

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

### **PREQUALIFICATION**

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

### **REQUESTS FOR AUTHORIZATION TO BID**

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

### **WHO CAN BID ?**

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

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

**ABOUT AUTHORIZATION TO BID:** Firms that have not received an authorization form within a reasonable time of complete and correct original document submittal should contact the department as to status. This is critical in the week before the letting. These documents must be received three days before the letting date. Firms unsure as to authorization status should call the Prequalification Section of the Bureau of Construction at the number listed at the end of these instructions.

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

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

The Internet is the Department's primary way of doing business. The subscription server e-mails are an added courtesy the Department provides. It is suggested that bidders check IDOT's website at <http://www.dot.il.gov/desenv/delett.html> before submitting final bid information.

### ***IDOT IS NOT RESPONSIBLE FOR ANY E-MAIL FAILURES.***

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

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

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

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

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

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

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

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

**ADDENDUMS AND REVISIONS TO THE PROPOSAL FORMS**

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

RETURN WITH BID

245

Proposal Submitted By
Name
Address
City

Letting January 15, 2010

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

**NOTICE TO PROSPECTIVE BIDDERS**

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

(SEE INSTRUCTIONS ON THE INSIDE OF COVER)

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



**Illinois Department  
of Transportation**

Springfield, Illinois 62764

Contract No. 63344  
LAKE County  
Section 08-00259-00-TL  
Route FAU 2730 (Lewis Avenue)  
Project CMM-9003(071)  
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

Checked by

F

(Printed by authority of the State of Illinois)

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## INSTRUCTIONS

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

**WHO CAN BID?:** Bids will be accepted from only those companies that request and receive written **Authorization to Bid** from IDOT's Central Bureau of Construction. To request authorization, a potential bidder must complete and submit Part B of the Request for Authorization to Bid/or Not For Bid Status form (BDE 124 INT) and submit an original Affidavit of Availability (BC 57).

**WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID?:** When a prospective prime bidder submits a "Request for Authorization to Bid/or Not For Bid" form, he/she must indicate at that time which items are being requested For Bidding purposes. Only those items requested For Bidding will be analyzed. After the request has been analyzed, the bidder will be issued an **Authorization to Bid or Not for Bid Report**, approved by the Central Bureau of Construction that indicates which items have been approved For Bidding. If **Authorization to Bid** cannot be approved, the **Authorization to Bid or Not for Bid Report** will indicate the reason for denial. If a contractor has requested to bid but has not received a **Authorization to Bid or Not for Bid Report**, they should contact the Central Bureau of Construction in advance of the letting date.

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

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

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

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

RETURN WITH BID



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. 63344  
LAKE County  
Section 08-00259-00-TL  
Project CMM-9003(071)  
Route FAU 2730 (Lewis Avenue)  
District 1 Construction Funds**

**Project consists of new traffic signal equipment, a fiber optic communication system inter-connecting 22 traffic signals, minor curb and gutter removal and replacement with detectable warning pad to accommodate ADA requirements and all other items to complete the work at 22 intersections along Lewis Avenue (FAU Route 2730) from 14th Street to Rosecrans Avenue (IL Route 173).**

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



**RETURN WITH BID**

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

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

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

**Schedule of Combination Bids**

Combination No.	Sections Included in Combination	Combination Bid	
		Dollars	Cents

7. **SCHEDULE OF PRICES.** The undersigned bidder submits herewith, in accordance with the rules and instructions, a schedule of prices for the items of work for which bids are sought. The unit prices bid are in U.S. dollars and cents, and all extensions and summations have been made. The bidder understands that the quantities appearing in the bid schedule are approximate and are provided for the purpose of obtaining a gross sum for the comparison of bids. If there is an error in the extension of the unit prices, the unit prices shall govern. Payment to the contractor awarded the contract will be made only for actual quantities of work performed and accepted or materials furnished according to the contract. The scheduled quantities of work to be done and materials to be furnished may be increased, decreased or omitted as provided elsewhere in the contract.

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

STATE JOB # - C-91-541-08  
 PPS NBR - 1-11010-0000

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT NUMBER - 63344

ECMS002 DTGECM03 ECMR003 PAGE 1  
 RUN DATE - 12/04/09  
 RUN TIME - 183255

COUNTY NAME CODE DIST SECTION NUMBER PROJECT NUMBER ROUTE  
 LAKE 097 01 08-00259-00-TL CMM-9003/071/000 FAU 2730

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE DOLLARS	CENTS	TOTAL PRICE DOLLARS	CTS
XX003661	ELCBL C COAXIAL	FOOT	2,606.000	X	=		
XX005723	VIDEO DET SY COMP INT	EACH	11.000	X	=		
XX005928	TRAF SIGL P 10FT SPL	EACH	1.000	X	=		
XX005929	TRAF SIGL P 14FT SPL	EACH	13.000	X	=		
XX005931	TRAF SIGL P 16FT SPL	EACH	22.000	X	=		
XX005932	TRAF SIGL P 18FT SPL	EACH	1.000	X	=		
XX005937	LED INT IL S-NAME SGN	EACH	47.000	X	=		
XX005940	REMOTE CONTR VIDEO SY	EACH	13.000	X	=		
XX006390	VID COMM SYS AND CAB	EACH	1.000	X	=		
XX006655	LYR II DATALINK SWITCH	EACH	2.000	X	=		
XX006938	OPTIM TRAF SIG SYS SP	EACH	1.000	X	=		
XX007017	TERM FIBER IN CABINET	EACH	36.000	X	=		
XX008246	FIB OPT CBL C 24 SM	FOOT	45,179.000	X	=		
XX008251	SPLICE FIBER IN CAB	EACH	12.000	X	=		
XX008252	QUAD ENCODER	EACH	1.000	X	=		

FAU 2730  
 08-00259-00-TL  
 LAKE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT NUMBER - 63344

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 RUN DATE - 12/04/09  
 RUN TIME - 183255

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE
				DOLLARS	CENTS	
XX008253	VIDEO ENCODER	EACH	14.000	=		
XX008254	LYR III FO TM SFP LD	EACH	3.000	=		
XX008255	LYR III FO TM GBIC LD	EACH	1.000	=		
XX008256	UPGR EX CON NTCIP SPL	EACH	7.000	=		
X0322925	ELCBL C TRACER 14 1C	FOOT	30,679.000	=		
X0322929	CAMERA MOUNT ASSEMBLY	EACH	1.000	=		
X0325462	MEDIA CONVERTER	EACH	3.000	=		
X0325991	ELCBL C COMM 18 3/C	FOOT	9,788.000	=		
X0326269	PED SH LED 3F BM CDT	EACH	1.000	=		
X6700405	ENGR FLD OFF A MOD	CAL MO	15.000	=		
X8050015	SERV INSTALL POLE MT	EACH	12.000	=		
X8620020	UNINTER POWER SUPPLY	EACH	11.000	=		
X8730027	ELCBL C GROUND 6 1C	FOOT	6,362.000	=		
X8730250	ELCBL C 20 3C TW SH	FOOT	6,484.000	=		
Z0076600	TRAINEES	HOUR	500.000	=	0.80	400.00

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ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT NUMBER - 63344

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 RUN DATE - 12/04/09  
 RUN TIME - 183255

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE
				DOLLARS	CENTS	
20200100	EARTH EXCAVATION	CU YD	160.000	=		
21101615	TOPSOIL F & P 4	SQ YD	2,000.000	=		
25200110	SODDING SALT TOLERANT	SQ YD	2,000.000	=		
25200200	SUPPLE WATERING	UNIT	10.000	=		
35101600	AGG BASE CSE B 4	SQ YD	450.000	=		
42400200	PC CONC SIDEWALK 5	SQ FT	14,890.000	=		
42400610	TEMP SIDEWALK	SQ FT	1,000.000	=		
42400800	DETECTABLE WARNINGS	SQ FT	1,176.000	=		
44000500	COMB CURB GUTTER REM	FOOT	1,785.000	=		
44000600	SIDEWALK REM	SQ FT	11,920.000	=		
60300305	FR & LIDS ADJUST	EACH	39.000	=		
60603800	COMB CC&G TB6.12	FOOT	1,365.000	=		
60605000	COMB CC&G TB6.24	FOOT	440.000	=		
67100100	MOBILIZATION	L SUM	1.000	=		
70102620	TR CONT & PROT 701501	L SUM	1.000	=		

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ILLINOIS DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF PRICES  
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RUN DATE - 12/04/09  
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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE
				DOLLARS	CENTS	
70102622	TR CONT & PROT 701502	L SUM	1.000	=		
70102625	TR CONT & PROT 701606	L SUM	1.000	=		
70102632	TR CONT & PROT 701602	L SUM	1.000	=		
70102635	TR CONT & PROT 701701	L SUM	1.000	=		
70102640	TR CONT & PROT 701801	L SUM	1.000	=		
78000100	THPL PVT MK LTR & SYM	SQ FT	364.000	=		
78000600	THPL PVT MK LINE 12	FOOT	4,495.000	=		
78000650	THPL PVT MK LINE 24	FOOT	1,000.000	=		
78300100	PAVT MARKING REMOVAL	SQ FT	3,660.000	=		
81000600	CON T 2 GALVS	FOOT	14,980.000	=		
81000700	CON T 2 1/2 GALVS	FOOT	567.000	=		
81000900	CON T 3 1/2 GALVS	FOOT	798.000	=		
81001000	CON T 4 GALVS	FOOT	370.000	=		
81001100	CON T 5 GALVS	FOOT	90.000	=		
81018500	CON P 2 GALVS	FOOT	13,474.000	=		

FAU 2730  
08-00259-00-TL  
LAKE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF PRICES  
CONTRACT NUMBER - 63344

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RUN DATE - 12/04/09  
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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE
				DOLLARS	CENTS	
81018800	CON P 3 1/2 GALVS	FOOT	100.000	=		
81018900	CON P 4 GALVS	FOOT	2,180.000	=		
81019000	CON P 5 GALVS	FOOT	732.000	=		
81400100	HANDHOLE	EACH	69.000	=		
81400300	DBL HANDHOLE	EACH	24.000	=		
81700215	EC C EPR RHW 2-1C 10	FOOT	9,405.000	=		
81900200	TR & BKFIL F ELECT WK	FOOT	16,335.000	=		
82103250	LUM SV HOR MT PC 250W	EACH	45.000	=		
85000205	MAIN EX TS INSTAL SPL	EACH	10.000	=		
85700205	FAC T4 CAB SPL	EACH	11.000	=		
85700505	FAC IN EXIST CAB SPL	EACH	1.000	=		
86400100	TRANSCIEVER - FIB OPT	EACH	12.000	=		
87301215	ELCBL C SIGNAL 14 2C	FOOT	22,368.000	=		
87301225	ELCBL C SIGNAL 14 3C	FOOT	20,721.000	=		
87301245	ELCBL C SIGNAL 14 5C	FOOT	18,824.000	=		

FAU 2730  
08-00259-00-TL  
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF PRICES  
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RUN DATE - 12/04/09  
RUN TIME - 183255

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
87301255	ELCBL C SIGNAL 14 7C	FOOT	7,819.000	=			
87301805	ELCBL C SERV 6 2C	FOOT	831.000	=			
87701140	S MAA & P 20 SPL	EACH	1.000	=			
87704050	STL COMB MAA&P 24 SPL	EACH	5.000	=			
87704060	STL COMB MAA&P 26 SPL	EACH	3.000	=			
87704070	STL COMB MAA&P 28 SPL	EACH	8.000	=			
87704080	STL COMB MAA&P 30 SPL	EACH	9.000	=			
87704090	STL COMB MAA&P 32 SPL	EACH	9.000	=			
87704100	STL COMB MAA&P 34 SPL	EACH	6.000	=			
87704110	STL COMB MAA&P 36 SPL	EACH	3.000	=			
87704120	STL COMB MAA&P 38 SPL	EACH	1.000	=			
87704130	STL COMB MAA&P 40 SPL	EACH	1.000	=			
87800100	CONC FDN TY A	FOOT	148.000	=			
87800150	CONC FDN TY C	FOOT	44.000	=			
87800200	CONC FDN TY D	FOOT	4.000	=			

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ILLINOIS DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF PRICES  
CONTRACT NUMBER - 63344

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RUN DATE - 12/04/09  
RUN TIME - 183255

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
87800400	CONC FDN TY E 30D	FOOT	15.000	=			
87800415	CONC FDN TY E 36D	FOOT	675.000	=			
87900200	DRILL EX HANDHOLE	EACH	3.000	=			
88030020	SH LED 1F 3S MAM	EACH	70.000	=			
88030050	SH LED 1F 3S BM	EACH	23.000	=			
88030100	SH LED 1F 5S BM	EACH	23.000	=			
88030110	SH LED 1F 5S MAM	EACH	23.000	=			
88030210	SH LED 2F 3S BM	EACH	3.000	=			
88102717	PED SH LED 1F BM CDT	EACH	63.000	=			
88102747	PED SH LED 2F BM CDT	EACH	15.000	=			
88200210	TS BACKPLATE LOU ALUM	EACH	92.000	=			
88700200	LIGHT DETECTOR	EACH	23.000	=			
88700300	LIGHT DETECTOR AMP	EACH	11.000	=			
88800100	PED PUSH-BUTTON	EACH	93.000	=			
89000100	TEMP TR SIG INSTALL	EACH	11.000	=			

FAU 2730  
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF PRICES  
CONTRACT NUMBER - 63344

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RUN DATE - 12/04/09  
RUN TIME - 183255

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
89502200	MOD EX CONTR	EACH	2.000		=		
89502300	REM ELCBL FR CON	FOOT	244.000		=		
89502375	REMOV EX TS EQUIP	EACH	14.000		=		
89502380	REMOV EX HANDHOLE	EACH	69.000		=		
89502385	REMOV EX CONC FDN	EACH	88.000		=		
TOTAL				\$			

NOTE:

1. EACH PAY ITEM SHOULD HAVE A UNIT PRICE AND A TOTAL PRICE.
2. THE UNIT PRICE SHALL GOVERN IF NO TOTAL PRICE IS SHOWN OR IF THERE IS A DISCREPANCY BETWEEN THE PRODUCT OF THE UNIT PRICE MULTIPLIED BY THE QUANTITY.
3. IF A UNIT PRICE IS OMITTED, THE TOTAL PRICE WILL BE DIVIDED BY THE QUANTITY IN ORDER TO ESTABLISH A UNIT PRICE.
4. A BID MAY BE DECLARED UNACCEPTABLE IF NEITHER A UNIT PRICE NOR A TOTAL PRICE IS SHOWN.

## RETURN WITH BID

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

#### **I. GENERAL**

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

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

**C.** In addition to all other remedies provided by law, failure to comply with any assurance, failure to make any disclosure or the making of a false certification shall be grounds for termination of the contract and the suspension or debarment of the bidder.

#### **II. ASSURANCES**

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

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

1. The Illinois Procurement Code provides:

Section 50-10. Felons. Unless otherwise provided, no person or business convicted of a felony shall do business with the State of Illinois or any state agency from the date of conviction until 5 years after the date of completion of the sentence for that felony, unless no person held responsible by a prosecutorial office for the facts upon which the conviction was based continues to have any involvement with the business.

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

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

1. The Illinois Procurement Code provides in pertinent part:

Section 50-13. Conflicts of Interest.

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

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

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

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

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

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

## RETURN WITH BID

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

### **D. Negotiations**

1. The Illinois Procurement Code provides in pertinent part:

Section 50-15. Negotiations.

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

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

### **E. Inducements**

1. The Illinois Procurement Code provides:

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

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

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

1. The Illinois Procurement Code provides:

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

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

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

1. The Illinois Procurement Code provides:

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

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

### **H. Confidentiality**

1. The Illinois Procurement Code provides:

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

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

## RETURN WITH BID

### **I. Insider Information**

1. The Illinois Procurement Act provides:

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

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

### **III. CERTIFICATIONS**

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

#### **B. Bribery**

1. The Illinois Procurement Code provides:

Section 50-5. Bribery.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## RETURN WITH BID

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## RETURN WITH BID

### **G. Debt Delinquency**

1. The Illinois Procurement Code provides:

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

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

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

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

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

### **I. Addenda**

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

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

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

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

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

**NA - FEDERAL**

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

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

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

## RETURN WITH BID

### **M. Disclosure of Business Operations in Iran**

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

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

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

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

Check the appropriate statement:

Company has no business operations in Iran to disclose.

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

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

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

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

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

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

**TO BE RETURNED WITH BID**

**IV. DISCLOSURES**

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

**B. Financial Interests and Conflicts of Interest**

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

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

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

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

**C. Disclosure Form Instructions**

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

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

**CERTIFICATION STATEMENT**

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

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



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

\_\_\_\_\_  
Date

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

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

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

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

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

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

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

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

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

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

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

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

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RETURN WITH BID/OFFER

**ILLINOIS DEPARTMENT  
OF TRANSPORTATION**

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

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

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

**DISCLOSURE OF FINANCIAL INFORMATION**

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

**FOR INDIVIDUAL (type or print information)**

**NAME:** \_\_\_\_\_

**ADDRESS** \_\_\_\_\_

**Type of ownership/distributable income share:**

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

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

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

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

- 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 \_\_\_

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

Yes \_\_\_ No \_\_\_

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

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

---

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

Yes \_\_\_ No \_\_\_

---

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

Yes \_\_\_ No \_\_\_

---

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

Yes \_\_\_ No \_\_\_

---

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

Yes \_\_\_ No \_\_\_

---

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

Yes \_\_\_ No \_\_\_

---

**RETURN WITH BID/OFFER**

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

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

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

**APPLICABLE STATEMENT**

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

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

**NOT APPLICABLE STATEMENT**

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

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

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

RETURN WITH BID/OFFER

**ILLINOIS DEPARTMENT  
OF TRANSPORTATION**

**Form B  
Other Contracts &  
Procurement Related Information  
Disclosure**

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

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

**DISCLOSURE OF OTHER CONTRACTS AND PROCUREMENT RELATED INFORMATION**

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

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

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

**THE FOLLOWING STATEMENT MUST BE CHECKED**

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

## **RETURN WITH BID**

### **SPECIAL NOTICE TO CONTRACTORS**

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

#### **CONSTRUCTION EMPLOYEE UTILIZATION PROJECTION**

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



**RETURN WITH BID**

**Contract No. 63344  
LAKE County  
Section 08-00259-00-TL  
Project CMM-9003(071)  
Route FAU 2730 (Lewis Avenue)  
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. 63344  
LAKE County  
Section 08-00259-00-TL  
Project CMM-9003(071)  
Route FAU 2730 (Lewis Avenue)  
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 this \_\_\_\_\_ day of \_\_\_\_\_ A.D., \_\_\_\_\_ .

PRINCIPAL

SURETY

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

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

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

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

Notary Certification for Principal and Surety

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

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

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

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

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

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

Notary Public

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



Electronic Bid Bond ID# \_\_\_\_\_

Company / Bidder Name \_\_\_\_\_

Signature and Title \_\_\_\_\_

# PROPOSAL ENVELOPE



# PROPOSALS

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

Item No.	Item No.	Item No.

Submitted By:

Name:
Address:
Phone No.

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

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

## **NOTICE**

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

# CONTRACTOR OFFICE COPY OF CONTRACT SPECIFICATIONS

## NOTICE

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

**Contract No. 63344  
LAKE County  
Section 08-00259-00-TL  
Project CMM-9003(071)  
Route FAU 2730 (Lewis Avenue)  
District 1 Construction Funds**



**Illinois Department of Transportation**



## NOTICE TO BIDDERS

- 1. TIME AND PLACE OF OPENING BIDS.** Sealed proposals for the improvement described herein will be received by the Department of Transportation at the Harry R. Hanley Building, 2300 South Dirksen Parkway, in Springfield, Illinois until 10:00 o'clock a.m., January 15, 2010. All bids will be gathered, sorted, publicly opened and read in the auditorium at the Department of Transportation's Harry R. Hanley Building shortly after the 10:00 a.m. cut off time.
- 2. DESCRIPTION OF WORK.** The proposed improvement is identified and advertised for bids in the Invitation for Bids as:

**Contract No. 63344  
LAKE County  
Section 08-00259-00-TL  
Project CMM-9003(071)  
Route FAU 2730 (Lewis Avenue)  
District 1 Construction Funds**

**Project consists of new traffic signal equipment, a fiber optic communication system inter-connecting 22 traffic signals, minor curb and gutter removal and replacement with detectable warning pad to accommodate ADA requirements and all other items to complete the work at 22 intersections along Lewis Avenue (FAU Route 2730) from 14th Street to Rosecrans Avenue (IL Route 173).**

- 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, 2010

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

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

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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, 2006	
LR 105	77	<input checked="" 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	80	<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. 20, 1963	Jan. 1, 2007
LR 400-1		<input type="checkbox"/> Bituminous Treated Earth Surface	Jan. 1, 2007	Jan. 1, 2008
LR 400-2		<input type="checkbox"/> Bituminous Surface Mixture (Class B)	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"/> Emulsified Asphalts	Jan. 1, 2007	Feb. 7, 2008
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 January 15 and March 5, 2010 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
80240			Above Grade Inlet Protection	July 1, 2009	
80099			Accessible Pedestrian Signals (APS)	April 1, 2003	Jan. 1, 2007
80243			American Recovery and Reinvestment Act Provisions	April 1, 2009	
80236			American Recovery and Reinvestment Act Signing	April 1, 2009	April 15, 2009
80186	81	X	Alkali-Silica Reaction for Cast-in-Place Concrete	Aug. 1, 2007	Jan. 1, 2009
80213			Alkali-Silica Reaction for Precast and Precast Prestressed Concrete	Jan. 1, 2009	
80207	84	X	Approval of Proposed Borrow Areas, Use Areas, and/or Waste Areas Inside Illinois State Borders	Nov. 1, 2008	
80192			Automated Flagger Assistance Device	Jan. 1, 2008	
80173			Bituminous Materials Cost Adjustments	Nov. 2, 2006	April 1, 2009
80241			Bridge Demolition Debris	July 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	85	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	88	X	Concrete Admixtures	Jan. 1, 2003	April 1, 2009
80214			Concrete Gutter, Type A	Jan. 1, 2009	
80215			Concrete Joint Sealer	Jan. 1, 2009	
80226			Concrete Mix Designs	April 1, 2009	
80237	92	X	Construction Air Quality – Diesel Vehicle Emissions Control	April 1, 2009	July 1, 2009
80239	94	X	Construction Air Quality – Idling Restrictions	April 1, 2009	
80227			Determination of Thickness	April 1, 2009	
80177			Digital Terrain Modeling for Earthwork Calculations	April 1, 2007	
* 80029	96	X	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	Jan. 1, 2010
80178	104	X	Dowel Bars	April 1, 2007	Jan. 1, 2008
80179	105	X	Engineer's Field Office Type A	April 1, 2007	Aug. 1, 2008
80205			Engineer's Field Office Type B	Aug. 1, 2008	
80189	108	X	Equipment Rental Rates	Aug. 2, 2007	Jan. 2, 2008
* 80244			Filter Fabric	Nov. 1, 2009	Jan. 1, 2010
80228			Flagger at Side Roads and Entrances	April 1, 2009	
* 80249			Frames and Grates	Jan. 1, 2010	
80229			Fuel Cost Adjustment	April 1, 2009	July 1, 2009
80169			High Tension Cable Median Barrier	Jan. 1, 2007	April 1, 2009
80194			HMA – Hauling on Partially Completed Full-Depth Pavement	Jan. 1, 2008	
80245			Hot-Mix Asphalt – Anti-Stripping Additive	Nov. 1, 2009	
* 80246			Hot-Mix Asphalt – Density Testing of Longitudinal Joints	Jan. 1, 2010	
* 80250			Hot-Mix Asphalt – Drop-Offs	Jan. 1, 2010	
* 80201			Hot-Mix Asphalt – Plant Test Frequency	April 1, 2008	Jan. 1, 2010
* 80251			Hot-Mix Asphalt – QC/QA Acceptance Criteria	Jan. 1, 2010	
80202			Hot-Mix Asphalt – Transportation	April 1, 2008	
80109			Impact Attenuators	Nov. 1, 2003	Nov. 1, 2008
80110			Impact Attenuators, Temporary	Nov. 1, 2003	Jan. 1, 2007
* 80252			Improved Subgrade	Jan. 1, 2010	
80230	110	X	Liquidated Damages	April 1, 2009	
80196	111	X	Mast Arm Assembly and Pole	Jan. 1, 2008	Jan. 1, 2009
80045			Material Transfer Device	June 15, 1999	Jan. 1, 2009
80203	113	X	Metal Hardware Cast into Concrete	April 1, 2008	April 1, 2009
* 80165			Moisture Cured Urethane Paint System	Nov. 1, 2006	Jan. 1, 2010
80238			Monthly Employment Report	April 1, 2009	

File Name	Pg #		Special Provision Title	Effective	Revised
* 80253			Movable Traffic Barrier System	Jan. 1, 2010	
80082			Multilane Pavement Patching	Nov. 1, 2002	
80180			National Pollutant Discharge Elimination System / Erosion and Sediment Control Deficiency Deduction	April 1, 2007	Nov. 1, 2009
80208			Nighttime Work Zone Lighting	Nov. 1, 2008	
80182	114	X	Notification of Reduced Width	April 1, 2007	
* 80069			Organic Zinc-Rich Paint System	Nov. 1, 2001	Jan. 1, 2010
80216			Partial Exit Ramp Closure for Freeway/Expressway	Jan. 1, 2009	
80231	115	X	Pavement Marking Removal	April 1, 2009	
* 80254			Pavement Patching	Jan. 1, 2010	
80022	116	X	Payments to Subcontractors	June 1, 2000	Jan. 1, 2006
80209	118	X	Personal Protective Equipment	Nov. 1, 2008	
80232			Pipe Culverts	April 1, 2009	
80119			Polyurea Pavement Marking	April 1, 2004	Jan. 1, 2009
80210			Portland Cement Concrete Inlay or Overlay	Nov. 1, 2008	
80170	119	X	Portland Cement Concrete Plants	Jan. 1, 2007	
80217			Post Clips for Extruded Aluminum Signs	Jan. 1, 2009	
80171			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	
80247			Raised Reflective Pavement Markers	Nov. 1, 2009	
80223			Ramp Closure for Freeway/Expressway	Jan. 1, 2009	
* 80172			Reclaimed Asphalt Pavement (RAP)	Jan. 1, 2007	Jan. 1, 2010
80183	121	X	Reflective Sheeting on Channelizing Devices	April 1, 2007	Nov. 1, 2008
80206	122	X	Reinforcement Bars – Storage and Protection	Aug. 1, 2008	April 1, 2009
80224			Restoring Bridge Approach Pavements Using High-Density Foam	Jan. 1, 2009	
* 80131			Seeding	July 1, 2004	Jan. 1, 2010
80152	123	X	Self-Consolidating Concrete for Cast-In-Place Construction	Nov. 1, 2005	Jan. 1, 2009
80132			Self-Consolidating Concrete for Precast Products	July 1, 2004	Jan. 1, 2007
80127			Steel Cost Adjustment	April 2, 2004	April 1, 2009
* 80255			Stone Matrix Asphalt	Jan. 1, 2010	
80234			Storm Sewers	April 1, 2009	
80143	128	X	Subcontractor Mobilization Payments	April 2, 2005	
80075			Surface Testing of Pavements	April 1, 2002	Jan. 1, 2007
* 80087			Temporary Erosion Control	Nov. 1, 2002	Jan. 1, 2010
* 80256			Temporary Longitudinal Traffic Barrier System	Jan. 1, 2010	
80225			Temporary Raised Pavement Marker	Jan. 1, 2009	
80176	129	X	Thermoplastic Pavement Markings	Jan. 1, 2007	
* 80257			Traffic Barrier Terminal, Type 6	Jan. 1, 2010	
20338	131	X	Training Special Provisions	Oct. 15, 1975	
* 80258			Truck Mounted/Trailer Mounted Attenuators	Jan. 1, 2010	
80071	134	X	Working Days	Jan. 1, 2002	

The following special provisions are in the 2010 Supplemental Specifications and Recurring Special Provisions:

<u>File Name</u>	<u>Special Provision Title</u>	<u>New Location</u>	<u>Effective</u>	<u>Revised</u>
80193	Concrete Barrier	Section 637	Jan. 1, 2008	
80175	Epoxy Pavement Markings	Section 1095	Jan. 1, 2007	
80181	Hot-Mix Asphalt – Field Voids in the Mineral Aggregate	Section 1030	April 1, 2007	April 1, 2008
80136	Hot-Mix Asphalt Mixture IL-4.75	Sections 406, 1003, 1030, 1032 and 1102	Nov. 1, 2004	Jan. 1, 2008
80195	Hot-Mix Asphalt Mixture IL-9.5L	Sections 1004 and 1030	Jan. 1, 2008	
80129	Notched Wedge Longitudinal Joint	Section 406	July 1, 2004	Jan. 1, 2007
80235	Payrolls and Payroll Records	Check Sheets #1 and #5	Mar. 1, 2009	July 1, 2009
80134	Plastic Blockouts for Guardrail	Section 630	Nov. 1, 2004	Jan. 1, 2007
80151	Reinforcement Bars	Section 1006	Nov. 1, 2005	April 1, 2009
80184	Retroreflective Sheeting, Nonreflective Sheeting, and Translucent Overlay Film for Highway Signs	Sections 1090, 1091, 1092 and 1093	April 1, 2007	
80212	Sign Panels and Sign Panel Overlays	Supplemental	Nov. 1, 2008	
80197	Silt Filter Fence	Sections 1080 and 1081	Jan. 1, 2008	
80153	Steel Plate Beam Guardrail	Section 1006	Nov. 1, 2005	Aug. 1, 2007
80191	Stone Gradation Testing	Section 1005	Nov. 1, 2007	
80185	Type ZZ Retroreflective Sheeting, Nonreflective Sheeting, and Translucent Overlay Film for Highway Signs	Sections 1090, 1091, 1092 and 1093	April 1, 2007	
80149	Variable Spaced Tining	Section 420	Aug. 1, 2005	Jan. 1, 2007
80204	Woven Wire Fence	Section 1006	April 1, 2008	

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:

- Bridge Demolition Debris
- 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
- Training Special Provisions
- Working Days

**Special Provisions**

The following Special Provisions supplement the specifications listed in the table below, which apply to and govern the proposed improvement designated as Section 08-00259-00-TL and in case of conflict with any part of parts of said specifications, the said Special Provisions shall take precedence and govern.

**CONTRACT NO. 63344**

<b>Specifications</b>	<b>Adopted/Dated</b>
<b>Standard Specifications for Road and Bridge Construction</b>	January 1, 2007
<b>Manual on Uniform Traffic Control Devices for Streets and Highway Illinois Supplement</b>	2003 Edition November 2004
<b>Supplemental Specifications and Recurring Special Provisions (indicated on the Check Sheet included herein)</b>	Latest Edition
<b>Standard Specifications for Sewer and Watermain Construction in Illinois</b>	May 1996 Fifth Edition or Latest Edition

**Location of Improvement**

The improvements are generally located in the City of Waukegan along Lewis Avenue (FAU 2730) between 14<sup>th</sup> Street and Rosecrans Ave. (IL Rte 173). Corridor length is approximately 9.0 miles. The traffic signal intersection improvements are located at the following locations:

1. Lewis Ave. at 14th St.
2. Lewis Ave. at 10th St.
3. Lewis Ave. at Dugdale Rd.
4. Lewis Ave. at Belvidere Rd.
5. Lewis Ave. at Washington St.
6. Lewis Ave. at Brookside Ave.
7. Lewis Ave. at Grand Ave.
8. Lewis Ave. at Ridgeland Ave.
9. Lewis Ave. at Glen Flora Ave.
10. Glen Flora Ave. at Butrick St.
11. Lewis Ave. at Harding Ave./Roger Edwards Ave.
12. Lewis Ave. at Williamsburg Dr.
13. Lewis Ave. at Sunset Rd.
14. Lewis Ave. at Ballentine St.
15. Lewis Ave. at York House Rd.
16. York House Rd. at McAree Rd.
17. Lewis Ave. at Beach Rd.
18. Lewis Ave. at Wadsworth Rd.
19. Lewis Ave. at 33rd St.
20. Lewis Ave. at 27th St.
21. Lewis Ave. at 21st St.
22. Lewis Ave. at Rosecrans Ave.(IL Rte 173)

**Description of Improvement**

Project consists of new traffic signal equipment, a fiber optic communication system inter-connecting 22 traffic signals, minor curb and gutter removal and replacement with detectable warning pad to accommodate ADA requirements and all other items to complete the work at 22 intersections along Lewis Avenue (FAU 2730) from 14<sup>th</sup> Street to Rosecrans Ave. (IL Rte 173).

### **Keeping Roads Open to Traffic**

All roads shall remain open to traffic. The contractor may close one lane because of construction only between the hours of 9 AM and 3 PM. The contractor shall maintain one-way traffic during these restricted hours with the use of signs and flagmen as shown on the Traffic Control Standards. Two lanes of traffic will be maintained between 3 PM and 9 AM and when no construction activities are being carried out. The restricted lane closure time provision may be waived at the Resident Engineer's discretion.

When necessary to close one lane because of construction, the Contractor shall maintain one-way traffic during construction hours with the use of signs and flagmen as shown on the Traffic Control Standards. Two lanes of traffic will be maintained during nights and weekends when no construction activities are being carried on.

### **Maintenance of Roadway**

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

The work involved in maintaining the existing pavement and shoulders as above specified will be paid for separately at the respective contact unit prices for the various items of work involved unless specified elsewhere in these special provisions. The cost to provide traffic control and protection required for this work shall be included in the contract price for traffic control and protection.

### **Maintenance of Right-of-Way**

Beginning on the date that the contractor begins work on this project, the contractor shall assume responsibility for the normal maintenance of the right-of-way within the limits of the improvement. This normal maintenance shall include, but is not limited to, mowing and maintenance of existing drainage ways.

The work involved in maintaining the right-of-way as above specified will not be paid for separately but shall be considered included in the cost of the contract.

### **Public Safety and Convenience**

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

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

### **Construction Safety and Health Standards**

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

### **Existing Utilities**

The contractor shall familiarize himself with the location of all utilities and structures that may be found in the vicinity of the construction. The contractor shall conduct his operation to avoid damage to the above mentioned utilities or structures. In the event any damage occurs from the contractor's negligence, repairs shall be made by

the contractor at his expense in a manner acceptable to the engineer. The contractor shall notify all utility owners of his construction schedule and shall coordinate construction operations with the utility owners so that relocation of utility lines and structures may proceed in an orderly manner. Notification shall be in writing with copies transmitted to the engineer.

**Status of Utilities**

The special provision provides status of utilities to be adjusted.

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

Name, Address, and Contact of Utility Company	Phone/Fax Numbers	Type/Location	Estimated Schedule
SBC/Phone Cable 1200 N. Arlington Heights Rd, Arlington Heights, IL 60004 Attn: Matt Pilkington OSP Design Engineer	Phone: 847-506-8705 Fax: 847-506-8738	SBC/Phone Cable to relocate cables as ComEd installs replacement poles.	TBD
Comcast Cable 688 Industrial Drive Elmhurst, IL 60126 Attn: Thomas Munar Right-of-Way Engineer	Phone: 630-600-6316	Comcast to relocate overhead cables as ComEd installs replacement poles.	TBD
Commonwealth Edison 1600 Franklin Blvd Libertyville, IL 60048 Attn: Ferdie Reyez	Phone: 847 816-5334 Fax: 847-816-5495	ComEd to remove and replace various poles at intersections to upgrade to 65' poles throughout the limits of the project.	December 2009

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.

**Protection of Existing Drainage Facilities During Construction**

All existing drainage structures are to be kept free of debris resulting from construction operations. All work and material necessary to prevent accumulation of debris in the drainage structures will be considered as incidental to the contract. Any debris in the drainage structures resulting from construction operations shall be removed at the Contractor's own expense, and no extra compensation will be allowed.

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

**Final Sign Placement on Construction Projects**

All signs removed shall be installed 16 to 18 feet off the edge of pavement where possible. In curb sections this will vary and will be determined by the jurisdictional agency (Lake County, Village, or IDOT) or as directed by the Engineer.

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

All signs replaced shall be erected using new "Telespar" system metal bases cut 42 inches long from 2 ¼ inch square material. They are to be driven into solid ground using pneumatic driver. This will not be paid for separately but shall be considered included in the cost of the contract.

### **Responsibility for Vandalism**

The contractor shall be responsible for the defacement of any concrete pours before they have set up. Concrete sidewalk, driveway, or curbing that has been defaced, in the opinion of the Engineer, shall be removed and replaced by the contractor at his expense.

### **Construction Debris**

Add the following to the third paragraph of Article 202.3 of the "Standard Specifications":

" The contractor shall not conduct any generation, transportation, or recycling of construction or demolition debris, clean or general or uncontaminated soil generated during construction, remodeling, repair, and demolition of utilities, structures, and road that is not commingled with any waste, without the maintenance of documentation identifying the hauler, generator, place of origin of the debris or soil, the weight or volume of the debris or soil, and the location, owner, and operator of the facility where the debris or soil was transferred, disposed, recycled or treated. This documentation must be maintained by the contractor for three years."

## **Special Provisions for Pay Items**

### **Engineer's Field Office, Type A (Modified)**

Effective: January 1, 2007

**Description:** This work shall consist of furnishing and maintaining in good condition, for the exclusive use of the Engineer, a weatherproof building at a location approved by the Engineer. Unless otherwise provided, the building shall be independent of any building used by the Contractor and all keys to the building shall be turned over to the Engineer.

**General:** This item shall be according to Article 670.02 of the "Standard Specifications", and the following:

Adequate all-weather parking spaces shall be provided to accommodate a minimum of 8 vehicles.

The field office and the required equipment, supplies and services shall meet the approval of the Engineer.

An electric pencil sharpener and a broadband connection shall be included in the field office equipment.

**Penalty:** Failure by the Contractor to meet the specified occupancy date for any field office or field laboratory shall be grounds for assessment of a penalty of \$100 per day for each calendar day thereafter that such facility remains incomplete in any respect. Failure by the Contractor to equip, heat, cool, power, supply or clean the field office shall be grounds for assessment of a penalty of \$100 per day for each calendar day that the field office remains incomplete after receipt of written notification from the Engineer. Such penalty shall be deducted from monies due or to become due the Contractor under the Contract.

**Basis of Payment:** This item will be paid for at the contract unit price per calendar month for ENGINEER'S FIELD OFFICE, TYPE A (MODIFIED).

## Detectable Warnings

Effective: February 13, 2007

**Description:** This work shall consist of furnishing and installing detectable warnings in accessibility ramps.

**Materials:** The detectable warnings shall be panels of the sizes shown on the plans and shall be supplied from one of the following manufacturers, or an approved equal:

- 1) MetaDome,  
2136 E. Dayton Street  
Madison, WI 53704  
Phone # 608-249-8644  
<http://www.metadome.com/>

Product Name: MetaPanel

Required coating system: Meta-Coat II, Federal Yellow

- 2) Advantage Tactile Systems, Inc.  
241 Main Street, Suite 100  
Buffalo, NY 14203  
Phone # 1-800-679-4022  
Fax # 1-800-679-4023  
<http://www.advantagetactile.com/>

Product Name: Advantage Tactile System

Required coating system: Diamond Tek, Federal Yellow

Supplier: RKD Construction  
11633 W. Grand Avenue  
Melrose Park, IL 60164

**General:** Detectable warnings shall be according to Article 424.09 of the "Standard Specifications".

**Method of Measurement:** This work will be measured for payment in place installed, in square feet.

**Basis of Payment:** This work will be paid for at the contract unit price per square foot of DETECTABLE WARNINGS.

## Temporary Sidewalk

**Description:** This work shall consist of constructing, maintaining, and removing temporary sidewalk at the locations shown on the plans or as directed by the Engineer.

**Materials:** The hot-mix asphalt materials shall be according to Section 1030 of the "Standard Specifications".

**General:** Temporary asphalt pavement shall consist of 4" of Hot-Mix Asphalt Binder Course constructed and compacted according to Section 355 of the "Standard Specifications". The temporary sidewalk shall be placed and compacted on a prepared sub-grade. Hot-Mix Asphalt Mixture Requirements for the Temporary Sidewalk shall be: HMA Binder Course, IL 19.0, N50, 4".

The bituminous mixture shall be shown on the plans.

Article 355.08 of the "Standard Specifications", shall not apply.

The removal of temporary sidewalk shall be according to Section 440 of the "Standard Specifications". The removed pavement shall be disposed of outside the right-of-way according to Article 202.03 of the "Standard Specifications".

**Method of Measurement:** Temporary Sidewalk will be measured for payment in place, and the area computed in square feet.

**Basis of Payment:** This work will be paid for at the contract unit price per square feet for TEMPORARY SIDEWALK. The unit price shall include both placement and removal of the hot-mix asphalt material.

#### **Temperature Control For Concrete Placement (District One)**

Effective: May 1, 2007

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

**Traffic Control Plan (L.C.-T- Section 700), Effective 03/01/2008**

Traffic Control shall be in accordance with the applicable sections of the “Standard Specifications”, the “Supplemental Specifications”, the “Illinois Manual on Uniform Traffic Control Devices for Streets and Highways, Millennium Edition”, the “Quality Standard for Work Zone Traffic Control Devices”, any special details and Highway Standards contained in the plans and the special provisions contained herein.

Special attention is called to Articles 105.05, and 107.09, and to Sections 701, 704, and 782 of the “Standard Specifications”, and to the following Highway Standards, Details, Recurring Special Provisions and Special Provisions contained herein, relating to traffic control.

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

**STANDARDS**

701001, 701101, 701011, 701006, 701301, 701501, 701502, 701602, 701606, 701701, 701801, 701901, 720001, 720006, 720011, 720016, 728001, 729001, 780001, 781001

**DETAILS**

TC-10 Traffic Control and Protection for Side Roads, Intersections and Driveways  
TC-11 Typical Applications Raised Reflective Pavement Markers (Snow Plow Resistant)  
TC-13 District One Typical Pavement Markings  
TC-16 Pavement Marking Letters and Symbols for Traffic Staging  
TC-18 Signing for Flagging Operations at Work Zone Openings  
TC-22 Arterial Road Information Sign  
TC-26 Driveway Entrance Signing

**SPECIAL PROVISIONS**

BDE 80182 Notification of Reduced Width  
BDE 80130 Reflective Sheeting on Channelizing Devices

**DETOURS**

Detours and Road Closures on County Maintained Roads within Lake County, Illinois shall be in accordance with the applicable sections of the “Standard Specifications”, the “Supplemental Specifications”, the “Illinois Manual on Uniform Traffic Control Devices for Streets and Highways”, the Lake County Division of Transportation’s Detour Procedures and Guidelines, any special details and Highway Standards contained in the Detour Plan and the Special Provisions contained herein. The LCDOT’s Detour Procedures and Guidelines are available from the LCDOT, Traffic Engineering Section upon request.

**Traffic Control and Protection (L.C.-T- Section 700), Effective 03/01/2008**

The Traffic Control and Protection shall meet the requirements of Division 700. Work Zone Traffic Control and Protection, Signing and Pavement Marking of the “Standard Specifications” except as follows:

**Article 701.01 Description** shall be replaced with the following:

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

Traffic Control and Protection shall be provided as called for in the plans, these special provisions, applicable Highway Standards, applicable sections of the “Standard Specifications”, or as directed by the Engineer.

The governing factor in the execution and staging of work for this project is to provide the motoring public with the safest possible travel conditions along the roadway through the construction zone. The Contractor shall arrange his/her operations to keep the closing of any lane of the roadway to a minimum.

Traffic control devices include signs and their supports, signals, pavement markings, barricades and their approved weights, channeling devices, warning lights, arrow boards, flaggers, or any other device used for the purpose of regulating, detouring, warning or guiding traffic through or around the construction zone.

**Article 701.04 General** shall be modified by adding the following section.

The Contractor is required to conduct routine inspections of the work site at a frequency that will allow for the timely replacement of any traffic control device that has become displaced, worn or damaged to the extent that it no longer conforms to the shape, dimensions, color and operational requirements of the MUTCD, the Traffic Control Standards or will no longer present a neat appearance to motorists. A sufficient quantity of replacement devices, based on vulnerability to damage, shall be readily available to meet this requirement.

The Contractor shall be responsible for the proper location, installation and arrangement of all traffic control devices. Special attention shall be given to advance warning signs during construction operations, in order to keep lane assignments consistent with barricade placement at all times.

The Contractor shall immediately remove, cover or turn from the view of motorists all traffic control devices which are inconsistent with the detour, lane assignment patterns or conflicting conditions created during the transition from one construction stage to another. When the Contractor elects to cover conflicting or inappropriate signing, the materials used shall totally block out the reflectivity of the sign and shall cover the entire sign. The method used for covering the signing shall meet with the approval of the Engineer.

The Contractor shall coordinate all traffic control work on this project with any adjoining or overlapping projects. The coordination will include any barricade placements necessary to provide a uniform traffic detour pattern. When directed by the Engineer, the Contractor shall remove all traffic control devices that he/she furnished, installed and maintained under the contract. Such devices shall remain the property of the Contractor. All traffic control devices shall remain in place until the Engineer specifically authorizes their relocation or removal.

The Contractor shall ensure that all the traffic control devices he/she installs are operational, functional and effective 24 hours a day, 7 days a week, including holidays.

**Article 701.04 General** shall be further modified by adding the following sections:

**Public Safety and Convenience:**

The Contractor shall provide a telephone number for a responsible individual who can be contacted 24 hours a day, 7 days a week, to receive notification of any deficiencies in traffic control and protection. The Contractor shall dispatch men, materials, and equipment to correct any such deficiencies. The Contractor shall respond to any call from LCDOT concerning any request for improving or correcting traffic control devices and begin making the requested repairs within two (2) hours from the time of notification.

Personal vehicles shall not park within the right-of-way except in specific areas designated by the Engineer. All roads shall remain open to traffic. The Contractor may close one lane on two lane roads, because of construction, between the hours of 9:00 AM and 3:00 PM only. The Contractor shall maintain one-way traffic during these restricted hours with the use of signs and flagmen as shown on the Traffic Control Standards. Two lanes of traffic will be maintained between the hours of 3:00 PM and 9:00 AM and when no construction activities are being carried out.

The restricted lane closure time may be adjusted by the Engineer.  
The Contractor shall provide a start and end time and a procedure plan 48

hours prior to the lane(s) to be closed. The Engineer shall notify the Contractor of his decision 24 hours in advance of the proposed lane closure. If the Contractor fails to provide notification or disregards the decision of the Engineer, the Traffic Control Deficiency Charge will be applied as stated in this special provision.

The Contractor shall maintain at least one lane in each direction on roads with four or more lanes. The Contractor shall also maintain entrances and side roads along the proposed improvement. Interference with traffic movements and inconvenience to owners of abutting property and the public shall be kept to a minimum. Any delays or inconveniences incurred by the Contractor while complying with these requirements shall be considered incidental to the contract, and no additional compensation will be allowed.

On two lane roads, the Contractor will plan his/her work so that there will be no open holes or obstructions in the pavement and so that all barricades will be removed from the pavement during non-work hours.

On highways with four or more lanes, the Contractor will plan his/her work so that there shall be no open holes or obstructions in the pavement being used by the traveling public. Lane closures, if allowed, will be in accordance with the applicable standards, staging details shown in the plans and any other applicable contract documents.

The Contractor shall remove all equipment from the shoulders and medians after work hours.

The Contractor shall not institute any road closures or restrictions except those covered by the plans and specifications of this contract without written approval from the Engineer.

#### Traffic Control Deficiency Charge:

The primary concern of LCDOT is to maintain a safe travel way for the public and a safe environment for the worker in the construction zone. The Contractor is expected to comply with the "Standard Specifications", contract plans, these special provisions, and directions from the Engineer concerning traffic control and protection. The Contractor shall provide a telephone number for a responsible individual who can be contacted 24 hours a day, 7 days a week, to receive notification of any deficiencies in the traffic control and protection.

When the Engineer is notified or determines a traffic control deficiency exists, 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 ½ (one half) hour to 8 (eight) hours

based upon the urgency of the situation and the nature of the deficiency. The Engineer will be the sole judge.

The deficiency may be any lack of repair, maintenance of, or non-compliance with the traffic control plan.

If the Contractor fails to correct the deficiency within the specified time, a traffic control deficiency shall be imposed for each calendar day or fraction thereof the deficiency exists. The calendar day(s) will begin with the notification and end with the Engineer's acceptance of the correction. The traffic control deficiency charge shall be for the full amount per day for each day the deficiency existed. The daily monetary deduction per deficiency shall be either \$1,000.00 or 0.05 of one percent of the awarded contract value, whichever is greater.

In addition, if the Contractor fails to respond, the Engineer may correct the deficiency and the cost thereof shall be deducted from the cost of the contract. The charge shall be separate and in addition to the traffic control deficiency deduction.

The Contractor shall not be relieved of any contractual responsibilities by LCDOT's action.

**Article 701.14 Signs** shall be modified by revising the first paragraph to read as follows:

When the work operations exceed four days, all signs shall be post mounted unless the signs are located on the pavement, paved median, other impervious surface, or define a moving or intermittent operation. When approved by the Engineer, a temporary sign stand may be used to support a sign at 5 feet minimum height where posts are impractical. Longitudinal dimensions shown on the plans for the placement of signs may be increased up to 100 feet to avoid obstacles, hazards or to improve sight distance, when approved by the Engineer. "ROAD WORK AHEAD" signs shall also be required on all side streets within the limits of the mainline "ROAD WORK AHEAD" signs."

Construction signs referring to daytime lane closures during working hours shall be removed, covered, or turned away from the view of motorists during non-working hours. Upon request, prior to the beginning of construction operations the Contractor will be provided a sign log of all existing signs within the limits of the construction zone. The Contractor is responsible for verifying the accuracy of the sign log. The Contractor shall maintain all existing traffic signs throughout the duration of the project.

All provisions of Article 107.25 of the "Standard Specifications" shall apply except the third paragraph shall be revised to read:

The Contractor shall maintain, furnish and replace at his own expense, any traffic sign or post which has been damaged or lost by the Contractor or a third party. The Contractor will not be held liable for third party damage to large freeway guide signs.

**Article 701.14 Signs** (b) Work Zone Speed Limit Signs shall be revised to read:

- (b) Work Zone Speed Limit Signs. The Lake County Division of Transportation's Engineering Department will specify whether a project meets the criteria for a Work Zone Speed Limit. When specified, the work zone speed limit signs shall be installed as shown on the LCDOT Typical Work Zone Speed Limit Installation guideline sheets, at a maximum of 20 feet lateral distance of the locations shown on the plans. Failure to install the required amount of signs at the proper sign spacing shall result in an immediate traffic control deficiency. These signs are required for the proper enforcement of the work zone speed limit.

All permanent "SPEED LIMIT" signs located within the work zone shall be removed or covered. If the speed limit sign is to be covered, it shall be done in a manner that no part of the legend shall be visible in any lighting condition. This work shall be completed by county forces only.

The work zone speed limit signs and the end work zone speed limit signs in advance of and at the end of the lane closure(s) shall be used for the duration of the closure(s).

The work zone speed limits signs within the lane closure(s) shall only be used when workers are present in the closed lane adjacent to traffic. The sign assemblies within the lane closure(s) will not be required when workers are located behind a concrete barrier wall.

**Article 701.14 Signs** shall be modified by adding the following section (c),

- (c) Temporary Construction Information Signs. When indicated in the traffic control plan or as directed by the Engineer the Contractor shall furnish, install, maintain, relocate, and remove for various stages of construction Temporary Construction Information Signs. These signs shall include all Temporary Construction Information Signs needed by the road users to proceed safely through the work zone.

The following signs are considered Temporary Construction Information Signs:

Entrance	White Legend on Green Background
Warning-New Lanes Open	Black Legend on Orange Background

The signs shall be installed in accordance with the traffic control plan and as directed by the Engineer.

**Article 701.14 Signs** shall be modified by adding the following section (d),

- (d) Flagger Signs. The W20-7a Flagger Symbol sign or the W20-7 Flagger Ahead sign may be used in lieu of the Illinois Department of Transportation W20-I101 Flagger sign.

**Article 701.15 Traffic Control Devices** shall be modified by adding the following paragraphs:

All devices and combination of devices shall meet the requirements of the National Cooperative Highway Research Program (NCHRP) Report 350 for their respective categories. The categories are as follows:

Category 1 include small, lightweight, channelizing and delineation devices that have been in common use for many years and are known to be crashworthy by crash testing of similar devices or years of demonstrable safe performance. These include cones, tubular markers, flexible delineators, and plastic drums with no attachments. Category 1 devices shall be crash tested and accepted or may be self certified by the manufacturer.

Category 2 includes devices that are not expected to produce significant vehicular velocity change but may otherwise be hazardous. These include drums and vertical panels with lights, barricades and portable sign supports. Category 2 devices shall be crash tested and accepted for Test Level 3.

Category 3 includes devices that are expected to cause significant velocity changes or other potentially harmful reactions to impacting vehicles. These include crash cushions, truck mounted attenuators and other devices not meeting the definitions of Category 1 or 2. Category 3 devices shall be crash tested and accepted for Test Level 3.

Category 4 includes portable or trailer-mounted devices such as arrow boards, changeable message signs, temporary traffic signals, and area lighting supports. Currently, there is no implementation date set this category and it is exempt from NCHRP 350 compliance requirement.

The Contractor shall provide a manufacturer's self-certification letter for each Category 1 device and a FHWA acceptance letter for each Category 2 and Category 3 device used on the contract. The letters shall state the device meets NCHRP 350 requirements for its respective category and test level, and shall include a detail drawing of the device. These "Letters of Certification" shall be given to the Engineer at the preconstruction

conference.

**Article 701.15 Traffic Control Devices** (b) Type I, II and III Barricades shall be modified by adding the following paragraphs.

Type II nonmetallic barricades shall be used at all locations that call for Type I, or Type II barricades. The reflective area of the top rail shall be at least 288 square inches.

Any drop off greater than 3 inches, but less than 6 inches, located within 8 feet of the pavement edge shall be protected by Type II barricades equipped with mono-directional steady burn lights. The barricades shall be placed at a spacing of 100 feet center to center. For any drop off within 8 feet of the pavement edge that exceeds 6 inches, the Type II barricades equipped with mono-directional steady burn lights shall be placed at a spacing of 50 feet center to center. Barricades that must be placed in excavated areas shall have leg extensions installed so that the top of the barricade is in compliance with the height requirements of IDOT Standard 701901.

All Type II barricades shall be equipped with a steady burn light when used during hours of darkness unless otherwise stated herein.

**Extended Leg Type II Barricades.** Extended leg type II barricades shall be required for any drop off within 8 feet of the pavement edge that exceeds 6 inches in depth. Extended Leg Type II barricades shall be in compliance with the height requirements of IDOT Standard 701901. Type II extended leg barricades may be of an "A" frame type with either wood or plastic panels and metal or non-metallic legs and have no rigid stay bracing. The method of weighting the Extended Leg Type II barricades shall be in accordance with the manufacturer's guidelines and approved by the Engineer. Extended Leg Type II barricades shall be equipped with mono-directional steady burn lights and shall be placed at a spacing of 50 feet center to center.

Check barricades shall be placed in work areas perpendicular to traffic every 1,000 feet, at one per lane and one per shoulder, to prevent motorists from using work areas as a traveled way. Two additional check barricades shall be placed in advance of each patch excavation or any other hazard in the work area. The first will be placed at the edge of the open traffic lane and the second centered on the closed lane. Check barricades shall be Type II and equipped with flashing amber light.

All Type II Barricades shall be made of plastic, fiberglass or other non-metallic materials. The top panels will be 12 inches x 24 inches and the bottom panels will be 8 inches x 24 inches. The orange and white reflective sheeting will be Type A, meeting the initial minimum coefficient of reflection

in Article 1084.02 of the “Standard Specifications”. All other requirements for Type II barricades will be met.

**Article 701.15 Traffic Control Devices (e) Direction Indicator Barricades** shall be modified by adding the following paragraphs.

Direction Indicator Barricades shall be used exclusively in lane closure and lane shift tapers. They shall be used only when traffic is being merged with an adjacent through lane or flush median, shifted onto a median crossover or being diverted onto a construction run-around. The barricades shall be placed in series in a taper with the arrow panel directing traffic in the direction of the merge, crossover or run-around. The direction indicator barricades shall meet the requirements for Type II barricades as stated in this special provision. The top panel, which faces traffic, shall be 12 inches x 24 inches with fluorescent orange sheeting meeting the requirements of Article 1084.02(b) of the “Standard Specifications”. The top panel indicator arrow shall be 21 inches long with a 9½ inch wide arrow barb and a 3½ inch wide arrow shaft. The top panel, facing away from traffic shall have a 12 inch x 24 inch orange and white diagonal panel. The bottom panels shall be 8 inches x 24 inches with orange and white diagonal sheeting, as shown in LCDOT’s Special Detail LC7200. All sheeting shall meet the initial coefficient of retroreflection in Article 1084.02(a) of the “Standard Specifications”, for Type A sheeting.

**Article 701.15 Traffic Control Devices (f) Drums** shall be replaced with the following:

- (f) Drums. Type II barricades shall be used in lieu of drums.

**Article 701.15 Traffic Control Devices (j) Portable Changeable Message Signs** shall be replaced with the following:

- (j) Portable Changeable Message Signs (PCMS). This work shall consist of furnishing, placing and maintaining a changeable message sign(s) at location(s) shown on the plans, in the standards or as directed by the Engineer.

The sign(s) shall be trailer mounted. The message panel shall be at least 7 feet above the pavement, present a level appearance, and be capable of displaying up to eight characters in each of three lines at a time. Character height shall be 18 inches.

The message panel shall be of either a LED matrix, bulb matrix or disc matrix design controlled by an onboard computer capable of storing a minimum of 99 programmed messages for instant recall. The computer shall be capable of being programmed to accept messages created by an operator via an

alphanumeric keyboard and able to flash any six messages in sequence. The message panel shall also be capable of being controlled by a computer from a remote location via a cellular linkage. The Contractor shall supply the modem, cellular telephone, and the necessary software to run the sign from a remote computer at a location designated by the Engineer. The Contractor shall promptly program and/or reprogram the computer to provide the messages as directed by the Engineer.

The message panel shall be visible from 1,320 feet under both day and night conditions. The letters shall be legible from 750 feet.

The sign shall include automatic dimming for nighttime operation and a power supply capable of providing 24 hours of uninterrupted service.

The Contractor shall provide all preventive maintenance efforts he/she deems necessary to achieve uninterrupted service. If service is interrupted for any cause and not restored within the time allotted by the modifications Article 701.04 of the "Standard Specifications" contained in this special provision, a traffic control deficiency penalty can be imposed and the Engineer will cause such work to be performed as may be necessary to provide this service. The cost of such work shall be borne by the Contractor or deducted from current or future compensation due to the Contractor.

When the sign(s) are displaying messages, they shall be considered a traffic control device. At all times when no message is displayed, they shall be considered equipment.

**Basis of Payment.** When portable message signs are shown on a Standard, this work shall be considered as included in the lump sum payment for Traffic Control and Protection. For all other portable changeable message signs, this work will be paid for at the contract unit price per calendar month for each sign as CHANGEABLE MESSAGE SIGN, as stated in Article 701.08 of this special provision.

**Article 701.17 Specific Construction Operations (c) Surface Courses and Pavement (1)**  
Prime Coat shall be replaced by the following:

- (1) Prime Coat. "FRESH OIL" signs (W21-1) shall be used when the prime coat is applied to pavement that is open to traffic. The signs are to remain in place until tracking of the prime ceases. These signs shall be erected a minimum of 500 feet preceding the start of the prime and on all side roads within the posted area. The signs on the side roads shall be posted a minimum of 200 feet from the mainline pavement. These signs are excluded from the time requirements of Article 701.04 of the "Standard Specifications" as modified by this special provision (above). Non-compliance with the provisions of this section, by the Contractor, shall result in an immediate

traffic control deficiency charge. All signs shall have an amber flashing light attached.

**Article 701.17 Specific Procedures (c) Surface Courses and Pavement (2) Cold Milling** shall be replaced by the following:

- (2) Cold Milling. "ROUGH GROOVED SURFACE" signs (W8-I107) shall be used when the road has been cold milled and is open to traffic. The signs shall remain in place until the milled surface condition no longer exists. These signs shall be erected a minimum of 500 feet preceding the start of the milled pavement and on all side roads within the posted area. The signs on the side roads shall be posted a minimum of 200 feet from the mainline pavement. All signs shall have an amber flashing light attached.

**Article 701.17 Specific Procedures (c) Surface Course and Pavement** shall be modified by adding the following paragraph:

- (6) Area Reflective Crack Control Treatment Fabric. "SLIPPERY WHEN WET" signs (W8-5) shall be used when crack control fabric is applied to pavement that is open to traffic. These signs shall remain in place until the binder course is laid. The signs shall be erected a minimum of 500 feet preceding the start of the crack control treatment and on all side roads within the posted area. The signs on the side roads shall be posted a minimum of 200 feet from the mainline pavement. These signs are excluded from the time requirements of Article 701.04 of the "Standard Specifications" as modified by this special provision (above). Non-compliance with the provisions of this section, by the Contractor, shall result in an immediate traffic control deficiency charge. All signs shall have an amber flashing light attached.

**Article 701.18 Highway Standards Application (b) Standard 701316 and 701321 (2) g. Detector Loops**, shall be replaced with the following:

- g. Microwave Vehicle Sensors. Microwave Vehicle Sensors shall be installed as directed by the Engineer. The installation of the microwave vehicle sensors shall meet the applicable requirements of Section 850 of the "Standard Specifications". LCDOT shall approve the proposed microwave vehicle sensor before the Contractor may furnish or install it. The Contractor shall install, wire and adjust the alignment of the sensor in accordance to the manufacturer's recommendations and requirements. The Engineer shall approve the installation.

The microwave vehicle sensor shall meet the following requirements:

- Detection Range: Adjustable to 60 feet
- Detection Angle: Adjustable, horizontal and vertical

- Detection Pattern: 16 degree beam width minimum. [at 50 feet the pattern shall be approximately 15.5 feet wide]
- Mounting: Heavy-duty bracket, predrilled and slotted for pole mounting

**Article 701.18 Highway Standards Application** (f) Standard 701416, the second paragraph shall be replaced by the following:

Vertical panels may be attached to the concrete barriers where available space prohibits the use of Type II barricades.

**Article 701.18 Highway Standards Application** (j) Urban Traffic Control, Standards 701501, 701502, 701601, 701602, 701606, 701701, and 701801 (1) General, shall be modified by adding the following paragraphs:

Whenever a lane is closed to traffic using IDOT standard 701601, 701606, or 701701, the pavement width transition sign (W4-2R or W4-2L) shall be used in lieu of the "WORKERS" sign (W21-1 or W21-1a)

Whenever any vehicle, equipment, workers or their activities infringe on the shoulder or within 15 feet of the traveled way, and the traveled way remains unobstructed, then the applicable Traffic Control Standard shall be 701006, 701011, 701101, or 701701. The "SHOULDER WORK AHEAD" sign (W21-5(0)-48) shall be used in lieu of the "WORKERS" sign (W21-1 or W-21-1a).

All diamond shaped warning signs shall have a minimum dimension of 48 inches x 48 inches. The Engineer may approve diamond shape warning signs measuring 36 inches x 36 inches when the posted speed limit is 30 M.P.H. or less.

**Article 701.18 Highway Standards Application** shall be modified by adding the following section (k):

- (k) IDOT standard 701331. When IDOT standard 701331 is specified on two-lane, two-way roadways, the "DETOUR AHEAD" sign shall be replaced with a "LANE SHIFT AHEAD" sign.

**Article 701.19 Method of Measurement** shall be replaced completely with the following:

**701.19 Method of Measurement.**

These items of work will be measured on a lump sum basis for furnishing installing, maintaining, replacing, relocating and removing the traffic control devices required in the plans and these special provisions.

**Article 701.20 Basis of Payment** shall be replaced completely with the following:

## 701.20 Basis of Payment

This work will be paid for at the contract unit price per lump sum price for TRAFFIC CONTROL AND PROTECTION STANDARD 701501, TRAFFIC CONTROL AND PROTECTION STANDARD 701502, TRAFFIC CONTROL AND PROTECTION STANDARD 701602, TRAFFIC CONTROL AND PROTECTION STANDARD 701606, TRAFFIC CONTROL AND PROTECTION STANDARD 701701, TRAFFIC CONTROL AND PROTECTION STANDARD 701801. The payment for each will be in full for all labor, materials, transportation, and all included, necessary to furnish, install, maintain, replace, relocate and remove all traffic control devices indicated in the plans and specifications, except for the following items, which will be paid for separately.

- 1) Temporary Bridge Traffic Signals
- 2) Temporary Rumble Strips [where each is defined as 25 feet].
- 3) Temporary Raised Pavement Markers.
- 4) Construction Speed Limit Trailer
- 5) Sand module impact attenuators
- 6) Temporary Bridge Rail
- 7) Traffic Control Supervisor
- 8) Portable Changeable Message Signs (when not shown on a standard)
- 9) Temporary Concrete Barrier
- 10) Monodirectional Prismatic Barrier Reflector

The salvage value of the materials removed shall be reflected in the bid price for this item.

Any delays or inconveniences incurred by the Contractor while complying with these requirements shall be considered included to the cost of each TRAFFIC CONTROL AND PROTECTION and no additional compensation will be allowed.

Any traffic control devices required by the Engineer to implement the Traffic Control Plan as shown in the plans and specifications of the contract shall be considered included to the cost of the pay item for each TRAFFIC CONTROL AND PROTECTION STANDARD.

If the Engineer requires additional work involving a substantial change of location and/or work which differs in design and/or work requiring a change in the type of construction, as stated in Article 104.02(d) of the "Standard Specifications" the standards and/or the designs, other than those required in the plans, will be made available to the Contractor at least one week in advance of the change in traffic control. Payment for any additional traffic

control required for the reasons listed above will be in accordance with Article 109.04 of the "Standard Specifications".

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

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

$$\text{Adjusted Contract Price} = 0.25P + 0.75P [1 \pm (X - 0.1)]$$

P = the contract price for TRAFFIC CONTROL AND PROTECTION

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

The value of the work items used in calculating the increase and decrease will include only items that have been added to or deducted from the contract under Article 104.02 of the "Standard Specifications" and only items that require the use of each TRAFFIC CONTROL AND PROTECTION.

In the event LCDOT cancels or alters any portion of the contract that result in the elimination or incompleteness of any portion of the work, payment for partially completed work will be made in accordance with Article 104.02 of the "Standard Specifications".

**Section 704 Temporary Concrete Barrier** shall be modified by adding the following:

Monodirectional, Prismatic Barrier Reflectors as described in Article 782 of the "Standard Specifications" and these special provisions shall be installed one per barrier unit or one per terminal section.

**Section 782 Prismatic Reflectors** shall be modified by adding the following,

The Prismatic Reflector shall be centered 9½ inches below the top of the temporary concrete barrier on the side of the barrier, which faces traffic, one

per temporary concrete barrier section or temporary concrete barrier terminal section. The Prismatic Reflector shall be reflective in the direction of approaching traffic only and shall match the color of the centerline or edge line, either amber or crystal, where the temporary concrete barrier is placed.

**Basis of Payment.** The cost of the Monodirectional, Prismatic Barrier Reflector shall be considered incidental to the contract unit price per foot for Temporary Concrete Barrier or the contract unit price each for Temporary Concrete Barrier Terminal Section.

**LAKE COUNTY DIVISION OF TRANSPORTATION  
 TRAFFIC SIGNAL SPECIAL PROVISIONS**

**Effective: October 1, 2009**

All work and equipment performed and installed under this Contract:

County Highway Name: Lewis Avenue  
 County Highway Number: CH 77  
 County Highway Section: # 08-00259-00-TL

shall be governed by and shall comply with:

SPECIFICATION	ADOPTED/DATED
The State of Illinois "Standard Specifications for Road and Bridge Construction" referred to as "Standard Specifications"	Latest Edition
The State of Illinois "Manual on Uniform Traffic Control Devices for Streets and Highways," referred to as "MUTCD"	Latest Edition
The National Electrical Code referred to as "NEC"	Latest Edition
The National Electrical Manufacturers Association (All publications for traffic control items) referred to as "NEMA"	Latest Edition
The International Municipal Signal Association ("Official Wire & Cable Specifications Manual,") referred to as "IMSA"	Latest Edition
The Institute of Transportation Engineers Technical Report No. 1, (A Standard for Adjustable Face Vehicular Traffic Control Heads) referred to as "ITE"	Latest Edition
AASHTO "Standard Specifications" Structural Supports for Highway Signs, Luminaires, and Traffic Signals	Latest Edition
Supplemental Specifications and Recurring Special Provisions	Latest Edition

The following Traffic Signal Special Provisions supplement the above specifications, manuals, and codes. In case of conflict with any part or parts of said documents, these Special Provisions shall take precedence and shall govern.

The following terms and acronyms are used:

IDOT	Illinois Department of Transportation
District 1	IDOT District 1
LCDOT	The Lake County Division of Transportation
Engineer	The Resident Engineer

Traffic Engineer

The County Traffic Engineer – LCDOT

The construction, installation, modification and/or removal work shall be accomplished at the following intersection(s):

Lewis Ave. at 14<sup>th</sup> St.  
Lewis Ave. at 10<sup>th</sup> St.  
Lewis Ave. at Dugdale Rd.  
Lewis Ave. at Belvidere Rd.  
Lewis Ave. at Washington St.  
Lewis Ave. at Brookside Ave.  
Lewis Ave. at Grand Ave.  
Lewis Ave. at Ridgeland Ave.  
Lewis Ave. at Glen Flora Ave.  
Glen Flora Ave. at Butrick St.  
Lewis Ave. at Harding Ave./Roger Edwards Ave.  
Lewis Ave. at Williamsburg Dr.  
Lewis Ave. at Sunset Rd.  
Lewis Ave. at Ballentine St.  
Lewis Ave. at York House Rd.  
York House Rd. at McAree Rd.  
Lewis Ave. at Beach Rd.  
Lewis Ave. at Wadsworth Rd.  
Lewis Ave. at 33<sup>rd</sup> St.  
Lewis Ave. at 27<sup>th</sup> St.  
Lewis Ave. at 21<sup>st</sup> St.  
Lewis Ave. at Rosecrans Ave.(IL Rte 173)

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

The work performed under this contract shall consist of furnishing and installing all traffic signal work as specified on the plans and as specified herein in a manner acceptable and approved by the Engineer.

#### **MAST ARM SIGN PANELS**

Add the following to Article 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 LCDOT. All aluminum signs shall have a white reflectorized legend and border on a green reflectorized background, type AZ sheeting. The sign face shall not have any holes. 3M Scotch Joining Systems bonding tape or an approved equal shall be used in place of screws or rivets. The Signfix Aluminum Channel Framing System is currently recommended, but other brands of mounting hardware, or bonding tape may be acceptable based upon LCDOT approval.

### **INSPECTION OF ELECTRICAL SYSTEMS**

Add the following to Article 802.01 of the "Standard Specifications":

All cabinets, including temporary traffic signal cabinets, shall be assembled by an approved equipment supplier in District One. LCDOT reserves the right to request that any controller and cabinet be tested at a District 1 approved equipment supplier's facility prior to field installation. Such testing will be at no extra cost to the contract. All permanent or temporary "railroad interconnected" controllers and cabinets, shall be newly constructed, built, tested and approved by the controller equipment vendor, in the vendor's District 1 approved 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**

Revise Article 802.02 of the "Standard Specifications" to read:

Any damaged equipment or equipment not operating properly from any cause whatsoever shall be repaired and/or replaced with new equipment provided by the Contractor at no additional cost to the Contract and/or owner of the traffic signal system, to the satisfaction of 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.

### **INTERRUPTION OF COMMUNICATION**

The interruption of communication with County equipment shall be kept to an absolute minimum. This includes communication such as controller telemetry, video transmission, camera control signals, Highway Advisory Radio, wireless interconnect, telephone (POTS/ISDN/DSL), high speed Internet, or any other County communication signals. This provision applies to cable types including copper, multimode fiber optic, singlemode fiber optic, telephone cables, Internet cables, or any other cable used by the County to monitor and maintain its various signal and ITS equipment.

The contractor shall plan ahead, and shall stage his construction work accordingly, so that he can interrupt communication, and then restore communication, with as little down time as possible. For example, when a section of existing interconnect is being relocated, the new handholes and conduits should be installed prior to disconnecting the interconnect cable. The interconnect cable can then be disconnected, pulled out of the existing conduit, pulled through the new conduit, and re-connected. In addition, when an existing fiber optic cable is to be re-used, the contractor shall be prepared to immediately replace any fiber splices and/or terminations that become damaged.

Prior to disconnecting any LCDOT communication link, the contractor shall contact the Traffic Engineer for approval of his planned construction method.

### **RESTORATION OF WORK AREA**

Add to Section 802 of the "Standard Specifications":

Restoration of the traffic signal work area shall be incidental to the related pay item such as foundation, conduit, handhole, trench and backfill, etc. and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be restored to match the previously existing conditions. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded, in accordance with Section 250 and 252 of the "Standard Specifications" respectively.

**SUBMITTALS.**

Revise Article 802.04 of the “Standard Specifications” to read:

The Contractor shall provide:

- a. All material approval requests shall be submitted a minimum of seven (7) days prior to the delivery of equipment to the job site, or within thirty (30) calendar days after the contract is awarded, or within fifteen (15) calendar days after the preconstruction meeting, whichever is earliest.
- b. Seven (7) copies of a letter listing the manufacturer's name and the model numbers of the proposed equipment. The Traffic Engineer will review the letter and determine whether the proposed equipment is approved for use. The copies will be stamped as “approved”, “not approved”, or “approved as corrected” and returned to the Contractor.
- c. Two (2) copies of material catalog cuts.
- d. Seven (7) copies of mast arm poles and assemblies drawings.
- e. The contract number or permit number, project location/limits and corresponding pay item number must be on each sheet of the letter, material catalog cuts and mast arm poles and assemblies drawings as required in items b, c and d.
- f. 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 802.07 of the “Standard Specifications” to read:

- a) Existing traffic signal installations and/or any electrical facilities at locations included in this contract 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 it is 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 pay item MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION, TEMPORARY TRAFFIC SIGNAL INSTALLATION, and/or MAINTENANCE OF EXISTING FLASHING BEACON INSTALLATION, shall become the full responsibility of the Contractor. The Contractor shall supply the Engineer and the County's Traffic Signal Maintenance Contractor a 24-hour emergency contact name and telephone number. The Contractor shall provide sufficient qualified personnel to respond to all notifications of malfunctions on a round-the-clock basis (24 hours a day, 7 days a week). The Contractor is required to keep a time and date log of each response, from the time of the initial report to the time of final permanent repair.
- b) When the project has a pay item for MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION, TEMPORARY TRAFFIC SIGNAL INSTALLATION, and/or MAINTENANCE OF EXISTING FLASHING BEACON INSTALLATION, the Contractor must notify the Traffic Engineer at (847) 377-7000 of their intent to begin any physical construction work on the

project or any portion thereof. This notification must be a minimum of seven (7) working days prior to the start of construction to allow sufficient time for an inspection of the existing traffic signal installation(s) and the transfer of maintenance to the Contractor. If work is started prior to the inspection, maintenance of the traffic signal installation(s) will be immediately transferred to the Contractor without an inspection. The Contractor shall then 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 to or the replacement of damaged equipment must meet the approval of the Engineer at the time of final inspection or the traffic signal installation will not be accepted.

- c) Contracts that don't include traffic signal installations or modifications, but do include pay items for milling or pavement patching which may result in the destruction of traffic signal loops, do not require maintenance transfer. These contracts do 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 Traffic Engineer at **(847) 377-7000**, at which time arrangements will be made to adjust the traffic controller timing to compensate for the absence of detection.
- 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 unavoidable down time. Any plan to shutdown the traffic signal installation for a period exceeding fifteen (15) minutes must receive prior approval from the Engineer. Approval to shutdown the traffic signal installation will only be granted during the hours of 9:00 A.M. to 3:00 P.M. on weekdays. Shutdowns will not be allowed during inclement weather, weekends 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 Division, the County's Traffic Signal Maintenance Contractor or the public, shall be investigated and repairs started. The Contractor shall restore service and complete permanent repairs in accordance with the following Repair Timetable. Failure to provide this service will result in liquidated damages of \$500 per day per occurrence. The Traffic Engineer reserves the right to assign any work not completed within this timeframe to the County's Traffic Signal Maintenance Contractor. All costs associated to repair this uncompleted work shall be the responsibility of the Contractor. Failure to pay these costs to the Traffic Signal 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 County's Traffic Signal Maintenance Contractor may inspect any signaling device on the Division's highway system at any time without notification.

Unless specifically stated to the contrary, all items shall be repaired within the time frame described in the Repair Timetable. The times listed are noncumulative. Any repairs not specifically covered in the Repair Timetable, or described elsewhere, shall be completed within a time frame matching the most similar line item in the Repair Timetable.

**REPAIR TIMETABLE**  
 (non cumulative)

<u>ITEM</u>	<u>RESPONSE TIME</u>	<u>SERVICE RESTORATION</u>	<u>PERMANENT REPAIRS</u>
<b>KNOCKDOWNS/FAILURE/DAMAGE:</b>			
Cabinet	1 hr	24hrs	2 wks
Controller (Local or Master)	1 hr	24hrs	2 wks
Detector Loop	1 hr	n.a.	30 days
Detector Loop (Priority)	1 hr	n.a.	10 days
Loop Detector/Amplifier	1 hr	4 hrs	2 wks
MVP Sensor	1 hr	4 hrs	2 wks
PTZ Camera	1 hr	48 hrs	2 wks
Detector Interface Card/Mini Hub	1 hr	4 hrs	2 wks
Modem	1 hr	NWD	2 wks
Load Switch	1 hr	2 hrs	2 hrs
Signal Head/Lenses	1 hr	2 hrs	NWD
Pole/Mast Arm	1 hr	2 hrs	ENG
Cabling/Conduit	1 hr	4 hrs	ENG
Interconnect/Communication	1 hr	NWD	ENG
Graffiti/Advertising	NWD	NWD	NWD
Telemetry, Electrical	1 hr	2 hrs	NWD
Ethernet Switches/Video Encoders	1 hr	48 hrs	2 wks
Highway Advisory Radio (HAR)	1 hr	48 hrs	2 wks
Indicators/switches/LEDs/displays	NWD	n.a.	2 wks
Outages not covered elsewhere	1 hr	2 hrs	NWD
Filter/Cleanliness/fans/thermostat	NWD	NWD	n.a.
Misalignment (conflicting)	1 hr	2 hrs	NWD
Misalignment (non-conflicting)	48hrs	48hrs	1 wk
<b>COMPLAINTS/CALLS/ALARMS:</b>			
Timing/Phasing/Programming	1 hr	2 hrs	ENG
Coordination Alarm/Cycle Fail	NWD	ENG	ENG
Controller Alarm/Status Change	1 hr	NWD	1 wk
Detector Alarm/Status change	NWD	NWD	ENG
CMU Flash/Local Flash	1 hr	2 hrs	1 wk
Door Open/Maint. Req.	1 hr	2 hrs	NWD

LEGEND: hr=hour, hrs=hours, NWD=next working day, wk=week, wks=weeks, ENG=acceptable to Engineer, days=calendar days, n.a.=not applicable

**TRAFFIC SIGNAL INSPECTION (TURN-ON).**

Revise Article 802.10 of the "Standard Specifications" to read:

It is LCDOT's intent to have all electric work completed and the equipment field-tested by the vendor, prior to LCDOT's "turn-on" field inspection. 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. In the event the Traffic Engineer determines that the work is not complete and that 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 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 Traffic Engineer at **(847) 377-7000** a minimum of seven (7) working days prior to the time of the requested inspection. LCDOT will not grant a field inspection until the Contractor provides notification that the equipment has been field tested, and the intersection is operating according to contract requirements. The LCDOT facsimile number is **(847) 362-5290**.

Signal indications being tested shall match the lane configurations and markings at the intersection. If any conflicting signal indications are visible to motorist or pedestrians while testing, the Contractor shall be responsible to provide police officer(s) to direct traffic. In addition, 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 properly and that all work has been completed in accordance with the contract and to the satisfaction of the Traffic Engineer, the Traffic 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 reassume the traffic signal maintenance upon successful completion of this inspection.

The Lake County Division of Transportation requires the following from the Contractor at Traffic Signal "turn-ons":

1. One (1) set of signal plans of record.
2. Notification from the Contractor and the equipment vendor that the equipment was satisfactorily field-tested.
3. A knowledgeable representative of the controller equipment supplier shall be present at the traffic signal "turn-on". The representative shall be knowledgeable concerning the cabinet design and the controller functions.
4. A copy of the approved material letter.
5. One (1) copy of the operation and service manuals for the signal controller and the associated control equipment.
6. Five (5) copies (11" x 17") of the cabinet wiring diagrams.
7. Five (5) copies of the traffic signal installation cable log.

Acceptance of the traffic signal equipment by LCDOT shall be based on the inspection results at the traffic signal "turn-on". If approved, the traffic signal acceptance shall be given verbally at the "turn-on" inspection, followed by written correspondence from the Traffic Engineer. The Contractor shall be responsible for all traffic signal equipment and associated maintenance thereof until LCDOT acceptance is granted. Any "punch list" work remaining after the installation is accepted shall be completed within thirty (30) calendar days of the acceptance date. If this work is not completed within thirty days, LCDOT reserves the right to have the work completed by others at the Contractor's expense. This cost will be in addition to Liquidated Damages for Untimely Work.

The Contractor shall furnish all equipment and/or parts to keep the traffic signal installation

operating.

All cost of work and materials required to comply with the above requirements shall be included in the pay item bid prices, under which the subject materials and signal equipment are paid, and no

additional compensation will be allowed. Materials and signal equipment not complying with the above requirements will be subject to removal and disposal at the Contractor's expense.

#### **LIQUIDATED DAMAGES FOR UNTIMELY WORK**

A primary concern of LCDOT is to maintain a safe and efficient roadway for the public. Therefore, the Contractor shall proceed with the traffic signal work as soon as conditions and project staging permit. If in the opinion of the Engineer construction conditions are suitable for traffic signal work, and the Contractor has not yet begun the traffic signal work, the Engineer shall notify the Contractor to proceed. The Contractor shall begin the traffic signal work within seven (7) calendar days after notification to proceed. The Contractor shall continue to prosecute the traffic signal work until completion, or until he can no longer proceed due to conditions beyond his control. The Contractor shall notify the Engineer of any conditions impeding and/or delaying his prosecution of the work. Failure by the Contractor to proceed with the traffic signal work as specified herein shall result in liquidated damages of **\$500.00** per calendar day per occurrence.

#### **LOCATING UNDERGROUND FACILITIES.**

Revise Section 803 of the "Standard Specifications" to read:

Contractor requests for equipment locates will be granted only once prior to the start of the contract. Additional requests shall be at the expense of the Contractor. The location of underground traffic facilities does not relieve the Contractor of their responsibility to repair any item(s) damaged during the construction, at his/her own expense.

Locate requests should be directed to LCDOT's Traffic Signal Maintenance Contractor or to the LCDOT Traffic Engineering Department at (847) 377-7000.

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 call J.U.L.I.E. at **1-800-892-0123**. For the locations of some utilities, other Agencies or Municipalities may need to be contacted.

#### **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 1 Standard Traffic Signal Design Details" and applicable portions of the Specifications.

#### **Materials.**

- a. General. The completed control panel shall be constructed in accordance with UL Std. 508, Industrial Control Panel, and carry the UL label. Wire terminations shall be UL listed.

- b. Enclosures. All electrical service enclosures shall be UL 50, single door design, fabricated from Type 5052 H-32 aluminum. All seams shall be continuous welded and ground smooth, and the cabinet shall be sized to adequately house all required components with extra space for arrangement and termination of wiring. Enclosures shall meet the following additional requirements:
1. Pole Mounted Cabinet. The cabinet shall be NEMA Type 4X. 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. A minimum size of 14-inches high, 9-inches wide and 8-inches deep is required. The cabinet shall be channel mounted to a wooden utility pole using assemblies recommended by the manufacturer.
  2. Ground Mounted Cabinet. The cabinet shall be NEMA Type 3R with back panel. The cabinet frame and door shall be 0.125-inch thick, the top 0.250-inch thick, and the bottom 0.500-inch thick. 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 thick hinge bolted to the cabinet with stainless steel carriage bolts and nylock nuts. The locking mechanism shall be slam-latch type with a keyhole cover. A minimum size of 40-inches high, 16-inches wide, and 15-inches deep 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, 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 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 in length, and 3/4-inch 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.

#### 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 grounding conduit, ground rod, and pole mount assembly. Any changes 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.**

Revise Section 807 of the "Standard Specifications" to read:

General. All traffic signal systems, equipment and appurtenances shall be properly grounded in strict conformance with the NEC. See IDOT District 1 Traffic Signal detail plan sheet for additional information.

The grounding electrode system shall include a ground rod installed in all foundations, and the service installation. An additional ground rod will be required at locations where measured resistance to ground exceeds 25 ohms. Ground rods are included in the associated pay items and will not be paid for separately. Testing shall be according to Article 801.11.

- 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 801.14 of the "Standard Specifications".
- 1) Equipment-grounding conductors shall be XLP insulated No. 6, unless otherwise noted on the plans, and bonded to the grounded conductor (neutral conductor) only at the electric service installation. The Earth shall not be used as the equipment-grounding conductor, and no splices shall be allowed in the cable between ground rods. The equipment-grounding conductor is paid for separately.
  - 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. 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, with the following exceptions: 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.
- 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.

#### **GROUNDING EXISTING HANDHOLE FRAME AND COVER**

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 (Burdny 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 contaminants. 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.

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 one handhole complete, regardless of the type of handhole or its location.

**GROUNDING 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":

Unless otherwise noted on the Plans, the system grounding cable shall be one conductor, #6 gauge copper, with an XLP jacket.

The traffic signal grounding conductor (system grounding cable) shall be bonded, using a Listed grounding connector (Burdny type KC/K2C, as applicable, or approved equal), to all new and existing traffic signal mast arm poles and traffic/pedestrian signal posts, including push button posts. The grounding conductor shall be bonded to all new 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. Payment shall be at the Contract unit price, per foot, for ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6, 1C, which price includes all associated labor and material including grounding clamps, splicing, exothermic welds/other Listed connectors and hardware.

**CONDUIT IN GROUND.**

The conduit shall meet the requirements of Section 810 of the "Standard Specifications", except for the following:

Delete Article 810.01 of the "Standard Specifications" and add the following:

Description. This item shall consist of furnishing and installing galvanized steel conduit, fittings and accessories in the ground, either pushed, trenched, plowed, or directionally bored, with fittings complete as specified herein and as shown on the Contract drawings.

Add the following to Article 810.03 of the "Standard Specifications":

Pavement, driveways, and curbs shall not be removed to install electrical conduits. All buried conduits shall be placed at a minimum depth of 30 inches, except under railroad tracks, where the minimum depth shall be five (5) feet, as measured from the final surface grade to the top of the conduit. All conduit couplings shall be threaded. Conduits terminating in junction and pull boxes shall be terminated with hubs.

When empty conduit is installed for future traffic signal interconnects(s), the Contractor shall provide a pull line within the conduit.

Revise Article 810.05 of the "Standard Specifications" to read:

Basis of Payment: This work will be paid for at the contract unit price per foot for CONDUIT IN GROUND of the type and size specified, which price shall be payment in full for furnishing and installing the conduit either pushed, trenched, plowed, or directionally bored with fittings, complete. Trenching, backfilling and area restoration are incidental to the cost of this item.

**HANDHOLES.**

Add the following to Section 814 of the “Standard Specifications”:

All handholes shall be cast-in-place concrete, with a minimum inside dimension of 21-1/2 inches. Frames and lid openings shall match this dimension. The minimum wall thickness for heavy-duty hand holes shall be 12 inches. The handhole cover shall be labeled “Traffic Signals” with legible raised letters.

All conduits shall enter the handhole at a minimum depth of thirty (30) inches. However, the depth of conduit from detector loops located less than five (5) feet from the handhole may be less than thirty (30) inches.

All cable hooks shall be hot-dipped galvanized in accordance with AASHTO Specification M111. Hooks shall be a minimum of 3/8-inch diameter and extend into the handhole at least 6 inches. Hooks shall be placed a minimum of 12 inches below the lid, or lower if additional space is required. All cable hooks shall be secured with a retaining nut tightened against the handhole concrete.

**RAILROAD INTERCONNECT CABLE.**

The cable shall meet the requirements of Section 817 of the “Standard Specifications”, except for the following:

Add the following to Article 817.02 of the “Standard Specifications”:

The cable shall be three conductor standard #14 copper cable in a clear polyester binder, shielded with #36 AWG tinned copper braid with 85% coverage, and insulated with .016 inch polyethylene (black, blue, red). The jacket shall be black 0.045 PVC or polyethylene.

Revise Article 817.05 of the “Standard Specifications” to read:

Basis of Payment. This work shall be paid for at the contract unit price per foot 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 Contractor shall not be required to pay the energy charges for the operation of the existing traffic signal installation. 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 electricians on staff with IMSA Level II certification to provide signal maintenance.

This item shall include maintenance of all traffic signal equipment at the intersection, including cameras, emergency vehicle pre-emption equipment, master controllers, telephone service

installations, communication equipment, communication cables and conduits to adjacent intersections.

The maintenance shall be according to Article 850 of the "Standard Specifications", 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 the emergency vehicle pre-emption system. 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 (2) 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 at least 2 STOP signs (R1-1-36) at each approach of the intersection as a temporary means of regulating traffic. At approaches where a yellow flashing indication is necessary, as directed by the Engineer, STOP signs will not be required. The Contractor shall furnish and equip all their signal maintenance vehicles 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 those which may be damaged or stolen.

The Contractor shall provide the Engineer with a 24-hour telephone number for traffic signal maintenance. The Contractor, or his representative, shall be available on a 24-hour basis to respond to emergency calls by the Traffic Engineer or other parties.

Traffic signal equipment which is lost or not returned to the County 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 County 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 County. 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 County's Traffic Signal Maintenance Contractor perform the maintenance work required. The County's Traffic Signal 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 County's Traffic Signal Maintenance Contractor to make reviews of the existing traffic signal installation that has been transferred to the Contractor for maintenance.

The Engineer may require the Contractor to transfer maintenance of a signal back to the County's Traffic Signal Maintenance Contractor (or other electrical contractor) for a short time. This may become necessary due to other signal projects in the area, or if the County needs to perform work at

the signal. Any costs incurred by the Contractor for maintenance transfer inspections of this type shall be incidental to the pay item MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION.

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 Section 857 of the “Standard Specifications”:

The controller shall be the latest model available that is compatible with “icons” software (NTCIP) or “Aries” software, currently in use by LCDOT, and shall be NEMA TS2 Type 1 compatible, unless specified otherwise on the plans. Controller software compatibility requirements are based upon the controller’s location in the communication system, and shall be as shown on the plans. The controller shall be equipped with an Ethernet port and a removable data key to save the controller database. Only controllers supplied by approved District 1 closed-loop equipment manufacturers will be allowed. The controller shall be the most recent model and software version supplied by the manufacturer. The traffic signal controller shall provide features to inhibit simultaneous display of circular yellow and yellow arrow indications.

**INTERSECTION MONITOR MODULE**

This item shall consist of furnishing and installing an Intersection Monitor (IM) Module or Intersection Monitor (IM) Data Key manufactured by the Econolite Corporation as a replacement or addition to an existing traffic signal controller. This item is necessary at isolated (non-interconnected) traffic signals in order to monitor the intersection and controller operations. The IM module is required in ASC/2 controllers and the IM Data Key is required in ASC/3 controllers.

Basis of Payment: This item will be paid for at the contract unit price each for INTERSECTION MONITOR MODULE, which price shall be payment in full for furnishing and installing the module (or Data Key) complete with all necessary connections and equipment for proper operations.

**MASTER CONTROLLER.**

Revise Articles 860.02 and 860.03 of the “Standard Specifications” to read:

The Master Controller shall be the latest model available that is compatible with “Aries” software, currently in use by LCDOT. The minimum baud rate for fiber optic interconnected signal systems shall be 9600 bps.

Functional requirements in addition to those in Section 863 of the Standard Specification include:

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. The interface shall be equipped with a standard Three-Electrode Heavy Duty Gas Tube Surge Arrestor. The cabinet shall be equipped with a US robotics modem, minimum 56K baud rate or approved equal.

**FIBER OPTIC CABLE.**

Revise Section 871 of the “Standard Specifications” to read:

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 fibers specified, with six fibers per tube.

The distribution enclosure shall be a Corning Model WIC-04P Wall-Mountable Interconnect Center, or approved equivalent, capable of accommodating the required number of fibers.

All fibers being terminated shall be connected to the distribution enclosure and labeled at the connector and also at the enclosure bulkhead. The label shall include the direction and also the fiber number (e.g. S1, S2, N11, N12). Both ends of each section of fiber optic cable being installed shall be spliced and/or terminated with approved mechanical connectors according to the following: This includes installing approved mechanical connectors on existing fibers that are being joined to the new fiber optic cable.

Multimode: The contractor shall coordinate with the equipment vendor, and shall terminate as many multimode fibers as are necessary to establish proper communications with signal controllers and/or video transmission equipment. In addition, the contractor shall terminate four unused multimode fibers and attach them to the distribution enclosure. All multimode terminations shall be ST compatible connectors with ceramic ferrules.

Singlemode: The contractor shall splice and/or terminate the number of singlemode fibers shown on the project plans, if any. Singlemode fiber terminations shall utilize pre-fabricated, factory-terminated pigtailed fusion spliced to bare fibers. All fusion splices shall be secured on Corning splice trays, Models M67-068, M67-110, or approved equivalent, capable of accommodating the required number of fusion splices. All single-mode connectors shall be SC compatible, with ceramic ferrules.

A minimum of 13 feet of slack cable shall be provided for the controller cabinet. The controller cabinet slack cable 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 per foot for FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, 24 FIBER (12 MULTIMODE AND 12 SINGLEMODE) or FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, 36 FIBER (12 MULTIMODE AND 24 SINGLEMODE) or FIBER OPTIC CABLE IN CONDUIT, 24 SINGLEMODE) for the cable in place, including distribution enclosure(s), all connectors, pigtailed, splice trays, connector bulkheads, and the required number of terminations described above. Additional fiber terminations and/or splices required by the Engineer, (not included in this item), shall be paid for as TERMINATE FIBER IN CABINET and/or SPLICE FIBER IN CABINET.

**TERMINATE FIBER IN CABINET.**

This work shall consist of terminating existing or new fibers in field cabinets or buildings as indicated on the plans or as directed by the Engineer.

All multi-mode connectors shall be ST compatible, with ceramic ferrules. Singlemode fiber terminations shall utilize pre-fabricated, factory-terminated (SC compatible) pigtailed fusion spliced to bare fibers. All fusion splices shall be secured on Corning splice trays, Models M67-068, M67-110,

or approved equivalent, capable of accommodating the required number of fusion splices. Splice trays and connector bulkheads shall be incidental to TERMINATE FIBER IN CABINET, and shall not be paid for separately. Connector bulkheads shall be the proper type for the fiber enclosure at the location, and shall be properly secured to the enclosure.

The quality of all fiber splices shall be verified by testing and documentation in accordance with Article 802.08(b) of the "Standard Specifications", to the satisfaction of the Engineer.

Basis of Payment: This work shall be paid for at the contract unit price each for each fiber terminated in a field cabinet or inside a building as TERMINATE FIBER IN CABINET, which will be payment in full for terminating each required multimode or singlemode fiber, including all connectors, pigtails, splice trays, bulkheads, testing and documentation. The splicing of pigtails for singlemode fibers is included in the cost of TERMINATE FIBER IN CABINET, and shall not be paid for separately. This pay item shall not be used to pay for fiber terminations and/or splices completed to meet the requirements of FIBER OPTIC CABLE IN CONDUIT.

#### **SPLICE FIBER IN CABINET.**

This work shall consist of fusion splicing singlemode fibers in a field cabinet or inside a building as indicated on the plans and as directed by the Engineer. Splices shall be secured in fiber optic splice trays within fiber optic distribution enclosures. The splice trays shall be Corning Models M67-068, M67-110, or approved equivalent, capable of accommodating the required number of fusion splices. Splice trays shall be incidental to SPLICE FIBER IN CABINET and shall not be paid for separately. The quality of all fiber splices shall be verified by testing and documentation in accordance with Article 802.08(b) of the "Standard Specifications", to the satisfaction of the Engineer.

All optical fibers shall be spliced to provide continuous runs. Splices shall be allowed only in equipment cabinets except where otherwise shown on the Plans.

All splices shall be made using a fusion splicer that automatically positions the fibers using a system of light injection and detection. The Contractor shall provide all equipment and consumable supplies.

Basis of Payment: This work shall be paid for at the contract unit price each for SPLICE FIBER IN CABINET, which will be payment in full for all fusion splicing, fiber optic splice trays, testing and documentation, at a cabinet or building location shown on the plans and as directed by the Engineer. This pay item shall not be used to pay for fiber terminations and/or splices completed to meet the requirements of FIBER OPTIC CABLE IN CONDUIT.

#### **FIBER OPTIC TRACER CABLE.**

The cable shall meet the requirements of Section 817 of the "Standard Specifications", except for the following:

In order to trace the fiber optic cable after installation, an XLP black insulated copper cable No. 14 shall be pulled in the same conduit as the fiber optic cable. 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. In order to minimize the number of splices required, the tracer cable shall incorporate maximum lengths of cable supplied by the manufacturer. Splicing of the tracer cable will be allowed at the handholes only. 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. Blowtorches or other devices which oxidize copper cable shall not be allowed for soldering operations. The splice shall be covered with underwater grade WCSMW 30/100 heat shrink tube, minimum length four (4) inches and with a minimum one (1) inch coverage over the XLP insulation.

Basis of Payment: The tracer cable shall be paid for separately as ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C per foot, which price shall include all associated labor and material for installation.

**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 1 Standards Traffic Signal Design Details". All Type A foundations shall be a minimum depth of forty-eight (48) inches.

Concrete Foundations, Type C (Special) for Traffic Signal Cabinets with Uninterruptible Power Supply (UPS / Battery Back-Up) cabinet installations shall be constructed a minimum of forty-eight (48) inches long by thirty-one (31) inches wide, and shall have a minimum depth of forty-eight (48) inches. An integral concrete pad foundation for the UPS cabinet shall be constructed a minimum of thirty-one (31) inches long by twenty (20) inches wide by ten (10) inches deep. The UPS cabinet pad foundation shall be integral to the side of the signal cabinet foundation, and shall be constructed on the same side as the signal cabinet power panel. An L-Shaped concrete apron shall be constructed along the entire front of the signal cabinet foundation, the entire side of the UPS cabinet foundation, and the entire front of the UPS cabinet foundation. This concrete apron shall be a minimum of thirty-six (36) inches wide by four (4) inches deep. Anchor bolts shall be provided and spaced according to the cabinet manufacturer's specifications.

Concrete Foundations, Type D for Traffic Signal Cabinets shall be constructed a minimum of forty-eight (48) inches long by thirty-one (31) inches wide, and shall have a minimum depth of forty-eight (48) inches. The concrete apron at the signal cabinet shall be constructed a minimum of thirty-six (36) inches wide by forty-eight (48) inches long by four (4) inches deep. Anchor bolts shall be provided and spaced according to the cabinet manufacturer's specifications.

Concrete Foundations, Type E for Mast Arm and Combination Mast Arm Poles shall meet the following requirements:

MAST ARM SIZE	DIAMETER OF FOUNDATION	DESIGN DEPTH OF FOUNDATION
14'-38'	30"	15'
> or = 40'	36"	15'
COMBINATION MAST ARMS	36"	15'

The Resident Engineer shall approve the foundation excavation prior to placing any concrete.

### 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 Engineer shall mark the location of the proposed loops and contact the Traffic Engineer **(847) 377-7000** to inspect and approve the layout. When preformed detector loops are installed, the Contractor shall have them inspected and approved prior to the placement of the concrete surface, using the same notification process as above.

Loop detectors shall be installed according to the requirements of the "District 1 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 in order to minimize the length of the saw cut (homerun), unless otherwise directed by the Engineer or as shown on the plans. Polyethylene unit duct shall be used for detector loop raceways to the handholes. Unit duct shall meet the requirements of NEC Article 343. All unit duct used for traffic signal loop detector runs shall be incidental to the price of the detector loop.

The detector loop cable insulation shall be labeled with the cable specifications. Each detector loop lead-in wire shall be labeled in the handhole using a Panduit 250W175C waterproof tag or approved equal. The tag will be secured to each wire with nylon ties.

The resistance to ground for new detector loops shall be a minimum of 500 megaohms under any conditions of weather or moisture. Inductance shall be more than 50 microhenries and less than 700 microhenries. Quality readings shall be more than 5. All new or replacement lead-in cables shall be connected to the loop interface panel using appropriate crimp-on, spade type connectors. 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 incidental to the price of the detector loop. Unit duct, trench and backfill, and drilling of pavement or handholes shall be incidental to detector loop quantities.

The location of each dive hole shall be marked on the face of the curb, the edge of pavement or the handhole, with a saw cut 1/4 inch deep by 4 inches long.

- (a) Type I: Each detector loop, which is to be installed in new asphalt pavement, must be placed in the pavement below the surface course. Each detector loop, which is to be installed in an existing asphalt or concrete pavement, shall be located to miss existing pavement cracks, if possible. Loop sealant used to seal new loops shall consist of a two-component thixotropic, chemically-cured polyurethane. The sealant will be Chemque Q-Seal 295, Perol Elastic Cement A/C Grade or an approved equal. The sealant shall be installed 1/8 inch below the pavement surface. Excess sealant, which accumulates on the surface, shall be removed immediately. Loop sealant used to reseal existing loops shall be composed of an asphalt-based compound. The sealant will be Doseal 230 or an approved equal.
- (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 and shall be placed in the substrate. Loop lead-ins shall be protected to the satisfaction of the Engineer.

Handholes shall be placed next to the shoulder or back of curb when preformed detector loops enter 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 outside diameter (minimum), 3/8-inch inside diameter (minimum) Class A oil resistant synthetic cord-reinforced hydraulic hose with 250 psi 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.

To minimize the length of time that a signal operates without vehicle detection, detector loops for active traffic signal installations shall be installed in a timely manner as follows:

If in the opinion of the Engineer construction conditions are suitable for loop installation(s), the Engineer shall notify the Contractor to proceed. The detector loops shall be installed and fully operational within fourteen (14) calendar days following notification to proceed by the Engineer. This 14-day period shall be in effect throughout the entire year, including the off season, regardless of the Contractor's working day status. Failure by the Contractor to complete the loop installation(s) within the specified timeframe shall result in liquidated damages in the amount of \$500.00 per calendar day, per occurrence.

**Basis of Payment.** This work shall be paid for at the contract unit price per foot 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:

If not marked in the Contract plans, 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 of the latest type manufactured and must be completely compatible with all components of signal equipment currently in use by the County.

All new installations shall be equipped with confirmation beacons as shown on the District 1 "Standard Traffic Signal Design Details". The confirmation beacon shall consist of a 150 watt Par 38 flood lamp for each direction of preemption. 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 to prevent chafing of wires. In order to maintain uniformity between communities, the confirmation beacons shall indicate when the control equipment receives the preemption signal. The preemption movement shall be signaled by a flashing indication at the rate specified by Section 4K.01 of "MUTCD". The stopped preempted movements shall be signaled by a continuous indication.

All light operated systems shall operate at a uniform rate of 14.035 hz  $\pm$  0.002 hz, or as otherwise required by the Traffic Engineer, and provide compatible operation with other light systems currently being operated in the County.

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 incidental to the cost of the Light Detector. The light 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.

### **TEMPORARY TRAFFIC SIGNAL INSTALLATION**

Add the following to Section 890 of the "Standard Specifications":

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 Electrical Systems" specification) A representative of the approved control equipment vendor shall be present at the temporary traffic signal turn-on inspection.

Only controllers compatible with "icons" software (NTCIP) or "Aries" software, currently in use by LCDOT, will be approved for use at temporary signal locations. Controller software compatibility requirements are based upon the controller's location in the communication system, and shall be as shown on the plans. All controllers used for temporary traffic signals shall be fully-actuated NEMA microprocessor based with RS232 data entry ports compatible with existing monitoring software, installed in NEMA TS-1 or TS-2 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 bridge 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.

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 diameter holes to run the electric cables through. The 4-inch diameter holes shall have a bushing installed to protect the electric cables and shall be sealed after the electric cables are installed.

The stand which supports the temporary traffic signal cabinet shall be constructed of lumber and plywood that has been pressure-treated to protect against rot, mold, and insects.

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 the District 1 Traffic Signal Specifications for "Grounding of Traffic Signal Systems".

All traffic signal head sections shall be twelve (12) inches. The temporary traffic signal heads shall be placed as indicated on the temporary traffic signal plan or as directed by the Traffic Engineer. The Contractor shall furnish enough cable slack to relocate heads to any position on the span wire or at locations illustrated on the plans for construction staging. The temporary traffic signal shall remain in operation during all signal head relocations. Each temporary traffic signal head shall have its own cable from the controller cabinet to the signal head.

For temporary traffic signal installations within closed loop system(s), the controller shall be compatible with the existing traffic signal system master controller. The existing system interconnect is to be maintained as part of the Temporary Traffic Signal Installation specified on the plan. The interconnect shall be installed into the temporary controller cabinet as per the notes or details on the plans. Refer to the INTERRUPTION OF COMMUNICATION requirements described earlier. All labor and equipment required to install and maintain the existing interconnect shall be incidental to the item TEMPORARY TRAFFIC SIGNAL INSTALLATION.

All emergency vehicle priority 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 priority equipment to be installed prior to the contract bidding. The equipment must be completely compatible with all components of signal equipment currently in use by the County. All light operated systems shall operate at a uniform rate of 14.035 hz  $\pm$ 0.002, or as otherwise required by the Engineer. All labor and material required to install and maintain the Emergency Vehicle Priority system shall be incidental to the item Temporary Traffic Signal Installation.

All temporary traffic signal installations shall have approved vehicular detection and approved pedestrian push buttons installed as shown on the plans or as directed by the Engineer. Vehicular detection shall be provided by video sensors, microwave sensors, or detector loops, and shall be paid for separately. The Contractor shall install, wire, and adjust the alignment of the vehicular detection system in accordance with the manufacturer's recommendations and requirements. When directed by the Engineer, this item shall also include operational items such as: controller database changes, timing changes, activation/deactivation of phases, relocation of signal heads, relocation / reconfiguration of detectors (microwave and/or video), and bagging / unbagging signal heads. A representative of the approved control equipment vendor shall be present and assist the contractor in setting up the vehicular detection system. 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 up the wood pole, unless otherwise shown on the plans. Unit duct shall meet the requirements of NEC Article 343. All unit duct used for traffic signal loop detector runs shall be incidental to the price of the detector loop.

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 assemblies and posts are specified for the permanent signals, the signs shall be relocated to the new equipment at no extra cost.

The Contractor shall not be required to pay the energy charges for the operation of the existing traffic signal installation. If the installation replaces an existing signal, the Contractor shall not be required to pay the energy charges for the operation of the temporary traffic signal. The Contractor shall pay the energy charges for all other temporary traffic signal installations.

The Contractor shall furnish all control equipment for the temporary traffic signal(s) unless otherwise stated in the plans. On projects with multiple temporary traffic signal installations, all controllers shall be of the same manufacturer and model number with current software installed.

Maintenance shall meet the requirements of the "Standard Specifications" and District 1 Specifications for "Maintenance of Existing Traffic Signal Installation". Maintenance of temporary signals and of the existing signals shall be incidental 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 any portion of the project. Maintenance responsibility of the existing signals shall be incidental to the item TEMPORARY TRAFFIC SIGNAL INSTALLATION. 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 contact the Traffic Engineer (847) 377-7000 to request an inspection of the installation(s).

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, on temporary wood poles (Class 5 or better) of 45 feet 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. All approaches for temporary traffic signals for bridge projects shall have microwave vehicle sensors or video vehicle detection, as shown on the plans or as approved by the Engineer.

Basis of Payment: This work shall be paid for at the contract unit price each for TEMPORARY TRAFFIC SIGNAL INSTALLATION which shall include all costs for the installation, modification, maintenance, operational items, complete removal of the temporary traffic signal., and all material required to complete the work.

**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 will become the property of the Contractor, shall be disposed of by the Contractor outside the right-of-way at his/her own expense.

The Contractor shall safely store and arrange for delivery of all equipment that will remain the property of LCDOT. The Contractor shall deliver, unload and stack the equipment at the owner's facility, as directed by the Engineer, within 30 days of removing it from the traffic signal installation. The Contractor shall provide three (3) copies of a list of equipment that is to remain the property of LCDOT including model and serial numbers where applicable. The Contractor shall also provide a copy of the contract plan or special provisions showing the quantities and type of equipment to be delivered. 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. The Contractor shall be responsible for the condition of the traffic signal equipment from the time of removal until the acceptance of a receipt written by the owner indicating that the items have been returned in good condition.

Traffic signal equipment which is lost or not returned to the County for any reason shall be replaced with new equipment meeting the requirements of these Specifications.

### **PEDESTRIAN PUSH-BUTTON**

Replace Article 1074.02 of the "Standard Specifications" with the following:

Pedestrian Push-button assembly shall be ADA compliant, 3-inch round style, highly vandal resistant, non-moving, pressure activated, with a solid-state Piezo switch actuator that cannot be stuck in an "on" or constant call position. A momentary (non-latching) red LED and audible tone shall be provided to confirm an actuation. The housing, or bezel, of the assembly shall be solid aluminum and powder coated yellow. The button shall be stainless steel or nickel-plated aluminum.

Pedestrian Push-button assembly shall be a Campbell Company 4 EVR 120, a Polara BullDog BDLM2-Y, or approved equivalent.

The pedestrian station shall be a Campbell Company 57H Station, or approved equivalent. The pedestrian station shall be powder coated black to match ornamental (Special) mast arm poles and signal posts. The pedestrian station shall be unpainted to match unpainted galvanized mast arm poles and signal posts.

The station shall be installed with a 5-inch by 7 $\frac{3}{4}$ -inch Campbell Company vandal resistant sign, according to the following: Where pedestrian signal heads are used, pedestrian signs shall provide the "Push Button for" legend, with the Walking Man symbol and arrow (R10-4b). Where no pedestrian signal heads are used, pedestrian signs shall provide the "Push Button for Green Light" legend with arrow (R10-3 with arrow), or as specified on the plans.

Refer to STEEL MAST ARM ASSEMBLY AND POLE (SPECIAL), STEEL COMBINATION MAST ARM ASSEMBLY AND POLE (SPECIAL), and/or TRAFFIC SIGNAL POST (SPECIAL) for additional installation requirements.

Basis of Payment: This work shall be paid for at the contract unit price each for PEDESTRIAN PUSH BUTTON. The unit price shall include furnishing and installing the pedestrian station, push button, sign, and all necessary equipment and connections for proper operations. Electric cable in conduit shall be paid for separately.

Signal modification projects may require both new pedestrian buttons (described above) and existing pedestrian buttons remaining in operation. The County desires to have all buttons at a particular traffic signal be similar in appearance and operation. The contractor should advise the Traffic Engineer if a different button should be installed in order to match the existing ones.

### **CONTROLLER CABINET AND PERIPHERAL EQUIPMENT.**

Add the following to Article 1074.03 of the "Standard Specifications":

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. Individual load switches shall be provided for each vehicle, pedestrian, and right turn overlap phase.

- Cabinets – Controller cabinets shall have a footprint of approximately 44 inches wide by 26 inches deep. Type IV cabinets shall be 65 inches high, and shall provide a third shelf for mounting additional equipment. Type V cabinets shall be 77 inches high. Cabinets shall be fabricated of 1/8" thick unpainted aluminum alloy 5052-H32. The surface shall be smooth, free of marks and scratches. All external hardware shall be stainless steel.
- Cabinet Doors – Provide front and rear doors of NEMA type 3R construction with cellular neoprene gasket that is rain tight. Door hinges shall be continuous 14-gauge stainless steel and shall be secured with ¼-20 stainless steel carriage bolts.
- Controller Harness – Provide a TS2 Type 2 "A" harness in addition to the TS2 Type 1 harness.
- Surge Protection – Atlantic Scientific ZoneIT Model 91391 base station, Model 91375 ZoneIT pluggable module (50kA rating) with LED status indicators, or approved equivalent.
- BIU – Containment screw required.
- Switch Guards – All switches shall be guarded.
- Back Panel – The back panel wiring shall be securely covered with a piece of plexiglass, minimum thickness 1/8-inch.
- Heating – One (1) 200-watt, thermostatically-controlled, Hoffman electric heater, or approved equivalent.
- Lighting – Four (4) GE Tetra PowerGrid LED light assemblies, or approved equivalent.
- Plan & Wiring Diagrams – 12" x 16" moisture sealed container attached to door.
- The cabinet shall be equipped with a pull-out drawer/ shelf assembly.
- Detector Racks –
  - Configuration #1, Half-size rack, to be used when few, if any, detector loops are required. Fully wired to support one BIU, eight channels of vehicle detection, and four channels of Emergency Vehicle Preemption (EVP).
  - Configuration #2, Full-size rack, to be used when the required detector loops cannot be accommodated by the half-size rack. Fully wired to support one BIU, sixteen channels of vehicle detection, and four channels of EVP.
- Field Wiring Labels – All field wiring shall be labeled.
- Field Wiring Termination – Approved channel lugs required.
- Power Supply – Provide a nonconductive shield.
- Circuit Breaker – The signal circuit breaker shall be sized for the proposed load, but shall not be rated less than thirty (30) amps.
- Police Door – Provide wiring and termination for plug-in manual phase advance switch.
- Railroad Pre-Emption Test Switch – Eaton 8830K13 SHA 1250 or approved equivalent.
- MMU – 16 Channel, LCD display, IP addressable (ethernet) Malfunction Management Unit.

**FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL**

This item shall comply with Sections 857 and 863 of the "Standard Specifications" for Road and Bridge Construction, and shall also comply with the following requirements:

The controller shall meet the requirements for NEMA-TS2 standards for a Type 1 Cabinet.

The controller shall be the latest model available that is compatible with “icons” software (NTCIP) or “Aries” software, currently in use by LCDOT. Controller software compatibility requirements are based upon the controller’s location in the communication system, and shall be as shown on the plans. The controller shall be equipped with an Ethernet port and a removable data key to save the controller database.

The cabinet shall be 65 inches high, and shall provide a third shelf for mounting additional equipment. Also, the cabinet shall have front and rear doors of NEMA type 3R construction with cellular neoprene gasket that is rain tight. Door hinges shall be continuous 14-gauge stainless steel and shall be secured with ¼-20 stainless steel carriage bolts. Standard equipment shall include a three-point locking system that secures the door at the top, bottom and center. A corbin lock with two keys shall also be furnished. The front and rear doors shall be equipped with a two-position doorstop, one at 90° and one at 120°.

Basis of Payment: This item will be paid for at the contract unit price each for FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL which price shall be payment in full for furnishing and installing the cabinet and controller, complete with necessary connections and equipment for proper operation, at a location designated by the Engineer. If required, the transceiver shall be considered incidental to the cost of this item. Removal of an existing controller, and its return to the County, shall also be incidental to the cost of this item.

**TRAFFIC ACTUATED CONTROLLER AND CABINET INTERCONNECTED WITH RAILROADS.**

Add the following to Article 1074.03 of the “Standard Specifications” to read:

Cabinets shall be NEMA TS2 Type 1 design, meeting the requirements of CONTROLLER CABINET AND PERIPHERAL EQUIPMENT and FULL ACTUATED CONTROLLER, IN TYPE IV CABINET, NEMA-TS2, (SPECIAL). In addition, the following shall apply to railroad interconnected equipment:.

Only an approved traffic signal equipment supplier shall assemble railroad interconnected controllers and cabinets. The equipment shall be tested and approved in the equipment supplier’s District 1 approved facility prior to field inspection.

The pedestrian clearance during railroad preemption will be limited to a flashing “Don’t Walk” interval, equal in length to the vehicle yellow clearance interval, and shall time concurrently with the vehicle yellow clearance.

The terminal facility shall be wired so as to provide supervision of all essential pre-emption components. This wiring shall cause the facility to transfer to or remain in flashing operation in the event any critical component is missing, not connected or failed. Interface relays shall be wired so as to be in the energized state during normal (non-pre-empt) operation. Failure of a relay coil shall open the supervision loop and cause the intersection to transfer to flashing operation. Each critical element such as controller harnesses and interface relays shall be wired to form a series loop which must be complete for normal operation.

A method of supervising the 6-conductor cable interconnecting the traffic and railroad facilities shall provide flashing operation during failed cable conditions. Upon detection of a failed railroad interconnect the controller shall provide one (1) track clearance green interval and shall enter flashing operation at end of track clearance yellow interval. Such flashing operation must be manually reset. The supervision circuit shall, within reason, be capable of detecting failure of the supervision circuit components themselves, and shall provide fail-safe operation immediately upon

detecting any failure.

The interconnect to the railroad facility shall be such that demand for pre-emption begins when the railroad flashers begin to flash and ends when railroad gates begin to rise.

An IDOT approved method of controller security shall be implemented to assure data integrity and to preclude changes to critical data. The method shall include a means for the controller to continuously verify the controller/cabinet CRC (cycle redundancy check) match. The CRC will be developed based on preemptor entries, unit data (including phases in use, sequence and ring structure, etc.), overlap assignment and timing, firmware version, and any special memory content necessary for proper operation. Where data is stored in a data module, a spare data module shall be provided to the Engineer.

The controller will provide for immediate track clearance green re-service upon receipt of each subsequent preempt demand. During the re-service all normal vehicle clearance intervals, including red revert, will be respected.

The cabinets shall be equipped with a labeled test switch for the railroad interconnected preemption line which will place a call in the controller's railroad preemption phase and also will acknowledge power to the interconnect line. The switch shall automatically return to normal position upon release.

#### **UNINTERRUPTIBLE POWER SUPPLY (UPS)**

This specification sets forth the minimum requirements for an uninterruptible power system with battery back-up, for a traffic signal. The system is comprised of the UPS or Inverter unit, bypass switch, batteries, cabinet, and related wiring harnesses.

#### **UPS (Inverter Unit)**

The inverter unit shall be a TechPower Developments DBL1000MX digital double-conversion traffic UPS, or approved equivalent.

In case of UPS failure and or battery depletion, the UPS will ensure upon the return of utility power that the utility power will be failsafe-bypassed to the traffic signal controller. An external manual bypass shall provide a secondary redundant path for the utility power if the internal UPS bypass fails. The UPS shall be capable of operating in a bypass mode until the depleted batteries have recharged to a predetermined state, and then resume full on-line operation. The UPS shall be capable of hot swapping the batteries or battery bank, without shutting down the UPS.

The inverter unit shall be IP addressable, and shall interface with the traffic signal controller or master controller to provide the "On Battery" alarm to the Lake County Division of Transportation facilities over the normal fiber optic/dial-up communication channels. The "On Battery" alarm must be wired to the Alarm 2 Function of the traffic signal controller back panel. The connector shall be rated for 150 amps DC.

#### **Bypass Switch**

The Bypass Switch shall consist of one main manual switch, which provides a means of placing the UPS into a bypassed position without interruption of the power to the intersection. A second switch provides a means of isolating the AC utility power from the UPS. This provides a means of testing the UPS/Battery back-up by turning off the AC utility power to the UPS with the UPS in normal operation. Both of these switches shall be rated 20 amps at 600 volts.

The bypass switch shall automatically revert back to AC utility power when power is restored, even if an external generator is still connected and providing power to the traffic signal.

The Bypass Switch AC connections consist of two circular locking Input/Output connectors, phased to the UPS AC harness. This switch will include an alternate-source input connection, which provides a means of connecting a generator or alternate utility source. The Bypass Switch case shall be constructed of aluminum.

### **Batteries**

This system shall be comprised of three(3) or six (6) 12-volt batteries, as required, to provide a minimum two (2) hours of normal signal operation followed by a minimum four (4) hours of flashing red operation. Non-essential items such as streetlights, illuminated street name signs, cabinet lamps and fans, EVPS confirmation beacons, and video monitors do not need to be connected to the UPS. Batteries shall be MK deep cycle batteries, AGM-type, with a 79 Ah capacity, or an approved equal. The battery cable shall consist of a quick release connector rated at 150 amps. The connector shall have recessed pins and be polarized to prevent accidental cross connecting of the battery string to the UPS.

### **Cabinet**

The cabinet shall be a California Chassis aluminum cabinet, Part Number FCU104013, with a natural aluminum mill finish, or approved equal.

The external cabinet dimensions shall be 41 inches tall by 25 inches wide by 16 inches deep, excluding the door. The cabinet shall house all batteries, the UPS, the Bypass Switch, and the wiring harnesses.

When being installed at an existing traffic signal cabinet, the cabinet for the UPS shall rest on the traffic signal cabinet foundation and shall also be secured to the right side of the traffic signal cabinet. For new traffic signal cabinets, the foundation and UPS cabinet installation shall be according to IDOT Standard 878001-04. The UPS cabinet shall not overhang / encroach on sidewalks, bikepaths, or paved shoulders.

The cabinet shall provide an external connection for an AC generator to power the signals, if necessary, during an extended utility power outage. The external connection shall be a NEMA Style 5-15 male flanged receptacle, and shall be securely covered by a screw-on aluminum plate with a rubber gasket.

The UPS shall be equipped with an integrated safety ("Tip") switch that will interrupt inverter output power in the event of a cabinet knockdown. The safety switch may be either internal to the inverter unit, or mounted inside the UPS cabinet. The safety switch shall be designed to interrupt output power in the event that the inverter is tilted more than twenty degrees on any axis. The switch shall be mechanically latching to ensure that power is not automatically restored to the UPS until the system is reset.

A blue LED indicator light shall be mounted on the side of the UPS cabinet facing traffic and shall illuminate to indicate when the utility power has been disrupted and the UPS is in operation. The light shall be a minimum 1" diameter, and bright enough to be visible from the driving lanes in the daylight.

Basis of Payment: This item shall be paid for at the contract unit price, each, for furnishing and installing the UNINTERRUPTIBLE POWER SUPPLY (UPS). The price shall include the UPS/Inverter unit, Bypass Switch, Batteries, Cabinet, wiring harnesses, and all associated equipment and materials necessary for proper operation.

### **CABINET NEATNESS**

The Contractor shall assure that all wiring and peripheral equipment in any new traffic signal cabinet is in a neat and orderly fashion that is acceptable to the Engineer. This applies to controller cabinets, master cabinets, railroad cabinets, communication cabinets, electrical service cabinets, or any other new cabinet called for in the project plans.

All conduit entrances into the cabinet shall be sealed with a pliable waterproof material. Electrical cables inside the cabinet shall be neatly trained along the base and back of the cabinet. Each conductor shall be connected individually to the proper terminal, and the spare conductors shall be bound into a neat bundle. All cables, including those for signals, vehicle detection, pushbuttons, emergency vehicle preemption, video transmission, and communication shall be neatly arranged and bundled within the cabinet to the satisfaction of the Engineer. Each cable shall be marked with an identification number which corresponds to the number and description on the cabinet cable log.

In the case of an existing cabinet that is being modernized or modified, the new cables being installed shall be trained, bundled and labeled to the satisfaction of the Engineer. When working inside an existing cabinet, the Contractor shall minimize disturbance to existing cables and cabinet wiring. Any existing cables and cabinet wiring disturbed by the Contractor shall be re-trained, bundled, and/or labeled to the satisfaction of the Engineer.

The County shall not accept maintenance of the traffic signal installations until the requirements of this specification are satisfied. The cost for this work shall be considered incidental to the cost of the associated pay item.

### **VENDOR REPRESENTATION**

Under this provision, the Engineer reserves the right to request the equipment vendor be present at the activation of new traffic equipment. Equipment covered under this provision includes signal heads, cabinets, controllers, amplifiers, preemption, video detection/monitoring, communication/transmission, fiber-optic/telemetry, radio, microwave, infra-red, illuminated signs, streetlights, push buttons, lighted crosswalks, uninterruptible power supplies, and any other new equipment being installed and activated.

This provision is in addition to the requirement contained herein that the Contractor provide a representative from the control equipment vendor to attend the traffic signal inspection for both permanent and temporary traffic signal "turn-ons".

Any costs associated with equipment vendor representation shall not be paid for separately, but shall be incidental to the cost of the associated traffic equipment being activated. Any unforeseen costs incurred by the Contractor to provide this representation shall not be the responsibility of the County.

### **ELECTRIC CABLE.**

Delete “or stranded, and No. 12 or” from the last sentence of Article 1076.04 (a) of the “Standard Specifications”.

The electric service cable shall have an XLP jacket. All other cable jackets shall be polyvinyl chloride, meeting the requirements of IMSA 19-1 or IMSA 20-1. The jacket color for signal cable shall be black. The jacket color for lead-in and communications cable shall be gray. All cabling between the signal cabinet and the signal heads shall be solid copper, not multi-stranded. Heat shrink splices shall be used according to the District 1 “Standard Traffic Signal Design Details”.

**STEEL MAST ARM ASSEMBLY AND POLE**  
**STEEL COMBINATION MAST ARM ASSEMBLY AND POLE**

Add the following to Article 1077.03 of the “Standard Specifications”:

The poles for all mast arms and combination mast arms, up to and including forty (40) feet in length, shall be manufactured with an eighteen (18)-inch bolt circle at the foundation base plate. The poles for all mast arms and combination mast arms forty-two (42) feet long and longer shall be manufactured with a twenty-one (21)-inch bolt circle.

Traffic signal mast arms shall be one-piece construction, unless otherwise approved by the Engineer. All mast arms and poles shall be galvanized.

Luminaire arms shall be galvanized steel, and a minimum fifteen (15) feet in length.

Luminaires shall be “cobra head” style, with a minimum mounting height of forty (40) feet., and shall be paid for separately.

The base of the mast arm pole shall be protected by a Component Products bolt-on galvanized metal shroud or an approved equal, in lieu of stainless steel screening.

**STEEL MAST ARM ASSEMBLY AND POLE (SPECIAL).**  
**STEEL COMBINATION MAST ARM ASSEMBLY AND POLE (SPECIAL).**

Add the following to Article 1077.03 of the “Standard Specifications”:

The poles for all mast arms and combination mast arms, up to and including forty (40) feet in length, shall be manufactured with an eighteen (18)-inch bolt circle at the foundation base plate. The poles for all mast arms and combination mast arms forty-two (42) feet long and longer shall be manufactured with a twenty-one (21)-inch bolt circle.

Ornamental bases for mast arm poles shall be either cast iron or cast aluminum. All mast arms, mast arm poles, luminaire arms, cast iron bases, and any exposed steel hardware shall be hot-dipped galvanized, and then painted black by the supplier/manufacturer. Cast aluminum bases shall also be painted black by the supplier/manufacturer.

All ornamental bases shall fit tightly around the poles, with little or no gap at the top of the ornamental base. Two-piece ornamental bases shall fit together tightly, with little or no gap between the two pieces. All bases shall fit securely on top of the foundation, and shall not easily move or wobble.

Pedestrian pushbutton stations shall be mounted to ornamental mast arm bases according to the following: The top and bottom of the station shall be secured by drilling, tapping, and installing a 3/8-inch stainless steel threaded bolt, lock washer, and hex nut. Do not use self-tapping screws. The pushbutton station shall be plumb. Spacers made of 3/4-inch aluminum conduit shall be installed behind the station.

Luminaire arms shall be steel, and a minimum fifteen (15) feet in length.

Luminaires shall be “cobra head” style, painted black by the supplier/manufacturer, minimum mounting height shall be forty (40) feet, and shall be paid for separately.

All (Special) steel mast arm assemblies and poles (including combination mast arm assemblies) shall be manufactured and/or supplied by Sternberg Vintage Lighting, Valmont, Beacon or approved equal, according to the following:

- Round, tapered, 16-sharp fluted pole.
- Round, tapered, smooth, standard-curved, flange-connected, traffic signal mast arm
- Hamilton Series (6400D) ornamental base (Sternberg).
- MainStreet Series (200SJ) ornamental base (Beacon).

#### **TRAFFIC SIGNAL POST.**

Add the following to Article 1077.01 (d) of the “Standard Specifications”:

Steel posts and cast iron bases shall be hot-dipped galvanized.

#### **TRAFFIC SIGNAL POST (SPECIAL).**

Add the following to Article 1077.01 of the “Standard Specifications”:

All Traffic Signal Posts (Special) shall be sixteen (16) feet in height, extruded aluminum, unless otherwise specified on the plans. All ornamental bases for Traffic Signal Post (Special) shall be cast aluminum.

All Traffic Signal Posts (Special) and associated ornamental bases shall be assembled and painted black at the factory. All exposed steel hardware shall be hot-dipped galvanized, and then painted black.

Pedestrian pushbutton stations shall be mounted to ornamental signal posts according to the following: The top and bottom of the station shall be secured by drilling, tapping, and installing a 3/8-inch stainless steel threaded bolt. Do not use self-tapping screws. The pushbutton station shall be plumb. Spacers made of 3/4-inch aluminum conduit shall be installed behind the station.

All ornamental bases shall fit tightly around the poles, with little or no gap at the top of the ornamental base. Two-piece ornamental bases shall fit together tightly, with little or no gap between the two pieces. All bases shall fit securely on top of the foundation, and shall not easily move or wobble.

All Traffic Signal Posts (Special) and associated ornamental bases shall be manufactured and/or supplied by Sternberg Vintage Lighting, Valmont, Beacon, or approved equal, according to the following:

- Round, straight (non-tapered), five (5)-inch diameter, 12-flat fluted post.
- A ball center cap for the top of the post, instead of a tenon.

- Hamilton Series (5400D) ornamental base, approximately forty-three (43) inches tall. (Sternberg)
- MainStreet Series (100SJ) ornamental base, approximately forty-three (43) inches tall. (Beacon)

### **INDUCTIVE LOOP DETECTOR**

Add the following to Article 1079.01 of the "Standard Specifications":

All new inductive loop detectors (amplifiers) shall have a liquid crystal display to view all detector operation, loop diagnostics, loop frequency, inductance, change of inductance readings, and programmable features. When rack space allows, new amplifiers shall be rack-mounted. When the detector rack is full, shelf-mounted amplifiers may be allowed. Shelf-mounted amplifiers shall utilize multi channels to minimize the required shelf space.

### **ILLUMINATED SIGN, LED**

This work shall consist of furnishing and installing an illuminated sign with light emitting diodes.

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.

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.

The message shall be clearly legible and highly visible, under any lighting conditions, within a 15-degree cone centered about the optic axis. The sign face shall be 24 inches by 24 inches. The sign face shall be completely illegible when not illuminated. No symbol shall be seen under any ambient light condition when not illuminated.

All LEDs shall be T-1 ¾ and have an expected lamplife 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).

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.

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.

Mounting hardware shall be black polycarbonate or galvanized steel and similar to mounting Signal Head hardware and brackets specified herein.

Lewis Avenue – Signal Modernization  
14<sup>th</sup> Street to Rosecrans Ave. (IL Rte 173)  
Section #08-00259-00-TL  
Project No. CMM-9003(070)  
Lake County Pg TS-33

Basis of Payment: This work shall be paid for at the unit price each for ILLUMINATED SIGN, LED.

**LED INTERNALLY ILLUMINATED STREET NAME SIGN**

This work shall consist of furnishing a street name sign which is internally illuminated with light emitting diodes, and installing the sign on a traffic signal mast arm or span wire.

The sign shall be manufactured by Traffic Signs, Inc., standard model, (with a J & J Electronics Inc, LED Light Engine), Carmanah Technologies (Model R409), or approved equivalent.

The sign shall display the designated street name clearly and legibly in the daylight hours without being energized. When energized, the entire surface of the sign panel shall be evenly illuminated, and the light transmission factor shall provide a letter to background brightness ratio adequate for nighttime legibility. The sign face/panels shall be 0.125-inch translucent, high-impact, UV resistant polycarbonate. All surfaces shall be free of blemishes in the plastics or coating that might impair the service or detract from the general appearance of the sign. The sign frame shall be painted black with a durable powder coated process.

Street name signs shall have double-sided message, with the following exception: At locations where one side of a particular sign will not be visible to vehicular traffic, such as a "T" intersection, that sign shall be single-sided. The street name/legend and border shall be as shown on the plans. The font shall be ClearviewHwy 5-W.

Both sides of each sign shall have legend and border made of 3M/Scotchlite Series 4090T translucent white diamond grade sheeting (DG<sup>3</sup>T), overlaid by 3M/Scotchlite Series 1177 transparent green, electronically cuttable film, or approved equivalent.

The sign shall be mounted on the mast arm three feet to the right of the furthest right signal head, as viewed by the approaching traffic.

Each sign shall be activated by a photocell mounted/installed on the side of the sign frame

The Manufacturer/Vendor shall supply shop drawings of the fixtures, sign, sign message and mounting hardware for approval. All hardware used to install the sign shall be in accordance with the manufacturer's recommendations.

Basis of Payment: This work will be paid for at the contract unit price each for furnishing and installing LED INTERNALLY ILLUMINATED STREET NAME SIGN, of the size specified, complete in place, including photocell and all related hardware, wiring, and connections required for proper operations.

**RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM**

This work shall consist of providing a revised Signal Coordination and Timing (SCAT) Report and implementing optimized timings to an existing previously optimized closed loop traffic signal system. This work is required due to the addition of a signalized intersection to an existing system or a modification of an existing signalized intersection which affects the quality of an existing system's operation. **MAINTENANCE OF THE SUBJECT INTERSECTION SHALL NOT BE TRANSFERRED TO THE COUNTY UNTIL THIS WORK IS COMPLETED AND ACCEPTED.**

After the new signalized intersection is added or the existing signal is modified, the traffic signal system shall be re-optimized by an approved consultant. The Contractor shall contact the County Traffic Engineer at (847) 377-7000 for a listing of approved consultants.

A listing of existing signal equipment, interconnect information and existing phasing/timing patterns may be obtained from the Lake County Traffic Engineering Department, if available and as appropriate. The consultant shall consult with the County Traffic 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 re-optimization.

Traffic counts shall be taken at the subject intersection no sooner than 30 days after the traffic signals are approved for operation by the County Traffic Engineer. Seven day/twenty-four hour automatic traffic recorder counts will be required and 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 typical weekday from midday Monday to midday Friday, and if necessary, on the weekend. Additional manual turning movement counts may be necessary if heavy traffic flows exist during off peak hours. The turning movement counts shall identify cars, heavy vehicles, buses, and pedestrian movements.

A Capacity Analysis shall be conducted at the subject intersection to determine its level of service and degree of saturation. 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 with minor adjustments if necessary. Changes to the cycle lengths and offsets for the entire system may be required due to the addition/modification of the subject intersection. Both volume and occupancy shall be considered when developing the re-optimized timing program. For signal systems with existing or proposed Transit Signal Priority (TSP) systems (e.g. PACE buses), the consultant shall insure that TSP is included in the optimization. Signal optimization analyses shall be conducted utilizing SYNCHRO, PASSER II, TRANSYT 7F, SIGNAL 2000 or other appropriate approved computer software.

If the system is being re-optimized due to the addition of a signalized intersection, all the intersections shall be re-addressed according to the current standard of District One. The proposed signal timing plan shall be forwarded to LCDOT for review prior to implementation. The timing plan shall include a traffic responsive program and a time-of-day program which may be used as a back-up system. After downloading the system timings, the consultant shall make fine tuning adjustments to the timing in the field to alleviate observed adverse operating conditions and to enhance signal coordination.

The consultant shall furnish to LCDOT an original and two copies of the revised SCAT Report for the re-optimized system. The report shall contain the following: turning movement and automatic traffic recorder counts, capacity analyses for each count period, computer optimization analysis for each count period, proposed implementation plans and summaries including system description, analysis methodology, method of effectiveness comparison results and special recommendations and/or observations. Copies of the entire database including intersection displays and zone displays shall be furnished to LCDOT.

Basis of Payment: This work shall be paid for at the contract unit price per lump sum for RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM, which price shall be payment in full for performing all work described herein.

### **SIGNAL HEADS.**

Add the following to Section 1078 of the “Standard Specifications” to read:

All vehicle signal and pedestrian signal heads shall provide 12-inch displays, with glossy black polycarbonate housings, with the following exception: At locations where existing yellow polycarbonate heads will remain, all new signal heads shall be yellow to match the existing ones. Connecting hardware and mounting brackets shall be polycarbonate, the same color as the heads, or galvanized. A corrosive 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. Where required, incandescent bulbs shall be manufactured by Duratest, Sylvania or an approved equal. Signal heads shall be positioned according to the District 1 “Standard Traffic Signal Design Details”.

### **SIGNAL HEAD, LIGHT EMITTING DIODE (LED)**

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.

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,” and amended herein:

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 (VTCSH) 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 County.

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, and shall not affect chromaticity.

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 in diameter. Additionally, the color shall be written out in ½-inch letters next to the symbol.

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. Maximum power consumption for LED modules is per Table 2.

### **Retrofit Traffic Signal Module:**

All other specifications apply unless specifically superceded in this section.

1. Each Retrofit module (12-inch circular or 12-inch arrow indications) 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.
2. 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.

3. 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 weatherproof after installation and connection.

#### 12-Inch Arrow Module:

All other specifications apply unless specifically superceded 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, 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.

#### 12-inch Programmed Visibility (PV) Module:

All other specifications apply unless specifically superceded in this section.

1. The module shall be designed and constructed to be installed in a PV signal housing without modification to the housing.
2. The LEDs shall be spread evenly across the module

#### 12-inch Pedestrian Module:

All other specifications apply unless specifically superceded 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 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 in height and easily identified from a distance of 120-feet.
4. All pedestrian signals at an intersection shall be the same type and have the same display. No mixing of multiple types of pedestrian traffic signals will be permitted.

#### Basis of Payment.

This item shall be paid for at the contract unit price each for SIGNAL HEAD, LED, of the type specified, or PEDESTRIAN 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.

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, or 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 signal faces, the number of signal sections, and the method of mounting.

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/m<sup>2</sup>)

	Red	Yellow	Green
Arrow Indication	5,500	11,000	11,000

**PEDESTRIAN COUNTDOWN SIGNAL HEAD, LIGHT EMITTING DIODE (LED)**

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 or retrofitting an existing pedestrian traffic signal head with a pedestrian countdown signal module with LEDs as 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:

Pedestrian Countdown Signal Heads, including Retrofit type, shall not be used at signalized intersections where traffic signals and railroad warning devices are interconnected.

Pedestrian Countdown Signal Heads, including Retrofit type, shall measure 12 inches x 12 inches, with 9-inch high countdown numerals, and form the time display utilizing two rows of LEDs.

Pedestrian Countdown Signal Heads shall consist of two (2) 12-inch by 12-inch modules aligned vertically. The top module of the unit shall be an LED message-bearing surface supplied with overlapping full "HAND" and full "MAN" symbols that comply with the ITE Pedestrian Traffic Control Signal Indications (PTCSI) standard for these symbols. The bottom module of the unit shall house a LED countdown traffic signal consisting of a two digit numerical display ("00" to "99") a minimum of nine (9) inches in height. The counter shall begin countdown at the beginning of the pedestrian clearance interval as the pictogram of the hand starts flashing. The counter shall execute a countdown of the time, in seconds, of the pedestrian clearance interval synchronized with the controller and ending at (0) at the expiration of the clearance interval. The counter shall be blank at all other times.

**Retrofit Pedestrian Countdown Signal Module:**

The Retrofit module shall be applicable where two (2) LED pedestrian signal sections exist, each with the Upraised Hand and Walking Person overlaid with the top section wired to illuminate only the Upraised Hand and the bottom section wired to illuminate only the Walking Person. The top section shall be re-wired to provide illumination of either of the displays, depending on the interval or phase. The contractor shall remove the existing bottom pedestrian overlay module and install a new countdown module.

**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.

When installed in an existing signal head, this item shall be paid for at the contract unit price each for PEDESTRAIN COUNTDOWN SIGNAL HEAD, LED, 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.

**TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM.**

Replace the first sentence of Article 1078.03 of the "Standard Specifications" with "All backplates shall be aluminum" and louvered".

**VIDEO DETECTION SYSTEM, (COMPLETE INTERSECTION)**

This specification sets forth the minimum requirements for a system that monitors vehicles on a roadway via processing of video images and provides detector outputs to a traffic controller or similar device. This work shall consist of furnishing and installing an Autoscope Terra or approved equal video vehicle detection system at one signalized intersection. This item includes the Machine Vision Processor (MVP) sensors, a Terra Interface Panel (TIP), a Terra Access Point (TAP), and all necessary hardware, cable and accessories necessary to complete the installation in accordance with the manufacturer's specifications. The system shall also include a ten-inch color VGA monitor with BNC connector for video input.

The Autoscope Machine Vision Processor (MVP) is normally installed on top of the luminaire arm. However, occasionally overhead utility wires obstruct the camera's field of view and prevent proper detector placement. When this occurs, the camera shall be installed on a J-hook below the luminaire arm.

To protect the video detection cameras from electrical surges, the Terra Interface Panel shall be grounded as follows:

1. The chassis sheet metal must be tied to ground with the supplied ground wire and stud.
2. All shield wires should be tied to the chassis ground stud.
3. Terminal position three (3) of each of the camera terminations shall be tied to the ground stud.
4. All extra/spare wires in the Autoscope MVP cable should be tied to ground.

In order for the Traffic Engineer to manipulate detection zones and view the video signal over a high-speed connection, the VIDEO DETECTION SYSTEM, (COMPLETE INTERSECTION) must be connected to either the LCDOT Gigabit Ethernet network or a VIDEO TRANSMISSION SYSTEM.

If the VIDEO DETECTION SYSTEM, (COMPLETE INTERSECTION) is being connected to the Gigabit Ethernet network, then a LAYER II (DATA LINK) SWITCH and/or a LAYER III (NETWORK) SWITCH will be required. Layer II and Layer III switches shall be installed according to the plans, and shall be paid for separately.

If the VIDEO DETECTION SYSTEM, (COMPLETE INTERSECTION) is being connected to a new or existing VIDEO TRANSMISSION SYSTEM, then fiber-optic video/data transmitters and receivers

may be required. Fiber-optic video/data transmitters and receivers are necessary whenever the VIDEO DETECTION SYSTEM, (COMPLETE INTERSECTION) and the VIDEO TRANSMISSION SYSTEM are installed at separate signalized intersections. When required, fiber-optic video/data transmitters and receivers shall be installed according to the plans, and shall be included in the cost of this item. The VIDEO TRANSMISSION SYSTEM shall be paid for separately.

Basis of Payment: This item will be paid for at the contract unit price each for VIDEO DETECTION SYSTEM, (COMPLETE INTERSECTION) which price shall be payment in full for furnishing all associated equipment required, installing the system at one signalized intersection, and placing the system in operation to the satisfaction of the Engineer.

### **REMOTE-CONTROLLED VIDEO SYSTEM**

This pay item shall include providing and installing a remote-controlled video system at a location designated by the Engineer. The remote-controlled video system shall be a PELCO Spectra IV SE Series Discreet Dome System or approved equal. This pay item shall include a color camera (minimum 35x optical zoom), dome assembly, all mounting hardware, connectors, cables, and related equipment necessary to complete the installation in accordance with the manufacturer's specifications.

The camera shall be installed as shown on the plans, either on the luminaire arm near the luminaire, or on the combination mast arm assembly pole, angled toward the center of the intersection. When installed on the pole, the camera shall be mounted with a 14-inch pendant arm with integral transformer / power supply (Pelco IWM24-GY or approved equal). When installed on the luminaire arm, the camera shall be installed with a 30-degree tilt-adjustable bracket, and the external power supply (Pelco WCS1-4 or approved equal) shall be installed on the pole. Cameras and external power supplies shall be installed with stainless steel straps

The contractor shall contact the Traffic Engineer prior to installing the Pelco camera and associated wiring, to receive final approval on the camera location

In order for the Traffic Engineer to control the camera remotely and view the video signal over a high-speed connection, the REMOTE-CONTROLLED VIDEO SYSTEM must be connected to either the LCDOT Gigabit Ethernet network or a VIDEO TRANSMISSION SYSTEM.

If the REMOTE-CONTROLLED VIDEO SYSTEM is being connected to the Gigabit Ethernet network, then a LAYER II (DATA LINK) SWITCH and/or a LAYER III (NETWORK) SWITCH will be required. Layer II and Layer III switches shall be installed according to the plans, and shall be paid for separately.

If the REMOTE-CONTROLLED VIDEO SYSTEM is being connected to a new or existing VIDEO TRANSMISSION SYSTEM, then fiber-optic video/data transmitters and receivers may be required. Fiber-optic video/data transmitters and receivers are necessary whenever the REMOTE-CONTROLLED VIDEO SYSTEM and the VIDEO TRANSMISSION SYSTEM are installed at separate signalized intersections. When required, fiber-optic video/data transmitters and receivers shall be installed according to the plans, and shall be included in the cost of this item. The VIDEO TRANSMISSION SYSTEM shall be paid for separately.

Basis of Payment: This item will be paid for at the contract unit price each for REMOTE-CONTROLLED VIDEO SYSTEM, which price shall be payment in full for furnishing all associated

equipment required, installing the system complete and in place, and placing the system in operation to the satisfaction of the Engineer.

### **CAMERA MOUNTING ASSEMBLY.**

This work shall consist of modifying an existing traffic signal mast arm pole to accommodate an extension pole suitable for mounting a CCTV Camera. The pole extension shall be a 20-foot long, 4-inch diameter, Schedule 80 galvanized steel pipe and fastened to the existing mast arm pole with adjustable, galvanized steel clamps as indicated in the plans. The exposed wires shall be trained into a drip loop and protected with black plastic spiral cable wrap.

Basis of Payment: This work shall be paid for at the contract unit price each for CAMERA MOUNTING ASSEMBLY, which shall include all necessary mounting hardware, labor, and incidentals necessary to securely fasten the assembly to an existing pole and placing the camera in operation to the satisfaction of the Engineer. The camera, cables, connectors, and related equipment shall be paid for separately as part of REMOTE-CONTROLLED VIDEO SYSTEM.

### **VIDEO TRANSMISSION SYSTEM**

This specification sets forth the minimum requirements for a video transmission system that allows a user to transmit video output from multiple cameras to a remote location, via video transmitter(s) and a high-speed communication link.

The VIDEO TRANSMISSION SYSTEM may be installed in either the intersection traffic signal cabinet or in the VIDEO COMMUNICATIONS CABINET. The Cabinet shall be paid for separately.

The VIDEO TRANSMISSION SYSTEM may include the relocation of existing video transmitter(s), ISDN modems, and/or high-speed Internet modem(s) to a new traffic signal cabinet. The relocation of such existing equipment to a new traffic signal cabinet shall be performed as directed by the Engineer and included in the cost of the VIDEO TRANSMISSION SYSTEM. Any item damaged during removal, storage, or reinstallation shall be repaired or replaced in kind to the satisfaction of the Engineer at the Contractor's expense.

### **System Components**

The system shall consist of video transmitter(s) (ADPRO Fast Tx or approved equal), high-speed Internet modem(s), and related connection cables.

### **High-Speed Internet Modem**

The high-speed Internet modem shall be provided by the County or the Internet Provider.

Basis of Payment: This item will be paid for at the contract unit price each for VIDEO TRANSMISSION SYSTEM, which price shall be payment in full for furnishing and/or relocating all associated equipment required, installing the system complete and in place, and placing the system in operation to the satisfaction of the Engineer

### **LAYER II (DATA LINK) SWITCH**

This specification sets forth the minimum requirements for a layer II Ethernet switch that will transmit data from one traffic signal cabinet to another traffic signal cabinet containing a layer II switch or a layer III (Network) switch. The layer II switch shall be a Cisco Catalyst 2955 Series Intelligent Ethernet Switch, or approved equal.

The Layer II (Data Link) Switch shall be procured from Delcan, the County's Passage engineering consultant. Delcan shall program this equipment for the appropriate location in the County's communication network.

The layer II switch and its power supply shall be mounted to either a standard DIN rail or an equipment mounting channel in the cabinet. The power supply shall be hard-wired to the cabinet power, not plugged into one of the traffic signal cabinet power outlets.

If the layer II switch is interconnected to other signalized intersections that deploy video detection without the use of switches, this pay item shall then also include all necessary video multiplexers, video and data transmitters, and all necessary connections for proper video/data communications.

Basis of Payment: This item will be paid for at the contract unit price each for LAYER II (DATA LINK) SWITCH, which price shall be payment in full for furnishing and installing the switch, and all necessary connectors, cables, fiber optic jumpers, hardware, software, other peripheral equipment, and placing it in operation to the satisfaction of the Engineer. The VIDEO ENCODER, MEDIA CONVERTERS, and TERMINAL SERVERS shall be paid for separately.

### **LAYER III (NETWORK) SWITCH**

This specification sets forth the minimum requirements for a layer III switch that will transmit video data from one traffic signal cabinet to another traffic signal cabinet or to another location having a layer III switch. The layer III switch shall be a Cisco Catalyst 3560 Series Intelligent Ethernet Switch, or approved equal.

The Layer III (Network) Switch shall be procured from Delcan, the County's Passage engineering consultant. Delcan shall program this equipment for the appropriate location in the County's communication network.

The layer III switch shall be mounted to the 19-inch equipment rack inside the cabinet. The power supply shall be mounted to either a standard DIN rail or an equipment mounting channel in the cabinet. The power supply shall be hard-wired to the cabinet power, not plugged into one of the traffic signal cabinet power outlets.

If the layer III switch is interconnected to other signalized intersections that deploy video detection without the use of switches, this pay item shall then also include all necessary video multiplexers, video and data transmitters, and all necessary connections for proper video/data communications.

Basis of Payment: This item will be paid for at the contract unit price each for LAYER III (NETWORK) SWITCH, which price shall be payment in full for furnishing and installing the switch, and all necessary connectors, cables, fiber optic jumpers, hardware, software, other peripheral equipment, and placing it in operation to the satisfaction of the Engineer. The VIDEO ENCODER, LAYER III FIBER OPTIC TRANSCIEVER MODULES, MEDIA CONVERTERS, and TERMINAL SERVERS shall be paid for separately.

### **VIDEO ENCODER**

This specification sets forth the minimum requirements for a video encoder that will transmit video data from one traffic signal cabinet to another traffic signal cabinet or to another location having a layer three switch.

The video encoder shall be an Optelecom Model C-40 MPEG-4 video encoder/decoder, or an Optelecom Model C-44 E-MC 4-channel MPEG-4 encoder, as shown on the plans, or approved equivalent. Other video encoder/decoders submitted for approval must be compatible with the Lake County Passage Advanced Traffic Management System (ATMS) software and VideoLAN VLC Media Player Release 0.8.6D or later.

The video encoder and its power supply shall be mounted to either a standard DIN rail or an equipment mounting channel in the cabinet. The power supply shall be hard-wired to the cabinet power, not plugged into one of the traffic signal cabinet power outlets.

Basis of Payment: This item will be paid for at the contract unit price each for VIDEO ENCODER, which price shall be payment in full for furnishing and installing the encoder, and all necessary connectors, cables, hardware, software, other peripheral equipment, and placing it in operation to the satisfaction of the Engineer.

**LAYER III FIBER OPTIC TRANSCEIVER MODULE, SFP TYPE, LONG DISTANCE**

This specification sets forth the minimum requirements for a fiber optic transceiver module that plugs into a Cisco layer III gigabit ethernet switch. The module shall be a small form pluggable (SFP), long distance, single mode transceiver, Cisco GLC-LH-SM, or approved equivalent. The transceiver shall be installed in the Cisco layer III switch at the location shown on the plans.

Basis of Payment: This item will be paid for at the contract unit price each for FIBER OPTIC TRANSCEIVER MODULE, SFP TYPE, LONG DISTANCE, which price shall be payment in full for furnishing and installing the module, and all necessary connectors, cables, hardware, software, other peripheral equipment, and placing it in operation to the satisfaction of the Engineer.

**LAYER III FIBER OPTIC TRANSCEIVER MODULE, SFP TYPE, EXTRA LONG DISTANCE**

This specification sets forth the minimum requirements for a fiber optic transceiver module that plugs into a Cisco layer III gigabit ethernet switch. The module shall be a small form pluggable (SFP), extra-long distance, single mode transceiver, Cisco GLC-ZX-SM, or approved equivalent. The transceiver shall be installed in the Cisco layer III switch at the location shown on the plans.

Basis of Payment: This item will be paid for at the contract unit price each for FIBER OPTIC TRANSCEIVER MODULE, SFP TYPE, EXTRA LONG DISTANCE, which price shall be payment in full for furnishing and installing the module, and all necessary connectors, cables, hardware, software, other peripheral equipment, and placing it in operation to the satisfaction of the Engineer.

**LAYER III FIBER OPTIC TRANSCEIVER MODULE, GBIC TYPE, LONG DISTANCE**

This specification sets forth the minimum requirements for a fiber optic transceiver module that plugs into a Cisco layer III gigabit ethernet switch. The module shall be a Gigabit Interface Converter (GBIC) type, long distance, single mode transceiver, Cisco WS-G5486, or approved equivalent. The transceiver shall be installed in the Cisco layer III switch at the location shown on the plans. This type of transceiver module is intended for use with earlier models of Cisco layer III switches.

Basis of Payment: This item will be paid for at the contract unit price each for FIBER OPTIC

TRANSCEIVER MODULE, GBIC TYPE, LONG DISTANCE, which price shall be payment in full for furnishing and installing the module, and all necessary connectors, cables, hardware, software, other peripheral equipment, and placing it in operation to the satisfaction of the Engineer.

#### **MEDIA CONVERTER**

This specification sets forth the minimum requirements for an unmanaged Ethernet switch that performs copper-to-fiber media conversion and 10Mbps to 100Mbps speed conversion.

The media converter shall be a Ruggedcom RMC40 Series, (Model RMC40-HI-C200) four-port, unmanaged Ethernet switch, or approved equivalent. The power supply shall be the HI voltage type (85-264VAC) and ports 3 and 4 shall be for single-mode fiber with SC connectors.

The media converter shall be mounted to either a standard DIN rail or an equipment mounting channel in the cabinet. The power supply shall be hard-wired to the cabinet power, not plugged into one of the traffic signal cabinet power outlets.

Basis of Payment: This item will be paid for at the contract unit price each for MEDIA CONVERTER, which price shall be payment in full for furnishing and installing the media converter, and all necessary connectors, cables, fiber optic jumpers, hardware, software, other peripheral equipment, and placing it in operation to the satisfaction of the Engineer.

#### **TERMINAL SERVER**

This specification sets forth the minimum requirements for a terminal server that will transmit signal controller data from one or more traffic signal controllers onto the Lake County PASSAGE Gigabit Ethernet network.

The terminal server shall be a Digi PortServer TS 4 four-port serial-to-Ethernet device, or approved equivalent, installed at the location shown on the plans. The terminal server shall be properly configured for its location within the Lake County PASSAGE Network, and for proper communication with the signal equipment being connected to it.

Basis of Payment: This item will be paid for at the contract unit price each for TERMINAL SERVER, which price shall be payment in full for furnishing, installing, and configuring the terminal server, and all necessary connectors, cables, hardware, software, other peripheral equipment, and placing it in operation to the satisfaction of the Engineer.

#### **VIDEO COMMUNICATIONS CABINET.**

This specification sets forth the minimum requirements for a video communications cabinet to be installed at the location(s) shown in the plans.

The Video Communications Cabinet shall be a Model 332 (Type 170) Controller Cabinet, with heat exchanger, or approved equal. The heat exchanger shall be thermostatically controlled to maintain the temperature between 32°F and 122°F within the enclosure. The cabinet shall be constructed of 0.125"-thickness, alloy-5052 sheet aluminum. The surface shall have a smooth, natural aluminum mill finish. The cabinet shall measure 24" wide x 30" deep x 55" high.

The communications cabinet shall have front and rear doors of NEMA type 3R construction with cellular neoprene gasket that is rain tight. Door hinges shall be continuous 14-gauge stainless steel and shall be secured with ¼-20 stainless steel carriage bolts. Standard equipment shall include a three-point locking system that secures the door at the top, bottom and center. A corbin lock with two keys shall also be furnished. The front and rear doors shall be equipped with a two-position doorstop, one at 90° and one at 120°. Door locking rods are ¼" x ¾" aluminum turned edgeways with 1" nylon rollers. Door handles shall be cast aluminum.

The cabinet shall be base mounted and equipped with inside flanges and anchoring holes in the front and back of the cabinet for anchoring to a base.

The cabinet shall be equipped with a 19" Electronic Industries Association (EIA) rack using 1.75" hole spacing for the purpose of mounting rack-mountable cabinet equipment. The cabinet shall include a fiber optic connector housing, Corning Cable Systems CCH-04U, or approved equal, and a splice housing, Corning Cable Systems CSH-03U, or approved equal, mounted on the 19" rack.

The cabinet shall also be equipped with a CCTV Power Distribution Assembly and a pull-out drawer/shelf assembly.

The heat exchanger handles the air inside the communication cabinet, as necessary, to maintain the equipment within the desired temperature range. Therefore, the cabinet shall be fully enclosed, with no louvers in any doors or side panels. No fans or thermostats shall be installed in the communication cabinet.

A power panel shall be included with the cabinet and shall include the following:

- 50-amp circuit breaker. This circuit breaker shall supply power to all devices in the cabinet.
- The main breaker shall be thermal magnetic type, U.L. listed for HACR service, with a minimum of 20,000 amp interrupting capacity.
- Two 15-amp load breakers with minimum 10,000 amp interrupting capacity.
- Two 20-amp load breakers with minimum 10,000 amp interrupting capacity.
- Atlantic Scientific ZoneIT Model 91391 base station, Model 91375 ZoneIT pluggable module (50kA rating) surge arrestor, with LED status indicators, or approved equivalent.
- A 15-position neutral bus bar capable of connecting three #12 wires per position.
- A 7-position ground bus bar capable of connecting three #12 wires per position.
- A NEMA type 5-15R GFI convenience outlet.
- A power supply with input voltage AC100-120/220-240V (switchable) 47-63 Hz, output voltage 24VDC (+5%, -1%), overload protection, and minimum operating temperature range -10° to +60°C. The power supply must be compatible with Cisco Catalyst 2955 Series switch.

The heat exchanger shall be mounted on the side of the communications cabinet and conform to the following specifications.

- Maximum dimensions of 47 inches high x 15 inches wide x 11 inches deep
- The unit shall provide closed-loop system cooling and heating. (Heater option shall be included with the unit.)
- Unit shall be fully gasketed and maintain the NEMA 3R enclosure rating
- Shall utilize a high efficiency, convoluted, refrigerant-free, aluminum heat transfer element
- Shall operate under maximum enclosure temperature of 150°F and maximum ambient temperature of 131°F

- The unit shall dissipate a minimum of 54 Watts per °F
- Shall operate on 115 VAC, 60 Hz
- The heat exchanger shall be hard-wired to the communications cabinet power supply.
- Unit shall be UL listed

Basis of Payment: This item will be paid for at the contract unit price each for VIDEO COMMUNICATIONS CABINET, which price shall be payment in full for furnishing all associated equipment and labor, and installing the cabinet as shown on the plans and to the satisfaction of the Engineer. The Layer III switch, fiber optic splices and terminations, the video transmission system, if applicable, and the concrete foundation for the cabinet shall be paid for separately.

### **WIRELESS SYSTEM NODE**

This specification sets forth the minimum requirements for a new node on the wireless portion of the County's PASSAGE network. This item includes the radio transceiver, directional antenna, power injector, and associated cables / wiring.

The radio transceiver shall be a Cisco Aironet 1520 Series Lightweight Outdoor Access Point (Model AIR-LAP1522AG-A-K9) or approved equivalent. The power injector shall be a Cisco Aironet Model AIR-PWRINJ1500-2 or approved equivalent. The antenna shall be a Huber + Suhner Planar Antenna SPA 5600/9/23/0/V or approved equivalent.

All components of this item shall be installed as shown on the plans. The radio transceiver and antenna shall be installed as high as possible on the mast arm assembly pole. The antenna shall be directed / aimed at another antenna on the County's wireless system, (e.g. aimed at a sector antenna on a water tower). The power injector shall be installed inside the traffic signal cabinet.

Basis of Payment: This item will be paid for at the contract unit price each for WIRELESS SYSTEM NODE, which price shall be payment in full for furnishing and installing the radio transceiver, power injector, antenna, and all associated connectors, cables, hardware, and other peripheral equipment, and placing it in operation to the satisfaction of the Engineer.

### **RELOCATE EXISTING VIDEO DETECTION SYSTEM (COMPLETE INTERSECTION).**

This work shall consist of the removal, storage, and relocation of an existing video detection system (complete intersection) from one traffic signal installation (temporary or permanent) to another traffic signal installation (temporary or permanent). This item shall also include the relocation of the remote-controlled video system according to the plans.

The video detection system (complete intersection) shall be removed and relocated as shown in the plans. Any damage sustained to the video detection system during removal, storage, transport, and/or reinstallation operations shall be repaired or replaced in kind to the satisfaction of the Engineer at the Contractor's expense.

Basis of Payment: This item will be paid for at the contract unit price each for RELOCATE EXISTING VIDEO DETECTION SYSTEM (COMPLETE INTERSECTION), which price shall be payment in full for disconnecting the existing video detection system, remote-controlled video system, packaging/storing it, transporting it, and relocating it to the new location complete and operating to the satisfaction of the Engineer.

**RELOCATE EXISTING REMOTE-CONTROLLED VIDEO SYSTEM.**

This work shall consist of the removal, storage, and relocation of an existing remote-controlled video system from one traffic signal installation (temporary or permanent) to another traffic signal installation (temporary or permanent). This pay item shall be used when only the remote-controlled video system is being relocated. This pay item shall not be used when the remote-controlled video system is being relocated as part of RELOCATE EXISTING VIDEO DETECTION SYSTEM (COMPLETE INTERSECTION).

The remote-controlled video system shall be removed and relocated as shown in the plans. Any damage sustained to the remote-controlled video system during removal, storage, transport, and/or reinstallation operations shall be repaired or replaced in kind to the satisfaction of the Engineer at the Contractor's expense.

Basis of Payment: This item will be paid for at the contract unit price each for RELOCATE EXISTING REMOTE-CONTROLLED VIDEO SYSTEM, which price shall be payment in full for disconnecting the existing remote-controlled video system, packaging/storing it, transporting it, and relocating it to the new location complete and operating to the satisfaction of the Engineer.

**RELOCATE EXISTING SWITCH.**

This work shall consist of the removal, storage, and relocation of an existing layer two or layer three switch from one traffic signal installation to another traffic signal installation.

The switch shall be removed and relocated as shown in the plans. Any damage sustained to the switch during removal, storage, transport, and/or reinstallation operations shall be repaired or replaced in kind to the satisfaction of the Engineer at the Contractor's expense.

Basis of Payment: This item will be paid for at the contract unit price each for RELOCATE EXISTING SWITCH, which price shall be payment in full for disconnecting the existing switch, packaging/storing it, transporting it, and relocating it to the new location complete and operating to the satisfaction of the Engineer.

**ELECTRIC CABLE IN CONDUIT, COAXIAL**

This work shall consist of furnishing and installing a Belden 1694A RG-6/U Type Digital Coaxial Cable or approved equal. The cable shall be a 75-ohm coaxial cable with 18 AWG solid bare copper conductor, tinned copper braided shield (95% min), and black polyvinyl chloride jacket. The nominal outside diameter shall be 0.274 inches. Amphenol 31-71032 (or equivalent) BNC plug connectors shall be used at both the PTZ camera and traffic signal cabinet ends of the cable. An Amphenol CLT-2 crimping tool is required for the termination. No splices shall be allowed in the cable between the PTZ camera and the traffic signal cabinet.

Basis of Payment: This work will be paid for at the contract unit price per foot for ELECTRIC CABLE IN CONDUIT, COAXIAL, which price shall be payment in full for furnishing the material, making all electrical connections and installing the cable complete, measured as specified herein.

**OUTDOOR RATED NETWORK CABLE**

This work shall consist of furnishing and installing a network cable from the traffic signal cabinet to the associated field device shown on the plans.

The outdoor rated network cable shall be a black Category 6e cable, meeting the TIA/EIA 568-B.2 telecommunication standards. The cable shall be composed of 4 pairs of 24AWG solid bare copper and shall be flooded with a gel or grease compound to prevent moisture in the cable. The outer jacket shall be made of Polyethylene (PE) that is ultraviolet (UV) resistant and abrasion resistant. The cable shall be capable of performing from -40 °C to 70 °C.

Each end of the cable shall be terminated with an RJ-45 connector installed according to the TIA/EIA 568B standard.

The work shall be performed according to the applicable portions of Section 873 of the “Standard Specifications”, and details as shown on the plans.

Basis of Payment: This work will be paid for at the contract unit price per foot for OUTDOOR RATED NETWORK CABLE. The unit price shall include furnishing and installing the cable, and making all connections necessary for proper operation. Furnishing and installing the RJ-45 connectors to the OUTDOOR RATED NETWORK CABLE shall be incidental to this pay item.

#### **MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION (SPECIAL).**

The Contractor shall not be required to pay the energy charges for the operation of the existing traffic signal installation. Full maintenance responsibility shall start as soon as the Contractor commences any work requiring access to the controller cabinet. **The intent of this pay item is for a short term maintenance transfer to the Contractor for minor traffic signal improvements. The Contractor will not be required to maintain this traffic signal installation for the duration of the contract.**

All improvements to the existing traffic signal controller shall be performed by the contractor in a timely manner. Once the improvements have been tested and accepted by the County, maintenance shall be transferred back to the County.

The Contractor shall have electricians on staff with IMSA Level II certification to provide signal maintenance.

This item shall include maintenance of all traffic signal equipment at the intersection, including cameras, emergency vehicle pre-emption equipment, master controllers, telephone service installations, communication equipment, communication cables and conduits to adjacent intersections.

Items that may require MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION (SPECIAL) may include the following: Removal of existing controller, Installation of a new controller, upgrade to existing controller, installation of a remote-controlled video system, installation of a P.T.Z camera, installation of L.E.D. internally illuminated street signs, installation of L.E.D. pedestrian signal heads or pushbuttons, and termination or splices of existing and/or proposed fiber optic cable.

The maintenance shall be according to Article 850 of the “Standard Specifications”, and the following contained herein.

The Contractor shall check all controllers weekly, 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 the emergency vehicle pre-emption system. 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 (2) 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 at least 2 STOP signs (R1-1-36) at each approach of the intersection as a temporary means of regulating traffic. At approaches where a yellow flashing indication is necessary, as directed by the Engineer, STOP signs will not be required. The Contractor shall furnish and equip all their signal maintenance vehicles 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 those which may be damaged or stolen.

The Contractor shall provide the Engineer with a 24-hour telephone number for traffic signal maintenance. The Contractor, or his representative, shall be available on a 24-hour basis to respond to emergency calls by the Traffic Engineer or other parties.

Traffic signal equipment which is lost or not returned to the County 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 County 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 County. 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 County's Traffic Signal Maintenance Contractor perform the maintenance work required. The County's Traffic Signal 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 County's Traffic Signal 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 (SPECIAL).

#### **UPGRADE EXISTING CONTROLLER TO NTCIP (SPECIAL)**

This item shall comply with Section 857 of the "Standard Specifications for Road and Bridge Construction" and shall also comply with the following requirements:

This work shall consist of upgrading an existing traffic signal controller to the manufacturer's latest version of National Transportation Communications for ITS Protocol (NTCIP) software, compatible with Lake County PASSAGE's central traffic signal management system, *icons*®.

Basis of Payment. This work will be paid for at the contract unit price each for UPGRADE EXISTING CONTROLLER TO NTCIP (SPECIAL), which price shall be payment in full for upgrading the existing controller to meet NTCIP Standards.

### **OPTIMIZE TRAFFIC SIGNAL SYSTEM (SPECIAL)**

Description:

This work shall consist of optimizing twenty two (22) traffic signals that will be operated within the Lake County Division of Transportation's *icons*® Advanced Traffic Management System (ATMS).

OPTIMIZE TRAFFIC SIGNAL SYSTEM (SPECIAL) applies when new or existing traffic signals, proposed to be interconnected to and operated within the County's *icons*® system, are to be optimized and a 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 and developing a time of day program.

The following traffic signals shall be optimized under this pay item:

Lewis Ave. at 14<sup>th</sup> St.  
Lewis Ave. at 10<sup>th</sup> St.  
Lewis Ave. at Dugdale Rd.  
Lewis Ave. at Belvidere Rd.  
Lewis Ave. at Washington St.  
Lewis Ave. at Brookside Ave.  
Lewis Ave. at Grand Ave.  
Lewis Ave. at Ridgeland Ave.  
Lewis Ave. at Glen Flora Ave.  
Glen Flora Ave. at Butrick St.  
Lewis Ave. at Harding Ave./Roger Edwards Ave.  
Lewis Ave. at Williamsburg Dr.  
Lewis Ave. at Sunset Rd.  
Lewis Ave. at Ballentine St.  
Lewis Ave. at York House Rd.  
York House Rd. at McAree Rd.  
Lewis Ave. at Beach Rd.  
Lewis Ave. at Wadsworth Rd.  
Lewis Ave. at 33<sup>rd</sup> St.  
Lewis Ave. at 27<sup>th</sup> St.  
Lewis Ave. at 21<sup>st</sup> St.  
Lewis Ave. at Rosecrans Ave. (IL Rte. 173)

**MAINTENANCE OF THE FOLLOWING NEWLY MODERNIZED INTERSECTIONS SHALL NOT BE TRANSFERRED TO THE COUNTY UNTIL THIS WORK IS COMPLETED AND ACCEPTED.**

Lewis Ave. at 14<sup>th</sup> St.  
Lewis Ave. at 10<sup>th</sup> St.  
Lewis Ave. at Dugdale Rd.  
Lewis Ave. at Belvidere Rd.  
Lewis Ave. at Washington St.  
Lewis Ave. at Brookside Ave.  
Lewis Ave. at Grand Ave.  
Lewis Ave. at Ridgeland Ave.  
Lewis Ave. at Glen Flora Ave.  
Lewis Ave. at Harding Ave./Roger Edwards Ave.  
Lewis Ave. at Williamsburg Dr.  
Lewis Ave. at Sunset Rd.  
Lewis Ave. at Ballentine St.  
Lewis Ave. at York House Rd.

After the signal improvements are completed, the subject traffic signals shall be optimized as specified by an approved Consultant who has previous experience in optimizing traffic signals. The Contractor shall contact the County Traffic Engineer at (847) 377-7000 for a listing of approved consultants. Traffic signal system optimization work, including fine-tuning adjustments of the optimized traffic signals, shall follow the requirements stated in the most recent IDOT District 1 SCAT Guidelines, except as noted herein.

A listing of existing signal equipment, interconnect information, and phasing data may be obtained from the Lake County Division of Transportation, if available and as appropriate. 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 (SPECIAL).

1. Traffic counts shall be taken at the subject intersections after the traffic signals are approved for operation by the County Traffic Engineer. Manual turning movement counts shall be conducted from 6:30 a.m. to 9:30 a.m. and 3:30 p.m. to 6:30 p.m. on typical weekday from PM Monday to AM Friday, and if necessary, on the weekend. The turning movement counts shall identify cars, heavy vehicles, buses, and pedestrian movements. No midday count shall be taken.

The consultant shall establish a midday program based, using engineering judgment, on the counts of the late AM peak period and/or the early PM peak period.

2. Appropriate signal timings and offsets shall be developed for each intersection and appropriate cycle lengths shall be developed for the 22 subject traffic signals using the latest build of SYNCHRO 7.
3. A meeting, that shall be held between the Lake County Division of Transportation staff and the SCAT consultant to review the SYNCHRO 7 results and reconcile proposed cycle lengths with those of several crossing arterials along the Lewis Ave. corridor.

4. Afterwards, the 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.
- (b) The following deliverable shall be provided for OPTIMIZE TRAFFIC SIGNAL SYSTEM (SPECIAL).

Consultant shall furnish to Lake County Division of Transportation two (2) copies of a SCAT Report for the optimized system. The report shall contain the following: turning movement counts, capacity analyses for each count period, computer optimization analysis for each count period, proposed implementation plans and summaries including system description, analysis methodology, and special recommendations and/or observations.

Basis of Payment:

The work shall be paid for at the contract unit each for OPTIMIZE TRAFFIC SIGNAL SYSTEM (SPECIAL), 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 7 analysis, 25 percent of the bid price will be paid. Following the meeting with the County and the setup and fine tuning of the timings, 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 2 reports and CD's have been submitted

State of Illinois  
Department of Transportation  
Bureau of Local Roads and Streets

SPECIAL PROVISION  
FOR  
COOPERATION WITH UTILITIES

Effective: January 1, 1999  
Revised: January 1, 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.

Replace Article 105.07 of the Standard Specifications with the following:

**"105.07 Cooperation with Utilities.** The adjustment of utilities consists of the relocation, removal, replacement, rearrangements, reconstruction, improvement, disconnection, connection, shifting, new installation or altering of an existing utility facility in any manner.

When the plans or special provisions include information pertaining to the location of underground utility facilities, such information represents only the opinion of the Department as to the location of such utilities and is only included for the convenience of the bidder. The Department assumes no responsibility in respect to the sufficiency or the accuracy of the information shown on the plans relative to the location of the underground utility facilities.

Utilities which are to be adjusted shall be adjusted by the utility owner or the owner's representative or by the Contractor as a contract item. Generally, arrangements for adjusting existing utilities will be made by the Department prior to project construction; however, utilities will not necessarily be adjusted in advance of project construction and, in some cases, utilities will not be removed from the proposed construction limits. When utility adjustments must be performed in conjunction with construction, the utility adjustment work will be shown on the plans and/or covered by Special Provisions.

When the Contractor discovers a utility has not been adjusted by the owner or the owner's representative as indicated in the contract documents, or the utility is not shown on the plans or described in the Special Provisions as to be adjusted in conjunction with construction, the Contractor shall not interfere with said utility, and shall take proper precautions to prevent damage or interruption of the utility and shall promptly notify the Engineer of the nature and location of said utility.

All necessary adjustments, as determined by the Engineer, of utilities not shown on the plans or not identified by markers, will be made at no cost to the Contractor except traffic structures, light poles, etc., that are normally located within the proposed construction limits as hereinafter defined will not be adjusted unless required by the proposed improvement.

(a) Limits of Proposed Construction for Utilities Paralleling the Roadway. For the purpose of this Article, limits of proposed construction for utilities extending in the same longitudinal direction as the roadway, shall be defined as follows:

- (1) The horizontal limits shall be a vertical plane, outside of, parallel to, and 600 mm (2 ft) distant at right angles from the plan or revised slope limits.

In cases where the limits of excavation for structures are not shown on the plans, the horizontal limits shall be a vertical plane 1.2 m (4 ft) outside the edges of structure footings or the structure where no footings are required.

- (2) The upper vertical limits shall be the regulations governing the roadbed clearance for the specific utility involved.
- (3) The lower vertical limits shall be the top of the utility at the depth below the proposed grade as prescribed by the governing agency or the limits of excavation, whichever is less.

(b) Limits of Proposed Construction for Utilities Crossing the Roadway. For the purpose of this Article, limits of proposed construction for utilities crossing the roadway in a generally transverse direction shall be defined as follows:

- (1) Utilities crossing excavations for structures that are normally made by trenching such as sewers, underdrains, etc. and all minor structures such as manholes, inlets, foundations for signs, foundations for traffic signals, etc., the limits shall be the space to be occupied by the proposed permanent construction unless otherwise required by the regulations governing the specific utility involved.
- (2) For utilities crossing the proposed site of major structures such as bridges, sign trusses, etc., the limits shall be as defined above for utilities extending in the same general direction as the roadway.

The Contractor may make arrangements for adjustment of utilities outside of the limits of proposed construction provided the Contractor furnishes the Department with a signed agreement with the utility owner covering the adjustments to be made. The cost of any adjustments made outside the limits of proposed construction shall be the responsibility of the Contractor unless otherwise provided.

The Contractor shall request all utility owners to field locate their facilities according to Article 107.31. The Engineer may make the request for location from the utility after receipt of notice from the Contractor. On request, the Engineer will make an inspection to verify that the utility company has field located its facilities, but will not assume responsibility for the accuracy of such work. The Contractor shall be responsible for maintaining the excavations or markers provided by the utility owners. This field location procedure may be waived if the utility owner has stated in writing to the Department it is satisfied the construction plans are sufficiently accurate. If the utility owner does not submit such statement to the Department, and they do not field locate their facilities in both horizontal and vertical alignment, the Engineer will authorize the Contractor in writing to proceed to locate the facilities in the most economical and reasonable manner, subject to the approval of the Engineer, and be paid according to Article 109.04.

The Contractor shall coordinate with any planned utility adjustment or new installation and the Contractor shall take all precautions to prevent disturbance or damage to utility facilities. Any failure on the part of the utility owner, or their representative, to proceed with any planned utility adjustment or new installation shall be reported promptly by the Contractor to the Engineer orally and in writing.

The Contractor shall take all necessary precautions for the protection of the utility facilities. The Contractor shall be responsible for any damage or destruction of utility facilities resulting from neglect, misconduct, or omission in the Contractor's manner or method of execution or nonexecution of the work, or caused by defective work or the use of unsatisfactory materials. Whenever any damage or destruction of a utility facility occurs as a result of work performed by the Contractor, the utility company will be immediately notified. The utility company will make arrangements to restore such facility to a condition equal to that existing before any such damage or destruction was done.

It is understood and agreed that the Contractor has considered in the bid all of the permanent and temporary utilities in their present and/or adjusted positions.

No additional compensation will be allowed for any delays, inconvenience, or damage sustained by the Contractor due to any interference from the said utility facilities or the operation of relocating the said utility facilities.

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:

Lake County Division of Transportation, City of Waukegan

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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		
	$\leq 0.16\%$	$> 0.16\% - 0.27\%$	$> 0.27\%$
	$\leq 0.16\%$	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.

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

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

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

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

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

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

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

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

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

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

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

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

- 4) Microsilica or High Reactivity Metakaolin. Microsilica solids or high reactivity metakaolin shall be added to the mixture at a minimum 25 lb/cu yd (15 kg/cu m) or 27 lb/cu yd (16 kg/cu m) respectively.
- c) Mixture Option 3. The cement used shall have a maximum total equivalent alkali content ( $\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$ ) of 0.60 percent. When aggregate in Group II is involved, any finely divided mineral may be used with a portland cement.
- d) Mixture Option 4. The cement used shall have a maximum total equivalent alkali content ( $\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$ ) of 0.45 percent. When aggregate in Group II or III is involved, any finely divided mineral may be used with a portland cement.
- e) Mixture Option 5. The proposed cement or finely divided mineral may be used if the ASTM C 1567 expansion value is  $\leq 0.16$  percent when performed on the aggregate in the concrete mixture with the highest ASTM C 1260 test result. The ASTM C 1567 test will be valid for two years, unless the Engineer determines the materials have changed significantly. For latex concrete, the ASTM C 1567 test shall be performed without the latex. The 0.20 percent autoclave expansion limit in ASTM C 1567 shall not apply.

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

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

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

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

80186

**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

## 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

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

Effective: April 1, 2009

Revised: July 1, 2009

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

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

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

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

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

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

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

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

If the Contractor fails to correct the deficiency within the specified time frame, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency continues to exist. The calendar day(s) will begin when the time period for correction is exceeded and end

with the Engineer's written acceptance of the correction. The daily monetary deduction will be \$1,000.00 for each deficiency identified.

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

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

## **DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (DBE)**

Effective: September 1, 2000

Revised: January 1, 2010

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

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

**CONTRACTOR ASSURANCE.** The Contractor makes the following assurance and agrees to include the assurance in each subcontract that the Contractor signs with a subcontractor:

The Contractor, subrecipient, or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of contracts funded in whole or in part with federal or state funds. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

**OVERALL GOAL SET FOR THE DEPARTMENT.** As a requirement of compliance with 49 CFR part 26, the Department has set an overall goal for DBE participation in its federally assisted contracts. That goal applies to all federal-aid funds the Department will expend in its federally assisted contracts for the subject reporting fiscal year. The Department is required to make a good faith effort to achieve the overall goal. The dollar amount paid to all approved DBE companies performing work called for in this contract is eligible to be credited toward fulfillment of the Department's overall goal.

**CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR.** This contract includes a specific DBE utilization goal established by the Department. The goal has been included because the Department has determined that the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies. This determination is based on an assessment of the type of work, the location of the work, and the availability of DBE companies to do a part of the work. The assessment indicates that, in the absence of unlawful discrimination, and in an arena of fair and open competition, DBE companies can be expected to perform 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 only award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set forth in this Special Provision:

- (a) The bidder documents that enough DBE participation has been obtained to meet the goal; or
- (b) The bidder documents that a good faith effort has been made to meet the goal, even though the effort did not succeed in obtaining enough DBE participation to meet the goal.

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

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

- (a) The bidder shall submit a Disadvantaged Business Utilization Plan on Department forms SBE 2025 and 2026 with the bid.
- (b) The Utilization Plan shall indicate that the bidder either has obtained sufficient DBE participation commitments to meet the contract goal or has not obtained enough DBE participation commitments in spite of a good faith effort to meet the goal. The Utilization Plan shall further provide the name, telephone number, and telefax number of a responsible official of the bidder designated for purposes of notification of plan approval or disapproval under the procedures of this Special Provision.
- (c) The Utilization Plan shall include a DBE Participation Commitment Statement, Department form SBE 2025, for each DBE proposed for the performance of work to achieve the contract goal. For bidding purposes, submission of the completed SBE 2025 forms, signed by the DBEs and faxed to the bidder will be acceptable as long as the original is available and provided upon request. All elements of information indicated on the said form shall be provided, including but not limited to the following:
  - (1) The names and addresses of DBE firms that will participate in the contract;
  - (2) A description, including pay item numbers, of the work each DBE will perform;
  - (3) The dollar amount of the participation of each DBE firm participating. The dollar amount of participation for identified work shall specifically state the quantity, unit price, and total subcontract price for the work to be completed by the DBE. If partial

pay items are to be performed by the DBE, indicate the portion of each item, a unit price where appropriate and the subcontract price amount;

- (4) DBE Participation Commitment Statements, form SBE 2025, signed by the bidder and each participating DBE firm documenting the commitment to use the DBE subcontractors whose participation is submitted to meet the contract goal;
- (5) If the bidder is a joint venture comprised of DBE companies and non-DBE companies, the plan must also include a clear identification of the portion of the work to be performed by the DBE partner(s); and,
- (6) If the contract goal is not met, evidence of good faith efforts.

GOOD FAITH EFFORT PROCEDURES. The contract will not be awarded until the Utilization Plan submitted by the apparent successful bidder is approved. All information submitted by the bidder must be complete, accurate and adequately document the good faith efforts of the bidder before the Department will commit to the performance of the contract by the bidder. The Utilization Plan will be approved by the Department if the Utilization Plan commits sufficient commercially useful DBE work performance to meet the contract goal or the bidder submits sufficient documentation of a good faith effort to meet the contract goal pursuant to 49 CFR part 26, Appendix A. The Utilization Plan will not be approved by the Department if the Utilization Plan does not commit sufficient DBE participation to meet the contract goal unless the apparent successful bidder documented in the Utilization Plan that it made a good faith effort to meet the goal. This means that the bidder must show that all necessary and reasonable steps were taken to achieve the contract goal. Necessary and reasonable steps are those which, by their scope, intensity and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not successful. The Department will consider the quality, quantity, and intensity of the kinds of efforts that the bidder has made. Mere *pro forma* efforts, in other words, efforts done as a matter of form, are not good faith efforts; rather, the bidder is expected to have taken genuine efforts that would be reasonably expected of a bidder actively and aggressively trying to obtain DBE participation sufficient to meet the contract goal.

- (a) The following is a list of types of action that the Department will consider as part of the evaluation of the bidder's good faith efforts to obtain participation. These listed factors are not intended to be a mandatory checklist and are not intended to be exhaustive. Other factors or efforts brought to the attention of the Department may be relevant in appropriate cases, and will be considered by the Department.
  - (1) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBE companies that have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBE companies to respond to the solicitation. The bidder must determine with certainty if the DBE companies are interested by taking appropriate steps to follow up initial solicitations.
  - (2) Selecting portions of the work to be performed by DBE companies in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to

facilitate DBE participation, even when the prime Contractor might otherwise prefer to perform these work items with its own forces.

- (3) Providing interested DBE companies with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
  - (4) a. Negotiating in good faith with interested DBE companies. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBE companies that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBE companies to perform the work.
    - b. A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBE companies is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a bidder to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from DBE companies if the price difference is excessive or unreasonable.
  - (5) Not rejecting DBE companies as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.
  - (6) Making efforts to assist interested DBE companies in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.
  - (7) Making efforts to assist interested DBE companies in obtaining necessary equipment, supplies, materials, or related assistance or services.
  - (8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBE companies.
- (b) If the Department determines that the apparent successful bidder has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided that it is otherwise eligible for award. If the Department determines that the bidder has failed to meet the requirements of this

Special Provision and that a good faith effort has not been made, the Department will notify the responsible company official designated in the Utilization Plan that the bid is not responsive. The notification shall include a statement of reasons why good faith efforts have not been found.

- (c) The bidder may request administrative reconsideration of a determination adverse to the bidder within the five working days after receipt of the notification date of the determination by delivering the request to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764 (Telefax: (217)785-1524). Deposit of the request in the United States mail on or before the fifth business day shall not be deemed delivery. The determination shall become final if a request is not made and delivered. A request may provide additional written documentation and/or argument concerning the issue of whether an adequate good faith effort was made to meet the contract goal. The request will be forwarded to the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person in order to consider all issues of whether the bidder made a good faith effort to meet the goal. After the review by the Reconsideration Officer, the bidder will be sent a written decision within ten working days after receipt of the request for reconsideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid not responsive.

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

- (a) DBE as the Contractor: 100 percent goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE does not count toward the DBE goals.
- (b) DBE as a joint venture Contractor: 100 percent goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.
- (c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE

subcontractor from the prime Contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE does not count toward the DBE goal.

(d) DBE as a trucker: 100 percent goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed, and insured by the DBE must be used on the contract. Credit will be given for the following:

(1) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.

(2) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission it receives as a result of the lease arrangement.

(e) DBE as a material supplier:

(1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.

(2) 100 percent goal credit for the cost of materials or supplies obtained from a DBE manufacturer.

(3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a regular dealer or manufacturer.

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

(a) No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be submitted to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764. Telephone number (217) 785-4611. Telefax number (217) 785-1524.

- (b) The Contractor must notify and obtain written approval from the Department's Bureau of Small Business Enterprises prior to replacing a DBE or making any change in the participation of a DBE. Approval for replacement will be granted only if it is demonstrated that the DBE is unable or unwilling to perform. The Contractor must make every good faith effort to find another certified DBE subcontractor to substitute for the original DBE. The good faith efforts shall be directed at finding another DBE to perform at least the same amount of work under the contract as the original DBE, to the extent needed to meet the contract goal.
- (c) Any deviation from the DBE condition-of-award or contract specifications must be approved, in writing, by the Department. The Contractor shall notify affected DBEs in writing of any changes in the scope of work which result in a reduction in the dollar amount condition-of-award to the contract.
- (d) In addition to the above requirements for reductions in the condition of award, additional requirements apply to the two cases of Contractor-initiated work substitution proposals. Where the contract allows alternate work methods which serve to delete or create underruns in condition of award DBE work, and the Contractor selects that alternate method or, where the Contractor proposes a substitute work method or material that serves to diminish or delete work committed to a DBE and replace it with other work, then the Contractor must demonstrate one of the following:
  - (1) That the replacement work will be performed by the same DBE (as long as the DBE is certified in the respective item of work) in a modification of the condition of award; or
  - (2) That the DBE is aware that its work will be deleted or will experience underruns and has agreed in writing to the change. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so; or
  - (3) That the DBE is not capable of performing the replacement work or has declined to perform the work at a reasonably competitive price. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so.
- (e) Where the revision includes work committed to a new DBE subcontractor, not previously involved in the project, then a Request for Approval of Subcontractor, Department form BC 260A, must be signed and submitted.
- (f) If the commitment of work is in the form of additional tasks assigned to an existing subcontract, then a new Request for Approval of Subcontractor shall not be required. However, the Contractor must document efforts to assure that the existing DBE subcontractor is capable of performing the additional work and has agreed in writing to the change.
- (g) All work indicated for performance by an approved DBE shall be performed, managed, and supervised by the DBE executing the Participation Statement. The Contractor shall not terminate for convenience a DBE listed in the Utilization Plan and then perform the

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

- (h) The Contractor shall maintain a record of payments for work performed to the DBE participants. The records shall be made available to the Department for inspection upon request. After the performance of the final item of work or delivery of material by a DBE and final payment therefore to the DBE by the Contractor, but not later than thirty calendar days after payment has been made by the Department to the Contractor for such work or material, the Contractor shall submit a DBE Payment Agreement on Department form SBE 2115 to the Regional Engineer. If full and final payment has not been made to the DBE, the DBE Payment Agreement shall indicate whether a disagreement as to the payment required exists between the Contractor and the DBE or if the Contractor believes that the work has not been satisfactorily completed. If the Contractor does not have the full amount of work indicated in the Utilization Plan performed by the DBE companies indicated in the Utilization Plan and after good faith efforts are reviewed, the Department may deduct from contract payments to the Contractor the amount of the goal not achieved as liquidated and ascertained damages. The Contractor may request an administrative reconsideration of any amount deducted as damages pursuant to subsection (j) of this part.
- (i) The Department reserves the right to withhold payment to the Contractor to enforce the provisions of this Special Provision. Final payment shall not be made on the contract until such time as the Contractor submits sufficient documentation demonstrating achievement of the goal in accordance with this Special Provision or after liquidated damages have been determined and collected.
- (j) Notwithstanding any other provision of the contract, including but not limited to Article 109.09 of the Standard Specifications, the Contractor may request administrative reconsideration of a decision to deduct the amount of the goal not achieved as liquidated damages. A request to reconsider shall be delivered to the Contract Compliance Section and shall be handled and considered in the same manner as set forth in paragraph (c) of "Good Faith Effort Procedures" of this Special Provision, except a final decision that a good faith effort was not made during contract performance to achieve the goal agreed to in the Utilization Plan shall be the final administrative decision of the Department.

**DOWEL BARS (BDE)**

Effective: April 1, 2007

Revised: January 1, 2008

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

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

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

## 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.

FHWA hourly rate = (monthly rate/176) x (model year adj.) x (Illinois adj.) + 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 x (FHWA hourly rate - 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

**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 4<sup>th</sup> 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 Concrete..... 1006.13”

Add the following to Article 504.02 of the Standard Specifications:

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

Revise Article 1006.13 of the Standard Specifications to read:

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

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

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

80203

**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

**PAVEMENT MARKING REMOVAL (BDE)**

Effective: April 1, 2009

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

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

80231

## **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

**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

## 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

**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 - 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

## **SELF-CONSOLIDATING CONCRETE FOR CAST-IN-PLACE CONSTRUCTION (BDE)**

Effective: November 1, 2005

Revised: January 1, 2009

Definition. Self-consolidating concrete is a flowable mixture that does not require mechanical vibration for consolidation.

Usage. Self-consolidating concrete may be used for cast-in-place concrete construction items involving Class MS, DS, and SI concrete.

Materials. Materials shall be according to Section 1021 of the Standard Specifications.

Mix Design Criteria. Article 1020.04 of the Standard Specifications shall apply, except as follows:

- (a) The cement factor shall be according to Article 1020.04 of the Standard Specifications. If the maximum cement factor is not specified, it shall not exceed 7.05 cwt/cu yd (418 kg/cu m). The cement factor shall not be reduced if a water-reducing, retarding, or high range water-reducing admixture is used.
- (b) The maximum allowable water/cement ratio shall be according to Article 1020.04 of the Standard Specifications or 0.44, whichever is lower.
- (c) The slump requirements shall not apply.
- (d) The coarse aggregate gradations shall be CA 13, CA 14, CA 16, or a blend of these gradations. CA 11 may be used when the Contractor provides satisfactory evidence to the Engineer that the mix will not segregate. The fine aggregate proportion shall be a maximum 50 percent by weight (mass) of the total aggregate used.
- (e) The slump flow range shall be  $\pm 2$  in. ( $\pm 50$  mm) of the Contractor target value, and within the overall Department range of 20 in. (510 mm) minimum to 28 in. (710 mm) maximum.
- (f) The visual stability index shall be a maximum of 1.
- (g) The J-ring value shall be a maximum of 4 in. (100 mm). The Contractor may specify a lower maximum in the mix design.
- (h) The L-box blocking ratio shall be a minimum of 60 percent. The Contractor may specify a higher minimum in the mix design.
- (i) The column segregation index shall be a maximum 15 percent.
- (j) The hardened visual stability index shall be a maximum of 1.

Test Methods. Illinois Test Procedures SCC-1, SCC-2, SCC-3, SCC-4, SCC-5, SCC-6, and Illinois Modified AASHTO T 22, 23, 121, 126, 141, 152, 177, 196, and 309 shall be used for testing of self-consolidating concrete mixtures.

Mix Design Submittal. The Contractor's Level III PCC Technician shall submit a mix design according to the "Portland Cement Concrete Level III Technician" course manual, except target slump information is not applicable and will not be required. However, a slump flow target range shall be submitted. In addition, the design mortar factor may exceed 1.10 and durability test data will be waived.

A J-ring value shall be submitted if a lower mix design maximum will apply. An L-box blocking ratio shall be submitted if a higher mix design minimum will apply. The Contractor shall also indicate applicable construction items for the mix design.

Trial mixture information will be required by the Engineer. A trial mixture is a batch of concrete tested by the Contractor to verify the Contractor's mix design will meet specification requirements. Trial mixture information shall include test results as specified in the "Portland Cement Concrete Level III Technician" course manual. Test results shall also include slump flow, visual stability index, J-ring value, L-box blocking ratio, column segregation index, and hardened visual stability index. For the trial mixture, the slump flow shall be near the midpoint of the proposed slump flow target range.

Trial Batch. A minimum 2 cu yd (1.5 cu m) trial batch shall be produced, and the self-consolidating concrete admixture dosage proposed by the Contractor shall be used. The slump flow shall be within 1.0 in. (25 mm) of the maximum slump flow range specified by the Contractor, and the air content shall be within the top half of the allowable specification range.

The trial batch shall be scheduled a minimum of 21 calendar days prior to anticipated use and shall be performed in the presence of the Engineer.

The Contractor shall provide the labor, equipment, and materials to test the concrete. The mixture will be evaluated by the Engineer for strength, air content, slump flow, visual stability index, J-ring value, L-box blocking ratio, column segregation index, and hardened visual stability index.

Upon review of the test data from the trial batch, the Engineer will verify or deny the use of the mix design and notify the Contractor. Verification by the Engineer will include the Contractor's target slump flow range. If applicable, the Engineer will verify the Contractor's maximum J-ring value and minimum L-box blocking ratio.

A new trial batch will be required whenever there is a change in the source of any component material, proportions beyond normal field adjustments, dosage of the self-consolidating concrete admixture, batch sequence, mixing speed, mixing time, or as determined by the Engineer. The testing criteria for the new trial batch will be determined by the Engineer.

When necessary, the trial batches shall be disposed of according to Article 202.03 of the Standard Specifications.

Mixing Portland Cement Concrete. In addition to Article 1020.11 of the Standard Specifications, the mixing time for central-mixed concrete shall not be reduced as a result of a mixer performance test. Truck-mixed or shrink-mixed concrete shall be mixed in a truck mixer for a minimum of 100 revolutions.

Wash water, if used, shall be completely discharged from the drum or container before the succeeding batch is introduced.

The batch sequence, mixing speed, and mixing time shall be appropriate to prevent cement balls and mix foaming for central-mixed, truck-mixed, and shrink-mixed concrete.

Falsework and Forms. In addition to Articles 503.05 and 503.06 of the Standard Specifications, the Contractor shall ensure the design of the falsework and forms is adequate for the additional form pressure caused by the fluid concrete. Forms shall be tight to prevent leakage of fluid concrete.

When the form height for placing the self-consolidating concrete is greater than 10.0 ft (3.0 m), direct monitoring of form pressure shall be performed according to Illinois Test Procedure SCC-10. The monitoring requirement is a minimum, and the Contractor shall remain responsible for adequate design of the falsework and forms. A minimum of one sensor will be required below each point of concrete placement to measure the maximum pressure. The first sensor below the point of concrete placement shall be approximately 12 in. (300 mm) above the base of the formwork. Additional sensors shall be installed above the bottom sensor when the form height is greater than 10.0 ft (3.0 m) above the bottom sensor. The additional sensors shall be installed at a maximum vertical spacing of 10.0 ft (3.0 m). The Contractor shall record the formwork pressure during concrete placement. This information shall be used by the Contractor to prevent the placement rate from exceeding the maximum formwork pressure allowed, to monitor the thixotropic change in the concrete during the pour, and to make appropriate adjustments to the mix design. This information shall be provided to the Engineer during the pour.

Placing and Consolidating. Concrete placement and consolidation shall be according to Article 503.07 of the Standard Specifications, except as follows:

Revise the third paragraph of Article 503.07 of the Standard Specifications to read:

“Open troughs and chutes shall extend as nearly as practicable to the point of deposit. The drop distance of concrete shall not exceed 5 ft (1.5 m). If necessary, a tremie shall be used to meet this requirement. The maximum distance of horizontal flow from the point of deposit shall be 25 ft (7.6 m), unless approved otherwise by the Engineer. For drilled shafts, free fall placement will not be permitted.”

Delete the seventh, eighth, ninth, and tenth paragraphs of Article 503.07 of the Standard Specifications.

Add to the end of the eleventh paragraph of Article 503.07 of the Standard Specifications the following:

“Concrete shall be rodded with a piece of lumber, conduit, or vibrator if the material has lost its fluidity prior to placement of additional concrete. The vibrator shall be the pencil head type with a maximum diameter or width of 1 in. (25 mm). Any other method for restoring the fluidity of the concrete shall be approved by the Engineer.”

Quality Control by Contractor at Plant. The specified test frequencies for aggregate gradation, aggregate moisture, air content, unit weight/yield, and temperature shall be performed as indicated in the contract.

Slump flow, visual stability index, and J-ring or L-box tests shall be performed as needed to control production. The column segregation index test and hardened visual stability index test will not be required to be performed at the plant.

Quality Control by Contractor at Jobsite. The specified test frequencies for air content, strength, and temperature shall be performed as indicated in the contract.

Slump flow, visual stability index, and J-ring or L-box tests shall be performed on the first two truck deliveries of the day, and every 50 cu yd (40 cu m) thereafter. The Contractor shall select either the J-ring or L-box test for jobsite testing.

The column segregation index test will not be required to be performed at the jobsite. The hardened visual stability index test shall be performed on the first truck delivery of the day, and every 300 cu yd (230 cu m) thereafter. Slump flow, visual stability index, J-ring value or L-box blocking ratio, air content, and concrete temperature shall be recorded for each hardened visual stability index test.

The Contractor shall retain all hardened visual stability index cut cylinder specimens until the Engineer notifies the Contractor that the specimens may be discarded.

If mix foaming or other potential detrimental material is observed during placement or at the completion of the pour, the material shall be removed while the concrete is still plastic.

Quality Assurance by Engineer at Plant. For air content and aggregate gradation, quality assurance independent sample testing and split sample testing will be performed as indicated in the contract.

For slump flow, visual stability index, and J-ring or L-box tests, quality assurance independent sample testing and split sample testing will be performed as determined by the Engineer.

Quality Assurance by Engineer at Jobsite. For air content and strength, quality assurance independent sample testing and split sample testing will be performed as indicated in the contract.

For slump flow, visual stability index, J-ring or L-box, and hardened visual stability index tests, quality assurance independent sample testing will be performed as determined by the Engineer.

For slump flow and visual stability index quality assurance split sample testing, the Engineer will perform tests at the beginning of the project on the first three tests performed by the Contractor. Thereafter, a minimum of ten percent of total tests required of the Contractor will be performed per plant, which will include a minimum of one test per mix design. The acceptable limit of precision will be 1.5 in. (40 mm) for slump flow and a limit of precision will not apply to the visual stability index.

For the J-ring or the L-box quality assurance split sample testing, a minimum of 80 percent of the total tests required of the Contractor will be witnessed by the Engineer per plant, which will include a minimum of one witnessed test per mix design. The Engineer reserves the right to conduct quality assurance split sample testing. The acceptable limit of precision will be 1.5 in. (40 mm) for the J-ring value and ten percent for the L-box blocking ratio.

For each hardened visual stability index test performed by the Contractor, the cut cylinders shall be presented to the Engineer for determination of the rating. The Engineer reserves the right to conduct quality assurance split sample testing. A limit of precision will not apply to the hardened visual stability index.

80152

## **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

## 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<sub>2</sub>). 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  $425 \pm 3$  °F ( $218.3 \pm 2$  °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 Reflectance .....75 percent min.

\*Yellow: Daylight Reflectance .....45 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  $425 \pm 3$  °F ( $218.3 \pm 2$  °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 **1**. 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

**WORKING DAYS (BDE)**

Effective: January 1, 2002

The Contractor shall complete the work within *160* working days.

80071

**REQUIRED CONTRACT PROVISIONS  
FEDERAL-AID CONSTRUCTION CONTRACTS**

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**ATTACHMENTS**

**A. Employment Preference for Appalachian Contracts  
(included in Appalachian contracts only)**

**I. GENERAL**

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

- Section I, paragraph 2;
- Section IV, paragraphs 1, 2, 3, 4 and 7;
- Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6 and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

6. Selection of Labor: During the performance of this contract, the contractor shall not:

- a. Discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or

- b. Employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

**II. NONDISCRIMINATION**

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

**1. Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60 (and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

- a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.
- b. The contractor will accept as his operating policy the following statement: "It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job-training."

**2. EEO Officer:** The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for an must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

**3. Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

- a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.
- b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.
- c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.
- d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees,

applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

**4. Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employees referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish which such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

**5. Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

#### **6. Training and Promotion:**

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be

in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

**7. Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the SHA and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

**8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from  
and to utilize DBE subcontractors or subcontractors with meaningful  
minority group and female representation among their employees.

Contractors shall obtain lists of DBE construction firms from SHA

personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

**9. Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;

(3) The progress and efforts being made in locating, hiring, training,

qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of

DBE subcontractors or subcontractors with meaningful minority and

female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

### III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

### IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located

on roadways classified as local roads or rural minor collectors, which are exempt.)

#### 1. General:

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

#### 2. Classification:

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the

contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the question, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advised the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

### 3. Payment of Fringe Benefits:

a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any cost reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

### 4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

#### a. Apprentices:

(1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any

employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid

the full amount of fringe benefits listed on the wage determination

for the applicable classification. If the Administrator for the Wage

and Hour Division determines that a different practice prevails for

the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

#### b. Trainees:

(1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which cases such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration

withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

**c. Helpers:**

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV. 2. Any worker listed on a payroll at a helper wage rate, who is not a helper under a approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

**5. Apprentices and Trainees (Programs of the U.S. DOT):**

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

**6. Withholding:**

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainee's and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

**7. Overtime Requirements:**

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

**8. Violation:**

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10 for each calendar day on which such employee was required or

permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

**9. Withholding for Unpaid Wages and Liquidated Damages:**

The SHA shall; upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

**V. STATEMENTS AND PAYROLLS**

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

**1. Compliance with Copeland Regulations (29 CFR 3):**

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

**2. Payrolls and Payroll Records:**

- a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.
- b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.
- c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely

all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for submitting payroll copies of all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

- (1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;
- (2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;
- (3) that each laborer or mechanic has been paid not less than the applicable wage rate and fringe benefits or cash equivalent for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S. C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

## VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all federal-aid contracts on the national highway system, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:

- a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.
- b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.
- c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data

required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

## VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractors' own organization (23 CFR 635).

a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

## VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in

surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

#### **IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS**

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

##### **NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS**

18 U.S.C. 1020 reads as follows:

*“Whoever, being an officer, agent or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or*

*Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or*

*Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;*

*Shall be fined not more than \$10,000 or imprisoned not more than 5 years or both.”*

#### **X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT**

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more).

By submission of this bid or the execution of this contract, or

subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 *et seq.*, as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 *et seq.*, as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

#### **XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION**

1. Instructions for Certification - Primary Covered Transactions:

(Applicable to all Federal-aid contracts - 49 CFR 29)

- a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.
- c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.
- d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal

is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification in all lower tier covered transactions

and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded from Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

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#### **Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Primary Covered Transactions**

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and
- d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

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#### **2. Instructions for Certification - Lower Tier Covered Transactions:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealing.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

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2. Where the prospective primary participant is unable to certify

**Certification Regarding Debarment, Suspension, Ineligibility And  
Voluntary Exclusion-Lower Tier Covered Transactions:**

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

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**XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR  
LOBBYING**

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**MINIMUM WAGES FOR FEDERAL AND FEDERALLY  
ASSISTED CONSTRUCTION CONTRACTS**

This project is funded, in part, with Federal-aid funds and, as such, is subject to the provisions of the Davis-Bacon Act of March 3, 1931, as amended (46 Sta. 1494, as amended, 40 U.S.C. 276a) and of other Federal statutes referred to in a 29 CFR Part 1, Appendix A, as well as such additional statutes as may from time to time be enacted containing provisions for the payment of wages determined to be prevailing by the Secretary of Labor in accordance with the Davis-Bacon Act and pursuant to the provisions of 29 CFR Part 1. The prevailing rates and fringe benefits shown in the General Wage Determination Decisions issued by the U.S. Department of Labor shall, in accordance with the provisions of the foregoing statutes, constitute the minimum wages payable on Federal and federally assisted construction projects to laborers and mechanics of the specified classes engaged on contract work of the character and in the localities described therein.

General Wage Determination Decisions, modifications and supersedes decisions thereto are to be used in accordance with the provisions of 29 CFR Parts 1 and 5. Accordingly, the applicable decision, together with any modifications issued, must be made a part of every contract for performance of the described work within the geographic area indicated as required by an applicable DBRA Federal prevailing wage law and 29 CFR Part 5. The wage rates and fringe benefits contained in the General Wage Determination Decision shall be the minimum paid by contractors and subcontractors to laborers and mechanics.

**NOTICE**

The most current **General Wage Determination Decisions** (wage rates) are available on the IDOT web site. They are located on the Letting and Bidding page at <http://www.dot.state.il.us/desenv/delett.html>.

In addition, ten (10) days prior to the letting, the applicable Federal wage rates will be e-mailed to subscribers. It is recommended that all contractors subscribe to the Federal Wage Rates List or the Contractor's Packet through IDOT's subscription service.

PLEASE NOTE: if you have already subscribed to the Contractor's Packet you will automatically receive the Federal Wage Rates.

The instructions for subscribing are at <http://www.dot.state.il.us/desenv/subsc.html>.

If you have any questions concerning the wage rates, please contact IDOT's Chief Contract Official at 217-782-7806.