186

ALKALI-SILICA REACTION FOR PRECAST AND PRECAST PRESTRESSED CONCRETE (BDE)

Effective: January 1, 2009

Description. This special provision is intended to reduce the risk of a deleterious alkali-silica reaction in precast and precast prestressed concrete exposed to humid or wet conditions. The special provision is not intended or adequate for concrete exposed to potassium acetate, potassium formate, sodium acetate or sodium formate. The special provision shall not apply to the dry environment (humidity less than 60 percent) found inside buildings for residential or commercial occupancy. The special provision shall also not apply to cast-in-place concrete.

Aggregate Expansion Values. Each coarse and fine aggregate will be tested by the Department for alkali reaction according to ASTM C 1260. The test will be performed with Type I or II cement having a total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.90 percent or greater. The Engineer will determine the assigned expansion value for each aggregate, and these values will be made available on the Department's Alkali-Silica Potential Reactivity Rating List. The Engineer may differentiate aggregate based on ledge, production method, gradation number, or other factors. An expansion value of 0.05 percent will be assigned to limestone or dolomite coarse aggregates and 0.03 percent to limestone or dolomite fine aggregates (manufactured stone sand); however the Department reserves the right to perform the ASTM C 1260 test.

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

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

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

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

Group IV - Mixture options 1, 2 and 4 combined, or 5 shall be used.

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

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

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

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

- b) Mixture Option 2. A finely divided mineral shall be used as described in 1), 2), 3), or 4) that follow. The replacement ratio is defined as "finely divided mineral:portland cement".
- 1) Class F Fly Ash. For Class PC concrete, precast products, and PS concrete, Class F fly ash shall replace 15 percent of the portland cement at a minimum replacement ratio of 1.5:1.
 - 2) Class C Fly Ash. For Class PC Concrete, precast products, and Class PS concrete, Class C fly ash with 18 percent to less than 26.5 percent calcium oxide content, and less than 2.0 percent loss on ignition, shall replace 20 percent of the portland cement at a minimum replacement ratio of 1:1; or at a minimum replacement ratio of 1.25:1 if the loss on ignition is 2.0 percent or greater. Class C fly ash with less than 18 percent calcium oxide content shall replace 20 percent of the portland cement at a minimum replacement ratio of 1.25:1.
 - 3) Ground Granulated Blast-Furnace Slag. For Class PC concrete, precast products, and Class PS concrete, ground granulated blast-furnace slag shall replace 25 percent of the portland cement at a minimum replacement ratio of 1:1.
 - 4) Microsilica or High Reactivity Metakaolin. Microsilica solids or high reactivity metakaolin shall be added to the mixture at a minimum 25 lb/cu yd (15 kg/cu m) or 27 lb/cu yd (16 kg/cu m) respectively.
- c) Mixture Option 3. The cement used shall have a maximum total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.60 percent. When aggregate in Group II is involved, any finely divided mineral may be used with a portland cement.
- d) Mixture Option 4. The cement used shall have a maximum total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.45 percent. When aggregate in Group II or III is involved, any finely divided mineral may be used with a portland cement.
- e) Mixture Option 5. The proposed cement or finely divided mineral may be used if the ASTM C 1567 expansion value is ≤ 0.16 percent when performed on the aggregate in

the concrete mixture with the highest ASTM C 1260 test result. The ASTM C 1567 test will be valid for two years, unless the Engineer determines the materials have changed significantly. The 0.20 percent autoclave expansion limit in ASTM C 1567 shall not apply.

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

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

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

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

80213

AMERICAN RECOVERY AND REINVESTMENT ACT PROVISIONS (BDE)

Effective: April 1, 2009

Required Contract Provision to Implement ARRA Section 902:

Section 902 of the American Recovery and Reinvestment Act (ARRA) of 2009 requires that each contract awarded using ARRA funds allow the U.S. Comptroller General and his representatives with the authority to:

- "(1) to examine any records of the Contractor or any of its subcontractors, or any State or local agency administering such contract, that directly pertain to, and involve transactions relating to, the contract or subcontract; and
- (2) to interview any officer or employee of the Contractor or any of its subcontractors, or of any State or local government agency administering the contract, regarding such transactions."

Accordingly, the Comptroller General and his representatives shall have the authority and rights as provided under Section 902 of the ARRA with respect to this contract, which is funded with funds made available under the ARRA. Section 902 further states that nothing in this section shall be interpreted to limit or restrict in any way any existing authority of the Comptroller General.

Notification of the Authority of the Inspector General:

Section 1515(a) of the ARRA provides authority for any representatives of the Inspector General to examine any records or interview any employee or officers working on this contract. The Contractor is advised that representatives of the inspector general have the authority to examine any record and interview any employee or officer of the Contractor, its subcontractors or other firms working on this contract. Section 1515(b) further provides that nothing in this section shall be interpreted to limit or restrict in any way any existing authority of an inspector general.

80243

AMERICAN RECOVERY AND REINVESTMENT ACT SIGNING (BDE)

Effective: April 1, 2009

Revised: April 2, 2009

Description. This work shall consist of furnishing, fabricating and installing sign panels, complete with sign faces, legend, and supplemental panels according to Section 720 of the Standard Specifications and as specified herein.

Materials. The "Putting America to Work" sign shall be fabricated using Type AP fluorescent orange sheeting for the background material with black vinyl or black opaque ink legend, symbol and borders. The "American Recovery and Reinvestment Act" sign shall be fabricated using Type AP green sheeting for the background with Type AP white sheeting for the legend and border. A green translucent overlay film may also be used over white Type AP sheeting to fabricate the "American Recovery and Reinvestment Act" sign.

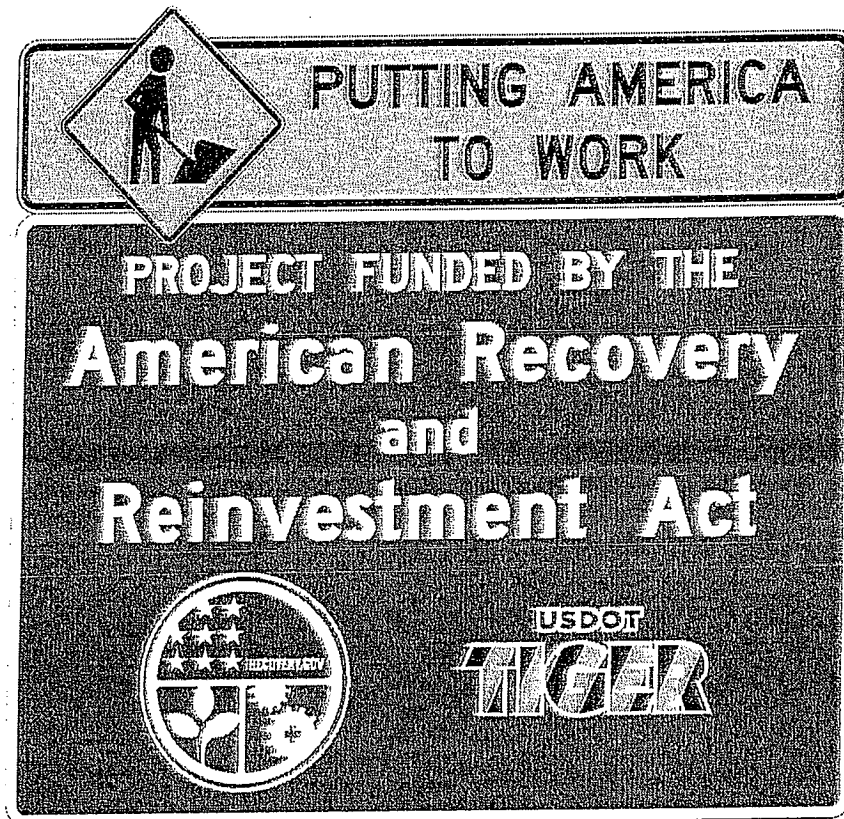
Sign Layout. See following attachment. The "Putting America to Work" sign shall be 84 in. x 18 in. The "American Recovery and Reinvestment Act" sign shall be 84 in x 60 in.

General. The signs shall be erected to applicable portions of Article 701.14 of the Standard Specifications. These signs shall be erected midway between the first and second warning signs as required by the traffic control plan and standards utilized for this project. If the second warning sign is defining a moving or intermittent operation, the sign may be maintained at a distance of 500 ft (150.m) beyond the first post mounted ROAD CONSTRUCTION AHEAD sign. The signs shall remain in place for the duration of the project. Upon completion of the project, the signs and posts shall be removed and shall remain the property of the Contractor.

Basis of Payment. This work will not be paid for separately but shall be included in the cost of Traffic Control items as shown on the plans.

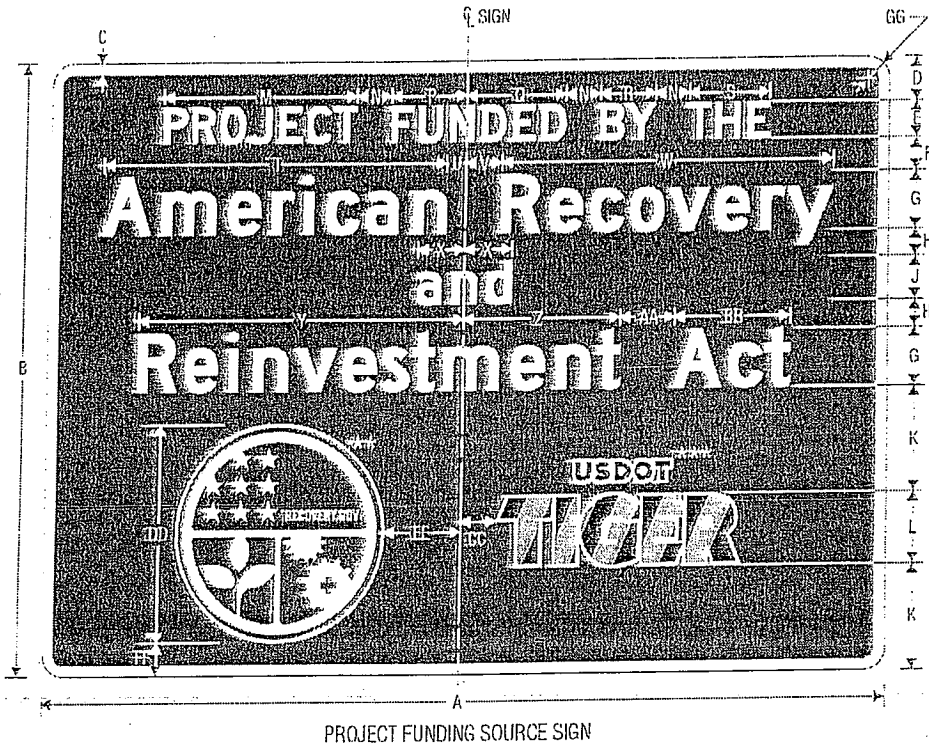
80236

PROJECT FUNDING SOURCE SIGN ASSEMBLY
AMERICAN RECOVERY AND REINVESTMENT ACT
SIGN LAYOUT DETAILS



PROJECT FUNDING SOURCE
SIGN ASSEMBLY

**PROJECT FUNDING SOURCE SIGN ASSEMBLY
AMERICAN RECOVERY AND REINVESTMENT ACT
SIGN LAYOUT DETAILS**



PROJECT FUNDING SOURCE SIGN

NOTE: SIGN SHALL NOT BE INSTALLED WITHOUT
PROJECT FUNDING SOURCE PLAQUE

Dimensions in inches:

A	B	C	D	E	F	G	H	J	K	L	M	N	P
120	84	1.5	6	5 D	4.5	8 D*	3.75	6 I (45 L)	14.5	10	27.917	5	10.831
84	60	1	5	4 C	3.5	6 C*	3	4 I (31.0)	9.25	7	19.047	4	7.362

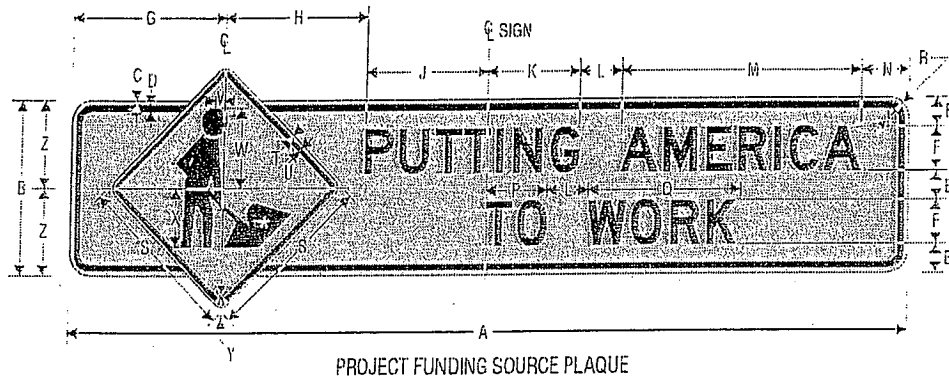
O	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD
14.087	8.106	11.556	49.42	2.742	5.258	46.904	6.812	46.76	22.472	8	16.288	5	30
9.484	5.162	7.763	31.722	2.415	3.585	30.552	4.542	30.911	14.737	6	10.175	4	21

EE	FF	GG
11	4.5	3
7.5	2.25	2.25

* Increase character spacing 50%
** See Pictograph
*** See Pictograph

COLORS: LEGEND, BORDER - WHITE (RETROREFLECTIVE)
BACKGROUND - GREEN (RETROREFLECTIVE)

**PROJECT FUNDING SOURCE SIGN ASSEMBLY
AMERICAN RECOVERY AND REINVESTMENT ACT
SIGN LAYOUT DETAILS**



NOTE: PLAQUE SHALL NOT BE INSTALLED
WITHOUT SIGN

* See *Standard Highway Signs*
Page 6-59 for symbol design.

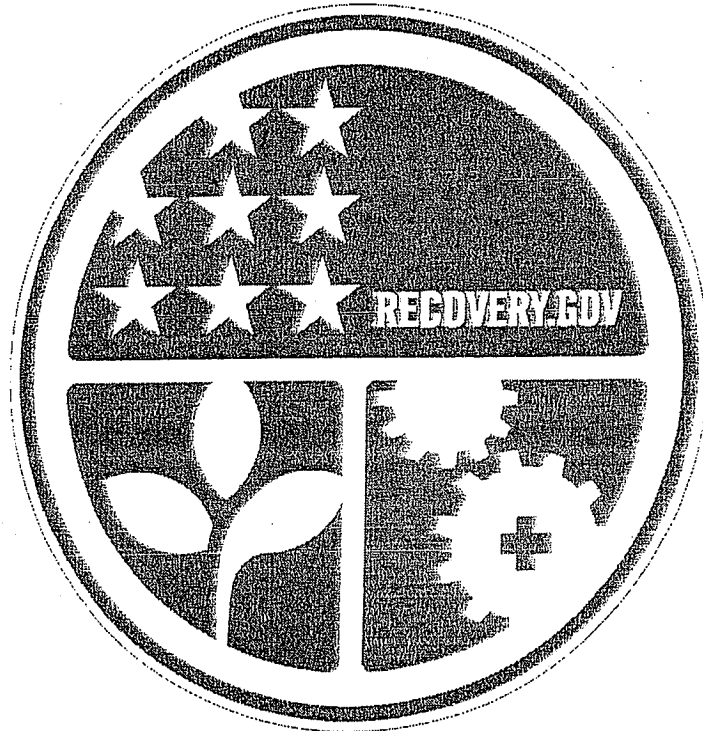
Dimensions in inches:

A	B	C	D	E	F	G	H	J	K	L	M	N	P
120	24	0.625	0.875	4	GD	22.349	20.370	17.281	13.28	6	34.22	6.5	8.765
84	18	0.375	0.625	3.5	4D	16.607	15.686	9.707	10.667	4	22.813	5	5.843

O	R	S	T	U	V	W	X	Y	Z
21.013	3	24	0.375	0.625	1.5	11	8	1.5	12
14.009	2.25	18	0.375	0.625	1	7	6	1.5	9

COLORS: LEGEND, BORDER - BLACK
BACKGROUND - ORANGE (RETROREFLECTIVE)

PROJECT FUNDING SOURCE SIGN ASSEMBLY
AMERICAN RECOVERY AND REINVESTMENT ACT
SIGN LAYOUT DETAILS



RECOVERY
Vector-Based, Vinyl-Ready Pictograph

COLORS: LEGEND, OUTLINE	— WHITE (RETROREFLECTIVE)
BORDER	— BLUE (RETROREFLECTIVE)
BACKGROUND (UPPER)	— BLUE (RETROREFLECTIVE)
BACKGROUND (LOWER RIGHT)	— RED (RETROREFLECTIVE)
BACKGROUND (LOWER LEFT)	— GREEN (RETROREFLECTIVE)

PROJECT FUNDING SOURCE SIGN ASSEMBLY
AMERICAN RECOVERY AND REINVESTMENT ACT
SIGN LAYOUT DETAILS



USDOT TIGER
Vector-Based, Vinyl-Ready Pictograph

COLORS: OUTLINE — WHITE (RETROREFLECTIVE)
USDOT LEGEND — BLACK
TIGER DIAGONALS — BLACK,
ORANGE (RETROREFLECTIVE)

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

Effective: November 1, 2008

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

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

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

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

80207

AUTOMATED FLAGGER ASSISTANCE DEVICES (BDE)

Effective: January 1, 2008

Description. This work shall consist of furnishing and operating automated flagger assistance devices (AFADs) as part of the work zone traffic control and protection for two-lane highways where two-way traffic is maintained over one lane of pavement. Use of these devices shall be at the option of the Contractor.

Equipment. AFADs shall be according to the FHWA memorandum, "MUTCD - Revised Interim Approval for the use of Automated Flagger Assistance Devices in Temporary Traffic Control Zones (IA-4R)", dated January 28, 2005. The devices shall be mounted on a trailer or a moveable cart and shall meet the requirements of NCHRP 350, Category 4.

The AFAD shall be the Stop/Slow type. This device uses remotely controlled "STOP" and "SLOW" signs to alternately control right-of-way.

Signs for the AFAD shall be according to Article 701.03 of the Standard Specifications and the MUTCD. The signs shall be 24 x 24 in. (600 x 600 mm) having an octagon shaped "STOP" sign on one side and a diamond shaped "SLOW" sign on the opposite side. The letters on the signs shall be 8 in. (200 mm) high. If the "STOP" sign has louvers, the full sign face shall be visible at a distance of 50 ft (15 m) and greater.

The signs shall be supplemented with one of the following types of lights.

- (a) Flashing Lights. When flashing lights are used, white or red flashing lights shall be mounted within the "STOP" sign face and white or yellow flashing lights within the "SLOW" sign face.
- (b) Stop and Warning Beacons. When beacons are used, a stop beacon shall be mounted 24 in. (600 mm) or less above the "STOP" sign face and a warning beacon mounted 24 in. (600 mm) or less above, below, or to the side of the "SLOW" sign face. As an option, a Type B warning light may be used in lieu of the warning beacon.

A "WAIT ON STOP" sign shall be placed on the right hand side of the roadway at a point where drivers are expected to stop. The sign shall be 24 x 30 in. (600 x 750 mm) with a black legend and border on a white background. The letters shall be at least 6 in. (150 mm) high.

This device may include a gate arm or mast arm that descends to a horizontal position when the "STOP" sign is displayed and rises to a vertical position when the "SLOW" sign is displayed. When included, the end of the arm shall reach at least to the center of the lane being controlled. The arm shall have alternating red and white retroreflective stripes, on both sides, sloping downward at 45 degrees toward the side on which traffic will pass. The stripes shall be 6 in. (150 mm) in width and at least 2 in. (50 mm) in height.

Flagging Requirements. Flaggers and flagging requirements shall be according to Article 701.13 of the Standard Specifications and the following.

AFADs shall be placed at each end of the traffic control, where a flagger is shown on the plans. The flaggers shall be able to view the face of the AFAD and approaching traffic during operation.

To stop traffic, the "STOP" sign shall be displayed, the corresponding lights/beacon shall flash, and when included, the gate arm shall descend to a horizontal position. To permit traffic to move, the "SLOW" sign shall be displayed, the corresponding lights/beacon shall flash, and when included, the gate arm shall rise to a vertical position.

If used at night, the AFAD location shall be illuminated according to Section 701 of the Standard Specifications.

When not in use, AFADs will be considered nonoperating equipment and shall be stored according to Article 701.11 of the Standard Specifications.

Basis of Payment. This work will not be paid for separately but shall be considered as included in the cost of the various traffic control items included in the contract.

80192

BITUMINOUS MATERIALS COST ADJUSTMENTS (BDE) (RETURN FORM WITH BID)

Effective: November 2, 2006

Revised: April 1, 2009

Description. Bituminous material cost adjustments will be made to provide additional compensation to the Contractor, or credit to the Department, for fluctuations in the cost of bituminous materials when optioned by the Contractor. The adjustments shall apply to permanent and temporary hot-mix asphalt (HMA) mixtures, bituminous surface treatments (cover and seal coats), and pavement preservation type surface treatments. The adjustments shall not apply to bituminous prime coats, tack coats, crack filling/sealing, or joint filling/sealing.

The bidder shall indicate on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form, or failure to fill out the form completely, shall make this contract exempt of bituminous materials cost adjustments.

Method of Adjustment. Bituminous materials cost adjustments will be computed as follows.

$$CA = (BPI_P - BPI_L) \times (\%AC_V / 100) \times Q$$

Where: CA = Cost Adjustment, \$.

BPI_P = Bituminous Price Index, as published by the Department for the month the work is performed, \$/ton (\$/metric ton).

BPI_L = Bituminous Price Index, as published by the Department for the month prior to the letting, \$/ton (\$/metric ton).

%AC_V = Percent of virgin Asphalt Cement in the Quantity being adjusted. For HMA mixtures, the % AC_V will be determined from the adjusted job mix formula. For bituminous materials applied, a performance graded or cutback asphalt will be considered to be 100% AC_V and undiluted emulsified asphalt will be considered to be 65% AC_V.

Q = Authorized construction Quantity, tons (metric tons) (see below).

For HMA mixtures measured in square yards: $Q, \text{ tons} = A \times D \times (G_{mb} \times 46.8) / 2000$. For HMA mixtures measured in square meters: $Q, \text{ metric tons} = A \times D \times (G_{mb} \times 24.99) / 1000$. When computing adjustments for full-depth HMA pavement, separate calculations will be made for the binder and surface courses to account for their different G_{mb} and % AC_V.

For bituminous materials measured in gallons: $Q, \text{ tons} = V \times 8.33 \text{ lb/gal} \times SG / 2000$

For bituminous materials measured in liters: $Q, \text{ metric tons} = V \times 1.0 \text{ kg/L} \times SG / 1000$

Where: A = Area of the HMA mixture, sq yd (sq m).

D = Depth of the HMA mixture, in. (mm).

G_{mb} = Average bulk specific gravity of the mixture, from the approved mix design.

V = Volume of the bituminous material, gal (L).

SG = Specific Gravity of bituminous material as shown on the bill of lading.

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

$$\text{Percent Difference} = \{(BPI_L - BPI_P) \div BPI_L\} \times 100$$

Bituminous materials cost adjustments will be calculated for each calendar month in which applicable bituminous material is placed; and will be paid or deducted when all other contract requirements for the work placed during the month are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Return With Bid

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**OPTION FOR
BITUMINOUS MATERIALS COST ADJUSTMENTS**

The bidder shall submit this completed form with his/her bid. Failure to submit the form, or failure to fill out the form completely, shall make this contract exempt of bituminous materials cost adjustments. After award, this form, when submitted, shall become part of the contract.

Contract No.: _____

Company Name: _____

Contractor's Option:

Is your company opting to include this special provision as part of the contract?

Yes

No

Signature: _____ **Date:** _____

80173

CEMENT (BDE)

Effective: January 1, 2007

Revised: April 1, 2009

Revise Section 1001 of the Standard Specifications to read:

"SECTION 1001. CEMENT

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

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

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

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

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

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

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

reducing or high range water-reducing admixture which is permitted according to Article 1020.05(b).

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

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

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

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

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

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

(1) The cement shall have a maximum final set of 25 minutes, according to Illinois Modified ASTM C 191.

(2) The cement shall have a minimum compressive strength of 2000 psi (13,800 kPa) at 3.0 hours, 3200 psi (22,100 kPa) at 6.0 hours, and 4000 psi (27,600 kPa) at 24.0 hours, according to Illinois Modified ASTM C 109.

(3) The cement shall have a maximum drying shrinkage of 0.050 percent at seven days, according to Illinois Modified ASTM C 596.

(4) The cement shall have a maximum expansion of 0.020 percent at 14 days, according to Illinois Modified ASTM C 1038.

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

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

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

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

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

80166

CONCRETE ADMIXTURES (BDE)

Effective: January 1, 2003

Revised: April 1, 2009

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

“(b) Admixtures. The use of admixtures to increase the workability or to accelerate the hardening of the concrete will be permitted when approved by the Engineer. Admixture dosages shall result in the mixture meeting the specified plastic and hardened properties. The Department will maintain an Approved List of Corrosion Inhibitors. Corrosion inhibitor dosage rates shall be according to Article 1020.05(b)(12). The Department will also maintain an Approved List of Concrete Admixtures, and an admixture technical representative shall be consulted when determining an admixture dosage from this list. The dosage shall be within the range indicated on the approved list unless the influence by other admixtures, jobsite conditions (such as a very short haul time), or other circumstances warrant a dosage outside the range. The Engineer shall be notified when a dosage is proposed outside the range. To determine an admixture dosage, air temperature, concrete temperature, cement source and quantity, finely divided mineral sources(s) and quantity, influence of other admixtures, haul time, placement conditions, and other factors as appropriate shall be considered. The Engineer may request the Contractor to have a batch of concrete mixed in the lab or field to verify the admixture dosage is correct. An admixture dosage or combination of admixture dosages shall not delay the initial set of concrete by more than one hour. When a retarding admixture is required or appropriate for a bridge deck or bridge deck overlayer pour, the initial set time shall be delayed until the deflections due to the concrete dead load are no longer a concern for inducing cracks in the completed work. However, a retarding admixture shall not be used to further extend the pour time and justify the alteration of a bridge deck pour sequence.

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

Revise Section 1021 of the Standard Specifications to read:

“SECTION 1021. CONCRETE ADMIXTURES

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

Corrosion inhibitors will be maintained on the Department's Approved List of Corrosion Inhibitors. All other concrete admixture products will be maintained on the Department's

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

80094

CONCRETE JOINT SEALER (BDE)

Effective: January 1, 2009

Add the following to the end of the second paragraph of Article 503.19 of the Standard Specifications:

“After the surface is clean and before applying protective coat, joints being sealed according to Section 588 shall be covered with a masking tape.”

Revise Section 588 of the Standard Specifications to read:

“SECTION 588. CONCRETE JOINT SEALER

588.01 Description. This work shall consist of sealing the transverse joint in the bridge roadway slab.

588.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Hot-Poured Joint Sealer	1050.02
(b) Preformed Flexible Foam Expansion Joint Filler.....	1051.09

CONSTRUCTION REQUIREMENTS

588.03 General. The faces of all joints to be sealed shall be free of foreign matter, curing compound, oils, grease, dirt, free water, and laitance. Concrete joints to be sealed shall be free of cracked or spalled areas. Any cracked areas shall be chipped back to sound concrete before placing joint sealer.

The hot-poured joint sealer shall be placed when the air temperature in the shade is 40 °F (5 °C) or higher, unless approved by the Engineer.

A continuous length of expansion joint filler of the size designated on the plans, shall be placed in the joint opening at the depth below the finished surface of the joint shown on the plans. Hot-poured joint sealer shall be stirred during heating to prevent localized overheating. The sealing material shall be applied to each joint opening according to the details shown on the plans or as directed by the Engineer, without spilling on the exposed concrete surfaces.

All bridge joints shall be filled to 1/4 in. (6 mm) below the finished surface of the joint. This is to be interpreted to mean that the surface of the sealant shall be level and the point of its contact with the sidewalls of the joint shall be 1/4 in. (6 mm) below the finished surface of the joint.

Any sealing compound that is not bonded to the joint wall or face 24 hours after placing shall be removed and the joint shall be cleaned and resealed.

588.04 Basis of Payment. This work will not be paid for as a separate item, but shall be considered as included in the unit price bid for the major item of construction involved.”

80215

CONCRETE MIX DESIGNS (BDE)

Effective: April 1, 2009

Add the following to Article 1020.05(c) of the Standard Specifications:

- “(5) Performance Based Finely Divided Mineral Combination. For Class PV and SI concrete a performance based finely divided mineral combination may be used. The minimum cement factor, maximum cement factor, and water cement ratio of Article 1020.04 shall be replaced with the values below, and the performance based finely divided mineral combination herein is an alternative to Articles 1020.05(c)(1), (c)(2), (c)(3), and (c)(4). The mix design shall meet the following requirements and the Engineer may request a trial batch.
- a. The mixture shall contain a minimum of 375 lbs/cu yd (222 kg/cu m) of portland cement. For a blended cement, a sufficient amount shall be used to obtain the required 375 lbs/cu yd (222 kg/cu m) of portland cement in the mixture. For example, a blended cement stated to have 20 percent finely divided mineral, ignoring any ASTM C 595 tolerance on the 20 percent, would require a minimum of 469 lbs/cu yd (278 kg/cu m) of material in the mixture. When the mixture is designed for cement content from 375 lbs/cu yd (222 kg/cu m) to 400 lbs/cu yd (237 kg/cu m), the total of organic processing additions, inorganic processing additions, and limestone addition in the cement shall not exceed 5.0 percent.
 - b. The mixture shall contain a maximum of two finely divided minerals. The finely divided mineral in a blended cement shall count toward the total number of finely divided minerals allowed. The finely divided mineral(s) shall constitute a maximum of 35.0 percent of the total cement plus finely divided mineral(s). The fly ash portion shall not exceed 30.0 percent for Class C fly ash or 25.0 percent for Class F fly ash. The Class C and F fly ash combination shall not exceed 30.0 percent. The ground granulated blast-furnace slag portion shall not exceed 35.0 percent. The microsilica or high-reactivity metakaolin portion used together or separately shall not exceed 5.0 percent. The finely divided mineral in the blended cement shall apply to the maximum 35.0 percent, and shall be determined as discussed in a. above for determining portland cement in blended cement.
 - c. For central mixed Class PV and SI concrete, the mixture shall contain a minimum of 535 lbs/cu yd (320 kg/cu m) of cement and finely divided mineral(s) summed together, and a water-reducing admixture shall be used. The value shall be 565 lbs/cu yd (335 kg/cu m) without a water-reducing admixture.

For truck mixed or shrink mixed Class PV and SI concrete, the mixture shall contain a minimum of 575 lbs/cu yd (345 kg/cu m) of cement and finely

divided mineral(s) summed together, and a water-reducing admixture shall be used. The value shall be 605 lbs/cu yd (360 kg/cu m) without a water-reducing admixture.

- d. The mixture shall contain a maximum of 705 lbs/cu yd (418 kg/cu m) of cement and finely divided mineral(s) summed together.
- e. The mixture shall have a water/cement ratio of 0.32 – 0.44.
- f. The mixture shall not be used for placement underwater.
- g. The combination of cement and finely divided mineral(s) shall have an ASTM C 1567 expansion value ≤ 0.16 percent, and shall be performed on the aggregate in the concrete mixture with the highest ASTM C 1260 test result. The ASTM C 1567 test will be valid for two years, unless the Engineer determines the materials have changed significantly.

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

80226

CONSTRUCTION AIR QUALITY – DIESEL VEHICLE EMISSIONS CONTROL (BDE)

Effective: April 1, 2009

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

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

In addition, all construction motor vehicles (both on-road and off-road, gasoline or diesel fuel powered) shall comply with all pertinent State and Federal regulations relative to exhaust emission controls and safety, including opacity. Frequently Asked Questions (FAQ's) regarding Illinois Environmental Protection Agency (IEPA) emissions testing for gasoline powered vehicles can be accessed at (<http://www.epa.state.il.us/air/vim/faqs.html>) . Regulations regarding diesel powered vehicles over 16,000 lb (7260 kg), and the Diesel Emission Inspection Program (Title 92: Transportation Part 460, Diesel Emission Inspection Program, Subpart A: General) can be accessed at (<http://www.ilga.gov/commission/icar/admincode/092/09200460sections.html>) ; Diesel powered vehicles less than 16,000 lb (7260 kg) are exempt from testing by the Department. All diesel powered equipment used on the project site shall be subject to reasonable, random spot checks for compliance with the required emissions controls and proper diesel fuel usage. The Secretary of State, Illinois State Police and other law enforcement officers will enforce Part 460. For additional information concerning Illinois diesel emission inspection requirements, please call the Illinois Department of Transportation, Diesel Emission Inspections Unit, at 217-557-6081.

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

The Contractor shall submit copies of monthly summary reports and include certified copies of the ULSD diesel fuel delivery slips for diesel fuel delivered to the jobsite for the reporting time period, noting the quantity of diesel fuel used with each piece of diesel powered equipment. The addition or deletion of any diesel powered equipment shall be included in the summary and noted on the monthly report.

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

Any costs associated with bringing any diesel powered equipment into compliance with these diesel vehicle emissions controls shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed. The

Contractor's compliance with this notice and any associated regulations shall also not be grounds for a claim.

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

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

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

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

80237

CONSTRUCTION AIR QUALITY - IDLING RESTRICTIONS (BDE)

Effective: April 1, 2009

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

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

- 1) The motor vehicle has a gross vehicle weight rating of less than 8000 lb (3630 kg).
- 2) The motor vehicle idles while forced to remain motionless because of on-highway traffic, an official traffic control device or signal, or at the direction of a law enforcement official.
- 3) The motor vehicle idles when operating defrosters, heaters, air conditioners, or other equipment solely to prevent a safety or health emergency.
- 4) A police, fire, ambulance, public safety, other emergency or law enforcement motor vehicle, or any motor vehicle used in an emergency capacity, idles while in an emergency or training mode and not for the convenience of the vehicle operator.
- 5) The primary propulsion engine idles for maintenance, servicing, repairing, or diagnostic purposes if idling is necessary for such activity.
- 6) A motor vehicle idles as part of a government inspection to verify that all equipment is in good working order, provided idling is required as part of the inspection.
- 7) When idling of the motor vehicle is required to operate auxiliary equipment to accomplish the intended use of the vehicle (such as loading, unloading, mixing, or processing cargo; controlling cargo temperature; construction operations, lumbering operations; oil or gas well servicing; or farming operations), provided that this exemption does not apply when the vehicle is idling solely for cabin comfort or to operate non-essential equipment such as air conditioning, heating, microwave ovens, or televisions.
- 8) When the motor vehicle idles due to mechanical difficulties over which the operator has no control.
- 9) The outdoor temperature is less than 32 °F (0 °C) or greater than 80 °F (26 °C).

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

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

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

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

80239

DETERMINATION OF THICKNESS (BDE)

Effective: April 1, 2009

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

Add the following Article to the Standard Specifications:

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

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

Revise Article 354.09 of the Standard Specifications to read:

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

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

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

Revise Article 355.09 of the Standard Specifications to read:

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

placement of the cover layer(s), the Engineer will determine the thickness of the cover layer(s), and subtract them from the measured core thickness to determine the base course thickness.”

Revise Article 356.07 of the Standard Specifications to read:

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

Revise Article 407.10 of the Standard Specifications to read:

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

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

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

- (1) Lots and Sublots. The pavement will be divided into approximately equal lots of not more than 5000 ft (1500 m) in length. When the length of a continuous strip of pavement is 500 ft (150 m) or greater but less than 5000 ft (1500 m), these short lengths of pavement, ramps, turn lanes, and other short sections of continuous pavement will be grouped together to form lots approximately 5000 ft (1500 m) in length. Short segments between structures will be measured continuously with the structure segments omitted. Each lot will be subdivided into ten equal sublots. The width of a subplot and lot will be the width from the pavement edge to the adjacent lane line, from one lane line to the next, or between pavement edges for single-lane pavements.

- (2) Cores. Cores 2 in. (50 mm) in diameter shall be taken from the pavement by the Contractor, at locations selected by the Engineer. The exact location for each core will be selected at random, but will result in one core per subplot. Core locations will be specified prior to beginning the coring operations.

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

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

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

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

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

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

- (4) Deficient Lot. After addressing deficient sublots, the PWL for each lot will be determined. When the PWL of a lot is 60 percent or less, the pavement in that lot shall be removed and replaced; however, when requested in writing by the Contractor, the Engineer may permit in writing such deficient lots to remain in place.

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

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

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

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

When the additional cores show the pavement to be deficient by more than ten percent of plan thickness, more additional cores shall be taken to determine the limits of the deficient pavement and that area shall be removed and replaced; however, when requested in writing by the Contractor, the Engineer may permit in writing such areas of deficient pavement to remain in place. The area of deficient pavement will be defined using the length between two acceptable cores and the full width of the subplot. An acceptable core is a core with a length of at least 90 percent of plan thickness.

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

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

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

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

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

Definitions:

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

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

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

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

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

$$Q_L = \frac{x - LSL}{s}$$

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

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

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

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

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

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

TPF = Total Pay Factor

CUP = Contract Unit Price
TOTPAVT = Area of Pavement Subject to Coring
DEFPAVT = Area of Deficient Pavement

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

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

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

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

*For Q_L values less than zero, subtract the table value from 100 to obtain PWL

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

*For Q_L values less than zero, subtract the table value from 100 to obtain PWL

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

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

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

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

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

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

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

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

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

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

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

- (8) Right of Discovery. When the Engineer has reason to believe any core location does not accurately represent the true conditions of the work, he/she may order additional cores. These additional cores shall be taken at specific locations determined by the

Engineer. The Engineer will provide notice to the Contractor containing an explanation of the reasons for his/her action.

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

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

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

Revise Article 482.06 of the Standard Specifications to read:

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

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

an amount equal to two times the contract unit price of the shoulder will be deducted from the compensation due the Contractor.

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

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

Revise Article 483.07 of the Standard Specifications to read:

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

80227

DIGITAL TERRAIN MODELING FOR EARTHWORK CALCULATIONS (BDE)

Effective: April 1, 2007

Revise the first and second paragraphs of Article 202.07(b) of the Standard Specifications to read:

“(b) Measured Quantities. Earth and rock excavation will be measured in cubic yards (cubic meters) in their original positions. The volumes will be computed by the method of average end areas using before and after cross sections; or by the method of digital terrain modeling using before and after total station surveys. The volume of any unstable or unsuitable material removed will be measured for payment in cubic yards (cubic meters).

In rock excavation, the Contractor shall strip ledge rock of overburden so that necessary survey shots for measurement may be taken. Vertical measurements shall extend from the surface of the rock to an elevation not more than 6 in. (150 mm) below the subgrade of the proposed pavement structure, as shown on the plans, or to the bottom of the rock where that point is above the subgrade of the proposed pavement structure. Horizontal measurements shall extend not more than 6 in. (150 mm) beyond the slope lines fixed by the Engineer for the work. Boulders and rocks 1/2 cu yd (0.5 cu m) or more in volume will be measured individually and the volume computed from average dimensions taken in three directions.”

Revise the first paragraph of Article 204.07 of the Standard Specifications to read.

“**204.07 Method of Measurement.** Borrow excavation will be measured in cubic yards (cubic meters) in its original position. The volume will be computed by the method of average end areas using before and after cross sections; or by the method of digital terrain modeling using before and after total station surveys.”

Revise the embankment definition of Article 204.07(b) of the Standard Specifications to read:

“Embankment = the volume of fill in its final position computed by the method of average end areas or digital terrain modeling. Both methods will be based upon the existing ground line as shown on the plans, except as noted in (1) and (2) below;”

Revise Article 207.04 of the Standard Specifications to read:

“**207.04 Method of Measurement.** This work will be measured for payment in tons (metric tons) according to Article 311.08(b), or in cubic yards (cubic meters) compacted in place and the volume computed by the method of average end areas or digital terrain modeling by total station measurement.”

Revise the second sentence of the second paragraph of Article 211.07(b) of the Standard Specifications to read:

“The volume will be computed by the method of average end areas or digital terrain modeling by total station measurement.”

80177

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)

Effective: September 1, 2000

Revised: November 1, 2008

FEDERAL OBLIGATION. The Department of Transportation, as a recipient of federal financial assistance, is required to take all necessary and reasonable steps to ensure nondiscrimination in the award and administration of contracts. Consequently, the federal regulatory provisions of 49 CFR part 26 apply to this contract concerning the utilization of disadvantaged business enterprises. For the purposes of this Special Provision, a disadvantaged business enterprise (DBE) means a business certified by the Department in accordance with the requirements of 49 CFR part 26 and listed in the Illinois Unified Certification Program (IL UCP) DBE Directory 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 percent state-funded contracts, the federal government has no involvement in such contracts (not a federal-aid contract) and no responsibility to oversee the implementation of this Special Provision by the Department on those contracts. DBE participation on 100 percent state-funded contracts will not be credited toward fulfilling the Department's annual overall DBE goal required by the US Department of Transportation to comply with the federal DBE program requirements.

CONTRACTOR ASSURANCE. The Contractor makes the following assurance and agrees to include the assurance in each subcontract that the Contractor signs with a subcontractor:

The Contractor, subrecipient, or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of contracts funded in whole or in part with federal or state funds. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

OVERALL GOAL SET FOR THE DEPARTMENT. As a requirement of compliance with 49 CFR part 26, the Department has set an overall goal for DBE participation in its federally assisted contracts. That goal applies to all federal-aid funds the Department will expend in its federally assisted contracts for the subject reporting fiscal year. The Department is required to make a good faith effort to achieve the overall goal. The dollar amount paid to all approved DBE companies performing work called for in this contract is eligible to be credited toward fulfillment of the Department's overall goal.

CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR. This contract includes a specific DBE utilization goal established by the Department. The goal has been included because the Department has determined that the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies. This determination is

based on an assessment of the type of work, the location of the work, and the availability of DBE companies to do a part of the work. The assessment indicates that, in the absence of unlawful discrimination, and in an arena of fair and open competition, DBE companies can be expected to perform 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 IL UCP DBE Directory as a reference source for DBE-certified companies. In addition, the Department maintains a letting and item specific DBE locator information system whereby DBE companies can register their interest in providing quotes on particular bid items advertised for letting. Information concerning DBE companies willing to quote work for particular contracts may be obtained by contacting the Department's Bureau of Small Business Enterprises at telephone number (217)785-4611, or by visiting the Department's web site at www.dot.il.gov.

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 working days after the date of letting. To meet the seven day requirement, the bidder may send the Plan by certified mail or delivery service within the seven 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 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 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 companies and non-DBE companies, the plan must also include a clear identification of the portion of the work to be performed by the DBE partner(s).
- (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 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 percent goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE does not count toward the DBE goals.
- (b) DBE as a joint venture Contractor: 100 percent goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.
- (c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the prime Contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE does not count toward the DBE goal.
- (d) DBE as a trucker: 100 percent goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed, and insured by the DBE must be used on the contract. Credit will be given for the 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 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.
 - (2) 100 percent goal credit for the cost of materials or supplies obtained from a DBE manufacturer.
 - (3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a regular dealer or manufacturer.

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 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 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 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 of Small Business Enterprises and provide a full accounting of the efforts undertaken to obtain substitute DBE participation. The Bureau of Small Business Enterprises will evaluate the good faith efforts in light of all circumstances surrounding the performance status of the contract, and determine whether the contract goal should be amended.

- (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 calendar days after payment has been made by the Department to the Contractor for such work or material, the Contractor shall submit a DBE Payment Agreement on Department form SBE 2115 to the Regional Engineer. If full and final payment has not been made to the DBE, the DBE Payment Agreement shall indicate whether a disagreement as to the payment required exists between the Contractor and the DBE or if the Contractor believes that the work has not been satisfactorily completed. If the Contractor does not have the full amount of work indicated in the Utilization Plan performed by the DBE companies indicated in the 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.

DOWEL BARS (BDE)

Effective: April 1, 2007

Revised: January 1, 2008

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

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

80178

ENGINEER'S FIELD OFFICE TYPE A (BDE)

Effective: April 1, 2007

Revised: August 1, 2008

Revise Article 670.02 of the Standard Specifications to read:

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

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

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

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

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

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

- (a) Four desks with minimum working surface 42 x 30 in. (1.1 m x 750 mm) each and five non-folding chairs with upholstered seats and backs.
- (b) One desk with minimum working surface 48 x 72 in. (1.2 x 1.8 m) with height adjustment of 23 to 30 in. (585 to 750 mm).
- (c) One four-post drafting table with minimum top size of 37 1/2 x 48 in. (950 mm x 1.2 m). The top shall be basswood or equivalent and capable of being tilted through an angle of 50 degrees. An adjustable height drafting stool with upholstered seat and back shall also be provided.
- (d) Two free standing four drawer legal size file cabinet with lock and an underwriters' laboratories insulated file device 350 degrees one hour rating.
- (e) One 6 ft (1.8 m) folding table with six folding chairs.

- (f) One equipment cabinet of minimum inside dimension of 44 in. (1100 mm) high x 24 in. (600 mm) wide x 30 in. (750 mm) deep with lock. The walls shall be of steel with a 3/32 in. (2 mm) minimum thickness with concealed hinges and enclosed lock constructed in such a manner as to prevent entry by force. The cabinet assembly shall be permanently attached to a structural element of the field office in a manner to prevent theft of the entire cabinet.
- (g) One refrigerator with a minimum size of 16 cu ft (0.45 cu m) with a freezer unit.
- (h) One electric desk type tape printing calculator.
- (i) A minimum of two communication paths. The configuration shall include:
 - (1) Internet Connection. An internet service connection using telephone DSL, cable broadband, or CDMA wireless technology. Additionally, an 802.11g/N wireless router shall be provided, which will allow connection by the Engineer and up to four Department staff.
 - (2) Telephone Lines. Three separate telephone lines.
- (j) One plain paper copy machine capable of reproducing prints up to 11 x 17 in. (280 x 432 mm) with an automatic feed tray capable of storing 30 sheets of paper. Letter size and 11 x 17 in. (280 x 432 mm) paper shall be provided.
- (k) One plain paper fax machine with paper.
- (l) Two telephones, with touch tone, where available, and a digital telephone answering machine, for exclusive use by the Engineer.
- (m) One electric water cooler dispenser.
- (n) One first-aid cabinet fully equipped.
- (o) One microwave oven, 1 cu ft (0.03 cu m) minimum capacity.
- (p) One fire-proof safe, 0.5 cu ft (0.01 cu m) minimum capacity.
- (q) One electric paper shredder.
- (r) One post mounted rain gauge, located on the project site for each 5 miles (8 km) of project length."

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

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

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

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

80179

EPOXY PAVEMENT MARKINGS (BDE)

Effective: January 1, 2007

Revise Article 1095.04(a) of the Standard Specifications to read:

- “(a) The epoxy marking material shall consist of a 100 percent solid two part system formulated and designed to provide a simple volumetric mixing ratio of two components (must be two volumes of Part A and one volume of Part B). No volatile solvents or fillers will be allowed. Total solids shall not be less than 99 percent when determined, on the mixed material, according to ASTM D 2369, excluding the solvent dispersion.”

Revise Article 1095.04(d) of the Standard Specifications to read:

- “(d) Composition by Weight of Component A as Determined by Low Temperature Ashing. A 0.5 gram sample of component A shall be dispersed with a paperclip on the bottom of an aluminum dish, weighed and then heated in a muffle furnace at 1000 °F (538 °C) for one hour and weighed again. No solvents shall be used for dispersion. The difference in the weights shall be calculated and meet the following.

Pigment*	White	Yellow
Titanium Dioxide ASTM D 476 Type II	21-24%	
Organic Yellow, Titanium Dioxide, Other		± 2%**
Epoxy Resin	76-79%	± 2%**

* No extender pigments are permitted.

** From the pigment and epoxy resin content determined on qualification samples.”

Revise Article 1095.04(f) of the Standard Specifications to read:

- “(f) The daylight directional reflectance of the paint (without glass spheres) applied at 14 to 16 mils (0.35 to 0.41 mm) shall meet the following requirements when tested, using a color spectrophotometer with 45 degree circumferential/zero degree geometry, illuminant C, and two degree observer angle. The color instrument shall measure the visible spectrum from 380 to 720 nm with a wavelength measurement interval and spectral bandpass of 10 nm.

White: Daylight Reflectance 80 % min.
Yellow:* Daylight Reflectance 50 % min.

*Shall meet the coordinates of the following color tolerance chart.

x	0.490	0.475	0.485	0.530
y	0.470	0.438	0.425	0.456”

Revise Article 1095.04(h) of the Standard Specifications to read:

"(h) The epoxy pavement marking material, when mixed in the proper mix ratio and tested according to ASTM D 7234 shall have a degree of adhesion which results in a 100 percent concrete failure in the performance of this test."

Revise Article 1095.04(n) of the Standard Specifications to read:

"(n) The epoxy paint shall be applied to an aluminum alloy panel (Federal Test Std. No. 141, Method 2013) at a film thickness of 14 to 16 mils (0.35 to 0.41 mm) and allowed to cure for 72 hours at room temperature. Subject the coated panel for 75 hours to accelerated weathering using the light and water exposure apparatus (fluorescent UV - condensation type) as specified in ASTM G 53 (equipped with UVB-313 lamps).

The cycle shall consist of four hours UV exposure at 122 °F (50 °C) followed by four hours of condensation at 104 °F (40 °C). UVB 313 bulbs shall be used. At the end of the exposure period, the panel shall show no more than 10 Hunter Lab Delta E units or substantial change in gloss from the original, non-exposed paint."

80175

EQUIPMENT RENTAL RATES (BDE)

Effective: August 2, 2007

Revised: January 2, 2008

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

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

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

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

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

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

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

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

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

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

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

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

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

80189

FLAGGER AT SIDE ROADS AND ENTRANCES (BDE)

Effective: April 1, 2009

Revise the second paragraph of Article 701.13(a) of the Standard Specifications to read:

“The Engineer will determine when a side road or entrance shall be closed to traffic. A flagger will be required at each side road or entrance remaining open to traffic within the operation where two-way traffic is maintained on one lane of pavement. The flagger shall be positioned as shown on the plans or as directed by the Engineer.”

Revise the first and second paragraph of Article 701.20(i) of the Standard Specifications to read:

“Signs, barricades, or other traffic control devices required by the Engineer over and above those specified will be paid for according to Article 109.04. All flaggers required at side roads and entrances remaining open to traffic including those that are shown on the Highway Standards and/or additional barricades required by the Engineer to close side roads and entrances will be paid for according to Article 109.04.”

80228

FUEL COST ADJUSTMENT (BDE) (RETURN FORM WITH BID)

Effective: April 1, 2009

Description. Fuel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in fuel prices when optioned by the Contractor. The bidder shall indicate on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form or failure to indicate contract number, company name and sign and date the form shall make this contract exempt of fuel cost adjustments for all categories of work. Failure to indicate "Yes" for any category of work will make that category of work exempt from fuel cost adjustment.

General. The fuel cost adjustment shall apply to contract pay items as grouped by category. The adjustment shall only apply to those categories of work checked "Yes", and only when the cumulative plan quantities for a category exceed the required threshold. Adjustments to work items in a category, either up or down, and work added by adjusted unit price will be subject to fuel cost adjustment only when the category representing the added work was subject to the fuel cost adjustment. Added work paid for by time and materials will not be subject to fuel cost adjustment. Category descriptions and thresholds for application and the fuel usage factors which are applicable to each are as follows:

(a) Categories of Work.

- (1) Category A: Earthwork. Contract pay items performed under Sections 202, 204, and 206 including any modified standard or nonstandard items where the character of the work to be performed is considered earthwork. The cumulative total of all applicable item plan quantities shall exceed 25,000 cu yd (20,000 cu m). Included in the fuel usage factor is a weighted average 0.10 gal/cu yd (0.50 liters/cu m) factor for trucking.
- (2) Category B: Subbases and Aggregate Base Courses. Contract pay items constructed under Sections 311, 312 and 351 including any modified standard or nonstandard items where the character of the work to be performed is considered construction of a subbase or aggregate, stabilized or modified base course. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is a 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.
- (3) Category C: Hot-Mix Asphalt (HMA) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 355, 406, 407 and 482 including any modified standard or nonstandard items where the character of the work to be performed is considered HMA bases, pavements and shoulders. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.

- (4) Category D: Portland Cement Concrete (PCC) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 353, 420, 421 and 483 including any modified standard or nonstandard items where the character of the work to be performed is considered PCC base, pavement or shoulder. The cumulative total of all applicable item plan quantities shall exceed 7500 sq yd (6000 sq m). Included in the fuel usage factor is 1.20 gal/cu yd (5.94 liters/cu m) factor for trucking.
- (5) Category E: Structures. Structure items having a cumulative bid price that exceeds \$250,000 for pay items constructed under Sections 502, 503, 504, 505, 512, 516 and 540 including any modified standard or nonstandard items where the character of the work to be performed is considered structure work when similar to that performed under these sections and not included in categories A through D.

(b) Fuel Usage Factors.

English Units		
Category	Factor	Units
A - Earthwork	0.34	gal / cu yd
B - Subbase and Aggregate Base courses	0.62	gal / ton
C - HMA Bases, Pavements and Shoulders	1.05	gal / ton
D - PCC Bases, Pavements and Shoulders	2.53	gal / cu yd
E - Structures	8.00	gal / \$1000

Metric Units		
Category	Factor	Units
A - Earthwork	1.68	liters / cu m
B - Subbase and Aggregate Base courses	2.58	liters / metric ton
C - HMA Bases, Pavements and Shoulders	4.37	liters / metric ton
D - PCC Bases, Pavements and Shoulders	12.52	liters / cu m
E - Structures	30.28	liters / \$1000

(c) Quantity Conversion Factors.

Category	Conversion	Factor
B	sq yd to ton	0.057 ton / sq yd / in depth
	sq m to metric ton	0.00243 metric ton / sq m / mm depth
C	sq yd to ton	0.056 ton / sq yd / in depth
	sq m to metric ton	0.00239 m ton / sq m / mm depth
D	sq yd to cu yd	0.028 cu yd / sq yd / in depth
	sq m to cu m	0.001 cu m / sq m / mm depth

Method of Adjustment. Fuel cost adjustments will be computed as follows.

$$CA = (FPI_P - FPI_L) \times (FUF / 100) \times Q$$

Where: CA = Cost Adjustment, \$
FPI_P = Fuel Price Index, as published by the Department for the month the work is performed, \$/gal (\$/liter)
FPI_L = Fuel Price Index, as published by the Department for the month prior to the letting, \$/gal (\$/liter)
FUF = Fuel Usage Factor in the pay item(s) being adjusted
Q = Authorized construction Quantity, tons (metric tons) or cu yd (cu m)

The entire FUF indicated in paragraph (b) will be used regardless of use of trucking to perform the work.

Progress Payments. Fuel cost adjustments will be calculated for each calendar month in which applicable work is performed; and will be paid or deducted when all other contract requirements for the items of work are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Final Quantities. Upon completion of the work and determination of final pay quantities, an adjustment will be prepared to reconcile any differences between estimated quantities previously paid and the final quantities. The value for the balancing adjustment will be based on a weighted average of FPI_P and Q only for those months requiring the cost adjustment. The cost adjustment will be applicable to the final measured quantities of all applicable pay items.

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

$$\text{Percent Difference} = \{(FPI_L - FPI_P) \div FPI_L\} \times 100$$

Return With Bid

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**OPTION FOR
FUEL COST ADJUSTMENT**

The bidder shall submit this completed form with his/her bid. Failure to submit the form or properly complete contract number, company name, and sign and date the form shall make this contract exempt of fuel cost adjustments in all categories. Failure to indicate "Yes" for any category of work at the time of bid will make that category of work exempt from fuel cost adjustment. After award, this form, when submitted shall become part of the contract.

Contract No.: _____

Company Name: _____

Contractor's Option:

Is your company opting to include this special provision as part of the contract plans for the following categories of work?

- | | | |
|--|-----|--------------------------|
| Category A Earthwork. | Yes | <input type="checkbox"/> |
| Category B Subbases and Aggregate Base Courses | Yes | <input type="checkbox"/> |
| Category C HMA Bases, Pavements and Shoulders | Yes | <input type="checkbox"/> |
| Category D PCC Bases, Pavements and Shoulders | Yes | <input type="checkbox"/> |
| Category E Structures | Yes | <input type="checkbox"/> |

Signature: _____ **Date:** _____

80229

HMA - HAULING ON PARTIALLY COMPLETED FULL-DEPTH PAVEMENT (BDE)

Effective: January 1, 2008

Revise Article 407.08 of the Standard Specifications to read:

“407.08 Hauling on the Partially Completed Full-Depth Pavement. Legally loaded trucks will be permitted on the partially completed full-depth HMA pavement only to deliver HMA mixture to the paver, provided the last lift has cooled a minimum of 12 hours. Hauling shall be limited to the distances shown in the following tables. The pavement surface temperature shall be measured using an infrared gun. The use of water to cool the pavement to permit hauling will not be allowed. The Contractor’s traffic pattern shall minimize hauling on the partially completed pavement and shall vary across the width of the pavement such that “tracking” of vehicles, one directly behind the other, does not occur.

MAXIMUM HAULING DISTANCE FOR PAVEMENT SURFACE TEMPERATURE BELOW 105 °F (40 °C)				
Total In-Place Thickness Being Hauled On, in. (mm)	Thickness of Lift Being Placed			
	3 in. (75 mm) or less		More than 3 in. (75 mm)	
	Modified Soil Subgrade	Granular Subbase	Modified Soil Subgrade	Granular Subbase
3.0 to 4.0 (75 to 100)	0.75 miles (1200 m)	1.0 mile (1600 m)	0.50 miles (800 m)	0.75 miles (1200 m)
4.1 to 5.0 (101 to 125)	1.0 mile (1600 m)	1.5 miles (2400 m)	0.75 miles (1200 m)	1.0 mile (1600 m)
5.1 to 6.0 (126 to 150)	2.0 miles (3200 m)	2.5 miles (4000 m)	1.5 miles (2400 m)	2.0 miles (3200 m)
6.1 to 8.0 (151 to 200)	2.5 miles (4000 m)	3.0 miles (4800 m)	2.0 miles (3200 m)	2.5 miles (4000 m)
Over 8.0 (200)	No Restrictions			

MAXIMUM HAULING DISTANCE FOR PAVEMENT SURFACE TEMPERATURE OF 105 °F (40 °C) AND ABOVE				
Total In-Place Thickness Being Hauled On, in. (mm)	Thickness of Lift Being Placed			
	3 in. (75 mm) or less		More than 3 in. (75 mm)	
	Modified Soil Subgrade	Granular Subbase	Modified Soil Subgrade	Granular Subbase
3.0 to 4.0 (75 to 100)	0.50 miles (800 m)	0.75 miles (1200 m)	0.25 miles (400 m)	0.50 miles (800 m)
4.1 to 5.0 (101 to 125)	0.75 miles (1200 m)	1.0 mile (1600 m)	0.50 miles (800 m)	0.75 miles (1200 m)
5.1 to 6.0 (126 to 150)	1.0 mile (1600 m)	1.5 miles (2400 m)	0.75 miles (1200 m)	1.0 mile (1600 m)
6.1 to 8.0 (151 to 200)	2.0 miles (3200 m)	2.5 miles (4000 m)	1.5 miles (2400 m)	2.0 miles (3200 m)
Over 8.0 (200)	No Restrictions			

Permissive hauling on the partially completed pavement shall not relieve the Contractor of his/her responsibility for damage to the pavement. Any portion of the full-depth HMA pavement that is damaged by hauling shall be removed and replaced, or otherwise repaired to the satisfaction of the Engineer.

Crossovers used to transfer haul trucks from one roadway to the other shall be at least 1000 ft (300 m) apart and shall be constructed of material that will prevent tracking of dust or mud on the completed HMA lifts. The Contractor shall construct, maintain, and remove all crossovers."

80194

HOT-MIX ASPHALT - FIELD VOIDS IN THE MINERAL AGGREGATE (BDE)

Effective: April 1, 2007

Revised: April 1, 2008

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

"Parameter	Frequency of Tests	Frequency of Tests	Test Method See Manual of Test Procedures for Materials
	High ESAL Mixture Low ESAL Mixture	All Other Mixtures	
VMA	Day's production ≥ 1200 tons:	N/A	Illinois-Modified AASHTO R 35
Note 5.	1 per half day of production		
	Day's production < 1200 tons:		
	1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)		

Note 5. The G_{sb} used in the voids in the mineral aggregate (VMA) calculation shall be the same average G_{sb} value listed in the mix design."

Add the following to the Control Limits table in Article 1030.05(d)(4) of the Standard Specifications:

"CONTROL LIMITS			
Parameter	High ESAL Low ESAL	High ESAL Low ESAL	All Other
	Individual Test	Moving Avg. of 4	Individual Test
VMA	-0.7 % ^{2/}	-0.5 % ^{2/}	N/A

2/ Allowable limit below minimum design VMA requirement"

Add the following to the table in Article 1030.05(d)(5) of the Standard Specifications:

"CONTROL CHART REQUIREMENTS	High ESAL Low ESAL	All Other
	VMA"	

Revise the heading of Article 1030.05(d)(6)a.1. of the Standard Specifications to read:

"1. Voids, VMA, and Asphalt Binder Content."

Revise the first sentence of the first paragraph of Article 1030.05(d)(6)a.1.(a.) of the Standard Specifications to read:

"If the retest for voids, VMA, or asphalt binder content exceeds control limits, HMA production shall cease and immediate corrective action shall be instituted by the Contractor."

Revise the table in Article 1030.05(e) of the Standard Specifications to read:

"Test Parameter	Acceptable Limits of Precision
% Passing: ^{1/}	
1/2 in. (12.5 mm)	5.0 %
No. 4 (4.75 mm)	5.0 %
No. 8 (2.36 mm)	3.0 %
No. 30 (600 μm)	2.0 %
Total Dust Content No. 200 (75 μm) ^{1/}	2.2 %
Asphalt Binder Content	0.3 %
Maximum Specific Gravity of Mixture	0.026
Bulk Specific Gravity	0.030
VMA	1.4 %
Density (% Compaction)	1.0 % (Correlated)

^{1/} Based on washed ignition."

80181

HOT-MIX ASPHALT – PLANT TEST FREQUENCY (BDE)

Effective: April 1, 2008

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

"Parameter	Frequency of Tests	Frequency of Tests	Test Method See Manual of Test Procedures for Materials
	High ESAL Mixture Low ESAL Mixture	All Other Mixtures	
<p>Aggregate Gradation</p> <p>Hot bins for batch and continuous plants.</p> <p>Individual cold-feed or combined belt-feed for drier drum plants.</p> <p>% passing sieves: 1/2 in. (12.5 mm), No. 4 (4.75 mm), No. 8 (2.36 mm), No. 30 (600 μm) No. 200 (75 μm)</p> <p>Note 1.</p>	<p>1 dry gradation per day of production (either morning or afternoon sample).</p> <p>and</p> <p>1 washed ignition oven test on the mix per day of production (conduct in the afternoon if dry gradation is conducted in the morning or vice versa).</p> <p>Note 3.</p> <p>Note 4.</p>	<p>1 gradation per day of production.</p> <p>The first day of production shall be a washed ignition oven test on the mix. Thereafter, the testing shall alternate between dry gradation and washed ignition oven test on the mix.</p> <p>Note 4.</p>	<p>Illinois Procedure</p>
<p>Asphalt Binder Content by Ignition Oven</p> <p>Note 2.</p>	<p>1 per half day of production</p>	<p>1 per day</p>	<p>Illinois-Modified AASHTO T 308</p>
<p>Air Voids</p> <p>Bulk Specific Gravity of Gyratory Sample</p>	<p>Day's production ≥ 1200 tons:</p> <p>1 per half day of production</p> <p>Day's production < 1200 tons:</p> <p>1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)</p>	<p>1 per day</p>	<p>Illinois-Modified AASHTO T 312</p>

"Parameter	Frequency of Tests	Frequency of Tests All Other Mixtures	Test Method See Manual of Test Procedures for Materials
	High ESAL Mixture Low ESAL Mixture		
Maximum Specific Gravity of Mixture	Day's production \geq 1200 tons: 1 per half day of production	1 per day	Illinois-Modified AASHTO T 209"
	Day's production < 1200 tons: 1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)		

80201

HOT-MIX ASPHALT – TRANSPORTATION (BDE)

Effective: April 1, 2008

Revise Article 1030.08 of the Standard Specifications to read:

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

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

- (a) Ambient air temperature is below 60 °F (15 °C).
- (b) The weather is inclement.
- (c) The temperature of the HMA immediately behind the paver screed is below 250 °F (120 °C).

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

80202

HOT-MIX ASPHALT MIXTURE IL-4.75 (BDE)

Effective: November 1, 2004

Revised: January 1, 2008

Description. This work shall consist of constructing hot-mix asphalt (HMA) surface course or leveling binder with an IL-4.75 mixture. Work shall be according to Sections 406 and 1030 of the Standard Specifications, except as modified herein.

Materials.

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

“(c) Gradation. The fine aggregate gradation for High ESAL, Low ESAL, and All Other HMA shall be FA 1, FA 2, FA 20, or FA 21; except FA 21 will not be permitted for mixture IL-4.75.”

Revise the third sentence of Note 2 of Article 1030.02 of the Standard Specifications to read:

“The maximum percentage of RAP in any mixtures containing a polymer modified asphalt binder shall be ten percent.”

Revise the second sentence of Note 3 of Article 1030.02 of the Standard Specifications to read:

“For mixtures with an $N_{design} \geq 90$ and for mixture IL-4.75, at least 50 percent of the required fine aggregate fraction shall consist of either stone sand, slag sand, or steel slag meeting the FA/FM 20 gradation.”

Add the following note after Table 1 and after Table 2 of Article 1032.05(b) of the Standard Specifications:

“Note. When SBS/SBR PG76-22 or SBS/SBR PG76-28 are specified for mixture IL-4.75, the elastic recovery shall be a minimum of 80.”

Equipment.

Add the following paragraph after the second paragraph of Article 1102.01(a)(6) of the Standard Specifications:

“IL-4.75 mixtures which contain aggregate having absorptions greater than or equal to 2.5 percent, or which contain steel slag sand, shall have a minimum silo storage plus haul time of 1.5 hours.”

Add the following to Article 1102.01(a) of the Standard Specifications:

"(13) For mixture IL-4.75, mineral filler and collected dust (baghouse) shall be proportioned according to the following.

- a. Mineral filler shall not be stored in the same silo as collected dust (baghouse).
- b. Additional minus 200 material needed to meet the JMF may be entirely manufactured mineral filler.
- c. Collected dust (baghouse) may be used in lieu of manufactured mineral filler according to the following.
 1. Sufficient collected dust (baghouse) is available for production of the IL-4.75 mixture for the entire project.
 2. A mix design was prepared based on collected dust (baghouse).
- d. A combination of collected dust (baghouse) and manufactured mineral filler may be used according to the following.
 1. The amount (proportion) of each shall be established and not varied.
 2. A mix design was prepared based on the established proportions."

Mixture Design.

Add the following to the list of Illinois Modified AASHTO references in Article 1030.04 of the Standard Specifications:

"AASHTO T 305 Standard Method of Test for Determination of Draindown Characteristics in Uncompacted Asphalt Mixtures"

Add the following to Article 1030.04(a) of the Standard Specifications:

"(4) IL-4.75 Mixture. The Job Mix Formula (JMF) shall fall within the following limits.

IL-4.75, MIXTURE COMPOSITION	
Sieve	Percent Passing
1/2 in. (12.5 mm)	100
3/8 in. (9.5 mm)	100
No. 4 (4.75 mm)	90-100
No. 8 (2.36 mm)	70-90
No. 16 (1.18 mm)	50-65
No. 30 (600 μm)	35-55
No. 50 (300 μm)	15-30

No. 100 (150 μm)	10-18
No. 200 (75 μm)	7-9
AB Content	7% to 9%"

Add the following to Article 1030.04(b) of the Standard Specifications:

"(4) IL-4.75 Mixture.

VOLUMETRIC REQUIREMENTS IL-4.75	
Volumetric Parameter	Requirement
Design Air Voids	4.0 % at Ndesign 50
Voids in the Mineral Aggregate (VMA)	18.5 % minimum
Voids Filled with Asphalt (VFA)	78-88 %
Maximum Dust/AC Ratio	1.0
Maximum Draindown	0.3%"

Control Limits.

Add the following to the tables in Article 1030.05(d)(4) of the Standard Specifications:

"CONTROL LIMITS		
Parameter	IL-4.75 Individual Test	IL-4.75 Moving Ave. of 4
% Passing: ^{1/}		
1/2 in. (12.5 mm)		
No. 4 (4.75 mm)		
No. 8 (2.36 mm)		
No. 16 (1.18 mm)	± 4 %	± 3 %
No. 30 (600 μm)		
Total Dust Content No. 200 (75 μm)	± 1.5 %	± 1.0 %
Asphalt Binder Content	± 0.3 %	± 0.2 %
Voids	± 1.2 %	± 1.0 %

DENSITY CONTROL LIMITS		
Mixture Composition	Parameter	Individual Test
IL-4.75	Ndesign = 50	93.0% - 97.4% ^{2/}

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

CONSTRUCTION REQUIREMENTS

Leveling.

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

“Leveling Binder	
Nominal, Compacted, Leveling Binder Thickness, in. (mm)	Mixture Composition
≤ 1 1/4 (32)	IL-4.75, IL-9.5, or IL-9.5L
> 1 1/4 to 2 (32 to 50)	IL-9.5, IL-12.5, or IL-9.5L

The density requirements of Article 406.07(c) shall apply for leveling binder, machine method, when the nominal compacted thickness is: 3/4 in. (19 mm) or greater for IL-4.75 mixtures; 1 1/4 in. (32 mm) or greater for IL-9.5 and IL-9.5L mixtures; and 1 1/2 in. (38 mm) or greater for IL-12.5 mixtures.”

Placing.

Revise Article 406.06(b) of the Standard Specifications to read:

“(b) Placement Conditions. Placement of HMA shall be under the following conditions.

- (1) General Conditions. HMA shall be placed on a clean, dry base and when weather conditions are suitable. The leveling binder and binder courses shall be placed only when the temperature in the shade is at least 40 °F (5 °C) and the forecast is for rising temperatures. The surface course shall be placed only when the air temperature in the shade is at least 45 °F (8 °C) and the forecast is for rising temperatures.

The HMA shall be delivered at a temperature of 250 to 350 °F (120 to 175 °C).

Intermingling of different mixture compositions at any one paver will not be permitted.

- (2) Special Conditions for mixture IL-4.75.

- a. The surface shall be dry for at least 24 hours, and clean, prior to placement of the mixture.
- b. Work shall not begin when local conditions indicate rain is imminent.

- c. The mixture shall be placed only when the temperature in the shade is at least 50 °F (10 °C) and the forecast is for rising temperatures.
- d. The mixture temperature shall be 310 to 350 °F (155 to 175 °C) and shall be measured in the truck just prior to placement.
- e. When used as leveling binder, the mixture shall be overlaid within five days of being placed.”

Add the following paragraph to the end of Article 406.06(d) of the Standard Specifications:

“The minimum and maximum compacted lift thickness for mixture IL-4.75 shall be 3/4 in. (19 mm) and 1 1/4 in. (32 mm) respectively.”

Compaction.

Revise Table 1 of Article 406.07 of the Standard Specifications to read:

"TABLE 1 - MINIMUM ROLLER REQUIREMENTS FOR HMA				
	Breakdown Roller (one of the following)	Intermediate Roller	Final Roller (one or more of the following)	Density Requirement
Level Binder: (When the density requirements of Article 406.05(c) do not apply.)	P ^{3/}	--	V _s , P, T _B , T _F , 3W	To the satisfaction of the Engineer.
Binder and Surface ^{1/} Level Binder ^{1/} : (When the density requirements of Article 406.05(c) apply.)	V _D , P, T _B , 3W	P ^{3/}	V _s , T _B , T _F	As specified in Articles: 1030.05(d)(3), (d)(4), and (d)(7).
Bridge Decks ^{2/}	T _B	--	T _F	As specified in Articles: 582.05 and 582.06.

- 1/ If the average delivery at the job site is 85 ton/hr (75 metric ton/hr) or less, any roller combination may be used provided it includes a steel wheeled roller and the required density and smoothness is obtained.
- 2/ One T_B roller may be used for both breakdown and final rolling on bridge decks 300 ft (90 m) or less in length, except when the air temperature is less than 60 °F (15 °C).
- 3/ A V_D roller may be used in lieu of the P roller on mixtures containing polymer modified asphalt binder.
- 4/ For mixture IL-4.75, a minimum of two T_B rollers and one T_F roller shall be provided. P and V rollers will not be permitted.”

Basis of Payment.

Add the following paragraph after the third paragraph of Article 406.14 of the Standard Specifications:

"Mixture IL-4.75 will be paid for at the contract unit price per ton (metric ton) for POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50; and POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-4.75, N50."

80136

IMPACT ATTENUATORS (BDE)

Effective: November 1, 2003

Revised: November 1, 2008

Description. This work shall consist of furnishing and installing impact attenuators of the category and test level specified.

Materials. Materials shall meet the requirements of the impact attenuator manufacturer and the following:

Item	Article/Section
(a) Fine Aggregate (Note 1).....	1003.01
(b) Steel Posts, Structural Shapes, and Plates	1006.04
(c) Rail Elements, End Section Plates, and Splice Plates.....	1006.25
(d) Bolts, Nuts, Washers and Hardware	1006.25
(e) Hollow Structural Tubing	1006.27(b)
(f) Wood Posts and Wood Blockouts.....	1007.01, 1007.02, 1007.06
(g) Preservative Treatment.....	1007.12

Note 1. Fine aggregate shall be FA 1 or FA 2, Class A quality. The sand shall be unbagged and shall have a maximum moisture content of five percent.

CONSTRUCTION REQUIREMENTS

General. Impact attenuators shall meet the testing criteria contained in National Cooperative Highway Research Program (NCHRP) Report 350 for the test level specified and shall be on the Department's approved list. Fully redirective and partially redirective attenuators shall also be designed for bi-directional impacts.

Installation. Regrading of slopes or approaches for the installation shall be as shown on the plans.

Bases for impact attenuators, other than sand modules, shall be installed when required by the manufacturer. The bases shall be constructed on a prepared subgrade according to the manufacturer's specifications. The surface of the base shall be slightly sloped or crowned to facilitate drainage.

Bases for sand module impact attenuators will be required. The bases shall be constructed of either portland cement concrete or hot-mix asphalt (HMA). Portland cement concrete bases shall be 6 in. (150 mm) thick and be according to the applicable requirements of Section 424 of the Standard Specifications. HMA bases shall be 8 in. (200 mm) thick and be according to the applicable requirements of Section 408 of the Standard Specifications. The surface of the base shall be slightly sloped or crowned to facilitate drainage. The perimeter of each module and the specified weight (mass) of sand in each module shall be painted on the surface of the base.

Impact attenuators shall be installed according to the manufacturer's specifications and include all necessary transitions between the impact attenuator and the item to which it is attached.

Method of Measurement. This work will be measured for payment as each, where each is defined as one complete installation.

Contract quantities for sand module attenuator bases may be accepted according to Article 202.07(a) of the Standard Specifications. When measured, sand module attenuator bases will be measured in place and the dimensions used to calculate square yards (square meters) will not exceed those as shown on the plans.

Basis of Payment. This work, will be paid for at the contract unit price per each for IMPACT ATTENUATORS (FULLY REDIRECTIVE, NARROW); IMPACT ATTENUATORS (FULLY REDIRECTIVE, WIDE); IMPACT ATTENUATORS (FULLY REDIRECTIVE, RESETTABLE); IMPACT ATTENUATORS (SEVERE USE, NARROW); IMPACT ATTENUATORS (SEVERE USE, WIDE); IMPACT ATTENUATORS (PARTIALLY REDIRECTIVE); or IMPACT ATTENUATORS (NON-REDIRECTIVE), of the test level specified.

Sand module attenuator bases will be paid for at the contract unit price per square yard (square meter) for ATTENUATOR BASE.

Regrading of slopes or approaches will be paid for according to Section 202 and/or Section 204 of the Standard Specifications.

80109

IMPACT ATTENUATORS, TEMPORARY (BDE)

Effective: November 1, 2003

Revised: January 1, 2007

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) Packaged Rapid Hardening Mortar	1018.01

Note 1. Fine aggregate shall be FA 1 or FA 2, Class A quality. The sand shall be unbagged and shall have a maximum moisture content of five percent.

CONSTRUCTION REQUIREMENTS

General. Impact Attenuators shall meet the testing criteria contained in National Cooperative Highway Research Program (NCHRP) Report 350 for the test level specified and shall be on the Department's approved list.

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

LIQUIDATED DAMAGES (BDE)

Effective: April 1, 2009

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

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

80230

MAST ARM ASSEMBLY AND POLE (BDE)

Effective: January 1, 2008

Revised: January 1, 2009

Revise Article 1077.03 of the Standard Specifications to read:

“1077.03 Mast Arm Assembly and Pole. Mast arm assembly and pole shall be as follows.

(a) Steel Mast Arm Assembly and Pole and Steel Combination Mast Arm Assembly and Pole. The steel mast arm assembly and pole and steel combination mast arm assembly and pole shall consist of a traffic signal mast arm, a luminaire mast arm or davit (for combination pole only), a pole, and a base, together with anchor rods and other appurtenances. The configuration of the mast arm assembly, pole, and base shall be according to the details shown on the plans.

(1) Loading. The mast arm assembly and pole, and combination mast arm assembly and pole shall be designed for the loading shown on the Highway Standards or elsewhere on the plans, whichever is greater. The design shall be according to AASHTO “Standard Specification for Structural Supports for Highway Signs, Luminaries and Traffic Signals” 1994 Edition for 80 mph (130 km/hr) wind velocity. However, the arm-to-pole connection for tapered signal and luminaire arms shall be according to the “ring plate” detail as shown in Figure 11-1(f) of the 2002 Interim, to the AASHTO “Standard Specification for Structural Supports for Highway Signs, Luminaries and Traffic Signals” 2001 4th Edition.

(2) Structural Steel Grade. The mast arm and pole shall be fabricated according to ASTM A 595, Grade A or B, ASTM A 572 Grade 55, or ASTM A 1011 Grade 55 HSLAS Class 2. The base and flange plates shall be of structural steel according to AASHTO M 270 Grade 50 (M 270M Grade 345). Luminaire arms and trussed arms 15 ft (4.5 m) or less shall be fabricated from one steel pipe or tube size according to ASTM A 53 Grade B or ASTM A 500 Grade B or C. All mast arm assemblies, poles, and bases shall be galvanized according to AASHTO M 111.

(3) Fabrication. The design and fabrication of the mast arm assembly, pole, and base shall be according to the requirements of the Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals published by AASHTO. The mast arm and pole may be of single length or sectional design. If section design is used, the overlap shall be at least 150 percent of the maximum diameter of the overlapping section and shall be assembled in the factory.

The manufacturer will be allowed to slot the base plate in which other bolt circles may fit, providing that these slots do not offset the integrity of the pole. Circumferential welds of tapered arms and poles to base plates shall be full penetration welds.

(4) Shop Drawing Approval. The Contractor shall submit detailed drawings showing design materials, thickness of sections, weld sizes, and anchor rods to the Engineer for approval prior to fabrication. These drawings shall be at least 11 x 17 in. (275 x 425 mm) in size and of adequate quality for microfilming.

(b) Anchor Rods. The anchor rods shall be ASTM F 1554 Grade 105, coated by the hot-dip galvanizing process according to AASHTO M 232, and shall be threaded a minimum of 7 1/2 in. (185 mm) at one end and have a bend at the other end. The first 10 in. (250 mm) at the threaded end shall be galvanized. Two nuts, one lock washer, and one flat washer shall be furnished with each anchor rod. All nuts and washers shall be galvanized."

80196

METAL HARDWARE CAST INTO CONCRETE (BDE)

Effective: April 1, 2008

Revised: April 1, 2009

Add the following to Article 503.02 of the Standard Specifications:

“(g) Metal Hardware Cast into Concrete1006.13”

Add the following to Article 504.02 of the Standard Specifications:

“(j) Metal Hardware Cast into Concrete1006.13”

Revise Article 1006.13 of the Standard Specifications to read:

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

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

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

80203

MONTHLY EMPLOYMENT REPORT (BDE)

Effective: April 1, 2009

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

- a) A listing of the total number of employees.
- b) The employee job classification.
- c) The total hours worked and payroll for each employee.

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

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

The report shall contain all hours worked under the contract from the start of the month to the last full pay period each month and shall be submitted no later than 10 business days after the end of each month.

The report shall be submitted electronically in a format determined by the Engineer. See attachment for potential reporting format.

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

80238

Attachment

MONTHLY PRIME AND SUBCONTRACTOR EMPLOYMENT REPORT AMERICAN RECOVERY AND REINVESTMENT ACT			
1. First day of reporting period (mm/dd/yyyy):	2. Last day of reporting period (mm/dd/yyyy):	3. Notice to Proceed Date (mm/dd/yyyy)	
4. NAME AND ADDRESS OF FIRM		5. FEDERAL-AID PROJECT NUMBER	
		6. State Project Number or ID	
7. CONTRACTING AGENCY		8. STATE (or Federal Lands Region)	
Employment Data			
Direct, On-Project Jobs	TOTAL EMPLOYEES	TOTAL HOURS	TOTAL PAYROLL
CONSTRUCTION	NEW HIRES		
	EXISTING EMPLOYEES		
NON-CONSTRUCTION	NEW HIRES		
	EXISTING EMPLOYEES		
TOTAL			
10. PREPARED BY: <i>(Signature and Title)</i>			DATE
11. REVIEWED BY: <i>(Signature and Title of State Highway Official)</i>			DATE

This form is issued in association with the American Recovery and Reinvestment Act of 2009

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

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

Effective: April 1, 2007

Revised: November 1, 2008

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

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

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

If the Contractor fails to correct a deficiency within the specified time, a daily monetary deduction will be imposed for each calendar day or 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 \$1000.00 or 0.05 percent of the awarded contract value, whichever is greater. For those deficiencies where corrective action was not an option, the monetary deduction will be immediate and will be valued at one calendar day."

80180

NOTCHED WEDGE LONGITUDINAL JOINT (BDE)

Effective: July 1, 2004

Revised: January 1, 2007

Description. This work shall consist of constructing a notched wedge longitudinal joint between successive passes of hot-mix asphalt (HMA) binder course that is placed in 2 1/4 in. (57 mm) or greater lifts on pavement that is open to traffic.

The notched wedge longitudinal joint shall consist of a 1 to 1 1/2 in. (25 to 38 mm) vertical notch at the centerline or lane line, a 9 to 12 in. (230 to 300 mm) uniform taper extending into the open lane, and a second 1 to 1 1/2 in. (25 to 38 mm) vertical notch (see Figure 1).

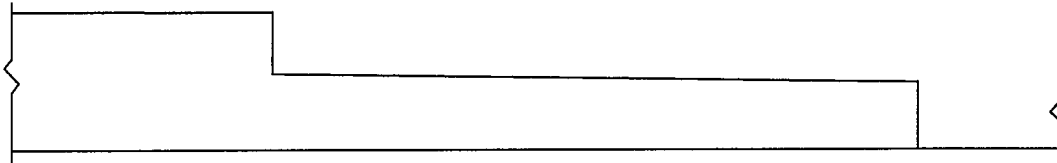


Figure 1

Equipment. Equipment shall meet the following requirements:

- a) Strike Off Device. The strike off device shall produce the notches and wedge of the joint and shall be adjustable. The device shall be attached to the paver and shall not restrict operation of the main screed.
- b) Wedge Roller. The wedge roller shall have a minimum diameter of 12 in. (300 mm), a minimum weight of 50 lb/in. (9 N/mm) of width, and a width equal to the wedge. The roller shall be attached to the paver.

CONSTRUCTION REQUIREMENTS

Joint Construction. The notched wedge longitudinal joint shall be formed by the strike off device on the paver. The wedge shall then be compacted by the joint roller.

Compaction. Initial compaction of the wedge shall be as close to final density as possible. Final density requirements of the entire binder mat, including the wedge, shall remain unchanged.

Prime Coat. Immediately prior to placing the adjacent lift of binder, the bituminous material specified for the mainline prime coat shall be applied to the entire face of the notched wedge longitudinal joint. The material shall be uniformly applied at a rate of 0.05 to 0.1 gal/sq yd (0.2 to 0.5 L/sq m).

Method of Measurement. The notched wedge longitudinal joint will not be measured for payment.

| The prime coat will be measured for payment according to Article 406.13 of the Standard Specifications.

Basis of Payment. The work of constructing the notched wedge longitudinal joint will not be paid for separately but shall be considered as included in the cost of the HMA binder course being constructed.

| The prime coat will be paid for according to Article 406.14 of the Standard Specifications.

80129

NOTIFICATION OF REDUCED WIDTH (BDE)

Effective: April 1, 2007

Add the following after the first paragraph of Article 701.06 of the Standard Specifications:

“Where the clear width through a work zone with temporary concrete barrier will be 16.0 ft (4.88 m) or less, the Contractor shall notify the Engineer at least 21 days in advance of implementing the traffic control for that restriction.”

80182

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: March 1, 2009

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

"STATEMENTS AND PAYROLLS

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, except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall include an identification number for each employee (e.g., the last four digits of the employee's social security number.). 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, except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall include an identification number for each employee (e.g., the last four digits of the employee's social security number). 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."

80235

PERSONAL PROTECTIVE EQUIPMENT (BDE)

Effective: November 1, 2008

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

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

80209

PLASTIC BLOCKOUTS FOR GUARDRAIL (BDE)

Effective: November 1, 2004

| Revised: January 1, 2007

Add the following to Article 630.02 of the Standard Specifications:

| “(g) Plastic Blockouts (Note 1.)

| Note 1. Plastic blockouts may be used in lieu of wood blockouts for steel plate beam guardrail. The plastic blockouts shall be the minimum dimensions shown on the plans and shall be on the Department’s approved list.”

80134

POLYUREA PAVEMENT MARKING (BDE)

Effective: April 1, 2004

Revised: January 1, 2009

Description. This work shall consist of furnishing and applying pavement marking lines.

The type of polyurea pavement marking applied will be determined by the type of reflective media used. Polyurea Pavement Marking Type I shall use glass beads as a reflective media. Polyurea Pavement Marking Type II shall use a combination of composite reflective elements and glass beads as a reflective media.

Polyurea-based liquid pavement markings shall only be applied by Contractors on the list of Approved Polyurea Contractors maintained by the Engineer of Operations and in effect on the date of advertisement for bids.

Materials. Materials shall meet the following requirements:

- (a) Polyurea Pavement Marking. The polyurea pavement marking material shall consist of 100 percent solid two part system formulated and designed to provide a simple volumetric mixing ratio of two components (must be two or three volumes of Part A to one volume of Part B). No volatile or polluting solvents or fillers will be allowed.
- (b) Pigmentation. The pigment content by weight (mass) of component A shall be determined by low temperature ashing according to ASTM D 3723. The pigment content shall not vary more than \pm two percent from the pigment content of the original qualified paint.

White Pigment shall be Titanium Dioxide meeting ASTM D 476 Type II, Rutile.

Yellow Pigment shall be an Organic Yellow and contain no heavy metals.

- (c) Environmental. Upon heating to application temperature, the material shall not exude fumes which are toxic or injurious to persons or property.
- (d) Daylight Reflectance. The daylight directional reflectance of the cured polyurea material (without reflective media) shall be a minimum of 80 percent (white) and 50 percent (yellow) relative to magnesium oxide when tested using a color spectrophotometer with a 45 degrees circumferential /zero degrees geometry, illuminant C, and two degrees observer angle. The color instrument shall measure the visible spectrum from 380 to 720 nm with a wavelength measurement interval and spectral bandpass of 10 nm. In addition, the color of the yellow polyurea shall visually match Color Number 33538 of Federal Standard 595a with chromaticity limits as follows:

X	0.490	0.475	0.485	0.539
Y	0.470	0.438	0.425	0.456

- (e) Weathering Resistance. The polyurea marking material, when mixed in the proper ratio and applied at 14 to 16 mils (0.35 to 0.41 mm) wet film thickness to an aluminum alloy

panel (Federal Test Std. No. 141, Method 2013) and allowed to cure for 72 hours at room temperature, shall be subjected to accelerated weathering for 75 hours. The accelerated weathering shall be completed by using the light and water exposure apparatus (fluorescent UV - condensation type) and tested according to ASTM G 53.

The cycle shall consist of four hours UV exposure at 122 °F (50 °C) and four hours of condensation at 104 °F (40 °C). UVB 313 bulbs shall be used. At the end of the exposure period, the material shall show no substantial change in color or gloss.

- (f) Dry Time. The polyurea pavement marking material, when mixed in the proper ratio and applied at 14 to 16 mils (0.35 to 0.41 mm) wet film thickness and with the proper saturation of reflective media, shall exhibit a no-tracking time of ten minutes or less when tested according to ASTM D 711.
- (g) Adhesion. The catalyzed polyurea pavement marking materials when applied to a 4 x 4 x 2 in. (100 x 100 x 50 mm) concrete block, shall have a degree of adhesion which results in a 100 percent concrete failure in the performance of this test.

The concrete block shall be brushed on one side and have a minimum strength of 3500 psi (24,100 kPa). A 2 in. (50 mm) square film of the mixed polyurea shall be applied to the brushed surface and allowed to cure for 72 hours at room temperature. A 2 in. (50 mm) square cube shall be affixed to the surface of the polyurea by means of an epoxy glue. After the glue has cured for 24 hours, the polyurea specimen shall be placed on a dynamic testing machine in such a fashion so that the specimen block is in a fixed position and the 2 in. (50 mm) cube (glued to the polyurea surface) is attached to the dynamometer head. Direct upward pressure shall be slowly applied until the polyurea system fails. The location of the break and the amount of concrete failure shall be recorded.

- (h) Hardness. The polyurea pavement marking materials when tested according to ASTM D 2240, shall have a shore D hardness of between 70 and 100. Films shall be cast on a rigid substrate at 14 to 16 mils (0.35 to 0.41 mm) in thickness and allowed to cure at room temperature for 72 hours before testing.
- (i) Abrasion. The abrasion resistance shall be evaluated according to ASTM D 4060 using a Taber Abrader with a 1,000 gram load and CS 17 wheels. The duration of the test shall be 1,000 cycles. The loss shall be calculated by difference and be less than 120 mgs. The tests shall be run on cured samples of polyurea material which have been applied at a film thickness of 14 to 16 mils (0.35 to 0.41 mm) to code S-16 stainless steel plates. The films shall be allowed to cure at room temperature for at least 72 hours and not more than 96 hours before testing.
- (j) Reflective Media. The reflective media shall meet the following requirements:
 - (1) Type I - The glass beads shall meet the requirements of Article 1095.07 of the Standard Specifications and the following requirements:

- a. First Drop Glass Beads. The first drop glass beads shall be tested by the standard visual method of large glass spheres adopted by the Department. The beads shall have a silane coating and meet the following sieve requirements:

U.S. Standard Sieve Number	Sieve Size	% Passing By Weight (mass)
12	1.70 mm	95-100
14	1.40 mm	75-95
16	1.18 mm	10-47
18	1.00 mm	0-7
20	850 μ m	0-5

- b. Second Drop Glass Beads. The second drop glass beads shall meet the requirements of Article 1095.07 of the Standard Specifications for Type B.

(2) Type II - The combination of microcrystalline ceramic elements and glass beads shall meet the following requirements:

- a. First Drop Glass Beads. The first drop glass beads shall meet the following requirements:

1. Composition. The elements shall be composed of a titania opacified ceramic core having clear and or yellow tinted microcrystalline ceramic beads embedded to the outer surface.
2. Index of Refraction. All microcrystalline reflective elements embedded to the outer surface shall have an index of refraction of 1.8 when tested by the immersion method.
3. Acid Resistance. A sample of microcrystalline ceramic beads supplied by the manufacturer, shall show resistance to corrosion of their surface after exposure to a one percent solution (by weight (mass)) of sulfuric acid. Adding 0.2 oz (5.7 ml) of concentrated acid into the water shall make the one percent acid solution. This test shall be performed by taking a 1 x 2 in. (25 x 50 mm) sample and adhering it to the bottom of a glass tray and placing just enough acid solution to completely immerse the sample. The tray shall be covered with a piece of glass to prevent evaporation and allow the sample to be exposed for 24 hours under these conditions. The acid solution shall be decanted (do not rinse, touch, or otherwise disturb the bead surfaces) and the sample dried while adhered to the glass tray in a 150 °F (66 °C) oven for approximately 15 minutes. Microscope examination (20X) shall show no white (corroded) layer on the entire surface.

- b. Second Drop Glass Beads. The second drop glass beads shall meet the requirements of Article 1095.07 of the Standard Specifications for Type B or the following manufacturer's specification:

1. Sieve Analysis. The glass beads shall meet the following sieve requirements:

U.S. Standard Sieve Number	Sieve Size	% Passing By Weight (mass)
20	850 μm	100
30	600 μm	75-95
50	300 μm	15-35
100	150 μm	0-5

The manufacturer of the glass beads shall certify that the treatment of the glass beads meets the requirements of the polyurea manufacturer.

2. Imperfections. The surface of the glass beads shall be free of pits and scratches. The glass beads shall be spherical in shape and shall contain a maximum of 20 percent by weight (mass) of irregular shapes when tested by the standard method using a vibratile inclined glass plate as adopted by the Department.
 3. Index of Refraction. The index of refraction of the glass beads shall be a minimum of 1.50 when tested by the immersion method at 77 °F (25 °C).
- (k) Packaging. Microcrystalline ceramic reflective elements and glass beads shall be delivered in approved moisture proof bags or weather resistant bulk boxes. Each carton shall be legibly marked with the manufacturer, specifications and type, lot number, and the month and year the microcrystalline ceramic reflective elements and/or glass beads were packaged. The letters and numbers used in the stencils shall be a minimum of 1/2 in. (12.7 mm) in height.
- (1) Moisture Proof Bags. Moisture proof bags shall consist of at least five ply paper construction unless otherwise specified. Each bag shall contain 50 lb (22.7 kg) net.
 - (2) Bulk Weather Resistance Boxes. Bulk weather resistance boxes shall conform to Federal Specification PPP-8-640D Class II or latest revision. Boxes are to be weather resistant, triple wall, fluted, corrugated-fiber board. Cartons shall be strapped with two metal straps. Straps shall surround the outside perimeter of the carton. The first strap shall be located approximately 2 in. (50 mm) from the bottom of the carton and the second strap shall be placed approximately in the middle of the carton. All cartons shall be shrink wrapped for protection from moisture. Cartons shall be lined with a minimum 4 mil polyester bag and meet Interstate Commerce Commission requirements. Cartons shall be approximately 38 x 38 in. (1 x 1 m), contain 2000 lb (910 kg) of microcrystalline ceramic reflective elements and/or glass beads and be supported on a wooden pallet with fiber straps.
- (l) Packaging. The material shall be shipped to the job site in substantial containers and shall be plainly marked with the manufacturer's name and address, the name and color of the material, date of manufacture, and batch number.
- (m) Verification. Prior to approval and use of the polyurea pavement marking materials, the manufacturer shall submit a notarized certification of an independent laboratory, together with the results of all tests, stating these materials meet the requirements as set forth

herein. The certification test report shall state the lot tested, manufacturer's name, brand name of polyurea and date of manufacture. The certification shall be accompanied by one 1 pt (1/2 L) samples each of Part A and Part B. Samples shall be sent in the appropriate volumes for complete mixing of Part A and Part B.

After approval by the Department, certification by the polyurea manufacturer shall be submitted for each batch used. New independent laboratory certified test results and samples for testing by the Department shall be submitted any time the manufacturing process or paint formulation is changed. All costs of testing (other than tests conducted by the Department) shall be borne by the manufacturer.

(n) Acceptance samples. Acceptance samples shall consist of one 1 pt (1/2 L) samples of Part A and Part B, of each lot of paint. Samples shall be sent in the appropriate volumes for complete mixing of Part A and Part B. The samples shall be submitted to the Department for testing, together with a manufacturer's certification. The certification shall state the formulation for the lot represented is essentially identical to that used for qualification testing. All, acceptance samples will be taken by a representative of the Department. The polyurea pavement marking materials shall not be used until tests are completed and they have met the requirements as set forth herein.

(o) Material Retainage. The manufacturer shall retain the test sample for a minimum of 18 months.

Equipment. The polyurea pavement marking compounds shall be applied through equipment specifically designed to apply two component liquid materials, glass beads and/or reflective elements in a continuous and skip-line pattern. The two-component liquid materials shall be applied after being accurately metered and then mixed with a static mix tube or airless impingement mixing guns. The static mixing tube or impingement mixing guns shall accommodate plural component material systems that have a volumetric ratio of 2 to 1 or 3 to 1. This equipment shall produce the required amount of heat at the mixing head and gun tip and maintain those temperatures within the tolerances specified. The guns shall have the capacity to deliver materials from approximately 1.5 to 3 gal/min (5.7 to 11.4 L/min) to compensate for a typical range of application speeds of 6 to 8 mph (10 to 13 km/h). The accessories such as spray tip, mix chamber, and rod diameter shall be selected according to the manufacturer's specifications to achieve proper mixing and an acceptable spray pattern. The application equipment shall be maneuverable to the extent that straight lines can be followed and normal curves can be made in a true arc. This equipment shall also have as an integral part of the gun carriage, a high pressure air spray capable of cleaning the pavement immediately prior to making application.

The equipment shall be capable of spraying both yellow and white polyurea, according to the manufacturer's recommended proportions and be mounted on a truck of sufficient size and stability with an adequate power source to produce lines of uniform dimensions and prevent application failure. The truck shall have at least two polyurea tanks each of 110 gal (415 L) minimum capacity and be equipped with hydraulic systems and agitators. It shall be capable of placing stripes on the left and right sides and placing two lines on a three-line system simultaneously with either line in a solid or intermittent pattern, in yellow or white, and applying the appropriate reflective media according to manufacturer's recommendations. All guns shall be in full view of operations at all times. The equipment shall have a metering device to register

the accumulated installed quantities for each gun, each day. Each vehicle shall include at least one operator who shall be a technical expert in equipment operations and polyurea application techniques. Certification of equipment shall be provided at the pre-construction conference.

The mobile applicator shall include the following features:

- (a) Material Reservoirs. The applicator shall provide individual material reservoirs, or space for the storage of Part A and Part B of the resin composition.
- (b) Heating Equipment. The applicator shall be equipped with heating equipment of sufficient capacity to maintain the individual resin components at the manufacturer's recommended temperature of ± 5 °F (± 2.8 °C) for spray application.
- (c) Dispensing Equipment. The applicator shall be equipped with glass bead and/or reflective element dispensing equipment. The applicator shall be capable of applying the glass beads and/or reflective elements at a rate and combination indicated by the manufacturer.
- (d) Volumetric Usage. The applicator shall be equipped with metering devices or pressure gauges on the proportioning pumps as well as stroke counters to monitor volumetric usage. Metering devices or pressure gauges and stroke counters shall be visible to the Engineer.
- (e) Pavement Marking Placement. The applicator shall be equipped with all the necessary spray equipment, mixers, compressors and other appurtenances to allow for the placement of reflectorized pavement markings in a simultaneous sequence of operations.

The Contractor shall provide an accurate temperature-measuring device(s) that shall be capable of measuring the pavement temperature prior to application of the material, the material temperature at the gun tip and the material temperature prior to mixing.

CONSTRUCTION REQUIREMENTS

General. The pavement shall be cleaned by a method approved by the Engineer to remove all dirt, grease, glaze, or any other material that would reduce the adhesion of the markings with minimum or no damage to the pavement surface. New portland cement concrete pavements shall be air-blast-cleaned to remove all latents.

Widths, lengths, and shapes of the cleaned surface shall be of sufficient size to include the full area of the specified pavement marking to be placed.

The cleaning operation shall be a continuous moving operation process with minimum interruption to traffic.

Markings shall be applied to the cleaned surfaces on the same calendar day. If this cannot be accomplished, the surface shall be re-cleaned prior to applying the markings. No markings shall be applied until the Engineer approves the cleaning.

The pavement markings shall be applied to the cleaned road surface, during conditions of dry weather and subsequently dry pavement surfaces at a minimum uniform wet thickness of 15 mils (0.4 mm) according to the manufacturer's installation instructions. On new hot-mix asphalt (HMA) surfaces the pavement markings shall be applied at a minimum uniform wet thickness of 20 mils (0.5 mm). The application of and combination of reflective media (glass beads and/or reflective elements) shall be applied at a rate specified by the manufacturer. At the time of installation the pavement surface temperature and the ambient temperature shall be above 40 °F (4 °C) and rising. The pavement markings shall not be applied if the pavement shows any visible signs of moisture or it is anticipated that damage causing moisture, such as rain showers, may occur during the installation and set periods. The Engineer will determine the atmospheric conditions and pavement surface conditions that produce satisfactory results.

Using the application equipment, the pavement markings shall be applied in the following manner, as a simultaneous operation:

- (a) The surface shall be air-blasted to remove any dirt and residue.
- (b) The resin shall be mixed and heated according to manufacturer's recommendations and sprayed onto the pavement surface.

The edge of the center line or lane line shall be offset a minimum distance of 2 in. (50 mm) from a longitudinal crack or joint. Edge lines shall be approximately 2 in. (50 mm) from the edge of pavement. The finished center and lane lines shall be straight, with the lateral deviation of any 10 ft (3 m) line not to exceed 1 in. (25 mm).

Notification. The Contractor shall notify the Engineer 72 hours prior to the placement of the markings in order that he/she can be present during the operation. At the time of notification, the Contractor shall provide the Engineer the manufacturer and lot numbers of polyurea and reflective media that will be used.

Inspection. The polyurea pavement markings will be inspected following installation according to Article 780.10 of the Standard Specifications, except, no later than December 15, and inspected following a winter performance period that extends 180 days from December 15.

Method of Measurement. This work will be measured for payment as follows:

- (a) Contract Quantities. The requirements for the use of contract quantities shall be according to Article 202.07(a).
- (b) Measured Quantities. Lines will be measured for payment in place in feet (meters). Double yellow lines will be measured as two separate lines.

Basis of Payment. This work will be paid for at the contract unit price per foot (meter) for POLYUREA PAVEMENT MARKING TYPE I – LINE of the line width specified or for POLYUREA PAVEMENT MARKING TYPE II – LINE of the line width specified.

PORTLAND CEMENT CONCRETE PLANTS (BDE)

Effective: January 1, 2007

Add the following to Article 1020.11(a) of the Standard Specifications.

- "(9) Use of Multiple Plants in the Same Construction Item. The Contractor may simultaneously use central-mixed, truck-mixed, and shrink-mixed concrete from more than one plant, for the same construction item, on the same day, and in the same pour. However, the following criteria shall be met.
- a. Each plant shall use the same cement, finely divided minerals, aggregates, admixtures, and fibers.
 - b. Each plant shall use the same mix design. However, material proportions may be altered slightly in the field to meet slump and air content criteria. Field water adjustments shall not result in a difference that exceeds 0.02 between plants for water/cement ratio. The required cement factor for central-mixed concrete shall be increased to match truck-mixed or shrink-mixed concrete, if the latter two types of mixed concrete are used in the same pour.
 - c. The maximum slump difference between deliveries of concrete shall be 3/4 in. (19 mm) when tested at the jobsite. If the difference is exceeded, but test results are within specification limits, the concrete may be used. The Contractor shall take immediate corrective action and shall test subsequent deliveries of concrete until the slump difference is corrected. For each day, the first three truck loads of delivered concrete from each plant shall be tested for slump by the Contractor. Thereafter, when a specified test frequency for slump is to be performed, it shall be conducted for each plant at the same time.
 - d. The maximum air content difference between deliveries of concrete shall be 1.5 percent when tested at the jobsite. If the difference is exceeded, but test results are within specification limits, the concrete may be used. The Contractor shall take immediate corrective action and shall test subsequent deliveries of concrete until the air content difference is corrected. For each day, the first three truck loads of delivered concrete from each plant shall be tested for air content by the Contractor. Thereafter, when a specified test frequency for air content is to be performed, it shall be conducted for each plant at the same time.
 - e. Strength tests shall be performed and taken at the jobsite for each plant. When a specified strength test is to be performed, it shall be conducted for each plant at the same time. The difference between plants for their mean strength shall not exceed 450 psi (3100 kPa) compressive and 80 psi (550 kPa) flexural. The strength standard deviation for each plant shall not exceed 650 psi (4480 kPa) compressive and 110 psi (760 kPa) flexural. The mean and standard deviation requirements shall apply to the test of record. If the strength difference requirements are exceeded, the Contractor shall take corrective action.

- f. The maximum haul time difference between deliveries of concrete shall be 15 minutes. If the difference is exceeded, but haul time is within specification limits, the concrete may be used. The Contractor shall take immediate corrective action and check subsequent deliveries of concrete until the haul time difference is corrected."

80170

PRECAST CONCRETE HANDLING HOLES (BDE)

Effective: January 1, 2007

Add the following to Article 540.02 of the Standard Specifications:

“(g) Handling Hole Plugs..... 1042.16”

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

“Handling holes shall be filled with a precast concrete plug and sealed with mastic or mortar, or filled with a polyethylene plug. The plug shall not project beyond the inside surface after installation. When metal lifting inserts are used, their sockets shall be filled with mastic or mortar.”

Add the following to Article 542.02 of the Standard Specifications:

“(ee) Handling Hole Plugs 1042.16”

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

“Handling holes in concrete pipe shall be filled with a precast concrete plug and sealed with mastic or mortar; or filled with a polyethylene plug. The plug shall not project beyond the inside surface after installation.”

Add the following to Article 550.02 of the Standard Specifications:

“(o) Handling Hole Plugs..... 1042.16”

Replace the fourth sentence of the fifth paragraph of Article 550.06 of the Standard Specifications with the following:

“Handling holes in concrete pipe shall be filled with a precast concrete plug and sealed with mastic or mortar; or filled with a polyethylene plug. The plug shall not project beyond the inside surface after installation.”

Add the following to Article 602.02 of the Standard Specifications:

“(p) Handling Hole Plugs..... 1042.16(a)”

Replace the fifth sentence of the first paragraph of Article 602.07 of the Standard Specifications with the following:

“Handling holes shall be filled with a precast concrete plug and sealed with mastic or mortar. The plug shall not project beyond the inside surface after installation. When metal lifting inserts are used, their sockets shall be filled with mastic or mortar.”

Add the following to Section 1042 of the Standard Specifications:

“**1042.16 Handling Hole Plugs.** Plugs for handling holes in precast concrete products shall be as follows.

- (a) Precast Concrete Plug. The precast concrete plug shall have a tapered shape and shall have a minimum compressive strength of 3000 psi (20,700 kPa) at 28 days.
- (b) Polyethylene Plug. The polyethylene plug shall have a “mushroom” shape with a flat round top and a stem with three different size ribs. The plug shall fit snugly and cover the handling hole.

The plug shall be according to the following.

Mechanical Properties	Test Method	Value (min.)
Flexural Modulus	ASTM D 790	3300 psi (22,750 kPa)
Tensile Strength (Break)	ASTM D 638	1600 psi (11,030 kPa)
Tensile Strength (Yield)	ASTM D 638	1200 psi (8270 kPa)

Thermal Properties	Test Method	Value (min.)
Brittle Temperature	ASTM D 746	-49 °F (-45 °C)
Vicat Softening Point	ASTM D 1525	194 °F (90 °C)”

80171

REFLECTIVE SHEETING ON CHANNELIZING DEVICES (BDE)

Effective: April 1, 2007

Revised: November 1, 2008

Revise the seventh paragraph of Article 1106.02 of the Standard Specifications to read:

"At the time of manufacturing, the retroreflective prismatic sheeting used on channelizing devices shall meet or exceed the initial minimum coefficient of retroreflection as specified in the following table. Measurements shall be conducted according to ASTM E 810, without averaging. Sheeting used on cones, drums and flexible delineators shall be reboundable as tested according to ASTM D 4956. Prestriped sheeting for rigid substrates on barricades shall be white and orange. The sheeting shall be uniform in color and devoid of streaks throughout the length of each roll. The color shall conform to the latest appropriate standard color tolerance chart issued by the U.S. Department of Transportation, Federal Highway Administration, and to the daytime and nighttime color requirements of ASTM D 4956.

Initial Minimum Coefficient of Retroreflection candelas/foot candle/sq ft (candelas/lux/sq m) of material				
Observation Angle (deg.)	Entrance Angle (deg.)	White	Orange	Fluorescent Orange
0.2	-4	365	160	150
0.2	+30	175	80	70
0.5	-4	245	100	95
0.5	+30	100	50	40"

Revise the first sentence of the first paragraph of Article 1106.02(c) of the Standard Specifications to read:

"Barricades and vertical panels shall have alternating white and orange stripes sloping downward at 45 degrees toward the side on which traffic will pass."

Revise the third sentence of the first paragraph of Article 1106.02(d) of the Standard Specifications to read:

"The bottom panels shall be 8 x 24 in. (200 x 600 mm) with alternating white and orange stripes sloping downward at 45 degrees toward the side on which traffic will pass."

80183

REINFORCEMENT BARS (BDE)

Effective: November 1, 2005

Revised: April 1, 2009

Revise Article 1006.10(a) of the Standard 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/or 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 706 (A 706M), Grade 60 (420) for deformed bars and the following.

- a. For straight bars furnished in cut lengths and with a well-defined yield point, the yield point shall be determined as the elastic peak load, identified by a halt or arrest of the load indicator before plastic flow is sustained by the bar and dividing it by the nominal cross-sectional area of the bar.
- b. Tensile strength shall be a minimum of 1.20 times the yield strength.
- c. For bars straightened from coils or bars bent from fabrication, there shall be no upper limit on yield strength; and for bar designation Nos. 3 - 6 (10 - 19), the elongation after rupture shall be at least 9%.
- d. Heat Numbers. Bundles or bars at the construction site shall be marked or tagged with heat identification numbers of the bar producer.
- e. 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 706 (A 706M). The dimensions and clearances of this guided bend test shall be according to ASTM E 190.
- f. 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 284 (M 284M) and the following.

- a. Certification. The epoxy coating applicator shall be certified according to the current Bureau of Materials and Physical Research Policy Memorandum, "Epoxy

Coating Plant Certification Procedure". The Department will maintain an approved list.

- b. Coating Thickness. When spiral reinforcement is coated after fabrication, the thickness of the epoxy coating shall be 7 to 20 mils (0.18 to 0.50 mm).
- 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 0.5 in. (13 mm) back and the cut is patched before any visible rusting appears. Flame cutting will not be permitted."

80151

REINFORCEMENT BARS - STORAGE AND PROTECTION (BDE)

Effective: August 1, 2008

Revised: April 1, 2009

Revise Article 508.03 of the Standard Specifications to read:

508.03 Storage and Protection. Reinforcement bars shall be stored off the ground using platforms, skids, or other supports; and shall be protected from mechanical injury and from deterioration by exposure. Epoxy coated bars shall be stored on wooden or padded steel cribbing and all systems for handling shall have padded contact areas. The bars or bundles shall not be dragged or dropped.

When epoxy coated bars are stored in a manner where they will be exposed to the weather more than 60 days prior to use, they shall be protected from deterioration such as that caused by sunlight, salt spray, and weather exposure. The protection shall consist of covering with opaque polyethylene sheeting or other suitable opaque material. The covering shall be secured and allow for air circulation around the bars to minimize condensation under the cover.

Covering of the epoxy coated bars will not be required when the bars are installed and tied, or when they are partially incorporated into the concrete."

80206

RETROREFLECTIVE SHEETING, NONREFLECTIVE SHEETING, AND TRANSLUCENT OVERLAY FILM FOR HIGHWAY SIGNS (BDE)

Effective: April 1, 2007

General. This special provision covers retroreflective sheeting and translucent overlay films intended for application on new or refurbished aluminum. The sheeting serves as the reflectorized background for sign messages and as cutout legends and symbols applied to the reflectorized background. Messages may be applied in opaque black or transparent colors.

This special provision also covers nonreflective sheeting for application on new or refurbished aluminum, and as material for cutout legends and symbols applied to the reflectorized background.

All material furnished under this specification shall have been manufactured within 18 months of the delivery date. All material shall be supplied by the same manufacturer.

Retroreflective Sheeting Properties. Retroreflective sheeting shall consist of a flexible, colored, prismatic, or glass lens elements adhered to a synthetic resin, encapsulated by a flexible, transparent plastic having a smooth outer surface and shall meet the following requirements.

Only suppliers whose products have been tested and approved in the Department's periodic Sheeting Study will be eligible to supply material. All individual batches and or lots of material shall be tested and approved by the Department. The Department reserves the right to sample and test delivered materials according to Federal Specification LS-300.

- (a) Adhesive. The sheeting shall have a Class 1, pre-coated, pressure sensitive adhesive according to ASTM D 4956. The adhesive shall have a protective liner that is easily removed when tested according to ASTM D 4956. The adhesive shall be capable of being applied to new or refurbished aluminum and reflectorized backgrounds without additional adhesive.
- (b) Color. The sheeting shall be uniform in color and devoid of streaks throughout the length of each roll. The color shall conform to the latest appropriate standard color tolerance chart issued by the U.S. Department of Transportation, Federal Highway Administration and to the daytime and nighttime color requirements of ASTM D 4956. Sheeting used for side by side overlay applications shall have a Hunter Lab Delta E of less than 3.
- (c) Coefficient of Retroreflection. When tested according to ASTM E 810, without averaging, the sheeting shall have a minimum coefficient of retroreflection as shown in the following tables. The brightness of the sheeting when totally wet shall be a minimum of 90 percent of the values shown when tested according to the standard rainfall test specified in Section 7.10.1 of AASHTO M 268-84.

Type A Sheeting
Minimum Coefficient of Retroreflection
candelas/foot candle/sq ft (candelas/lux/sq m) of material

Type A

Observation Angle (deg.)	Entrance Angle (deg.)	White	Yellow	Orange	Red	Green	Blue	Brown
0.2	-4	250	170	100	45	45	20	12
0.2	+30	150	100	60	25	25	12	8.5
0.5	-4	95	65	30	15	15	8	5
0.5	+30	75	50	25	10	10	5	3.5

Type AA Sheeting
 Minimum Coefficient of Retroreflection
 candelas/foot candle/sq ft (candelas/lux/sq m) of material

Type AA (0 and 90 degree rotation)

Observation Angle (deg.)	Entrance Angle (deg.)	White	Yellow	Red	Green	Blue	FO
0.2	-4	800	660	215	80	43	200
0.2	+30	400	340	100	35	20	120
0.5	-4	200	160	45	20	9.8	80
0.5	+30	100	85	26	10	5.0	50

Type AA (45 degree rotation)

Observation Angle (deg.)	Entrance Angle (deg.)	Yellow	FO
0.2	-4	550	165
0.2	+30	130	45
0.5	-4	145	70
0.5	+30	70	40

Type AP Sheeting
 Minimum Coefficient of Retroreflection
 candelas/foot candle/sq ft (candelas/lux/sq m) of material

Type AP

Observation Angle (deg.)	Entrance Angle (deg.)	White	Yellow	Red	Green	Blue	Brown	FO
0.2	-4	550	425	100	75	50	30	275
0.2	+30	200	150	40	35	25	15	90
0.5	-4	300	250	60	35	25	20	150
0.5	+30	100	70	20	20	10	5	50

Type AZ Sheeting
Minimum Coefficient of Retroreflection
candelas/foot candle/sq ft (candelas/lux/sq m) of material

Type AZ (0 degree rotation)

Observation Angle (deg.)	Entrance Angle (deg.)	White	Yellow	Red	Green	Blue	FYG	FY
0.2	-4	430	350	110	45	20	325	240
0.2	+30	235	140	60	24	11	200	150
0.5	-4	250	200	60	25	10	235	165
0.5	+30	170	135	40	19	7	105	75
1.0	-4	70	45	10	10	4	70	30
1.0	+30	30	20	7	5	2.5	45	15

Type AZ (90 degree rotation)

Observation Angle (deg.)	Entrance Angle (deg.)	White	Yellow	Red	Green	Blue	FYG	FY
0.2	-4	320	250	100	45	20	300	220
0.2	+30	235	140	40	24	11	200	150
0.5	-4	240	200	60	25	10	235	165
0.5	+30	100	85	20	10	7	80	75
1.0	-4	30	30	7	5	4	65	20
1.0	+30	15	15	5	2	2	30	10

(d) Gloss. The sheeting surface shall exhibit a minimum 85 degree gloss-meter rating of 50 when tested according to ASTM D 523.

(e) Durability. When processed and applied, the sheeting shall be weather resistant.

Accelerated weathering testing will be performed for 1000 hours (300 hours for orange/FO) according to ASTM G 151. The testing cycle will consist of 8 hours of light at 140 °F (60 °C), followed by 4 hours of condensation at 104 °F (40 °C). Following accelerated weathering, the sheeting shall exhibit a minimum of 80 percent of its initial minimum coefficient of retroreflection as listed in the previous tables.

Outdoor weathering will entail an annual evaluation of material placed in an outdoor rack with a 45 degree angle and a southern sun exposure. The sheeting will be evaluated for five years. Following weathering, the test specimens will be cleaned by immersing them in a five percent hydrochloric acid solution for 45 seconds, then rinsed with water and blotted dry with a soft clean cloth. Following cleaning, the applied sheeting shall show no appreciable discoloration, cracking, streaking, crazing, blistering, or dimensional change. The sheeting shall exhibit a Hunter Lab Delta E of 5 or less when compared to the original.

- (f) Shrinkage. When tested according to ASTM D 4956, the sheeting shall not shrink in any dimension more than 1/32 in. (0.8 mm) in ten minutes and not more than 1/8 in. (3 mm) in 24 hours.
- (g) Workability. The sheeting shall show no cracking, scaling, pitting, blistering, edge lifting, inter-film splitting, curling, or discoloration when processed and applied using mutually acceptable processing and application procedures.
- (h) Splices. A single roll of sheeting shall contain a maximum of four splices per 50 yd (45 m) length. The sheeting shall be overlapped a minimum of 3/16 in. (5 mm) at each splice.
- (i) Adhesive Bond. The sheeting shall form a durable bond to smooth, corrosion and weather-resistant surfaces and adhere securely when tested according to ASTM D 4956.
- (j) Positionability. Sheeting, with ASTM D 4956 Class 3 adhesive, used for manufacturing cutout legends and borders shall provide sufficient positionability during the fabrication process to permit removal and reapplication without damage to either the legend or sign background and shall have a plastic liner suitable for use on bed cutting machines. Thereafter, all other adhesive and bond requirements contained in the specification shall apply.

Positionability shall be verified by cutting 4 in. (100 mm) letters E, I, K, M, S, W, and Y out of the positionable material. The letters shall then be applied to a sheeted aluminum blank using a single pass of a two pound roller. The letters shall sit for five minutes and then a putty knife shall be used to lift a corner. The thumb and fore finger shall be used to slowly pull the lifted corner to lift letters away from the sheeted aluminum. The letters shall not tear or distort when removed.

- (k) Thickness. The thickness of the sheeting without the protective liner shall be less than or equal to 0.015 in. (0.4 mm), or 0.025 in. (0.6 mm) for prismatic material.
- (l) Processing. The sheeting shall permit cutting and color processing according to the sheeting manufacturer's specifications at temperatures of 60 to 100 °F (15 to 38 °C) and within a relative humidity range of 20 to 80 percent. The sheeting shall be heat resistant and permit forced curing without staining the applied or unapplied sheeting at temperatures recommended by the manufacturer. The sheeting shall be solvent resistant and capable of being cleaned with VM&P naphtha, mineral spirits, and turpentine.

Transparent color and opaque black inks shall be single component and low odor. The inks shall dry within eight hours and not require clear coating. After color processing on white sheeting, the sheeting shall show no appreciable discoloration, cracking, streaking, crazing, blistering, or dimensional change when tested for durability (e). The ink on the weathered, prepared panel shall exhibit a Hunter Lab Delta E of 5 or less when compared to the original.

Transparent color electronic cutting films shall be acrylic. After application to white sheeting, the films shall show no appreciable discoloration, cracking, streaking, crazing, blistering, or dimensional change when tested for durability (e). The films on the weathered, prepared panel shall exhibit a Hunter Lab Delta E of 5 or less when compared to the original.

Transparent colors screened, or transparent acrylic electronic cutting films, on white sheeting, shall have a minimum initial coefficient of retroreflection values of 50 percent for yellow and red, and a minimum 70 percent for green, blue, and brown of the 0.2 degree observation angle/-4.0 degree entrance angle values as listed in the previous tables for the color being applied. After durability testing, the colors shall retain a minimum 80 percent of the initial coefficient of retroreflection.

- (m) Identification. The sheeting shall have a distinctive overall pattern in the sheeting unique to the manufacturer. If material orientation is required for optimum retroreflectivity, permanent orientation marks shall be incorporated into the face of the sheeting. Neither the overall pattern nor the orientation marks shall interfere with the reflectivity of the sheeting.
- (n) Packaging. Both ends of each box shall be clearly labeled with the sheeting type, color, adhesive type, manufacturer's lot number, date of manufacture, and supplier's name. Material Safety Data Sheets and technical bulletins for all materials shall be furnished to the Department with each shipment.

Nonreflective Sheeting Properties. Nonreflective sheeting shall consist of a flexible, pigmented cast vinyl film having a smooth, flat outer surface and shall meet the following requirements.

The Department reserves the right to sample and test delivered materials according to Federal Specification LS-300.

- (a) Adhesive. The sheeting shall have a Class 1, pre-coated, pressure sensitive adhesive according to ASTM D 4956. The adhesive shall have a protective liner that is easily removed when tested according to ASTM D 4956. The adhesive shall be capable of being applied to new or refurbished aluminum and reflectorized backgrounds without additional adhesive.
- (b) Color. The sheeting shall be uniform in color and devoid of streaks throughout the length of each roll.
- (c) Gloss. The sheeting shall exhibit a minimum 85 degree gloss-meter rating of 40 when tested according to ASTM D 523.
- (d) Durability. Applied sheeting that has been vertically exposed to the elements for seven years shall show no appreciable discoloration, cracking, crazing, blistering, delamination, or loss of adhesion. A slight amount of chalking is permitted but the sheeting shall not support fungus growth.

(e) Testing. Test panels shall be prepared by applying the sheeting to 6 1/2 x 6 1/2 in. (165 x 165 mm) pieces of aluminum according to the manufacturer's specifications. The edges of the panel shall be trimmed evenly and aged 48 hours at 70 to 90 °F (21 to 32 °C). Shrinkage and immersion testing shall be as follows.

(1) Shrinkage. The sheeting shall not shrink more than 1/64 in. (0.4 mm) from any panel edge when subjected to a temperature of 150 °F (66 °C) for 48 hours and shall be sufficiently heat resistant to retain adhesion after one week at 150 °F (66 °C).

(2) Immersion Testing. The sheeting shall show no appreciable decrease in adhesion, color, or general appearance when examined one hour after being immersed to a depth of 2 or 3 in. (50 or 75 mm) in the following solutions at 70 to 90 °F (21 to 32 °C) for specified times.

Solution	Immersion Time (hours)
Reference Fuel (M I L-F-8799A) (15 parts xylol and 85 parts mineral spirits by weight)	1
Distilled Water	24
SAE No. 20 Motor Oil	24
Antifreeze (1/2 ethylene glycol, 1/2 distilled water)	24

(f) Adhesive Bond: The sheeting shall form a durable bond to smooth, corrosion and weather-resistant surfaces and adhere securely when tested according to ASTM D 4956.

(g) Thickness. The thickness of the sheeting without the protective liner shall be a maximum of 0.005 in. (0.13 mm).

(h) Cutting. Material used on bed cutting machines shall have a smooth plastic liner.

(i) Identification. The sheeting shall have a distinctive overall pattern in the sheeting unique to the manufacturer. If material orientation is required for optimum retroreflectivity, permanent orientation marks shall be incorporated into the face of the sheeting. Neither the overall pattern nor the orientation marks shall interfere with the reflectivity of the sheeting.

(j) Packaging. Both ends of each box shall be clearly labeled with the sheeting type, color, adhesive type, manufacturer's lot number, date of manufacture, and supplier's name. Material Safety Data Sheets and technical bulletins for all materials shall be furnished to the Department with each shipment.

SEEDING (BDE)

Effective: July 1, 2004
 Revised: January 1, 2009

Revise the following seeding mixtures shown in Table 1 of Article 250.07 of the Standard Specifications to read:

"Table 1 - SEEDING MIXTURES		
Class – Type	Seeds	lb/acre (kg/hectare)
2 Roadside Mixture 7/	Tall Fescue (Inferno, Tarheel II, Quest, Blade Runner, or Falcon IV)	100 (110)
	Perennial Ryegrass	50 (55)
	Creeping Red Fescue	40 (50)
	Red Top	10 (10)
2A Salt Tolerant Roadside Mixture 7/	Tall Fescue (Inferno, Tarheel II, Quest, Blade Runner, or Falcon IV)	60 (70)
	Perennial Ryegrass	20 (20)
	Red Fescue (Audubon, Sea Link, or Epic)	30 (20)
	Hard Fescue (Rescue 911, Spartan II, or Reliant IV)	30 (20)
	Fults Salt Grass 1/	60 (70)"

Revise Note 7 of Table 1 – Seeding Mixtures of Article 250.07 of the Standard Specifications to read:

"7/ In Districts 1 through 6, the planting times shall be April 1 to June 15 and August 1 to November 1. In Districts 7 through 9, the planting times shall be March 1 to June 1 and August 1 to November 15. Seeding may be performed outside these dates provided the Contractor guarantees a minimum of 75 percent uniform growth over the entire seeded area(s) after a period of establishment. Inspection dates for the period of establishment will be as follows: Seeding conducted in Districts 1 through 6 between June 16 and July 31 will be inspected after April 15 and seeding conducted between November 2 and March 31 will be inspected after September 15. Seeding conducted in Districts 7 through 9 between June 2 and July 31 will be inspected after April 15 and seeding conducted between November 16 and February 28 will be inspected after September 15. The guarantee shall be submitted to the Engineer in writing prior to performing the work. After the period of establishment, areas not exhibiting 75 percent uniform growth shall be interseeded or reseeded, as determined by the Engineer, at no additional cost to the Department."

Revise Table II of Article 1081.04(c)(6) of the Standard Specifications to read:

TABLE II						
Variety of Seeds	Hard Seed %	Purity %	Pure Live Seed %	Weed %	Secondary * Noxious Weeds No. per oz (kg)	Notes
	Max.	Min.	Min.	Max.	Max. Permitted	
Alfalfa	20	92	89	0.50	6 (211)	1/
Clover, Alsike	15	92	87	0.30	6 (211)	2/
Red Fescue, Audubon	0	97	82	0.10	3 (105)	-
Red Fescue, Creeping	-	97	82	1.00	6 (211)	-
Red Fescue, Epic	-	98	83	0.05	1 (35)	-
Red Fescue, Sea Link	-	98	83	0.10	3 (105)	-
Tall Fescue, Blade Runner	-	98	83	0.10	2 (70)	-
Tall Fescue, Falcon IV	-	98	83	0.05	1 (35)	-
Tall Fescue, Inferno	0	98	83	0.10	2 (70)	-
Tall Fescue, Tarheel II	-	97	82	1.00	6 (211)	-
Tall Fescue, Quest	0	98	83	0.10	2 (70)	-
Fults Salt Grass	0	98	85	0.10	2 (70)	-
Kentucky Bluegrass	-	97	80	0.30	7 (247)	4/
Oats	-	92	88	0.50	2 (70)	3/
Redtop	-	90	78	1.80	5 (175)	3/
Ryegrass, Perennial, Annual	-	97	85	0.30	5 (175)	3/
Rye, Grain, Winter	-	92	83	0.50	2 (70)	3/
Hard Fescue, Reliant IV	-	98	83	0.05	1 (35)	-
Hard Fescue, Rescue 911	0	97	82	0.10	3 (105)	-
Hard Fescue, Spartan II	-	98	83	0.10	3 (105)	-
Timothy	-	92	84	0.50	5 (175)	3/
Wheat, hard Red Winter	-	92	89	0.50	2 (70)	3/

Revise the first sentence of the first paragraph of Article 1081.04(c)(7) of the Standard Specifications to read:

"The seed quantities indicated per acre (hectare) for Prairie Grass Seed in Classes 3, 3A, 4, 4A, 6, and 6A in Article 250.07 shall be the amounts of pure, live seed per acre (hectare) for each species listed."

80131

SELF-CONSOLIDATING CONCRETE FOR CAST-IN-PLACE CONSTRUCTION (BDE)

Effective: November 1, 2005

Revised: January 1, 2009

Definition. Self-consolidating concrete is a flowable mixture that does not require mechanical vibration for consolidation.

Usage. Self-consolidating concrete may be used for cast-in-place concrete construction items involving Class MS, DS, and SI concrete.

Materials. Materials shall be according to Section 1021 of the Standard Specifications.

Mix Design Criteria. Article 1020.04 of the Standard Specifications shall apply, except as follows:

- (a) The cement factor shall be according to Article 1020.04 of the Standard Specifications. If the maximum cement factor is not specified, it shall not exceed 7.05 cwt/cu yd (418 kg/cu m). The cement factor shall not be reduced if a water-reducing, retarding, or high range water-reducing admixture is used.
- (b) The maximum allowable water/cement ratio shall be according to Article 1020.04 of the Standard Specifications or 0.44, whichever is lower.
- (c) The slump requirements shall not apply.
- (d) The coarse aggregate gradations shall be CA 13, CA 14, CA 16, or a blend of these gradations. CA 11 may be used when the Contractor provides satisfactory evidence to the Engineer that the mix will not segregate. The fine aggregate proportion shall be a maximum 50 percent by weight (mass) of the total aggregate used.
- (e) The slump flow range shall be ± 2 in. (± 50 mm) of the Contractor target value, and within the overall Department range of 20 in. (510 mm) minimum to 28 in. (710 mm) maximum.
- (f) The visual stability index shall be a maximum of 1.
- (g) The J-ring value shall be a maximum of 4 in. (100 mm). The Contractor may specify a lower maximum in the mix design.
- (h) The L-box blocking ratio shall be a minimum of 60 percent. The Contractor may specify a higher minimum in the mix design.
- (i) The column segregation index shall be a maximum 15 percent.
- (j) The hardened visual stability index shall be a maximum of 1.

Test Methods. Illinois Test Procedures SCC-1, SCC-2, SCC-3, SCC-4, SCC-5, SCC-6, and Illinois Modified AASHTO T 22, 23, 121, 126, 141, 152, 177, 196, and 309 shall be used for testing of self-consolidating concrete mixtures.

Mix Design Submittal. The Contractor's Level III PCC Technician shall submit a mix design according to the "Portland Cement Concrete Level III Technician" course manual, except target slump information is not applicable and will not be required. However, a slump flow target range shall be submitted. In addition, the design mortar factor may exceed 1.10 and durability test data will be waived.

A J-ring value shall be submitted if a lower mix design maximum will apply. An L-box blocking ratio shall be submitted if a higher mix design minimum will apply. The Contractor shall also indicate applicable construction items for the mix design.

Trial mixture information will be required by the Engineer. A trial mixture is a batch of concrete tested by the Contractor to verify the Contractor's mix design will meet specification requirements. Trial mixture information shall include test results as specified in the "Portland Cement Concrete Level III Technician" course manual. Test results shall also include slump flow, visual stability index, J-ring value, L-box blocking ratio, column segregation index, and hardened visual stability index. For the trial mixture, the slump flow shall be near the midpoint of the proposed slump flow target range.

Trial Batch. A minimum 2 cu yd (1.5 cu m) trial batch shall be produced, and the self-consolidating concrete admixture dosage proposed by the Contractor shall be used. The slump flow shall be within 1.0 in. (25 mm) of the maximum slump flow range specified by the Contractor, and the air content shall be within the top half of the allowable specification range.

The trial batch shall be scheduled a minimum of 21 calendar days prior to anticipated use and shall be performed in the presence of the Engineer.

The Contractor shall provide the labor, equipment, and materials to test the concrete. The mixture will be evaluated by the Engineer for strength, air content, slump flow, visual stability index, J-ring value, L-box blocking ratio, column segregation index, and hardened visual stability index.

Upon review of the test data from the trial batch, the Engineer will verify or deny the use of the mix design and notify the Contractor. Verification by the Engineer will include the Contractor's target slump flow range. If applicable, the Engineer will verify the Contractor's maximum J-ring value and minimum L-box blocking ratio.

A new trial batch will be required whenever there is a change in the source of any component material, proportions beyond normal field adjustments, dosage of the self-consolidating concrete admixture, batch sequence, mixing speed, mixing time, or as determined by the Engineer. The testing criteria for the new trial batch will be determined by the Engineer.

When necessary, the trial batches shall be disposed of according to Article 202.03 of the Standard Specifications.

Mixing Portland Cement Concrete. In addition to Article 1020.11 of the Standard Specifications, the mixing time for central-mixed concrete shall not be reduced as a result of a mixer performance test. Truck-mixed or shrink-mixed concrete shall be mixed in a truck mixer for a minimum of 100 revolutions.

Wash water, if used, shall be completely discharged from the drum or container before the succeeding batch is introduced.

The batch sequence, mixing speed, and mixing time shall be appropriate to prevent cement balls and mix foaming for central-mixed, truck-mixed, and shrink-mixed concrete.

Falsework and Forms. In addition to Articles 503.05 and 503.06 of the Standard Specifications, the Contractor shall ensure the design of the falsework and forms is adequate for the additional form pressure caused by the fluid concrete. Forms shall be tight to prevent leakage of fluid concrete.

When the form height for placing the self-consolidating concrete is greater than 10.0 ft (3.0 m), direct monitoring of form pressure shall be performed according to Illinois Test Procedure SCC-10. The monitoring requirement is a minimum, and the Contractor shall remain responsible for adequate design of the falsework and forms. A minimum of one sensor will be required below each point of concrete placement to measure the maximum pressure. The first sensor below the point of concrete placement shall be approximately 12 in. (300 mm) above the base of the formwork. Additional sensors shall be installed above the bottom sensor when the form height is greater than 10.0 ft (3.0 m) above the bottom sensor. The additional sensors shall be installed at a maximum vertical spacing of 10.0 ft (3.0 m). The Contractor shall record the formwork pressure during concrete placement. This information shall be used by the Contractor to prevent the placement rate from exceeding the maximum formwork pressure allowed, to monitor the thixotropic change in the concrete during the pour, and to make appropriate adjustments to the mix design. This information shall be provided to the Engineer during the pour.

Placing and Consolidating. Concrete placement and consolidation shall be according to Article 503.07 of the Standard Specifications, except as follows:

Revise the third paragraph of Article 503.07 of the Standard Specifications to read:

“Open troughs and chutes shall extend as nearly as practicable to the point of deposit. The drop distance of concrete shall not exceed 5 ft (1.5 m). If necessary, a tremie shall be used to meet this requirement. The maximum distance of horizontal flow from the point of deposit shall be 25 ft (7.6 m), unless approved otherwise by the Engineer. For drilled shafts, free fall placement will not be permitted.”

Delete the seventh, eighth, ninth, and tenth paragraphs of Article 503.07 of the Standard Specifications.

Add to the end of the eleventh paragraph of Article 503.07 of the Standard Specifications the following:

"Concrete shall be rodded with a piece of lumber, conduit, or vibrator if the material has lost its fluidity prior to placement of additional concrete. The vibrator shall be the pencil head type with a maximum diameter or width of 1 in. (25 mm). Any other method for restoring the fluidity of the concrete shall be approved by the Engineer."

Quality Control by Contractor at Plant. The specified test frequencies for aggregate gradation, aggregate moisture, air content, unit weight/yield, and temperature shall be performed as indicated in the contract.

Slump flow, visual stability index, and J-ring or L-box tests shall be performed as needed to control production. The column segregation index test and hardened visual stability index test will not be required to be performed at the plant.

Quality Control by Contractor at Jobsite. The specified test frequencies for air content, strength, and temperature shall be performed as indicated in the contract.

Slump flow, visual stability index, and J-ring or L-box tests shall be performed on the first two truck deliveries of the day, and every 50 cu yd (40 cu m) thereafter. The Contractor shall select either the J-ring or L-box test for jobsite testing.

The column segregation index test will not be required to be performed at the jobsite. The hardened visual stability index test shall be performed on the first truck delivery of the day, and every 300 cu yd (230 cu m) thereafter. Slump flow, visual stability index, J-ring value or L-box blocking ratio, air content, and concrete temperature shall be recorded for each hardened visual stability index test.

The Contractor shall retain all hardened visual stability index cut cylinder specimens until the Engineer notifies the Contractor that the specimens may be discarded.

If mix foaming or other potential detrimental material is observed during placement or at the completion of the pour, the material shall be removed while the concrete is still plastic.

Quality Assurance by Engineer at Plant. For air content and aggregate gradation, quality assurance independent sample testing and split sample testing will be performed as indicated in the contract.

For slump flow, visual stability index, and J-ring or L-box tests, quality assurance independent sample testing and split sample testing will be performed as determined by the Engineer.

Quality Assurance by Engineer at Jobsite. For air content and strength, quality assurance independent sample testing and split sample testing will be performed as indicated in the contract.

For slump flow, visual stability index, J-ring or L-box, and hardened visual stability index tests, quality assurance independent sample testing will be performed as determined by the Engineer.

For slump flow and visual stability index quality assurance split sample testing, the Engineer will perform tests at the beginning of the project on the first three tests performed by the Contractor. Thereafter, a minimum of ten percent of total tests required of the Contractor will be performed per plant, which will include a minimum of one test per mix design. The acceptable limit of precision will be 1.5 in. (40 mm) for slump flow and a limit of precision will not apply to the visual stability index.

For the J-ring or the L-box quality assurance split sample testing, a minimum of 80 percent of the total tests required of the Contractor will be witnessed by the Engineer per plant, which will include a minimum of one witnessed test per mix design. The Engineer reserves the right to conduct quality assurance split sample testing. The acceptable limit of precision will be 1.5 in. (40 mm) for the J-ring value and ten percent for the L-box blocking ratio.

For each hardened visual stability index test performed by the Contractor, the cut cylinders shall be presented to the Engineer for determination of the rating. The Engineer reserves the right to conduct quality assurance split sample testing. A limit of precision will not apply to the hardened visual stability index.

80152

SELF-CONSOLIDATING CONCRETE FOR PRECAST PRODUCTS (BDE)

Effective: July 1, 2004

Revised: January 1, 2007

Definition. Self-consolidating concrete is a flowable mixture that does not require mechanical vibration for consolidation.

Usage. Self-consolidating concrete may be used for precast concrete products.

Materials. Materials shall be according to Section 1021 of the Standard Specifications.

Mix Design Criteria. The mix design criteria shall be as follows:

- (a) The minimum cement factor shall be according to Article 1020.04 of the Standard Specifications. If the maximum cement factor is not specified, it shall not exceed 7.05 cwt/cu yd (418 kg/cu m).
- (b) The maximum allowable water/cement ratio shall be according to Article 1020.04 of the Standard Specifications or 0.44, whichever is lower.
- (c) The slump requirements of Article 1020.04 of the Standard Specifications shall not apply.
- (d) The coarse aggregate gradations shall be CA 13, CA 14, CA 16, or a blend of these gradations. CA 11 may be used when the Contractor provides satisfactory evidence to the Engineer that the mix will not segregate. The fine aggregate proportion shall be a maximum 50 percent by weight (mass) of the total aggregate used.
- (e) The slump flow range shall be ± 2 in. (± 50 mm) of the Contractor target value, and within the overall Department range of 20 in. (510 mm) minimum to 28 in. (710 mm) maximum.
- (f) The visual stability index shall be a maximum of 1.
- (g) The J-ring value shall be a maximum of 4 in. (100 mm). The Contractor may specify a lower maximum in the mix design.
- (h) The L-box blocking ratio shall be a minimum of 60 percent. The Contractor may specify a higher minimum in the mix design.
- (i) The column segregation index shall be a maximum 15 percent.
- (j) The hardened visual stability index shall be a maximum of 1.

Placing and Consolidating. The maximum distance of horizontal flow from the point of deposit shall be 25 ft (7.6 m), unless approved otherwise by the Engineer.

Concrete shall be rodded with a piece of lumber, conduit, or vibrator if the material has lost its fluidity prior to placement of additional concrete. The vibrator shall be the pencil head type with a maximum diameter or width of 1 in. (25 mm). Any other method for restoring the fluidity of the concrete shall be approved by the Engineer.

Mix Design Approval. The Contractor shall obtain mix design approval according to the Department's Policy Memorandum "Quality Control/Quality Assurance Program for Precast Concrete Products".

80132

SIGN PANELS AND SIGN PANEL OVERLAYS (BDE)

Effective: November 1, 2008

Description. This work shall consist of furnishing, fabricating, and installing sign panels and/or sign panel overlays. Work shall be according to Sections 720 and 721 of the Standard Specifications, except as modified herein.

Materials. Type AP and AZ sheeting shall meet the requirements of the special provision, "Retroreflective Sheeting, Nonreflective Sheeting, and Translucent Overlay Film for Highway Signs". Type ZZ sheeting shall meet the requirements of the special provision, "Type ZZ Retroreflective Sheeting, Nonreflective Sheeting, and Translucent Overlay Film for Highway Signs".

The sheeting for the background, legend, border, shields, and symbols shall be provided by the same manufacturer.

CONSTRUCTION REQUIREMENTS

Fabrication. Signs shall be fabricated according to the current Bureau of Operations Policy Memorandum, "Fabrication of Highway Signs", the MUTCD, the FHWA Standard Highway Signs manual, the Illinois standard highway signs, and as shown on the plans.

Signs shall be fabricated such that the material for the background, legend, border, shields, and symbols is applied in the preferred orientation for the maximum retroreflectivity per the manufacturer's recommendation. The nesting of legend, border, shields, or symbols will not be permitted.

80212

SILT FILTER FENCE (BDE)

Effective: January 1, 2008

For silt filter fence fabric only, revise Article 1080.02 of the Standard Specifications to read:

“1080.02 Geotextile Fabric. The fabric for silt filter fence shall be a woven fabric meeting the requirements of AASHTO M 288 for unsupported silt fence with less than 50 percent geotextile elongation.”

Replace the last sentence of Article 1081.15(b) of the Standard Specifications with the following:

“Silt filter fence stakes shall be a minimum of 4 ft (1.2 m) long and made of either wood or metal. Wood stakes shall be 2 in. x 2 in. (50 mm x 50 mm). Metal stakes shall be a standard T or U shape having a minimum weight (mass) of 1.32 lb/ft (600 g/300 mm).”

80197

STEEL COST ADJUSTMENT (BDE) (RETURN FORM WITH BID)

Effective: April 2, 2004

Revised: April 1, 2009

Description. Steel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in steel prices when optioned by the Contractor. The bidder shall indicate on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form or failure to indicate contract number, company name, and sign and date the form shall make this contract exempt of steel cost adjustments for all items of steel. Failure to indicate "Yes" for any item of work will make that item of steel exempt from steel cost adjustment.

Types of Steel Products. An adjustment will be made for fluctuations in the cost of steel used in the manufacture of the following items:

Metal Piling (excluding temporary sheet piling)
Structural Steel
Reinforcing Steel

Other steel materials such as dowel bars, tie bars, mesh reinforcement, guardrail, steel traffic signal and light poles, towers and mast arms, metal railings (excluding wire fence), and frames and grates will be subject to a steel cost adjustment when the pay items they are used in has a contract value of \$10,000 or greater.

Documentation. Sufficient documentation shall be furnished to the Engineer to verify the following:

- (a) The dates and quantity of steel, in lb (kg), shipped from the mill to the fabricator.
- (b) The quantity of steel, in lb (kg), incorporated into the various items of work covered by this special provision. The Department reserves the right to verify submitted quantities.

Method of Adjustment. Steel cost adjustments will be computed as follows:

$$SCA = Q \times D$$

Where: SCA = steel cost adjustment, in dollars
Q = quantity of steel incorporated into the work, in lb (kg)
D = price factor, in dollars per lb (kg)

$$D = MPI_M - MPI_L$$

Where: MPI_M = The Materials Cost Index for steel as published by the Engineering News-Record for the month the steel is shipped from the mill. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

MPI_L = The Materials Cost Index for steel as published by the Engineering News-Record for the month prior to the letting. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

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

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

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

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

$$\text{Percent Difference} = \{(MPI_L - MPI_M) \div MPI_L\} \times 100$$

Steel cost adjustments will be calculated by the Engineer and will be paid or deducted when all other contract requirements for the items of work are satisfied. Adjustments will only be made for fluctuations in the cost of the steel as described herein. No adjustment will be made for changes in the cost of manufacturing, fabrication, shipping, storage, etc.

The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Attachment

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

Return With Bid

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**OPTION FOR
STEEL COST ADJUSTMENT**

The bidder shall submit this completed form with his/her bid. Failure to submit the form or properly complete contract number, company name, and sign and date the form shall make this contract exempt of steel cost adjustments for all items of steel. Failure to indicate "Yes" for any item of work will make that item of steel exempt from steel cost adjustment. After award, this form, when submitted shall become part of the contract.

Contract No.: _____

Company Name: _____

Contractor's Option:

Is your company opting to include this special provision as part of the contract plans for the following items of work?

Metal Piling	Yes	<input type="checkbox"/>
Structural Steel	Yes	<input type="checkbox"/>
Reinforcing Steel	Yes	<input type="checkbox"/>
Dowel Bars, Tie Bars and Mesh Reinforcement	Yes	<input type="checkbox"/>
Guardrail	Yes	<input type="checkbox"/>
Steel Traffic Signal and Light Poles, Towers and Mast Arms	Yes	<input type="checkbox"/>
Metal Railings (excluding wire fence)	Yes	<input type="checkbox"/>
Frames and Grates	Yes	<input type="checkbox"/>

Signature: _____ **Date:** _____

80127

STEEL PLATE BEAM GUARDRAIL (BDE)

Effective: November 1, 2005

Revised: August 1, 2007

Revise the first paragraph of Article 1006.25 of the Standard Specifications to read:

"1006.25 Steel Plate Beam Guardrail. Steel plate beam guardrail, including bolts, nuts, and washers, shall be according to AASHTO M 180. The guardrail shall be Class A, with a Type II galvanized coating; except the weight (mass) of the coating for each side of the guardrail shall be at least 2.00 oz/sq ft (610 g/sq m). The coating will be determined for each side of the guardrail using the average of at least three non-destructive test readings taken on that side of the guardrail. The minimum average thickness for each side shall be 3.4 mils (86 μ m)."

80153

STONE GRADATION TESTING (BDE)

Effective: November 1, 2007

Revise the first sentence of note 1/ of the Erosion Protection and Sediment Control Gradations table of Article 1005.01(c)(1) of the Standard Specifications to read:

“A maximum of 15 percent of the total test sample by weight may be oversize material.”

80191

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

SURFACE TESTING OF PAVEMENTS (BDE)

Effective: April 1, 2002

Revised: January 1, 2007

Hot-Mix Asphalt (HMA) Overlays

Revise Article 406.03(h) of the Standard Specifications to read:

“(h) Pavement Surface Test Equipment 1101.10”

Revise Article 406.11 of the Standard Specifications to read:

“**406.11 Surface Tests.** The finished surface of the pavement shall be tested for smoothness within three days of paving. Testing shall be performed in the presence of the Engineer.

Prior to testing, a copy of the approval letter and recorded settings from the Profile Equipment Verification (PEV) Program shall be submitted to the Engineer; and all objects and debris shall be removed from the pavement.

(a) Test Sections/Equipment.

(1) High-Speed Mainline Pavement. High-speed mainline pavement shall consist of pavements, ramps, and loops with a posted speed greater than 45 mph. These sections shall be tested using a profile testing device.

(2) Low-Speed Mainline Pavement. Low-speed mainline pavement shall consist of pavements, ramps, and loops with a posted speed of 45 mph or less. These sections shall be tested using a profile testing device.

(3) Miscellaneous Pavement. Miscellaneous pavement shall consist of:

a. pavement on horizontal curves with a centerline radius of curvature of less than or equal to 1000 ft (300 m) and pavement within the superelevation transition of such curves;

b. pavement on vertical curves having a length of less than or equal to 200 ft (60 m) in combination with an algebraic change in tangent grades greater than or equal to three percent, as may occur on urban ramps or other constricted-space facilities;

c. the first or last 15 ft (4.5 m) of a pavement section where the Contractor is not responsible for the adjoining surface;

d. intersections;

- e. variable width pavements;
- f. side street returns;
- g. crossovers;
- h. connector pavement from mainline pavement expansion joint to the bridge approach pavement;
- i. bridge approach pavement; and
- j. other miscellaneous pavement surfaces (i.e. a turn lane) as determined by the Engineer.

Miscellaneous pavement shall be tested using a 16 ft (5 m) straightedge set to a 3/8 in. (10 mm) tolerance.

(b) Lots/Sublots. Mainline pavement test sections will be divided into lots and sublots.

(1) Lots. A lot will be defined as a continuous strip of pavement 1 mile (1600 m) long and one lane wide. When the length of a continuous strip of pavement is less than 1 mile (1600 m), that pavement will be included in an adjacent lot. Structures will be omitted when measuring pavement length.

(2) Sublots. Lots will be divided into 0.1 mile (160 m) sublots. A partial subplot greater than or equal to 250 ft (76 m) resulting from an interruption in the pavement will be subject to the same evaluation as a whole subplot. Partial sublots less than 250 ft (76 m) shall be included with the previous subplot for evaluation purposes.

(c) Testing Procedure. One wheel track shall be tested per lane. Testing shall be performed 3 ft (1 m) from and parallel to the edge of the lane away from traffic. A guide shall be used to maintain the proper distance.

The profile trace generated shall have stationing indicated every 500 ft (150 m) at a minimum. Both ends of the profile trace shall be labeled with the following information: contract number, beginning and ending stationing, which direction is up on the trace, which direction the data was collected, and the device operator name(s). The top portion of the Department supplied form, "Profile Report of Pavement Smoothness" shall be completed and secured around the trace roll.

Although surface testing of intermediate lifts will not be required, they may be performed at the Contractor's option. When this option is chosen, the testing shall be performed and the profile traces shall be generated as described above.

The Engineer may perform his/her own testing at any time for monitoring and comparison purposes.

- (d) Trace Reduction and Bump Locating Procedure. All traces shall be reduced. Traces produced by a mechanical recorder shall be reduced using an electronic scanner and computer software. This software shall calculate the profile index of each subplot in in./mile (mm/km) and indicate any high points (bumps) in excess of 0.30 in. (8 mm) with a line intersecting the profile on the printout. Computerized recorders shall provide the same information.

The profile index of each track, average profile index of each subplot, average profile index of the lot and locations of bumps shall be recorded on the form.

All traces and reports shall be provided within two working days of completing the testing to the Engineer for the project file. Traces from either a computerized profile testing device or analysis software used with a manual profile testing device shall display the settings used for the data reduction. The Engineer will compare these settings with the approved settings from the PEV Program. If the settings do not match, the results will be rejected and the section shall be retested/reanalyzed with the appropriate settings.

The Engineer will use the results of the testing to evaluate paving methods and equipment. If the average profile index of a lot exceeds 40.0 in./mile (635 mm/km) for high-speed mainline pavement or 65.0 in./mile (1025 mm/km) for low-speed mainline pavement, the paving operation will be suspended until corrective action is taken by the Contractor.

- (e) Corrective Work. All bumps in excess of 0.30 in. (8 mm) in a length of 25 ft (8 m) or less shall be corrected. If the bump is greater than 0.50 in. (13 mm), the pavement shall be removed and replaced. The minimum length of pavement to be removed shall be 3 ft (900 mm).

(1) High-Speed Mainline Pavement. Any subplot having a profile index within the range of, greater than 30.0 to 40.0 in./mile (475 to 635 mm/km) including bumps, shall be corrected to reduce the profile index to 30.0 in./mile (475 mm/km) or less on each trace. Any subplot having a profile index greater than 40.0 in./mile (635 mm/km) including bumps, shall be corrected to reduce the profile index to 30.0 in./mile (475 mm/km) or less on each trace, or replaced at the Contractor's option.

(2) Low-Speed Mainline Pavement. Any subplot having a profile index within the range of, greater than 45.0 to 65.0 in./mile (710 to 1025 mm/km) including bumps, shall be corrected to reduce the profile index to 45.0 in./mile (710 mm/km) or less on each trace. Any subplot having a profile index greater than 65.0 in./mile (1025 mm/km) including bumps, shall be corrected to reduce the profile index to 45.0 in./mile (710 mm/km) or less on each trace, or replaced at the Contractor's option.

(3) Miscellaneous Pavement. Surface variations which exceed the 3/8 in. (10 mm) tolerance will be marked by the Engineer and shall be corrected by the Contractor.

Corrective work shall be completed using either an approved grinding device consisting of multiple saws or by removing and replacing the pavement. Corrective work shall be applied to the full lane width. When completed, the corrected area shall have uniform texture and appearance, with the beginning and ending of the corrected area squared normal to the centerline of the paved surface.

Upon completion of the corrective work, the surface of the subplot(s) shall be retested. The Contractor shall furnish the profile tracing(s) and the completed form(s) to the Engineer within two working days after corrections are made. If the profile index and/or bumps still do not meet the requirements, additional corrective work shall be performed.

Corrective work shall be at no additional cost to the Department.

(f) Smoothness Assessments. Assessments will be paid to or deducted from the Contractor for each subplot of mainline pavement, per the Smoothness Assessment Schedule. Assessments will be based on the average profile index of each subplot prior to performing any corrective work unless the Contractor has chosen to remove and replace the subplot. For sublots that are replaced, assessments will be based on the profile index determined after replacement.

Assessments will not be paid or deducted until all other contract requirements for the pavement are satisfied. Pavement that is corrected or replaced for reasons other than smoothness, shall be retested as stated herein.

SMOOTHNESS ASSESSMENT SCHEDULE (HMA Overlays)		
High-Speed Mainline Pavement Average Profile Index in./mile (mm/km)	Low-Speed Mainline Pavement Average Profile Index in./mile (mm/km)	Assessment per subplot
6.0 (95) or less	15.0 (240) or less	+\$150.00
>6.0 (95) to 10.0 (160)	>15.0 (240) to 25.0 (400)	+\$80.00
>10.0 (160) to 30.0 (475)	>25.0 (400) to 45.0 (710)	+\$0.00
>30.0 (475) to 40.0 (635)	>45.0 (710) to 65.0 (1025)	+\$0.00
Greater than 40.0 (635)	Greater than 65.0 (1025)	-\$300.00

Smoothness assessments will not be applied to miscellaneous pavement sections.”

Hot-Mix Asphalt (HMA) Pavement (Full-Depth)

Revise Article 407.09 of the Standard Specifications to read:

407.09 Surface Tests. The finished surface of the pavement shall be tested for smoothness according to Article 406.11, except as follows:

Two wheel tracks shall be tested per lane. Testing shall be performed 3 ft (1 m) from and parallel to each lane edge.

SMOOTHNESS ASSESSMENT SCHEDULE (Full-Depth HMA)		
High-Speed Mainline Pavement Average Profile Index in./mile (mm/km)	Low-Speed Mainline Pavement Average Profile Index in./mile (mm/km)	Assessment per subplot
6.0 (95) or less		+\$800.00
>6.0 (95) to 11.0 (175)	15.0 (240) or less	+\$550.00
>11.0 (175) to 17.0 (270)	>15.0 (240) to 25.0 (400)	+\$350.00
>17.0 (270) to 30.0 (475)	>25.0 (400) to 45.0 (710)	+\$0.00
>30.0 (475) to 40.0 (635)	>45.0 (710) to 65.0 (1025)	+\$0.00
Greater than 40.0 (635)	Greater than 65.0 (1025)	-\$500.00"

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

Portland Cement Concrete Pavement

Revise Article 420.10 of the Standard Specifications to read:

420.10 Surface Tests. The finished surface of the pavement shall be tested for smoothness according to Article 406.11, except as follows:

The finished surface of the pavement shall be tested for smoothness once the pavement has attained a flexural strength of 550 psi (3800 kPa) or a compressive strength of 3000 psi (20,700 kPa).

Two wheel tracks shall be tested per lane. Testing shall be performed 3 ft (1 m) from and parallel to each lane edge.

Membrane curing damaged during testing shall be repaired as directed by the Engineer at no additional cost to the Department.

No further texturing for skid resistance will be required for areas corrected by grinding. Protective coat shall be reapplied to ground areas according to Article 420.18 at no additional cost to the Department.

For pavement that is corrected by removal and replacement, the minimum length to be removed shall meet the requirements of either Class A or Class B patching.

SMOOTHNESS ASSESSMENT SCHEDULE (PCC)		
High-Speed Mainline Pavement Average Profile Index in./mile (mm/km)	Low-Speed Mainline Pavement Average Profile Index in./mile (mm/km)	Assessment per subplot
6.0 (95) or less		+\$1200.00
>6.0 (95) to 11.0 (175)	15.0 (240) or less	+\$950.00
>11.0 (175) to 17.0 (270)	>15.0 (240) to 25.0 (400)	+\$600.00
>17.0 (270) to 30.0 (475)	>25.0 (400) to 45.0 (710)	+\$0.00
>30.0 (475) to 40.0 (635)	>45.0 (710) to 65.0 (1025)	+\$0.00
Greater than 40.0 (635)	Greater than 65.0 (1025)	-\$750.00"

Delete the fourth paragraph of Article 420.20 of the Standard Specifications.

Testing Equipment

Revise Article 1101.10 of the Standard Specifications to read:

"1101.10 Pavement Surface Test Equipment. Required surface testing and analysis equipment and their jobsite transportation shall be provided by the Contractor.

- (a) 16 ft (5 m) Straightedge. The 16 ft (5 m) straightedge shall consist of a metal I-beam mounted between two wheels spaced 16 ft (5 m) between the axles. Scratcher bolts which can be easily and accurately adjusted, shall be set at the 1/4, 1/2, and 3/4 points between the axles. A handle suitable for pushing and guiding shall be attached to the straightedge.
- (b) Profile Testing Device. The profile testing device shall have a decal displayed to indicate it has been tested through the Profile Equipment Verification (PEV) Program administered by the Department.
- (1) California Profilograph. The California Profilograph shall be either computerized or manual and have a frame 25 ft (8 m) in length supported upon multiple wheels at either end. The profile shall be recorded from the vertical movement of a wheel attached to the frame at mid point.

The California Profilograph shall be calibrated according to the manufacturer's recommendations and California Test 526. All calibration traces and calculations shall be submitted to the Engineer for the project file.

- (2) Inertial Profiler. The inertial profiler shall be either an independent device or a system that can be attached to another vehicle using one or two non-contact sensors to measure the pavement profile. The inertial profiler shall be capable of performing a simulation of the California Profilograph to provide results in the Profile Index format.

The inertial profiler shall be calibrated according to the manufacturer's recommendations. All calibration traces and calculations shall be submitted to the Engineer for the project file.

- (3) Trace Analysis. The Contractor shall reduce/evaluate these traces using a 0.00 in. (0.0 mm) blanking band and determine a Profile Index in in./mile (mm/km) for each section of finished pavement surface. Traces produced using a computerized profile testing device will be evaluated without further reduction. When using a manual profile testing device, the Contractor shall provide an electronic scanner, a computer, and software to reduce the trace. All analysis equipment (electronic scanner, computerized recorder, etc.) shall be able to accept 0.00 in. (0.0 mm) for the blanking band.

All traces from pavement sections tested with the profile testing device shall be recorded on paper with scales of 300:1 longitudinally and 1:1 vertically. Equipment and software settings of the profile testing device and analysis equipment shall be set to those values approved through the PEV Program.

The Engineer may retest the pavement at any time to verify the accuracy of the equipment."

80075

TEMPORARY EROSION CONTROL (BDE)

Effective: November 1, 2002

Revised: January 1, 2008

Revise the third paragraph of Article 280.03 of the Standard Specifications to read:

“Erosion control systems shall be installed prior to beginning any activities which will potentially create erodible conditions. Erosion control systems for areas outside the limits of construction such as storage sites, plant sites, waste sites, haul roads, and Contractor furnished borrow sites shall be installed prior to beginning soil disturbing activities at each area. These offsite systems shall be designed by the Contractor and be subject to the approval of the Engineer.”

Add the following paragraph after the third paragraph of Article 280.03 of the Standard Specifications:

“The temporary erosion and sediment control systems shown on the plans represent the minimum systems anticipated for the project. Conditions created by the Contractor’s operations, or for the Contractor’s convenience, which are not covered by the plans, shall be protected as directed by the Engineer at no additional cost to the Department. Revisions or modifications of the erosion and sediment control systems shall have the Engineer’s written approval.”

Add the following paragraph after the ninth paragraph of Article 280.07 of the Standard Specifications:

“Temporary or permanent erosion control systems required for areas outside the limits of construction will not be measured for payment.”

Delete the tenth (last) paragraph of Article 280.08 of the Standard Specifications.

80087

THERMOPLASTIC PAVEMENT MARKINGS (BDE)

Effective: January 1, 2007

Revise Article 1095.01(a)(2) of the Standard Specifications to read:

“(2) Pigment. The pigment used for the white thermoplastic compound shall be a high-grade pure (minimum 93 percent) titanium dioxide (TiO_2). The white pigment content shall be a minimum of ten percent by weight and shall be uniformly distributed throughout the thermoplastic compound.

The pigments used for the yellow thermoplastic compound shall not contain any hazardous materials listed in the Environmental Protection Agency Code of Federal Regulations (CFR) 40, Section 261.24, Table 1. The combined total of RCRA listed heavy metals shall not exceed 100 ppm when tested by X-ray fluorescence spectroscopy. The pigments shall also be heat resistant, UV stable and color-fast yellows, golds, and oranges, which shall produce a compound which shall match Federal Standard 595 Color No. 33538. The pigment shall be uniformly distributed throughout the thermoplastic compound.”

Revise Article 1095.01(b)(1)e. of the Standard Specifications to read:

“e. Daylight Reflectance and Color. The thermoplastic compound after heating for four hours \pm five minutes at 425 ± 3 °F (218.3 ± 2 °C) and cooled at 77 °F (25 °C) shall meet the following requirements for daylight reflectance and color, when tested, using a color spectrophotometer with 45 degree circumferential/zero degree geometry, illuminant C, and two degree observer angle. The color instrument shall measure the visible spectrum from 380 to 720 nm with a wavelength measurement interval and spectral bandpass of 10 nm.

White: Daylight Reflectance75 percent min.

*Yellow: Daylight Reflectance45 percent min.

*Shall meet the coordinates of the following color tolerance chart.

x	0.490	0.475	0.485	0.530
y	0.470	0.438	0.425	0.456”

Revise Article 1095.01(b)(1)k. of the Standard Specifications to read:

“k. Accelerated Weathering. After heating the thermoplastic for four hours \pm five minutes at 425 ± 3 °F (218.3 ± 2 °C) the thermoplastic shall be applied to a steel wool abraded aluminum alloy panel (Federal Test Std. No. 141, Method 2013) at a film thickness of 30 mils (0.70 mm) and allowed to cool for 24 hours at room temperature. The coated panel shall be subjected to accelerated weathering

using the light and water exposure apparatus (fluorescent UV - condensation type) for 75 hours according to ASTM G 53 (equipped with UVB-313 lamps).

The cycle shall consist of four hours UV exposure at 122 °F (50 °C) followed by four hours of condensation at 104 °F (40 °C). UVB 313 bulbs shall be used. At the end of the exposure period, the panel shall not exceed 10 Hunter Lab Delta E units from the original material."

80176

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 *10*. 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

VARIABLY SPACED TINING (BDE)

Effective: August 1, 2005
 Revised: January 1, 2007

Revise the first sentence of the third paragraph of Article 420.09(e)(1) of the Standard Specifications to read:

“The metal comb shall consist of a single line of tempered spring steel tines variably spaced as shown in the table below and securely mounted in a suitable head.”

Revise the fifth sentence of the third paragraph of Article 420.09(e)(1) of the Standard Specifications to read:

“The tining device shall be operated so as to produce a pattern of grooves, 1/8 to 3/16 in. (3 to 5 mm) deep and 1/10 to 1/8 in. (2.5 to 3.2 mm) wide across the pavement. The tining device shall be operated at a 1:6 skew across the pavement for facilities with a posted speed limit of 55 mph or greater. The tining pattern shall not overlap or leave gaps between successive passes.”

Add the following table after the third paragraph of Article 420.09(e)(1) of the Standard Specifications:

"Center to Center Spacings of Metal Comb Tines in. (mm) (read spacings left to right)				
1 5/16 (34)	1 7/16 (36)	1 7/8 (47)	2 1/8 (54)	1 7/8 (48)
1 11/16 (43)	1 1/4 (32)	1 1/4 (31)	1 1/16 (27)	1 7/16 (36)
1 1/8 (29)	1 13/16 (46)	13/16 (21)	1 11/16 (43)	7/8 (23)
1 5/8 (42)	2 1/16 (52)	15/16 (24)	11/16 (18)	1 1/8 (28)
1 9/16 (40)	1 5/16 (34)	1 1/16 (27)	1 (26)	1 (25)
1 1/16 (27)	13/16 (20)	1 7/16 (37)	1 1/2 (38)	2 1/16 (52)
2 (51)	1 3/4 (45)	1 7/16 (37)	1 11/16 (43)	2 1/16 (53)
1 1/16 (27)	1 7/16 (37)	1 5/8 (42)	1 5/8 (41)	1 1/8 (29)
1 11/16 (43)	1 3/4 (45)	1 3/4 (44)	1 3/16 (30)	1 7/16 (37)
1 5/16 (33)	1 9/16 (40)	1 1/8 (28)	1 1/4 (31)	1 15/16 (50)
1 5/16 (34)	1 3/4 (45)	13/16 (20)	1 3/4 (45)	1 15/16 (50)
2 1/16 (53)	2 (51)	1 1/8 (29)	1 (25)	11/16 (18)
2 1/16 (53)	11/16 (18)	1 1/2 (38)	2 (51)	1 9/16 (40)
11/16 (17)	1 15/16 (49)	1 15/16 (50)	1 9/16 (39)	2 (51)
1 7/16 (36)	1 7/16 (36)	1 1/2 (38)	1 13/16 (46)	1 1/8 (29)
1 1/2 (38)	1 15/16 (50)	15/16 (24)	1 5/16 (33)"	

CLEANING AND PAINTING EXISTING STEEL STRUCTURES

Effective: October 2, 2001

Revised: July 9, 2008

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	1008.04
(b) Aluminum Epoxy Mastic	1008.03
(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 percent (plus or minus 2 percent).
- (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 Level 2 - Certified, 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. Copies of the certification and/or experience shall be provided. References for experience shall be provided and 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
- SSPC Visual Standards 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 Prepared by Water Jetting, and/or SSPC-VIS 5, Guide and Reference Photographs for Steel Prepared by Wet Abrasive Blast Cleaning, as applicable.

- Commercially available putty knife of a minimum thickness of 40 mils (1mm) and a width between 1 and 3 in. (25 and 75 mm). 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 for compressed air cleanliness checks
- Type 2 Electronic Dry Film Thickness Gage per SSPC - PA2, Measurement of Dry Coating Thickness with magnetic Gages
- 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.

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 6 ft. (1.8 m) above the ground or water surface, and fall protection is not provided (e.g., guardrails are not provided), 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 (e.g., platform) is more than 2 1/2 ft. (800 mm) 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 30 foot candles (325 LUX). Illumination for cleaning and painting, including the working platforms, access and entryways shall be at least 20 foot candles (215 LUX).

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 10 sq. ft. (0.93 sq m). 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 40 mph (64 kph) 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 5°F (3°C) 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. Effected 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 1000 psi (7 MPa) and less than 5000 psi (34 MPa) 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 recleaned 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.

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 recurrence 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 1 1/2 in. (40 mm) 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 9 sq. in. (58 sq. cm) 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 9 sq. in. (58 sq. cm) 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. On a daily basis, the Contractor shall verify that recycled abrasives are free of oil contamination by conducting oil content tests according to SSPC-AB2.

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 1.5 to 4.5 mils (38 to 114 microns). 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 2.0 mils (50 microns).

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 1000 sq. ft. (93 sq m) or fraction thereof completed in a given day, shall be conducted at project start up. If results greater than 7 µg/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 1000 sq. ft. (93 sq. m) 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 1000 sq. ft. (93 sq. m).

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 1 in. (25 mm) 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 3.5 and 5.0 mils (90 and 125 microns) 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 3.0 and 6.0 mils (75 and 150 microns) 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 2.5 and 4.0 mils (65 and 100 microns) 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 9.0 and 15.0 mils (225 and 375 microns).

- 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 1.0 and 2.0 mils (25 and 50 microns) dry film thickness.
- One spot coat of aluminum epoxy mastic between 5.0 and 7.0 mils (125 and 175 microns) dry film thickness. The color shall contrast with the finish coat.
- One full finish coat of aliphatic urethane between 2.5 and 4.0 mils (65 and 100 microns) 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 8.5 and 13.0 mils (215 and 325 microns). 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 5.0 and 7.0 mils (125 and 175 microns) 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 5.0 and 7.0 mils (125 and 175 microns) 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 2.0 and 4.0 mils (50 and 100 microns) 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 12.0 and 18.0 mils (360 and 450 microns).

- 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 1.0 and 2.0 mils (25 and 50 microns) dry film thickness.
- One spot coat of aluminum epoxy mastic between 5.0 and 7.0 mils (125 and 175 microns) dry film thickness. The color shall contrast with the finish coat.
- One full finish coat of waterborne acrylic between 2.0 and 4.0 mils (50 and 100 microns) 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 8.0 and 13.0 mils (200 and 325 microns). 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 3.0 and 5.0 mils (75 and 125 microns) dry film thickness. The prime coat shall be tinted to a color that contrasts with the steel surface.
- One full MCU intermediate coat between 3.0 and 4.0 mils (75 and 100 microns) 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 2.0 and 4.0 mils (50 and 100 microns) 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 8.0 and 13.0 mils (200 and 325 microns).

- 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 1.0 and 2.0 mils (25 and 50 microns) dry film thickness.
- One full MCU intermediate coat between 3.0 and 4.0 mils (75 and 100 microns) dry film thickness. The color shall contrast with the finish coat.
- One full MCU finish coat 2.0 and 4.0 mils (50 and 100 microns) 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 6.0 and 10.0 mils (150 and 250 microns). 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 1 1/2 in. (40 mm) 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 2 in. (50 mm) and not more than 3 in. (75 mm) 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

UNDERWATER STRUCTURE EXCAVATION PROTECTION

Effective: April 1, 1995

Revised: March 6, 2009

Description. This work shall include all labor, materials, and equipment necessary for the isolation and protection of any excavations, from flowing water, which may be needed for construction at the locations shown on the plans and as required by the Specifications. Other than to install and remove the excavation protection no work shall be performed in flowing water. The protection may consist of diverting the water for the excavation by the uses of timbers, sheet piling, non erodible barrier material or other structural elements adequate to protect and support the excavation. The protection need not be watertight. All concrete placement below the waterline shall be tremied underwater into forms according to Article 503.08 of the Standard Specifications. Tremied concrete shall be placed to an elevation 1 ft. (300 mm) above the water level at the time of construction.

The Contractor's plan for the subject protection shall address the proposed construction sequence, including water diversion and/or dewatering methods, erosion and sediment control measures, sediment traps, disposal of excavated material, effluent water, along with best management practices to prevent reintroduction of excavated material into flowing water, etc. The plan shall be approved by the Engineer before excavation protection and construction may begin. Any system selected by the Contractor in which safe design and construction requires that loads and stresses be computed and the size and strength of parts determined by mathematical calculations based upon scientific principles and engineering data shall be prepared and sealed by an Illinois Licensed Structural Engineer. When the excavation protection is no longer required, it shall be removed according to the Contractor's plan unless otherwise specified by the Engineer. All materials removed will become the property of the Contractor.

Basis of Payment. Excavation protection for structures will be paid for at the contract unit price each, for UNDERWATER STRUCTURE EXCAVATION PROTECTION at the locations specified.

TEMPORARY SOIL RETENTION SYSTEM

Effective: December 30, 2002

Revised : January 1, 2007

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

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

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

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

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

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

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

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

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

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

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

PIPE UNDERDRAINS FOR STRUCTURES

Effective: May 17, 2000

Revised: January 1, 2007

Description. This work shall consist of furnishing and installing a pipe underdrain system as shown on the plans, as specified herein, and as directed by the Engineer.

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

The perforated pipe drain shall be according to Article 601.02 of the Standard Specifications. Outlet pipes or pipes connecting to a separate storm sewer system shall not be perforated.

The drainage aggregate shall be a combination of one or more of the following gradations, FA1, FA2, CA5, CA7, CA8, CA11, or CA13 thru 15, according to Sections 1003 and 1004 of the Standard Specifications.

The fabric surrounding the drainage aggregate shall be Geotechnical Fabric for French Drains according to Article 1080.05 of the Standard Specifications.

Construction Requirements. All work shall be according to the applicable requirements of Section 601 of the Standard Specifications except as modified below.

The pipe underdrains shall consist of a perforated pipe drain situated at the bottom of an area of drainage aggregate wrapped completely in geotechnical fabric and shall be installed to the lines and gradients as shown on the plans.

Method of Measurement. Pipe Underdrains for Structures shall be measured for payment in feet (meters), in place. Measurement shall be along the centerline of the pipe underdrains. All connectors, outlet pipes, elbows, and all other miscellaneous items shall be included in the measurement. Concrete headwalls shall be included in the cost of Pipe Underdrains for Structures, but shall not be included in the measurement for payment.

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

POROUS GRANULAR EMBANKMENT, SPECIAL

Effective: September 28, 2005

Revised: November 14, 2008

Description. This work shall consist of furnishing and placing porous granular embankment special material as detailed on the plans, according to Section 207 except as modified herein.

Materials. The gradation of the porous granular material may be any of the following CA 8 thru CA 18, FA 1 thru FA 4, FA 7 thru FA 9, and FA 20 according to Articles 1003 and 1004.

Construction. The porous granular embankment special shall be installed according to Section 207, except that it shall be uncompacted.

Basis of Payment. This work will be paid for at the contract unit price per Cubic Yard (Cubic Meter) for POROUS GRANULAR EMBANKMENT, SPECIAL.

**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	5
VI. Record of Materials, Supplies, and Labor.....	6
VII. Subletting or Assigning the Contract.....	6
VIII. Safety: Accident Prevention	7
IX. False Statements Concerning Highway Projects.....	7
X. Implementation of Clean Air Act and Federal Water Pollution Control Act	7
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

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60 (and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

- a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.
- b. The contractor will accept as his operating policy the following statement: "It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job-training."

2. EEO Officer: The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for an must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

- a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.
- b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.
- c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.
- d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.
- e. The contractor's EEO policy and the procedures to

implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

- a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employees referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish which such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.
- b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)
- c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

- a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
- b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
- c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.
- d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

6. Training and Promotion:

- a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.
- b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special

provision.

- c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.
- d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

- a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.
- b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.
- c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the SHA and shall set forth what efforts have been made to obtain such information.
- d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

- a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.
- b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.
- c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of

DBE subcontractors or subcontractors with meaningful minority and

female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General:

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and

Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the question, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so 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 listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which cases such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV. 2. Any worker listed on a payroll at a helper wage rate, who is not a helper under a approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

5. Apprentices and Trainees (Programs of the U.S. DOT):

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

6. Withholding:

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainee's and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

7. Overtime Requirements:

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. Violation:

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. Withholding for Unpaid Wages and Liquidated Damages:

The SHA shall; upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. Compliance with Copeland Regulations (29 CFR 3):

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. Payrolls and Payroll Records:

- a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.
- b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.
- c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the

Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for submitting payroll copies of all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

(2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;

(3) that each laborer or mechanic has been paid not less than the applicable wage rate and fringe benefits or cash equivalent for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all federal-aid contracts on the national highway system, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:

a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.

b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.

c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report

covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractors' own organization (23 CFR 635).

a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with

Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined not more than \$10,000 or imprisoned not more than 5 years or both."

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more).

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 *et seq.*, as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 *et seq.*, as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. Instructions for Certification - Primary Covered Transactions:

(Applicable to all Federal-aid contracts - 49 CFR 29)

- a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.
- c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.
- d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.
- f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be

entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification in all lower tier covered transactions

and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded from Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

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.

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XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**MINIMUM WAGES FOR FEDERAL AND FEDERALLY
ASSISTED CONSTRUCTION CONTRACTS**

This project is funded, in part, with Federal-aid funds and, as such, is subject to the provisions of the Davis-Bacon Act of March 3, 1931, as amended (46 Sta. 1494, as amended, 40 U.S.C. 276a) and of other Federal statutes referred to in a 29 CFR Part 1, Appendix A, as well as such additional statutes as may from time to time be enacted containing provisions for the payment of wages determined to be prevailing by the Secretary of Labor in accordance with the Davis-Bacon Act and pursuant to the provisions of 29 CFR Part 1. The prevailing rates and fringe benefits shown in the General Wage Determination Decisions issued by the U.S. Department of Labor shall, in accordance with the provisions of the foregoing statutes, constitute the minimum wages payable on Federal and federally assisted construction projects to laborers and mechanics of the specified classes engaged on contract work of the character and in the localities described therein.

General Wage Determination Decisions, modifications and supersedes decisions thereto are to be used in accordance with the provisions of 29 CFR Parts 1 and 5. Accordingly, the applicable decision, together with any modifications issued, must be made a part of every contract for performance of the described work within the geographic area indicated as required by an applicable DBRA Federal prevailing wage law and 29 CFR Part 5. The wage rates and fringe benefits contained in the General Wage Determination Decision shall be the minimum paid by contractors and subcontractors to laborers and mechanics.

NOTICE

The most current **General Wage Determination Decisions** (wage rates) are available on the IDOT web site. They are located on the Letting and Bidding page at <http://www.dot.state.il.us/desenv/delett.html>.

In addition, ten (10) days prior to the letting, the applicable Federal wage rates will be e-mailed to subscribers. It is recommended that all contractors subscribe to the Federal Wage Rates List or the Contractor's Packet through IDOT's subscription service.

PLEASE NOTE: if you have already subscribed to the Contractor's Packet you will automatically receive the Federal Wage Rates.

The instructions for subscribing are at <http://www.dot.state.il.us/desenv/subsc.html>.

If you have any questions concerning the wage rates, please contact IDOT's Chief Contract Official at 217-782-7806.