BID PROPOSAL INSTRUCTIONS

ABOUT IDOT PROPOSALS: All proposals are potential bidding proposals. Each proposal contains all certifications and affidavits, a proposal signature sheet and a proposal bid bond.

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.

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.

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 124) 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.

WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID?

When a prospective prime bidder submits a "Request for Authorization to Bid/or Not For Bid Status"(BDE 124) 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 and the Chief Procurement Officer 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 to Bid or Not For Bid Report within a reasonable time of complete and correct original document submittal should contact the Department as to the status. 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 bidder'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 or revision will be included with the Electronic Plans and Proposals. 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 service emails 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 DOT.D&Econtracts@illlinois.gov

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

STANDARD GUIDELINES FOR SUBMITTING BIDS

- All pages should be single sided.
- Use the Cover Page that is provided in the Bid Proposal (posted on the IDOT Web Site) as the first page of your submitted bid. It has the item number in large bold type in the upper left-hand corner and lines provided for your company name and address in the upper right-hand corner.
- Do not use report covers, presentation folders or special bindings and do not staple multiple times on left side like a book. Use only 1 staple in the upper left hand corner. Make suer all elements of your bid are stapled together including the bid bond or guaranty check (if required).
- Do not include any certificates of eligibility, your authorization to bid, Addendum Letters or affidavit of availability.
- Do not include the Subcontractor Documentation with your bid (pages i – iii and pages a – g). This documentation is required only if you are awarded the project.
- Use the envelope cover sheet (provided with the proposal) as the cover for the proposal envelope.
- Do not rely on overnight services to deliver your proposal prior to 10 AM on letting day. It will not be read if it is delivered after 10 AM.
- Do not submit your Substance Abuse Prevention Program (SAPP) with your bid. If you are awarded the contract this form is to be submitted to the district engineer at the pre-construction conference.

BID SUBMITTAL CHECKLIST

☐ **Cover page** (the sheet that has the item number on it) **–** This should be the first page of your bid proposal, **followed by your bid (the Schedule of Prices/Pay Items).** If you are using special software or CBID to generate your schedule of prices, do not include the blank pages of the schedule of prices that came with the proposal package.

☐ **Page 4 (Item 9)** – Check "YES" if you will use a subcontractor(s) with an annual value over $50,000. Include the subcontractor(s) name, address, general type of work to be performed and the dollar amount. If you will use subcontractor(s) but are uncertain who or the dollar amount; check "YES" but leave the lines blank.

☐ **After page 4 –** Insert the following documents: The I**llinois Office Affidavit** (Not applicable to federally funded projects) followed by Cost Adjustments for Steel, Bituminous and Fuel (if applicable) and the Contractor Letter of Assent (if applicable). The general rule should be, if you don't know where it goes, put it after page 4.

☐ **Page 10 (Paragraph J)** – Check "YES" or "NO" whether your company has any business in Iran.

☐ **Page 10 (Paragraph K)** – (Not applicable to federally funded projects) List the name of the apprenticeship and training program sponsor holding the certificate of registration from the US Department of Labor. If no applicable program exists, please indicate the work/job category. Do not include certificates with your bid. Keep the certificates in your office in case they are requested by IDOT.

☐ **Page 11 (Paragraph L)** – A copy of your State Board of Elections certificate of registration is no longer required with your bid.

☐ **Page 11 (Paragraph M)** – Indicate if your company has hired a lobbyist in connection with the job for which you are submitting the bid proposal.

☐ **Page 12 (Paragraph C)** – This is a work sheet to determine if a completed Form A is required. It is not part of the form and you do not need to make copies for each completed Form A.

☐ **Pages 14-17 (Form A)** – One Form A (4 pages) is required for each applicable person in your company. Copies of the forms can be used and only need to be changed when the information changes. The certification signature and date must be original for each letting. **Do not staple the forms together**. If you answered "NO" to all of the questions in Paragraph C (page 12), complete the first section (page 14) with your company information and then sign and date the Not Applicable statement on page 17.

☐ **Page 18 (Form B)** - If you check "YES" to having other current or pending contracts it is acceptable to use the phrase, "See Affidavit of Availability on file". **Ownership Certification** (at the bottom of the page) - Check N/A if the Form A(s) you submitted accounts for 100 percent of the company ownership. Check YES if any percentage of ownership falls outside of the parameters that require reporting on the Form A. Checking NO indicates that the Form A(s) you submitted is not correct and you will be required to submit a revised Form A.

☐ **Page 20 (Workforce Projection)** – Be sure to include the Duration of the Project. It is acceptable to use the phrase "Per Contract Specifications".

☐ **Proposal Bid Bond –** (Insert after the proposal signature page) Submit your proposal Proposal Bid Bond (if applicable) using the current Proposal Bid Bond form provided in the proposal package. The Power of Attorney page should be stapled to the Proposal Bid Bond. If you are using an electronic bond, include your bid bond number on the Proposal Bid Bond and attach the Proof of Insurance printed from the Surety's Web Site.

☐ **Disadvantaged Business Utilization Plan and/or Good Faith Effort –** The last items in your bid should be the DBE Utilization Plan (SBE 2026), followed by the DBE Participation Statement (SBE 2025) and supporting paperwork. If you have documentation of a Good Faith Effort, it is to follow the SBE Forms.

The Bid Letting is now available in streaming Audio/Video from the IDOT Web Site. A link to the stream will be placed on the main page of the current letting on the day of the Letting. The stream will not begin until 10 AM. The actual reading of the bids does not begin until approximately 10:30 AM.

Following the Letting, the As-Read Tabulation of Bids will be posted by the end of the day. You will find the link on the main Web page for the current letting.

QUESTIONS: pre-letting up to execution of the contract

Contractor pre-qualification	217-782-3413
Small Business, Disadvantaged Business Enterprise (DBE)	217-785-4611
Contracts, Bids, Letting process or Internet downloads	217-782-7806
Estimates Unit	217-785-3483
Aeronautics	217-785-8515
IDNR (Land Reclamation, Water Resources, Natural Resources)	217-782-6302

QUESTIONS: following contract execution

Subcontractor documentation, payments	217-782-3413
Railroad Insurance	217-785-0275

RETURN WITH BID

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Proposal Submitted By **Name**
Address
City

Letting August 1, 2014

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.
BIDDERS NEED NOT RETURN THE ENTIRE PROPOSAL

Notice to Bidders, Specifications, Proposal, Contract and Contract Bond

Illinois Department of Transportation

Springfield, Illinois 62764

Contract No. 61A36
KANE County
Section 11-00214-00-TL
Route FAP 361 (Stearns Road)
Project CMM-4003(002)
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

☐ An Annual Bid Bond is included or is on file with IDOT.

Prepared by

Checked by F

(Printed by authority of the State of Illinois)

Page intentionally left blank

RETURN WITH BID

Illinois Department of Transportation

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. 61A36
KANE County
Section 11-00214-00-TL
Project CMM-4003(002)
Route FAP 361 (Stearns Road)
District 1 Construction Funds

Project consists of the installation of an Intelligent Transportation System including Closed Circuit Television, Remote Traffic Microwave Sensor, Speed Confirmation Signs, and a Road Weather Information Station which will be integrated along with existing traffic signal controllers into the County's Advanced Traffic Management System on FAP Route 361 (Stearns Road) from Randall Road to Dunham Road.

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 will govern performance and payments.

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

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

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

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

Bank cashier's checks or properly certified checks accompanying bid proposals will be made payable to the Treasurer, State of Illinois.

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

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

Attach Cashier's Check or Certified Check Here

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

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

Item _____

Section No. _____

County _____

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

STATE JOB #- C-91-359-12
PPS NBR -

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 61A36

COUNTY NAME	CODE	DIST	SECTION NUMBER	PROJECT NUMBER	ROUTE
KANE	089	01	11-00214-00-TL	CMM-4003/002/000	FAP 361

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE DOLLARS	UNIT PRICE CENTS	TOTAL PRICE DOLLARS	TOTAL PRICE CTS
XX004913	REMOV FOC FR CONDUIT	FOOT	879.000 X		=		
XX007251	INT VID TMS W PTZ CAM	EACH	10.000 X		=		
XX007953	NETWORK CONFIGURATION	L SUM	1.000 X		=		
XX008392	OUTDR RTD NTWRK CABLE	FOOT	7,179.000 X		=		
XX008450	UPGR UPS BAT BKUP SYS	EACH	1.000 X		=		
XX008452	MALFUNCTION MGMT UNIT	EACH	3.000 X		=		
XX008453	ETHERNET SWITCH TYP 1	EACH	8.000 X		=		
XX008454	ETHERNET SWITCH TYP 2	EACH	2.000 X		=		
XX008594	FIBER OPTIC TERM 6F	EACH	15.000 X		=		
XX008595	FIBER OPTIC TERM 48F	EACH	2.000 X		=		
XX008696	PROCURE INSTALL RWIS	L SUM	1.000 X		=		
XX008962	RADAR SPEED SIGN	EACH	6.000 X		=		
XX008963	3 CELL FAB INNERDUCT	FOOT	16,907.000 X		=		
XX008964	ATMS SYS DATA POR MOD	L SUM	1.000 X		=		
XX008965	ATMS SYS TRAF SYS MOD	L SUM	1.000 X		=		

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 61A36

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
XX008966	ATMS SYS DEV INTGRATE	L SUM	1.000	X			=		
XX008967	ATMS SYS TRAV SYS MOD	L SUM	1.000	X			=		
X0323833	DYNAMIC MESSAGE SIGN	EACH	2.000	X			=		
X0323906	CAMERA POLE 45 FT	EACH	4.000	X			=		
X0323920	POLE MT EQUIP CAB TB	EACH	3.000	X			=		
X0324599	ROD AND CLEAN EX COND	FOOT	879.000	X			=		
X0325476	RADAR VEH DETECT SYST	EACH	2.000	X			=		
X0326362	PT EX ST LT/T EQ COMP	EACH	12.000	X			=		
X0326452	VIDEO SYS DET PROCSSR	EACH	3.000	X			=		
X0327735	CAMERA POLE 20 FT	EACH	3.000	X			=		
X0327739	MISC ELECTRICAL WORK	L SUM	1.000	X			=		
X8360120	LIGHT POLE FDN SPL	EACH	4.000	X			=		
X8710031	FIB OPT CBL 36F SM	FOOT	23,642.000	X			=		
X8710039	FIB OPT CBL 144F SM	FOOT	22,351.000	X			=		
X8900010	TEMP TR SIG INTERCON	EACH	2.000	X			=		

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 61A36

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS		CENTS		TOTAL PRICE DOLLARS	CTS
X8950212	MOD EX CONTR CAB SPL	EACH	3.000	X		=				
Z0030850	TEMP INFO SIGNING	SQ FT	225.000	X		=				
Z0033024	MAINT EX LTG SYS	L SUM	1.000	X		=				
Z0033046	RE-OPTIMIZE SIG SYS 2	EACH	7.000	X		=				
Z0048665	RR PROT LIABILITY INS	L SUM	1.000	X		=				
Z0076600	TRAINEES	HOUR	1,000.000	X		=				
Z0076604	TRAINEES TPG	HOUR	1,000.000	X	0	=	80		800	00
28000400	PERIMETER EROS BAR	FOOT	180.000	X	15	=	00		15,000	00
28000500	INLET & PIPE PROTECT	EACH	63.000	X		=				
42400200	PC CONC SIDEWALK 5	SQ FT	118.000	X		=				
67100100	MOBILIZATION	L SUM	1.000	X		=				
70102630	TR CONT & PROT 701601	L SUM	1.000	X		=				
70102635	TR CONT & PROT 701701	L SUM	1.000	X		=				
70102640	TR CONT & PROT 701801	L SUM	1.000	X		=				
72000100	SIGN PANEL T1	SQ FT	30.000	X		=				

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 61A36

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
72400710	RELOC SIGN PANEL T1	SQ FT	15.000			X =		
73700100	REM GR MT SIN SUPPORT	EACH	2.000			X =		
78000650	THPL PVT MK LINE 24	FOOT	72.000			X =		
78300100	PAVT MARKING REMOVAL	SQ FT	144.000			X =		
80500010	SERV INSTALL GRND MT	EACH	5.000			X =		
80500020	SERV INSTALL POLE MT	EACH	2.000			X =		
81028200	UNDRGRD C GALVS 2	FOOT	4,374.000			X =		
81028240	UNDRGRD C GALVS 4	FOOT	15,873.000			X =		
81100510	CON AT ST 1.5 GS PVC	FOOT	150.000			X =		
81300540	JUN BX SS AS 12X12X4	EACH	2.000			X =		
81400100	HANDHOLE	EACH	23.000			X =		
81400300	DBL HANDHOLE	EACH	10.000			X =		
81702100	EC C XLP USE 1C 12	FOOT	4,895.000			X =		
81702120	EC C XLP USE 1C 8	FOOT	580.000			X =		
81702150	EC C XLP USE 1C 2	FOOT	6,750.000			X =		

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 61A36

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE DOLLARS	UNIT PRICE CENTS	TOTAL PRICE DOLLARS	TOTAL PRICE CTS
81702160	EC C XLP USE 1C 1/0	FOOT	5,340.000 X		=		
83800650	BKWY DEV COU SS SCRN	EACH	5.000 X		=		
85000200	MAIN EX TR SIG INSTAL	EACH	7.000 X		=		
86200200	UNINTER POWER SUP STD	EACH	5.000 X		=		
86300400	CONT CAB TYPE IV	EACH	2.000 X		=		
87300010	GROUND HH FR & COVER	EACH	13.000 X		=		
87301305	ELCBL C LEAD 14 1PR	FOOT	1,250.000 X		=		
87501200	TS POST 16	EACH	8.000 X		=		
87800100	CONC FDN TY A	FOOT	44.000 X		=		
87800150	CONC FDN TY C	FOOT	8.000 X		=		
87900100	DRILL EX FOUNDATION	EACH	2.000 X		=		
87900200	DRILL EX HANDHOLE	EACH	11.000 X		=		
88500500	IND L DET AMP	EACH	3.000 X		=		
88600100	DET LOOP T1	FOOT	219.000 X		=		
89502210	MOD EX CONTR CAB	EACH	7.000 X		=		

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 61A36

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
89502375	REMOV EX TS EQUIP	EACH	5.000			X =		.

TOTAL $

NOTE:

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

6. **COMBINATION BIDS.** The undersigned bidder 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 contract 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 will 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. **AUTHORITY TO DO BUSINESS IN ILLINOIS.** Section 20-43 of the Illinois Procurement Code (the Code) (30 ILCS 500/20-43) provides that a person (other than an individual acting as a sole proprietor) must be a legal entity authorized to do business in the State of Illinois prior to submitting the bid.

9. **EXECUTION OF CONTRACT**: The Department of Transportation will, in accordance with the rules governing Department procurements, execute the contract and shall be the sole entity having the authority to accept performance and make payments under the contract. Execution of the contract by the Chief Procurement Officer (CPO) or the State Purchasing Officer (SPO) is for approval of the procurement process and execution of the contract by the Department. Neither the CPO nor the SPO shall be responsible for administration of the contract or determinations respecting performance or payment there under except as otherwise permitted in the Code.

10. **The services of a subcontractor will be used.**

Check box Yes ☐
Check box No ☐

For known subcontractors with subcontracts with an annual value of more than $50,000, the contract shall include their name, address, general type of work to be performed, and the dollar allocation for each subcontractor. (30 ILCS 500/20-120)

RETURN WITH BID

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

I. GENERAL

A. Article 50 of the Code establishes the duty of all State CPOs, SPOs, 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. Except as otherwise required in subsection III, paragraphs J-M, by execution of the Proposal Signature Sheet, the bidder indicates that each of the mandated assurances have 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 the CPO to void the contract, and may result in the suspension or debarment of the bidder or subcontractor. If a false certification is made by a subcontractor the contractor's submitted bid and the executed contract may not be declared void unless the contractor refuses to terminate the subcontract upon the State's request after a finding that the subcontractor's certification was false.

☐ I acknowledge, understand and accept these terms and conditions.

II. ASSURANCES

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.

A. Conflicts of Interest

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 State 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 State 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.

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. Information concerning the exemption process is available from the Department upon request.

B. Negotiations

Section 50-15. Negotiations.

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.

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.

C. Inducements

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.

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.

D. Revolving Door Prohibition

Section 50-30. Revolving door prohibition.

CPOs, SPOs, procurement compliance monitors, 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.

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.

E. Reporting Anticompetitive Practices

Section 50-40. Reporting anticompetitive practices.

When, for any reason, any vendor, bidder, contractor, CPO, SPO, 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 CPO.

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.

F. Confidentiality

Section 50-45. Confidentiality.

Any CPO, SPO, 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.

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.

G. Insider Information

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.

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.

☐ I acknowledge, understand and accept these terms and conditions for the above assurances.

III. CERTIFICATIONS

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. Section 50-2 of the Code provides that every person that has entered into a multi-year contract and every subcontractor with a multi-year subcontract shall certify, by July 1 of each fiscal year covered by the contract after the initial fiscal year, to the responsible CPO whether it continues to satisfy the requirements of Article 50 pertaining to the eligibility for a contract award. If a contractor or subcontractor is not able to truthfully certify that it continues to meet all requirements, it shall provide with its certification a detailed explanation of the circumstances leading to the change in certification status. A contractor or subcontractor that makes a false statement material to any given certification required under Article 50 is, in addition to any other penalties or consequences prescribed by law, subject to liability under the Whistleblower Reward and Protection Act for submission of a false claim.

A. Bribery

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, or subcontracting under such a contract, 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, or which is signatory to the contract which the subcontract relates, 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 2012.

(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, and every subcontract subject to Section 20-120 of the Code shall contain a certification by the contractor or the subcontractor, respectively, that the contractor or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the CPO may declare the related contract void if any certifications required by this Section are false. A contractor who makes a false statement, material to the certification, commits a Class 3 felony.

The contractor or subcontractor certifies that it is not barred from being awarded a contract under Section 50.5.

B. Felons

Section 50-10. Felons.

(a) Unless otherwise provided, no person or business convicted of a felony shall do business with the State of Illinois or any State agency, or enter into a subcontract, 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.

(b) Certification. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the Code shall contain a certification by the bidder or contractor or subcontractor, respectively, that the bidder, contractor, or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the CPO may declare the related contract void if any of the certifications required by this Section are false.

C. Debt Delinquency

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

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

D. Prohibited Bidders, Contractors and Subcontractors

Section 50-10.5 and 50-60(c). Prohibited bidders, contractors and subcontractors.

The bidder or contractor or subcontractor, respectively, 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 or if in violation of Subsection (c) for a period of five years from the date of conviction. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the Code shall contain a certification by the bidder, contractor, or subcontractor, respectively, that the bidder, contractor, or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the CPO shall declare the related contract void if any of the certifications completed pursuant to this Section are false.

E. Section 42 of the Environmental Protection Act

The bidder or contractor or subcontractor, respectively, certifies in accordance with 30 ILCS 500/50-14 that the bidder, contractor, or subcontractor, is not barred from being awarded a contract or entering into a subcontract under this Section which prohibits the bidding on or entering into contracts with the State of Illinois or a State agency, or entering into any subcontract, that is subject to the Code 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 bidder or contractor or subcontractor, respectively, acknowledges that the CPO may declare the contract void if this certification is false.

F. Educational Loan

Section 3 of the Educational Loan Default Act provides 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.

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.

G. Bid-Rigging/Bid Rotating

Section 33E-11 of the Criminal Code of 2012 provides:

(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.

(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.

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.

H. International Anti-Boycott

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

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

I. Drug Free Workplace

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.

The bidder certifies that if awarded a contract in excess of $5,000 it will provide a drug free workplace in compliance with the provisions of the Act.

J. Disclosure of Business Operations in Iran

Section 50-36 of the 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, offeror, 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 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.

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

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

NA-FEDERAL

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

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

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

The undersigned bidder 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. If the business entity is required to register, the CPO shall verify that it is in compliance on the date the bid or proposal is due. The CPO shall not accept a bid or proposal if the business entity is not in compliance with the registration requirements.

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

M. Lobbyist Disclosure

Section 50-38 of the Code requires that any bidder or offeror on a State contract that hires a person required to register under the Lobbyist Registration Act to assist in obtaining a contract shall:

(i) Disclose all costs, fees, compensation, reimbursements, and other remunerations paid or to be paid to the lobbyist related to the contract,
(ii) Not bill or otherwise cause the State of Illinois to pay for any of the lobbyist's costs, fees, compensation, reimbursements, or other remuneration, and
(iii) Sign a verification certifying that none of the lobbyist's costs, fees, compensation, reimbursements, or other remuneration were billed to the State.

This information, along with all supporting documents, shall be filed with the agency awarding the contract and with the Secretary of State. The CPO shall post this information, together with the contract award notice, in the online Procurement Bulletin.

Pursuant to Subsection (c) of this Section, no person or entity shall retain a person or entity to attempt to influence the outcome of a procurement decision made under the Code for compensation contingent in whole or in part upon the decision or procurement. Any person who violates this subsection is guilty of a business offense and shall be fined not more than $10,000.

Bidder acknowledges that it is required to disclose the hiring of any person required to register pursuant to the Illinois Lobbyist Registration Act (25 ILCS 170) in connection with this contract.

☐ Bidder has not hired any person required to register pursuant to the Illinois Lobbyist Registration Act in connection with this contract.

Or

☐ Bidder has hired the following persons required to register pursuant to the Illinois Lobbyist Registration Act in connection with the contract:

Name and address of person: _____
All costs, fees, compensation, reimbursements and other remuneration paid to said person: _____
_____
_____
_____

☐ I acknowledge, understand and accept these terms and conditions for the above certifications.

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 bidder further certifies that the Department has received the disclosure forms for each bid.

The CPO may void the bid, or contract, respectively, if it is later determined that the bidder or subcontractor rendered a false or erroneous disclosure. A contractor or subcontractor may be suspended or debarred for violations of the Code. Furthermore, the CPO may void the contract 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 Code provides that all bids of more than $25,000 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, filed with the Procurement Policy Board, and shall be incorporated as a material term of the contract. Furthermore, pursuant to Section 5-5, the Procurement Policy Board may review a proposal, bid, or contract and issue a recommendation to void a contract or reject a proposal or bid based on any violation of the Code or the existence of a conflict of interest as provided in subsections (b) and (d) of Section 50-35.

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 200 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.
The current annual salary of the Governor is $177,412.00.

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. A separate Disclosure Form A must be submitted with the bid for each individual meeting the above requirements. In addition, a second form (Disclosure Form B) provides for the disclosure of current or pending procurement relationships with other (non-IDOT) state agencies and a total ownership certification. **The forms must be included with each bid.**

C. Disclosure Form Instructions

Form A Instructions for Financial Information & Potential Conflicts of Interest

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 200 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 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 60% of the annual salary of the Governor? YES ___ NO___
3. Does anyone in your organization receive more than 60% of the annual salary of the Governor of the bidding entity's or parent entity's 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 60% of the annual salary of the Governor? 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 of Form A must be signed and dated by a person that is authorized to execute contracts for your company.

Form B: Instructions for 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.

RETURN WITH BID

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 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 $25,000, 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.**

The current annual salary of the Governor is $177,412.00.

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 60% of the annual salary of the Governor. **(Make copies of this form as necessary and attach a separate Disclosure Form A for each individual meeting these requirements)**

FOR INDIVIDUAL (type or print information)

NAME: _____

ADDRESS _____

_____

Type of ownership/distributable income share:

stock _____ sole proprietorship _____ Partnership _____ other: (explain on separate sheet):

% or $ value of ownership/distributable income share: _____

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

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

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

1. Are you currently an officer or employee of either the Capitol Development Board or the Illinois State Toll Highway Authority? Yes ___No __

2. Are you currently appointed to or employed by any agency of the State of Illinois? If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor provide the name the State agency for which you are employed and your annual salary. _____
_____

3. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor, 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 100% of the annual 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 60% of the annual salary of the Governor, 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 two times the salary of the Governor? Yes ___ No __

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

Yes ___No __

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

1. Is your spouse or any minor children currently an officer or employee of the Capitol Development Board or the Illinois State 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 60% of the annual salary of the Governor, 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 60% of the annual salary of the Governor, are you entitled to receive (i) more than 71/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess 100% of the annual 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 60% of the annual salary of the Governor, 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 two 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 statues of the State of Illinois, which office entitles the holder to compensation in excess of the expenses incurred in the discharge of that office currently or in the previous 3 years. Yes ___No __

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

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

(h) Relationship to anyone who is or was a registered lobbyist in the previous 2 years; spouse, father, mother, son, or daughter. Yes ___No __

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

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

---

3. Communication Disclosure.

Disclose the name and address of each lobbyist and other agent of the bidder or offeror who is not identified in Section 2 of this form, who is has communicated, is communicating, or may communicate with any State officer or employee concerning the bid or offer. This disclosure is a continuing obligation and must be promptly supplemented for accuracy throughout the process and throughout the term of the contract. If no person is identified, enter "None" on the line below:

Name and address of person(s): _____

_____

_____

_____

RETURN WITH BID

4. Debarment Disclosure. For each of the persons identified under Sections 2 and 3 of this form, disclose whether any of the following has occurred within the previous 10 years: debarment from contracting with any governmental entity; professional licensure discipline; bankruptcies; adverse civil judgments and administrative findings; and criminal felony convictions. This disclosure is a continuing obligation and must be promptly supplemented for accuracy throughout the procurement process and term of the contract. If no person is identified, enter "None" on the line below:

Name of person(s): _____

Nature of disclosure: _____
_____
_____
_____

APPLICABLE STATEMENT

This Disclosure Form A is submitted on behalf of the INDIVIDUAL named on previous page. Under penalty of perjury, I certify the contents of this disclosure to be true and accurate to the best of my knowledge.

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

NOT APPLICABLE STATEMENT

Under penalty of perjury, 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.

☐ _____ _____
Signature of Authorized Representative Date

The bidder has a continuing obligation to supplement these disclosures under Sec. 50-35 of the Code.

RETURN WITH BID

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form B
Other Contracts & Financial 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 Code (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 $25,000, 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

☐ _____ _____
Signature of Authorized Representative Date

OWNERSHIP CERTIFICATION

Please certify that the following statement is true if the individuals for all submitted Form A disclosures do not total 100% of ownership.

Any remaining ownership interest is held by individuals receiving less than $106,447.20 of the bidding entity's or parent entity's distributive income or holding less than a 5% ownership interest.

☐ Yes ☐ No ☐ N/A (Form A disclosure(s) established 100% ownership)

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

Illinois Department of Transportation

Contract No. 61A36
KANE County
Section 11-00214-00-TL
Project CMM-4003(002)
Route FAP 361 (Stearns Road)
District 1 Construction Funds

PART I. IDENTIFICATION

Dept. Human Rights # _____ Duration of Project: _____

Name of Bidder: _____

PART II. WORKFORCE PROJECTION

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

TABLE A

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

TABLE C

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

*Other minorities are defined as Asians (A) or Native Americans (N).
Please specify race of each employee shown in Other Minorities column.

FOR DEPARTMENT USE ONLY

BC 1256 (Rev. 12/11/07)

Note: See instructions on page 2

RETURN WITH BID

Contract No. 61A36
KANE County
Section 11-00214-00-TL
Project CMM-4003(002)
Route FAP 361 (Stearns Road)
District 1 Construction Funds

PART II. WORKFORCE PROJECTION - continued

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

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

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

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

PART III. AFFIRMATIVE ACTION PLAN

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

B. The undersigned bidder understands and agrees that the minority and female employee utilization projection submitted herein, and the goals and timetable included under an Affirmative Action Plan if required, are deemed to be part of the contract specifications.

Company _____ Telephone Number _____

_____

Address _____

NOTICE REGARDING SIGNATURE

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

Signature: ☐ _____ Title: _____ Date: _____

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

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

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

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

BC-1256 (Rev. 12/11/07)

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. 61A36
KANE County
Section 11-00214-00-TL
Project CMM-4003(002)
Route FAP 361 (Stearns Road)
District 1 Construction Funds

PROPOSAL SIGNATURE SHEET

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

(IF AN INDIVIDUAL)

Firm Name _____

Signature of Owner _____

Business Address _____

_____

(IF A CO-PARTNERSHIP)

Firm Name _____

By _____

Business Address _____

_____

Name and Address of All Members of the Firm:

_____ _____

(IF A CORPORATION)

Corporate Name _____

By _____
Signature of Authorized Representative

_____
Typed or printed name and title of Authorized Representative

Attest _____
Signature

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

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.

Illinois Department of Transportation

Return with Bid

Division of Highways
Annual Proposal Bid Bond

This Annual Proposal Bid Bond shall become effective at 12:01 AM (CDST) on _____ and shall be valid until _____ 11:59 PM (CDST).

KNOW ALL PERSONS BY THESE PRESENTS, That We _____

as PRINCIPAL, and _____

as SURETY, and 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 the bid proposal under "Proposal Guaranty" in effect on the date of the 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 may submit bid proposal(s) to the STATE OF ILLINOIS, acting through the Department of Transportation, for various improvements published in the Transportation Bulletin during the effective term indicated above.

NOW, THEREFORE, if the Department shall accept the bid proposal(s) of the PRINCIPAL; and if the PRINCIPAL shall, within the time and as specified in the bidding and contract documents; 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 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 has caused this instrument to be signed by its officer
_____ day of _____ A.D., _____.

_____
(Company Name)

By _____
(Signature and Title)

Notary for PRINCIPAL

STATE OF _____
COUNTY OF _____

Signed and attested before me on _____ (date)

by _____
(Name of Notary Public)

(Seal)

_____
(Signature of Notary Public)

_____
(Date Commission Expires)

In TESTIMONY WHEREOF, the said SURETY has caused this instrument to be signed by its officer
_____ day of _____ A.D., _____.

_____
(Company Name)

By _____
(Signature of Attorney-in-Fact)

Notary for SURETY

STATE OF _____
COUNTY OF _____

Signed and attested before me on _____ (date)

by _____
(Name of Notary Public)

(Seal)

_____
(Signature of Notary Public)

_____
(Date Commission Expires)

In lieu of completing the above section of the Annual Proposal Bid Bond form, the Principal may file an Electronic Bid Bond. By signing the proposal(s) 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

This bond may be terminated, at Surety's request, upon giving not less than thirty (30) days prior written notice of the cancellation/termination of the bond. Said written notice shall be issued to the Illinois Department of Transportation, Chief Contracts Official, 2300 South Dirksen Parkway, Springfield, Illinois, 62764, and shall be served in person, by receipted courier delivery or certified or registered mail, return receipt requested. Said notice period shall commence on the first calendar day following the Department's receipt of written cancellation/termination notice. Surety shall remain firmly bound to all obligations herein for proposals submitted prior to the cancellation/termination. Surety shall be released and discharged from any obligation(s) for proposals submitted for any letting or date after the effective date of cancellation/termination.

Illinois Department of Transportation

Return with Bid

Division of Highways
Proposal Bid Bond

Item No. _____

Letting Date _____

KNOW ALL PERSONS BY THESE PRESENTS, That We _____

as PRINCIPAL, and _____

as SURETY, and 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 the bid proposal under "Proposal Guaranty" in effect on the date of the 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; 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 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 has caused this instrument to be signed by its officer
_____ day of _____ A.D., _____.

_____
(Company Name)

By _____
(Signature and Title)

Notary for PRINCIPAL

STATE OF _____
COUNTY OF _____

Signed and attested before me on _____ (date)
by _____
(Name of Notary Public)

(Seal)

_____
(Signature of Notary Public)

_____
(Date Commission Expires)

In TESTIMONY WHEREOF, the said SURETY has caused this instrument to be signed by its officer
_____ day of _____ A.D., _____.

_____
(Company Name)

By _____
(Signature of Attorney-in-Fact)

Notary for SURETY

STATE OF _____
COUNTY OF _____

Signed and attested before me on _____ (date)
by _____
(Name of Notary Public)

(Seal)

_____
(Signature of Notary Public)

_____
(Date Commission Expires)

In lieu of completing the above section of the Proposal Bid Bond form, the Principal may file an Electronic Bid Bond. By signing the proposal 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

Illinois Department of Transportation

DBE Utilization Plan

(1) Policy

It is public policy that disadvantaged businesses as defined in 49 CFR Part 26 and the Special Provision shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with Federal or State funds. Consequently the requirements of 49 CFR Part 26 apply to this contract.

(2) Obligation

The contractor agrees to ensure that disadvantaged businesses as defined in 49 CFR Part 26 and the Special Provision have the maximum opportunity to participate in the performance of contracts or subcontracts financed in whole or in part with Federal or State funds. The contractor shall take all necessary and reasonable steps in accordance with 49 CFR Part 26 and the Special Provision to ensure that said businesses have the maximum opportunity to compete for and perform under this contract. The contractor shall not discriminate on the basis of race, color, national origin or sex in the award and performance of contracts.

(3) Project and Bid Identification

Complete the following information concerning the project and bid:

Route _____ Total Bid _____

Section _____ Contract DBE Goal _____ (Percent) _____ (Dollar Amount)

Project _____

County _____

Letting Date _____

Contract No. _____

Letting Item No. _____

(4) Assurance

I, acting in my capacity as an officer of the undersigned bidder (or bidders if a joint venture), hereby assure the Department that on this project my company : (check one)

☐ Meets or exceeds contract award goals and has provided documented participation as follows:
Disadvantaged Business Participation _____ percent

Attached are the signed participation statements, forms SBE 2025, required by the Special Provision evidencing availability and use of each business participating in this plan and assuring that each business will perform a commercially useful function in the work of the contract.

☐ Failed to meet contract award goals and has included good faith effort documentation to meet the goals and that my company has provided participation as follows:

Disadvantaged Business Participation _____ percent

The contract goals should be accordingly modified or waived. Attached is all information required by the Special Provision in support of this request including good faith effort. Also attached are the signed participation statements, forms SBE 2025, required by the Special Provision evidencing availability and use of each business participating in this plan and assuring that each business will perform a commercially useful function in the work of the contract.

_____
Company

By _____

Title _____

Date _____

The "as read" Low Bidder is required to comply with the Special Provision.

Submit only one utilization plan for each project. The utilization plan shall be submitted in accordance with the special provision.

Bureau of Small Business Enterprises
2300 South Dirksen Parkway
Springfield, Illinois 62764

Local Let Projects
Submit forms to the
Local Agency

The Department of Transportation is requesting disclosure of information that is necessary to accomplish the purpose as outlined under State and Federal law. Disclosure of this information is **REQUIRED**. Failure to provide any information will result in the contract not being awarded. This form has been approved by the State Forms Manager Center.

Illinois Department of Transportation

DBE Participation Statement

Subcontractor Registration Number _____ Letting _____

Participation Statement Item No. _____

(1) Instructions Contract No. _____

This form must be completed for each disadvantaged business participating in the Utilization Plan. This form shall be submitted in accordance with the special provision and will be attached to the Utilization Plan form. If additional space is needed complete an additional form for the firm.

(2) Work:

Please indicate: J/V _____ Manufacturer _____ Supplier (60%) _____ Subcontractor _____ Trucking _____

Pay Item No.	Description	Quantity	Unit Price	Total
			Total	

(3) Partial Payment Items (For any of the above items which are partial pay items)
Description must be sufficient to determine a Commercially Useful Function, specifically describe the work and subcontract dollar amount:

(4) Commitment
When a DBE is to be a second-tier subcontractor, or if the first-tier DBE subcontractor is going to be subcontracting a portion of its subcontract, it must be clearly indicated on the DBE Participation Statement, and the details of the transaction fully explained.

In the event a DBE subcontractor second-tiers a portion of its subcontract to one or more subcontractors during the work of a contract, the prime must submit a DBE Participation Statement, with the details of the transaction(s) fully explained.

The undersigned certify that the information included herein is true and correct, and that the DBE firm listed below has agreed to perform a commercially useful function in the work of the contract item(s) listed above and to execute a contract with the prime contractor or 1st Tier subcontractor. The undersigned further understand that no changes to this statement may be made without prior approval from the Department's Bureau of Small Business Enterprises and that complete and accurate information regarding actual work performed on this project and the payment therefore must be provided to the Department.

_____
Signature for Contractor __ 1st Tier __ 2nd Tier

Title _____

Date _____

Contact Person _____

Phone _____

Firm Name _____

Address _____

City/State/Zip _____

_____
Signature for DBE Firm __ 1st Tier __ 2nd Tier

Title _____

Date _____

Contact Person _____

Phone _____

Firm Name _____

Address _____

City/State/Zip _____

E _____

WC _____

The Department of Transportation is requesting disclosure of information that is necessary to accomplish the statutory purpose as outlined under the state and federal law. Disclosure of this information is **REQUIRED**. Failure to provide any information will result in the contract not being awarded. This form has been approved by the State Forms Management Center.

PROPOSAL ENVELOPE

Illinois Department of Transportation

PROPOSALS

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

Item No.	Item No.	Item No.

Submitted By:

Name:
Address:
Phone No.

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

Engineer of Design and Environment - Room 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. 61A36
KANE County
Section 11-00214-00-TL
Project CMM-4003(002)
Route FAP 361 (Stearns Road)
District 1 Construction Funds

Illinois Department of Transportation

SUBCONTRACTOR DOCUMENTATION

Public Acts 96-0795, 96-0920, and 97-0895 enacted substantial changes to the provisions of the Code (30 ILCS 500). Among the changes are provisions affecting subcontractors. The Contractor awarded this contract will be required as a material condition of the contract to implement and enforce the contract requirements applicable to subcontractors that entered into a contractual agreement with a total value of $50,000 or more with a person or entity who has a contract subject to the Code and approved in accordance with article 108.01 of the Standard Specifications for Road and Bridge Construction.

If the Contractor seeks approval of subcontractors to perform a portion of the work, and approval is granted by the Department, the Contractor shall provide a copy of the subcontract to the Illinois Department of Transportation's CPO upon request within 15 calendar days after execution of the subcontract.

Financial disclosures required pursuant to Sec. 50-35 of the Code must be submitted for all applicable subcontractors. The subcontract shall contain the certifications required to be made by subcontractors pursuant to Article 50 of the Code. This Notice to Bidders includes a document incorporating all required subcontractor certifications and disclosures for use by the Contractor in compliance with this mandate. The document is entitled State Required Ethical Standards Governing Subcontractors.

RETURN WITH SUBCONTRACT

STATE ETHICAL STANDARDS GOVERNING SUBCONTRACTORS

Article 50 of the Code establishes the duty of all State CPOs, SPOs, 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.

The certifications hereinafter made by the subcontractor are each a material representation of fact upon which reliance is placed should the Department approve the subcontractor. The CPO may terminate or void the contract approval if it is later determined that the bidder or subcontractor rendered a false or erroneous certification. If a false certification is made by a subcontractor the contractor's submitted bid and the executed contract may not be declared void unless the contractor refuses to terminate the subcontract upon the State's request after a finding that the subcontractor's certification was false.

Section 50-2 of the Code provides that every person that has entered into a multi-year contract and every subcontractor with a multi-year subcontract shall certify, by July 1 of each fiscal year covered by the contract after the initial fiscal year, to the responsible CPO whether it continues to satisfy the requirements of Article 50 pertaining to the eligibility for a contract award. If a contractor or subcontractor is not able to truthfully certify that it continues to meet all requirements, it shall provide with its certification a detailed explanation of the circumstances leading to the change in certification status. A contractor or subcontractor that makes a false statement material to any given certification required under Article 50 is, in addition to any other penalties or consequences prescribed by law, subject to liability under the Whistleblower Reward and Protection Act for submission of a false claim.

A. Bribery

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, or subcontracting under such a contract, 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, or which is signatory to the contract to which the subcontract relates, 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 2012.

(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, and every subcontract subject to Section 20-120 of the Code shall contain a certification by the contractor or the subcontractor, respectively, that the contractor or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the CPO may declare the related contract void if any certifications required by this Section are false. A contractor who makes a false statement, material to the certification, commits a Class 3 felony.

The contractor or subcontractor certifies that it is not barred from being awarded a contract under Section 50.5.

B. Felons

Section 50-10. Felons.

(a) Unless otherwise provided, no person or business convicted of a felony shall do business with the State of Illinois or any State agency, or enter into a subcontract, 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.

(b) Certification. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the Code shall contain a certification by the bidder or contractor or subcontractor, respectively, that the bidder, contractor, or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the CPO may declare the related contract void if any of the certifications required by this Section are false.

RETURN WITH SUBCONTRACT

C. Debt Delinquency

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

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

D. Prohibited Bidders, Contractors and Subcontractors

Section 50-10.5 and 50-60(c). Prohibited bidders, contractors and subcontractors.

The bidder or contractor or subcontractor, respectively, 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 or if in violation of Subsection (c) for a period of five years from the date of conviction. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the Code shall contain a certification by the bidder, contractor, or subcontractor, respectively, that the bidder, contractor, or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the CPO shall declare the related contract void if any of the certifications completed pursuant to this Section are false.

E. Section 42 of the Environmental Protection Act

The bidder or contractor or subcontractor, respectively, certifies in accordance with 30 ILCS 500/50-14 that the bidder, contractor, or subcontractor, is not barred from being awarded a contract or entering into a subcontract under this Section which prohibits the bidding on or entering into contracts with the State of Illinois or a State agency, or entering into any subcontract, that is subject to the Code 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 bidder or contractor or subcontractor, respectively, acknowledges that the CPO may declare the contract void if this certification is false.

The undersigned, on behalf of the subcontracting company, has read and understands the above certifications and makes the certifications as required by law.

_____
Name of Subcontracting Company

_____ _____
Authorized Officer Date

RETURN WITH SUBCONTRACT

SUBCONTRACTOR DISCLOSURES

I. DISCLOSURES

A. The disclosures hereinafter made by the subcontractor are each a material representation of fact upon which reliance is placed. The subcontractor further certifies that the Department has received the disclosure forms for each subcontract.

The CPO may void the bid, contract, or subcontract, respectively, if it is later determined that the bidder or subcontractor rendered a false or erroneous disclosure. A contractor or subcontractor may be suspended or debarred for violations of the Code. Furthermore, the CPO may void the contract.

B. Financial Interests and Conflicts of Interest

1. Section 50-35 of the Code provides that all subcontracts with a total value of $50,000 or more, from subcontractors identified in Section 20-120 of the Code, shall be accompanied by disclosure of the financial interests of the subcontractor. This disclosed information for the subcontractor, will be maintained as public information subject to release by request pursuant to the Freedom of Information Act, filed with the Procurement Policy Board, and shall be incorporated as a material term of the Prime Contractor's contract. Furthermore, pursuant to this Section, the Procurement Policy Board may recommend to allow or void a contract or subcontract based on a potential conflict of interest.

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 subcontracting entity or its parent entity, whichever is less, unless the subcontractor 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 subcontractor is a privately held entity that is exempt from Federal 10K reporting, but has more than 200 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.
The current annual salary of the Governor is $177,412.00.

In addition, all disclosures shall indicate any other current or pending contracts, subcontracts, proposals, leases, or other ongoing procurement relationships the subcontracting entity has with any other unit of state government and shall clearly identify the unit and the contract, subcontract, 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. A separate Disclosure Form A must be submitted with the bid for each individual meeting the above requirements. In addition, a second form (Disclosure Form B) provides for the disclosure of current or pending procurement relationships with other (non-IDOT) state agencies and a total ownership certification. **The forms must be included with each bid.**

C. Disclosure Form Instructions

Form A Instructions for Financial Information & Potential Conflicts of Interest

If the subcontractor 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 subcontractor is a privately held entity that is exempt from Federal 10K reporting, but has more than 200 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 subcontractor is not subject to Federal 10K reporting, the subcontractor must determine if any individuals are required by law to complete a financial disclosure form. To do this, the subcontractor 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 subcontracting 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 60% of the annual salary of the Governor? YES ___ NO___
3. Does anyone in your organization receive more than 60% of the annual salary of the Governor of the subcontracting entity's or parent entity's distributive income? YES ___ NO __

   (Note: Distributive income is, for these purposes, any type of distribution of profits. An annual salary is not distributive income.)
4. Does anyone in your organization receive greater than 5% of the subcontracting entity's or parent entity's total distributive income, but which is less than 60% of the annual salary of the Governor? YES ___ NO __

   (Note: Only one set of forms needs to be completed per person per subcontract 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 subcontractor must determine each individual in the subcontracting entity or the subcontracting 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 subcontractor 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.

RETURN WITH SUBCONTRACT

Form B: Instructions for Identifying Other Contracts & Procurement Related Information

Disclosure Form B must be completed for each subcontract submitted by the subcontracting entity. *Note: Checking the NOT APPLICABLE STATEMENT on Form A does not allow the subcontractor to ignore Form B. Form B must be completed, checked, and dated or the subcontract will not be approved.*

The Subcontractor shall identify, by checking Yes or No on Form B, whether it has any pending contracts, subcontracts, leases, bids, proposals, or other ongoing procurement relationship with any other (non-IDOT) State of Illinois agency. If "No" is checked, the subcontractor only needs to complete the check box on the bottom of Form B. If "Yes" is checked, the subcontractor must list all non-IDOT State of Illinois agency pending contracts, subcontracts, leases, bids, proposals, and other ongoing procurement relationships. These items may be listed on Form B or on an attached sheet(s). Contracts with cities, counties, villages, etc. are not considered State of Illinois agency contracts and are not to be included. Contracts or subcontracts with other State of Illinois agencies such as the Department of Natural Resources or the Capital Development Board must be included.

RETURN WITH SUBCONTRACT

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form A Subcontractor: Financial Information & Potential Conflicts of Interest Disclosure

Subcontractor 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 Code (30 ILCS 500). Subcontractors desiring to enter into a subcontract of a State of Illinois contract 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 subcontracts with a total value of $50,000 or more, from subcontractors identified in Section 20-120 of the Code, 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.**

The current annual salary of the Governor is $177,412.00.

DISCLOSURE OF FINANCIAL INFORMATION

1. Disclosure of Financial Information. The individual named below has an interest in the SUBCONTRACTOR (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 60% of the annual salary of the Governor. **(Make copies of this form as necessary and attach a separate Disclosure Form A for each individual meeting these requirements)**

FOR INDIVIDUAL (type or print information)

NAME: _____

ADDRESS _____

_____

Type of ownership/distributable income share:

stock _____ sole proprietorship _____ Partnership _____ other: (explain on separate sheet):

% or $ value of ownership/distributable income share: _____

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

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

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

1. Are you currently an officer or employee of either the Capitol Development Board or the Illinois State Toll Highway Authority? Yes ___No __

2. Are you currently appointed to or employed by any agency of the State of Illinois? If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor, provide the name the State agency for which you are employed and your annual salary. _____
_____

3. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor, 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 100% of the annual 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 60% of the annual salary of the Governor, are you and your spouse or minor children entitled to receive (i) more than 15 % in the aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of two times the salary of the Governor? Yes ___No __

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

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

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

3. If your spouse or any minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, are you entitled to receive (i) more than 71/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of of 100% of the annual 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 60% of the annual salary of the Governor, are you and your spouse or minor children entitled to receive (i) more than 15 % in the aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of two times the salary of the Governor?
Yes ___No __

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

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

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

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

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

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

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

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

---

3 Communication Disclosure.

Disclose the name and address of each lobbyist and other agent of the bidder or offeror who is not identified in Section 2 of this form, who is has communicated, is communicating, or may communicate with any State officer or employee concerning the bid or offer. This disclosure is a continuing obligation and must be promptly supplemented for accuracy throughout the process and throughout the term of the contract. If no person is identified, enter "None" on the line below:

Name and address of person(s): _____

_____

_____

_____

RETURN WITH SUBCONTRACT

4. Debarment Disclosure. For each of the persons identified under Sections 2 and 3 of this form, disclose whether any of the following has occurred within the previous 10 years: debarment from contracting with any governmental entity; professional licensure discipline; bankruptcies; adverse civil judgments and administrative findings; and criminal felony convictions. This disclosure is a continuing obligation and must be promptly supplemented for accuracy throughout the procurement process and term of the contract. If no person is identified, enter "None" on the line below:

Name of person(s): _____

Nature of disclosure: _____

_____

_____

_____

APPLICABLE STATEMENT

This Disclosure Form A is submitted on behalf of the INDIVIDUAL named on previous page. Under penalty of perjury, I certify the contents of this disclosure to be true and accurate to the best of my knowledge.

Completed by: ☐ _____ _____

Signature of Individual or Authorized Officer — Date

NOT APPLICABLE STATEMENT

Under penalty of perjury, 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 SUBCONTRACTOR listed on the previous page.

☐ _____ _____

Signature of Authorized Officer — Date

RETURN WITH SUBCONTRACT

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form B
Subcontractor: Other Contracts & Financial Related Information Disclosure

Subcontractor 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 Code (30 ILCS 500). This information shall become part of the publicly available contract file. This Form B must be completed for subcontracts with a total value of $50,000 or more, from subcontractors identified in Section 20-120 of the Code, and for all open-ended contracts.

DISCLOSURE OF OTHER CONTRACTS, SUBCONTRACTS, AND PROCUREMENT RELATED INFORMATION

1. Identifying Other Contracts & Procurement Related Information. The SUBCONTRACTOR shall identify whether it has any pending contracts, subcontracts, including leases, bids, proposals, or other ongoing procurement relationship with any other State of Illinois agency: Yes ___ No __
If "No" is checked, the subcontractor 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

☐ _____ _____
Signature of Authorized Officer Date

OWNERSHIP CERTIFICATION

Please certify that the following statement is true if the individuals for all submitted Form A disclosures do not total 100% of ownership

Any remaining ownership interest is held by individuals receiving less than $106,447.20 of the bidding entity's or parent entity's distributive income or holding less than a 5% ownership interest.

☐ Yes ☐ No ☐ N/A (Form A disclosure(s) established 100% ownership)

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. Electronic bids are to be submitted to the electronic bidding system (ics-Integrated Contractors Exchange). Paper-based bids are to be submitted to the Chief Procurement Officer for the Department of Transportation in care of the Chief Contracts Official at the Harry R. Hanley Building, 2300 South Dirksen Parkway, in Springfield, Illinois until 10:00 o'clock a.mAugust 1, 2014. 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. 61A36
   KANE County
   Section 11-00214-00-TL
   Project CMM-4003(002)
   Route FAP 361 (Stearns Road)
   District 1 Construction Funds

Project consists of the installation of an Intelligent Transportation System including Closed Circuit Television, Remote Traffic Microwave Sensor, Speed Confirmation Signs, and a Road Weather Information Station which will be integrated along with existing traffic signal controllers into the County's Advanced Traffic Management System on FAP Route 361 (Stearns Road) from Randall Road to Dunham Road.

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

Ann L. Schneider,
Secretary

CONTRACT 61A36

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2014

This index contains a listing of SUPPLEMENTAL SPECIFICATIONS, frequently used RECURRING SPECIAL PROVISIONS, and LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS.

ERRATA Standard Specifications for Road and Bridge Construction (Adopted 1-1-12) (Revised 1-1-14)

SUPPLEMENTAL SPECIFICATIONS

RECURRING SPECIAL PROVISIONS

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

LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS

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

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LR SD13		☐	Required Cold Milled Surface Texture	Nov. 1, 1987	Jan. 1, 2007
LR SD406		☐	**RESCINDED**		
LR 102-2		☐	Bidding Requirements and Conditions for Contract Proposals	Jan. 1, 2001	Jan. 1, 2014
LR 105	**150**	☒	Cooperation with Utilities	Jan. 1, 1999	Jan. 1, 2007
LR 107-2		☐	Railroad Protective Liability Insurance for Local Lettings	Mar. 1, 2005	Jan. 1, 2006
LR 107-4	**153**	☒	Insurance	Feb. 1, 2007	Aug. 1, 2007
LR 107-7		☐	Wages of Employees on Public Works	Jan. 1, 1999	Jan. 1, 2014
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LR 109		☐	Equipment Rental Rates	Jan. 1, 2012	
LR 212		☐	Shaping Roadway	Aug. 1, 1969	Jan. 1, 2002
LR 355-1		☐	Bituminous Stabilized Base Course, Road Mix or Traveling Plant Mix	Oct. 1, 1973	Jan. 1, 2007
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LR 702		☐	Construction and Maintenance Signs	Jan. 1, 2004	Jun. 1, 2007
LR 1000-1		☐	Cold In-Place Recycling (CIR) and Full Depth Reclamation (FDR) with Emulsified Asphalt Mix Design Procedures	Apr. 1, 2012	Jun. 1, 2012
LR 1000-2		☐	Cold In-Place Recycling (CIR) and Full Depth Reclamation (FDR) with Foamed Asphalt Mix Design Procedures	June 1, 2012	
LR 1004		☐	Coarse Aggregate for Bituminous Surface Treatment	Jan. 1, 2002	Jan. 1, 2007
LR 1030		☐	Growth Curve	Mar. 1, 2008	Jan. 1, 2010
LR 1032-1		☐	Emulsified Asphalts	Jan. 1, 2007	Feb. 7, 2008
LR 1102		☐	Road Mix or Traveling Plan Mix Equipment	Jan. 1, 2007	

BDE SPECIAL PROVISIONS
For the August 1 and September 19, 2014 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	Jan. 1, 2012
	80099			Accessible Pedestrian Signals (APS)	April 1, 2003	Jan. 1, 2014
	80274			Aggregate Subgrade Improvement	April 1, 2012	Jan. 1, 2013
	80192			Automated Flagger Assistance Device	Jan. 1, 2008	
	80173			Bituminous Materials Cost Adjustments	Nov. 2, 2006	Aug. 1, 2013
	80241			Bridge Demolition Debris	July 1, 2009	
	5026I			Building Removal-Case I (Non-Friable and Friable Asbestos)	Sept. 1, 1990	April 1, 2010
	5048I			Building Removal-Case II (Non-Friable Asbestos)	Sept. 1, 1990	April 1, 2010
	5049I			Building Removal-Case III (Friable Asbestos)	Sept. 1, 1990	April 1, 2010
	5053I			Building Removal-Case IV (No Asbestos)	Sept. 1, 1990	April 1, 2010
	80292			Coarse Aggregate in Bridge Approach Slabs/Footings	April 1, 2012	April 1, 2013
*	80310	154	X	Coated Galvanized Steel Conduit	Jan. 1, 2013	Aug. 1, 2014
*	80341			Coilable Nonmetallic Conduit	Aug. 1, 2014	
	80198			Completion Date (via calendar days)	April 1, 2008	
	80199			Completion Date (via calendar days) Plus Working Days	April 1, 2008	
	80293			Concrete Box Culverts with Skews > 30 Degrees and Design Fills ≤ 5 Feet	April 1, 2012	April 1, 2014
	80294			Concrete Box Culverts with Skews ≤ 30 Degrees Regardless of Design Fill and Skews > 30 Degrees with Design Fills > 5 Feet	April 1, 2012	April 1, 2014
	80311			Concrete End Sections for Pipe Culverts	Jan. 1, 2013	
*	80334			Concrete Gutter, Curb, Median, and Paved Ditch	April 1, 2014	Aug. 1, 2014
	80277			Concrete Mix Design – Department Provided	Jan. 1, 2012	Jan. 1, 2014
	80261	155	X	Construction Air Quality – Diesel Retrofit	June 1, 2010	Jan. 1, 2014
	80335	158	X	Contract Claims	April 1, 2014	
	80029	159	X	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	Aug. 2, 2011
	80265			Friction Aggregate	Jan. 1, 2011	
	80229			Fuel Cost Adjustment	April 1, 2009	July 1, 2009
	80329			Glare Screen	Jan. 1, 2014	
	80303			Granular Materials	Nov. 1, 2012	
*	80304			Grooving for Recessed Pavement Markings	Nov. 1, 2012	Aug. 1, 2014
	80246			Hot-Mix Asphalt – Density Testing of Longitudinal Joints	Jan. 1, 2010	April 1, 2012
	80322			Hot-Mix Asphalt – Mixture Design Composition and Volumetric Requirements	Nov 1, 2013	
	80323			Hot-Mix Asphalt – Mixture Design Verification and Production	Nov 1, 2013	
	80315			Insertion Lining of Culverts	Jan. 1, 2013	Nov 1, 2013
	80336			Longitudinal Joint and Crack Patching	April 1, 2014	
	80324			LRFD Pipe Culvert Burial Tables	Nov 1, 2013	April 1, 2014
	80325			LRFD Storm Sewer Burial Tables	Nov 1, 2013	
*	80045			Material Transfer Device	June 15, 1999	Aug. 1, 2014
*	80342			Mechanical Side Tie Bar Inserter	Aug. 1, 2014	
	80165			Moisture Cured Urethane Paint System	Nov. 1, 2006	Jan. 1, 2010
	80337			Paved Shoulder Removal	April 1, 2014	
	80330			Pavement Marking for Bike Symbol	Jan. 1, 2014	
	80298			Pavement Marking Tape Type IV	April 1, 2012	
	80254			Pavement Patching	Jan. 1, 2010	
	80331	169	X	Payrolls and Payroll Records	Jan. 1, 2014	
	80332			Portland Cement Concrete – Curing of Abutments and Piers	Jan. 1, 2014	
	80326	171	X	Portland Cement Concrete Equipment	Nov 1, 2013	

	File Name	Pg.		Special Provision Title	Effective	Revised
	80338			Portland Cement Concrete Partial Depth Hot-Mix Asphalt Patching	April 1, 2014	
*	80343			Precast Concrete Handhole	Aug. 1, 2014	
	80300			Preformed Plastic Pavement Marking Type D - Inlaid	April 1, 2012	
	80328	172	X	Progress Payments	Nov. 2, 2013	
	80281			Quality Control/Quality Assurance of Concrete Mixes	Jan. 1, 2012	Jan. 1, 2014
	3426I	173	X	Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
	80157			Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	
	80306			Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS)	Nov. 1, 2012	April 1, 2014
	80327			Reinforcement bars	Nov 1, 2013	
	80283	175	X	Removal and Disposal of Regulated Substances	Jan. 1, 2012	Nov. 2, 2012
	80319	179	X	Removal and Disposal of Surplus Materials	Nov. 2, 2012	
*	80344			Rigid Metal Conduit	Aug. 1, 2014	
	80307			Seeding	Nov. 1, 2012	
*	80340			Speed Display Trailer	April 2, 2014	
	80339			Stabilized Subbase	April 1, 2014	
	80127			Steel Cost Adjustment	April 2, 2004	April 1, 2009
	80317			Surface Testing of Hot-Mix Asphalt Overlays	Jan. 1, 2013	
	80301			Tracking the Use of Pesticides	Aug. 1, 2012	
	80333			Traffic Control Setup and Removal Freeway/Expressway	Jan. 1, 2014	
	20338	180	X	Training Special Provisions	Oct. 15, 1975	
	80318			Traversable Pipe Grate	Jan. 1, 2013	April 1, 2014
*	80345			Underpass Luminaire	Aug. 1, 2014	
*	80346			Waterway Obstruction Warning Luminaire	Aug. 1, 2014	
	80288			Warm Mix Asphalt	Jan. 1, 2012	Nov. 1, 2013
	80302	183	X	Weekly DBE Trucking Reports	June 2, 2012	
	80289			Wet Reflective Thermoplastic Pavement Marking	Jan. 1, 2012	
	80071	184	X	Working Days	Jan. 1, 2002	

The following special provisions are in the 2014 Supplemental Specifications and Recurring Special Provisions:

File Name	Special Provision Title	New Location	Effective	Revised
80309	Anchor Bolts	Articles 1006.09, 1070.01, and 1070.03	Jan. 1, 2013	
80276	Bridge Relief Joint Sealer	Article 503.19 and Sections 588 and 589	Jan. 1, 2012	Aug. 1, 2012
80312	Drain Pipe, Tile, Drainage Mat, and Wall Drain	Article 101.01, 1040.03, and 1040.04	Jan. 1, 2013	
80313	Fabric Bearing Pads	Article 1082.01	Jan. 1, 2013	
80169	High Tension Cable Median Barrier	Section 644 and Article 1106.02	Jan. 1, 2007	Jan. 1, 2013
80320	Liquidated Damages	Article 108.09	April 1, 2013	
80297	Modified Urethane Pavement Marking	Section 780, Articles 1095.09 and 1105.04	April 1, 2012	
80253	Moveable Traffic Barrier	Section 707 and Article 1106.02	Jan. 1, 2010	Jan. 1, 2013
80231	Pavement Marking Removal	Recurring CS #33	April 1, 2009	
80321	Pavement Removal	Article 440.07	April 1, 2013	
80022	Payments to Subcontractors	Article 109.11	June 1, 2000	Jan. 1, 2006
80316	Placing and Consolidating Concrete	Articles 503.06, 503.07, and 516.12	Jan. 1, 2013	
80278	Planting Woody Plants	Section 253 and Article 1081.01	Jan. 1, 2012	Aug. 1, 2012
80305	Polyurea Pavement Markings	Article 780.14	Nov. 1, 2012	Jan. 1, 2013

File Name	Special Provision Title	New Location	Effective	Revised
80279	Portland Cement Concrete	Sections 312, 503, 1003, 1004, 1019, and 1020	Jan. 1, 2012	Nov. 1, 2013
80218	Preventive Maintenance – Bituminous Surface Treatment	Recurring CS #34	Jan. 1, 2009	April 1, 2012
80219	Preventive Maintenance – Cape Seal	Recurring CS #35	Jan. 1, 2009	April 1, 2012
80220	Preventive Maintenance – Micro Surfacing	Recurring CS #36	Jan. 1, 2009	April 1, 2012
80221	Preventive Maintenance – Slurry Seal	Recurring CS #37	Jan. 1, 2009	April 1, 2012
80224	Restoring Bridge Approach Pavements Using High-Density Foam	Recurring CS #39	Jan. 1, 2009	Jan. 1, 2012
80255	Stone Matrix Asphalt	Sections 406, 1003, 1004, 1030, and 1011	Jan. 1, 2010	Aug. 1, 2013
80143	Subcontractor Mobilization Payments	Article 109.12	April 2, 2005	April 1, 2011
80308	Synthetic Fibers in Concrete Gutter, Curb, Median and Paved Ditch	Articles 606.02 and 606.11	Nov. 1, 2012	
80286	Temporary Erosion and Sediment Control	Articles 280.04 and 280.08	Jan. 1, 2012	
80225	Temporary Raised Pavement Marker	Recurring CS #38	Jan. 1, 2009	
80256	Temporary Water Filled Barrier	Section 708 and Article 1106.02	Jan. 1, 2010	Jan. 1, 2013
80273	Traffic Control Deficiency Deduction	Article 105.03	Aug. 1, 2011	
80270	Utility Coordination and Conflicts	Articles 105.07, 107.19, 107.31, 107.37, 107.38, 107.39 and 107.40	April 1, 2011	Jan. 1, 2012

The following special provisions require additional information from the designer. 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

STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the *Standard Specifications for Road and Bridge Construction*, adopted January 1, 2012 (hereinafter referred to as the Standard Specifications, the latest edition of the "Manual of Uniform Traffic Control Devices for Streets and Highways", and the "Manual of Test Procedures for Materials" in effect on the date of invitation for bids, and the IDOT District 1 Traffic Signal Special Provisions, National Electrical Code (NEC), National Electrical Manufactures Association (NEMA) publications, International Municipal Signals Association (IMSA) Official Wire and Cable Specifications, Institute of Electrical and Electronics Engineers (IEEE), and the "Supplemental Specifications and Recurring Special Provisions" indication on the Check Sheet included herein which apply to and govern the construction of Contract No. 61A36. Section 11-00214-00-TL, Project CMM-4003 (002), Job No. D-91-359-12 and in case of conflict with any part, or parts of said Specifications, the said Special provisions shall take precedence and shall govern.

LOCATION OF PROJECT

The project limits for this Scope of Services extend along Stearns Road from Randall Road to Dunham, a total gross and net length of approximately 21,600 feet (4 miles).

The six signalized intersections in this project include:

McDonald Drive and Briargate Drive
Randall Road and Stearns Road
Stearns Road and McLean
IL Rte 31 and McLean
Stearns Road and IL Rte 31
Stearns/IL Rte 25 and
Stearns Road and Dunham Road

DESCRIPTION OF PROJECT

The work consists of the installation of Intellegent Transportation Systems including Closed Circuit Television, Remote Traffic Microwave Sensor (RTMS), Speed Confirmation Signs, and a Road Weather Information Station (RWIS). Each of the elements and the exisitng traffic signal controllers will be networked back to the Kane County Operations Center via a Gigabit Ethernet Network and incorporated into the County's ATMS (Advanced Traffic Management System) as part of this project.

TRAFFIC CONTROL PLAN

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

Special attention is called to Articles 107.09, 107.14 and Section 701 of the Standard Specification and the following Highway Standards, Details, Quality Standard for Work Zone Traffic Control Devices, Recurring Special Provisions and Special Provisions contained herein, relating to traffic control.

The Contractor shall contact the Kane County Division of Transportation and IDOT District One Bureau of Traffic at least 72 hours in advance of beginning work.

STANDARDS:

701101-04, 701301-04, 701311-03, 701426-06, 701427-02, 701601-09, 701701-09, 701801-05, 701901-03, 720001-01, 720006-04

DETAILS: TC-10, TC-22

SPECIAL PROVISIONS:

PUBLIC CONVENIENCE AND SAFETY (DIST 1)
MAINTENANCE OF ROADWAYS
TEMPORARY INFORMATION SIGNING

RECURRING SPECIAL PROVISIONS:

LRS 3 - Work Zone Traffic Control Surveillance
LRS 4 – Flaggers in Work Zones

PROJECT COORDINATION

Existing conditions shown in these plans include elements that will be installed by others as part of the roadway reconstruction and add lanes project Contract No. 63598 between Stearns Road and IL/Dunham Road. The Contractor may have to postpone work within the limits of this project to allow the other roadway contractor time to complete their work. The timeline for Contract 63598 is between February 2014 and November 2015.

STATUS OF UTILITIES TO BE ADJUSTED

Effective: January 30, 1987

Revised: January 24, 2013

Utilities companies involved in this project have provided the following estimated durations:

Name of Utility	Type	Location	Estimated Duration of Time for the Completion of Relocation or Adjustments
City of South Elgin Department of Public Works 735 Martin Drive South Elgin, IL 60177 Charlton Behm Phone: (847) 695-2742	Traffic Signals/ Lighting Municipal Water	Reference only McDonald & & Briargate	No impacts or adjustment required
Otter Creek Reclamation District c/o RHMG Engineers 975 Campus Drive Mundelein, IL 60060 Bill Rickert 847-362-5959	Municipal Sewer	Reference only	No impacts or adjustment required
Commonwealth Edison Fran Piatkowski 350 S. Second Street Elgin, IL 60123 (847)608-2331 or (815)904-4013(cell)	UG electrical utility	New Service Stearns Road & Brewster Creek, Stearns Road and Rt 31 and Stearns Road and Umbdenstock	Sept. 15th, 2014 or Within 2 months of following notice to proceed
Nicor Gas 1844 Ferry Road Naperville IL 60563-9600 Jeff Liefheit (815) 754-3140	Gas Utility	Various Crossing	No adjustments required
Other Agencies			
IDOT Bureau of Traffic 101 West Center Court Schaumburg, IL 60196 Daryle Drew 847-705-4420	Traffic Signals/ Lighting	Stearns Road and Randall Road IL Rte 31 and McLean Kirk Road and IL 64 Stearns Road and Dunham Road (IL Rte 25)	No adjustments required. Notify IDOT Bureau of Traffic 72 hours prior to work on IDOT signals.

Chicago Central and Pacific Railroad and it Parents 17641 S. Ashland Ave. Homewood, IL 60430 Terry Lee 715-345-2501	Railroad	Stearns Road south of Gilbert Street	No adjustments required.
Union Pacific West Mr. Chris Keckeisen Mngr. Construction Projects 500 W. Madison Ave., 300 Chicago, IL 60661 312.496.4724	Railroad	Stearns Road south of Gilbert Street	No adjustments required.

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.

In accordance with 605 ILCS 5/9-113 of the Illinois Compiled Statutes, utility companies have 90 days to complete the relocation of their facilities after receipt of written notice from the Department. The 90-day written notice will be sent to the utility companies after the following occurs:

1) Proposed right of way is clear for contract award.
2) Final plans have been sent to and received by the utility company.
3) Utility permit is received by the Department and the Department is ready to issue said permit.
4) If a permit has not been submitted, a 15 day letter is sent to the utility company notifying them they have 15 days to provide their permit application. After allowing 15 days for submission of the permit the 90 day notice is sent to the utility company.
5) Any time within the 90 day relocation period the utility company may request a waiver for additional time to complete their relocation. The Department has 10 days to review and respond to a waiver request.

SERVICE INSTALLATION

This pay item shall include all labor, parts and materials necessary to install a standalone electrical service disconnect cabinet with attached electrical meter. This work is in addition to the work associated with the Service Installation – Ground Mounted and Service Installation – Pole Mounted as described in the Standard Specifications and IDOT District 1 Traffic Signal Specifications.

Basis of Payment:

This work will be included in the item for Service Installation - Ground Mounted and Service Installation – Pole Mounted.

MALFUNCTION MANAGEMENT UNIT

This pay item shall include all labor, parts, and materials necessary to install a Malfunction Management Unit in an existing controller cabinet.

All references to "Conflict Monitor" in Article 1074.03 shall be changed to "Malfunction Management Unit."

Add the following to Article 1074.03 of the Standard Specifications:

The Malfunction Management Unit (MMU) shall be compatible with the existing traffic signal controller and shall include a 10/100Mbps Ethernet port.

The MMU shall have two high contrast, large area Liquid Crystal Displays (LCD) that continuously show full RYG(W) intersection status and a separate graphic LCD that provides a menu driven user interface to status, signal voltages, configuration, event logs, and the Help system.

Remote monitoring and communication with the MMU shall be established over the Ethernet network to the satisfaction of the Engineer.

Basis of Payment:

This item will be paid for at the contract unit price each for MALFUNCTION MANAGEMENT UNIT which price shall be payment in full for furnishing and installing the MMU in an existing controller cabinet as specified. If the MMU is to be installed in a new controller cabinet it shall not be paid for separately but shall be considered included in the cost for the Controller and Cabinet of the type specified.

MODIFY EXISTING CONTROLLER CABINET

This work shall be in accordance with Section 895 of the Standard Specifications and shall include all modifications and peripheral equipment necessary to accommodate the new signal equipment and interconnect installation at the intersection. All necessary materials, part, and labor required for modifying the controller cabinet to accommodate the new traffic signal and interconnect equipment, including modifications to the master controller, shall be considered incidental to this pay item. Network configuration to KCDOT will be paid for under NETWORK CONFIGURATION.

Basis of Payment:

This work shall be paid for at the contract unit price each for MODIFY EXISTING CONTROLLER, which price shall be payment in full for all materials, parts, and labor to modify the existing controller and associated equipment necessary for proper operation.

MODIFY EXISTING CONTROLLER CABINET, SPECIAL

The Contractor shall furnish and install an Ethernet interface to enable the existing uninterruptible power supply to be managed on Kane County's Traffic Management System.

This item includes furnishing and installing the IP interface device as directed by the manufacturer, complete with all hardware, cables and connections necessary for a complete and fully functional system.

Basis of Payment:

This item will be paid for at the contract unit price each for MODIFY EXISTING CONTROLLER CABINET, SPECIAL; which price shall be payment in full for furnishing all associated equipment required, installing and testing the equipment complete and in place, and placing the equipment in operation to the satisfaction of the Engineer.

UNINTERRUPTIBLE POWER SUPPLY

All references to "Uninterruptable Power Supply" shall be equivalent to "Uninterruptible Power Supply."

Description

This work shall consist of furnishing and installing an uninterruptible power supply (UPS).

The UPS shall have the power capacity to provide normal operation of a Dynamic message sign LED type Roadway Weather Information Station, associated IP network electronics and Radar speed signs for a minimum of eight hours.

The UPS shall include, but not be limited to the following: inverter/charger, power transfer relay, batteries, battery cabinet, a separate manually operated non-electronic bypass switch, and all necessary hardware and interconnect wiring according to the plans. The UPS shall provide reliable emergency power to the ITS devices in the event of a power failure or interruption. The transfer from utility power to battery power and vice versa shall not interfere with the normal operation of the IP network, or any other peripheral ITS devices within the traffic controller assembly.

The UPS shall include an Ethernet interface to enable the UPS to be managed on Kane County's Traffic Management System.

The UPS shall be designed for outdoor applications, and shall meet the environmental requirements of, "NEMA Standards Publication No. TS 2 – Traffic Controller Assemblies", except as modified herein.

Materials

The UPS shall be line interactive and provide voltage regulation and power conditioning when utilizing utility power. The UPS shall be sized appropriately for the intersection's normal ITS operating connected load, plus 20 percent (20%). The total connected traffic signal load shall not exceed the published ratings for the UPS. The UPS shall provide a minimum of eight (8) hours of normal operation run-time for signalized intersections with LED type signal head optics at 77 °F (25 °C) (minimum 700 W/VA active output capacity, with 90 percent minimum inverter efficiency).

The maximum transfer time from loss of utility power to switchover to battery backed inverter power shall be 65 milliseconds.

The UPS shall be provided with safety locks to prevent improper installation. This protection shall include a reverse polarity protection and protection against electrical back feed to the utility service that complies with UL 1778 and CSA C22.2 No. 107.1.3 requirements and safety standard EN50091-1-1-2 and EN60950. Besides passing Immunity Standards, EN61000-4-2, 3, 4, 5, 6 and 8 and EN61000-3-2 Standards, the manufacturer's nameplate label shall display agency approval mark "cCSAus".

The UPS shall be provided with an SNMP Ethernet port for remote programming and monitoring, complete with password and remote operation software or browser application. Additionally, the UPS shall be provided with an RS-232 port for local programming and a LCD display and local control and monitoring of alarm logging events. The UPS shall be provided with a minimum of three SPDT relay contacts for user programming of alarms or other controls for operation. A sixth SPDT relay contact set shall be provided to output the alarms for a secondary remote alarm system that is programmed by the factory. The relay contacts shall be located on a panel mounted terminal block or locking circular connectors, rated at a minimum 120 V/1 A, and labeled so as to identify each contact according to the plans. Contact closures shall be energized whenever the unit:

- Switches to battery power. Contact shall be labeled or marked "On Batt".
- Has been connected to battery power for two (2) hours. Contact shall be labeled or marked "Timer".
- Has an inverter/charger failure. Contact shall be labeled or marked "UPS Fail".
- Operating temperature for the inverter/charger, power transfer relay, and manual bypass switch shall be -35 to 165 °F.
- Both the power transfer relay and manual bypass switch shall be rated at 240 VAC/30 amps, minimum.

The UPS shall use a temperature-compensated battery charging system. The charging system shall compensate over a range of 1.4 – 2.2 mV/°F per cell. The temperature sensor shall be external to the inverter/charger unit. The temperature sensor shall come with 6.5 ft of wire.

Batteries shall not be recharged when battery temperature exceeds 122 °F ± 5 °F.

The UPS shall bypass the utility line power whenever the utility line voltage is outside of the following voltage range: 85 VAC to 135 VAC (± 2 VAC).

When utilizing battery power, the UPS output voltage shall be between 110 and 125 VAC, pure sine wave output, ≤ 3 percent THD, 60 Hz ± 3 Hz.

The UPS shall be compatible with the District's approved ITS controller assemblies utilizing NEMA TS 1 or NEMA TS 2 controllers and cabinet components for full time operation.

When the utility line power has been restored at above 90 VAC ± 2 VAC for more than 30 seconds, the UPS shall dropout of battery backup mode and return to utility line mode.

When the utility line power has been restored at below 130 VAC ± 2 VAC for more than 30 seconds, the UPS shall dropout of battery backup mode and return to utility line mode.

The UPS shall be equipped to prevent a malfunction feedback to the cabinet or from feeding back to the utility service.

In the event of inverter/charger failure, the power transfer relay shall revert to the NC state, where utility line power is reconnected to the cabinet. In the event of an UPS fault condition, the UPS shall always revert back to utility line power.

Recharge time for the battery, from "protective low-cutoff" to 80 percent or more of full battery charge capacity, shall not exceed twenty hours.

The manual bypass switch shall be wired to provide power to the UPS when the switch is set to manual bypass.

When the system is in battery backup mode, the UPS shall bypass all internal cabinet lights, ventilation fans, service receptacles and any other devices directed by the Engineer. Cabinet wiring shall be designed to include traffic video monitoring operation during power transition to battery power.

As the battery reserve capacity reaches 50 percent, the intersection shall automatically be placed in all-red flash. The UPS shall allow the controller to automatically resume normal operation after the power has been restored. The UPS shall log an alarm in the controller for each time it is activated.

A blue LED indicator light shall be mounted on the front of the ITS cabinet or on the side of the UPS cabinet facing traffic and shall turn on to indicate when the cabinet power has been disrupted and the UPS is in operation. The light shall be a minimum 1 in. diameter, be viewable from the driving lanes, and able to be seen from 200 ft away.

All 24 volt and 48 volt systems shall include an external or internal component that monitors battery charging to ensure that every battery in the string is fully charged. The device shall compensate for the effects of adding a new battery to an existing battery system by ensuring that the charge voltage is spread equally across all batteries.

Mounting/Configuration

The inverter/charger unit shall be rack or shelf-mounted. All interconnect wiring provided between the power transfer relay, manual bypass switch, and cabinet terminal service block shall be at least 6.5 ft of #10 AWG wire. Relay contact wiring provided for each set of NO/NC relay contact closure terminals shall be 6.5 ft of #18 AWG wire.

Battery Cabinet

Batteries, inverter/charger and power transfer relay shall be housed in a separate NEMA Type 3R cabinet. The cabinet shall be Aluminum alloy, 5052-H32, 0.125-inch thick and have a natural mill finish.

The door shall open to the entire cabinet; have a neoprene gasket, an Aluminum continuous piano hinge with stainless steel pin, and a three point locking system. The cabinet shall be provided with a main door lock which shall operate with a traffic industry conventional No. 2 key. Provisions for padlocking the door shall be provided.

The manually bypass switch shall be installed inside the traffic signal cabinet.

No more than three batteries shall be mounted on individual shelves for a cabinet housing six batteries and no more than four batteries per shelf for a cabinet housing eight batteries. A minimum of three shelves shall be provided. Each shelf shall support a load of 132 lb minimum.

The battery cabinet housing shall have the following nominal outside dimensions: a width of 25 in., a depth of 16 in., and a height of 41 to 48 in. Clearance between shelves shall be a minimum of 10 in.

The battery cabinet shall be ventilated through the use of louvered vents, filters, and one thermostatically controlled fan. The cabinet fan shall not be energized when the traffic signals are on UPS power.

The battery cabinet shall have provisions for an external generator connection.

The UPS shall be provided with a Battery Heater Mat that shall function when power line voltage is present and temperature ranges indicate the advantage of heating the batteries for enhanced performance, activating at twenty three degrees Fahrenheit and deactivating at temperatures at or above sixty degrees Fahrenheit. The Manual Bypass Switch shall be provided for manual connection or disconnection and testing. The Automatic Transfer Switch shall automatically transfer the load from line power to UPS power and back when the incoming line voltage is impaired and then corrected for proper operation. The battery heater mat shall be sized for the battery array installed.

The UPS with battery cabinet shall come with all bolts, conduits and bushings, gaskets, shelves, and hardware needed for mounting. A warning sticker shall be placed on the outside of the cabinet indicating that there is an uninterruptible power supply inside the cabinet.

Maintenance, Displays, Controls, and Diagnostics

The UPS shall include a display and/or meter to indicate current battery charge status and conditions.

The UPS shall have lightning surge protection compliant with IEEE/ANSI C.62.41.

The UPS shall be equipped with an integral system to prevent battery from destructive discharge and overcharge.

The UPS hardware and batteries shall be easily replaced without requiring any special tools or devices.

The UPS shall include a re-settable front-panel event counter display to indicate the number of times the UPS was activated. The total number of hours the unit has operated on battery power shall be available from the controller unit or UPS unit.

The UPS shall include tip or kill switch installed in the battery cabinet, which shall completely disconnect power from the UPS when the switch is manually activated.

The UPS shall incorporate a flanged electric generator inlet for charging the batteries and operating the UPS. The generator connector shall be male type, twist-lock, rated as 15A, 125VAC with a NEMA L5-15P configuration and weatherproof lift cover plate (Hubbell model HBL4716C). Access to the generator inlet shall be from a secured weatherproof lift cover plate or behind a locked battery cabinet police panel.

The manufacturer shall include two sets of equipment lists, operation and maintenance manuals, board-level schematic and wiring diagrams of the UPS, and battery data sheets. The manufacturer shall include any software needed to monitor, diagnose, and operate the UPS. The manufacturer shall include any required cables to connect the UPS to a laptop computer.

Battery System

Individual batteries shall be 12 V type, 65 amp-hour minimum capacity at 20 hours, and shall be easily replaced and commercially available off the shelf.

The UPS shall consist of an even number of batteries that are capable of maintaining normal operation of the ITS cabinet for a minimum of eight (8) hours. Calculations shall be provided showing the number of batteries of the type supplied that are needed to satisfy this requirement. A minimum of four batteries shall be provided.

All batteries supplied in the UPS shall be shall be Gel Cell Valve Regulated Lead Acid (VRLA) type specifically designed for outdoor application using a "Float Service" to provide 100% runtime capacity without initialization charging. Batteries shall be constructed using Silver Alloy positive plates and shall have a five year full replacement warranty, non-prorated. Battery capacity rating at 20 hour shall be 94 Amp Hours, 12 VDC – each battery. Battery design for the UPS shall be either four or eight units per design application. Batteries shall be installed and

connected to operate at the 48 VDC design. The contractor shall furnish either the four or eight battery design based on the signalized intersection design and power requirements for each intersection. either gel cell or AGM type, deep cycle, completely sealed, prismatic lead-calcium based, silver alloy, valve regulated lead acid (VRLA) requiring no maintenance. All batteries in a UPS installation shall be the same type; mixing of gel cell and AGM types within a UPS installation is not permitted.

The Gel Cell Batteries shall be certified by the manufacturer to operate over a temperature range of -13 to 160 °F. The batteries shall be provided with appropriate interconnect wiring and corrosion resistant mounting trays and/or brackets appropriate for the cabinet into which they will be installed.

The UPS shall be provided with a Battery Charge Maintenance Management System to equalize charging of batteries with different battery life ratings and to allow adding new batteries to existing installation sites without changing all existing batteries at a single time. This management system shall comply with CSA C22.2 No. 107.1 and UL 1778 Standards for safe operation of batteries under unattended applications.

Batteries shall indicate maximum recharge data and recharging cycles.

Battery interconnect wiring shall be via a modular harness. Batteries shall be shipped with positive and negative terminals pre-wired with red and black cabling that terminates into a typical power-pole style connector. The harness shall be equipped with mating power-pole style connectors for the batteries and a single, insulated plug-in style connection to the inverter/charger unit. The harness shall allow batteries to be quickly and easily connected in any order and shall be keyed and wired to ensure proper polarity and circuit configuration.

Battery terminals shall be covered and insulated so as to prevent accidental shorting.

Warranty

The manufacturer's warranty for the uninterruptible power supplies (UPS) shall cover from date the equipment is placed in operation; additionally, the batteries of the UPS shall be warranted for full replacement from the date the batteries and UPS are placed into service in accordance with the battery manufacturer's warranty.

Installation

When a UPS is installed at a new ITS cabinet and foundation, it shall be mounted as shown on the plans.

Basis of Payment:

This work will be paid for at the contract unit price per each for UNINTERRUPTABLE POWER SUPPLY, STANDARD.

FIBER OPTIC CABLE

Add the following to Article 871.01 of the Standard Specifications:

The Fiber Optic cable shall be installed in conduit or as specified on the plans.

Add the following to Article 872.02 of the Standard Specifications:

The control cabinet distribution enclosure shall be supplied under FIBER OPTIC CABLE 36 FIBERS, SINGLE MODE OR FIBER OPTIC CABLE 144 FIBERS, SINGLE MODE.

Add the following to Article 871.04 of the Standard Specifications:

A nominal six single-mode fibers from each cable shall be terminated with approved optical connectors at the distribution enclosure. A minimum of 13.0 feet (4m) of extra cable length shall be provided for controller cabinets. The controller cabinet extra cable length shall be coiled and stored as approved by the Engineer.

Include in paragraph (b) of Article 1076.02:

Single mode fiber shall satisfy the criteria of ITU Recommendation. G.652.

Basis of Payment:

This work will be paid for at the contract unit price per foot for FIBER OPTIC CABLE 36 FIBERS, SINGLE MODE or FIBER OPTIC CABLE 144 FIBERS, SINGLE MODE.

RAILROAD RIGHT OF ENTRY

In addition to railroad protective liability insurance, any contractors working on CC&P/CN right of way will need to apply for a right-of-entry permit and pay the $750 fee. Obtaining a railroad Right of Entry is not anticipated to be required as part of the Stearns Road Traffic Signal Improvements project. This installation of conduit and fiber optic cable between Stearns Road/IL Rte. 25 and Dunham Road/IL Rte. 25 should be installed by the roadway contractor for Contract No. 63598 prior to work under this contract. If the successful completion of this project requires accessing railroad ROW, the prime contractor would apply for this permit and all subcontractors and subconsultants will be covered under the prime's policy and permit. This is only required in instances where the contract will require work on the CC&P/CN right of way.

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

The Grantee, Licensee, Permittee and/or it's Contractor shall, before entering upon the property of the Railroad for performance of any work, secure a right of entry agreement and permission from the Engineering Superintendent of the Railroad Company or his authorized representative at curtis.holman@cn.ca for the occupancy and use of the Railroad's property and shall confer

with the Railroad relative to the requirements for railroad clearances, operation and general safety regulations. Grantee, Licensee, Permittee and/or its Contractor shall have all employees doing work on CN's property or its subcontractors doing work on CN's property to go through Railroad Safety Training at http://www.e-railsafe.com/.

Contractor shall confirm the need for a railroad right-of-entry prior to applying for permit. KCDOT authorization is require before a right of entry permit is obtained.

Method of Measurement.

Not Measured

Basis of Payment:

Railroad Right of Entry will not be paid for separately. Permit costs are the responsibility of the contractor at no additional cost to the Department per article 107.04 of the Standard Specifications.

MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION

Revise Articles 850 of the Standard Specifications to read:

Procedure.

The energy charges for the operation of the traffic signal installation shall be paid for by others. Full maintenance responsibility shall start as soon as the Contractor begins any physical work on the Contract or any portion thereof. The Contractor shall have electricians with IMSA Level II certification on staff to provide signal maintenance.

This item shall include maintenance of all traffic signal equipment at the intersection, including emergency vehicle pre-emption equipment, master controllers, uninterruptible power supply (UPS and batteries), telephone service installations, communication cables, conduits to adjacent intersections, and other traffic signal equipment, but shall not include Automatic Traffic Enforcement equipment, such as Red Light Enforcement cameras, detectors, or peripheral equipment, not owned by the State.

Maintenance.

The maintenance shall be according to MAINTENANCE AND RESPONSIBILITY in Division 800 of these specifications and the following:

The Contractor shall check all controllers every two (2) weeks, which will include visually inspecting all timing intervals, relays, detectors, and pre-emption equipment to ensure that they are functioning properly. This item includes, as routine maintenance, all portions of emergency vehicle pre-emption equipment. The Contractor shall maintain in stock at all times a sufficient amount of materials and equipment to provide effective temporary and permanent repairs.

The Contractor shall provide immediate corrective action when any part or parts of the system fail to function properly. Two far side heads facing each approach shall be considered the minimum acceptable signal operation pending permanent repairs. When repairs at a signalized intersection require that the controller be disconnected or otherwise removed from normal operation, and power is available, the Contractor shall place the traffic signal installation on flashing operation. The signals shall flash RED for all directions unless a different indication has been specified by the Engineer. The Contractor shall be required to place stop signs (R1-1-36) at each approach of the intersection as a temporary means of regulating traffic. When the signals operate in flash, the Contractor shall furnish and equip all their vehicles assigned to the maintenance of traffic signal installations with a sufficient number of stop signs as specified herein. The Contractor shall maintain a sufficient number of spare stop signs in stock at all times to replace stop signs which may be damaged or stolen.

The Contractor shall provide the Engineer with a 24 hour telephone number for the maintenance of the traffic signal installation and for emergency calls by the Engineer.

Traffic signal equipment which is lost or not returned to the Department for any reason shall be replaced with new equipment meeting the requirements of the Standard Specifications and these special provisions.
The Contractor shall respond to all emergency calls from the Department or others within one hour after notification and provide immediate corrective action. When equipment has been damaged or becomes faulty beyond repair, the Contractor shall replace it with new and identical equipment. The cost of furnishing and installing the replaced equipment shall be borne by the Contractor at no additional charge to the contract. The Contractor may institute action to recover damages from a responsible third party. If at any time the Contractor fails to perform all work as specified herein to keep the traffic signal installation in proper operating condition or if the Engineer cannot contact the Contractor's designated personnel, the Engineer shall have the State's Electrical Maintenance Contractor perform the maintenance work required. The State's Electrical Maintenance Contractor shall bill the Contractor for the total cost of the work. The Contractor shall pay this bill within thirty (30) days of the date of receipt of the invoice or the cost of such work will be deducted from the amount due the Contractor. The Contractor shall allow the Electrical Maintenance Contractor to make reviews of the Existing Traffic Signal Installation that has been transferred to the Contractor for Maintenance.

Basis of Payment:

Maintaining the existing traffic signals shall be paid for at the contract unit price each for MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION shall be payment in full.

SALVAGE EXISTING TRAFFIC SIGNAL EQUIPMENT

Add the following to Article 895.05 of the Standard Specifications and the IDOT District 1 Traffic Signal Specifications below:

All equipment indicated on the plans to be returned to the County or City of South Elgin shall be delivered by the Contractor to the County's or City's Traffic Signal Maintenance Contractor's main facility at the addresses shown below. The Contractor shall contact the County's or City's Electrical Maintenance Contractor to schedule an appointment to deliver the equipment. No equipment will be accepted without a prior appointment.

City of South Elgin	Kane County
30 W. 751 North Aurora Road Naperville, IL 60563 TEL (708) 588-2500	H&H Electric 2830 Commerce Street Franklin Park, IL 60131-2927 TEL (708) 453-2222

All equipment shall be delivered within 30 days of removing it from the traffic signal installation.

The Contractor shall provide 5 copies of a list of equipment that is to remain the property of the State, including model and serial numbers, where applicable. The Contractor shall also provide a copy of the Contract plan or special provision showing the quantities and type of equipment. Controllers and peripheral equipment from the same location shall be boxed together (equipment from different locations may not be mixed) and all boxes and controller cabinets shall be clearly marked or labeled with the location from which they were removed. If equipment is not returned with these requirements, it will be rejected by the State's Electrical Maintenance Contractor.

The Contractor shall be responsible for the condition of the traffic signal equipment from the time Contractor takes maintenance of the signal installation until the acceptance of a receipt drawn by the County's or State's Electrical Maintenance Contractor indicating the items have been returned in good condition.

In addition to the items listed under Article 895.05 and the IDOT District 1 Traffic Signal Specifications, items to be removed include:

- PTZ Camera
- Malfunction Management Unit
- Associated cabling and power supply cables to above equipment.

Basis of Payment

The work shall be paid for at the contract unit price per each for REMOVE TRAFFIC SIGNAL EQUIPMENT.

CAMERA POLE, 45 FT

Description

The work is furnishing and construction of a ground-mounted galvanized steel CCTV support pole structure with a 45-foot height at locations indicated on the plans. Camera pole foundation and associated work are paid for separately.

Materials

The CCTV pole shall consist of a 45-foot galvanized steel pole that is structurally sound and adheres to Section 1069 of the IDOT Standard Specifications.

Submit design calculations and shop drawings for the support pole for approval by the Engineer. A total of 4 sets of design calculations and 4 sets of detailed construction drawings, signed and sealed by a Professional Engineer licensed in the State of Illinois, to the Engineer for approval. Do not begin fabrication and construction until receiving approval from the Engineer.

Construction

Submit detailed shop drawings for review and acceptance. Material and workmanship not previously inspected will be inspected on the work site. Remove rejected material from the work site. If a disturbance is made to the site during installation, restore the site to its original condition.

Clean threads of anchor bolts and nuts before column installation and lubricate as necessary. Clean, to the satisfaction of the Engineer, the top of the foundation to ensure it is free of dirt or other foreign materials. Install CCTV camera pole atop of base plate. Pole must fit freely on base plate. Do not force pole onto foundation. Make adjustments as necessary to firmly secure the pole to the foundation.

Pole shall provide handhole access approximately 2 feet from the top and approximately 3'-6" from the base of the foundation. Install the necessary hand holes if not available. Handholes that are prefabricated with the pole, but do not meet these requirements, may be approved by the Engineer. The Contractor shall note any variance on the shop drawings for review.

Provide grounding rod, wire, etc. to provide the necessary grounding in accordance with the NEC. All power, communication, and/or cables are to be installed inside the pole. Ensure that the CCTV camera pole is hollow enough to allow cables to pass through. Cables shall only be exposed at locations shown on the plans or approved by the Engineer.

Pole foundation and equipment to be mounted on the pole will be paid for separately.

Basis of Payment

This work will be paid for at the contract unit price per EACH for CAMERA POLE, 45' which price labor, mounting hardware, connections, and fittings.

POLE MOUNTED EQUIPMENT CABINET, TYPE B

Description

The pole mounted ITS controller cabinet is used to house the Camera Interface, DTMS Interface, RSS Interface Managed Ethernet Switch, power supplies, and other equipment served from the cabinet per the Plans.

Materials

The camera tower mounted ITS controller cabinet shall be constructed of 0.125" Aluminum. The cabinet shall be treated by industry-accepted coatings to withstand exposure to a corrosive environment. The door shall include a lock and a hasp for a pad lock. All door locks shall be keyed the same. The Contractor shall supply the IDOT Standard padlock for each pole mounted ITS controller cabinet. The door shall be ventilated and include a replaceable filter. The pole mounted ITS controller cabinet shall meet the following requirements:

1. Type 1 TVSS, true sine wave tracking with let through voltage no greater than L-N 70V, L-L 80V, L-G 90, and N-G 90V. Install the Type 1 TVSS per the Plans
2. Temperature controlled heating strip
3. Temperature controlled cooling fan
4. 0.5 inch of insulation
5. Four (4) outlet gangbox
6. Duplex GFI outlet box
7. Ground stud on floor of the cabinet
8. NEMA CLASS 250 TYPE 4
9. Gasket door seal
10. Cabinet dimensions as per the plans
11. Hinges shall be continuous stainless steel piano hinge and shall both be mounted on the roadway side of the cabinet.
12. Doors shall be provided with catches to hold the doors open at both 90 degrees and 180 degrees, +/- 10 degrees
13. Laptop tray – An adjustable rack mounted slide out aluminum work surface, designed to fully support the weight and size of a portable computer or technician's tool case, shall be installed at a height greater than 24 in (923 mm) but less than 48 in (1219 mm) above the standing pad. The top of the surface shall be a minimum of 156 square inches and shall accommodate a laptop computer and associated cabling that may plug into the back of the laptop
14. Rack mounted 120V/240V UPS capable of supporting the ITS Ethernet switch, Traffic monitoring camera interface, Radar speed signs, RTMS and all equipment essential for communications back to the KDOT traffic control center for a minimum of eight (8) hours.

Installation

The Contractor shall install the pole mounted ITS controller cabinet as shown on the plans. The Contractor shall install the pole mounted ITS controller cabinet so that the top of the unit is no higher than six (6) feet above the standing pad.

Basis of Payment

This work will be paid for at the contract unit price per EACH for POLE MOUNTED EQUIPMENT CABINET, TYPE B which price Labor, mounting hardware, wiring, connections, fittings, etc. will be considered incidental to the installation and no separate payment will be made.

ROD AND CLEAN EXISTING CONDUIT

Description

This Work consists of cleaning and existing conduit with a duct rod or electrical fish rod tape of sufficient length and rigidity into an electrical conduit opening in one electrical manhole or handhole, and pushing the said rod through the conduit to emerge at the next or subsequent manhole in the conduit system at the location shown on the Plans.

General Requirements

The conduit system which is to be rodded and cleaned may exist with various amounts of standing water in the manholes. The contractor must pump the water or sufficient water from the manholes to drain the conduit and to afford compatible working conditions for the installation of the duct rods and/or cables. Prior to removal of the duct rod, a duct cleaning attachment such as a properly sized wire brush or cleaning mandrel must be attached to the duct rod, which by removal of the duct rod must be pulled through the conduit to remove sand, grit, or other light obstructions from the duct to provide a clean, clear passage for the installation of cable.

Basis of Payment:

The work under this item will be paid at the unit price per foot of ROD AND CLEAN EXISTING CONDUIT.

RADAR VEHICLE DETECTION SYSTEM

Description

This item shall consist of furnishing, installing, and calibrating a pole mounted radar vehicle detector system to collect vehicle volumes, classification and speeds.

Materials

The pole mounted radar vehicle detector assembly will consist of:

- Ground Rod
- Radar Vehicle Detector

All related connection cables, conduit, brackets, and other items incidental to the construction of the pole mounted radar vehicle detection assembly. Cabinet/Enclosure and camera pole are described and will be paid for separately.

The Contractor shall furnish components for each Pole Mounted Radar Vehicle Detector Assembly as described below and in accordance with the plan details.

Ground Rod:

The ground rod shall be 5/8" x 10' in accordance with Article 801.04 of the IDOT Standard Specifications and shall be installed and connected as shown on the drawings.

Radar Vehicle Detector

The remote mounted radar vehicle detector shall be designed for side-fired operation and shall be capable of detecting up to six lanes of bi-directional traffic. The Vehicle Detector unit shall be furnished with a manufacturer's specified cable to the IP Ethernet switch contained within the pole mounted ITS cabinet.

Installation

The Plans identify approximate locations for the pole mounted radar vehicle detector systems. Radar units will be co-located with CCTV cameras. The Contractor shall stake these locations in the field for approval by the Engineer.

A ground rod shall be installed as shown on the plan details and shall be included in this item. Breakaway poles or devices shall not be used.

The radar vehicle detector system unit shall be mounted in accordance with the plan details and manufactures' specifications. The Contractor shall install the detector unit on the pole at the nominal height above the road surface identified on the plans or as directed by the Engineer, so that the masking of vehicles is minimized and that all detection zones are contained within the specified elevation angle as suggested by the manufacturer.

The components shall be installed in the cabinet in accordance with installation drawings provided by the manufacturer.

The radar vehicle detector system detection zones and the wireless modem shall be configured by the Contractor using the licensed software provided by each manufacturer and the Contractor's Notebook PC. The radar vehicle detector system detection zones shall also be calibrated by the Contractor using manual traffic counts. Manual traffic count verification shall include 50 vehicles per lane, at a minimum. Deviation of more than 5% between actual and measured traffic volumes will require recalibration. Speed calibration shall be conducted over a minimum of five (5) 30-second measurement periods and shall include at least 8 vehicles per period. Actual speeds shall be confirmed using a radar gun or other method as approved by the Engineer. Data received from the calibration and the travel speed calibration shall be submitted to the Kane County Department of Transportation (KCDOT), in a format to be determined by the Engineer, for verification.

The Contractor shall install the cabinets, detectors, and radios at the locations approved by the Engineer.

Calibration

The Contractor shall coordinate with the KCDOT and the Kane County IT Department to ensure that the necessary data is available to KCDOT. When all equipment is installed and connected, the Contractor shall test and demonstrate the performance and accuracy of the installed detectors. This test shall match observed and detected vehicles.

The Contractor shall develop as-built drawings of all radar vehicle detector assembly locations and connections (inclusive of electrical) if they differ from locations/routing identified in the plan set. Final documentation shall reflect all field changes, including but not limited to final coordinates of the radar vehicle detector assembly station locations to the precision provided in the design, and shall be provided within 30 days after successful completion of the 30-day test period. This documentation shall include drawings of cabinet layouts, wiring diagrams, and schematics for all elements of the wireless communications system. This shall also include detailed drawings identifying cable type, color code and function, the routing of all conductors in the communications system. Upon completion of the 30-day test period, the Contractor shall submit these plans, maps, and/or drawings to reflect an as-built condition, incorporating all changes made during installation and testing period.

Radar Vehicle Detector System Acceptance Test Plan.

The Contractor shall submit a detailed system acceptance test plan to the Engineer for review and approval. The Contractor acceptance test plan shall at a minimum include the following:

- Local Field Test
- Standalone Test
- Subsystem Test
- 30-Day "Burn-in" Period

The Contractor test plans shall test all areas of system functionality described herein and be in accordance with the various equipment manufacturer recommendations. The Contractor shall provide copies of all test results to Kane County in a format to be determined by the Engineer.

Local Field Test Requirements.

The Contractor shall perform Local Field Tests at each field site in the presence of the Engineer in accordance with the test procedures detailed herein, within the plan set, in the Contract, and as recommended by the various equipment manufacturers. This requirement is meant to confirm that all site equipment has been installed, connected, and configured properly. The Contractor shall verify that physical construction has been completed as detailed herein, within the plan set, and/or in the Contract:

- Inspect the quality and tightness of ground connections
- Check power supply voltages and outputs
- Connect devices to the power sources
- Verify installation of specified cables and connections between the radar vehicle detector system device and the communications system
- Configure the IP addresses for data input/output
- Verify presence and quality of radar vehicle detector system device data
- Verify proper voltage of all power supplies; and interconnect the communication interface device into the communication network's assigned locations

Stand-alone Test Requirements:

Following the radar vehicle detector assembly installation and Local Field Testing, but prior to connection with the rest of the system, the Contractor shall conduct Standalone Tests at each radar vehicle detector system field site in the presence of the Engineer. This requirement is meant to ensure that all components of the radar vehicle detector system station function appropriately after installation. The Contractor shall notify the Engineer in writing the scheduled date of any Standalone Test 14 calendar days prior to the commencement of said test. No Standalone Test shall be performed without prior written approval from the Engineer.

Prior to requesting the scheduling of any Stand-alone Test, the Contractor shall identify, document, and submit to the Engineer the name, model number, serial number, technical support and warranty telephone numbers of all devices and ancillary components; categorized and uniquely numbered by site, and any other pertinent information required to facilitate project maintenance.

The Contractor shall perform all Stand-alone Tests. The test shall exercise all stand-alone (non-network) functional operations of the radar vehicle detector system device and ancillary components installed and demonstrate conformance with the project requirements, manufacturer specifications, applicable standards, and these contract documents.

If any radar vehicle detector system device or ancillary component fails to pass its Stand-alone Test more than twice, it shall be replaced by Contractor with a new radar vehicle detector system device or ancillary component of same make and model, and the entire Stand-alone Test shall be repeated until proven successful.

The Stand-alone Tests shall be performed on each and every radar vehicle detector system device and ancillary component as contained in the Plans.

Subsystem Test Requirements:

Following the Stand-alone Testing, the Contractor shall conduct a Subsystem Test in the presence of the Engineer. This requirement is meant to ensure that all data collected by the radar vehicle detector system stations is properly and accurately transmitted to KCDOT offices. The Subsystem Test shall be performed based on the Engineer approved Contractor testing schedule. The Contractor shall notify the Engineer in writing the scheduled date of the Subsystem Test 14 calendar days prior to the commencement of said test. The Subsystem Test shall be performed without prior written approval from the Engineer.

The Subsystem Test shall be performed utilizing the installed radar vehicle detector system devices and ancillary components in conjunction with the wireless/wireline communications system.

The Contractor shall perform the Subsystem Test, which will involve personnel on-site at the radar vehicle detector system stations and at KCDOT offices to confirm that data collected by the radar vehicle detector system devices is being properly and accurately received by KCDOT. During the Subsystem Test, the Contractor shall provide qualified personnel to support the diagnosing and repair of radar vehicle detector system devices and ancillary components. These personnel shall be available for this support within 24 hours of notification of the need for their services.

30-Day "Burn-in" Period Requirements.

Following the Subsystem Test and before Final System Acceptance, the Contractor shall oversee a 30-Day Burn-in Period. This requirement is meant to demonstrate full monitoring capabilities of the radar vehicle detector system devices from KCDOT offices via the installed/existing communications channels as well as the functionalities of the Stand-alone Test and troubleshooting/diagnostics for a 30-day period. This period shall coincide with the KCDOT Integration Burn-in Period described elsewhere in these special provisions. The 30-day Burn-In Period shall be conducted based on the Engineer approved Contractor testing schedule. The Contractor shall notify the Engineer in writing the scheduled date of the 30-Day Burn-In Test 14 calendar days prior to the commencement of said test. The 30-Day Burn-in Period shall not be performed without prior written approval from the Engineer.

The Contractor shall correct any and all failures during the 30-Day Burn-in Test at no additional cost to KCDOT. The system may be shut down for purposes of testing and correcting identified deficiencies. For each period of system shut down, the scheduled 30-day Subsystem Test shall be extended for the same period of time plus 1 day unless otherwise directed by the Engineer. The contractor shall notify the KCDOT Engineer of any shutdowns of equipment ahead of the shutdown.

Final System Acceptance: Final acceptance of the work associated with this project will be made after satisfactory completion of the required 30-Day "Burn-in" Test period and on the basis of the final inspection of the entire system. The final inspection of the entire system will be performed by the Engineer in the presence of a representative of the Contractor. All "as-built" documents shall be submitted to the Engineer at the time of Final Acceptance. Notification of Final Acceptance will be in writing from the Engineer.

Warranty

All equipment shall be warranted and guaranteed against defects and/or failure in design and materials. The Contractor shall submit the warranty terms as part of the shop drawing submittal for each material item.

System components shall be warranted against all defects and/or failure in design and materials for a minimum of one (1) year from the date of Final Acceptance, as recorded by Engineer.

The warranty shall provide that, in the event of a malfunction during the warranty period, the defective system component shall be repaired or replaced with a new component by the manufacturer or representative within five (5) working days.

Any component that, in the opinion of the Engineer, fails three (3) times prior to the expiration of the warranty will be judged as unsuitable and shall be replaced by the manufacturer or representative with a new component of the same type at no additional cost. The unsuitable component shall be permanently removed from the project. A failure shall also be defined as the field device becoming unable to comply with all applicable standards.

Any repairs made by a manufacturer or representative shall be documented and that documentation shall be returned with the warranty repaired units. This documentation shall include an explanation of the exact repairs made and identification of parts replaced by part number and circuit number. All warranty repairs shall be completed within thirty (30) days of delivery of the equipment to the designated repair location. The warranty period shall not begin until the date that the Engineer issues final acceptance to the project, as recorded by the Engineer.

Basis of Payment

This item shall be paid for at the contract unit price per EACH for RADAR VEHICLE DETECTOR SYSTEM of the type specified which shall be payment in full for furnishing and installing the service installation complete. Seventy-five percent (75%) of the contract unit price will be paid at completion of the Stand-alone Test. The final twenty-five percent (25%) of the payment due for this work will be paid after Final System Acceptance, which will be made after satisfactory completion of the required 30-Day Burn-in Period and on the basis of the final inspection of the entire system. The final inspection of the entire system will be performed by the Engineer in the presence of a representative of the Contractor. The radar vehicle detector system pole and helix foundation will be paid separately as CAMERA POLE, 45 FT and LIGHT POLE FOUNDATION, SPECIAL.

PAINT EXISTING STREET LIGHT / TRAFFIC SIGNAL EQUIPMENT COMPLETE

Description

This work is for painting the proposed Road Weather Information Systems (RWIS) and Intelligent Transportation Systems (ITS) supports that will be installed as part of this project. Supports include 16' traffic signal posts and 45' aluminum ITS poles. This work will bring new infrastructure to an architectural consistency to other infrastructure along Stearns Road.

Materials

Paint color shall be dark green per Federal Standard 595B, Color #14062, Textured, which is the paint that has been used on other infrastructure in the project limits. Painting work will be conducted at the manufacturing facility for the RTMS pole assembly, or at a painting facility approved by the Engineer.

Construction

Follow manufacturers' guidance for application of paint to infrastructure.

All weld flux and other contaminates shall be mechanically removed.

All galvanized or aluminum exterior surfaces shall be coated with a urethane or triglycidyl isocyanurate (TGIC) polyester powder to a dry film thickness of 2.0 mils. Prior to application, the surface shall be mechanically etched by brush blasting (Ref. SSPC-SP7) and the zinc coated substrate preheated to 450 °F for a minimum one (1) hour. The coating shall be electrostatically applied and cured by elevating the zinc-coated substrate temperature to a minimum of 400 °F.

Any damage to the finish after leaving the manufacturer's facility shall be repaired to the satisfaction of the Engineer using a method recommended by the manufacturer and approved by the Engineer. If, while at the manufacturer's facility the finish is damaged, the finish shall be re-applied at no cost to the contract.

Warranty

The Contractor shall furnish in writing to the Engineer the paint manufacturer's standard warranty and certification that the pain system has been properly applied.

Packaging

Prior to shipping, the poles and posts shall be wrapped in ultraviolet-inhibiting plastic foam or rubberized foam.

Basis of Payment

The work shall be paid for at the contract unit price each for PAINT EXISTING STREET LIGHT / TRAFFIC SIGNAL EQUIPMENT COMPLETE. Price includes paint material and labor necessary to paint the RWIS and ITS supports.

VIDEO SYSTEM DETECTION PROCESSOR

Description

This work shall consist of providing a operational VIDEO SYSTEM DETECTION PROCESSOR, which provides video processing (vehicle detection) of four cameras and MPEG4 and H.264 encoding of the four channels and transmits it via a standard 10/100 Ethernet connection. At locations with an existing video processor, work shall include providing an integrating a new remote communications module. Existing processors exist at;

- McDonald Road and Briagate Drive
- Stearns Road and Randall Road
- Stearns Road and McLean Boulevard

This work shall include all wiring required for proper operation of module interfacing with existing video vehicle detection cameras or interface unit.

New equipment provided under VIDEO SYSTEM DETECTION PROCESSOR shall operate at the extended temperature range of -37 C to +7 4C.

Basis of Payment

The work shall be paid for at the contract unit price each for VIDEO SYSTEM DETECTION PROCESSOR, which price shall be payment in full for all hardware, cabling and coordination necessary to deliver a VIDEO SYSTEM DETECTION PROCESSOR that provides successful vehicle detection and video transmission and control to the KCDOT central facility. Unit price shall take in to account equipment present in the controller cabinet.

RADAR SPEED SIGN

Description

This work shall consist of installing a RADAR SPEED SIGN at the specified locations in the plans.

Standards

A. NEMA 4R level compliant
B. NTCIP V2 compliant
C. National Electrical Code.
D. Occupational Safety and Health Administration

Materials

Housing
The Radar Speed Signs shall consist of a weather resistant and shatter resistant protective cover. The faceplate shall be 36"W x 44"H and shall read "YOUR SPEED" in 6" lettering. The sign must comply with MUTCD regulations for color and reflectiveness.

LEDs
The LEDs must display 2 digits and be super bright LEDs. The LED must auto-adjust to light conditions for optimal brightness.

Radar
Internal radar must be provided, with a pickup distance of 1,000 ft.

Contractor must provide an Ethernet connection to Kane County Traffic Operations Center for programming and communications purposes.

Data Collection

Traffic data collection and storage must be provided by each sign. Statistical records must include weekly reports of average speed and speed violations. This data must be sent directly to Kane County Traffic Operations Center.

Power

Contractor shall install a single 240V/5A circuit from the pole mounted cabinet serving the radar signs. Contractor shall install copper power wires through conduit pathway as indicated on plans. Contractor shall route conduits directly from sign through the 16' pole directly to the nearest power handhole. Contractor shall ground all sign components per NEC code.

Communications

The sign shall have an Ethernet port for communication to Kane County Traffic Operations Center. Contractor shall install Outdoor Rated Network Cable from pole mounted cabinet serving the radar signs. Contractor shall install Ethernet extender where indicated on the plans. Contractor shall route conduits directly from sign through 16' pole directly to the nearest fiber optic handhole. Contractor shall directly connect each end of the cable to a lightning protection device as indicated within the outdoor rated network cable specification.

Basis of Payment

This item shall be paid for at the contract unit price each for RADAR SPEED SIGN, which price shall be payment in full for furnishing the equipment described above and installing them in a satisfactory operating condition.

MISCELLANEOUS ELECTRICAL WORK

Description

The work for this item includes the coordination with ComEd (TEL 1-866-639-3532) with the installation of new medium voltage (7.2kV) service connection direct buried feed from Stearns Rd and Rte. 25 to Stearns Rd and Brewster Creek as shown on the plans. Contractor will be responsible for providing a utility trench connection (minimum 30" deep x minimum 4" wide x 1700' length), backfill, environmental control and restoration following the installation of electrical infrastructure trenching and backfilling for ComEd electrical service. ComEd will be responsible for providing and installing medium voltage electrical cable, junction boxes (as required), transformers and transformer platforms.

Contractor will be required to provide perimeter erosion barrier along the trench if trench will remain open for more than one (1) working day. Trench shall be backfilled with the excavated material within the same working day that ComEd has completed the installation of electrical cable. Contractor shall compact the trench fill with a hand compactor or method approved by ComEd. Contractor will be responsible for the restoration of work areas. Salt tolerant seed Type 2a shall be used in open areas and salt tolerant sod shall be used in all mowed areas. Seeding will not be permitted at any time when the ground is frozen, wet, or in an untellable condition. Location to be seeded will be determined by the engineer.

Basis of Payment

Work for this item should be paid for the Lump Sum for MISCELLANEOUS ELECTRICAL WORK. Work shall include perimeter erosion trenching, coordinating with ComEd and backfilling the excavated area.

LIGHT POLE FOUNDATION, SPECIAL

Description

This item shall consist of furnishing and installing a 10 foot helix foundation for a pole mounted radar vehicle detector assembly.

Materials

The metal foundation shall comply with Article 1070.01 of the IDOT Standard Specifications for Road and Bridge Construction for Light Pole Foundation.

Installation

Foundations shall be installed outside of the clear zone or in areas protected by guardrail. The Plans identify approximate locations for the pole mounted radar vehicle detector assembly assemblies. The Contractor shall stake these locations in the field for approval by the Engineer.

The steel helix foundation shall be installed in accordance with the manufacturer's recommended procedures. The installation shall be accomplished by either a boom type or a bed mounted type digger truck. The maximum torque limit of 13,000 ft.-lb. should not be exceeded since the possible damage to the foundation could occur.

Local soils conditions shall be verified by the Contractor prior to installation of the Metal Helix Foundation, 10 FT. In the case of extremely difficult soils that cause the mechanical limit of the foundation to be exceeded, the helix foundation may be installed at the discretion of the Engineer in one of two methods. Predrilling a hole that is less than the shaft diameter of the foundation or using water as a lubricant. When foundation is installed by either method, minimum torque requirements of 5000 ft.-lb. are to be followed. The installation torque may be measured by torque measuring devices currently available or by calibrating the hydraulic system of the installing equipment. As an alternative for foundation installation in extremely difficult soils, a concrete foundation may be used. The Contractor shall submit for approval his structural calculations for installation of a concrete foundation for the pole mounted radar vehicle detector assembly.

Ground rod shall be included for payment in the contract unit price for pole mounted radar vehicle detector assembly.

Method of Measurement

Metal Helix Foundation, 10 FT. will be measured per EACH completed in place and accepted. Relocation of a foundation due to an obstruction and any shaft excavation to that point will not be measured for payment.

Basis of Payment

This work will be paid for at the contract unit price per EACH for LIGHT POLE FOUNDATION, SPECIAL, which price shall be payment in full for the work described herein.

TEMPORARY TRAFFIC SIGNAL INTERCONNECT

Description

The Contractor shall maintain the two existing traffic signal interconnect systems within the project limits during construction. Existing traffic signal interconnect systems exist between Stearns Road/McLean and IL Rte. 31 (2 traffic signals) and between Stearns Road/IL Rte. 25 and Stearns/Dunham Road (3 traffic signals). The Stearns Road/IL Rte. 25 System will be constructed as part of 63598 and will only need to be maintained by the Contractor through Stage II Construction.

Work required for Temporary Traffic Signal Interconnect is described under Temporary Traffic Signal Installation of the District 1 Traffic Signal Specifications (Revised 1, 2012) Subsection (e) Interconnect.

Amend **Temporary Traffic Signal Installation** Basis of Payment to read:

Basis of Payment.

This work shall be paid for at the contract unit price each for TEMPORARY TRAFFIC SIGNAL INSTALLATION, TEMPORARY BRIDGE TRAFFIC SIGNAL INSTALLATION, or TEMPORARY PORTABLE BRIDGE TRAFFIC SIGNAL INSTALLATION, **TEMPORARY TRAFFIC SIGNAL INTERCONNECT**, the price of which shall include all costs for the modifications required for traffic staging, changes in signal phasing as required in the Contract plans, microwave vehicle sensors, video vehicle detection system, any maintenance or adjustment to the microwave vehicle sensors/video vehicle detection system, the temporary wireless interconnect system complete, temporary fiber optic interconnect system complete, all material required, the installation and complete removal of the temporary traffic signal. Each intersection will be paid for separately.

REMOVE FIBER OPTIC CABLE FROM CONDUIT

Description

This work will be paid for the contract unit for removal of existing fiber optic cable from existing conduit. Work includes disconnecting existing fiber splices and terminations, and disposal of removed cable.

Basis of Payment

This work shall be paid for at the contract unit price per foot for REMOVE FIBER OPTIC CABLE FROM CONDUIT, which shall be payment in full for cleaning and swabbing existing conduit and disposing of debris outside the right-of-way. Payment will be made for the measured quantity performed as agreed to by the contractor and the County.

INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA

Description

The Contractor shall furnish and install a video surveillance camera system consisting of a special video camera in a dome, a dome mount to the video monitoring pole, all mounting hardware, brackets, outdoor rated network cable (to be paid for separately) supplied to the required length by the video system manufacturer with fast disconnect at the camera mount, video camera controller and special electronics/cabling for video transmission and pan/tilt/zoom controls, video controller unit to link all electronic components between the controller unit and the camera dome to include heater, fan, PTZ camera, video coax, video decoders with video encoding and decoding software.

Materials

The camera shall be designed and optimized for roadway video monitoring. The items shall have a minimum Object Distance: 300mm (wide end), 800mm (tele end), have a minimum mechanical zoom of thirty-five (35x) and a minimum digital zoom of twelve (12x). The camera, joystick controller (required for field adjustments and video verification), camera controller and auxiliary devices necessary for a complete and functional video operation shall utilize the Diamond control protocol for pan/tilt/zoom controls. The camera shall be digital with IP port(s) and a built-in encoder for connection to the central office. A separate encoder shall not be required. The camera shall provide for 360-degree rotation on the horizontal plane and 180-degree rotation within the lower hemisphere of the dome.

The Contractor shall install an auxiliary cabinet, DT-ST Series, when the distance between the camera and traffic controller cabinet exceeds 300 feet. The use of a DT-ST cabinet shall be considered incidental to the cost of the video traffic monitoring system and no additional compensation shall be provided for the cabinet, cables, additional fiber optic cable, jumpers, etc.

The Contractor shall furnish and install the video software for decoding and encoding.

This item includes furnishing and installing the video monitoring camera, power injector (if required), and an auxiliary DT-ST cabinet as shown on the intersection wiring diagrams, box prints and fiber optic wiring diagram. This item also includes furnishing, installing and testing all auxiliary cabling, connectors, couplers, in-building hardware and software, jacks, splitters, conversion adapters, equipment racks, power supplies, power strips, surge suppressors, etc., necessary for a complete and fully functional system. The cable to be used for connecting the video monitoring camera to the local Ethernet switch shall be paid for separately under the pay item "Outdoor Rated Network Cable."

Cameras shall be mounted onto existing and proposed infrastructure. Proposed poles will be paid separately under CAMERA POLES, 45 FT; 20 ft EXTENSION POLE, and PROCUREMENT AND INSTALLATION OF RWIS.

All mounting platforms, connecting hardware and auxiliary devices to test and operate this system to the satisfaction of the Engineer shall be incidental to this pay item and no additional compensation will be allowed.

The contractor shall contact the KCDOT Traffic prior to installing the PTZ camera and associated wiring, to receive final approval on the camera location.

Basis of Payment

This item will be paid for at the contract unit price each for INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA, 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 KCDOT Traffic.

NETWORK CONFIGURATION

Description

This work shall consist of installing, configuring and provisioning a fully operational Ethernet Local Area Network (LAN), which provides communication with remote traffic control field devices from the Kane County Division of Transportation (KCDOT) traffic office. Field devices include traffic signal controllers, loop detectors, Malfunction Management Units (MMU), Uninterruptable Power Supply (UPS) units, video detection systems and CCTV (PTZ) cameras or other specified Intelligent Transportation System (ITS) field device as shown on the plans. These ITS devices include, but are not limited to, Dynamic Message Signs (DMS) and Roadway Weather Instrumentation Systems (RWIS).

Construction

Contractor shall include configuring Ethernet switches, terminal servers, RWIS remote processing unit, media converters, and DMS controllers, assigning IP addresses to field devices based on KCDOT Traffic staff input/standards, troubleshooting and submitting documentation to KCDOT Traffic staff. A new, contractor-provided 36-strand single mode KCDOT fiber optic cable shall serve as the Local Area Network (LAN) communication backhaul for the Stearns Road project to the traffic cabinet located at Randall Road and through the existing KCDOT network to the KCDOT Traffic operation Center. This work shall also require coordination with each manufacturer of field end devices, converters, and networking equipment to ensure successful digital video transmissions, serial-over-copper, serial-over-fiber, and serial-over-Ethernet communications between the WAN and field devices. Coordination with the DMS and RWIS provider is required to determine specific central software requirements for the communications including communication channels, static IP addresses, port forwarding, and TCP ports. The contractor shall also coordinate final connection to the existing system network with the KCDOT network contractor of record. The contractor shall setup a meeting between the contractor, KCDOT IT staff, KCDOT stakeholders, and the Engineer to coordinate programming requirements for the final network programming prior to final turnover.

The Contractor shall develop a written test plan and submit it to the Engineer and KCDOT Traffic for approval. The test plan shall be revised to the satisfaction of the Engineer and KCDOT Traffic for approval. The testing plan shall include systematic procedures with anticipated results that demonstrate that the communication network and all of its subsystems are fully operational. Approved testing procedures will be performed in the presence of KDOT and Contractor representatives. The testing plan shall include forms listing itemized functional checks of the system with signature placeholders for KCDOT and Contractor representatives.

The test plan will verify the network performance over the extent of this project. The Contractor shall emulate traffic operations over the network by interfacing a laptop computer with the Type 2 Ethernet Switch at Randall Road and Stearns Road. From this location, the Contractor will control and exchange data with all ITS and traffic controllers, CCTV cameras, DMS signs and the RWIS. The computer shall also monitor the UPS components and all other alarms.

After satisfactory completion of this work, the existing master controllers shall be returned to KDOT as directed by the Engineer.

Basis of Payment

The work shall be paid for at the contract unit price per lump sum for NETWORK CONFIGURATION, which price shall be payment in full for all communication network configuration and coordination necessary to deliver an Ethernet network that provides successful communications between all field devices and the communication backhaul to the KCDOT Traffic Office.

OUTDOOR RATED NETWORK CABLE

Description

This work shall consist of furnishing an outdoor-rated 24 AWG, 4-pair data cable. Each cable link that is routed to an external device outside of the area serving ITS cabinet shall be protected by a lightning protection device on the switch side of the link cable for equipment protection. Contractor shall also provide an outdoor rated Ethernet extender to connect to Radar speed signs and power and connect to PTZ CCTV cameras located throughout the project where networked equipment locations are beyond the 300' distance limitation for category cabling from the network switch.

Materials

Shielded polyolefin cable with four 24 AWG twisted pair conductors.

Jacket Material: PE
Conductor Material: Bare Copper
Drain Wire Material: Tinned Copper
Insulation Material: Polyolefin
Separator Material: Polyolefin
Shield (Tape) Material: Aluminum/Poly

Cable shall meet the following electrical criteria:

ANSI/TIA Category: 6
Maximum dc Resistance Unbalance: 5 percent
Maximum dc Resistance: 9.38 ohms/100 m
Mutual Capacitance: 6.0 nF/100 m @ 1 kHz
Nominal Velocity of Propagation (NVP): 62 percent
Maximum Operating Frequency: 250 MHz
Transmission Standards: ANSI/TIA-568-C.2, CENELEC EN 50288-6-1, ISO/IEC 11801 Class E

Cable shall have an operating temperature from -40 degrees Fahrenheit to 160 degrees Fahrenheit, with an insulation temperature from 32 degrees Fahrenheit to 140 degrees Fahrenheit.

Cable shall be type F/UTP (unshielded) with 4 pairs.

Conductor gauge shall be 24 AWG and of solid type. 8 conductors shall be provided.

Maximum pull tension of cable shall be 11 kg.

Nominal cable diameter over jacket shall be no greater than 8.255 millimeters.

RJ-45 grounded lighting protection device shall be a RJ-45 to RJ-45 module style grounded to the nearest ground bar or rod. The device shall be capable of passing 60W of PoE power and shall draw no power from the PoE(passive).

Ethernet Extender

RJ-45 Outdoor rated Ethernet and POE extender with 60W pass thru shall be a IP66 rated enclosure with RJ-45 to RJ-45 and grommeted connections on either side. The device shall have LEDs to help indicate network status. Each device shall be capable of extending Ethernet up to 100m and daisy chain two devices for a total length of 300m from switch port to device.

Basis of Payment

This work will be paid for at the contract unit price per FOOT for OUTDOOR RATED NETWORK CABLE which price shall include all equipment, labor, Ethernet extenders, and materials necessary to complete this work as specified including mounting hardware and terminating connectors.

ETHERNET MANAGED SWITCH, TYPE 1

Description

This work shall include all materials and work necessary to install an Ethernet Managed Switch, Type 1 in a traffic signal cabinet. The Ethernet Managed Switch, Type 1 will connect the equipment in the field cabinet to the Kane County ITS data-comm fiber optic network.

Materials

The Ethernet Managed Switch, Type 1 is a managed edge switch configured with a minimum of the following ports:

8	RJ-45 10/100 Communication ports; a minimum of four (4) ports shall be equipped to provide power over Ethernet (PoE)
2	Single-mode 100 base Fiber optic communication ports
2	Single-Mode 1000 base fiber optic communication ports

The Ethernet Managed Switch, Type 1 shall satisfy the following:

Dimensions:	6.85" H x 7.5" W x 2.0" D
Power:	88-150 VAC, 47-63 Hz
Power Consumption:	20 W (maximum)
Temperature Range	-40 to +140 degrees F; cooling shall use convection and heat sinking; no fans
Weight:	3 lbs (nominal)
Performance:	
Filtering / Forwarding Rate:	Ethernet (10Mb): 14,880 pps
	Fast Ethernet (100Mb): 148,800 pps
	Gigabit Ethernet (1000Mb): 1,488,000 pps
Switching Processing:	Store and Forward with IEEE 802.3x fullduplefIow -control, non-blocking
Data Rate:	10Mbps, 100Mbps and 1000Mbps
Address Table Capacity:	4K node, self-learning with address aging
Packet buffer size :	240KB for 10/100 and 120KB for 1000Mb
Latency:	5 µs + packet time (100 to 100Mbps)
	15 µs + packet time (10 to 10 Mbps, and 10 to 100Mbps)
Throughput with	max.- 4.17M pps (Transmit) (8 10/100linls and 2Glinks)
Back plane-	2.66Gb/s per slot

Network Standards and Compliance, hardware

Ethernet V1.0/V2.0 IEEE 802.3: 10BASE-T,
IEEE 802.3u: 100Base-TX, 100BASE-FX
IEEE 802.3z: 1000BASE-X Ethernet (Auto-negotiation)
IEEE 802.3ab: 1000BASE-X Ethernet
IEEE 802.1p: Priority protocol
IEEE 802.1d: Spanning tree protocol
IEEE 802.1w: Rapid Spanning tree protocol
IEEE 802.1q: VLAN Tagging
IEEE 802.3x: Flow Control
IEEE 802.3ad: Link Aggregation (Trunking)
IEEE 802.1x: Port based Network access control
IEEE 802.3af: Power over Ethernet

Compatibility

The switch must be form, fit, and function interchangeable with the legacy Garrettcom 6KQE Ethernet switch. If requested by the Engineer, the Contractor shall provide an off-the-shelf factory model of the proposed switch and demonstrate that the proposed switch will operate transparently and with full functionality in the existing ITS data-comm network. The demonstration will take place prior to ordering any data-comm equipment.

Construction

The Contractor shall locate shelf space or other suitable mounting location in the traffic signal cabinets or as identified on the plans. The Contractor shall secure the Ethernet Switch as appropriate and approved by the engineer.

The Contractor shall install all necessary patch cords, optical transceivers, connectors, power supplies, communication transformers, or auxiliary equipment necessary to complete the communication circuits at full functional potential. The Contractor shall connect the switch to the field devices as indicated on the plans.

When requested by the Contractor, the Engineer will provide the necessary IP address assignments and port assignments, including the necessary port provisioning. The contractor shall be responsible for all network programming of the network switches and communicating elements within the traffic signal cabinet.

The Contractor will demonstrate that the switches are correctly installed and configured as specified in other special provisions for this project.

Basis of Payment

This work shall be paid for at the contract unit price each for ETHERNET MANAGED SWITCH, TYPE 1, which price shall be payment in full for furnishing and installing an Ethernet Managed Switch as specified.

ETHERNET MANAGED SWITCH, TYPE 2

Description

This work shall include all materials and work necessary to install an Ethernet Managed Switch, Type 2 in a traffic signal cabinet. The Ethernet Managed Switch, Type 2 connects field elements to the Kane County ITS data-comm network; in addition, it acts as an aggregation node and Gigabit Ethernet router.

Materials

The Ethernet Managed Switch, Type 2 is a managed edge switch configured with a minimum of the following ports:

12	RJ-45 10/100 Communication ports; a minimum of four (4) ports shall be equipped to provide power over Ethernet (PoE)
2	Single-mode 100 base Fiber optic communication ports
4	Single-Mode 1000 base fiber optic communication ports

The Ethernet Managed Switch, Type 1 shall satisfy the following:

Dimensions:	6.85" H x 7.5" W x 2.0" D
Power:	88-150 VAC, 47-63 Hz
Power Consumption:	20 W (maximum)
Temperature Range	-40 to +140 degrees F; cooling shall use convection and heat sinking; no fans
Weight:	3 lbs (nominal)
Performance:	
Filtering / Forwarding Rate:	Ethernet (10Mb): 14,880 pps
Fast Ethernet (100Mb): 148,800 pps	
Gigabit Ethernet (1000Mb): 1,488,000 pps	
Switching Processing:	Store and Forward with IEEE 802.3x full-duple flow - control, non-blocking
Data Rate:	10Mbps, 100Mbps and 1000Mbps
Address Table Capacity:	4K node, self-learning with address aging
Packet buffer size :	240KB for 10/100 and 120KB for 1000Mb
Latency:	6 µs + packet time (100 to 100Mbps)
Throughput with	max.- 8.33M pps (Transmit)
(8 10/100linls and 4 Glinks)	
Back plane-	2.66Gb/s per slot

Network Standards and Compliance, hardware

Ethernet V1.0/V2.0 IEEE 802.3: 10BASE-T,
IEEE 802.3u: 100Base-TX, 100BASE-FX
IEEE 802.3z: 1000BASE-X Ethernet (Auto-negotiation)
IEEE 802.3ab: 1000BASE-X Ethernet
IEEE 802.1p: Priority protocol
IEEE 802.1d: Spanning tree protocol
IEEE 802.1w: Rapid Spanning tree protocol
IEEE 802.1q: VLAN Tagging
IEEE 802.3x: Flow Control
IEEE 802.3ad: Link Aggregation (Trunking)
IEEE 802.1x: Port based Network access control
IEEE 802.3af: Power over Ethernet

Compatibility

The switch must be form, fit, and function interchangeable with the legacy Garrettcom 6K32 Ethernet switch. If requested by the Engineer, the Contractor shall provide an off-the-shelf factory model and demonstrate that the proposed switch will operate transparently and with full functionality in the existing ITS data-comm network. The demonstration will take place prior to ordering any data-comm equipment.

Construction

The Contractor shall locate shelf space or other suitable mounting location in the traffic signal cabinets or as identified on the plans. The Contractor shall secure the Ethernet Switch as appropriate and approved by the engineer.

The Contractor shall install all necessary patch cords, optical transceivers, connectors, power supplies, communication transformers, or auxiliary equipment necessary to complete the communication circuits at full functional potential. The Contractor shall connect the switch to the field devices as indicated on the plans.

When requested by the Contractor, the Engineer will provide the necessary IP address assignments and port assignments, including the necessary port provisioning. The contractor shall be responsible for all network programming of the network switches and communicating elements within the traffic signal cabinet.

The Contractor will demonstrate that the switches are correctly installed and configured as specified in other special provisions for this project.

Basis of Payment

This work shall be paid for at the contract unit price each for ETHERNET MANAGED SWITCH, TYPE 2, which price shall be payment in full for furnishing and installing an Ethernet Managed Switch as specified.

FIBER OPTIC TERMINATIONS

Description

The Contractor will splice and terminate optical fibers from different cable sheaths at the locations shown on the Plans. Fibers assigned to a cabinet or location will be terminated on ST-connectors in a termination housing or termination panel; fibers not assigned to the location shall be spliced "through" to the next cabinet/location.

Two splices are identified based on the number of potential terminations: 12 terminations and 48 terminations.

Materials

Four types of terminations will be provided as summarized in the following table.

Panel Type	Connector Type	Fiber Count	Connector Count	Splices
6-Fiber	ST	24	Up to 12	Up to 30
36-Fiber	ST	36	Up to 48	Up to 36
48-Fiber	ST	48	Up to 48	Up to 48
144-Fiber	ST	144	Up to 144	Up to 144

Fiber optic terminations will consist of three components: the termination panel and housing, a fiber optic pigtail with one fiber for each connector, fusion splices, and a splice closure. Fiber optic interconnect cables will be provided to connect the termination panels to the network equipment or to crosspatch fibers from different cable sheaths.

6-fiber Termination

The 6-fiber termination is typically used to connect a field cabinet to the backbone cable. It consists of a pre-terminated ITS drop cable equipped with a 6-fiber pigtail and cable splice.

36-fiber Termination

The 36-fiber termination is typically used to terminate all fibers in a 36-fiber cable at an end point or network node. It consists of a termination box with bulkhead adapters/connectors, a pre-connectorized pigtail, and cable splice.

48-fiber Termination

The 48-fiber termination is typically used to terminate 24 add/drop fibers at an intermediate network node or field cabinet. It consists of a termination box with bulkhead adapters/connectors, a pre-connectorized pigtail, and a cable splice.

144-fiber Termination

The 144-fiber termination is typically used to terminate 144 add/drop fibers at an intermediate network node or field cabinet. It consists of a termination box with bulkhead adapters/connectors, a pre-connectorized pigtail, and a cable splice.

ITS Drop Cable

The ITS Drop Cable is a cable assembly consisting of a hermetically-sealed Fiber Termination Box equipped with six ST-type, female optical connectors. These connectors terminate a 6-fiber pigtail, with the same optical and physical characteristics as the cable it is terminating.

Fiber Termination Box

The Fiber Termination Box shall either rack-mounted or wall-mounted. It will consist of two chambers, one normally used for splicing pigtails to the entrance cable and on used for patch cords used for connecting equipment and cross-patching fibers. The splicing chamber is not required when pre-connectorized, pigtailed entrance cables are used.

Pre-connectorized Pigtail

The pre-connectorized cable connects the adapters in the termination panel to the splice in the cable vault/double handhole. ST-connectors are factory-installed on one end of a cable pigtail. The other end of the cable is spliced to appropriate fibers in the mainline cable. The cable shall be optically and mechanically equivalent to the fiber optic mainline cable specified for this project. These cables shall contain either 36 fibers for the 36-fiber termination or 48 fibers for the 48-fiber termination. The pigtails shall be factory-tested and shall have loss not exceeding 0.5 dB per connector.

Fusion Splice

The Contractor shall splice the fibers in the pigtail cable to the mainline cable as indicated in the plans. Additional protection shall be installed on the spliced fibers. The maximum splice loss for the fusion splices shall not exceed 0.1 dB. This splice loss will be measured as part of the fiber optic testing required under the fiber optic cable installation.

Splice Closure

The splice closure shall be designed for underground applications. It shall be waterproof and re-enterable using common hand tools. It will provide a chamber tray to house the fiber optic splices. It shall also provide storage space for buffer tubes in the mainline cable that are not accessed at the specific location. The nominal dimensions of the splice closure shall be 6.5" diameter and 17" length.

All tapes and hardware required for the proper installation of the splice closure shall be incidental to this pay item.

General Requirements

All mounting hardware and labeling materials are included. Also included are jumper cables with ST connectors on one end and SC (or LC) connectors on the other to match the connectors on the equipment. These jumpers connect the terminated fibers to the ports on the Ethernet switches or other field devices. Each 6-fiber panel shall include five (5) jumpers and each 48-fiber panel shall include ten (10) jumpers. Each jumper will be 72 inches long. Jumpers not used for this project will be stored in plastic pouches as maintenance spares and placed in the controller cabinets. If pigtails are used to attach connectors to the mainline cables, excess pigtails shall be similarly stored in plastic bags and placed in the controller cabinet.

Construction Requirements

The cables shall be terminated according to the manufacturer's recommended guidelines. The Contractor shall prepare the cables and fibers in accordance with the termination panel and cable manufacturers' installation practices. A copy of these practices shall be provided to the Engineer 21 days prior to splicing operations.

Using a fusion splicer, the Contractor shall optimize the alignment of the fibers and fuse them together. The Contractor shall recoat the fused fibers and install mechanical protection over them.

Upon completing all splicing operations for a cable span, the Contractor shall measure the mean bi-directional loss at each splice using an Optical Time Domain Reflectometer. This loss shall not exceed 0.1 dB.

The Contractor shall measure the end-to-end attenuation of each fiber, from connector to connector, using an optical power meter and source. This loss shall be measured at from both directions and shall not exceed 0.5 dB per installed kilometer of single mode cable. For cables less than 1.6 km (1 mile), the measured loss should not exceed 2 dB. Measurements shall be made at both 1300 and 1550 nm for single mode cable.

The splice closure shall be installed using the manufacturer's instructions. It shall be flash tested to 6 psi minimum. The closure should be secured to the wall of the splice vault.

As directed by the Engineer, the Contractor at no additional cost to the Department shall replace any cable splice not satisfying the required objectives.

Method of Measurement

Fiber optic termination of the type specified will be measured as each, completely installed and tested with all fibers spliced, terminated, or dropped as identified in the plans, and the housing secured to the wall of the controller cabinet or facility.

SHOWN AS	PAID FOR AS
6 FIBER TERMINATIONS	FIBER OPTIC TERMINATIONS 6 FIBER; QNTY. = 1
24 FIBER TERMINATIONS	FIBER OPTIC TERMINATIONS 6 FIBER; QNTY. = 4
36 FIBER TERMINATIONS	FIBER OPTIC TERMINATIONS 48 FIBER; QNTY. = 1
48 FIBER TERMINATIONS	FIBER OPTIC TERMINATIONS 48 FIBER; QNTY. = 1
144 FIBER TERMINATIONS	FIBER OPTIC TERMINATIONS 48 FIBER; QNTY. = 4

Basis of Payment

These items shall be paid at the contract unit price each for **FIBER OPTIC TERMINATIONS 6 FIBER or FIBER OPTIC TERMINATIONS 48 FIBER,** per the table above which shall be payment in full for the work, complete, as specified herein.

MAINTAIN EXISTING LIGHTING SYSTEM

Description

This work shall consist of maintaining the existing lighting systems within the project limits through the duration of the project. Upon successful completion of Stage 1 Work, contractor can transfer maintenance responsibility back to the Kane County Department of Transportation. All repairs must be made within 48 hours of notice.

Materials

Materials used must be replaced in kind or as approved by the engineer.

Basis of Payment

This work will be paid for at the contract unit price per lump sum for MAINTAIN EXISTING LIGHTING SYSTEM which price shall include all equipment, labor, and materials necessary to complete this work as specified.

DRILL EXISTING FOUNDATION

Description

This work shall consist of coring an existing concrete lighting foundation as shown on the plans. Contractor shall disconnect the existing lighting standard and lighting cables and store the light standard within the project limits during the duration of coring of the existing foundation.

Installation

1. Disconnect lighting and cables at the base of the light fixture.
2. Remove the existing street lighting pole and light fixture and safely store the pole.
3. Confirm that bolt pattern and location of existing conduits matches what is shown on the plan.
4. Core 1 ¼" diameter hole through the foundation.
5. Install 1" conduit. Conduit shall extend ½" above and below the concrete foundation.
6. Install a foam based duct sealant on the in the area between the outside of the conduit and the cored hole. Sealent shall be installed at the top and bottom of the concrete foundation to hold the conduit in place and keep water, dirt from getting between the outside of the conduit and cored hole.
7. Contractor shall reinstall the light pole and light fixture and reconnect lighting cables to the satisfaction of the Engineer.
8. Project areas shall be removed of debris

Light pole shall not be removed for more than 3 consecutive working days. Multiple removals and reinstallations of the light pole will not constitute additional payment.

Materials

Conduit

Conduit shall consist of a Polyvinyl Chloride material, Schedule 40 compliant with Article 1088.01 of the IDOT Specifications.

Duct Sealant

Duct sealant shall consist of a quick setting foam-based material.

Basis of Payment

This work will be paid for at the contract unit price per EACH for CORING EXISTING FOUNDATION which price shall include all equipment, labor, and materials necessary to complete this work as specified.

DYNAMIC MESSAGE SIGN

Description

The work shall consist of furnishing and installing a high resolution, full matrix, full color light emitting diode (LED) dynamic message sign (DMS), as shown on the plans, and integrate the DMS into the proposed system. DMS size shall be 3'-11" x 3'-11" and have capabilities of showing images of MUTCD signs made available through local library storage.

Provide a fully installed, debugged, and operational DMS system complete with signs, structures, components, software modules, cabling, connectors, etc. that is completely compatible with other equipment provided as part of the project and those identified to be part of the system within 5 years of NTP.

Communications shall comply with the referenced National Transportation Communications for ITS Protocol (NTCIP) profiles and the software data dictionaries shall comply with NTCIP information level.

Provide installation, integration, and layout plans for approval by the Engineer before construction.

Materials

DMS Sign

The DMS system (sign display, controller, communications, power and related appurtenances) shall be from a vendor or personnel with demonstrated previous experience of installing at least one similar sign in the state of Illinois or no fewer than 100 LED, full color, full matrix DMS compliant with NTCIP elsewhere in the U.S. or Canada that are currently in operation on a transportation facility.

The DMS manufacturer must have an in house Quality Management System (QMS) in place that is certified by an approved registrar to ISO 9001:2008 (or latest released standard of ISO 9001) or an equivalent quality system. QMS is a means of ensuring the DMS organization conforms to specific requirements through quality planning.

Sign enclosures shall present a clean, neat appearance that protects equipment housed within from moisture, dust, dirt, and corrosion. No leaking within the sign enclosure is allowed. Provide the appropriate manufacturer-specified heating elements, cooling fans, and associated thermostats and switches in order to maintain the optimum operating environment, if not provided by the DMS vendor as part of the product. Mechanical design should facilitate periodic maintenance.

Sign shall comply with latest national, state, and local codes, standards, and specifications, including those listed below:

- American Association of State Highway and Transportation Officials (AASHTO) - Standard Specifications for Structural Supports for Highway Signs, Luminaries, and Traffic Signals (ITE publication No. LP-321)
- NCHRP Report 412, Fatigue-Resistant Design of Cantilevered Signal, Sign, and Light Supports.
- American Welding Society (AWS) - AWS D 1.2 Structural Welding Code – Aluminum and AWS A 5.1 & A 5.5 Structural Welding Code - Steel
- American Society For Testing And Materials (ASTM)
- ASTM A 36 - Steel
- ASTM B 209 - Aluminum and Aluminum Alloy Sheet and Plate
- ASTM A 325 - High Strength Bolts
- ASTM B 686 - Aluminum Alloy Castings, High Strength
- Electrical Testing Laboratories, Inc. (ETL)
- Electronic Institute of America (EIA) - EIA/ TIA-232-E Interface Between Data Terminal Equipment and Data Circuit Terminating Equipment Employing Serial Binary Data Interchange; and EIA-422-A Electrical Characteristics Of Balanced Voltage Digital Interface Circuits
- Federal Highway Administration (FHWA) - Manual on Uniform Traffic Control Devices (MUTCD) and Standard Alphabets for Highway Signs and Pavement Markings
- National Electrical Manufacturers Association (NEMA)
- TS4-2005 Hardware Standards for Dynamic Message Signs with NTCIP requirements.
- National Transportation Communications for Intelligent Transportation Systems Protocol (NTCIP) Standards (most recent approved versions):
- NTCIP 1101 - Signal Transportation Management Framework (STMF)
- NTCIP 1102 - Base Standard: Octet Encoding Rules (OER)
- NTCIP 1103 - Simple Transportation Management Protocol (STMP)
- NTCIP 1201 - Global Object Definitions
- NTCIP 1203 - Object Definitions for DMS
- NTCIP 2001 - Class B Profile
- NTCIP 2101 - Point to Multi-Point Protocol Using RS-232 Subnet Profile
- NTCIP 2102 - Subnet Profile for PPP over FSK Modems
- NTCIP 2103 - Subnet Profile for Point-to-Point Protocol using RS 232
- NTCIP 2104 - Subnet Profile for Ethernet
- NTCIP 2201 - Transportation Transport Profile
- NTCIP 2202 - Internet (TCP/IP and UDP/IP) Transport Profile
- NTCIP 2301 - Application Profile for Simple Transportation Management Framework (STMF)
- NTCIP 2303 - Application Profile for File Transfer Protocol (FTP)
- Standards for Enclosures for Electrical Equipment (Publication No. 250)
- Standards for Wiring Devices - Dimensional Requirements (Publication No. WD6)
- National Fire Protection Association (NFPA) - NFPA-70: NEC
- Occupational Safety and Health Act (OSHA)
- Underwriters Laboratories, Inc. (UL)
- American National Standards Institute (ANSI)

- Institute of Electrical and Electronics Engineers (IEEE)
- International Standards Organization (ISO)
- National Electric Code (NEC)

Contractor may substitute requirements in these standards by demonstrating an alternative design that exceeds the current level of quality provided by the existing standard. Requirement substitution shall only be granted by the Engineer.

Design Criteria

Provide DMS, within this Contract, at locations along the roadways denoted and shown on the Plans. New signs shall be in accordance with IDOT and/or Kane County design standards and a data interface for future integration with a central server identified by the Engineer as being installed within 5 years of NTP. Provide capabilities for features of full-color matrix DMS to be available to potential future software client identified by the Engineer as being installed within 5 years of NTP.

Provide a DMS that utilizes red, blue and green LED Displays with a front access enclosure type. DMS shall be capable of operating 24 hours a day, 7 days per week, with a reliability of 99.7 percent. DMS shall be capable of showing graphics, including standard MUTCD signs that can be made available from a local library. The DMS is to provide clear readable messages in all normally encountered roadway weather and lighting conditions.

Furnish the DMS with all electrical and electronic hardware, structural materials, housings, and computer hardware, firmware, and software required for a fully operational, integrated, real-time system. Coordinate all hardware and wiring with the structural design. Only proven hardware, firmware, and software elements shall be used, which shall also be fully consistent with the system's intended design and operation. Special or custom components may only be used with written approval from the Engineer.

Utilize the latest version of the NTCIP for all system tests. The use of the sign manufacturer's standard proprietary protocol, as the only substitute for the NTCIP, is not acceptable. Furnish and install, as a minimum, all objects specified by the NTCIP that are required to provide the functionality to meet the specifications herein. All objects that are provided to support manufacturer-specific or project-specific functions that are not included in the NTCIP specifications are to be registered with NEMA and be non-proprietary.

Provide a sign display composed of identical and readily interchangeable display modules. Provide each display module containing one or more display elements. The replacement of any display module or element is to not require the use of special tools.

The presence of ambient radio signals, magnetic or electromagnetic interference, including those from power lines, roadway lights, transformers or motors, within one foot of any of the components of the DMS, is not to impair the performance of the system.

Equip the DMS with three (3) external light sensors.

The light sensors are to be used to help adjust the brightness in all environmental conditions and oriented as follows:

- One facing towards traffic
- One facing away from traffic
- One facing towards the pavement to get ambient light off road conditions

Light sensors are to avoid facing toward bright street lighting. Locate all light sensors in an easily accessible location for maintenance, as approved by the Engineer. An alternative light sensor design may be proposed by the Contractor, and implemented if approved by the Engineer.

When switching brightness levels, the intensity is to increase gradually so there is no flickering when the intensity is increasing or decreasing on the display. The DMS sign controller shall continuously monitor the light sensors and adjust the LED display matrix intensity to a level that creates a legible message on the DMS face.

Provide a system that does not radiate any electrical or electromagnetic signals that adversely affect any other electrical or electronic device.

DMS Controller:

The sign Controller shall include two (2) RS-485 ports, three (3) Ethernet ports and three (3) serial communication I/O ports to accommodate both local and remote communications. The local communications port shall be easily reached when the cabinet is opened from the front and shall be a DB 9 connector configured as a DCE. Access to the DMS Controller through the local communications port and user interface shall be protected by a password. A second security level password shall be required to edit messages.

The DMS Controller shall be mountable in an EIA standard 19-inch rack. The DMS Controller shall be mounted inside the local controller cabinet along with the fiber optic equipment. An auxiliary control panel shall also be provided inside the sign housing. The auxiliary control panel shall completely mimic the controller and have a Vacuum Fluorescent Display and a Hex Keypad.

A unique logical address shall be assigned to the Controller consisting of an 8 byte ID code. The Controller address shall be readily changeable through jumpers, dip switches or plug-in modules.

The DMS Controller shall be capable of storing a minimum of thirty-two display messages in non-volatile programmable read only memory (PROM) and a minimum of twenty (20) display messages in battery backed random access memory (RAM). The DMS Controller shall be capable of storing a minimum of twenty (20) preset message display schedules in non-volatile read and write memory. The Controller shall allow schedule entries to be either a date and time

(i.e., month/day/year, hour/minutes) or by a weekday and time. The DMS Controller shall store all configuration variables in non-volatile read and write memory.

The front panel of the DMS Controller shall contain the following features:

- On/Off switch controlling power to the DMS and Controller.
- Local/Remote switch (implemented in hardware or software) permitting control from the DMS Controller or from an external unit such as a remote computer or a TIMS workstation.
- Keypad or switches permitting selection of one of the 25 non-volatile messages stored in the Controller or permitting the DMS to be blanked.
- Diagnostic mode switch or software function accessible from the keypad permitting selection of built-in diagnostic routines and individually testing LED pixels and display support step-by-step troubleshooting from the display and keypad.
- A display capable of showing graphics and text as they would appear on the DMS sign.
- A keypad providing keys for entry of zero through nine, four direction navigation, page-up and page down, home, delete, enter, and execute.
- Interior temperature and humidity sensor monitored by the Controller.

The DMS Controller shall contain a computer readable time-of-year clock with a lithium battery backup. The battery shall keep the clock operating for at least three years and have a ten (10) year life expectancy. The clock shall automatically adjust for daylight savings time and leap year and shall be accurate to within one minute per month.

The DMS Controller shall have a hardware watchdog, which shall reset the DMS in case of software failure and/or Controller lock-up. A counter shall be provided to count the quantity of reset events using the Watchdog Failure Count parameter as defined by NTCIP 1203v3.

The Contractor shall submit with the shop drawings for approval by engineer, a subsystem analysis of the DMS Controller that includes the mean time between failure (MTBF) of all hardware components, the source of the MTBF values (i.e., testing, historical tracking, generally accepted values used in the industry) and the mean time to repair/restore (MTTR) values used in the calculation.

Each DMS is to have a basic message library consisting of programmed messages, including graphics. These basic messages are to be unique to each DMS at its location.

"Temporary" messages are available to be downloaded to the DMS to augment the sign's basic local message library. "Temporary" messages are to be displayed from the local sign control station in an identical manner to the "permanent" messages. Capabilities to receive these "temporary" messages from a central dispatch point are to be available for future expansion.

Provide DMS controller that is a microprocessor or logic circuit-based unit with sufficient on-board memory, logic boards, input and output boards and connectors, to provide all the functions assigned to a sign type within these specifications.

Provide DMS controller that receives and interprets commands sent by a host device such as a central server that may exist within 5 years of NTP, a locally connected maintenance computer or a Local Control Panel.

Provide a system capable of performing redundant checking of all data received and transmitted.

Provide status monitoring for communication line malfunction or break.

Transmit alarm signals due to out-of-range environmental conditions to a proposed central server that may exist within 5 years of NTP. Allow for the capability to deactivate such alarms, with proper authorization, from an external point in the network. Allow for system polling over the network and the option to blank any signs that do not receive a system poll within a certain time frame. This feature shall have an option to disable.

This system shall have capabilities to validate the content of all sent and received transmissions; check and report logic or data errors; check and report errors in display driver operation; check and report failures of LED Display Modules; check and report failures of power supplies; check and report opened/closed status of all sign, controller cabinet and equipment enclosure doors; check and report bad pixel locations; and check and report sign message legibility.

Provide a DMS controller capable of displaying messages transmitted directly from a proposed DMS server that may be installed in the future or a local maintenance computer in addition to being locally commanded to be displayed from a pre-programmed local message library.

Provide a DMS controller that forces a blank message (all pixels off) on all sign displays controlled by it, in the event of a loss of power.

Provide a DMS controller having an easily accessible and clearly labeled ON/ OFF switch. When in the "OFF" position, disconnect all power from the sign control electronics and matrix units and automatically blank out the LED displays.

Provide a DMS controller that has a momentary contact switch that resets the DMS controller.

Provide a DMS controller that controls the pixel luminance levels, both directly and based on ambient light levels obtained from photocells.

Store luminance levels in the DMS controller that are adjustable, in a minimum range of 0 to 248, on either a continuous logarithmic basis, to match the normal human eye luminous response characteristic, or a 1/2 incremental dimming basis, where each lower dimming level is 1/2 the previous level.

Provide a DMS controller with multiple communications ports that allow for remote control, programming and diagnostics of both it and the sign displays from local control. Allow for the capability of remote control from a proposed DMS server that may exist within 5 years of NTP.

Provide a DMS controller that does not require removal of any connections to the sign displays or any other input or output devices required for normal sign operation.

Provide a DMS controller that keeps a log of all system errors, malfunctions, automatic operations and locally controlled commands and activities. Time and date stamp all logs. DMS controller shall have sufficient memory to store a minimum of 100 logs. If 100 percent of the log storage memory has been reached without a successful download to an external source that is approved by the Engineer, the oldest log can be overwritten.

Provide a DMS controller that blanks the display whenever any of the following conditions occur: The number of pixels, which shall be a configurable parameter, that are not working for the particular sign type exceed a specified maximum value; the ratio of the number of pixels that actually achieve a commanded state divided by the number of pixels actually commanded to that state, which shall be a configurable parameter, exceeds a legibility threshold value; communication loss greater than a configurable time value, which shall have a default value of 10 minutes; or power failure followed by power restoration where the power failure lasted longer than a configurable time value, which shall have a default value of 10 minutes.

DMS Housing

The front access sign housing shall be designed to comply with NEMA Type 3R enclosure criteria. The DMS housing structural frame shall consist of aluminum extrusions made from 6061-T6 and/or 6063-T6 aluminum alloy. All sides of the DMS housing exterior, except the front, shall be covered with 0.125 inch thick aluminum sheets made from 5052-H32 aluminum alloy. This external aluminum skin shall be attached to the structural framework using a proven method of attachment. DMS structural assembly hardware (nuts, bolts, washers, and direct tension indicators) shall be galvanized A325 high-strength steel and shall be appropriately sized for the application.

Sign housing, including the framing, face and all mounting components, shall be designed to withstand a wind velocity of 90 MPH with a gust factor as specified in NCHRP Report 412, minimum wind pressure of 35 P.S.F., in accordance with AASHTO's "Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals" and certified by a Structural Engineer licensed in Illinois. Design ice loading shall be a minimum of 3 psf per the above AASHTO requirements. The vendor shall submit the following shop drawing information for approval by the Engineer:

Calculations showing wind load applied horizontally over the sign face and various combinations of vertical loads including dead load, ice load, and truck generated wind load (updraft).

Static weights and center of gravity of the DMS.

Weld design computations showing all loads and stresses.

SE certified fatigue resistance compliant with NCHRP, Report 412.

For maintenance access, front access panel(s) shall be provided. The panel(s) shall be fabricated using aluminum sheeting on the exterior and polycarbonate sheeting on the interior of the panel. Front face panel(s) shall provide a high-contrast background for the DMS display matrix. The aluminum mask of each panel shall be painted black and shall contain an opening for each pixel. Openings shall be large enough to not block any portion of the viewing cones of the LEDs. Face panel(s) shall be attached to the housing using stainless steel hardware. Face panel(s) shall be gasketed and sealed. Panel(s) shall be mounted to the DMS housing using hinges and door-stops and be securely closed.

The panel(s) shall have a single polycarbonate sheet attached securely to the inside of the aluminum panel(s). The polycarbonate sheet shall cover all of the pixel openings. The polycarbonate shall be sealed to prevent water and other elements from entering the DMS. The polycarbonate shall contain UV inhibitors that protect the LED display matrix from the effects of ultraviolet light exposure and prevent premature aging of the polycarbonate itself.

LED display modules shall mount to the inside of the DMS front face panel(s). No tools shall be needed for removal and replacement of LED display modules. DMS front face borders (top, bottom, left side, and right side), which surround the front face panel(s) and LED display matrix, shall be painted black to maximize display contrast and legibility.

The face shall be heated (only if the manufacturer requires) to prevent fogging, frost and condensation. A self-regulating, heat tape shall be provided along the bottom of each message line, between the glazing and the display modules. The heat tape shall be controlled by the sign controller.

DMS front face panels and front face border pieces shall be coated with semi-gloss black polyvinylidene fluoride (PVDF) applied in accordance to American Architectural Manufacturers Association (AAMA 2605) which has an expected outdoor service life of 10 to 15 years. All other DMS housing surfaces, including the access doors and DMS mounting brackets, shall be natural mill-finish aluminum.

Sign housing bottom panel shall contain a minimum of four small weep holes for draining moisture accumulations in the sign from condensation. Weep holes shall be designed to protect against entry of insects using non-corrosive materials. With the exception of weep hole and air in-take and exhaust openings the sign housing shall be watertight.

DMS and sign controller components shall operate in a minimum temperature range of –30°F to +165°F (-34°C to +74°C) and a relative humidity range of 0 to 99%, non-condensing.

External DMS component hardware (nuts, bolts, screws, standoffs, rivets, fasteners, etc.) shall be fabricated from hot dipped or mechanically galvanized steel, stainless steel, aluminum, or other durable corrosion-resistant materials suitable for the roadway signage application.

Multiple mounting brackets in the form of Z-bar extrusions shall be bolted to the DMS housing exterior rear wall to facilitate attachment of the DMS to the support structure. Mounting brackets shall be:

- Extruded from aluminum alloy number 6061-T6.
- Attached to the DMS structural frame members, not just the exterior sheet metal.
- Installed at the DMS manufacturer's factory.
- Attached to the DMS using mechanically galvanized A325 high-strength steel bolts.
- Attached to the DMS using direct tension indicators to verify that mounting hardware is tightened with the proper amount of force.
- Installed such that all bracket-to-DMS attachment points are sealed and water-tight.
- Designed and fabricated such that the installing contractor can drill into them without penetrating the DMS housing and compromising the housing's ability to shed water.

For moving and installation purposes, multiple galvanized steel lifting eyebolts shall be attached to the top of the DMS housing. Eyebolt hardware shall attach directly to the DMS housing structural frame and be installed at the DMS factory. All mounting points for eyebolts shall be sealed to prevent water from entering the DMS housing.

A positive pressure ventilation system shall be installed to cool both the display modules and the sign-housing interior. The housing system shall include a minimum of two thermostatically controlled fans with sealed ball bearing motors and fan bearings. The sign housing shall provide filtered and weatherproof protected exhaust ports and filtered and weatherproof protected intake ports. The exhaust ports shall be located near the top of the enclosure. Filters shall be capable of trapping airborne particle sizes 10 µm and larger. The two fans shall be capable of providing a minimum of two housing volume change per minute. Additional thermostatically controlled fans shall be provided, as needed, to direct airflow uniformly to the back of each of the display modules, either directly or by ducts. Any ductwork that blocks access to any sign component shall be removable without tools to gain access to the affected components. Interior temperature sensors shall be installed to monitor the temperature within the housing and the air surrounding at least two representative display modules. The sensors shall be connected to the DMS controller for continuous monitoring. The controller shall report to the central controller and blank the sign if configurable temperatures are equaled or exceeded. The central controller or laptop computer shall have the ability to change this user selectable threshold and access temperature measurement from the sign controller.

The DMS shall be equipped with transient voltage surge suppressor and lightning protection equipment. The system power and communication lines shall be protected by two stages of transient voltage suppression devices including MOVS and spark gap arrestor. Tripping of each stage (or both if tripped simultaneously) of the surge protection shall cause the sign controller to report the error condition to central on the next poll.

The DMS shall be equipped with a grounding bus bar. This bus bar shall be of solid copper construction with a bare tinned stranded #2 copper grounding conductor for connection to a ground rod at the base of the DMS truss or pole mount support. The bus bar shall be approximately 24" in length, 4" in height, and ¼" in depth. The bus bar shall be provided with

pre-drilled holes arranged to accept #6 AWG wire two-hole lugs. All equipment grounds in the DMS shall be connected to this bus.

DMS housing shall not exceed 250 lbs.

DMS Electrical:

The Contractor shall provide all materials, labor and equipment required to perform the electric work for the DMS in accordance with the applicable portions of the Standard Specifications and the NEC.

Maximum AC power shall not exceed 5900 watts, when the following circuits are operational and fully loaded:

Full operation of the display modules with 100% of the pixels operating at maximum possible drive current.

DMS environmental control system in full operation.

DMS Sign Controller:

Utility outlet circuit

The DMS shall operate from an electrical service providing 120/240 VAC, 60 Hz Single phase, three wires. Power and signal cables shall be installed in separate conduits.

Provide equipment having transient with surge protection device and automatic power failure and "brownout" recovery.

Provide all wiring and conduits in accordance with the requirements of the NFPA-70 or any local codes having jurisdiction at the installation site, as specified herein. No wiring or cable is to be exposed.

Provide electrical field connections by barrier type terminal connection blocks as defined in NEMA Standard Specification No. TS-1.

Identify all terminal block connections and locate so readily accessible for maintenance.

Provide all wire and cable terminations made with insulated spade terminals as defined in NEMA Standard Specifications No. TS-1.

Soldering of any field terminal connections is not permitted.

Identify all cables or wires with permanent adhesive labels or cable tags secured to the cable with nylon cable ties in all junction boxes, DMS enclosures and ITS node cabinets that are non-fading or non-yellowing.

All circuit boards will be labeled with the correct silk screen labels that are to be noted in the schematics to enable maintenance technician troubleshooting.

Neatly secure all cables and wires with nylon cable clamps or a material approved by the engineer, permanently attached to the ITS node or HUB cabinet / enclosure using an attachment mechanism approved by the Engineer.

Adhesive-backed cable tie mounts are not to be used to secure cables or wires to the cabinet or enclosure.

Properly terminate spare wires and identify as such.

Neatly route all wires to their connections.

Provide flexible watertight conduit connections to the DMS enclosures that allow for adjustment of the DMS enclosures for optimum viewing.

Where a cable or wire passes through a hole or runs along a surface at any point through or on a completed assembly, deburred such holes and/or surfaces and void of any sharp edges that may damage the cable or wire passing through or along the surface.

Equip all deburred holes with a rubber or plastic grommet.

Submit cable type, gauge and number of conductors (including calculations) to the Engineer for approval. In order to increase flexibility when pulling, provide stranded copper wire cable, unless otherwise shown.

Provide individual conductors color coded as per IMSA Specifications 19-1 and 19-3.

Install all connections between the DMS enclosure and the ITS node cabinet in accordance with the recommendations of the DMS manufacturer.

Locate all terminal blocks and strips within the DMS enclosures and ITS node cabinets that are accessible to the extent that it is not necessary to remove any equipment from the housing to make an inspection or connection.

Cut all wires to their proper length before assembly.

Do not double back wire to make up for unnecessary slack. However, provide sufficient slack such that any wire end can be cut back, re-stripped and connected at least twice.

Provide sufficient clearance between each terminal and the housing for all electrical connections in the DMS enclosures and node cabinets to prevent a leakage path or physical contact under stress.

The lay of the interconnect cables between components is to be such that when the housing door is closed, it is not to press against the cables or force the cables against various components inside the housing.

Run all equipment grounds without splices directly and independently to the ground bus.

Connect the grounding strip directly to the DMS enclosure / housing wall.

Install surge protection devices in the DMS enclosure and local ITS node cabinets to protect the DMS electronics from surges and over voltage situations, such as lightning strikes and power line surges.

If AC power utility receptacles come with the DMS, protect their circuit(s) located within the DMS and all associated control equipment enclosures with Ground Fault Circuit Interrupting (GFCI) type devices.

Use re-settable surge protection devices to guard against circuit damage resulting from voltage surges on all incoming power lines.

Provide Type 2 surge protection devices (SPDs) for all AC power lines per information given for Type 2 SPD.

Provide surge protection devices to guard against circuit damage resulting from voltage surges on all communications lines.

Submit all surge protection devices to the Engineer for review and approval prior to procurement and installation of devices

Provide components that are plug- in or screw- in units that are quickly replaced.

Clearly and permanently label all protection devices.

Electrically bond all DMS enclosures / panels to the support structure with an electrical bond wire or properly prepared electrical contact points.

Insert a block diagram of all components illustrating all connectors and connections used to interconnect the components, wiring diagrams and schematic drawings of all circuits in a re-sealable weather-resistant pocket that is permanently mounted on the inside of an accessible door in the ground-mounted controller cabinet.

Label each major or replaceable component in the cabinet and enclosure with a permanent label or Laminoid name plate.

Label all devices, components, cables and wires with permanently attached labels designed for use in the intended environment.

Use labels approved by the Engineer, and inscribed in accordance with the approved schematic shop drawings showing the component layout.

Label all internal connectors and wire terminations with sufficient information to locate its connection point without recourse to any other documentation located outside the ITS node cabinet or DMS enclosure.

Clearly mark each printed circuit and higher level assembly with the manufacturer's part number and the revision level of the assembly.

Indicate changes to components by an unambiguous change to the marked revision level.

Maintain a master revision level list until the DMS and all associated control equipment and electronics are installed and the Affidavit of Final Completion is rendered.

Mark all electronic parts (such as capacitors, resistors and integrated circuits) either with the characteristics of the part or with an industry standard part number.

Label custom parts, such as Read Only Memories, to identify the information, the revision level, date and checksum of the information stored.

Clearly label all printed circuit card cages, all slots within the cages and all printed circuit card interconnection cables.

Key printed circuit cards and cable connectors to prevent insertion into incorrect locations.

All printed circuit boards are to be manufactured with woven FR4 fiberglass material.

All printed circuit boards are to be manufactured with the proper amount of copper trace accordance with IPC standards and are to be double sided with plated through holes (where through hole devices are installed).

Provide gold plated connectors and connector fingers. Provide a moisture proof conformal coating for each board.

Conduit and Ducts:

See DMS plan sheets for individual site conduit routing requirements.

All ground ring connectors shall be directly buried bare stranded copper cable except for where the conductor goes up to the Master Grounding Bus Bar (MGB). At that point the grounding conductor shall be routed in 1" Schedule 40 PVC from 18" above finished grade down to a 90-degree bend that terminates at a depth of 40" below finished grade.

The size and material of the conduit shall comply with all applicable NEC, Standard Specifications, and Special Provision DMS ELECTRICAL WORK.

The Contractor shall provide a junction box at the base of each of the two roadside vertical supports of the sign structure or at the base of the pole mount support for cantilever/butterfly sign structures. Flexible liquid tight conduit shall connect the junction box to metallic conduit used to route power and communication wiring to the DMS by attachment to the sign support structure. The diameter/size and material specifications of the metallic conduit, connectors and fittings shall comply with all applicable NEC and Standard Specification requirements.

LED Display Modules

The DMS shall contain LED display modules that include an LED pixel array, and LED driver circuitry. These modules shall be mounted adjacently in a two-dimensional array to form a continuous LED pixel matrix. Each LED display module shall be constructed as follows:

Each LED display module may consist of one or two laminated fiberglass printed circuit boards. If two boards are used, they shall be mounted physically to each other using durable non-corrosive hardware. They shall be electrically connected via one or more header-type connectors. The header connectors shall be keyed such that the boards cannot be connected incorrectly.

Each LED display module shall be mounted to the rear of the display's front face panels using durable non-corrosive hardware. No tools shall be required for module removal and replacement. The modules shall be mounted such that the LEDs emit light through the face panel's pixel holes and such that the face panel does not block any part of the viewing cone of any of the LEDs in any pixels. It shall not be possible to mount an LED display module upside-down or in an otherwise incorrect position within the DMS display matrix.

LED display module power and signal connections shall be a quick-disconnect locking connector type. Removal of a display module from the DMS, or a pixel board or driver circuit board from its display module, shall not require a soldering operation.

All exposed metal on both sides of each printed circuit board, except connector contacts, shall be protected from water and humidity exposure by a thorough application of conformal coating. Bench level repair of individual components, including discrete LED replacement and conformal coating repair, shall be possible.

Individual addressing of the each LED display module shall be configured via the communication wiring harness and connector or by inserting an addressing module into the LED driver board.

Removal or failure of any LED module shall not affect the operation of any other LED module or sign component. Removal of one or more LED modules shall not affect the structural integrity of any part of the sign.

All LED display modules, as well as the LED pixel boards and driver circuit boards, shall be identical and interchangeable throughout the DMS.

Light Emitting Diodes (LED)

Each LED module shall contain a printed circuit board to which LED pixels are soldered. The LED pixel matrix shall conform to the following specifications:

Each LED module shall contain a minimum of 256 LED pixels configured in a two dimensional array. The pixel array shall be a minimum of 16 pixels high by 16 pixels wide. The distance from the center of one pixel to the center of all adjacent pixels, both horizontally and vertically, shall be 0.81-inches (20 mm).

Each pixel shall consist of a minimum of one (1) independent string of discrete LEDs for each color. All pixels shall contain an equal quantity of LED strings. The failure of an LED string or pixel shall not cause the failure of any other LED string or pixel in the DMS.

Each pixel shall contain the quantity of discrete LEDs needed to output white colored light at a minimum luminous intensity of 12,400 candelas per square meter when measured using a photometric meter through the DMS front face panel assembly.

Each pixel shall also be capable of displaying amber colored light with a minimum luminous intensity of 7,440 candelas per square meter when measured using a photometric meter through the DMS front face panel assembly.

Pixels

DMS pixels shall be constructed with discrete LEDs manufactured by a reputable manufacturer, as defined by the Engineer. Discrete LEDs shall be fabricated from UV light resistant epoxy and conform to the following specifications:

All LEDs shall have a nominal viewing cone of 30 degrees with a half-power angle of 15 degrees measured from the longitudinal axis of the LED. Viewing cone tolerances shall be as specified in the LED manufacturer's product specifications and shall not exceed +/- 5 degrees.

Red LEDs shall utilize AlInGaP semiconductor technology and shall emit red light that has a peak wavelength of 618-630nm.

Green LEDs shall utilize InGaN semiconductor technology and shall emit green light that has a peak wavelength of 519-539nm.

Blue LEDs shall utilize InGaN semiconductor technology and shall emit blue light that has a peak wavelength of 460-480nm.

The LED manufacturer shall perform intensity sorting of the bins. LEDs shall be obtained from no more than two (2) consecutive luminous intensity "bins" as defined by the LED manufacturer. The LED manufacturer shall perform color sorting of the bins. Each color of LEDs shall be obtained from no more than two (2) consecutive color "bins" as defined by the LED manufacturer. The various LED color and intensity bins shall be distributed evenly throughout the sign and shall be consistent from pixel to pixel. Random distribution of the LED bins shall not be accepted. The LED manufacturer shall assure color uniformity and consistency on the

LED display face within the 30 degree cone of vision. Inconsistent color shifts or intensity will be cause for rejection.

All LEDs used in all DMS provided for this contract shall be from the same manufacturer and of the same part number, except for the variations in the part number due to the intensity and color.

The LEDs shall be rated by the LED manufacturer to have a minimum lifetime of 100,000 hours of continuous operation while maintaining a minimum of 50% of the original brightness.

The LED driver board shall contain a seven segment numeric LED display that indicates the functional status of the LED pixel display module. At a minimum, it shall indicate error states of the LED pixels and communication network. The indicator shall be positioned such that a maintenance technician can easily view the status code for diagnostic purposes. The LED display module shall report status, including pixel errors, voltage levels, etc. to the sign controller upon request.

Displays

A full-matrix display shall be provided, each consisting of identical LED pixels as per the requirements stated herein.

The full-matrix display shall be capable of displaying a three-line message consisting of up to fifteen (15) full-width 7x5 alphanumeric characters, with each character nominally 6 inches high.

The full-matrix display shall be capable of displaying other size characters and other numbers of lines depending on the height of characters utilized. The display shall be designed to provide proper spacing between lines of text when displaying characters and lines of text as indicated herein. The display shall also be capable of displaying graphics as programmed via the traffic management system as well as via the remote computer or directly via the sign controller.

The signs shall have sufficient borders on all four sides for display clarity and background contrast, and shall be legible from a distance of 300 feet with a 6 inch character height, within a minimum 30 degree cone of vision centered about the centerline perpendicular to the width of the sign.

DMS Local Controller Cabinet

A weatherproof roadside cabinet shall be furnished and installed at each dynamic message sign location. The cabinet shall be designed to meet all applicable requirements of Section 1074 of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction adopted January 1, 2012 except as modified herein. The cabinet shall utilize EIA-standard 19 inch racks and be designed with front and rear lockable access doors. The cabinet doors shall include permanent, fixed position non-corrosive handles. The cabinet shall be sized to accommodate the DMS Controller and communications equipment, including fiber optics transceivers, fiber terminations and distribution, environmental filters and control equipment. All equipment shall be side-panel or rack mounted. Final design of the cabinet including sizing and equipment layout shall be done by the Contractor. Shop drawings for the cabinet and

equipment layout shall be submitted to the Engineer for review and acceptance before any fabrication is started.

The local control cabinet shall contain the following assemblies:

- Power-on indicator
- Local control LED switch
- IP communication (internet connection) connection for portable laptop computer and Ethernet cable.
- One Duplex NEMA 5-15R-equipment receptacle with GFCI.
- UL Listed appropriately sized Power Supply Module (+24 VDC) and socket.
- Nine NEMA 5-15R-power receptacles.
- One 20A, 120V, circuit breaker for CCTV camera power in the load center.

The UPS shall be internal to the control cabinet and shall be as specified herein or manufacturer recommended. The UPS shall have the capacity to operate the controller and network switches for 10 minutes to allow the controller to notify the central controller when an improper power condition exists for longer than a user selectable power loss time. The UPS shall operate at nominal voltage of 120 VAC, voltage range of 88-152 VAC, compliant with UL1778. The UPS and batteries shall be rated for outdoor use and temperature ranges.

An Ethernet switch shall be provided inside the DMS local control cabinet mounted above the DMS controller. The contractor shall install the proposed Ethernet switch in accordance with these specifications, in accordance with manufacturer's recommendations and as directed by the Engineer. Initial system configuration and setup shall also be provided.

The Contractor shall perform a review and analysis of the proposed fiber optic cabling and connections and determine connections needed. The Contractor may not use any fiber without approval by the Engineer. The Contractor's detailed plan for connection of the fiber strands, connections, and network devices shall be included in the shop drawings. All costs for implementing this approved plan are to be included in the Contractor's bid price, whether local to the site or at a remote but related location. When all equipment is installed and connected, the Contractor shall test and demonstrate the performance of the installed Ethernet switch.

The Contractor shall provide all ancillary equipment, patch cables (fiber and copper), SFP's, mounting equipment, and surge protectors required for connections between the Ethernet switch in the DMS local control cabinet and the Ethernet switches and fiber termination panels at each equipment shelter or plaza. All cables shall be properly labeled with printed cable tags. Each switch shall be permanently and securely mounted inside the cabinet back panel or DIN rail. All power and data cables shall be securely fastened to the cabinet back panel and shall be neatly dressed. Tie wraps shall not be used. Instead cables shall be secured per BICSI practices. All equipment, components, wire, patch cords, cables, racks, and panels (shelves) installed as part of this work shall be labeled per ANSI/EIA/TIA-606-B Standards. Labeling and documentation shall be incidental to this work.

A fiber optic distribution panel.

A foldout and or hinged aluminum work surface to fully support a portable computer or technician's tool case shall be installed at an ergonomically correct height for a technician 5 feet 10 inches tall. The foldout surface shall be mounted inside the front access door and shall be flat and sturdy when folded out with a portable computer placed on the surface. The foldout surface shall be secured with appropriate hardware against the inside of the front access door when not in use.

Ground bus bar and neutral bar.

The DMS Controller Cabinet shall be equipped with transient voltage surge suppressor and lightning protection equipment conforming to the following requirements:

- Withstand a peak 100,000-ampere surge current, 50kA L-N, 50kA L-G
- Designed, manufactured, & tested consistent with: ANSI/IEEE C62.41.1-2002, C62.42.2-2002, C62.45-2002, NEMA LS-1, NEC 285, and IEC 61643, CE
- Less than 1 nanosecond response time
- Temperature range of -15°F to +140°F (-25°C to +60°C)
- UL listed to: UL 1449 Third Edition 200kA & 100kA SCCR

A 100 amp, single phase, 3 wire 120/240 VAC electrical service distribution panel with a 16 circuit capacity shall be located in the DMS cabinet. The panel shall include an 80 amp two-pole main breaker. One 120V, 20A, circuit breaker shall be provided for CCTV camera power. Separate circuits with a properly sized breaker shall be provided for heating, ventilation, Controller, lighting, sign power supplies, and utility service within the sign housing and the cabinet. All circuit breakers shall be thermomagnetic, quick-break, UL listed, and properly labeled on the panel door.

The sign control and data cable from the DMS controller to the sign shall be multi-mode or single-mode fiber optic per the manufacturer's recommendations.

DMS Controller Functionality

The Controller shall be able to perform all sign control functions and to enact locally selected functions via an external laptop computer or remotely via the existing fiber optic network. The Engineer is to select the location of the remote test, depending on the available network architecture at the time of the testing.

The DMS Controller shall monitor the temperature values (minimum and maximum) within the Controller cabinet, sign housing and the sign exterior ambient temperature using the objects defined under the temperature status configuration group as defined in NTCIP 1203v3. A temperature greater than a user selectable critical temperature shall cause the sign message to go to blank and the sign Controller shall report this error message. This temperature shall be selectable both locally and remotely.

The DMS Controller shall monitor the photocell circuits in the sign and convert the measured light intensity into the desired pixel brightness using a look-up table. The sign Controller shall be capable of an automatic, incremental, and smooth adjustment of the LED brightness. The pixel light shall be initially set to an output level that is twice as bright as the highest light level measured from the three photocells mounted to the sign. The brightness table shall be adjustable remotely. This function shall be achieved by implementing the Illumination/Brightness Conformance Group as specified in NTCIP 1203v3.

The DMS Controller shall continuously monitor the voltages of all LED display module power supplies. When the voltage drops below a configurable value, the under voltage shall be reported to the TIMS and any locally connected laptop computer. All LED power supply failures shall be detected and reported any locally or remotely connected laptop computer.

The DMS Controller shall allow editing of the fonts and graphics using the objects defined in NTCIP 1203v3.

Once per day or upon command from either the remotely connected or locally connected computer, the DMS Controller shall test the operational status of each LED pixel. Any defective pixels, identified by display module number, column number and pixel number shall be reported any locally or remotely connected computer. Defective states shall include half-failed off, full-failed off, half-failed on and full failed-on. This test shall not affect the displayed message for more than 0.5 seconds.

The communication through the fiber optic network switch, the sign, local controller, and remote computer shall be completed by the Contractor.

DMS Controller Software

The DMS Controller software shall comply with NTCIP Standards, as defined in greater detail below. The software shall comply with the version of the relevant NTCIP standards and all related amendments and errata sheets that are current on the advertised date of bid submittal. The DMS Controller software shall comply with the NTCIP Requirements defined in these specifications.

Application Level- The software shall comply with the NTCIP 2301v2-Simple Transportation Management Framework (STMF) Application Profile as a Managed Agent and shall meet the requirement for Conformance Level 1.

An NTCIP component may support additional Application Profiles at the manufacturer's option. Responses shall use the same Application Profile used by the request, thereby requiring coordination with the TIMS System Integrator. Each NTCIP Component shall support the receipt of Application data packets at any time allowed by the subject standards.

Transport Level - The software shall support NTCIP 2201, 2202, and the UDP/IP option defined by the standard. The DMS system shall support the receipt of datagrams conforming to any of the identified Transport profiles at any time. Response datagrams shall use the same Transport Profile used in the request.

Information Level – The software shall implement all objects of all the conformance groups as defined in NTCIP 1201v3-Global Object Definitions. The software shall implement all objects of all conformance groups as defined in NTCIP 1203v3 – Object Definitions for Dynamic Message Signs (DMS).

The software shall implement the tags (opening and closing where defined) of the MULTI language as defined in NTCIP 1203v3. The DMS shall support any valid MULTI string containing any subset of those MULTI tags.

DMS Software Documentation

DMS Controller software shall be supplied with full documentation, including DVD containing ASCII versions of the following Management Information Base (MIB) files in Abstract Syntax Notation 1 (ASN.) format:

Relevant version of each official standard MIB module as referenced by device functionality.

If device does not support the full range of any given object within a standard MIB module, a manufacturer-specific version of the official Standard MIB module shall be provided with supported range in ASN.1 format in the SYNTAX field of the associated OBJECT TYPE macro. The filename of this file shall be identical to the standard MIB module, except it will have the extension "man."

A MIB module in ASN.1 format containing any and all manufacturer-specific objects supported by the device with accurate and meaningful DESCRIPTION fields and supported ranges indicated in the SYNTAX field of the OBJECT TYPE macros.

A MIB containing any other objects supported by the device.

The manufacturer shall allow the use of any and all of this documentation by any party authorized by the Engineer for systems integration purposes at any time initially or in the future, regardless of what parties are involved in the systems integration effort.

Controller Diagnostics and Error Reporting

The DMS Controller shall log all errors, all failures, and all warnings by implementing all of the objects under the Report Parameter Node as defined by NTCIP 1201v3, the Validate Message Error Parameter, Activate Message Error Parameter and all objects of Multi Error Conformance group as defined by NTCIP 1203v3.

The error and failure log shall incorporate a time and date stamp. All DMS errors, failures, and warnings shall immediately be logged by the DMS Controller and reported to the TIMS and the local communication port.

The DMS Controller shall incorporate a Communication Time Out Error by implementing the Communication Loss Time Definition Parameter as define by NTCIP 1203v3.

The DMS Controller shall use the Description of Other MULTI Error Parameter as defined by NTCIP 1203v3 when implementing manufacturer-specific error message descriptions.

The DMS Controller shall sense a Communication Error when it receives a message that cannot be processed using the Short Error Status Parameter as defined by NTCIP 1203v3.

The DMS Controller shall track Controller errors by implementing the Controller Error Status Parameter as defined by NTCIP 1203v3.

The DMS Controller shall continuously monitor, detect, and locate any pixel failure (single or multiple pixels) by implementing the Pixel Failure Table Parameter as specified in NTCIP 1203v3.

The Pixel Failure monitor and detection functionality shall be implemented by using the parameters as specified in NTCIP 1203v3.

At a minimum, the DMS Controller shall have the following display test patterns for visual inspection of DMS pixels. The Contractor may submit alternative test sequences for approval by the Engineer:

SET TEST: All pixels are on.

RESET TEST: All pixels are off.

SET RESET TEST: Set and resets all pixels continuously.

COLUMN TEST: Walking set column.

ROW TEST: Scrolling set row.

Sign Display Messages

Each message shall include a minimum of three (3) display frames (pages). This function shall be achieved by implementing the "np" MULTI Tag as specified in NTCIP 1203v3.

The time each message frame (page) is displayed shall be independently configured. This function shall be achieved by implementing the "pt" MULTI Tag as specified in NTCIP 1203v3.

Each message frame (page) ON time shall have a minimum range from 2 seconds to 10 seconds in 0.5-second intervals and is adjustable in increments of 0.1 seconds. This function shall be achieved by implementing the "ptxoy" MULTI Tag as specified in NTCIP 1203v3.

The DMS Controller shall display characters using proportional spacing. Spacing options for the pixel columns shall be variable.

A currently displayed message shall not be affected as the DMS Controller performs other functions, except when displaying a new message or when blanking the DMS.

When flashing a message frame or displaying a message with two or more frames, the DMS Controller shall blank, change, or update the DMS display within 0.1 sec. The flash rate shall be user programmable in increments of 0.1 seconds.

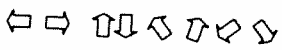
Each alphanumeric font shall include the following characters as a minimum:

"A" through "Z" All upper case

"0" through "9" All decimal digits

A blank or space

Special characters: , / !? ; ' : " , . @ # &+()[]<> * - +



Display of Graphic Images

The DMS control software shall support the inclusion of graphics in messages according to NTCIP 1203v3 standards. The vendor shall also support graphics using MUTCD symbols, clip art, shapes, free form creations, manufacturer-specific objects, and MULTI tags. Packs of graphics and MUTCD symbols shall be included with the software.

Brightness Control

Three photoelectric sensor devices shall be provided on top of the sign with one facing the direction of travel, one facing the opposite direction of travel and one positioned to detect ambient lighting to use in performing automatic dimming and brightening the display to correspond to light conditions. The DMS Controller shall be capable of reading a minimum of 256 light levels from each photocell.

Provisions, such as a moving average of measured brightness, shall be made to prevent brightening of the sign due to stray headlights shining upon the photo sensors at night.

Levels of brightness, as related to ambient light, shall be operator-selectable at the DMS Controller and from Central Controller. The range of operator control over brightness shall be a minimum of 100 increments between fully dimmed and full brightness.

Testing

Displays

The Contractor shall deliver a sample of the character module to be used in the proposed sign. The module shall be capable of being turned fully "on" and fully "off", with all LED's operating at full design brightness. A sample of the sign face material to be used, attached at the design distance from the character module, shall be included. Luminance testing shall be performed on this sample by the Contractor and witnessed by the Engineer. Luminance shall be measured by the manufacturer with a Minolta Model #LS-110 Luminance Meter or equivalent. Measurements will be made at a distance of 24 feet from each pixel, at the angles specified. If

any deviations from these specifications are discovered, the sample will be returned to the manufacturer for modification, and resubmitted for testing. Once the sample conforms to these specifications, the manufacturer shall certify that the delivered sign has been tested at the factory and conforms to the photometric performance of the approved sample. The sample will be held until the completed sign is approved and then returned to the Contractor.

Sign Performance Testing, Local Operation

The signs being delivered under this project, including all hardware and software components shall be tested for operational completeness at the Contractor's delivery location or at a point mutually agreeable to both the Contractor and the Engineer. Testing shall be performed in the presence of the Contractor and the Engineer and shall consist of tests specified herein. The Contractor shall provide a portable generator to provide power, if not readily available, for testing at no additional cost to the Engineer.

The Contractor shall state, in writing, that the sign is complete and ready for pre-installation local testing. Within five (5) days upon receiving notification, the Engineer shall begin the testing.

Water Test:

The sign housing shall be exposed to a continuous high-pressure water spray for 2 hours on all sides except the sign-housing bottom. The size, spacing and location of the drainage holes shall effectively prevent the accumulation of water within the sign housing and prevent any equipment or devices inside the housing from getting wet. The DMS Manufacturer and Contractor shall certify to the Engineer in writing that the housing of the sign provided passed the Water Test and will not accumulate water or allow any of the equipment to get wet.

DMS Check-out:

The Engineer and/or his/her representative will thoroughly exercise the system, including the local alarm system, using any test or procedure that would demonstrate the capabilities of each sign component. All hardware, software and performance functions, including the maintenance and troubleshooting software, will be individually checked for compliance with the specifications. Training is considered a system component and shall have been furnished before the tests can begin.

Message Speed will be tested by preparing six (6) frames of twenty-one (21) random characters on each line. A frame reference number will be included on each frame. The frames will be run at the fastest sign speed setting. The total time to go through the six (6) frames shall be measured from the start of Frame #1 to the start of Frame #6.

The Contractor shall state, in writing, that the sign installation is complete and ready for local testing. Within five (5) days upon receiving notification, the Engineer shall authorize the start of the Sixty-day (60) Performance Test.

Sign Sixty-day (60) Performance Test – Local Control:

The Contractor shall demonstrate that the system satisfies the specified operational requirements as an integrated unit by operating the system continuously for sixty consecutive days without major malfunction or failure.

During the Sign Sixty-day (60) Performance Test, the Engineer will exercise the system and document the performance of all specified features and any other events which could be expected to occur in an operational Traffic Management System, including the simulation of failures. During the system exercise, the Sign Sixty-day Performance test may be suspended or terminated by the Engineer or the Contractor. Suspension is defined as halting the test progress, the Contractor taking necessary corrective action, and the test being resumed from the point of suspension. Termination is defined as halting the test. In the event of termination, the Contractor shall take necessary corrective action, and the test shall be restarted from the beginning. Any corrective action shall be by mutual agreement between the Contractor and the Engineer.

The Sign Sixty-day (60) Performance Test may be suspended for the following reasons, including but not limited to.

Failure or interference due to conditions beyond the control of the Contractor, such as vandalism, traffic accidents, power failures and similar occurrences.

Communications noise from an outside source, unanticipated or not present during the communications design, construction or pre-test stages of the Project.

Failure of any support or diagnostic equipment necessary to successfully test the system.

Communications failure

The DMS sixty-day (60) Performance Test may be terminated for the following reasons, including but not limited to:

- Failure of any hardware or performance item to meet these Special Provisions.
- Communications noise from an outside source, which was anticipated by neither the Engineer nor the Contractor.
- Failure of the sign to change messages in the local mode.
- Failure of any pixel.
- Failure of more than 1 percent of the total number of LED's in the sign at the end of the test.
- Failure of any pixel to turn off or turn on.
- The appearance of any problem which has a significant effect upon the reliability, safety or operation of the system.

Each sign will be tested for proper operation from the local and remote locations via the remote computers.

Documentation

The Contractor shall furnish the following shop drawing submittals for approval before the delivery of any DMS sign:

LED manufacturer's data sheet, stating that make and model of LED to be used, the luminance of LED at a stated current, the maximum/minimum operating temperatures and other pertinent information.

Pixel Design – include a detail drawing of the physical layout of the pixel, including the pixel size, number of LED's board detail, operation voltage and current, method of weather protection, orientation of the individual LED's and the calculated luminance at the following points:

- 15 degrees right and left of the vertical geometric center.
- 90 degrees perpendicular to the pixel.
- 15 degrees below the horizontal geometric center of the sign.
- The module design, including mounting detail.
- The cabinet design and installation details of equipment in the cabinet.
- Cabinet Shop Drawings.
- Air pre-cleaner and filter design.
- Control Cabinet/Panel Drawings.
- Full Electrical Schematics of all circuits with component values; operating, Voltages, operating current, etc.
- A demonstration disk of the software to be used for local operation and troubleshooting. This shall be capable of running in the latest Windows environment.
- Copy of the company's ISO 9001 certification or other Quality Management System (QMS) in place.

Before the sign is tested and initial payment is made, the following items shall be provided to and accepted by the Engineer:

- Pixel Module Shop Drawings
- Wiring Diagrams
- Water Test Certification
- Full Electrical Schematics of all circuits with component values, operating voltages, operating current, etc.
- Maintenance and Trouble Shooting Manuals to include, but not limited to:
- Maintenance Schedules
- Maintenance Instructions
- Troubleshooting guide
- Repair and disassembly procedures
- Troubleshooting Software
- Decision Tree type of structure
- Step by step guidance

Within 30 days of the Notice-to-Proceed for the Contract, the Contractor shall provide to the Engineer the weight and center of gravity location for the DMS.

Contractor shall supply complete as built drawings of all associated equipment and site work.

Training

The Contractor shall supply training for maintenance personnel in the operation and maintenance of all field equipment prior to any equipment's being made operational in the field.

Training shall be provided by personnel thoroughly familiar with the equipment operation. This may be the Contractor's personnel, equipment manufacturer representatives, or a combination of the two. A complete course outline and summary of the experience and qualifications of the instructional personnel shall be submitted and approved by the Engineer prior to the start of training. Training sessions may be combined and/or shortened with the agreement of the Engineer and the Contractor.

Recommended test equipment, literature and drawings for the classes shall be furnished by the Contractor.

Maintenance Personnel Training

Training for maintenance personnel shall consist of two separate and identical courses of 16 classroom and system demonstration hours each. Training shall be as follows:

Part 1 – 8 hours. The objective of Part 1 is to provide operational description, troubleshooting procedures, and recommendations for test equipment, test equipment use, repair procedures, design data and drawing for DMS signs furnished as part of this project. This training shall be provided before the first DMS sign is delivered.

Part 2 – 8 hours. The objective of Part 2 is to provide "hands on" experience with trouble shooting software, manuals, drawings and test equipment for all LED type DMS sign equipment furnished as part of this project.

Training shall be conducted at the Kane County Division of Transportation offices, located at 41W011 Burlington Road, St. Charles, IL. The Contractor is responsible for determining the test equipment available at this facility. Class size for each of the two courses shall be limited to ten (10) persons to afford maximum individual experience.

All training class time (indoors or outdoors) shall be videotaped by the Contractor on DVD(s). The DVD(s) shall become the property of Kane County. All unused training materials become the property of Kane County as well at the conclusion of the session.

Warranty

Following successful completion of the sixty-day (60) Performance Test and Acceptance by the Engineer, a Warranty Period shall commence. The purpose of this period is to ensure that all components of the DMS system function in accordance with the Special Provisions over the length of the manufactures warranty period, and to provide continuing assistance to Kane County in all phases of system operation as required. This consists of a One Year Warranty Period. The one (1) year warranty period begins at acceptance by the Engineer. The Contractor shall be responsible for the proper performance of all equipment including the DMS, controller and control cabinet, including but not limited to any performance problems resulting from power surges and/or lightning strikes. The Contractor is also, responsible for responding within forty-eight (48) hours on site after notification. The Contractor is also responsible for obtaining technical assistance from the equipment manufacturers and/or suppliers in cases where operations or adjustment difficulties are encountered. The Contractor shall be responsible for correcting any problems attributable to poor workmanship and/or equipment. During the Warranty Period signs delivered prior to revisions in the NTCIP requirements shall be upgraded to comply with the revised requirements within one year of their effective date as a part of the Warranty at no cost to Kane County. Ongoing software support by the supplier shall include updates of the Ethernet switch and associated application software. These updates shall be provided free of charge for length of warranty period.

Basis of Payment

This work will be paid for at the contract unit price per EACH for a DYNAMIC MESSAGE SIGN which price shall include all equipment, labor, and materials necessary to complete this work as specified including mounting hardware and terminating connectors. The support pole will be paid for separately.

ROAD WEATHER INFORMATION STATION

Description

This work is furnishing and installation of a Road Weather Information System (RWIS) in the project limits. This RWIS includes sensors that can measure wind speed, wind direction, air temperature, barometric pressure, relative humidity, rainfall, and road temperature monitoring.

Material

Materials shall be selected from a common manufacturer, or from several manufacturers' that are shown to be directly compatible with each other per manufacturer's recommendations. Written approval from the Engineer is required to utilize equipment from different manufactures.

If directed, demonstrate the proposed RWIS can provide functional requirements. The RWIS equipment vendor chosen shall have at least 5 successful RWIS installations in North America. As part of the equipment approval process, the Contractor shall provide, if requested by the Engineer, the names of at least 5 agencies, with contact person name and telephone numbers, to verify said RWIS installations were successful.

Weather Station:

Provide a weather station with capabilities to collect wind speed, wind direction, temperature, relative humidity, and barometric pressure through use of sensors. This weather station shall have capabilities to add an integrated tipping bucket rain gauge through one of the common ports. Air temperature, humidity, and barometric pressure sensors shall be housed in a solar radiation shield below the mechanical wind direction and speed sensor.

Weather station shall use 9 to 17 VDC at 4 mA.

Weather station shall have communication interfaces for SDI-12 and RS-232 standard, with an option for RS-485 and RS-422.

Weather station shall operate successfully between the temperatures of -40 degrees Fahrenheit to 140 degrees Fahrenheit.

Wind speed and direction sensors shall meet the following:

Speed Range: 0 to 111.8 miles per hour

Speed Resolution: 0.22 miles per hour

Speed Accuracy: +/- 2 percent

Direction Range: 0 to 360 degrees

Direction Resolution: 1 degree

Direction Accuracy: +/- 5 degrees

Threshold, speed and direction: 2.23 mph

Temperature and Humidity Specifications:

Temperature Range: -40 degrees Fahrenheit to 140 degrees Fahrenheit

Temperature Resolution: 0.1 degrees Fahrenheit

Temperature Accuracy: +/- 0.5 degrees Fahrenheit

Relative Humidity Range: 0 to 100 percent

Relative Humidity Resolution: 1 percent

Relative Humidity Accuracy: +/- 4 percent

Barometric Pressure Specifications:

Range: 500 – 1000 mbars (14.76 – 32.48 inHg)

Resolution: 0.1 mbar (-0.002 inHg)

Accuracy: +/- 2 mbars (0.059 inHg)

Provide a tipping bucket rain gauge that meets the specifications of the World Meteorological Organization (WMO). Rain gauge shall have a minimum catchment area of 31 square inches with a measurement resolution of 0.004 inches (in) per tip.

Rain gauge shall be heated to allow for operation in cold temperatures. Operating temperature shall be between -4 degrees Fahrenheit to 122 degrees Fahrenheit. Heater shall use a maximum of 18 watts and have a separate thermostat for control.

At the direction of the Engineer, provide a bird wire assembly to discourage birds from perching on the funnel rim.

Rain gauge shall have an accuracy of 2 percent up to 25 1.0 in/hr and 3 percent up to 2.0 in/hr.

Rain gauge Output shall be a magnetic reed switch, rating 24VAC/DC 500mA.

Provide a clamp for 1" iron pipe or 3 bolts on 6.3 in. dia. circle for rain gauge.

Remote Road Surface Condition Sensor:

Provide a non-intrusive surface condition sensor that uses laser and infrared electro-optical technology to read surface condition, temperature, and reduction of surface grip due to water, snow and ice. This sensor shall have capabilities of being mounted on typical transportation infrastructure, such as traffic signal poles, CCTV camera poles, or street lights.

Road Surface Sensor shall provide compliance with NTCIP 1204 ESS standards for open architecture communications.

Road Surface Sensor shall be immune to passing traffic and common road treatment chemicals, as identified by the Engineer. Road Surface Sensor shall be able to detect conditions on both asphalt and concrete.

Road Surface Sensor shall output air temperature, surface temperature, surface state, and a surface grip coefficient. Surface states shall include 1 dry indication, 3 wet, 2 snow, and 2 ice indications. Surface grip coefficient shall be provided in two formats, including a relative grip on a scale (e.g. 0 (worst) to 100 (best)) and a classification system (e.g. "good", "fair", "poor"). Alternative scales and reporting features may be presented to the Engineer for consideration.

Road Surface Sensor shall have an internal algorithm to check 3 different behavioral parameters to evaluate and report the optical condition of the laser window.

Road Surface Sensor may have a Hardened Wireless Access Point (WAP) to allow for calibration efforts without making direct connections.

Road Surface Sensor shall use 12VDC with a maximum power consumption of 4.2 watts. It shall operate in temperatures between -40 degrees Fahrenheit and 140 degrees Fahrenheit.

Road Surface Sensor shall have a range of 9.84 to 32.81 feet at a 45-degree angle. Sensor shall have an ability to operate at an elevation angle of 30 to 90 degrees, with a measurement area of 0.82 feet at 32.81 feet.

Road Surface Sensor shall have sensitivity to ambient temperature of 0.5 degrees Fahrenheit, 0.01 inches to ice and water, and 0.05 inches to snow.

Road Surface Sensor shall read air temperatures between -40 degrees Fahrenheit and 130 degrees Fahrenheit, with a 1.2 degree Fahrenheit level of accuracy.

Road Surface Sensor shall read surface temperatures between 23 degrees Fahrenheit and 40 degrees Fahrenheit, with a 1.2 degree Fahrenheit level of accuracy, with ambient temperature capabilities between -40 degrees Fahrenheit and 130 degrees.

Road Surface Sensor shall use communications that are EIA-485, multi-drop capable with up to 8 addresses, EIA-232, or Ethernet.

Road Surface Sensor shall use a removable high visibility green laser for targeting. This laser shall be an Eye Safe Class 1 Laser.

Diagnostics shall include a Start-Up BIT, One Digital test Signal.

Provide 4.9feet of cable to IP67 rated connection. If directed, provide 1.6 feet of cable extension.

Remote Process Unit:

A Remote Processing Unit (RPU) shall be provided to disseminate road surface and weather information. RPU shall be open architecture and NTCIP-compliant. RPU shall have capability to be installed within cabinets proposed under this project and be rack mountable (19"). RPU should use 1 rack unit.

RPU shall have capabilities to activate and deactivate isolated outputs based on a user settable high and low threshold, enabling use of local weather information to activate public warning devices, including message signs, flashing beacons, public warning devices, traffic signal preemptions, or other active traffic management devices.

Communications shall be via NTCIP 1204v3 ESS via Ethernet or RS-232 connection. Central polling and monitoring shall be available for the central system or local laptop, as directed by the Engineer.

RPU shall provide sensor surge protection, power converter, and condition status outputs. These should be packaged as part of a 1 unit rack mount enclosure.

RPU shall be able to incorporate sensors of another manufacturer type that is available via open architecture.

RPU shall be able to accommodate all sensors identified in these plans and specifications. Additional, it shall have the capability to equip a total of:

- Up to 8 non-intrusive pavement surface sensors
- Up to 2 HSE passive surface sensors
- Up to 2 HSE sub-surface temperature sensors
- Up to 8 road sensors that provide surface temperature, surface status, freeze point, and film thickness data via sub surface probes
- Up to 2 water depth sensors, either via pressure transducers, bubbler sensors, radar sensors, or other industry sensor technologies
- A minimum capability of accommodating combined weather sensor systems and discrete atmospheric sensors

Power consumption shall be 24 VDC at less than 4 watts, with options to do 12 VDC and 114VAC via External power supply.

Data connections shall include RJ45-F Ethernet or DB9M for RS-232 and RS-485. Protocol stacks for these shall be supported.

Sensor inputs shall include 16 digital input, 8 12-bit analog inputs, and 3 serial (RS-495). Isolated outputs shall include 8 SPDT Dry Form C.

Sensor surge protection shall be provided via Internal M Block Plug-in Suppressors for sensor data and power. Sensor power should be individually fused.

RPU shall have an operating temperature between -40 degrees Fahrenheit and 165 degrees Fahrenheit, with non-condensing humidity between 5 and 95 percent.

Construction

All sensors, stations, and equipment shall be installed per manufacturers' recommendations. Deviations from these recommendations or from plan shall be only after approval is granted by the Engineer.

Install all weather sensing equipment to the proposed pole shown in the plans. Weather sensing equipment shall be installed firmly to prevent sway or shaking from wind gusts. Equipment mount should be clamped or welded to pole, depending on the capabilities of the structure.

Install Road Surface Sensor at locations shown on plans. Verify that sufficient cable is available to provide the power and communications necessary for successful operation. Provide the necessary extenders where needed.

Install RPU in proposed ITS cabinet, as shown on the plans. Connect all cabling necessary to establish communications between the RPU and the sensors.

System shall be tested using procedures consistent with ASTM and ISO standards for testing the performance of weather-sensing equipment. A manufacturer-recommended or Contractor-recommended testing plan may be submitted as an alternative, if granted approval by the Engineer. The Contractor shall demonstrate or prove the accuracy of the weather-sensing equipment to the Engineer, using the testing plan and evaluation criteria that have been approved.

Upon completion of equipment installation, start and test the entire system. Make all final sensor connections to the RPU; perform all final system checks, sensor alignments, software setup, and software configuration to provide a fully operational RWIS system.

Provide a detailed description (technical cut sheets) of the RWIS and the experience of the vendor/manufacturer in supply such RWIS to similar agencies.

Warranty

Provide a limited, on-site warranty covering all equipment for a 12-month period from the RWIS commissioning date. Provide a warranty on the RPU for not less than 36 months, atmospheric sensors for a period of not less than 12 months, and non-invasive pavement sensors for a period of not less than 12 months. Batteries will be supported by their respective manufacturers' warranty, if applicable.

Training

Provide a minimum of 24 hours of instruction to 10 designated personnel in the operation and maintenance procedures of equipment or systems installed. Provide the training during installation, testing, and integration. Provide the training through practical demonstrations, seminars, and other related technical procedures. Unless otherwise directed, training shall occur at the Kane County Department of Transportation offices, located at 41W011 Burlington Road, St. Charles, IL, or at the field site where the RWIS is installed.

Furnish a training session agenda, a complete set of training materials (manuals and schematics), and the names and qualifications of proposed instructors for approval 60 days before the training. Provide a training location. Provide one (1) copy of the course material for each person. Provide training in the following areas of interest:

- The "Hands-on" operation for each type of equipment.
- Explanation of all system commands, their function and usage.
- Requirement preventative maintenance procedures.
- All equipment servicing procedures.
- System "troubleshooting"/problem identification procedures.

Basis of Payment

The work performed and the materials furnished in accordance with this Item and measured as provided will be paid for at the contract unit bid price LSum which is full compensation for furnishing, placing, testing all materials and equipment, and all tools, labor, supplies, and incidentals.

CAMERA POLE, 20 FT

Description

This work shall consist of providing and installing a 20' Extension trenching and backfilling, Pole on to an existing traffic signal mast arm assembly for a CCTV camera installation.

Materials

Provide a 20-foot section of 4" aluminum or galvanized steel traffic signal post. Post shall be hollow and free of holes or other blemishes that inhibit the structural integrity. The option to add small holes for cable access shall be available without impacting structural integrity of the post.

Provide a minimum of 4 clamps, unless a greater value is recommended by the manufacturer, to clamp the post to the traffic signal structure. Clamp shall be use #4 gage steel. 8 long bolts, 8 lock washers, and 8 hex nuts shall be used to bracket the clamp together, using the appropriate manufacturer-recommended sizes. Internal clamp radii shall be selected based on manufacturers' recommendations for the size of traffic signal post in the field.

Construction

Attach the clamps to the existing traffic signal pole in a manner that does not damage the existing equipment or the clamp's structural integrity. Attach the 20-foot extension pole to the clamps in a manner that maximizes the pole height while meeting the minimum deflection criteria and minimizing cable exposure. Set pole so that deflection at the top of pole is no more than 1" and natural sway of pole does not damage or disfigure the exterior of the existing traffic signal pole.

Space shall be made available at the top of the 20-foot pole to bracket a CCTV camera. Pole material shall allow brackets to safely and securely mount to the pole without damaging or disfiguring the pole. CCTV camera cables shall be threaded through the top opening of the pole and fed down through the pole's hollow inside.

Install pole as close to existing hole access point on existing traffic signal pole, so to minimize the distance of exposed cable between the bottom of the pole and access the inside of the existing traffic signal pole. If directed by the Engineer, the Contractor may drill a hole through the 20-foot extension pole and/or the existing traffic signal pole. Drilling holes shall leave no aesthetic or structural damage that could inhibit either item.

Basis of Payment

This work will be paid for at the contract unit price per EACH for CAMERA POLE, 20 FT which price shall include all equipment, labor, and materials necessary to complete this work as specified including mounting hardware and terminating connectors.

THREE CELL FABRIC INNERDUCT

Description

This work shall consist of providing and installing a detectable 3-cell fabric innerduct within existing and proposed conduits as shown on the plans.

Materials

Fabric innerduct shall contain three individual cells each capable of housing cables up to 1.3" diameter cables. Fabric innerduct shall be sized to be placed in a 4" or larger conduit. Fabric innerduct shall be constructed of a flexible nylon-6 resin polymer material meeting UL 2024A standards for Optical Fiber Communications raceways. Innerduct material shall be factory lubricated.

Pull Tape: Pull tape shall be constructed of synthetic fiber and shall be pre-installed within each innerduct cell. Pull tape shall have sequential footage marks every 5 feet. Pull tape must be color coated to differentiate between cells. Innerduct shall contain an integrated 18 gage tracer wire for detecting conduit.

Fabric Innerduct shall be installed in accordance with manufactures guidelines.

Basis of Payment

This work will be paid for at the contract unit price per FOOT for THREE-CELL FABRIC INNERDUCT which price shall include all equipment, labor, and materials necessary to complete this work as specified including mounting hardware and terminating connectors.

ATMS SYSTEMS INTEGRATION – DATA PORTAL MODULE

Description.

Furnishing shall consist of securing the software license for a Data Portal (DP) module. The DP shall be an integrated module that becomes part of the central control software at Kane County.

Module handles the storage, display, and analysis of detector and incident data to provide a user with tools to determine system effectiveness. The tool can handle data from a few dozen to well over 1000+ detector sources as well as event data from the event management module to store and analyze incident information. The system module is a web-based interface that allows for easier accessibility across agencies or within a single department.

Key features of the DP module shall include:

- Aggregate data from the current raw 30-second detector results
- Allow users to build queries about detector data
- Return information about detector volume, speed, and occupancy
- Allow users to define/store sets of detectors for future use
- Allow users to submit queries for immediate execution
- Allow users to schedule queries for periodic background execution
- Support use of Structured Query Language (SQL)
- Provide query results in formats suitable for analysis in other systems, such as TRADAS, Access, or Excel
- Identify potential issues with data quality

Materials.

Module shall be the Transuite Data Portal module.

Installation.

Furnishing shall consist of securing the software license for the module, and shall be furnished from a vendor that is shown to be compatible with the existing central control software at Kane County. Module shall be installed using approved representatives from the selected vendor. The vendor shall integrate the module into the central software servers and update the necessary databases. The Contractor is responsible for completion of the vendor's work.

Configuration shall consist of adding devices, initial software setup, and final installation of any third party services necessary to allow operators to successfully use the new module without additional effort.

Basis of Payment

This work will be paid for at the contract unit price per LUMP SUM for ATMS SYSTEMS INTEGRATION – DATA PORTAL MODULE which price shall include all equipment, labor, and materials necessary to complete this work as specified including mounting hardware and terminating connectors.

ATMS SYSTEMS INTEGRATION – TRAFFIC MANAGEMENT SYSTEMS MODULE

Description

This work shall consist of furnishing, installing, and configuration of a software module that shall be compatible with the existing central control software at Kane County. This module will support real-time access to standalone detector stations along a roadway segment. The module connects volume, speed, and occupancy detectors, as well as calculates travel times along designed routes. The system further supports the collection of weather data which then can be made available to other modules for processing or to trigger specific actions.

Key features of the module:

- Receives static data from the database and/or external sources in the form of Center to Center (C2C) Message Sets as defined by the Standards for Traffic Management Center to Center Communications.
- Receives and smoothes dynamic detector data from the Communications Server or an external source in the form of C2C Message Sets.
- Calculates and exports averaged and weighted detector to external sources and graphic displays, with views available on a per-link basis
- Provides link data in the form of C2C Message Sets for export to other applications (e.g., existing speed maps, FTP files, RADS, PDA data, MILOS)
- Calculates and exports route travel times to automatically disseminate travel times and delay times
- Automatic Incident Detection (for freeway applications) and triggers for external events

  Automated queue message generation on DMS

Materials.

- Module shall be the Transuite Traffic Management System module.
- Develop High Sierra RWIS enhancement for Traffic Management System, integration and database configuration.

Installation.

Furnishing shall consist of securing the software license for the module, and shall be furnished from a vendor that is shown to be compatible with the existing central control software at Kane County. Module shall be installed using approved representatives from the selected vendor. The vendor shall integrate the module into the central software servers and update the necessary databases. The Contractor is responsible for completion of the vendor's work.

Configuration shall consist of adding devices, initial software setup, and final installation of any third party services necessary to allow operators to successfully use the new module without additional effort.

Basis of Payment

This work will be paid for at the contract unit price per LUMP SUM for ATMS SYSTEMS INTEGRATION – TRAFFIC MANAGEMENT SYSTEMS MODULE which price shall include all equipment, labor, and materials necessary to complete this work as specified including mounting hardware and terminating connectors.

ATMS SYSTEMS INTEGRATION – ALERT PROCESSING SYSTEM

Description

Furnishing shall consist of securing the software license for the Alert Processing System (APS) module. The APS shall be an integrated module that becomes part of the central control software at Kane County.

The APS module takes inputs from diverse external sources and triggers a response based on the input. The sources can be equipment or feeds that contain speed, weather information (e.g. temp or wind speed). The response or action taken by the software when generated is configurable. Responses shall be able to trigger specific displays on message boards and HAR transmissions.

Materials

- Module shall be the Transuite Alert Processing System module.
- Develop a RWIS enhancement for Alert Processing System, integration, and database configuration for road weather information station system provided under the pay item ROAD WEATHER INFORMATION STATION

Installation

Furnishing shall consist of securing the software license for the module, and shall be furnished from a vendor that is shown to be compatible with the existing central control software at Kane County. Module shall be installed using approved representatives from the selected vendor. The vendor shall integrate the module into the central software servers and update the necessary databases. The Contractor is responsible for completion of the vendor's work.

Configuration shall consist of adding devices, initial software setup, and final installation of any third party services necessary to allow operators to successfully use the new module without additional effort.

Basis of Payment

This work will be paid for at the contract unit price per LUMP SUM for ATMS SYSTEMS INTEGRATION – DEVICE INTEGRATION which price shall include all equipment, labor, and materials necessary to complete this work as specified including mounting hardware and terminating connectors.

ATMS SYSTEMS INTEGRATION – TRAVELER INFORMATION SYSTEM MODULE

Description

This work shall consist of furnishing, installing, and configuration of a Traveler Information System (TIS) module. The TIS shall be an integrated module that becomes part of the central control software at Kane County.

Control of dynamic signs, portable message boards, and highway advisory radios is controlled by this module. The TIS can handle scheduling, library messaging, plan selection, and manual messaging. Supports dynamic filtering for sites with a few to several hundred sign sizes or types, and can support operations where multiple agencies have equipment is operated by the same central servers.

The TIS shall be a client/server application to monitor and control DMS and is fully integrated into ATMS Map and ATMS Explorer. The system supports controlling signs using multiple protocols, including NTCIP and multiple proprietary sign vendor protocols. It has support for polling device status, displaying messages, blanking or quieting devices, scheduling messages, upload/download of device parameters such as fonts and messages, editing messages and fonts, and editing and implementing message plans.

The main TIS user interface provides a complete listing with color highlights to show the status and messages being displayed on all DMS signs in the system. This screen allows the operator to quickly select a sign and edit its database, view its operation, or change its operation.

The TIS module shall support a number of communications protocols from various sign vendors in addition to NTCIP. In addition, the TIS shall support most types of communications media and communications configurations such as direct connect modem over T1/fiber/etc., dial-up, TCP/IP, and CDPD. A TIS scheduler shall be an integrated component of the Traveler Information System. Schedule entries shall be created, modified, or deleted from the system's user interface. Entries shall be scheduled to execute at particular times on a daily basis, on particular days of the week, or on particular days of the month or year. Any device shall be disabled from participating in scheduled events, and schedule messages shall be removed from any device with a single command.

TIS also shall include a plan management subsystem which allows an operator to create a DMS sign plan, a combination of signs and messages that are managed as a single operator action. This will allow an operator to establish a sign plan as part of a special event or incident

mitigation program, and then invoke a set of simultaneous settings to effect a specific configuration. Plans shall be commanded by an operator or scheduled.

Materials

Module shall be the Transuite Traveler Information System module.

Installation

Furnishing shall consist of securing the software license for the module, and shall be furnished from a vendor that is shown to be compatible with the existing central control software at Kane County. Module shall be installed using approved representatives from the selected vendor. The vendor shall integrate the module into the central software servers and update the necessary databases. The Contractor is responsible for completion of the vendor's work.

Configuration shall consist of adding devices, initial software setup, and final installation of any third party services necessary to allow operators to successfully use the new module without additional effort.

Basis of Payment

This work will be paid for at the contract unit price per LUMP SUM for ATMS SYSTEMS INTEGRATION – TRAVELER SYSTEM MODULE which price shall include all equipment, labor, and materials necessary to complete this work as specified including mounting hardware and terminating connectors.

UPGRADE EXISTING UPS BATTERY BACK-UP SYSTEM

Description

This work shall consist of integrating a network interface card to receive UPS status and event notification at a central monitoring station. The module will allow upgrades to the UPS via the enterprise IP network. The module will allow the user to schedule shutdown, startup and self-test functionalities.

Materials

Shall consist of Communication TCP/IP Module providing an Ethernet connection between the battery backup and local network switch.

Basis of Payment

This work will be paid for at the contract unit price per EACH for UPGRADE EXISTING UPS BATTERY BACK-UP SYSTEM which price shall include all equipment, labor, and materials necessary to complete this work as specified including mounting hardware and terminating connectors.

JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12"X12"X4"

Description

This work is furnishing and installation of pull boxes that are mounted on the underside of a bridge structure.

Material

Provide NEMA 3R rated junction boxes, hot dipped galvanized as specified in Section 1105.02(S) after fabrication. Junction box shall be 12" by 12" by 4".

Provide boxes that can be surface mounted with a cover secured by brass or stainless steel tamperproof screws. Box cover shall be hinged. A customized hinge may be used, so long as that custom hinge is demonstrated to be structurally secure.

Provide factory installed grounding stud and hex nut in rear of box, as applicable.

Provide interior hooks to suspend coiled cables in the air and prevent them from resting against door.

Engrave or weld the label "ELECTRICAL" or "COMMUNICATION", as appropriate, on the covers as approved by the Engineer.

Use one (1) inch minimum letters for all labels.

Construction

Install steel junction box to underside of bridge, using manufacturer-approved installation methods. Installation shall comply with UL-50 Electrical Cabinets and Boxes.

Basis of Payment

This work will be paid for at the contract unit price per EACH for JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 12" X 4" which price shall include all equipment, labor, and materials necessary to complete this work as specified including mounting hardware.

TRAFFIC SIGNAL SPECIFICATIONS

Effective: May 22, 2002

Revised: January 1, 2012

These Traffic Signal Special Provisions and the "District One Standard Traffic Signal Design Details" supplement the requirements of the State of Illinois "Standard Specifications for Road and Bridge Construction." The intent of these Special Provisions is to prescribe the materials and construction methods commonly used for traffic signal installations. All material furnished shall be new. The locations and the details of all installations shall be as indicated on the Plans or as directed by the Engineer. Traffic signal construction and maintenance work shall be performed by personnel holding IMSA Traffic Signal Technician Level II certification. The work to be done under this contract consists of furnishing and installing all traffic signal work as specified in the Plans and as specified herein in a manner acceptable and approved by the Engineer.

SECTION 720 SIGNING

MAST ARM SIGN PANELS

Add the following to 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 the District Sign Shops. Signfix Aluminum Channel Framing System is currently recommended, but other brands of mounting hardware are acceptable based upon the Department's approval.

DIVISION 800 ELECTRICAL

SUBMITTALS.

Revise Article 801.05 of the Standard Specifications to read:

All material approval requests shall be submitted in accordance with the District's current Electrical Product Data and Documentation Submittal Guidelines. General requirements include:

Material approval requests shall be made at the preconstruction meeting, including major traffic signal items listed in the table in Article 801.05. Material or equipment which is similar or identical shall be the product of the same manufacturer, unless necessary for system continuity. Traffic signal materials and equipment shall bear the U.L. label whenever such labeling is available.

Product data and shop drawings shall be assembled by pay item and separated from of other pay item submittals. Only the top sheet of each pay item submittal will be stamped by the Department with the review status, except shop drawings for mast arm pole assemblies and the like will be stamped with the review status on each sheet.

Partial or incomplete submittals will be returned without review.

Certain non-standard mast arm poles and structures will require additional review from IDOT's Central Office. Examples include ornamental/decorative and non-standard length mast arm pole assemblies. The Contractor shall account for the additional review time in his schedule.

The contract number or permit number, project location/limits and corresponding pay code number must be on each sheet of correspondence,, catalog cuts and mast arm poles and assemblies drawings.

Where certifications and/or warranties are specified, the information submitted for approval shall include certifications and warranties. Certifications involving inspections, and/or tests of material shall be complete with all test data, dates, and times.

After the Engineer reviews the submittals for conformance with the design concept of the project, the Engineer will stamp the drawings indicating their status as 'Approved', 'Approved-As-Noted', 'Disapproved', or 'Incomplete'. Since the Engineer's review is for conformance with the design concept only, it is the Contractor's responsibility to coordinate the various items into a working system as specified. The Contractor shall not be relieved from responsibility for errors or omissions in the shop, working, layout drawings, or other documents by the Department's approval thereof. The Contractor must still be in full compliance with contract and specification requirements.

All submitted items reviewed and marked 'APPROVED AS NOTED', 'DISAPPROVED', or 'INCOMPLETE' are to be resubmitted in their entirety, unless otherwise indicated within the submittal comments, with a disposition of previous comments to verify contract compliance at no additional cost to the contract.

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.

INSPECTION OF ELECTRICAL SYSTEMS.

Add the following to Article 801.10 of the Standard Specifications:

(c) All cabinets including temporary traffic signal cabinets shall be assembled by an approved equipment supplier in District One. The Department reserves the right to request any controller and cabinet to be tested at the equipment supplier facilities prior to field installation, at no extra cost to this contract.

MAINTENANCE AND RESPONSIBILITY.

Revise Article 801.11 of the Standard Specifications to read:

Existing traffic signal installations and/or any electrical facilities at all or various locations may be altered or reconstructed totally or partially as part of the work on this Contract. The Contractor is hereby advised that all traffic control equipment, presently installed at these locations, may be the property of the State of Illinois, Department of Transportation, Division of Highways, County, Private Developer, or the Municipality in which they are located. Once the Contractor has begun any work on any portion of the project, all traffic signals within the limits of this contract or those which have the item "Maintenance of Existing Traffic Signal Installation," "Temporary Traffic Signal Installation(s)" and/or "Maintenance of Existing Flashing Beacon Installation," shall become the full responsibility of the Contractor. Automatic Traffic Enforcement equipment is not owned by the State and the Contractor shall not be responsible for maintaining it during construction. The Contractor shall supply the Engineer, Area Traffic Signal Maintenance and Operations Engineer, IDOT ComCenter and the Department's Electrical Maintenance Contractor with two 24-hour emergency contact names and telephone numbers.

When the project has a pay item for "Maintenance of Existing Traffic Signal Installation," "Temporary Traffic Signal Installation(s)" and/or "Maintenance of Existing Flashing Beacon Installation," the Contractor must notify both the Area Traffic Signal Maintenance and Operations Engineer at (847) 705-4424 and the Department's Electrical Maintenance Contractor, of their intent to begin any physical construction work on the Contract or any portion thereof. This notification must be made a minimum of seven (7) working days prior to the start of construction to allow sufficient time for inspection of the existing traffic signal installation(s) and transfer of maintenance to the Contractor. If work is started prior to an inspection, maintenance of the traffic signal installation(s) will be transferred to the Contractor without an inspection. The Contractor will become responsible for repairing or replacing all equipment that is not operating properly or is damaged at no cost to the owner of the traffic signal. Final repairs or replacement of damaged equipment must meet the approval of the Engineer prior to or at the time of final inspection otherwise the traffic signal installation will not be accepted.

Contracts such as pavement grinding or patching which result in the destruction of traffic signal loops do not require maintenance transfer, but require a notification of intent to work and an inspection. A minimum of seven (7) working days prior to the loop removal, the Contractor shall notify the Area Traffic Signal Maintenance and Operations Engineer at (847) 705-4424 and the Department's Electrical Maintenance Contractor, at which time arrangements will be made to adjust the traffic controller timing to compensate for the absence of detection. Damaged Automatic Traffic Enforcement equipment, including cameras, detectors, or other peripheral equipment, shall be replaced by others, per Permit agreement, at no cost to the contract. See additional requirements in these specifications under Inductive Loop Detector.

The Contractor is advised that the existing and/or temporary traffic signal installation must remain in operation during all construction stages, except for the most essential down time. Any shutdown of the traffic signal installation, which exceeds fifteen (15) minutes, must have prior approval of the Engineer. Approval to shutdown the traffic signal installation will only be granted during the period extending from 10:00 a.m. to 3:00 p.m. on weekdays. Shutdowns shall not be allowed during inclement weather or holiday periods.

The Contractor shall be fully responsible for the safe and efficient operation of the traffic signals. Any inquiry, complaint or request by the Department, the Department's Electrical Maintenance Contractor or the public, shall be investigated and repairs begun within one hour. Failure to provide this service will result in liquidated damages of $500 per day per occurrence. In addition, the Department reserves the right to assign any work not completed within this timeframe to the Electrical Maintenance Contractor. All costs associated to repair this uncompleted work shall be the responsibility of the Contractor. Failure to pay these costs to the Electrical Maintenance Contractor within one month after the incident will result in additional liquidated damages of $500 per month per occurrence. Unpaid bills will be deducted from the cost of the Contract. The District's Electrical Maintenance Contractor may inspect any signalizing device on the Department's highway system at any time without notification.

Any proposed activity in the vicinity of a highway-rail grade crossing must adhere to the guidelines set forth in the current edition of the Manual on Uniform Traffic Control Devices (MUTCD) regarding work in temporary traffic control zones in the vicinity of highway-rail grade crossings which states that lane restrictions, flagging, or other operations shall not create conditions where vehicles can be queued across the railroad tracks. If the queuing of vehicles across the tracks cannot be avoided, a uniformed law enforcement officer or flagger shall be provided at the crossing to prevent vehicles from stopping on the tracks, even if automatic warning devices are in place.

DAMAGE TO TRAFFIC SIGNAL SYSTEM.

Add the following to Article 801.12(b) of the Standard Specifications to read:

Any traffic signal control equipment damaged or not operating properly from any cause whatsoever shall be replaced with new equipment meeting current District One traffic signal specifications and provided by the Contractor at no additional cost to the Contract and/or owner of the traffic signal system, all as approved by the Engineer. Final 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.

Automatic Traffic Enforcement equipment, such as Red Light Enforcement cameras, detectors, and peripheral equipment, damaged or not operating properly from any cause whatsoever, shall be the responsibility of the municipality or the Automatic Traffic Enforcement company per Permit agreement.

TRAFFIC SIGNAL INSPECTION (TURN-ON).

Revise Article 801.15(b) of the Standard Specifications to read:

It is the intent to have all electric work completed and equipment field tested by the vendor prior to the Department's "turn-on" field inspection. If in the event the Engineer determines work is not complete and the inspection will require more than two (2) hours to complete, the inspection shall be canceled and the Contractor will be required to reschedule at another date. The maintenance of the traffic signals will not be accepted until all punch list work is corrected and re-inspected.

When the road is open to traffic, except as otherwise provided in Section 850 of the Standard Specifications, the Contractor may request a turn-on and inspection of the completed traffic signal installation at each separate location. This request must be made to the Area Traffic Signal Maintenance and Operations Engineer at (847) 705-4424 a minimum of seven (7) working days prior to the time of the requested inspection. The Department will not grant a field inspection until notification is provided from the Contractor that the equipment has been field tested and the intersection is operating according to Contract requirements. The Department's facsimile number is (847) 705-4089. The Contractor must invite local fire department personnel to the turn-on when Emergency Vehicle Preemption (EVP) is included in the project. When the contract includes the item RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM, OPTIMIZE TRAFFIC SIGNAL SYSTEM, or TEMPORARY TRAFFIC SIGNAL TIMINGS, the Contractor must notify the SCAT Consultant of the turn-on/detour implementation schedule, as well as stage changes and phase changes during construction.

The Contractor must have all traffic signal work completed and the electrical service installation connected by the utility company prior to requesting an inspection and turn-on of the traffic signal installation. The Contractor shall be responsible to provide a police officer to direct traffic at the time of testing.

The Contractor shall provide a representative from the control equipment vendor's office to attend the traffic signal inspection for both permanent and temporary traffic signal turn-ons. Upon demonstration that the signals are operating and all work is completed in accordance with the Contract and to the satisfaction of the Engineer, the Engineer will then allow the signals to be placed in continuous operation. The Agency that is responsible for the maintenance of each traffic signal installation will assume the maintenance upon successful completion of this inspection.

The District requires the following from the Contractor at traffic signal turn-ons.

One set of signal plans of record with field revisions marked in red ink.

Written notification from the Contractor and the equipment vendor of satisfactory field testing.

A knowledgeable representative of the controller equipment supplier shall be required at the traffic signal turn-on. The representative shall be knowledgeable of the cabinet design and controller functions.

A copy of the approved material letter.

One (1) copy of the operation and service manuals of the signal controller and associated control equipment.

Five (5) copies 11" x 17" (280 mm X 430 mm) of the cabinet wiring diagrams.

The controller manufacturer shall supply a printed form, not to exceed 11" x 17" (280 mm X 430 mm) for recording the traffic signal controller's timings; backup timings; coordination splits, offsets, and cycles; TBC Time of Day, Week and Year Programs; Traffic Responsive Program, Detector Phase Assignment, Type and Detector Switching; and any other functions programmable from the keyboard. The form shall include a location, date, manufacturer's name, controller model and software version. The form shall be approved by the Engineer and a minimum of three (3) copies must be furnished at each turn-on. The manufacturer must provide all programming information used within the controller at the time of turn-on.

All manufacturer and contractor warrantees and guarantees required by Article 801.14.

Acceptance of the traffic signal equipment by the Department shall be based upon inspection results at the traffic signal "turn on." If approved, traffic signal acceptance shall be verbal at the "turn on" inspection followed by written correspondence from the Engineer. The Contractor shall be responsible for all traffic signal equipment and associated maintenance thereof until Departmental acceptance is granted.

All equipment and/or parts to keep the traffic signal installation operating shall be furnished by the Contractor. No spare traffic signal equipment is available from the Department.

All punch list work shall be completed within two (2) weeks after the final inspection. The Contractor shall notify the Electrical Maintenance Contractor to inspect all punch list work. Failure to meet these time constraints shall result in liquidated damage charges of $500 per month per incident.

All cost of work and materials required to comply with the above requirements shall be included in the pay item bid prices, under which the subject materials and signal equipment are paid, and no additional compensation will be allowed. Materials and signal equipment not complying with the above requirements shall be subject to removal and disposal at the Contractor's expense.

RECORD DRAWINGS

The requirements listed for Electrical Installation shall apply for Traffic Signal Installations in Article 801.16. Revise the 2nd paragraph of Article 801.16 of the Standard Specifications to read:

- "When the work is complete, and seven days before the request for a final inspection, the full-size set of contract drawings. Stamped "RECORD DRAWINGS", shall be submitted to the Engineer for review and approval and shall be stamped with the date and the signature of the Contractor's supervising Engineer or electrician. The record drawings shall be submitted in PDF format on CD-ROM as well as hardcopy for review and approval.
- In addition to the record drawings, copies of the final catalog cuts which have been Approved or Approved as Noted shall be submitted in PDF format along with the record drawings. The PDF files shall clearly indicate the pay item either by filename or PDF Table of Contents referencing the respective pay item number for multi-item PDF files. Specific part or model numbers of items which have been selected shall be clearly visible."
- Additional requirements are listed in the District's Electrical Product Data and Documentation Guidelines.

Add the following to Article 801.16 of the Standard Specifications:

"In addition to the specified record drawings, the Contactor shall record GPS coordinates of the following traffic signal components being installed, modified or being affected in other ways by this contract:

All Mast Arm Poles and Posts
Handholes
Conduit roadway crossings
Controller Cabinets
Communication Cabinets
Electric Service Disconnect locations
CCTV Camera installations
Fiber Optic Splice Locations

Datum to be used shall be North American 1983.

Data shall be provided electronically and in print form. The electronic format shall be compatible with MS Excel. Latitude and Longitude shall be in decimal degrees with a minimum of 6 decimal places. Each coordinate shall have the following information:

Description of item
Designation or approximate station if the item is undesignated
Latitude
Longitude

Examples:

Description	Designation	Latitude	Longitude
Mast Arm Pole Assembly (dual, combo, etc)	MP (SW, NW, SE or NE corner)	41.580493	-87.793378
FO mainline splice handhole	HHL-ST31	41.558532	-87.792571
Handhole	HH	41.765532	-87.543571
Electric Service	Elec Srv	41.602248	-87.794053
Conduit crossing	SB IL83 to EB I290 ramp SIDE A	41.584593	-87.793378
PTZ Camera	PTZ	41.584600	-87.793432
Signal Post	Post	41.558532	-87.792571
Controller Cabinet	CC	41.651848	-87.762053
Master Controller Cabinet	MCC	41.580493	-87.793378
Communication Cabinet	ComC	41.558532	-87.789771
Fiber splice connection	Toll Plaza34	41.606928	-87.794053

Prior to the collection of data, the contractor shall provide a sample data collection of at least six data points of known locations to be reviewed and verified by the Engineer to be accurate within 100 feet. Upon verification, data collection can begin. Data collection can be made as construction progresses, or can be collected after all items are installed. If the data is unacceptable the contractor shall make corrections to the data collection equipment and or process and submit the data for review and approval as specified.

Accuracy. Data collected is to be mapping grade. A handheld mapping grade GPS device shall be used for the data collection. The receiver shall support differential correction and data shall have a minimum 5 meter accuracy after post processing.

GPS receivers integrated into cellular communication devices, recreational and automotive GPS devices are not acceptable.

The GPS shall be the product of an established major GPS manufacturer having been in the business for a minimum of 6 years."

Delete the last sentence of the 3rd paragraph of Article 801.16.

LOCATING UNDERGROUND FACILITIES.

Revise Section 803 to the Standard Specifications to read:

If this Contract requires the services of an Electrical Contractor, the Contractor shall be responsible at his/her own expense for locating existing IDOT electrical facilities prior to performing any work. If this Contract does not require the services of an Electrical Contractor, the Contractor may request one free locate for existing IDOT electrical facilities from the District One Electrical Maintenance Contractor prior to the start of any work. Additional requests may be at the expense of the Contractor. The location of underground traffic facilities does not relieve the Contractor of their responsibility to repair any facilities damaged during construction at their expense.

The exact location of all utilities shall be field verified by the Contractor before the installation of any components of the traffic signal system. For locations of utilities, locally owned equipment, and leased enforcement camera system facilities, the local Counties or Municipalities may need to be contacted: in the City of Chicago contact Digger at (312) 744-7000 and for all other locations contact J.U.L.I.E. at 1-800-892-0123 or 811.

RESTORATION OF WORK AREA.

Add the following article to Section 801 of the Standard Specifications:

801.17 Restoration of work area. Restoration of the traffic signal work area shall be included in the related pay items such as foundation, conduit, handhole, trench and backfill, underground raceways, etc. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded. All brick pavers disturbed in the work area shall be restored to their original configuration as directed by the Engineer. All damaged brick pavers shall be replaced with a comparable material approved by the Engineer. Restoration of the work area shall be included in the contract without any extra compensation allowed to the Contractor.

ELECTRIC SERVICE INSTALLATION.

Revise Section 805 of the Standard Specifications to read:

Description.

This work shall consist of all materials and labor required to install, modify, or extend the electric service installation. All installations shall meet the requirements of the details in the "District One Standard Traffic Signal Design Details" and applicable portions of the Specifications.

General.

The electric service installation shall be the electric service disconnecting means and it shall be identified as suitable for use as service equipment.

The electric utility contact information is noted on the plans and represents the current information at the time of contract preparation. The Contractor must request in writing for service and/or service modification within 10 days of contract award and must follow-up with the electric utility to assure all necessary documents and payment are received by the utility. The Contractor shall forward copies of all correspondence between the contractor and utility company to the Engineer and Area Traffic Signal Maintenance and Operations Engineer. The service agreement and sketch shall be submitted for signature to the IDOT's Traffic Operations Programs Engineer.

Materials.

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

Enclosures.
Pole Mounted Cabinet. The cabinet shall be UL 50, NEMA Type 4X, unfinished single door design, fabricated from minimum 0.080-inch (2.03 mm) thick Type 5052 H-32 aluminum. Seams shall be continuous welded and ground smooth. Stainless steel screws and clamps shall

secure the cover and assure a watertight seal. The cover shall be removable by pulling the continuous stainless steel hinge pin. The cabinet shall have an oil-resistant gasket and a lock kit shall be provided with an internal O-ring in the locking mechanism assuring a watertight and dust-tight seal. The cabinet shall be sized to adequately house all required components with extra space for arrangement and termination of wiring. A minimum size of 14-inches (350 mm) high, 9-inches (225 mm) wide and 8-inches (200 mm) in depth is required. The cabinet shall be channel mounted to a wooden utility pole using assemblies recommended by the manufacturer.

Ground Mounted Cabinet.
The cabinet shall be UL 50, NEMA Type 3R unfinished single door design with back panel. The cabinet shall be fabricated from Type 5052 H-32 aluminum with the frame and door 0.125-inch (3.175 mm) thick, the top 0.250-inch (6.350 mm) thick and the bottom 0.500-inch (12.70 mm) thick. Seams shall be continuous welded and ground smooth. The door and door opening shall be double flanged. The door shall be approximately 80% of the front surface, with a full length tamperproof stainless steel .075-inch (1.91 mm) thick hinge bolted to the cabinet with stainless steel carriage bolts and nylocks nuts. The locking mechanism shall be slam-latch type with a keyhole cover. The cabinet shall be sized to adequately house all required components with extra space for arrangement and termination of wiring. A minimum size of 40-inches (1000 mm) high, 16-inches (400 mm) wide and 15-inches (375 mm) in depth is required. The cabinet shall be mounted upon a square Type A concrete foundation as indicated on the plans. The foundation is paid for separately.

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.

Circuit Breakers.
Circuit breakers shall be standard UL listed molded case, thermal-magnetic bolt-on type circuit breakers with trip free indicating handles. 120 volt circuit breakers shall have an interrupting rating of not less than 65,000 rms symmetrical amperes. Unless otherwise indicated, the main disconnect circuit breaker for the traffic signal controller shall be rated 60 amperes, 120 V and the auxiliary circuit breakers shall be rated 10 amperes, 120 V.

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.

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.

Utility Services Connection.
The Contractor shall notify the Utility Company marketing representative a minimum of 30 working days prior to the anticipated date of hook-up. This 30 day advance notification will begin only after the Utility Company marketing representative has received service charge payments from the Contractor. Prior to contacting the Utility Company marketing representative for service connection, the service installation controller cabinet and cable must be installed for inspection by the Utility Company.

Ground Rod. Ground rods shall be copper-clad steel, a minimum of 10 feet (3.0m) in length, and 3/4 inch (20mm) in diameter. Ground rod resistance measurements to ground shall be 25 ohms or less. If necessary additional rods shall be installed to meet resistance requirements at no additional cost to the contract.

Installation.

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.

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.

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 CONCRETE FOUNDATION, TYPE A, which includes the ground rod, shall be paid for separately. SERVICE INSTALLATION, POLE MOUNTED shall include the 3/4 inch (20mm) grounding conduit, ground rod, and pole mount assembly. Any charges by the utility companies shall be approved by the engineer and paid for as an addition to the contract according to Article 109.05 of the Standard Specifications.

GROUNDING OF TRAFFIC SIGNAL SYSTEMS.

Revise Section 806 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 One Traffic Signal detail plan sheets for additional information.

The grounding electrode system shall include a ground rod installed with each traffic signal controller concrete foundation and all mast arm and post concrete foundations. An additional ground rod will be required at locations were measured resistance exceeds 25 ohms. Ground rods are included in the applicable concrete foundation or service installation pay item and will not be paid for separately.

Testing shall be according to Article 801.13 (a) (4) and (5).

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.

The equipment grounding conductor shall be green color coded. The following is in addition to Article 801.04 of the Standard Specifications.

Equipment grounding conductors shall be bonded to the grounded conductor (neutral conductor) only at the Electric Service Installation. The equipment grounding conductor is paid for separately and shall be continuous. The Earth shall not be used as the equipment grounding conductor.

Equipment grounding conductor*s* 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, conduits, and other metallic enclosures throughout the traffic signal wiring system, except where noted herein. Bonding shall be made with a splice and pigtail connection, using a sized compression type copper sleeve, sealant tape, and heat-shrinkable cap. A Listed electrical joint compound shall be applied to all conductors' terminations, connector threads and contact points. Conduit grounding bushings shall be installed at all conduit terminations.

All metallic and non-metallic raceways containing traffic signal circuit runs shall have a continuous equipment grounding conductor, except raceways containing only detector loop lead-in circuits, circuits under 50 volts and/or fiber optic cable will not be required to include an equipment grounding conductor.

4. Individual conductor splices in handholes shall be soldered and sealed with heat shrink. When necessary to maintain effective equipment grounding, a full cable heat shrink shall be provided over individual conductor heat shrinks.

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.

Description.

This work shall consist of all materials and labor required to bond the equipment grounding conductor to the existing handhole frame and handhole cover. All installations shall meet the requirements of the details in the "District One Standard Traffic Signal Design Details," and applicable portions of the Standard Specifications and these specifications.

The equipment grounding conductor shall be bonded to the handhole frame and to the handhole cover. Two (2) ½-inch diameter x 1 ¼-inch long hex-head stainless steel bolts, spaced 1.75-inches apart center-to-center shall be fully welded to the frame and to the cover to accommodate a heavy duty Listed grounding compression terminal (Burndy type YGHA). The grounding compression terminal shall be secured to the bolts with stainless steel split-lock washers and nylon-insert locknuts.

Welding preparation for the stainless steel bolt hex-head to the frame and to the cover shall include thoroughly cleaning the contact and weldment area of all rust, dirt and contaminates. The Contractor shall assure a solid strong weld. The welds shall be smooth and thoroughly cleaned of flux and spatter. The grounding installation shall not affect the proper seating of the cover when closed.

The grounding cable shall be paid for separately.

Method of Measurement.

Units measured for payment will be counted on a per handhole basis, regardless of the type of handhole and its location.

Basis of Payment.

This work shall be paid for at the contract unit price each for GROUNDING EXISTING HANDHOLE FRAME AND COVER which shall be payment in full for grounding the handhole complete.

COILABLE NON-METALLIC CONDUIT.

Description.

This work shall consist of furnishing and installing empty coilable non-metallic conduit (CNC) for detector loop raceways.

General.

The CNC installation shall be in accordance with Sections 810 and 811 of the Standard Specifications except for the following:

Add the following to Article 810.03 of the Standard Specifications:

CNC meeting the requirements of NEC Article 353 shall be used for detector loop raceways to the handholes.

Add the following to Article 811.03 of the Standard Specifications:

On temporary traffic signal installations with detector loops, CNC meeting the requirements of NEC Article 353 shall be used for detector loop raceways from the saw-cut to 10 feet (3m) up the wood pole, unless otherwise shown on the plans

Basis of Payment.

All installations of CNC for loop detection shall be included in the contract and not paid for separately.

HANDHOLES.

Add the following to Section 814 of the Standard Specifications:

All handholes shall be concrete, poured in place, with inside dimensions of 21-1/2 inches (549mm) minimum. Frames and lid openings shall match this dimension. The cover of the handhole frame shall be labeled "Traffic Signals" with legible raised letters.

For grounding purposes the handhole frame shall have provisions for a 7/16 inch (15.875mm) diameter stainless bolt cast into the frame. The covers shall have a stainless steel threaded stint extended from the eye hook assembly for the purpose of attaching the grounding conductor to the handhole cover.

The minimum wall thickness for heavy duty hand holes shall be 12 inches (300mm).

All conduits shall enter the handhole at a depth of 30 inches (760mm) except for the conduits for detector loops when the handhole is less than 5 feet (1.52 m) from the detector loop. All conduit ends should be sealed with a waterproof sealant to prevent the entrance of contaminants into the handhole.

Steel cable hooks shall be coated with hot-dipped galvanization in accordance with AASHTO Specification M111. Hooks shall be a minimum of 1/2 inch (12.7 mm) diameter with two 90 degree bends and extend into the handhole at least 6 inches (150 mm). Hooks shall be placed a minimum of 12 inches (300 mm) below the lid or lower if additional space is required.

GROUNDING 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 (b) of the Standard Specifications:

Unless otherwise noted on the Plans, traffic signal grounding conductor shall be one conductor, #6 gauge copper, with a green color coded XLP jacket.

The traffic signal grounding conductor shall be bonded, using a Listed grounding connector (Burndy type KC/K2C, as applicable), to all proposed and existing traffic signal mast arm poles and traffic/pedestrian signal posts, including push button posts. The grounding conductor shall be bonded to all proposed and existing pull boxes, handhole frames and covers and other metallic enclosures throughout the traffic signal wiring system and noted herein and detailed on the plans. The grounding conductor shall be bonded to conduit terminations using rated grounding bushings. Bonding to existing handhole frames and covers shall be paid for separately.

Add the following to Article 817.05 of the Standard Specifications:

Basis of Payment.

Grounding cable shall be measured in place for payment in foot (meter). Payment shall be at the contract unit price for ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C, which price includes all associated labor and material including grounding clamps, splicing, exothermic welds, grounding connectors, conduit grounding bushings, and other hardware.

RAILROAD INTERCONNECT CABLE.

The cable shall meet the requirements of Section 873 of the Standard Specifications, except for the following:

Add to Article 873.02 of the Standard Specifications:

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

Add the following to Article 873.05 of the Standard Specifications:

Basis of Payment.

This work shall be paid for at the contract unit price per foot (meter) for ELECTRIC CABLE IN CONDUIT, RAILROAD, NO. 14 3C, which price shall be payment in full for furnishing, installing, and making all electrical connections in the traffic signal controller cabinet. Connections in the railroad controller cabinet shall be performed by railroad personnel.

FIBER OPTIC TRACER CABLE.

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

Add the following to Article 817.03 of the Standard Specifications:

In order to trace the fiber optic cable after installation, the tracer cable shall be installed in the same conduit as the fiber optic cable in locations shown on the plans. The tracer cable shall be continuous, extended into the controller cabinet and terminated on a barrier type terminal strip mounted on the side wall of the controller cabinet. The barrier type terminal strip and tracer cable shall be clearly marked and identified. All tracer cable splices shall be kept to a minimum and shall incorporate maximum lengths of cable supplied by the manufacturer. The tracer cable will be allowed to be spliced at handholes only. The tracer cable splice shall use a Western Union Splice soldered with resin core flux and shall be soldered using a soldering iron. Blow torches or other devices which oxidize copper cable shall not be allowed for soldering operations. All exposed surfaces of the solder shall be smooth. The splice shall be covered with a black shrink tube meeting UL 224 guidelines, Type V and rated 600v, minimum length 4 inches (100 mm) and with a minimum 1 inch (25 mm) coverage over the XLP insulation, underwater grade.

Add the following to Article 817.05 of the Standard Specifications:

Basis of Payment.

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

MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION.

Revise Articles 850.02 and 850.03 of the Standard Specifications to read:

Procedure.

The energy charges for the operation of the traffic signal installation shall be paid for by others. Full maintenance responsibility shall start as soon as the Contractor begins any physical work on the Contract or any portion thereof.

The Contractor shall have electricians with IMSA Level II certification on staff to provide signal maintenance.

This item shall include maintenance of all traffic signal equipment at the intersection, including emergency vehicle pre-emption equipment, master controllers, uninterruptible power supply (UPS and batteries), telephone service installations, communication cables, conduits to adjacent intersections, and other traffic signal equipment, but shall not include Automatic Traffic Enforcement equipment, such as Red Light Enforcement cameras, detectors, or peripheral equipment, not owned by the State.

Maintenance.

The maintenance shall be according to MAINTENANCE AND RESPONSIBILITY in Division 800 of these specifications and the following:

The Contractor shall check all controllers every two (2) weeks, which will include visually inspecting all timing intervals, relays, detectors, and pre-emption equipment to ensure that they are functioning properly. This item includes, as routine maintenance, all portions of emergency vehicle pre-emption equipment. The Contractor shall maintain in stock at all times a sufficient amount of materials and equipment to provide effective temporary and permanent repairs.

The Contractor shall provide immediate corrective action when any part or parts of the system fail to function properly. Two far side heads facing each approach shall be considered the minimum acceptable signal operation pending permanent repairs. When repairs at a signalized intersection require that the controller be disconnected or otherwise removed from normal operation, and power is available, the Contractor shall place the traffic signal installation on flashing operation. The signals shall flash RED for all directions unless a different indication has been specified by the Engineer. The Contractor shall be required to place stop signs (R1-1-36) at each approach of the intersection as a temporary means of regulating traffic. When the signals operate in flash, the Contractor shall furnish and equip all their vehicles assigned to the maintenance of traffic signal installations with a sufficient number of stop signs as specified herein. The Contractor shall maintain a sufficient number of spare stop signs in stock at all times to replace stop signs which may be damaged or stolen.

The Contractor shall provide the Engineer with a 24 hour telephone number for the maintenance of the traffic signal installation and for emergency calls by the Engineer.

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

The Contractor shall respond to all emergency calls from the Department or others within one hour after notification and provide immediate corrective action. When equipment has been damaged or becomes faulty beyond repair, the Contractor shall replace it with new and identical equipment. The cost of furnishing and installing the replaced equipment shall be borne by the Contractor at no additional charge to the contract. The Contractor may institute action to recover damages from a responsible third party. If at any time the Contractor fails to perform all work as specified herein to keep the traffic signal installation in proper operating condition or if the Engineer cannot contact the Contractor's designated personnel, the Engineer shall have the State's Electrical Maintenance Contractor perform the maintenance work required. The State's Electrical Maintenance Contractor shall bill the Contractor for the total cost of the work. The Contractor shall pay this bill within thirty (30) days of the date of receipt of the invoice or the cost of such work will be deducted from the amount due the Contractor. The Contractor shall allow the Electrical Maintenance Contractor to make reviews of the Existing Traffic Signal Installation that has been transferred to the Contractor for Maintenance.

TRAFFIC ACTUATED CONTROLLER.

Add the following to Article 857.02 of the Standard Specifications:

Controllers shall be NTCIP compliant NEMA TS2 Type 1, Econolite ASC/3S-1000 or Eagle/Siemens M50 unless specified otherwise on the plans or elsewhere on these specifications. Only controllers supplied by one of the District One approved closed loop equipment manufacturers will be allowed. The controller shall be the most recent model and software version supplied by the manufacturer at the time of the approval and include the standard data key. The traffic signal controller shall provide features to inhibit simultaneous display of a circular yellow ball and a yellow arrow display. Individual load switches shall be provided for each vehicle, pedestrian, and right turn over lap phase. The controller shall prevent phases from being skipped during program changes and after all preemption events.

Add the following to Article 857.03 of the Standard Specifications:

The Contractor shall arrange to install a standard voice-grade dial-up telephone line to the RAILROAD, FULL-ACTUATED CONTROLLER AND CABINET as called for on the traffic signal installation plans. If the traffic signal installation is part of a traffic signal system, a telephone line is usually not required, unless a telephone line is called for on the traffic signal plans. The Contractor shall follow the requirements for the telephone service installation as contained in the current District One Traffic Signal Special Provisions under Master Controller.

MASTER CONTROLLER.

Revise Articles 860.02 - Materials and 860.03 - Installation of the Standard Specifications to read:

Only controllers supplied by one of the District approved closed loop equipment manufacturers will be allowed. Only NEMA TS 2 Type 1 Eagle/Siemens and Econolite closed loop systems shall be supplied. The latest model and software version of master controller shall be supplied.

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

The system commands shall consist of, as a minimum, six (6) cycle lengths, five (5) offsets, three (3) splits, and four (4) special functions. The system commands shall also include commands for free or coordinated operation.

Traffic Responsive operation shall consist of the real time acquisition of system detector data, data validation, and the scaling of acquired volumes and occupancies in a deterministic fashion so as to cause the selection and implementation of the most suitable traffic plan.

Upon request by the Engineer, each master shall be delivered with up to three (3) complete sets of the latest edition of registered remote monitoring software with full manufacture's support. Each set shall consist of software on CD, DVD, or other suitable media approved by the Engineer, and a bound set of manuals containing loading and operating instruction. One copy of the software and support data shall be delivered to the Agency in charge of system operation, if other than IDOT. One of these two sets will be provided to the Agency Signal Maintenance Contractor for use in monitoring the system.

The approved manufacturer of equipment shall loan the District one master controller and two intersection controllers of the most recent models and the newest software version to be used for instructional purposes in addition to the equipment to be supplied for the Contract.

The Contractor shall arrange to install a standard voice-grade dial-up telephone line to the master controller. This shall be accomplished through the following process utilizing District One staff. This telephone line may be coupled with a DSL line and a phone filter to isolate the dial-up line. An E911 address is required.

The cabinet shall be provided with an Outdoor Network Interface for termination of the telephone service. It shall be mounted to the inside of the cabinet in a location suitable to provide access for termination of the telephone service at a later date.

Full duplex communication between the master and its local controllers is recommended, but at this time not required. The data rate shall be 1200 baud minimum and shall be capable of speeds to 38,400 or above as technology allows. The controller, when installed in an Ethernet topology, may operate non-serial communications.

The cabinet shall be equipped with a 9600 baud, auto dial/auto answer modem. It shall be a US robotics 33.6K baud rate or equal.

As soon as practical or within one week after the contract has been awarded, the Contractor shall contact (via phone) the Administrative Support Manager in the District One Business Services Section at (847) 705-4011 to request a phone line installation.

A follow-up fax transmittal to the Administrative Support Manager (847-705-4712) with all required information pertaining to the phone installation is required from the Contractor as soon as possible or within one week after the initial request has been made. A copy of this fax transmittal must also be faxed by the Contractor to the Traffic Signal Systems Engineer at (847) 705-4089. The required information to be supplied on the fax shall include (but not limited to): A street address for the new traffic signal controller (or nearby address); a nearby existing telephone number; what type of telephone service is needed; the name and number of the Contractor's employee for the telephone company to contact regarding site work and questions.

The usual time frame for the activation of the phone line is 4-6 weeks after the Business Services Section has received the Contractor supplied fax. It is, therefore, imperative that the phone line conduit and pull-string be installed by the Contractor in anticipation of this time frame. On jobs which include roadway widening in which the conduit cannot be installed until this widening is completed, the Contractor will be allowed to delay the phone line installation request to the Business Services Section until a point in time that is 4-6 weeks prior to the

anticipated completion of the traffic signal work. The contractor shall provide the Administrative Support Manager with an expected installation date considering the 4-6 week processing time.

The telephone line shall be installed and activated one month before the system final inspection.

All costs associated with the telephone line installation and activation (not including the Contract specified conduit installation between the point of telephone service and the traffic signal controller cabinet) shall be paid for by the District One Business Services Section (i.e., this will be an IDOT phone number not a Contractor phone number).

UNINTERRUPTIBLE POWER SUPPLY.

Add the following to Article 862.01 of the Standard Specifications:

The UPS shall have the power capacity to provide normal operation of a signalized intersection that utilizes all LED type signal head optics, for a minimum of six hours.

Add the following to Article 862.02 of the Standard Specifications:

Materials shall be according to Article 1074.04 as modified in UNINTERRUPTIBLE POWER SUPPLY in Division 1000 of these specifications.

Add the following to Article 862.03 of the Standard Specifications:

The UPS shall additionally include, but not be limited to, a battery cabinet. The UPS shall provide reliable emergency power to the traffic signals in the event of a power failure or interruption.

Revise Article 862.04 of the Standard Specifications to read:

Installation.

When a UPS is installed at an existing traffic signal cabinet, the UPS cabinet shall partially rest on the lip of the existing controller cabinet foundation and be secured to the existing controller cabinet by means of at least four (4) stainless steel bolts. The UPS cabinet shall be completely enclosed with the bottom and back constructed of the same material as the cabinet.

When a UPS is installed at a new signal cabinet and foundation, it shall be mounted as shown on the plans.

At locations where UPS is installed and Emergency Vehicle Priority System is in use, any existing incandescent confirmation beacons shall be replaced with LED lamps in accordance with the District One Emergency Vehicle Priority System specification at no additional cost to the contract. A concrete apron 67 in. x 50 in. x 5 in. (1702mm x 1270mm x 130mm) shall be provided on the side of the existing Type D Foundation, where the UPS cabinet is located. The concrete apron shall follow the District 1 Standard Traffic Signal Design Detail, Type D for

Ground Mounted Controller Cabinet and UPS Battery Cabinet. The concrete apron shall follow Articles 424 and 202 of the Standard Specifications.

This item shall include any required modifications to an existing traffic signal controller as a result of the addition of the UPS.

Revise Article 862.05 of the Standard Specifications to read:

Basis of Payment.

This work will be paid for at the contract unit price per each for UNINTERRUPTABLE POWER SUPPLY, STANDARD. Replacement of Emergency Vehicle Priority System confirmation beacons and any required modifications to the traffic signal controller shall be included in the cost of the UNINTERRUPTABLE POWER SUPPLY, STANDARD item. The concrete apron and earth excavation required shall be included in the cast of the UNINTERRUPTABLE POWER SUPPLY, STANDARD item.

FIBER OPTIC CABLE.

Add the following to Article 871.01 of the Standard Specifications:

The Fiber Optic cable shall be installed in conduit or as specified on the plans.

Add the following to Article 872.02 of the Standard Specifications:

The control cabinet distribution enclosure shall be CSC FTWO12KST-W/O 12 Port Fiber Wall Enclosure or an approved equivalent. The fiber optic cable shall provide six fibers per tube for the amount of fibers called for in the Fiber Optic Cable pay item in the Contract. Fiber Optic cable may be gel filled or have an approved water blocking tape.

Add the following to Article 871.04 of the Standard Specifications:

A minimum of six multimode fibers from each cable shall be terminated with approved mechanical connectors at the distribution enclosure. Fibers not being used shall be labeled "spare." Fibers not attached to the distribution enclosure shall be capped and sealed. A minimum of 13.0 feet (4m) of extra cable length shall be provided for controller cabinets. The controller cabinet extra cable length shall be stored as directed by the Engineer.

Add the following to Article 871.06 of the Standard Specifications:

The distribution enclosure and all connectors will be included in the cost of the fiber optic cable.

MAST ARM ASSEMBLY AND POLE.

Revise Article 877.01 of the Standard Specifications to read:

Description.

This work shall consist of furnishing and installing a steel mast arm assembly and pole and a galvanized steel or extruded aluminum shroud for protection of the base plate.

Revise Article 877.03 of the Standard Specifications:

Mast arm assembly and pole shall be as follows.

(a) Steel Mast Arm Assembly and Pole and Steel Combination Mast Arm Assembly and Pole. The steel mast arm assembly and pole and steel combination mast arm assembly and pole shall consist of a traffic signal mast arm, a luminaire mast arm or davit (for combination pole only), a pole, and a base, together with anchor rods and other appurtenances. The configuration of the mast arm assembly, pole, and base shall be according to the details shown on the plans.

(1) Loading. The mast arm assembly and pole, and combination mast arm assembly and pole shall be designed for the loading shown on the Highway Standards or elsewhere on the plans, whichever is greater. The design shall be according to AASHTO "Standard Specification for Structural Supports for Highway Signs, Luminaries and Traffic Signals" 1994 Edition for 80 mph (130 km/hr) wind velocity. However, the arm-to-pole connection for tapered signal and luminaire arms shall be according to the "ring plate" detail as shown in Figure 11-1(f) of the 2002 Interim, to the AASHTO "Standard Specification for Structural Supports for Highway Signs, Luminaries and Traffic Signals" 2001 4th Edition.

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.

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. All product data and shop drawings shall be submitted in electronic form on CD-ROM

(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 12 in. 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.

(c) The galvanized steel or extruded aluminum shroud shall have dimensions similar to those detailed in the "District One Standard Traffic Signal Design Details." The shroud shall be installed such that it allow air to circulate throughout the mast arm but not allow infestation of insects or other animals, and such that it is not hazardous to probing fingers and feet.

Add the following to Article 877.04 of the Standard Specifications:

The shroud shall not be paid for separately but shall be included in the cost of the mast arm assembly and pole.

CONCRETE FOUNDATIONS.

Add the following to Article 878.03 of the Standard Specifications:

All anchor bolts shall be according to Article 1006.09, with all anchor bolts hot dipped galvanized a minimum of 12 in. (300 mm) from the threaded end.

Concrete Foundations, Type "A" for Traffic Signal Posts shall provide anchor bolts with the bolt pattern specified within the "District One Standard Traffic Signal Design Details." All Type "A" foundations shall be a minimum depth of 48 inches (1220 mm).

Concrete Foundations, Type "C" for Traffic Signal Cabinets with Uninterruptible Power Supply (UPS) cabinet installations shall be a minimum of 72 inches (1830 mm) long and 31 inches (790 mm) wide. All Type "C" foundations shall be a minimum depth of 48 inches (1220 mm). The concrete apron in front of the Type IV or V cabinet shall be 36 in. x 48 in. x 5 in. (915 mm X 1220 mm X 130 mm). The concrete apron in front of the UPS cabinet shall be 36 in. x 67 in. x 5 in. (915 mm X 1700 mm X 130 mm). Anchor bolts shall provide bolt spacing as required by the manufacturer.

Concrete Foundations, Type "D" for Traffic Signal Cabinets shall be a minimum of 48 inches (1220 mm) long and 31 inches (790 mm) wide. All Type "D" foundations shall be a minimum depth of 48 inches (1220 mm). The concrete apron shall be 36 in. x 48 in. x 5 in. (910 mm X 1220 mm X 130 mm). Anchor bolts shall provide bolt spacing as required by the manufacturer.

Concrete Foundations, Type "E" for Mast Arm and Combination Mast Arm Poles shall meet the current requirements listed in the Highway Standards.

Foundations used for Combination Mast Arm Poles shall provide an extra 2-1/2 inch (65 mm) raceway.

No foundation is to be poured until the Resident Engineer gives his/her approval as to the depth of the foundation.

LIGHT EMITTING DIODE (LED) SIGNAL HEAD AND OPTICALLY PROGRAMMED LED SIGNAL HEAD.

Add the following to the first paragraph of Article 880.04 of the Standard Specifications:

Basis of Payment.

The price shall include furnishing the equipment described above, all mounting hardware and installing them in satisfactory operating condition.

LIGHT EMITTING DIODE (LED), SIGNAL HEAD, RETROFIT

Description.

This work shall consist of retrofitting an existing polycarbonate traffic signal head with a traffic signal module, pedestrian signal module, and pedestrian countdown signal module, with light emitting diodes (LEDs) as specified in the plans.

Materials.

Materials shall be according to LIGHT EMITTING DIODE (LED) AND OPTICALLY PROGRAMMED LED SIGNAL HEAD, AND LIGHT EMITTING DIODE (LED) PEDESTRIAN SIGNAL HEAD in Divisions 880, 881 and 1000 of these specifications.

Add the following to Article 880.04 of the Standard Specifications:

Basis of Payment.

This item shall be paid for at the contract unit price each for SIGNAL HEAD, LED, RETROFIT, or PEDESTRIAN SIGNAL HEAD, LED, RETROFIT, for the type and number of polycarbonate signal heads, faces, and sections specified, which price shall be payment in full for furnishing the equipment described above including LED 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.

LIGHT EMITTING DIODE (LED) PEDESTRIAN SIGNAL HEAD

Add the following to the third paragraph of Article 881.03 of the Standard Specifications:

No mixing of different types of pedestrian traffic signals or displays will be permitted.

Add the following to Article 881.03 of the Standard Specifications:

(a) Pedestrian Countdown Signal Heads.

(1) Pedestrian Countdown Signal Heads shall not be installed at signalized intersections where traffic signals and railroad warning devices are interconnected.

(2) Pedestrian Countdown Signal Heads shall be 16 inch (406mm) x 18 inch (457mm), for single units with the housings glossy black polycarbonate. Connecting hardware and mounting brackets shall be polycarbonate (black). A corrosion resistant anti-seize lubricant shall be applied to all metallic mounting bracket joints, and shall be visible to the inspector at the signal turn-on.

(3) Each pedestrian signal LED module shall be fully MUTCD compliant and shall consist of double overlay message combining full LED symbols of an Upraised Hand and a Walking Person. "Egg Crate" type sun shields are not permitted. Numerals shall measure 9 inches (229mm) in height and easily identified from a distance of 120 feet (36.6m).

Add the following to Article 881.04 of the Standard Specifications:

Basis of Payment.

The price shall include furnishing the equipment described above, all mounting hardwire and installing them in satisfactory operating condition.

DETECTOR LOOP.

Revise Section 886 of the Standard Specifications to read:

Description.

This work shall consist of furnishing and installing a detector loop in the pavement.

Procedure.

A minimum of seven (7) working days prior to the Contractor cutting loops, the Contractor shall have the proposed loop locations marked and contact the Area Traffic Signal Maintenance and

Operations Engineer (847) 705-4424 to inspect and approve the layout. When preformed detector loops are installed, the Contractor shall have them inspected and approved prior to the pouring of the Portland cement concrete surface, using the same notification process as above.

Installation.

Loop detectors shall be installed according to the requirements of the "District One Standard Traffic Signal Design Details." Saw-cuts (homeruns on preformed detector loops) from the loop to the edge of pavement shall be made perpendicular to the edge of pavement when possible in order to minimize the length of the saw-cut (homerun on preformed detector loops) unless directed otherwise by the Engineer or as shown on the plan.

The detector loop cable insulation shall be labeled with the cable specifications.

Each loop detector lead-in wire shall be labeled in the handhole using a Panduit PLFIM water proof tag, secured to each wire with nylon ties.

Resistance to ground shall be a minimum of 100 mega-ohms under any conditions of weather or moisture. Inductance shall be more than 50 and less than 700 microhenries. Quality readings shall be more than 5.

Type I. All loops installed in new asphalt pavement shall be installed in the binder course and not in the surface course. The edge of pavement, curb and handhole shall be cut with a 1/4 inch (6.3 mm) deep x 4 inches (100 mm) saw cut to mark location of each loop lead-in.

Loop sealant shall be a two-component thixotropic chemically cured polyurethane either Chemque Q-Seal 295, Percol Elastic Cement AC Grade. The sealant shall be installed 1/8 inch (3 mm) below the pavement surface, if installed above the surface the overlap shall be removed immediately.

Detector loop measurements shall include the saw cut and the length of the loop lead-in to the edge of pavement. The lead-in wire, including all necessary connections for proper operations, from the edge of pavement to the handhole, shall be included in the price of the detector loop. Unit duct, trench and backfill, and drilling of pavement or handholes shall be included in detector loop quantities.

Preformed.

This work shall consist of furnishing and installing a rubberized or crosslinked polyethylene heat resistant preformed traffic signal loop in accordance with the Standard Specifications, except for the following:

Preformed detector loops shall be installed in new pavement constructed of Portland cement concrete using mounting chairs or tied to re-bar or the preformed detector loops may be placed in the sub-base. Loop lead-ins shall be extended to a temporary protective enclosure near the proposed handhole location. The protective enclosure shall provide sufficient protection from other construction activities and may be buried for additional protection.

Handholes shall be placed next to the shoulder or back of curb when preformed detector loops enter the handhole. Non-metallic coilable duct, included in this pay item, shall be used to protect the preformed lead-ins from back of curb to the handhole.

Preformed detector loops shall be factory assembled with ends capped and sealed against moisture and other contaminants. Homeruns and interconnects shall be pre-wired and shall be an integral part of the loop assembly. The loop configurations and homerun lengths shall be assembled for the specific application. The loop and homerun shall be constructed using 11/16 inch (17.2 mm) outside diameter (minimum), 3/8 inch (9.5 mm) inside diameter (minimum) Class A oil resistant synthetic cord reinforced hydraulic hose with 250 psi (1,720 kPa) internal pressure rating or a similarly sized XLPE cable jacket. 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. For XLPE jacketed preformed loops, all splice connections shall be soldered, sealed, and tested before being sealed in a high impact glass impregnated plastic splice enclosure. The wire used shall be #16 THWN stranded copper. The number of turns in the loop shall be application specific. Homerun wire pairs shall be twisted a minimum of four turns per foot. No wire splices will be allowed in the preformed loop assembly. The loop and homeruns shall be filled and sealed with a flexible sealant to insure complete moisture blockage and further protect the wire. The preformed loops shall be constructed to allow a minimum of 6.5 feet of extra cable in the handhole.

Method of Measurement.

This work will be measured for payment in feet (meters) in place. Type I detector loop will be measured along the sawed slot in the pavement containing the loop and lead-in, rather than the actual length of the wire. Preformed detector loops will be measured along the detector loop and lead-in embedded in the pavement, rather than the actual length of the wire.

Basis of Payment.

This work shall be paid for at the contract unit price per foot (meter) for DETECTOR LOOP, TYPE I as specified in the plans, which price shall be payment in full for furnishing and installing the detector loop and all related connections for proper operation.

EMERGENCY VEHICLE PRIORITY SYSTEM.

Revise Section 887 of the Standard Specifications to read:

It shall be the Contractor's responsibility to contact the municipality or fire district to verify the brand of emergency vehicle pre-emption equipment to be installed prior to the contract bidding. The equipment must be completely compatible with all components of the equipment currently in use by the Agency.

All new installations shall be equipped with Confirmation Beacons as shown on the "District One Standard Traffic Signal Design Details." The Confirmation Beacon shall consist of a 6 watt Par 38 LED flood lamp with a 30 degree light spread, maximum 6 watt energy consumption at 120V, and a 2,000 hour warranty for each direction of pre-emption. The lamp shall have an adjustable mount with a weatherproof enclosure for cable splicing. All hardware shall be cast aluminum or stainless steel. Holes drilled into signal poles, mast arms, or posts shall require rubber grommets. In order to maintain uniformity between communities, the confirmation beacons shall indicate when the control equipment receives the pre-emption signal. The pre-emption movement shall be signalized by a flashing indication at the rate specified by Section 4L.01 of the "Manual on Uniform Traffic Control Devices," and other applicable sections of future editions. The stopped pre-empted movements shall be signalized by a continuous indication.

All light operated systems shall include security and transit preemption software and operate at a uniform rate of 14.035 Hz ±0.002, or as otherwise required by the Engineer, and provide compatible operation with other light systems currently being operated in the District.

This item shall include any required modifications to an existing traffic signal controller as a result of the addition of the EMERGENCY VEHICLE PRIORITY SYSTEM.

Basis of Payment.

The work shall be paid for at the contract unit price each for furnishing and installing LIGHT DETECTOR and LIGHT DETECTOR AMPLIFIER. Furnishing and installing the confirmation beacon shall be included in the cost of the Light Detector. Any required modifications to the traffic signal controller shall be included in the cost of the LIGHT DETECTOR AMPLIFIER. The preemption detector amplifier shall be paid for on a basis of (1) one each per intersection controller and shall provide operation for all movements required in the pre-emption phase sequence.

TEMPORARY TRAFFIC SIGNAL INSTALLATION.

Revise Section 890 of the Standard Specifications to read:

Description.

This work shall consist of furnishing, installing, maintaining, and removing a temporary traffic signal installation as shown on the plans, including but not limited to temporary signal heads, emergency vehicle priority systems, interconnect, vehicle detectors, uninterruptible power supply, and signing. Temporary traffic signal controllers and cabinets interconnected to railroad traffic control devices shall be new. When temporary traffic signals will be operating within a county or local agency Traffic Management System, the equipment must be NTCIP compliant and compatible with the current operating requirements of the Traffic Management System.

General.

Only an approved equipment vendor will be allowed to assemble the temporary traffic signal cabinet. Also, an approved equipment vendor shall assemble and test a temporary railroad traffic signal cabinet. (Refer to the "Inspection of Controller and Cabinet" specification). A representative of the approved control equipment vendor shall be present at the temporary traffic signal turn-on inspection.

Construction Requirements.

(a) Controllers.

1. Only controllers supplied by one of the District approved closed loop equipment manufacturers will be approved for use at temporary signal locations. All controllers used for temporary traffic signals shall be fully actuated NEMA microprocessor based with RS232 data entry ports compatible with existing monitoring software approved by IDOT District 1, installed in NEMA TS2 cabinets with 8 phase back panels, capable of supplying 255 seconds of cycle length and individual phase length settings up to 99 seconds. On projects with one lane open and two way traffic flow, such as bridge deck repairs, the temporary signal controller shall be capable of providing an adjustable all red clearance setting of up to 30 seconds in length. All controllers used for temporary traffic signals shall meet or exceed the requirements of Section 857 of the Standard Specifications with regards to internal time base coordination and preemption. All railroad interconnected temporary controllers and cabinets shall be new and shall satisfy the requirements of Article 857.02 of the Standard Specifications as modified herein.

2. Only control equipment, including controller cabinet and peripheral equipment, supplied by one of the District approved closed loop equipment manufacturers will be approved for use at temporary traffic signal locations. All control equipment for the temporary traffic signal(s) shall be furnished by the Contractor unless otherwise stated in the plans. On projects with multiple temporary traffic signal installations, all controllers shall be the same manufacturer brand and model number with current software installed.

(b) Cabinets. All temporary traffic signal cabinets shall have a closed bottom made of aluminum alloy. The bottom shall be sealed along the entire perimeter of the cabinet base to ensure a water, dust and insect-proof seal. The bottom shall provide a minimum of two (2) 4 inch (100 mm) diameter holes to run the electric cables through. The 4 inch (100 mm) diameter holes shall have a bushing installed to protect the electric cables and shall be sealed after the electric cables are installed.

(c) Grounding. Grounding shall be provided for the temporary traffic signal cabinet meeting or exceeding the applicable portions of the National Electrical Code, Section 806 of the Standard Specifications and shall meet the requirements of the District 1 Traffic Signal Specifications for "Grounding of Traffic Signal Systems."

(d) Traffic Signal Heads. All traffic signal sections and pedestrian signal sections shall be 12 inches (300 mm). Traffic signal sections shall be LED with expandable view, unless otherwise approved by the Engineer. Pedestrian signal heads shall be Light Emitting Diode (LED) Pedestrian Countdown Signal Heads except when a temporary traffic signal is installed at an intersection interconnected with a railroad grade crossing. When a temporary traffic signal is installed at an intersection interconnected with a railroad grade crossing, Light Emitting Diode (LED) Pedestrian Signal Heads shall be furnished. The temporary traffic signal heads shall be placed as indicated on the temporary traffic signal plan or as directed by the Engineer. The Contractor shall furnish enough extra cable length to relocate heads to any position on the span wire or at locations illustrated on the plans for construction staging. The temporary traffic signal shall remain in operation during all signal head relocations. Each temporary traffic signal head shall have its own cable from the controller cabinet to the signal head.

(e) Interconnect.

1. Temporary traffic signal interconnect shall be provided using fiber optic cable or wireless interconnect technology as specified in the plans. The Contractor may request, in writing, to substitute the fiber optic temporary interconnect indicated in the contract documents with a wireless interconnect. The Contractor must provide assurances that the radio device will operate properly at all times and during all construction staging. If approved for use by the Engineer, the Contractor shall submit marked-up traffic signal plans indicating locations of radios and antennas and installation details. If wireless interconnect is used, and in the opinion of the engineer, it is not viable, or if it fails during testing or operations, the Contractor shall be responsible for installing all necessary poles, fiber optic cable, and other infrastructure for providing temporary fiber optic interconnect at no cost to the contract.

2. The existing system interconnect and phone lines are to be maintained as part of the Temporary Traffic Signal Installation specified for on the plan. The interconnect shall be installed into the temporary controller cabinet as per the notes or details on the plans. All labor and equipment required to install and maintain the existing interconnect as part of the Temporary Traffic Signal Installation shall be included in the item Temporary Traffic Signal Installation. When shown in the plans, temporary traffic signal interconnect equipment shall be furnished and installed. The temporary traffic signal interconnect shall maintain interconnect communications throughout the entire signal system for the duration of the project.

3. Temporary wireless interconnect, complete. The radio interconnect system shall be compatible with Eagle or Econolite controller closed loop systems. This item shall include all temporary wireless interconnect components, complete, at the adjacent existing traffic signal(s) to provide a completely operational closed loop system. This item shall include all materials, labor and testing to provide the completely operational closed loop system as shown on the plans. The radio interconnect system shall include the following components:

   a. Rack or Shelf Mounted RS-232 Frequency Hopping Spread Spectrum (FHSS) Radio

   b. Software for Radio Configuration (Configure Frequency and Hopping Patterns)

   c. Antennas (Omni Directional or Yagi Directional)

   d. Antenna Cables, LMR400, Low Loss. Max. 100-ft from controller cabinet to antenna

   e. Brackets, Mounting Hardware, and Accessories Required for Installation

   f. RS232 Data Cable for Connection from the radio to the local or master controller

   g. All other components required for a fully functional radio interconnect system

All controller cabinet modifications and other modifications to existing equipment that are required for the installation of the radio interconnect system components shall be included in this item.

The radio interconnect system may operate at 900Mhz (902-928) or 2.4 Ghz depending on the results of a site survey. The telemetry shall have an acceptable rate of transmission errors, time outs, etc. comparable to that of a hardwire system.

The proposed master controller and telemetry module shall be configured for use with the radio interconnect at a minimum rate of 9600 baud.

The radio interconnect system shall include all other components required for a complete and fully functional telemetry system and shall be installed in accordance to the manufacturers recommendations.

The following radio equipment is currently approved for use in Region One/District One: Encom Model 5100 and Intuicom Communicator II.

(f) Emergency Vehicle Pre-Emption. All emergency vehicle preemption equipment (light detectors, light detector amplifiers, confirmation beacons, etc.) as shown on the temporary traffic signal plans shall be provided by the Contractor. It shall be the Contractor's responsibility to contact the municipality or fire district to verify the brand of emergency vehicle preemption equipment to be installed prior to the contract bidding. The equipment must be completely compatible with all components of the equipment currently in use by the Agency. All light operated systems shall operate at a uniform rate of 14.035 hz ±0.002, or as otherwise required by the Engineer, and provide compatible

operation with other light systems currently being operated in the District. All labor and material required to install and maintain the Emergency Vehicle Preemption installation shall be included in the item Temporary Traffic Signal Installation.

(g) Vehicle Detection. All temporary traffic signal installations shall have vehicular detection installed as shown on the plans or as directed by the Engineer. Pedestrian push buttons shall be provided for all pedestrian signal heads/phases as shown on the plans or as directed by the Engineer. All approaches shall have vehicular detection provided by vehicle detection system as shown on the plans or as directed by the Engineer. Microwave vehicle sensors or video vehicle detection system shall be approved by IDOT prior to Contractor furnishing and installing. The Contractor shall install, wire, and adjust the alignment of the microwave vehicle sensor or video vehicle detection system in accordance to the manufacturer's recommendations and requirements. The Contractor shall be responsible for adjusting the alignment of the microwave vehicle sensor or video vehicle detection system for all construction staging changes and for maintaining proper alignment throughout the project. A representative of the approved control equipment vendor shall be present and assist the contractor in setting up and maintaining the microwave vehicle sensor or video vehicle detection system. An in-cabinet video monitor shall be provided with all video vehicle detection systems and shall be included in the item Temporary Traffic Signal Installation.

(h) Uninterruptible Power Supply. All temporary traffic signal installations shall have Uninterruptible Power Supply (UPS). The UPS cabinet shall be mounted to the temporary traffic signal cabinet and meet the requirements of Uninterruptible Power Supply in Divisions 800 and 1000 of these specifications.

(i) Signs. All existing street name and intersection regulatory signs shall be removed from existing poles and relocated to the temporary signal span wire. If new mast arm assembly and pole(s) and posts are specified for the permanent signals, the signs shall be relocated to the new equipment at no extra cost. Any intersection regulatory signs that are required for the temporary traffic signal shall be provided as shown on the plans or as directed by the Engineer. Relocation, removing, bagging and installing the regulatory signs for the various construction stages shall be provided as shown on the plans or as directed by the Engineer.

(j) Energy Charges. The electrical utility energy charges for the operation of the temporary traffic signal installation shall be paid for by others if the installation replaces an existing signal. Otherwise charges shall be paid for under 109.05 of the Standard Specifications.

(k) Maintenance. Maintenance shall meet the requirements of the Standard Specifications and MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION in Division 800 of these specifications. Maintenance of temporary signals and of the existing signals shall be included in the cost of the TEMPORARY TRAFFIC SIGNAL INSTALLATION pay item. When temporary traffic signals are to be installed at locations where existing signals are presently operating, the Contractor shall be fully responsible for the maintenance of the existing signal installation as soon as he begins any physical work on the Contract or any portion thereof. In addition, a minimum of seven (7) days prior to

assuming maintenance of the existing traffic signal installation(s) under this Contract, the Contractor shall request that the Resident Engineer contact the Bureau of Traffic Operations (847) 705-4424 for an inspection of the installation(s).

(l) Temporary Traffic Signals for Bridge Projects. Temporary Traffic Signals for bridge projects shall follow the State Standards, Standard Specifications, District One Traffic Signal Specifications and any plans for Bridge Temporary Traffic Signals included in the plans. The installation shall meet the Standard Specifications and all other requirements in this TEMPORARY TRAFFIC SIGNAL INSTALLATION specification. In addition all electric cable shall be aerially suspended, at a minimum height of 18 feet (5.5m) on temporary wood poles (Class 5 or better) of 45 feet (13.7 m) minimum height. The signal heads shall be span wire mounted or bracket mounted to the wood pole or as directed by the Engineer. The Controller cabinet shall be mounted to the wood pole as shown in the plans, or as directed by the Engineer. Microwave vehicle sensors or video vehicle detection system may be used in place of detector loops as approved by the Engineer.

(m) Temporary Portable Traffic Signal for Bridge Projects.

1. Unless otherwise directed by the Engineer, temporary portable traffic signals shall be restricted to use on roadways of less than 8000 ADT that have limited access to electric utility service, shall not be installed on projects where the estimated need exceeds ten (10) weeks, and shall not be in operation during the period of November through March. The Contractor shall replace the temporary portable traffic signals with temporary span wire traffic signals noted herein at no cost to the contract if the bridge project or Engineer requires temporary traffic signals to remain in operation into any part of period of November through March. If, in the opinion of the engineer, the reliability and safety of the temporary portable traffic signal is not similar to that of a temporary span wire traffic signal installation, the Contractor shall replace the temporary portable traffic signals with temporary span wire traffic signals noted herein at no cost to the contract.

2. The controller and LED signal displays shall meet the Standard Specifications and all other requirements in this TEMPORARY TRAFFIC SIGNAL INSTALLATION specification.

3. Work shall be according to Article 701.18(b) of the Standard Specifications except as noted herein.

4. General.

a. The temporary portable bridge traffic signals shall be trailer-mounted units. The trailer-mounted units shall be set up securely and level. Each unit shall be self-contained and consist of two signal heads. The left signal head shall be mounted on a mast arm capable of extending over the travel lane. Each unit shall contain a solar cell system to facilitate battery charging. There shall be a minimum of 12 days backup reserve battery supply and the units shall be capable of operating with a 120 V power supply from a generator or electrical service.

b. All signal heads located over the travel lane shall be mounted at a minimum height of 17 feet (5m) from the bottom of the signal back plate to the top of the road surface. All far right signal heads located outside the travel lane shall be mounted at a minimum height of 8 feet (2.5m) from the bottom of the signal back plate to the top of the adjacent travel lane surface.

c. The long all red intervals for the traffic signal controller shall be adjustable up to 250 seconds in one-second increments.

d. As an alternative to detector loops, temporary portable bridge traffic signals may be equipped with microwave sensors or other approved methods of vehicle detection and traffic actuation.

e. All portable traffic signal units shall be interconnected using hardwire communication cable. Radio communication equipment may be used only with the approval of the Engineer. If radio communication is used, a site analysis shall be completed to ensure that there is no interference present that would affect the traffic signal operation. The radio equipment shall meet all applicable FCC requirements.

f. The temporary portable bridge traffic signal system shall meet the physical display and operational requirements of conventional traffic signals as specified in Part IV and other applicatble portions of the currently adopted version of the Manual on Uniform Traffic Control Devices (MUTCD) and the Illinois MUTCD. The signal system shall be designed to continuously operate over an ambient temperature range between -30 °F (-34 °C) and 120 °F (48 °C). When not being utilized to inform and direct traffic, portable signals shall be treated as nonoperating equipment according to Article 701.11.

g. Basis of Payment. This work will be paid for according to Article 701.20(c).

Basis of Payment.

This work shall be paid for at the contract unit price each for TEMPORARY TRAFFIC SIGNAL INSTALLATION, TEMPORARY BRIDGE TRAFFIC SIGNAL INSTALLATION, or TEMPORARY PORTABLE BRIDGE TRAFFIC SIGNAL INSTALLATION, the price of which shall include all costs for the modifications required for traffic staging, changes in signal phasing as required in the Contract plans, microwave vehicle sensors, video vehicle detection system, any maintenance or adjustment to the microwave vehicle sensors/video vehicle detection system, the temporary wireless interconnect system complete, temporary fiber optic interconnect system complete, all material required, the installation and complete removal of the temporary traffic signal. Each intersection will be paid for separately.

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT.

Add the following to Article 895.05 of the Standard Specifications:

The traffic signal equipment which is to be removed and is to become the property of the Contractor shall be disposed of outside the right-of-way at the Contractor's expense.

All equipment to be returned to the State shall be delivered by the Contractor to the State's Traffic Signal Maintenance Contractor's main facility. The Contractor shall contact the State's Electrical Maintenance Contractor to schedule an appointment to deliver the equipment. No equipment will be accepted without a prior appointment. All equipment shall be delivered within 30 days of removing it from the traffic signal installation. The Contractor shall provide 5 copies of a list of equipment that is to remain the property of the State, including model and serial numbers, where applicable. The Contractor shall also provide a copy of the Contract plan or special provision showing the quantities and type of equipment. Controllers and peripheral equipment from the same location shall be boxed together (equipment from different locations may not be mixed) and all boxes and controller cabinets shall be clearly marked or labeled with the location from which they were removed. If equipment is not returned with these requirements, it will be rejected by the State's Electrical Maintenance Contractor. The Contractor shall be responsible for the condition of the traffic signal equipment from the time Contractor takes maintenance of the signal installation until the acceptance of a receipt drawn by the State's Electrical Maintenance Contractor indicating the items have been returned in good condition.

The Contractor shall safely store and arrange for pick up or delivery of all equipment to be returned to agencies other than the State. The Contractor shall package the equipment and provide all necessary documentation as stated above.

Traffic signal equipment which is lost or not returned to the Department for any reason shall be replaced with new equipment meeting the requirements of these Specifications at no cost to the contract.

TRAFFIC SIGNAL PAINTING.

Description.

This work shall include surface preparation, powder type painted finish application and packaging of new galvanized steel traffic signal mast arm poles and posts assemblies. All work associated with applying the painted finish shall be performed at the manufacturing facility for the pole assembly or post or at a painting facility approved by the Engineer. Traffic signal mast arm shrouds and post bases shall also be painted the same color as the pole assemblies and posts.

Surface Preparation.

All weld flux and other contaminates shall be mechanically removed. The traffic mast arms and post assemblies shall be degreased, cleaned, and air dried to assure all moisture is removed.

Painted Finish.

All galvanized exterior surfaces shall be coated with a urethane or triglycidyl isocyanurate (TGIC) polyester powder to a dry film thickness of 2.0 mils. Prior to application, the surface shall be mechanically etched by brush blasting (Ref. SSPC-SP7) and the zinc coated substrate preheated to 450 °F for a minimum one (1) hour. The coating shall be electrostatically applied and cured by elevating the zinc-coated substrate temperature to a minimum of 400 °F.

The finish paint color shall be one of the manufacturer's standard colors and shall be as selected by the local agency responsible for paint costs. The Contractor shall confirm, in writing, the color selection with the local responsible agency and provide a copy of the approval to the Engineer and a copy of the approval shall be included in the material catalog submittal.

Painting of traffic signal heads, pedestrian signal heads and controller cabinets is not included in this pay item.

Any damage to the finish after leaving the manufacturer's facility shall be repaired to the satisfaction of the Engineer using a method recommended by the manufacturer and approved by the Engineer. If while at the manufacturer's facility the finish is damaged, the finish shall be re-applied at no cost to the contract.

Warranty.

The Contractor shall furnish in writing to the Engineer, the paint manufacturer's standard warranty and certification that the paint system has been properly applied.

Packaging.

Prior to shipping, the poles and posts shall be wrapped in ultraviolet-inhibiting plastic foam or rubberized foam.

Basis of Payment.

This work shall be paid for at the contract unit price each for PAINT NEW MAST ARM AND POLE, UNDER 40 FEET (12.19 METER), PAINT NEW MAST ARM AND POLE, 40 FEET (12.19 METER) AND OVER, PAINT NEW COMBINATION MAST ARM AND POLE, UNDER 40 FEET (12.19 METER), PAINT NEW COMBINATION MAST ARM AND POLE, 40 FEET (12.19 METER) AND OVER, or PAINT NEW TRAFFIC SIGNAL POST of the length specified, which shall be payment in full for painting and packaging the traffic signal mast arm poles and posts described above including all shrouds, bases and appurtenances.

ILLUMINATED STREET NAME SIGN.

Description.

This work shall consist of furnishing and installing a LED internally illuminated street name sign.

Materials.

Materials shall be in accordance with ILLUMINATED STREET NAME SIGN in Division 1000 of these specifications.

Installation.

The sign can be mounted on most steel mast arm poles. Mounting on aluminum mast arm pole requires supporting structural calculations. Some older or special designed steel mast arm poles may require structural evaluation to assure that construction of the mast arm pole is adequate for the proposed additional loading. Structural calculations and other supporting documentation as determined by the Engineer shall be provided by the contractor for review by the Department.

The sign shall be located on a steel traffic signal mast arm no further than 8-feet from the center of the pole to the center of the sign at a height of between 16 to 18-feet above traveled pavement. Mounting hardware shall be Pelco model SE-5015, utilizing stainless steel components.

Signs shall be installed such that they are not energized when traffic signals are powered by an alternate energy source such as a generator or uninterruptible power supply (UPS). The signs shall be connected to the generator or UPS bypass circuitry.

Basis of Payment.

This work will be paid for at the contract unit price each for ILLUMINATED STREET NAME SIGN, of the length specified which shall be payment in full for furnishing and installing the LED internally illuminated street sign, complete with circuitry and mounting hardware including photo cell, circuit breaker, fusing, relay, connections and cabling as shown on the plans for proper operation and installation.

RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM.

Description.

This work shall consist of re-optimizing a closed loop traffic signal system according to the following Levels of work.

LEVEL I applies when improvements are made to an existing signalized intersection within an existing closed loop traffic signal system. The purpose of this work is to integrate the improvements to the subject intersection into the signal system while minimizing the impacts to the existing system operation. This type of work would be commonly associated with the addition of signal phases, pedestrian phases, or improvements that do not affect the capacity at an intersection.

LEVEL II applies when improvements are made to an existing signalized intersection within an existing closed loop traffic signal system and detailed analysis of the intersection operation is desired by the engineer, or when a new signalized or existing signalized intersection is being added to an existing system, but optimization of the entire system is not required. The purpose of this work is to optimize the subject intersection, while integrating it into the existing signal system with limited impact to the system operations. This item also includes an evaluation of the overall system operation, including the traffic responsive program.

For the purposes of re-optimization work, an intersection shall include all traffic movements operated by the subject controller and cabinet.

After the signal improvements are completed, the signal shall be re-optimized as specified by an approved Consultant who has previous experience in optimizing Closed Loop Traffic Signal Systems for District One of the Illinois Department of Transportation. The Contractor shall contact the Traffic Signal Engineer at (847) 705-4424 for a listing of approved Consultants. Traffic signal system optimization work, including fine-tuning adjustments of the optimized system, shall follow the requirements stated in the most recent IDOT District 1 SCAT Guidelines, except as note herein.

A listing of existing signal equipment, interconnect information, phasing data, and timing patterns may be obtained from the Department, if available and as appropriate. The existing SCAT Report is available for review at the District One office and if the Consultant provides blank computer disks, copies of computer simulation files for the existing optimized system and a timing database that includes intersection displays will be made for the Consultant. The Consultant shall confer with the Traffic Signal Engineer prior to optimizing the system to determine if any extraordinary conditions exist that would affect traffic flows in the vicinity of the system, in which case, the Consultant may be instructed to wait until the conditions return to normal or to follow specific instructions regarding the optimization.

(a) LEVEL I Re-Optimization

1. The following tasks are associated with LEVEL I Re-Optimization.

   a. Appropriate signal timings shall be developed for the subject intersection and existing timings shall be utilized for the rest of the intersections in the system.

   b. Proposed signal timing plan for the new or modified intersection(s) shall be forwarded to IDOT for review prior to implementation.

   c. Consultant shall conduct on-site implementation of the timings at the turn-on and make fine-tuning adjustments to the timings of the subject intersection in the field to alleviate observed adverse operating conditions and to enhance operations.

2. The following deliverables shall be provided for LEVEL I Re-Optimization.

   a. Consultant shall furnish to IDOT a cover letter describing the extent of the re-optimization work performed.

   b. Consultant shall furnish an updated intersection graphic display for the subject intersection to IDOT and to IDOT's Traffic Signal Maintenance Contractor.

(b) LEVEL II Re-Optimization

1. In addition to the requirements described in the LEVEL I Re-Optimization above, the following tasks are associated with LEVEL II Re-Optimization.

   a. Traffic counts shall be taken at the subject intersection after the traffic signals are approved for operation by the Area Traffic Signal Operations Engineer. Manual turning movement counts shall be conducted from 6:30 a.m. to 9:30 a.m., 11:00 a.m. to 1:00 p.m., and 3:30 p.m. to 6:30 p.m. on a typical weekday from midday Monday to midday Friday. The turning movement counts shall identify cars, and single-unit, multi-unit heavy vehicles, and transit buses.

   b. As necessary, the intersections shall be re-addressed and all system detectors reassigned in the master controller according to the current standard of District One.

   c. Traffic responsive program operation shall be evaluated to verify proper pattern selection and lack of oscillation and a report of the operation shall be provided to IDOT.

2. The following deliverables shall be provided for LEVEL II Re-Optimization.

   a. Consultant shall furnish to IDOT one (1) copy of a technical memorandum for the optimized system. The technical memorandum shall include the following elements:

      (1) Brief description of the project

(2) Printed copies of the analysis output from Synchro (or other appropriate, approved optimization software file)

(3) Printed copies of the traffic counts conducted at the subject intersection

b. Consultant shall furnish to IDOT two (2) CDs for the optimized system. The CDs shall include the following elements:

(1) Electronic copy of the technical memorandum in PDF format

(2) Revised Synchro files (or other appropriate, approved optimization software file) including the new signal and the rest of the signals in the closed loop system

(3) Traffic counts conducted at the subject intersection

(4) New or updated intersection graphic display file for the subject intersection

(5) The CD shall be labeled with the IDOT system number and master location, as well as the submittal date and the consultant logo. The CD case shall include a clearly readable label displaying the same information securely affixed to the side and front.

Basis of Payment.

This work shall be paid for at the contract unit price each for RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM – LEVEL I or RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM – LEVEL II, which price shall be payment in full for performing all work described herein per intersection. Following completion of the timings and submittal of specified deliverables, 100 percent of the bid price will be paid. Each intersection will be paid for separately.

OPTIMIZE TRAFFIC SIGNAL SYSTEM.

Description.

This work shall consist of optimizing a closed loop traffic signal system.

OPTIMIZE TRAFFIC SIGNAL SYSTEM applies when a new or existing closed loop traffic signal system is to be optimized and a formal Signal Coordination and Timing (SCAT) Report is to be prepared. The purpose of this work is to improve system performance by optimizing traffic signal timings, developing a time of day program and a traffic responsive program.

After the signal improvements are completed, the signal system shall be optimized as specified by an approved Consultant who has previous experience in optimizing Closed Loop Traffic Signal Systems for District One of the Illinois Department of Transportation. The Contractor shall contact the Traffic Signal Engineer at (847) 705-4424 for a listing of approved Consultants.

Traffic signal system optimization work, including fine-tuning adjustments of the optimized system, shall follow the requirements stated in the most recent IDOT District 1 SCAT Guidelines, except as note herein.

A listing of existing signal equipment, interconnect information, phasing data, and timing patterns may be obtained from the Department, if available and as appropriate. The existing SCAT Report is available for review at the District One office and if the Consultant provides blank computer disks, copies of computer simulation files for the existing optimized system and a timing database that includes intersection displays will be made for the Consultant. The Consultant shall confer with the Traffic Signal Engineer prior to optimizing the system to determine if any extraordinary conditions exist that would affect traffic flows in the vicinity of the system, in which case, the Consultant may be instructed to wait until the conditions return to normal or to follow specific instructions regarding the optimization.

(a) The following tasks are associated with OPTIMIZE TRAFFIC SIGNAL SYSTEM.

1. Appropriate signal timings and offsets shall be developed for each intersection and appropriate cycle lengths shall be developed for the closed loop signal system.

2. Traffic counts shall be taken at all intersections after the permanent traffic signals are approved for operation by the Area Traffic Signal Operations Engineer. Manual turning movement counts shall be conducted from 6:30 a.m. to 9:30 a.m., 11:00 a.m. to 1:00 p.m., and 3:30 p.m. to 6:30 p.m. on a typical weekday from midday Monday to midday Friday. The turning movement counts shall identify cars, and single-unit and multi-unit heavy vehicles.

3. As necessary, the intersections shall be re-addressed and all system detectors reassigned in the master controller according to the current standard of District One.

4. A traffic responsive program shall be developed, which considers both volume and occupancy. A time-of-day program shall be developed for used as a back-up system.

5. Proposed signal timing plan for the new or modified intersection shall be forwarded to IDOT for review prior to implementation.

6. Consultant shall conduct on-site implementation of the timings and make fine-tuning adjustments to the timings in the field to alleviate observed adverse operating conditions and to enhance operations.

7. Speed and delay studies shall be conducted during each of the count periods along the system corridor in the field before and after implementation of the proposed timing plans for comparative evaluations. These studies should utilize specialized electronic timing and measuring devices.

(b) The following deliverables shall be provided for OPTIMIZE TRAFFIC SIGNAL SYSTEM.

1. Consultant shall furnish to IDOT one (1) copy of a SCAT Report for the optimized system. The SCAT Report shall include the following elements:**Cover Page in color showing a System Map**

Figures

1. System overview map – showing system number, system schematic map with numbered system detectors, oversaturated movements, master location, system phone number, cycle lengths, and date of completion.
2. General location map in color – showing signal system location in the metropolitan area.
3. Detail system location map in color – showing cross street names and local controller addresses.
4. Controller sequence – showing controller phase sequence diagrams.

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Tab 2. Turning Movement Counts

1. Turning Movement Counts (Showing turning movement counts in the intersection diagram for each period, including truck percentage)

Tab 3. Synchro Analysis

1. AM: Time-Space diagram in color, followed by intersection Synchro report (Timing report) summarizing the implemented timings.

2. Midday: same as AM

3. PM: same as AM

Tab 4: Speed, Delay Studies

1. Summary of before and after runs results in two (2) tables showing travel time and delay time.

2. Plot of the before and after runs diagram for each direction and time period.

Tab 5: Environmental Report

1. Environmental impact report including gas consumption, NO2, HCCO, improvements.

Tab 6: Electronic Files

1. Two (2) CDs for the optimized system. The CDs shall include the following elements:

   a. Electronic copy of the SCAT Report in PDF format

   b. Copies of the Synchro files for the optimized system

   c. Traffic counts for the optimized system

   d. New or updated intersection graphic display files for each of the system intersections and the system graphic display file including system detector locations and addresses.

Basis of Payment.

The work shall be paid for at the contract unit each for OPTIMIZE TRAFFIC SIGNAL SYSTEM, which price shall be payment in full for performing all work described herein for the entire traffic signal system. Following the completion of traffic counts, 25 percent of the bid price will be paid. Following the completion of the Synchro analysis, 25 percent of the bid price will be paid. Following the setup and fine tuning of the timings, the speed-delay study, and the TRP programming, 25 percent of the bid price will be paid. The remaining 25 percent will be paid when the system is working to the satisfaction of the engineer and the report and CD have been submitted.

TEMPORARY TRAFFIC SIGNAL TIMINGS

Description.

This work shall consist of developing and maintaining appropriate traffic signal timings for the specified intersection for the duration of the temporary signalized condition, as well as impact to existing traffic signal timings caused by detours or other temporary conditions.

All timings and adjustments necessary for this work shall be performed by an approved Consultant who has previous experience in optimizing Closed Loop Traffic signal Systems for District One of the Illinois Department of Transportation. The Contractor shall contact the Traffic Signal Engineer at (847) 705-4424 for a listing of approved Consultants.

The following tasks are associated with TEMPORARY TRAFFIC SIGNAL TIMINGS.

(a) Consultant shall attend temporary traffic signal inspection (turn-on) and/or detour meeting and conduct on-site implementation of the traffic signal timings. Make fine-turning adjustments to the timings in the field to alleviate observed adverse operating conditions and to enhance operations.

(b) Consultant shall provide monthly observation of traffic signal operations in the field.

(c) Consultant shall provide on-site consultation and adjust timings as necessary for construction stage changes, temporary traffic signal phase changes, and any other conditions affecting timing and phasing, including lane closures, detours, and other construction activities.

(d) Consultant shall make timing adjustments and prepare comment responses as directed by the Area Traffic Signal Operations Engineer.

Basis of Payment.

The work shall be paid for at the contract unit price each for TEMPORARY TRAFFIC SIGNAL TIMINGS, which price shall be payment in full for performing all work described herein per intersection. When the temporary traffic signal installation is turned on and/or detour implemented, 50 percent of the bid price will be paid. The remaining 50 percent of the bid price will be paid following the removal of the temporary traffic signal installation and/or detour.

MODIFYING EXISTING CONTROLLER CABINET.

The work shall consist of modifying an existing controller cabinet as follows:

(a) Uninterruptible Power Supply (UPS). The addition of uninterruptible power supply (UPS) to an existing controller cabinet could require the relocation of the existing controller cabinet items to allow for the installation of the uninterruptible power supply (UPS) components inside the existing controller cabinet as outlined under Sections 862 and 1074.04 of the Standard Specifications.

(b) Light Emitting Diode (LED) Signal Heads, Light Emitting Diode (LED) Optically Programmed Signal Heads and Light Emitting Diode (LED) Pedestrian Signal Heads. The contractor shall verify that the existing load switches meet the requirements of Section 1074.03(5)(b)(2) of the Standard Specifications and the recommended load requirements of the light emitting diode (LED) signal heads that are being installed at the existing traffic signal. If any of the existing load switches do not meet these requirements, they shall be replaced, as directed by the Engineer.

(c) Light Emitting Diode (LED), Signal Head, Retrofit. The contractor shall verify that the existing load switches meet the requirements of Section 1074.03(2) of the Standard Specifications and the recommended load requirements of light emitting diode (LED) traffic signal modules, pedestrian signal modules, and pedestrian countdown signal modules as specified in the plans. If any of the existing load switches do not meet these requirements, they shall be replaced, as directed by the Engineer.

Basis of Payment.

Modifying an existing controller cabinet will be paid for at the contract unit price per each for MODIFY EXISTING CONTROLLER CABINET. This shall include all material and labor required to complete the work as described above, the removal and disposal of all items removed from the controller cabinet, as directed by the Engineer. The equipment for the Uninterruptible Power Supply (UPS) and labor to install it in the existing controller cabinet shall be included in the pay item Uninterruptible Power Supply. Modifying an existing controller will be paid for at the contract unit price per each for MODIFY EXISTING CONTROLLER CABINET, per Sections 895.04 and 895.08 of the Standard Specifications.

DIVISION 1000 MATERIALS

PEDESTRIAN PUSH-BUTTON.

Revise Article 1074.02(a) of the Standard Specifications to read:

The pedestrian push-button housing shall be constructed of aluminum alloy according to ASTM B 308 6061-T6 and powder coated yellow, unless otherwise noted on the plans. The housing shall be furnished with suitable mounting hardware.

Revise Article 1074-02(e) of the Standard Specifications to read:

Stations shall be designed to be mounted directly to a post, mast arm pole or wood pole. The station shall be aluminum and shall accept a 3 inch (75mm) round push-button assembly and a regulatory pedestrian instruction sign according to MUTCD, sign series R10-3e 9 x 15 inch sign with arrow(s) for a count-down pedestrian signal. The pedestrian station size without count-down pedestrian signals shall accommodate a MUTCD sign series R10-3b or R10-3d 9 x 12 inch sign with arrow(s).

Add the following to Article 1074.02(a) of the Standard Specifications:

(f) Location. Pedestrian push-buttons and stations shall be mounted directly to a post, mast arm pole or wood pole as shown on the plans and shall be fully accessible from a paved or concrete surface. See the District's Detail sheets for orientation and mounting details.

CONTROLLER CABINET AND PERIPHERAL EQUIPMENT.

Add the following to Article 1074.03 of the Standard Specifications:

(a) (6) Cabinets shall be designed for NEMA TS2 Type 1 operation. All cabinets shall be pre-wired for a minimum of eight (8) phases of vehicular, four (4) phases of pedestrian and four (4) phases of overlap operation.

(b) (5) Cabinets – Provide 1/8" (3.2 mm) thick unpainted aluminum alloy 5052-H32. The surface shall be smooth, free of marks and scratches. All external hardware shall be stainless steel.

(b) (6) Controller Harness – Provide a TS2 Type 2 "A" wired harness in addition to the TS2 Type 1 harness.

(b) (7) Surge Protection – Plug-in type EDCO SHA-1250 or Atlantic/Pacific.

(b) (8) BIU – Containment screw required.

(b) (9) Transfer Relays – Solid state or mechanical flash relays are acceptable.

(b) (10) Switch Guards – All switches shall be guarded.

(b) (11) Heating – One (1) 200 watt, thermostatically-controlled, Hoffman electric heater.

(b) (12) Lighting – One (1) LED Panel shall be placed inside the cabinet top panel and one (1) LED Panel shall be placed on each side of the pull-out drawer/shelf assembly located beneath the controller support shelf. The LED Panels shall be controlled by a wall switch. Relume Traffic Control Box LED Panels and power supply.

(b) (13) The cabinet shall be equipped with a pull-out drawer/shelf assembly. A 1 ½ inch (38mm) deep drawer shall be provided in the cabinet, mounted directly beneath the controller support shelf. The drawer shall have a hinged top cover and shall be capable of accommodating one (1) complete set of cabinet prints and manuals. This drawer shall support 50 lbs. (23 kg) in weight when fully extended. The drawer shall open and close smoothly. Drawer dimensions shall make maximum use of available depth offered by the controller shelf and be a minimum of 24 inches (610mm) wide.

(b) (14) Plan & Wiring Diagrams – 12" x 16" (3.05mm x 4.06mm) moisture sealed container attached to door.

(b) (15) Detector Racks – Fully wired and labeled for four (4) channels of emergency vehicle pre-emption and sixteen channels (16) of vehicular operation.

(b) (16) Field Wiring Labels – All field wiring shall be labeled.

(b) (17) Field Wiring Termination – Approved channel lugs required.

(b) (18) Power Panel – Provide a nonconductive shield.

(b) (19) Circuit Breaker – The circuit breaker shall be sized for the proposed load but shall not be rated less than 30 amps.

(b) (20) Police Door – Provide wiring and termination for plug in manual phase advance switch.

(b) (21) Railroad Pre-Emption Test Switch – Eaton 8830K13 SHA 1250 or equivalent.

RAILROAD, FULL-ACTUATED CONTROLLER AND CABINET.

Controller shall comply with Article 1073.01 as amended in these Traffic Signal Special Provisions.

Controller Cabinet and Peripheral Equipment shall comply with Article 1074.03 as amended in these Traffic Signal Special Provisions.

Add the following to Articles 1073.01 (c) (2) and 1074.03 (a) (5) (e) of the Standard Specifications:

Controllers and cabinets shall be new and NEMA TS2 Type 1 design.

A method of monitoring and/or providing redundancy to the railroad preemptor input to the controller shall be included as a component of the Railroad, Full Actuated Controller and Cabinet installation and be verified by the traffic signal equipment supplier prior to installation.

Railroad interconnected controllers and cabinets shall be assembled only by an approved traffic signal equipment supplier. All railroad interconnected (including temporary railroad interconnect) controllers and cabinets shall be new, built, tested and approved by the controller equipment vendor, in the vendor's District One facility, prior to field installation. The vendor shall provide the technical equipment and assistance as required by the Engineer to fully test this equipment.

UNINTERRUPTIBLE POWER SUPPLY (UPS).

Revise Article 1074.04(a)(1) of the Standard Specifications to read:

The UPS shall be line interactive and provide voltage regulation and power conditioning when utilizing utility power. The UPS shall be sized appropriately for the intersection's normal traffic signal operating connected load, plus 20 percent (20%). The total connected traffic signal load shall not exceed the published ratings for the UPS. The UPS shall provide a minimum of six (6) hours of normal operation run-time for signalized intersections with LED type signal head optics at 77 °F (25 °C) (minimum 700 W/1000 VA active output capacity, with 90 percent minimum inverter efficiency).

Revise the first paragraph of Article 1074.04(a)(3) of the Standard Specifications to read:

The UPS shall have a minimum of four (4) sets of normally open (NO) and normally closed (NC) single-pole double-throw (SPDT) relay contact closures, available on a panel mounted terminal block or locking circular connectors, rated at a minimum 120 V/1 A, and labeled so as to identify each contact according to the plans.

Revise Article 1074.04(a)(10) of the Standard Specifications to read:

The UPS shall be compatible with the District's approved traffic controller assemblies utilizing NEMA TS 1 or NEMA TS 2 controllers and cabinet components for full time operation.

Revise Article 1074.04(a)(17) of the Standard Specifications to read:

When the intersection is in battery backup mode, the UPS shall bypass all internal cabinet lights, ventilation fans, cabinet heaters, service receptacles, any lighted street name signs, any automated enforcement equipment and any other devices directed by the Engineer.

Revise Article 1074.04(b)(2)b of the Standard Specifications to read:

Batteries, inverter/charger and power transfer relay shall be housed in a separate NEMA Type 3R cabinet. The cabinet shall be Aluminum alloy, 5052-H32, 0.125-inch thick and have a natural mill finish.

Revise Article 1074.04(b)(2)c of the Standard Specifications to read:

No more than three batteries shall be mounted on individual shelves for a cabinet housing six batteries and no more than four batteries per shelf for a cabinet housing eight batteries.

Revise Article 1074.04(b)(2)e of the Standard Specifications to read:

The battery cabinet housing shall have the following nominal outside dimensions: a width of 25 in. (785 mm), a depth of 16 in. (440 mm), and a height of 41 to 48 in. (1.1 to 1.3 m). Clearance between shelves shall be a minimum of 10 in. (250 mm).

UPS

End of paragraph 1074.04(b) (2)e

The door shall be equipped with a two position doorstop, one a 90° and one at 120°.

Revise Article 1074.04(b)(2)g of the Standard Specifications to read:

The door shall open to the entire cabinet, have a neoprene gasket, an Aluminum continuous piano hinge with stainless steel pin, and a three point locking system. The cabinet shall be provided with a main door lock which shall operate with a traffic industry conventional No. 2 key. Provisions for padlocking the door shall be provided.

Add the following to Article 1074.04(b)(2) of the Standard Specifications:

j. The battery cabinet shall have provisions for an external generator connection.

Add the following to Article 1074.04(c) of the Standard Specifications:

(8) The UPS shall include a tip or kill switch installed in the battery cabinet, which shall completely disconnect power from the UPS when the switch is manually activated.

(9) The UPS shall incorporate a flanged electric generator inlet for charging the batteries and operating the UPS. The generator connector shall be male type, twist-lock, rated as 15A, 125VAC with a NEMA L5-15P configuration and weatherproof lift cover plate (Hubbell model

HBL4716C). Access to the generator inlet shall be from a secured weatherproof lift cover plate or behind a locked battery cabinet police panel.

Battery System.

Revise Article 1074.04(d)(3) of the Standard Specifications to read:

All batteries supplied in the UPS shall be either gel cell or AGM type, deep cycle, completely sealed, prismatic leadcalcium based, silver alloy, valve regulated lead acid (VRLA) requiring no maintenance. All batteries in a UPS installation shall be the same type; mixing of gel cell and AGM types within a UPS installation is not permitted.

Revise Article 1074.04(d)(4) of the Standard Specifications to read:

Batteries shall be certified by the manufacturer to operate over a temp. range of -13 to 160°F (-25 to +71°C) for gel cell batteries and -40 to 140 °F (-40 to +60°C) for AGM type batteries.

Add the following to Article 1074.04(d) of the Standard Specifications:

(9) The UPS shall consist of an even number of batteries that are capable of maintaining normal operation of the signalized intersection for a minimum of six hours. Calculations shall be provided showing the number of batteries of the type supplied that are needed to satisfy this requirement. A minimum of four batteries shall be provided.

Add the following to the Article 1074.04 of the Standard Specifications:

(e) Warranty. The warranty for an uninterruptible power supply (UPS) shall cover a minimum of two years from date the equipment is placed in operation; however, the batteries of the UPS shall be warranted for full replacement for a minimum of five years from the date the traffic signal and UPS are placed into service.

ELECTRIC CABLE.

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

Add the following to the Article 1076.04(d) of the Standard Specifications:

Service cable may be single or multiple conductor cable.

TRAFFIC SIGNAL POST.

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

All posts and bases shall be steel and hot dipped galvanized. If the Department approves painting, powder coating by the manufacturer will be required over the galvanization in accordance with TRAFFIC SIGNAL PAINTING in Division 800 of these specifications.

PEDESTRIAN PUSH-BUTTON POST.

Add the following to Article 1077.02(b) of the Standard Specifications:
All posts and bases shall be steel and hot-dipped galvanized. If the Department approves painting, powder coating by the manufacturer will be required over the galvanization in accordance with Traffic Signal Painting in Division 800 of these specifications.

MAST ARM ASSEMBLY AND POLE.

Add the following to Article 1077.03 (a) of the Standard Specifications:

Traffic signal mast arms shall be one piece construction, unless otherwise approved by the Engineer. All poles shall be galvanized. If the Department approves painting, powder coating by the manufacturer will be required over the galvanization in accordance with with TRAFFIC SIGNAL PAINTING in Division 800 of these specifications.

The shroud shall be of sufficient strength to deter pedestrian and vehicular damage. The shroud shall be constructed and designed to allow air to circulate throughout the mast arm but not allow infestation of insects or other animals, and such that it is not hazardous to probing fingers and feet. All mounting hardware shall be stainless steel.

LIGHT EMITTING DIODE (LED) TRAFFIC SIGNAL HEAD.

Add the following to Section 1078 of the Standard Specifications:

General.

All signal and pedestrian heads shall provide 12" (300 mm) displays with glossy yellow or black polycarbonate housings. All head housings shall be the same color (yellow or black) at the intersection. For new signalized intersections and existing signalized intersections where all signal and/or pedestrian heads are being replaced, the proposed head housings shall be black. Where only selected heads are being replaced, the proposed head housing color (yellow or black) shall match existing head housings. Connecting hardware and mounting brackets shall be polycarbonate (black). A corrosion resistant anti-seize lubricant shall be applied to all metallic mounting bracket joints, and shall be visible to the inspector at the signal turn-on. Post top mounting collars are required on all posts, and shall be constructed of the same material as the brackets.

Pedestrian signal heads shall be furnished with the international symbolic "Walking Person" and "Upraised Palm" displays. Egg crate sun shields are not permitted.

Signal heads shall be positioned according to the "District One Standard Traffic Signal Design Details."

LED signal heads (All Face and Section Quantities), (All Mounting Types) shall conform fully to the requirements of Articles 1078.01 and 1078.02 of the Standard Specifications amended herein.

1. The LED signal modules shall be replaced or repaired if an LED signal module fails to function as intended due to workmanship or material defects within the first 60 months from the date of delivery. LED signal modules which exhibit luminous intensities less than the minimum values specified in Table 1 of the ITE Vehicle Traffic Control Signal Heads: Light Emitting Diode (LED) Circular Signal Supplement (June 27, 2005) [VTSCH], or applicable successor ITE specifications, or show signs of entrance of moisture or contaminants within the first 60 months of the date of delivery shall be replaced or repaired. The manufacturer's written warranty for the LED signal modules shall be dated, signed by an Officer of the company and included in the product submittal to the State.

(a) Physical and Mechanical Requirements

1. Modules can be manufactured under this specification for the following faces:

   a. 12 inch (300 mm) circular, multi-section

   b. 12 inch (300 mm) arrow, multi-section

   c. 12 inch (300 mm) pedestrian, 2 sections

2. The maximum weight of a module shall be 4 lbs. (1.8 kg).

3. Each module shall be a sealed unit to include all parts necessary for operation (a printed circuit board, power supply, a lens and gasket, etc.), and shall be weather proof after installation and connection.

4. Material used for the lens and signal module construction shall conform to ASTM specifications for the materials.

5. The lens of the module shall be tinted with a wavelength-matched color to reduce sun phantom effect and enhance on/off contrast. The tinting shall be uniform across the lens face. Polymeric lens shall provide a surface coating or chemical surface treatment applied to provide abrasion resistance. The lens of the module shall be integral to the unit, convex with a smooth outer surface and made of plastic. The lens shall have a textured surface to reduce glare.

6. The use of tinting or other materials to enhance ON/OFF contrasts shall not affect chromaticity and shall be uniform across the face of the lens.

7. Each module shall have a symbol of the type of module (i.e. circle, arrow, etc.) in the color of the module. The symbol shall be 1 inch (25.4 mm) in diameter. Additionally, the color shall be written out in 1/2 inch (12.7mm) letters next to the symbol.

(b) Photometric Requirements

1. The minimum initial luminous intensity values for the modules shall conform to the values in Table 1 of the VTCSH (2005) for circular signal indications, and as stated in Table 3 of these specifications for arrow and pedestrian indications at 25 °C.

2. The modules shall meet or exceed the illumination values stated in Articles 1078.01 and 1078.02 the Standard Specifications for circular signal indications, and Table 3 of these specifications for arrow and pedestrian indications, throughout the useful life based on normal use in a traffic signal operation over the operating temperature range.

3. The measured chromaticity coordinates of the modules shall conform to the chromaticity requirements of Section 4.2 of the VTCSH (2005) or applicable successor ITE specifications.

4. The LEDs utilized in the modules shall be AlInGaP technology for red, yellow, Portland orange (pedestrian) and white (pedestrian) indications, and GaN for green indications, and shall be the ultra bright type rated for 100,000 hours of continuous operation from -40 °C to +74 °C.

(c) Electrical

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

2. Operating voltage of the modules shall be 120 VAC. All parameters shall be measured at this voltage.

3. The modules shall be operationally compatible with currently used controller assemblies (solid state load switches, flashers, and conflict monitors).

4. When a current of 20 mA AC (or less) is applied to the unit, the voltage read across the two leads shall be 15 VAC or less.

5. The LED modules shall provide constant light output under power. Modules with dimming capabilities shall have the option disabled or set on a non-dimming operation.

6. The individual LEDs shall be wired such that a catastrophic loss or the failure of one or more LED will not result in the loss of the entire module.

(d) Retrofit Traffic Signal Module

1. The following specification requirements apply to the Retrofit module only. All general specifications apply unless specifically superseded in this section.

2. Retrofit modules can be manufactured under this specification for the following faces:

   a. 12 inch (300 mm) circular, multi-section

   b. 12 inch (300 mm) arrow, multi-section

   c. 12 inch (300 mm) pedestrian, 2 sections

3. Each Retrofit module shall be designed to be installed in the doorframe of a standard traffic signal housing. The Retrofit module shall be sealed in the doorframe with a one-piece EPDM (ethylene propylene rubber) gasket.

4. The maximum weight of a Retrofit module shall be 4 lbs. (1.8 kg).

5. Each Retrofit module shall be a sealed unit to include all parts necessary for operation (a printed circuit board, power supply, a lens and gasket, etc.), and shall be weather proof after installation and connection.

6. Electrical conductors for modules, including Retrofit modules, shall be 39.4 inches (1m) in length, with quick disconnect terminals attached.

7. The lens of the Retrofit module shall be integral to the unit, shall be convex with a smooth outer surface and made of plastic or of glass.

(e) The following specification requirements apply to the 12 inch (300 mm) arrow module only. All general specifications apply unless specifically superseded in this section.

1. The arrow module shall meet specifications stated in Section 9.01 of the Equipment and Material Standards of the Institute of Transportation Engineers (November 1998) [ITE Standards], Chapter 2 (Vehicle Traffic Control Signal Heads) or applicable successor ITE specifications for arrow indications.

2. The LEDs arrow indication shall be a solid display with a minimum of three (3) outlining rows of LEDs and at least one (1) fill row of LEDs.

(f) The following specification requirement applies to the 12 inch (300 mm) programmed visibility (PV) module only. All general specifications apply unless specifically superseded in this section.

1. The LED module shall be a module designed and constructed to be installed in a programmed visibility (PV) signal housing without modification to the housing.

(g) The following specification requirements apply to the 12 inch (300 mm) Pedestrian module only. All general specifications apply unless specifically superseded in this section.

1. Each pedestrian signal LED module shall provide the ability to actuate the solid upraised hand and the solid walking person on one 12 inch (300mm) section.

2. Two (2) pedestrian sections shall be installed. The top section shall be wired to illuminate only the upraised hand and the bottom section shall be the walking man.

3. "Egg Crate" type sun shields are not permitted. All figures must be a minimum of 9 inches (225mm) in height and easily identified from a distance of 120-feet (36.6m).

LIGHT EMITTING DIODE (LED) PEDESTRIAN COUNTDOWN SIGNAL HEAD.

Add the following to Article 1078.02 of the Standard Specifications:

General.

1. The module shall operate in one mode: Clearance Cycle Countdown Mode Only. The countdown module shall display actual controller programmed clearance cycle and shall start counting when the flashing clearance signal turns on and shall countdown to "0" and turn off when the steady Upraised Hand (symbolizing Don't Walk) signal turns on. Module shall not have user accessible switches or controls for modification of cycle.

2. At power on, the module shall enter a single automatic learning cycle. During the automatic learning cycle, the countdown display shall remain dark.

3. The module shall re-program itself if it detects any increase or decrease of Pedestrian Timing. The counting unit will go blank once a change is detected and then take one complete pedestrian cycle (with no counter during this cycle) to adjust its buffer timer.

4. The module shall allow for consecutive cycles without displaying the steady Upraised Hand.

5. The module shall recognize preemption events and temporarily modify the crossing cycle accordingly.

6. If the controller preempts during the Walking Person (symbolizing Walk), the countdown will follow the controller's directions and will adjust from Walking Person to flashing Upraised Hand. It will start to count down during the flashing Upraised Hand.

7. If the controller preempts during the flashing Upraised Hand, the countdown will continue to count down without interruption.

8. The next cycle, following the preemption event, shall use the correct, initially programmed values.

9. If the controller output displays Upraised Hand steady condition and the unit has not arrived to zero or if both the Upraised Hand and Walking Person are dark for some reason, the unit suspends any timing and the digits will go dark.

10. The digits will go dark for one pedestrian cycle after loss of power of more than 1.5 seconds.

11. The countdown numerals shall be two (2) "7 segment" digits forming the time display utilizing two rows of LEDs.

12. The LED module shall meet the requirements of the Institute of Transportation Engineers (ITE) LED purchase specification, "Pedestrian Traffic Control Signal Indications - Part 2: LED Pedestrian Traffic Signal Modules," or applicable successor ITE specifications, except as modified herein.

13. The LED modules shall provide constant light output under power. Modules with dimming capabilities shall have the option disabled or set on a non-dimming operation.

14. In the event of a power outage, light output from the LED modules shall cease instantaneously.

15. The LEDs utilized in the modules shall be AlInGaP technology for Portland Orange (Countdown Numerals and Upraised Hand) and GaN technology for Lunar White (Walking Person) indications.

16. The individual LEDs shall be wired such that a catastrophic loss or the failure of one or more LED will not result in the loss of the entire module.

Electrical.

1. Maximum power consumption for LED modules is 29 watts.

2. The measured chromaticity shall remain unchanged over the input line voltage range listed of 80 VAC to 135 VAC.

TRAFFIC SIGNAL BACKPLATE.

Delete 1st sentence of Article 1078.03 of the Standard Specifications and add "All backplates shall be aluminum and louvered".

Add the following to the third paragraph of Article 1078.03 of the Standard Specifications. The reflective backplate shall not contain louvers.

Delete second sentence of the fourth paragraph of Article 1078.03 f the Standard Specifications.

Add the following to the fourth paragraph of Article 1078.03 of the Standard Specifications:

When retro reflective sheeting is specified, it shall be Type ZZ sheeting according to Article 1091.03 and applied in preferred orientation for the maximum angularity according to the manufacturer's recommendations. The retro reflective sheeting shall be installed under a controlled environment at the manufacturer/supplier before shipment to the contractor. The aluminum backplate shall be prepared and cleaned, following recommendations of the retro reflective sheeting manufacturer.

INDUCTIVE LOOP DETECTOR.

Add the following to Article 1079.01 of the Standard Specifications:

Contracts requiring new cabinets shall provide for rack mounted detector amplifier cards. Detector amplifiers shall provide LCD displays with loop frequency, inductance, and change of inductance readings.

ILLUMINATED SIGN, LIGHT EMITTING DIODE.

Delete last sentence of Article 1084.01(a) and add "Mounting hardwire shall be black polycarbonate or galvanized steel and similar to mounting Signal Head hardware and bracket specified herein and shall provide tool free access to the interior."

Revise the second paragraph of Article 1084.01(a) to read:

The exterior surface of the housing shall be acid-etched and shop painted with one coat of zinc-chromate primer and two coats of exterior enamel. The housing shall be the same color (yellow or black) to match the existing or proposed signal heads. The painting shall be according to Section 851.

Add the following to Article 1084.01 (b) of the Standard Specifications:

The message shall be formed by rows of LEDs. The sign face shall be 24 inches (600 mm) by 24 inches (600 mm).

Add the following to Article 1084.01 of the Standard Specifications:

(e) The light emitting diode (LED) blank out signs shall be manufactured by National Sign & Signal Company and consist of a weatherproof housing and door, LEDs and transformers.

ILLUMINATED STREET NAME SIGN

The illuminate street name sign shall be as follows.

(a) Description.

The LEDs shall be white in color and utilize InGaN or UV thermally efficient technology. The LED Light Engines shall be designed to fit inside a standard fluorescent illuminated street sign housing in lieu of fluorescent lamps and ballasts or a slim line type housing. The LED internally-illuminated street name sign shall display the designated street name clearly and legibly in the daylight hours without being energized and at night when energized. The sign assembly shall consist of a four-, six-, or eight-foot aluminum housing. White translucent 3M DG^3 reflective sheeting sign faces with the street name applied in 3M/Scotchlite Series 1177 or current 3M equivalent transparent green shall be installed in hinged doors on the side of the sign for easy access to perform general cleaning and maintenance operations. Illumination shall occur with LED Light Engine as specified.

(b) Environmental Requirements.

The LED lamp shall be rated for use in the ambient operating temperature range of -40 to +50°C (-40 to +122°F) for storage in the ambient temperature range of -40 to +75°C (-40 to +167°F).

(c) General Construction.

The LED Light Engine shall be a single, self-contained device, for installation in an existing street sign housing. The power supply must be designed to fit and mounted on the inside wall at one end of the street sign housing. The LED Light Engine shall be mounted within the inner top portion of the housing and no components of the light source shall sit between the sign faces.

The assembly and manufacturing processes of the LED Light Engine shall be designed to ensure that all LED and electronic components are adequately supported to withstand mechanical shocks and vibrations in compliance with the specifications of the ANSI, C136.31-2001 standards.

(d) Mechanical Construction.

The sign shall be constructed using a weatherproof, aluminum housing consisting of an extruded aluminum top with a minimum thickness of .140" x 10 ¾" deep (including the drip edge). The extruded aluminum bottom is .094" thick x 5 7/8" deep. The ends of the housing shall be cast aluminum with a minimum thickness of .250". A six-foot sign shall be 72 5/8" long and 22 5/16" tall and not weigh more than 77 pounds. An eight-foot sign shall be 96 5/8" long and 22 5/16" tall and not weigh more than 92 pounds. All corners are continuous TIG (Tungsten Inert Gas) welded to provide a weatherproof seal around the entire housing.

The door shall be constructed of extruded aluminum. Two corners are continuous TIG welded with the other two screwed together to make one side of the door removable for installation of the sign face. The door is fastened to the housing on the bottom by a full length, .040" x 1 1/8" open stainless steel hinge. The door shall be held secure onto a 1" wide by 5/32" thick neoprene gasket by three (six total for two-way sign) quarter-turn fasteners to form a watertight seal between the door and the housing.

The sign face shall be constructed of .125" white translucent polycarbonate. The letters shall be 8" upper case and 6" lower case. The sign face legend background shall consist of 3M/Scotchlite Series 4090T or current equivalent 3M translucent DG^3 white VIP (Visual Impact Performance) diamond grade sheeting (ATSM Type 9) and 3M/Scotchlite Series 1177 or current 3M equivalent transparent green acrylic EC (electronic cut-able) film applied to the front of the sign face. The legend shall be framed by a white polycarbonate border. A logo symbol and/or name of the community may be included with approval of the Engineer.

All surfaces of the sign shall be etched and primed in accordance to industry standards before receiving appropriate color coats of industrial enamel.

All fasteners and hardware shall be corrosion resistant stainless steel. No tools are required for routine maintenance.

All wiring shall be secured by insulated wire compression nuts.

A wire entrance junction box shall be supplied with the sign assembly. The box may be supplied mounted to the exterior or interior of the sign and provide a weather tight seal.

A photoelectric switch shall be mounted in the control cabinet to control lighting functions for day and night display. Each sign shall be individually fused.

Brackets and Mounting: LED internally-illuminated street name signs will be factory drilled to accommodate mast arm two-point support assembly mounting brackets.

(e) Electrical.

Photocell shall be rated 105-305V, turn on at 1.5 fcs. with a 3-5 second delay. A manufacturer's warranty of six (6) years shall be provided. Power consumption shall be no greater than 1 watt at 120V.

The LED Light Engine shall operate from a 60 +- 3 cycle AC line power over a voltage range of 80 to 135 Vac rms. Fluctuations in line voltage over the range of 80 to 135 Vac shall not affect luminous intensity by more than +- 10%.

Total harmonic distortion induced into the AC power line by the LED Light Engine, operated at a nominal operating voltage, and at a temperature of +25°C (+77°F), shall not exceed 20%.

The LED Light Engine shall cycled ON and OFF with a photocell as shown on the detail sheet and shall not exceed the following maximum power values:

4-Foot Sign	60 W
6-Foot Sign	90 W
8-Foot Sign	120 W

The signs shall not be energized when traffic signals are powered by an alternate energy source such as a generator or uninterruptable power source (UPS). The signs shall be connected to the generator or UPS bypass circuitry.

(f) Photometric Requirements.

The entire surface of the sign panel shall be evenly illuminated. The average maintained luminous intensity measured across the letters, operating under the conditions defined in Environmental Requirements and Wattage Sections shall be of a minimum value of 100 cd/m^2.

The manufacturer shall make available independent laboratory test results to verify compliance to Voltage Range and Luminous Intensity Distribution Sections.

Twelve (12) 1.25 watt LED units shall be mounted on 1-inch x 22-inch metal cone printed circuit boards (MCPCB). The viewing angle shall be 120 degrees. LED shall have a color temperature of 5200k nominal, CRI of 80 with a life expectancy of 75,000 hrs.

(g) Quality Assurance.

The LED Light Engine shall be manufactured in accordance with a vendor quality assurance (QA) program. The production QA shall include statistically controlled routine tests to ensure minimum performance levels of the LED Light Engine build to meet this specification. QA process and test result documentations shall be kept on file for a minimum period of seven (7) years. The LED Light Engine that does not satisfy the production QA testing performance requirements shall not be labeled, advertised, or sold as conforming to these specifications. Each LED Light Engine shall be identified by a manufacturer's serial number for warranty purposes. LED Light Engines shall be replaced or repaired if they fail to function as intended due to workmanship or material defects within the first sixty (60) months from the date of acceptance. LED Light Engines that exhibit luminous intensities less than the minimum value specified in Photometric Section within the first thirty-six (36) months from the date of acceptance shall be replaced or repaired.

IDOT TRAINING PROGRAM GRADUATE ON-THE-JOB TRAINING SPECIAL PROVISION (TPG)

Effective: August 1, 2012 Revised: February 1, 2014

In addition to the Contractor's equal employment opportunity affirmative action efforts undertaken as elsewhere required by this Contract, the Contractor is encouraged to participate in the incentive program to provide additional on-the-job training to certified graduates of IDOT funded pre-apprenticeship training programs outlined by this Special Provision.

It is the policy of IDOT to fund IDOT pre-apprenticeship training programs throughout Illinois to provide training and skill-improvement opportunities to assure the increased participation of minority groups, disadvantaged persons and women in all phases of the highway construction industry. The intent of this IDOT Training Program Graduate (TPG) Special Provision is to place certified graduates of these IDOT funded pre-apprentice training programs on IDOT project sites when feasible, and provide the graduates with meaningful on-the-job training intended to lead to journey-level employment. IDOT and its sub-recipients, in carrying out the responsibilities of a state contract, shall determine which construction contracts shall include "Training Program Graduate Special Provisions." To benefit from the incentives to encourage the participation in the additional on-the-job training under this Training Program Graduate Special Provision, the Contractor shall make every reasonable effort to employ certified graduates of IDOT funded Pre-apprenticeship Training Programs to the extent such persons are available within a reasonable recruitment area.

Participation pursuant to IDOT's requirements by the Contractor or subcontractor in this Training Program Graduate (TPG) Special Provision entitles the Contractor or subcontractor to be reimbursed at $15.00 per hour for training given a certified TPG on this contract. As approved by the Department, reimbursement will be made for training persons as specified herein. This reimbursement will be made even though the Contractor or subcontractor may receive additional training program funds from other sources for other trainees, provided such other source does not specifically prohibit the Contractor or subcontractor from receiving other reimbursement. For purposes of this Special Provision the Contractor is not relieved of requirements under applicable federal law, the Illinois Prevailing Wage Act, and is not eligible for other training fund reimbursements in addition to the Training Program Graduate (TPG) Special Provision reimbursement.

No payment shall be made to the Contractor if the Contractor or subcontractor fails to provide the required training. It is normally expected that a TPG will begin training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project through completion of the contract, so long as training opportunities exist in his work classification or until he has completed his training program. Should the TPG's employment end in advance of the completion of the contract, the Contractor shall promptly notify the designated IDOT staff member under this Special Provision that the TPG's involvement in the contract has ended and supply a written report of the reason for the end of the involvement, the hours completed by the TPG under the Contract and the number of hours for which the incentive payment provided under this Special Provision will be or has been claimed for the TPG.

The Contractor will provide for the maintenance of records and furnish periodic reports documenting its performance under this 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 $15.00 per hour for certified TRAINEES TRAINING PROGRAM GRADUATE. The estimated total number of hours, unit price and total price have been included in the schedule of prices.

The Contractor shall provide training opportunities aimed at developing full journeyworker in the type of trade or job classification involved. The initial number of TPGs for which the incentive is available under this contract is **2**. During the course of performance of the Contract the Contractor may seek approval from the Department for additional incentive eligible TPGs. In the event the Contractor subcontracts a portion of the contract work, it shall determine how many, if any, of the TPGs 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 Program Graduate Special Provision is made applicable to such subcontract if the TPGs are to be trained by a subcontractor and that the incentive payment is passed on to each subcontractor.

For the Contractor to meet the obligations for participation in this TPG incentive program under this Special Provision, the Department has contracted with several entities to provide screening, tutoring and pre-training to individuals interested in working in the applicable construction classification and has certified those students who have successfully completed the program and are eligible to be TPGs. A designated IDOT staff member, the Director of the Office of Business and Workforce Diversity (OBWD), will be responsible for providing assistance and referrals to the Contractor for the applicable TPGs. For this contract, the Director of OBWD is designated as the responsible IDOT staff member to provide the assistance and referral services related to the placement for this Special Provision. For purposes of this Contract, contacting the Director of OBWD and interviewing each candidate he/she recommends constitutes reasonable recruitment.

Prior to commencing construction, the Contractor shall submit to the Department for approval the TPGs to be trained in each selected classification. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. No employee shall be employed as a TPG in any classification in which he/she has successfully completed a training course leading to journeyman status or in which he/she has been employed as a journeyman. Notwithstanding the on-the-job training purpose of this TPG Special Provision, some offsite training is permissible as long as the offsite training is an integral part of the work of the contract and does not comprise a significant part of the overall training.

Training and upgrading of TPGs of IDOT pre-apprentice training programs is intended to move said TPGs toward journeyman status and is the primary objective of this Training Program Graduate Special Provision. Accordingly, the Contractor shall make every effort to enroll TPGs by recruitment through the IDOT funded TPG programs to the extent such persons are available within a reasonable area of recruitment. The Contractor will be responsible for demonstrating the steps that it has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance and entitled to the Training Program Graduate Special Provision $15.00 an hour incentive.

The Contractor or subcontractor shall provide each TPG with a certificate showing the type and length of training satisfactorily completed.

TEMPORARY INFORMATION SIGNING
Effective: November 13, 1996
Revised: January 2, 2007

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

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

	Item	Article/Section
a.)	Sign Base (Notes 1 & 2)	1090
b.)	Sign Face (Note 3)	1091
c.)	Sign Legends	1092
d.)	Sign Supports	1093
e.)	Overlay Panels (Note 4)	1090.02

Note 1. The Contractor may use 5/8 inch (16 mm) instead of 3/4 inch (19 mm) thick plywood.
Note 2. Type A sheeting can be used on the plywood base.
Note 3. All sign faces shall be Type A except all orange signs shall meet the requirements of Article 1106.01.
Note 4. The overlay panels shall be 0.08 inch (2 mm) thick.

GENERAL CONSTRUCTION REQUIRMENTS

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

Signs which are placed along the roadway and/or within the construction zone shall be installed according to the requirements of Article 701.14 and Article 720.04. The signs shall be 7 ft (2.1 m) above the near edge of the pavement and shall be a minimum of 2 ft (600 mm) beyond the edge of the paved shoulder. A minimum of two (2) posts shall be used.

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

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

Method Of Measurement.

This work shall be measured for payment in square feet (square meters) edge to edge (horizontally and vertically).

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

Basis Of Payment.
This work shall be paid for at the contract unit price per square foot (square meter) for TEMPORARY INFORMATION SIGNING.

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:

Kane County Divsion of Transportation

The entities listed above and their officers, employees, and agents shall be indemnified and held harmless in accordance with Article 107.26.

COATED GALVANIZED STEEL CONDUIT (BDE)

Effective: January 1, 2013
Revised: August 1, 2014

Revise Article 811.03(b) of the Standard Specifications to read:

"(b) Coated Galvanized Steel Conduit. In addition to the methods described in Article 810.05(a) the following methods shall be observed when installing coated conduit.

Coated conduit pipe vise jaw adapters shall be used when the conduit is being clamped to avoid damaging the coating.

Coated conduit shall be cut with a roller cutter or by other means approved by the conduit manufacturer.

After any cutting or threading operations are completed, the bare steel shall be touched up with the conduit manufacturer's touch up compound."

Revise Article 1088.01(a)(3) of the Standard Specifications to read:

"(3) Coated Galvanized Steel Conduit. The conduit prior to coating shall meet the requirements for rigid metal conduit and be manufactured according to NEMA Standard No. RN1.

The coating shall have the following characteristics.

Hardness	85+ Shore A Durometer
Dielectric Strength	400 V/mil @ 60 Hz
Aging	1,000 Hours Atlas Weatherometer
Brittleness Temperature	0 °F (-18 °C) when tested according to ASTM D 746
Elongation	200 percent

The exterior galvanized surfaces shall be coated with a primer before the coating to ensure a bond between the zinc substrate and the coating. The bond strength created shall be greater than the tensile strength of the plastic coating. The nominal thickness of the coating shall be 40 mils (1 mm). The coating shall pass the following bonding test.

Two parallel cuts 1/2 in. (13 mm) apart and 1 1/2 in. (38 mm) in length shall be made with a sharp knife along the longitudinal axis. A third cut shall be made perpendicular to and crossing the longitudinal cuts at one end. The knife shall then be worked under the coating for 1/2 in. (13 mm) to free the coating from the metal.

Using pliers, the freed tab shall be pulled with a force applied vertically and away from the conduit. The tab shall tear rather than cause any additional coating to separate from the substrate.

A two part urethane coating shall be applied to the interior of the conduit. The internal coating shall have a nominal thickness of 2 mils (50 µm). The interior coating shall be applied in a manner so there are no runs, drips, or pinholes at any point. The coating shall not peel, flake, or chip off after a cut is made in the conduit or a scratch is made in the coating. The urethane interior coating applied shall afford sufficient flexibility to permit field bending without cracking or flaking of the interior coating.

All conduit fittings and couplings shall be as specified and recommended by the conduit manufacturer. All conduit fitting covers shall be furnished with stainless steel screws which have been encapsulated with a polyester material on the head to ensure maximum corrosion protection."

80310

CONSTRUCTION AIR QUALITY – DIESEL RETROFIT (BDE)

Effective: June 1, 2010
Revised: January 1, 2014

The reduction of emissions of particulate matter (PM) for off-road equipment shall be accomplished by installing retrofit emission control devices. The term "equipment" refers to diesel fuel powered devices rated at 50 hp and above, to be used on the jobsite in excess of seven calendar days over the course of the construction period on the jobsite (including rental equipment).

Contractor and subcontractor diesel powered off-road equipment assigned to the contract shall be retrofitted using the phased in approach shown below. Equipment that is of a model year older than the year given for that equipment's respective horsepower range shall be retrofitted:

Effective Dates	Horsepower Range	Model Year
June 1, 2010 1/	600-749	2002
	750 and up	2006
June 1, 2011 2/	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006
June 1, 2012 2/	50-99	2004
	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006

1/ Effective dates apply to Contractor diesel powered off-road equipment assigned to the contract.

2/ Effective dates apply to Contractor and subcontractor diesel powered off-road equipment assigned to the contract.

The retrofit emission control devices shall achieve a minimum PM emission reduction of 50 percent and shall be:

a) Included on the U.S. Environmental Protection Agency (USEPA) *Verified Retrofit Technology List* (http://www.epa.gov/cleandiesel/verification/verif-list.htm), or verified by the California Air Resources Board (CARB) (http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm); or

b) Retrofitted with a non-verified diesel retrofit emission control device if verified retrofit emission control devices are not available for equipment proposed to be used on the project, and if the Contractor has obtained a performance certification from the retrofit

device manufacturer that the emission control device provides a minimum PM emission reduction of 50 percent.

Note: Large cranes (Crawler mounted cranes) which are responsible for critical lift operations are exempt from installing retrofit emission control devices if such devices adversely affect equipment operation.

Diesel powered off-road equipment with engine ratings of 50 hp and above, which are unable to be retrofitted with verified emission control devices or if performance certifications are not available which will achieve a minimum 50 percent PM reduction, may be granted a waiver by the Department if documentation is provided showing good faith efforts were made by the Contractor to retrofit the equipment.

Construction shall not proceed until the Contractor submits a certified list of the diesel powered off-road equipment that will be used, and as necessary, retrofitted with emission control devices. The list(s) shall include (1) the equipment number, type, make, Contractor/rental company name; and (2) the emission control devices make, model, USEPA or CARB verification number, or performance certification from the retrofit device manufacturer. Equipment reported as fitted with emissions control devices shall be made available to the Engineer for visual inspection of the device installation, prior to being used on the jobsite.

The Contractor shall submit an updated list of retrofitted off-road construction equipment as retrofitted equipment changes or comes on to the jobsite. The addition or deletion of any diesel powered equipment shall be included on the updated list.

If any diesel powered off-road equipment is found to be in non-compliance with any portion of this special provision, the Engineer will issue the Contractor a diesel retrofit deficiency deduction.

Any costs associated with retrofitting any diesel powered off-road equipment with emission control devices 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 not be grounds for a claim.

Diesel Retrofit Deficiency Deduction

When the Engineer determines that a diesel retrofit deficiency exists, 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.

The deficiency will be based on lack of diesel retrofit emissions control.

If a Contractor accumulates three diesel retrofit deficiency deductions for the same piece of equipment 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 the contract time, waiver of penalties, or be grounds for any claim.

80261

CONTRACT CLAIMS (BDE)

Effective: April 1, 2014

Revise the first paragraph of Article 109.09(a) of the Standard Specifications to read:

"(a) Submission of Claim. All claims filed by the Contractor shall be in writing and in sufficient detail to enable the Department to ascertain the basis and amount of the claim. As a minimum, the following information must accompany each claim submitted."

Revise Article 109.09(e) of the Standard Specifications to read:

"(e) Procedure. The Department provides two administrative levels for claims review.

Level I Engineer of Construction
Level II Chief Engineer/Director of Highways or Designee

(1) Level I. All claims shall first be submitted at Level I. Two copies each of the claim and supporting documentation shall be submitted simultaneously to the District and the Engineer of Construction. The Engineer of Construction, in consultation with the District, will consider all information submitted with the claim and render a decision on the claim within 90 days after receipt by the Engineer of Construction. Claims not conforming to this Article will be returned without consideration. The Engineer of Construction may schedule a claim presentation meeting if in the Engineer of Construction's judgment such a meeting would aid in resolution of the claim, otherwise a decision will be made based on the claim documentation submitted. If a Level I decision is not rendered within 90 days of receipt of the claim, or if the Contractor disputes the decision, an appeal to Level II may be made by the Contractor.

(2) Level II. An appeal to Level II shall be made in writing to the Engineer of Construction within 45 days after the date of the Level I decision. Review of the claim at Level II shall be conducted as a full evaluation of the claim. A claim presentation meeting may be scheduled if the Chief Engineer/Director of Highways determines that such a meeting would aid in resolution of the claim, otherwise a decision will be made based on the claim documentation submitted. A Level II final decision will be rendered within 90 days of receipt of the written request for appeal.

Full compliance by the Contractor with the provisions specified in this Article is a contractual condition precedent to the Contractor's right to seek relief in the Court of Claims. The Director's written decision shall be the final administrative action of the Department. Unless the Contractor files a claim for adjudication by the Court of Claims within 60 days after the date of the written decision, the failure to file shall constitute a release and waiver of the claim."

80335

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)

Effective: September 1, 2000
Revised: August 2, 2011

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. The 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 12.00 % of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will 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 for 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 shall 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 website at 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 if 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 that enough DBE participation has been obtained or document that good faith efforts of the bidder, in the event enough DBE participation has not been obtained, 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 documents 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 document 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 or 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 for the determination.

(c) The bidder may request administrative reconsideration of a determination adverse to the bidder within the five working days after the 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 issues raised in the determination statement of reasons, provided the documentation and arguments address efforts made prior to submitting the bid. 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 documentation and 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 consideration, 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 is 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 of 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. All work indicated for performance by an approved DBE shall be performed, managed, and supervised by the DBE executing the Participation Statement.

(a) NO AMENDMENT. 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) TERMINATION OR REPLACEMENT. The Contractor shall not terminate or replace a DBE listed on the approved Utilization Plan, or perform with other forces work designated for a listed DBE except as provided in the Special Provision.

(c) CHANGES TO WORK. Any deviation from the DBE condition-of-award or contract plans, specifications, or special provisions must be approved, in writing, by the Department as provided elsewhere in the Contract. 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. 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. If the commitment of work is in the form of additional tasks assigned to an existing subcontract, than 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.

(d) ALTERNATIVE WORK METHODS. 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 reasonable 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) TERMINATION AND REPLACEMENT PROCEDURES. The Contractor shall not terminate or replace a DBE subcontractor listed in the approved Utilization Plan without prior written consent. This includes, but is not limited to, instances in which the Contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm. Written consent will be granted only if the Bureau of Small Business Enterprises agrees, for reasons stated in its concurrence document, that the Contractor has good cause to terminate or replace the DBE firm. Before transmitting to the Bureau of Small Business Enterprises any request to terminate and/or substitute a DBE subcontractor, the Contractor shall give notice in writing to the DBE subcontractor, with a copy to the Bureau, of its intent to request to terminate and/or substitute, and the reason for the request. The Contractor shall give the DBE five days to respond to the Contractor's notice. The DBE so notified shall advise the Bureau and the Contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why the Bureau should not approve the Contractor's action. If required in a particular case as a matter of public necessity, the Bureau may provide a response period shorter than five days.

For purposes of this paragraph, good cause includes the following circumstances:

(1) The listed DBE subcontractor fails or refuses to execute a written contract;

(2) The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor;

(3) The listed DBE subcontractor fails or refuses to meet the prime Contractor's reasonable, nondiscriminatory bond requirements;

(4) The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;

(5) The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1,200 or applicable state law.

(6) You have determined that the listed DBE subcontractor is not a responsible contractor;

(7) The listed DBE subcontractor voluntarily withdraws from the projects and provides to you written notice of its withdrawal;

(8) The listed DBE is ineligible to receive DBE credit for the type of work required;

(9) A DBE owner dies or becomes disabled with the result that the listed DBE contractor is unable to complete its work on the contract;

(10) Other documented good cause that compels the termination of the DBE subcontractor. Provided, that good cause does not exist if the prime Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the prime Contractor can self-perform the work for which the DBE contractor was engaged or so that the prime Contractor can substitute another DBE or non-DBE contractor after contract award.

When a DBE is terminated, or fails to complete its work on the Contract for any reason the Contractor shall make a good faith effort to find another DBE to substitute for the original DBE to perform at least the same amount of work under the contract as the terminated DBE to the extent needed to meet the established Contract goal.

(f) PAYMENT RECORDS. 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 BDE 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 (h) of this part.

(g) ENFORCEMENT. 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.

(h) RECONSIDERATION. Notwithstanding any other provision of the contract, including but not limited to Article 109.09 of the Standard Specifications, the Contractor my 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.

80029

PAYROLLS AND PAYROLL RECORDS (BDE)

Effective: January 1, 2014

FEDERAL AID CONTRACTS. Revise the following section of Check Sheet #1 of the Recurring Special Provisions to read:

"STATEMENTS AND PAYROLLS

The payroll records shall include the worker's name, the worker's address, the worker's telephone number when available, the worker's social security number, the worker's classification or classifications, the worker's gross and net wages paid in each pay period, the worker's number of hours worked each day, the worker's starting and ending times of work each day. However, any Contractor or subcontractor who remits contributions to a fringe benefit fund that is not jointly maintained and jointly governed by one or more employers and one or more labor organization must additionally submit the worker's hourly wage rate, the worker's hourly overtime wage rate, the worker's hourly fringe benefit rates, the name and address of each fringe benefit fund, the plan sponsor of each fringe benefit, if applicable, and the plan administrator of each fringe benefit, if applicable.

The Contractor and each subcontractor shall submit payroll records to the Engineer each week from the start to the completion of their respective work, except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead, the payrolls shall include an identification number for each employee (e.g., the last four digits of the employee's social security number). In addition, starting and ending times of work each day may be omitted from the payroll records submitted to the Engineer. The submittals shall be on the Department's form SBE 48, or an approved facsimile. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate box ("No Work", "Suspended", or "Complete") checked on the form."

STATE CONTRACTS. Revise Section IV of Check Sheet #5 of the Recurring Special Provisions to read:

"IV. COMPLIANCE WITH THE PREVAILING WAGE ACT

1. Prevailing Wages. All wages paid by the Contractor and each subcontractor shall be in compliance with The Prevailing Wage Act (820 ILCS 130), as amended, except where a prevailing wage violates a federal law, order, or ruling, the rate conforming to the federal law, order, or ruling shall govern. The Contractor shall be responsible to notify each subcontractor of the wage rates set forth in this contract and any revisions thereto. If the Department of Labor revises the wage rates, the Contractor will not be allowed additional compensation on account of said revisions.

2. Payroll Records. The Contractor and each subcontractor shall make and keep, for a period of five years from the later of the date of final payment under the contract or completion of the contract, records of the wages paid to his/her workers. The payroll

records shall include the worker's name, the worker's address, the worker's telephone number when available, the worker's social security number, the worker's classification or classifications, the worker's gross and net wages paid in each pay period, the worker's number of hours worked each day, the worker's starting and ending times of work each day. However, any contractor or subcontractor who remits contributions to a fringe benefit fund that is not jointly maintained and jointly governed by one or more employers and one or more labor organization must additionally submit the worker's hourly wage rate, the worker's hourly overtime wage rate, the worker's hourly fringe benefit rates, the name and address of each fringe benefit fund, the plan sponsor of each fringe benefit, if applicable, and the plan administrator of each fringe benefit, if applicable. Upon seven business days' notice, these records shall be available at a location within the State, during reasonable hours, for inspection by the Department or the Department of Labor; and Federal, State, or local law enforcement agencies and prosecutors.

3. Submission of Payroll Records. The Contractor and each subcontractor shall submit payroll records to the Engineer each week from the start to the completion of their respective work, except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall include an identification number for each employee (e.g., the last four digits of the employee's social security number). In addition, starting and ending times of work each day may be omitted from the payroll records submitted to the Engineer. The submittals shall be on the Department's form SBE 48, or an approved facsimile. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate box ("No Work", "Suspended", or "Complete") checked on the form.

   Each submittal shall be accompanied by a statement signed by the Contractor or subcontractor, or an officer, employee, or officer thereof, which avers that: (i) he or she has examined the records and such records are true and accurate; (ii) the hourly rate paid to each worker is not less than the general prevailing rate of hourly wages required by the Act; and (iii) the Contractor or subcontractor is aware that filing a payroll record that he/she knows to be false is a Class A misdemeanor.

4. Employee Interviews. The Contractor and each subcontractor shall permit his/her employees to be interviewed on the job, during working hours, by compliance investigators of the Department or the Department of Labor."

80331

PORTLAND CEMENT CONCRETE EQUIPMENT (BDE)

Effective: November 1, 2013

Add the following to the first paragraph of Article 1103.03(a)(5) of the Standard Specifications to read:

"As an alternative to a locking key, the start and finish time for mixing may be automatically printed on the batch ticket. The start and finish time shall be reported to the nearest second."

80326

PROGRESS PAYMENTS (BDE)

Effective: November 2, 2013

Revise Article 109.07(a) of the Standard Specifications to read:

"(a) Progress Payments. At least once each month, the Engineer will make a written estimate of the quantity of work performed in accordance with the contract, and the value thereof at the contract unit prices. The amount of the estimate approved as due for payment will be vouchered by the Department and presented to the State Comptroller for payment. No amount less than $1000.00 will be approved for payment other than the final payment.

Progress payments may be reduced by liens filed pursuant to Section 23(c) of the Mechanics' Lien Act, 770 ILCS 60/23(c).

If a Contractor or subcontractor has defaulted on a loan issued under the Department's Disadvantaged Business Revolving Loan Program (20 ILCS 2705/2705-610), progress payments may be reduced pursuant to the terms of that loan agreement. In such cases, the amount of the estimate related to the work performed by the Contractor or subcontractor, in default of the loan agreement, will be offset, in whole or in part, and vouchered by the Department to the Working Capital Revolving Fund or designated escrow account. Payment for the work shall be considered as issued and received by the Contractor or subcontractor on the date of the offset voucher. Further, the amount of the offset voucher shall be a credit against the Department's obligation to pay the Contractor, the Contractor's obligation to pay the subcontractor, and the Contractor's or subcontractor's total loan indebtedness to the Department. The offset shall continue until such time as the entire loan indebtedness is satisfied. The Department will notify the Contractor and Fund Control Agent in a timely manner of such offset. The Contractor or subcontractor shall not be entitled to additional payment in consideration of the offset.

The failure to perform any requirement, obligation, or term of the contract by the Contractor shall be reason for withholding any progress payments until the Department determines that compliance has been achieved."

80328

RAILROAD PROTECTIVE LIABILITY INSURANCE (5 and 10) (BDE)

Effective: January 1, 2006

Description. Railroad Protective Liability and Property Damage Liability Insurance shall be carried according to Article 107.11 of the Standard Specifications, except the limits shall be a minimum of $5,000,000 combined single limit per occurrence for bodily injury liability and property damage liability with an aggregate limit of $10,000,000 over the life of the policy. A separate policy is required for each railroad unless otherwise noted.

NAMED INSURED & ADDRESS	NUMBER & SPEED OF PASSENGER TRAINS	NUMBER & SPEED OF FREIGHT TRAINS
Chicago Central and Pacific Railroad Company and its Parents 17641 South Ashland Ave. Homewood, IL 60430-1345	0	10 @ 50 mph
DOT/AAR No.: 289908W RR Division: North	RR Mile Post: 40.07 RR Sub-Division: Freeport	**(Grade Separated)**
For Freight/Passenger Information Contact: Chris Garman For Insurance Information Contact: Rob Glass		Phone: 708/332-3557 Phone: 708/332-6673
Chicago Central and Pacific Railroad Company and its Parents 17641 South Ashland Ave. Homewood, IL 60430-1345	0	10 @ 50 mph
DOT/AAR No.: 289905B RR Division: North	RR Mile Post: 38.15 RR Sub-Division: Freeport	**(Grade Separated)**
For Freight/Passenger Information Contact: Chris Garman For Insurance Information Contact: Rob Glass		Phone: 708/332-3557 Phone: 708/332-6673

NAMED INSURED & ADDRESS	NUMBER & SPEED OF PASSENGER TRAINS	NUMBER & SPEED OF FREIGHT TRAINS
Union Pacific Railroad 1400 Douglas Street Omaha, NE 68179	0	2 @ 25 mph
DOT/AAR No.: 174540B RR Division: Chicago	RR Mile Post: 37.79 RR Sub-Division: Belvidere	**(Grade Separated)**
For Freight/Passenger Information Contact: Rich Ellison For Insurance Information Contact: Bill Smith/Marsh USA		Phone: 312/777-2048 Phone: 800/729-7001

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

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

The Contractor will be advised when the Department has received approval of the insurance from the railroad(s). Before any work begins on railroad right-of-way, the Contractor shall submit to the Engineer evidence that the required insurance has been approved by the railroad(s). The Contractor shall also provide the Engineer with the expiration date of each required policy.

Basis of Payment. Providing Railroad Protective Liability and Property Damage Liability Insurance will be paid for at the contract unit price per Lump Sum for RAILROAD PROTECTIVE LIABILITY INSURANCE.

80157

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (BDE)

Effective: January 1, 2012
Revised: November 2, 2012

Revise Article 669.01 of the Standard Specifications to read:

"**669.01 Description.** This work shall consist of the transportation and proper disposal of contaminated soil and water. This work shall also consist of the removal, transportation, and proper disposal of underground storage tanks (UST), their content and associated underground piping to the point where the piping is above the ground, including determining the content types and estimated quantities."

Revise Article 669.08 of the Standard Specifications to read:

"**669.08 Contaminated Soil and/or Groundwater Monitoring.** The Contractor shall hire a qualified environmental firm to monitor the area containing the regulated substances. The affected area shall be monitored with a photoionization detector (PID) utilizing a lamp of 10.6eV or greater or a flame ionization detector (FID). Any field screen reading on the PID or FID in excess of background levels indicates the potential presence of contaminated material requiring handling as a non-special waste, special waste, or hazardous waste. No excavated soils can be taken to a clean construction and demolition debris (CCDD) facility or an uncontaminated soil fill operation with detectable PID or FID meter readings that are above background. The PID or FID meter shall be calibrated on-site and background level readings taken and recorded daily. All testing shall be done by a qualified engineer/technician. Such testing and monitoring shall be included in the work. The Contractor shall identify the exact limits of removal of non-special waste, special waste, or hazardous waste. All limits shall be approved by the Engineer prior to excavation. The Contractor shall take all necessary precautions.

Based upon the land use history of the subject property and/or PID or FID readings indicating contamination, a soil or groundwater sample shall be taken from the same location and submitted to an approved laboratory. Soil or groundwater samples shall be analyzed for the contaminants of concern, including pH, based on the property's land use history or the parameters listed in the maximum allowable concentration (MAC) for chemical constituents in uncontaminated soil established pursuant to Subpart F of 35 Illinois Administrative Code 1100.605. The analytical results shall serve to document the level of soil contamination. Soil and groundwater samples may be required at the discretion of the Engineer to verify the level of soil and groundwater contamination.

Samples shall be grab samples (not combined with other locations). The samples shall be taken with decontaminated or disposable instruments. The samples shall be placed in sealed containers and transported in an insulated container to the laboratory. The container shall maintain a temperature of 39 °F (4 °C). All samples shall be clearly labeled. The labels shall indicate the sample number, date sampled, location and elevation, and any other observations.

The laboratory shall use analytical methods which are able to meet the lowest appropriate practical quantitation limits (PQL) or estimated quantitation limit (EQL) specified in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods", EPA Publication No. SW-846 and "Methods for the Determination of Organic Compounds in Drinking Water", EPA, EMSL, EPA-600/4-88/039. For parameters where the specified cleanup objective is below the acceptable detection limit (ADL), the ADL shall serve as the cleanup objective. For other parameters the ADL shall be equal to or below the specified cleanup objective."

Replace the first two paragraphs of Article 669.09 of the Standard Specifications with the following:

"**669.09 Contaminated Soil and/or Groundwater Management and Disposal.** The management and disposal of contaminated soil and/or groundwater shall be according to the following:

(a) Soil Analytical Results Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels exceed the most stringent maximum allowable concentration (MAC) for chemical constituents in uncontaminated soil established pursuant to Subpart F of 35 Illinois Administrative Code 1100.605, the soil shall be managed as follows:

(1) When analytical results indicate inorganic chemical constituents exceed the most stringent MAC but they are still considered within area background levels by the Engineer, the excavated soil can be utilized within the construction limits as fill, when suitable. Such soil excavated for storm sewers can be placed back into the excavated trench as backfill, when suitable, unless trench backfill is specified. If the soils cannot be utilized within the construction limits, they shall be managed and disposed of off-site as a non-special waste, special waste, or hazardous waste as applicable.

(2) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for a Metropolitan Statistical Area (MSA) County, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an uncontaminated soil fill operation within an MSA County provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.

(3) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, or the MAC within the Chicago corporate limits, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an uncontaminated soil fill operation within an MSA County excluding Chicago or within the Chicago corporate limits provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.

(4) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an uncontaminated soil fill operation within an MSA County excluding Chicago provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.

(5) When the Engineer determines soil cannot be managed according to Articles 669.09(a)(1) through (a)(4) above, the soil shall be managed and disposed of off-site as a non-special waste, special waste, or hazardous waste as applicable.

(b) Soil Analytical Results Do Not Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels do not exceed the most stringent MAC but the pH of the soil is less than 6.25 or greater than 9.0, the excavated soil can be utilized within the construction limits or managed and disposed of off-site as "uncontaminated soil" according to Article 202.03. However the excavated soil cannot be taken to a CCDD facility or an uncontaminated soil fill operation.

(c) Groundwater. When groundwater analytical results indicate the detected levels are above Appendix B, Table E of 35 Illinois Administrative Code 742, the most stringent Tier 1 Groundwater Remediation Objectives for Groundwater Component of the Groundwater Ingestion Route for Class 1 groundwater, the groundwater shall be managed off-site as a special waste.

All groundwater encountered within lateral trenches may be managed within the trench and allowed to infiltrate back into the ground. If the groundwater cannot be managed within the trench it must be removed as a special or hazardous waste. The Contractor is prohibited from managing groundwater within the trench by discharging it through any existing or new storm sewer. The Contractor shall install backfill plugs within the area of groundwater contamination.

One backfill plug shall be placed down gradient to the area of groundwater contamination. Backfill plugs shall be installed at intervals not to exceed 50 ft (15 m). Backfill plugs are to be 4 ft (1.2 m) long, measured parallel to the trench, full trench width and depth. Backfill plugs shall not have any fine aggregate bedding or backfill, but shall be entirely cohesive soil or any class of concrete. The Contractor shall provide test data that the material has a permeability of less than 10^{-7} cm/sec according to ASTM D 5084, Method A or per another test method approved by the Engineer."

Revise Article 669.14 of the Standard Specifications to read:

"**669.14 Final Environmental Construction Report.** At the end of the project, the Contractor will prepare and submit three copies of the Environmental Construction Report on the activities conducted during the life of the project, one copy shall be submitted to the Resident Engineer, one copy shall be submitted to the District's Environmental Studies Unit, and one copy shall be submitted with an electronic copy in Adode.pdf format to the Geologic

and Waste Assessment Unit, Bureau of Design and Environment, IDOT, 2300 South Dirksen Parkway, Springfield, Illinois 62764. The technical report shall include all pertinent information regarding the project including, but not limited to:

(a) Measures taken to identify, monitor, handle, and dispose of soil or groundwater containing regulated substances, to prevent further migration of regulated substances, and to protect workers,

(b) Cost of identifying, monitoring, handling, and disposing of soil or groundwater containing regulated substances, the cost of preventing further migration of regulated substances, and the cost for worker protection from the regulated substances. All cost should be in the format of the contract pay items listed in the contract plans (identified by the preliminary environmental site investigation (PESA) site number),

(c) Plan sheets showing the areas containing the regulated substances,

(d) Field sampling and testing results used to identify the nature and extent of the regulated substances,

(e) Waste manifests (identified by the preliminary environmental site investigation (PESA) site number) for special or hazardous waste disposal, and

(f) Landfill tickets (identified by the preliminary environmental site investigation (PESA) site number) for non-special waste disposal."

Revise the second paragraph of Article 669.16 of the Standard Specifications to read:

"The transportation and disposal of soil and other materials from an excavation determined to be contaminated will be paid for at the contract unit price per cubic yard (cubic meter) for NON-SPECIAL WASTE DISPOSAL, SPECIAL WASTE DISPOSAL, or HAZARDOUS WASTE DISPOSAL."

80283

REMOVAL AND DISPOSAL OF SURPLUS MATERIALS (BDE)

Effective: November 2, 2012

Revise the first four paragraphs of Article 202.03 of the Standard Specifications to read:

"**202.03 Removal and Disposal of Surplus, Unstable, Unsuitable, and Organic Materials.** Suitable excavated materials shall not be wasted without permission of the Engineer. The Contractor shall dispose of all surplus, unstable, unsuitable, and organic materials, in such a manner that public or private property will not be damaged or endangered.

Suitable earth, stones and boulders naturally occurring within the right-of-way may be placed in fills or embankments in lifts and compacted according to Section 205. Broken concrete without protruding metal bars, bricks, rock, stone, reclaimed asphalt pavement with no expansive aggregate, or uncontaminated dirt and sand generated from construction or demolition activities may be used in embankment or in fill. If used in fills or embankments, these materials shall be placed and compacted to the satisfaction of the Engineer; shall be buried under a minimum of 2 ft (600 mm) of earth cover (except when the materials include only uncontaminated dirt); and shall not create an unsightly appearance or detract from the natural topographic features of an area. Broken concrete without protruding metal bars, bricks, rock, or stone may be used as riprap as approved by the Engineer. If the materials are used for fill in locations within the right-of-way but outside project construction limits, the Contractor must specify to the Engineer, in writing, how the landscape restoration of the fill areas will be accomplished. Placement of fill in such areas shall not commence until the Contractor's landscape restoration plan is approved by the Engineer.

Aside from the materials listed above, all other construction and demolition debris or waste shall be disposed of in a licensed landfill, recycled, reused, or otherwise disposed of as allowed by State or Federal laws and regulations. When the Contractor chooses to dispose of uncontaminated soil at a clean construction and demolition debris (CCDD) facility or at an uncontaminated soil fill operation, it shall be the Contractor's responsibility to have the pH of the material tested to ensure the value is between 6.25 and 9.0, inclusive. A copy of the pH test results shall be provided to the Engineer.

A permit shall be obtained from IEPA and made available to the Engineer prior to open burning of organic materials (i.e., plant refuse resulting from pruning or removal of trees or shrubs) or other construction or demolition debris. Organic materials originating within the right-of-way limits may be chipped or shredded and placed as mulch around landscape plantings within the right-of-way when approved by the Engineer. Chipped or shredded material to be placed as mulch shall not exceed a depth of 6 in. (150 mm)."

80319

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 2 . 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 then 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

WEEKLY DBE TRUCKING REPORTS (BDE)

Effective: June 2, 2012

The Contractor shall provide a weekly report of Disadvantaged Business Enterprise (DBE) trucks hired by the Contractor or subcontractors (i.e. not owned by the Contractor or subcontractors) that are used on the jobsite; or used for the delivery and/or removal of equipment/material to and from the jobsite. The jobsite shall also include offsite locations, such as plant sites or storage sites, when those locations are used solely for this contract.

The report shall be submitted on the form provided by the Department within ten business days following the reporting period. The reporting period shall be Monday through Sunday for each week reportable trucking activities occur. The report shall be submitted to the Engineer and a copy shall be provided to the district EEO Officer.

Any costs associated with providing weekly DBE trucking reports 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.

80302

WORKING DAYS (BDE)

Effective: January 1, 2002

The Contractor shall complete the work within 575 working days.

80071

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, 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.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

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, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) 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 provisions of the Americans with 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 contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its 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, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program 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 minorities and women.

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 minorities and women 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 employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women 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, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such 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 its 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 their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

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. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

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 employees who are minorities and women 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 good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 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 good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith 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 contracting agency 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 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 minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. 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 contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. 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. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor 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 DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. 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 the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours 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; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency 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. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. Davis-Bacon and Related Act Provisions

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics 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 issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, 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 29 CFR 5.5(a)(4). 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. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) 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.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), 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 Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The 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.

(3) In the event the contractor, the laborers or mechanics to be employed in the 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 questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. 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 shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs 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.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor 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, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, 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 contracting agency 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.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of 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. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) 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 shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a “Statement of Compliance,” signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each 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 Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) 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 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, 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 FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action 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.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

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 U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or 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 Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen 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 worker 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 on 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 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's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

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 journeymen 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 determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

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 U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman 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 wage rate on the wage determination which provides for less than full fringe benefits for apprentices. 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.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor 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. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. 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.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for

debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 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 U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the 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 or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys 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 (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

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 contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased 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 or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

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 or propose 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 VI 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 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 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 contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

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 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. 3704).

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.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

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, Form FHWA-1022 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:

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 under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier 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 first tier 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 first tier 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 contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier 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," "participant," "person," "principal," and "voluntarily excluded,"

as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first 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 entering into this transaction.

g. The prospective first tier 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 Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

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 is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective 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.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-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;

(3) 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 (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

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," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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 exceeding the $25,000 threshold.

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 is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

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 dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

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 participating in covered transactions 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.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is 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 its bid or proposal that the participant 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.