

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.idot.illinois.gov/doing-business/procurements/construction-services/construction-bulletins/transportation-bulletin/index#TransportationBulletin> 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.DE-Contracts@Illinois.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 PAPER 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 sure 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: 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)** – 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 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 – Do Not Submit with Bid** The bidder shall submit a Disadvantaged Business Utilization Plan on completed Department forms SBE 2025 and 2026. (1) The final Utilization Plan must be submitted within five calendar days after the date of the letting. (2) To meet the five day requirement, the bidder may send the Utilization Plan electronically by scanning and sending to DOT.DBE.UP@illinois.gov or faxing to (217) 785-1524. The subject line must include the bid Item Number and the Letting date. The Utilization Plan should be sent as one .pdf file, rather than multiple files and emails for the same Item Number. It is the responsibility of the bidder to obtain confirmation of email or fax delivery.

Alternatively, the Utilization Plan may be sent by certified mail or delivery service within the five calendar day period. If a question arises concerning the mailing date of a Utilization Plan, the mailing date will be established by the U.S. Postal Service postmark on the certified mail receipt from the U.S. Postal Service or the receipt issued by a delivery service. It is the responsibility of the bidder to ensure the postmark or receipt date is affixed within the five days if the bidder intends to rely upon mailing or delivery to satisfy the submission day requirement. The Utilization Plan is to be submitted to:

Illinois Department of Transportation
 Bureau of Small Business Enterprises
 Contract Compliance Section
 2300 South Dirksen Parkway, Room 319
 Springfield, Illinois 62764

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.

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 January 20, 2017

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. 61C41
KANE County
Section 13-00215-10-PV
Route FAU 2298 (Longmeadow Parkway)
Project RS-M-4003(397)
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

Page intentionally left blank

RETURN WITH BID



PROPOSAL

TO THE DEPARTMENT OF TRANSPORTATION

1. Proposal of _____

Taxpayer Identification Number (Mandatory) _____

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

**Contract No. 61C41
KANE County
Section 13-00215-10-PV
Project RS-M-4003(397)
Route FAU 2298 (Longmeadow Parkway)
District 1 Construction Funds**

Roadway reconstruction, new roadway and alignment, storm sewers, traffic signals, pedestrian path, retaining wall and landscaping starting at the intersection of Randall Road and Longmeadow Parkway and ends approximately 0.39 miles east of White Chapel Lane.

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.

RETURN WITH BID

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 transact business or conduct affairs 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)

COUNTY NAME	CODE	DIST	SECTION NUMBER	PROJECT NUMBER	ROUTE
KANE	089	01	13-00215-10-PV	RS-M-4003/397/000	FAU 2298

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
A2000220	T-ACERX FREM MM 2-1/2	EACH	45.000	X	=		
A2002020	T-AESCULUS GLA 2-1/2	EACH	7.000	X	=		
A2002820	T-CATALPA SPEC 2-1/2	EACH	1.000	X	=		
A2002884	T-CELTIS OCCID CL 3	EACH	18.000	X	=		
A2003120	T-CELTIS OC WC 2-1/2	EACH	15.000	X	=		
A2004514	T-GINKGO BIL AG 2-1/2	EACH	14.000	X	=		
A2004720	T-GLED TRI-I SM 2-1/2	EACH	29.000	X	=		
A2005050	T-GYMNOC DIO PT 2-1/2	EACH	31.000	X	=		
A2005520	T-NYSSA SYLVAT 2-1/2	EACH	3.000	X	=		
A2005920	T-PLAT X ACR BG 2-1/2	EACH	12.000	X	=		
A2005960	T-PLAT X ACR MC 2.5	EACH	57.000	X	=		
A2006520	T-QUERCUS BICOL 2-1/2	EACH	70.000	X	=		
A2006606	T-QUERCUS COCCI 2-1/2	EACH	5.000	X	=		
A2006720	T-QUERCUS MACR 2-1/2	EACH	9.000	X	=		
A2007120	T-QUERCUS RUBRA 2-1/2	EACH	95.000	X	=		

FAU 2298
 13-00215-10-PV
 KANE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 61C41

ECMS002 DTGECM03 ECMR003 PAGE 2
 RUN DATE - 12/14/16
 RUN TIME - 183021

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
A2007132	T-QUERCUS SCHUETTI 2	EACH	7.000				
A2007820	T-TILIA AMER 2-1/2	EACH	67.000				
A2007920	T-TILIA AMER RD 2-1/2	EACH	5.000				
A2008470	T-ULMUS AMER PRNC 2.5	EACH	30.000				
A2008517	T-ULMUS JAP X WIL 2.5	EACH	53.000				
A2008519	T-ULMUS MRTN G TE 2.5	EACH	80.000				
B2001167	T-CERCIS CAN (E R) 8'	EACH	3.000				
B2001266	T-CORNUS ALT CL 6'	EACH	3.000				
B2001770	T-CRAT CRU-VAR IN 8MH	EACH	24.000				
B2004576	T-MALUS R P TF 2 1/2	EACH	32.000				
B2005068	T-MALUS SND CL 7'	EACH	3.000				
B2006168	T-SYRING PEK M CL 7'	EACH	14.000				
D2001988	E-PICEA GLAU DEN 8'	EACH	12.000				
D2002188	E-PICEA PUNGENS 8'	EACH	12.000				
D2002788	E-PINUS NIGRA 8'	EACH	14.000				

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
K0013030	P PL WETLND 2X4 DPPLG	UNIT	153.000	X	=	=	=
K0026830	SHRUB REMOVAL	EACH	78.000	X	=	=	=
K0029614	WEED CONT AQUATIC	GALLON	6.000	X	=	=	=
K0029624	WEED CONTROL TEASEL	GALLON	6.000	X	=	=	=
K0029634	WEED CONTR PRE-EM GRN	POUND	485.000	X	=	=	=
K1005421	SEEDING SPL	ACRE	1.000	X	=	=	=
XX007251	INT VID TMS W PTZ CAM	EACH	2.000	X	=	=	=
XX007879	EROSION CON BLANK SP2	SQ YD	7,967.000	X	=	=	=
XX007953	NETWORK CONFIGURATION	L SUM	1.000	X	=	=	=
XX008392	OUTDR RTD NTRK CABLE	FOOT	390.000	X	=	=	=
XX008453	ETHERNET SWITCH TYP 1	EACH	1.000	X	=	=	=
XX008454	ETHERNET SWITCH TYP 2	EACH	1.000	X	=	=	=
XX008963	3 CELL FAB INNERDUCT	FOOT	5,201.000	X	=	=	=
XX009142	PAVMT MRKG REM SPL	SQ FT	41,210.000	X	=	=	=
XZ127900	RETAINING WALL REMOV	FOOT	588.000	X	=	=	=

FAU 2298
 13-00215-10-PV
 KANE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 61C41

ECMS002 DTGECM03 ECMR003 PAGE 4
 RUN DATE - 12/14/16
 RUN TIME - 183021

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
X0322464	ABAN FILL EX SAN MAN	EACH	1.000 X				
X0322871	MAINT EROS CONT SYS	L SUM	1.000 X				
X0322936	REMOV EX FLAR END SEC	EACH	1.000 X				
X0324045	SED CON STAB CON EN R	EACH	2.000 X				
X0324079	EXIST FIELD TILE REM	FOOT	1,830.000 X				
X0324085	EM VEH P S LSC 20 3C	FOOT	710.000 X				
X0324775	SED CON STAB CON EN M	SQ YD	355.000 X				
X0324993	SEP JT W/SLEEP SLAB	FOOT	299.000 X				
X0325405	FILL EX STORM SEWERS	CU YD	11.000 X				
X0325476	RADAR VEH DETECT SYST	EACH	1.000 X				
X0326694	PLUG EX STORM SEWERS	CU YD	2.000 X				
X0326712	ABAN FILL EX SAN SEW	EACH	1.000 X				
X0326806	WASHOUT BASIN	L SUM	1.000 X				
X0327036	BIKE PATH REM	SQ YD	6,703.000 X				
X0327139	AGG COLUMN GRND IMPRV	L SUM	1.000 X				

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
X0327297	REMOVE BARRICADES	EACH	109.000				
X0327979	PAVMT MRKG REM GRIND	SQ FT	20,442.000				
X0327980	PAVMT MRKG REM WTR BL	SQ FT	9,488.000				
X0426200	DEWATERING	L SUM	1.000				
X0487850	SAN SEW REMOV 15	FOOT	33.000				
X1200015	VALVE VAULTS ABANDON	EACH	1.000				
X1400081	FAC T SUPER P CAB SP	EACH	1.000				
X2111100	TOPSOIL EXC & PLAC SP	CU YD	26,132.000				
X2501800	SEEDING CL 4 MOD	ACRE	2.000				
X2502024	SEEDING CL 4B MOD	ACRE	2.000				
X2510635	HD EROS CONT BLANK SP	SQ YD	217.000				
X2511630	EROS CONT BLANKET SPL	SQ YD	22,657.000				
X2511640	EROS CONT BLANKET MOD	SQ YD	30,348.000				
X2800400	PERIMETER EROS BAR SP	FOOT	25,398.000				
X4021000	TEMP ACCESS- PRIV ENT	EACH	4.000				

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
X4023000	TEMP ACCESS- ROAD	EACH	6.000	=		=	
X4024100	TEMP ACCESS WINTERIZE	SQ YD	181.000	=		=	
X5510100	STORM SEWER REMOVAL	FOOT	72.000	=		=	
X5610651	ABAN EX WM FILL CLSM	FOOT	109.000	=		=	
X5630008	CUT & CAP EX 8 WM	EACH	2.000	=		=	
X6020096	MH TA 6D W/2 T1FCL RP	EACH	5.000	=		=	
X6020710	CB ADJ W/SPL F&G	EACH	2.000	=		=	
X6022402	MAN TA 4D T1F CL SPL	EACH	2.000	=		=	
X6022712	CB TA 4 DIA W/SPL F&G	EACH	5.000	=		=	
X6022810	MAN SAN 4 DIA T1F CL	EACH	1.000	=		=	
X6023508	INLETS TA W/SPL F&G	EACH	4.000	=		=	
X6026050	SANITARY MANHOLE ADJ	EACH	1.000	=		=	
X6026054	SAN MAN REMOVED	EACH	1.000	=		=	
X6061100	CONC MED TSB SPL	SQ FT	3,680.000	=		=	
X6650200	WOV W FENCE SPL	FOOT	2,188.000	=		=	

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
X7010216	TRAF CONT & PROT SPL	L SUM	1.000 X	=	=	=	=
X7030025	WET REF TEM TP T3 L&S	SQ FT	872.000 X	=	=	=	=
X7030030	WET REF TEM TAPE T3 4	FOOT	108,882.000 X	=	=	=	=
X7030040	WET REF TEM TAPE T3 6	FOOT	5,391.000 X	=	=	=	=
X7030050	WET REF TEM TPE T3 12	FOOT	60.000 X	=	=	=	=
X7030055	WET REF TEM TPE T3 24	FOOT	766.000 X	=	=	=	=
X7040125	PIN TEMP CONC BARRIER	EACH	207.000 X	=	=	=	=
X7800100	PT PVT MK- RAISED MED	SQ FT	150.000 X	=	=	=	=
X8140105	HANDHOLE SPL	EACH	2.000 X	=	=	=	=
X8211190	LUM LED HM 190W SPL	EACH	6.000 X	=	=	=	=
X8620200	UNINTER POWER SUP SPL	EACH	2.000 X	=	=	=	=
X8710031	FIB OPT CBL 36F SM	FOOT	7,445.000 X	=	=	=	=
X8730104	ELCBL C SIGNAL 10 2C	FOOT	490.000 X	=	=	=	=
X8730250	ELCBL C 20 3C TW SH	FOOT	397.000 X	=	=	=	=
X8760200	ACCESSIBLE PED SIGNAL	EACH	10.000 X	=	=	=	=

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
Z0013796	SED CON STAB CONST EN	SQ YD	355.000 X	=	=	=	=
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000 X	=	=	=	=
Z0015200	CURB STOPS 1 1/2	EACH	1.000 X	=	=	=	=
Z0019600	DUST CONTROL WATERING	UNIT	300.000 X	=	=	=	=
Z0022800	FENCE REMOVAL	FOOT	225.000 X	=	=	=	=
Z0023202	SED CONT DR ST INL CL	EACH	244.000 X	=	=	=	=
Z0030850	TEMP INFO SIGNING	SQ FT	76.000 X	=	=	=	=
Z0033046	RE-OPTIMIZE SIG SYS 2	EACH	3.000 X	=	=	=	=
Z0033056	OPTIM TRAF SIGNAL SYS	EACH	1.000 X	=	=	=	=
Z0033058	P MT FL BEAC INS SPL	EACH	2.000 X	=	=	=	=
Z0046304	P UNDR FOR STRUCT 4	FOOT	215.000 X	=	=	=	=
Z0056608	STORM SEW WM REQ 12	FOOT	615.000 X	=	=	=	=
Z0056610	STORM SEW WM REQ 15	FOOT	117.000 X	=	=	=	=
Z0056612	STORM SEW WM REQ 18	FOOT	47.000 X	=	=	=	=
Z0056622	STORM SEW WM REQ 36	FOOT	272.000 X	=	=	=	=

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
Z0056624	STORM SEW WM REQ 42	FOOT	128.000 X				
Z0057200	SAN SEW 15	FOOT	33.000 X				
Z0062456	TEMP PAVEMENT	SQ YD	1,922.000 X				
Z0062458	TEMP PAVEMT VAR DEPTH	TON	105.000 X				
Z0066600	STAB DRIVEWAYS 8	SQ YD	5.000 X				
Z0066700	STAB DRIVEWAYS 10	SQ YD	305.000 X				
Z0067700	STEEL CASINGS 20	FOOT	445.000 X				
Z0075505	TIMBER RETAIN WALL RM	FOOT	269.000 X				
Z0076600	TRAINEES	HOUR	1,000.000 X	0.80		800.00	
Z0076604	TRAINEES TPG	HOUR	1,000.000 X	15.00		15,000.00	
20100110	TREE REMOV 6-15	UNIT	393.000 X				
20100500	TREE REMOV ACRES	ACRE	6.000 X				
20101000	TEMPORARY FENCE	FOOT	1,739.000 X				
20101200	TREE ROOT PRUNING	EACH	138.000 X				
20101300	TREE PRUN 1-10	EACH	104.000 X				

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
20101350	TREE PRUN OVER 10	EACH	50.000	=	=	=	=
20101700	SUPPLE WATERING	UNIT	652.000	=	=	=	=
20200100	EARTH EXCAVATION	CU YD	73,834.000	=	=	=	=
20201200	REM & DISP UNS MATL	CU YD	29,749.000	=	=	=	=
20700220	POROUS GRAN EMBANK	CU YD	163.000	=	=	=	=
20800150	TRENCH BACKFILL	CU YD	6,174.000	=	=	=	=
20900110	POROUS GRAN BACKFILL	CU YD	90.000	=	=	=	=
21001000	GEOTECH FAB F/GR STAB	SQ YD	23,904.000	=	=	=	=
21301072	EXPLOR TRENCH 72	FOOT	300.000	=	=	=	=
25000210	SEEDING CL 2A	ACRE	11.000	=	=	=	=
25000312	SEEDING CL 4A	ACRE	2.000	=	=	=	=
25000322	SEEDING CL 5A	ACRE	1.000	=	=	=	=
25000350	SEEDING CL 7	ACRE	8.000	=	=	=	=
25000400	NITROGEN FERT NUTR	POUND	1,004.000	=	=	=	=
25000600	POTASSIUM FERT NUTR	POUND	1,004.000	=	=	=	=

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
25100630	EROSION CONTR BLANKET	SQ YD	61,818.000				
28000250	TEMP EROS CONTR SEED	POUND	2,612.000				
28000305	TEMP DITCH CHECKS	FOOT	964.000				
28000500	INLET & PIPE PROTECT	EACH	24.000				
28000510	INLET FILTERS	EACH	244.000				
28001000	AGGREGATE - EROS CONT	TON	110.000				
28001100	TEMP EROS CONTR BLANK	SQ YD	3,385.000				
28100105	STONE RIPRAP CL A3	SQ YD	92.000				
28100107	STONE RIPRAP CL A4	SQ YD	167.000				
28100109	STONE RIPRAP CL A5	SQ YD	670.000				
28200200	FILTER FABRIC	SQ YD	929.000				
30300001	AGG SUBGRADE IMPROVE	CU YD	11,719.000				
30300112	AGG SUBGRADE IMPR 12	SQ YD	80,325.000				
31101000	SUB GRAN MAT B	TON	354.000				
31101200	SUB GRAN MAT B 4	SQ YD	668.000				

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
35101800	AGG BASE CSE B 6	SQ YD	8,100.000 X	=	=	=	=
35300105	PCC BSE CSE 6 1/4	SQ YD	55.000 X	=	=	=	=
35501300	HMA BASE CSE 4	SQ YD	3,656.000 X	=	=	=	=
35501324	HMA BASE CSE 10	SQ YD	26,193.000 X	=	=	=	=
40600290	BIT MATLS TACK CT	POUND	6,245.000 X	=	=	=	=
40600827	P LB MM IL-4.75 N50	TON	833.000 X	=	=	=	=
40600982	HMA SURF REM BUTT JT	SQ YD	25.000 X	=	=	=	=
40600990	TEMPORARY RAMP	SQ YD	25.000 X	=	=	=	=
40603085	HMA BC IL-19.0 N70	TON	461.000 X	=	=	=	=
40603240	P HMA BC IL19.0 N90	TON	3,929.000 X	=	=	=	=
40603335	HMA SC "D" N50	TON	1,328.000 X	=	=	=	=
40603340	HMA SC "D" N70	TON	523.000 X	=	=	=	=
40603565	P HMA SC "E" N70	TON	4,809.000 X	=	=	=	=
40700100	BIT MATLS TACK CT	POUND	98,703.000 X	=	=	=	=
42000501	PCC PVT 10 JOINTED	SQ YD	37,839.000 X	=	=	=	=

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
42001300	PROTECTIVE COAT	SQ YD	47,982.000	=		=	
42400200	PC CONC SIDEWALK 5	SQ FT	6,012.000	=		=	
42400800	DETECTABLE WARNINGS	SQ FT	572.000	=		=	
44000100	PAVEMENT REM	SQ YD	49,264.000	=		=	
44000157	HMA SURF REM 2	SQ YD	14,000.000	=		=	
44000200	DRIVE PAVEMENT REM	SQ YD	312.000	=		=	
44000500	COMB CURB GUTTER REM	FOOT	16,195.000	=		=	
44000600	SIDEWALK REM	SQ FT	1,392.000	=		=	
44200174	PAVT PATCH T4 14	SQ YD	112.000	=		=	
44201694	CL D PATCH T3 4	SQ YD	20.000	=		=	
44201723	CL D PATCH T4 6	SQ YD	223.000	=		=	
48203029	HMA SHOULDERS 8	SQ YD	1,085.000	=		=	
50105220	PIPE CULVERT REMOV	FOOT	310.000	=		=	
50200100	STRUCTURE EXCAVATION	CU YD	60.000	=		=	
50200450	REM/DISP UNS MATL-STR	CU YD	220.000	=		=	

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
50300225	CONC STRUCT	CU YD	64.000 X	=	=	=	=
50300285	FORM LINER TEX SURF	SQ FT	920.000 X	=	=	=	=
50500505	STUD SHEAR CONNECTORS	EACH	152.000 X	=	=	=	=
50800205	REINF BARS, EPOXY CTD	POUND	12,090.000 X	=	=	=	=
52200105	FUR SOLDIER PILES WS	FOOT	501.000 X	=	=	=	=
52200200	DRILL SET SLD PI SOIL	CU FT	2,950.000 X	=	=	=	=
52200250	UNTREATED TIMBER LAG	SQ FT	1,092.000 X	=	=	=	=
52200800	SEG CONC BLOCK WALL	SQ FT	426.000 X	=	=	=	=
54003000	CONC BOX CUL	CU YD	44.000 X	=	=	=	=
54010604	PCBC 6X4	FOOT	360.000 X	=	=	=	=
542A0217	P CUL CL A 1 12	FOOT	20.000 X	=	=	=	=
542A0229	P CUL CL A 1 24	FOOT	56.000 X	=	=	=	=
542A5485	P CUL CL A 1 EQRS 30	FOOT	165.000 X	=	=	=	=
54213657	PRC FLAR END SEC 12	EACH	15.000 X	=	=	=	=
54213660	PRC FLAR END SEC 15	EACH	3.000 X	=	=	=	=

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				DOLLARS	CENTS	DOLLARS	CTS
54213663	PRC FLAR END SEC 18	EACH	5.000				
54213666	PRC FLAR END SEC 21	EACH	1.000				
54213669	PRC FLAR END SEC 24	EACH	5.000				
54213687	PRC FLAR END SEC 42	EACH	1.000				
54214515	PRC FL END S EQ RS 30	EACH	1.000				
550A0050	STORM SEW CL A 1 12	FOOT	538.000				
550A0070	STORM SEW CL A 1 15	FOOT	538.000				
550A0090	STORM SEW CL A 1 18	FOOT	296.000				
550A0110	STORM SEW CL A 1 21	FOOT	106.000				
550A0180	STORM SEW CL A 1 42	FOOT	242.000				
550A0340	STORM SEW CL A 2 12	FOOT	6,765.000				
550A0360	STORM SEW CL A 2 15	FOOT	836.000				
550A0380	STORM SEW CL A 2 18	FOOT	1,091.000				
550A0410	STORM SEW CL A 2 24	FOOT	1,261.000				
550A0450	STORM SEW CL A 2 36	FOOT	466.000				

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
550A0470	STORM SEW CL A 2 42	FOOT	2,643.000	=	-	=	-
550A0770	STORM SEW CL A 3 42	FOOT	473.000	=	-	=	-
55100500	STORM SEWER REM 12	FOOT	2,122.000	=	-	=	-
55100700	STORM SEWER REM 15	FOOT	156.000	=	-	=	-
56106400	ADJ WATER MAIN 8	FOOT	160.000	=	-	=	-
56106600	ADJ WATER MAIN 12	FOOT	160.000	=	-	=	-
56200500	WATER SERV LINE 1 1/2	FOOT	170.000	=	-	=	-
56201600	CORP STOPS 1 1/2	EACH	1.000	=	-	=	-
56400300	FIRE HYDNTS TO BE ADJ	EACH	3.000	=	-	=	-
56400400	FIRE HYDNTS RELOCATED	EACH	1.000	=	-	=	-
59100100	GEOCOMPOSITE WALL DR	SQ YD	135.000	=	-	=	-
60107600	PIPE UNDERDRAINS 4	FOOT	1,480.000	=	-	=	-
60200105	CB TA 4 DIA T1F OL	EACH	1.000	=	-	=	-
60200805	CB TA 4 DIA T8G	EACH	3.000	=	-	=	-
60201105	CB TA 4 DIA T11F&G	EACH	14.000	=	-	=	-

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
60201340	CB TA 4 DIA T24F&G	EACH	85.000				
60205040	CB TA 5 DIA T24F&G	EACH	52.000				
60218300	MAN TA 4 DIA T1F OL	EACH	1.000				
60218400	MAN TA 4 DIA T1F CL	EACH	22.000				
60219000	MAN TA 4 DIA T8G	EACH	8.000				
60219540	MAN TA 4 DIA T24F&G	EACH	3.000				
60221100	MAN TA 5 DIA T1F CL	EACH	9.000				
60221700	MAN TA 5 DIA T8G	EACH	1.000				
60223700	MAN TA 6 DIA T1F OL	EACH	1.000				
60223800	MAN TA 6 DIA T1F CL	EACH	17.000				
60224020	MAN TA 6 DIA T11F&G	EACH	2.000				
60224039	MAN TA 6 DIA T24F&G	EACH	4.000				
60224443	MAN TA 7 DIA T11F&G	EACH	1.000				
60224446	MAN TA 7 DIA T1F CL	EACH	1.000				
60224448	MAN TA 7 DIA T8G	EACH	1.000				

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CENTS
60224459	MAN TA 8 DIA T1F CL	EACH	1.000 X	=	=	=	=
60224469	MAN TA 9 DIA T1F CL	EACH	1.000 X	=	=	=	=
60234200	INLETS TA T1F OL	EACH	2.000 X	=	=	=	=
60236200	INLETS TA T8G	EACH	5.000 X	=	=	=	=
60236800	INLETS TA T11F&G	EACH	5.000 X	=	=	=	=
60237470	INLETS TA T24F&G	EACH	66.000 X	=	=	=	=
60255500	MAN ADJUST	EACH	18.000 X	=	=	=	=
60255800	MAN ADJ NEW T1F CL	EACH	2.000 X	=	=	=	=
60256400	MAN ADJ NEW T8G	EACH	1.000 X	=	=	=	=
60265700	VV ADJUST	EACH	1.000 X	=	=	=	=
60402210	GRATES T8	EACH	1.000 X	=	=	=	=
60406100	FR & LIDS T1 CL	EACH	1.000 X	=	=	=	=
60500040	REMOV MANHOLES	EACH	3.000 X	=	=	=	=
60500050	REMOV CATCH BAS	EACH	25.000 X	=	=	=	=
60500060	REMOV INLETS	EACH	20.000 X	=	=	=	=

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
60500105	FILL MANHOLES	EACH	3.000 X	=	=	=	=
60500205	FILL CATCH BAS	EACH	1.000 X	=	=	=	=
60600095	CLASS SI CONC OUTLET	CU YD	12.000 X	=	=	=	=
60600605	CONC CURB TB	FOOT	191.000 X	=	=	=	=
60602800	CONC GUTTER TB	FOOT	150.000 X	=	=	=	=
60603800	COMB CC&G TB6.12	FOOT	12,778.000 X	=	=	=	=
60605000	COMB CC&G TB6.24	FOOT	17,000.000 X	=	=	=	=
60608600	COMB CC&G TM6.06	FOOT	260.000 X	=	=	=	=
60609200	COMB CC&G TM6.12	FOOT	1,017.000 X	=	=	=	=
60610400	COMB CC&G TM6.24	FOOT	160.000 X	=	=	=	=
60610900	COMB CC&G TM6.24 VWGF	FOOT	220.000 X	=	=	=	=
60618300	CONC MEDIAN SURF 4	SQ FT	3,808.000 X	=	=	=	=
60619600	CONC MED TSB6.12	SQ FT	10,097.000 X	=	=	=	=
63000001	SPBGR TY A 6FT POSTS	FOOT	138.000 X	=	=	=	=
63100045	TRAF BAR TERM T2	EACH	1.000 X	=	=	=	=

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
63100169	TR BAR TRM T1 SPL FLR	EACH	1.000 X	=	=	=	=
63500105	DELINEATORS	EACH	7.000 X	=	=	=	=
66900200	NON SPL WASTE DISPOS	CU YD	500.000 X	=	=	=	=
67000400	ENGR FIELD OFFICE A	CAL MO	18.000 X	=	=	=	=
67100100	MOBILIZATION	L SUM	1.000 X	=	=	=	=
70103815	TR CONT SURVEILLANCE	CAL DA	300.000 X	=	=	=	=
70106800	CHANGEABLE MESSAGE SN	CAL MO	52.000 X	=	=	=	=
70300100	SHORT TERM PAVT MKING	FOOT	1,164.000 X	=	=	=	=
70300150	SHRT TRM PAVT MK REM	SQ FT	388.000 X	=	=	=	=
70300210	TEMP PVT MK LTR & SYM	SQ FT	1,052.000 X	=	=	=	=
70300220	TEMP PVT MK LINE 4	FOOT	56,347.000 X	=	=	=	=
70300240	TEMP PVT MK LINE 6	FOOT	4,927.000 X	=	=	=	=
70300280	TEMP PVT MK LINE 24	FOOT	537.000 X	=	=	=	=
70400100	TEMP CONC BARRIER	FOOT	1,638.000 X	=	=	=	=
70400200	REL TEMP CONC BARRIER	FOOT	188.000 X	=	=	=	=

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
70600255	IMP ATTN TEMP FRN TL2	EACH	6.000				
70600260	IMP ATTN TEMP FRN TL3	EACH	2.000				
70600322	IMP ATTN REL FRN TL2	EACH	2.000				
72000100	SIGN PANEL T1	SQ FT	752.000				
72000200	SIGN PANEL T2	SQ FT	295.000				
72400100	REMOV SIN PAN ASSY TA	EACH	27.000				
72400200	REMOV SIN PAN ASSY TB	EACH	1.000				
72400500	RELOC SIN PAN ASSY TA	EACH	5.000				
72400600	RELOC SIN PAN ASSY TB	EACH	1.000				
72501000	TERMINAL MARKER - DA	EACH	2.000				
72800100	TELES STL SIN SUPPORT	FOOT	1,686.000				
73100100	BASE TEL STL SIN SUPP	EACH	7.000				
78009000	MOD URETH PM LTR-SYM	SQ FT	1,748.000				
78009004	MOD URETH PM LINE 4	FOOT	32,146.000				
78009006	MOD URETH PM LINE 6	FOOT	7,412.000				

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				DOLLARS	CENTS	DOLLARS	CTS
78009008	MOD URETH PM LINE 8	FOOT	1,925.000	=	=	=	=
78009012	MOD URETH PM LINE 12	FOOT	4,599.000	=	=	=	=
78009024	MOD URETH PM LINE 24	FOOT	678.000	=	=	=	=
78200005	GRDRAIL REF TYPE A	EACH	4.000	=	=	=	=
78200011	BARR WALL REF TYPE C	EACH	76.000	=	=	=	=
80400200	ELECT UTIL SERV CONN	L SUM	1.000	32,500.00	00	32,500.00	00
80500010	SERV INSTALL GRND MT	EACH	3.000	=	=	=	=
80500020	SERV INSTALL POLE MT	EACH	1.000	=	=	=	=
81028200	UNDRGRD C GALVS 2	FOOT	1,678.000	=	=	=	=
81028210	UNDRGRD C GALVS 2 1/2	FOOT	786.000	=	=	=	=
81028220	UNDRGRD C GALVS 3	FOOT	146.000	=	=	=	=
81028230	UNDRGRD C GALVS 3 1/2	FOOT	38.000	=	=	=	=
81028240	UNDRGRD C GALVS 4	FOOT	1,677.000	=	=	=	=
81028790	UNDRGRD C CNC 4	FOOT	15,482.000	=	=	=	=
81400100	HANDHOLE	EACH	17.000	=	=	=	=

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
81400200	HD HANDHOLE	EACH	9.000 X	=	=	=	=
81400300	DBL HANDHOLE	EACH	6.000 X	=	=	=	=
84200804	REM POLE FDN	EACH	7.000 X	=	=	=	=
85000205	MAIN EX TS INSTAL SPL	EACH	1.000 X	=	=	=	=
85700200	FAC T4 CAB	EACH	1.000 X	=	=	=	=
87300925	ELCBL C TRACER 14 1C	FOOT	8,053.000 X	=	=	=	=
87301215	ELCBL C SIGNAL 14 2C	FOOT	2,049.000 X	=	=	=	=
87301225	ELCBL C SIGNAL 14 3C	FOOT	3,185.000 X	=	=	=	=
87301245	ELCBL C SIGNAL 14 5C	FOOT	6,595.000 X	=	=	=	=
87301255	ELCBL C SIGNAL 14 7C	FOOT	6,679.000 X	=	=	=	=
87301305	ELCBL C LEAD 14 1PR	FOOT	3,327.000 X	=	=	=	=
87301805	ELCBL C SERV 6 2C	FOOT	455.000 X	=	=	=	=
87301900	ELCBL C EGRDC 6 1C	FOOT	1,360.000 X	=	=	=	=
87501200	TS POST 16	EACH	6.000 X	=	=	=	=
87602000	PED PUSHBUTTON POST	EACH	1.000 X	=	=	=	=

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
87702719	STL MAAAP DMA 46 & 34	EACH	1.000 X				
87702770	S MAA & P DMA 55 & 34	EACH	1.000 X				
87702990	STL COMB MAA&P 54	EACH	1.000 X				
87703010	STL COMB MAA&P 56	EACH	1.000 X				
87703070	STL COMB MAA&P 66	EACH	2.000 X				
87704335	S C MAA&P DMA 24 & 55	EACH	2.000 X				
87800100	CONC FDN TY A	FOOT	32.000 X				
87800150	CONC FDN TY C	FOOT	8.000 X				
87800415	CONC FDN TY E 36D	FOOT	77.000 X				
87800420	CONC FDN TY E 42D	FOOT	71.000 X				
87900200	DRILL EX HANDHOLE	EACH	2.000 X				
88030020	SH LED 1F 3S MAM	EACH	30.000 X				
88030050	SH LED 1F 3S BM	EACH	4.000 X				
88030070	SH LED 1F 4S BM	EACH	6.000 X				
88030080	SH LED 1F 4S MAM	EACH	6.000 X				

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
88030100	SH LED 1F 5S BM	EACH	8.000 X				
88030110	SH LED 1F 5S MAM	EACH	4.000 X				
88102710	PED SH LED 1F BM	EACH	4.000 X				
88102717	PED SH LED 1F BM CDT	EACH	6.000 X				
88200100	TS BACKPLATE	EACH	24.000 X				
88200510	TS BACKPLATE RET-REFL	EACH	30.000 X				
88500100	INDUCTIVE LOOP DETECT	EACH	10.000 X				
88600100	DET LOOP T1	FOOT	145.000 X				
88600700	PREFORM DETECT LOOP	FOOT	1,037.000 X				
88700200	LIGHT DETECTOR	EACH	5.000 X				
88700300	LIGHT DETECTOR AMP	EACH	2.000 X				
89502300	REM ELCBL FR CON	FOOT	2,600.000 X				
89502350	REM & RE ELCBL FR CON	FOOT	1,100.000 X				
89502380	REMOV EX HANDHOLE	EACH	4.000 X				

TOTAL \$

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

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NOTE:

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

RETURN WITH BID

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

I. GENERAL

A. Article 50 of the 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 calendar days after the officer, member, or employee takes office or is employed. The current salary of the Governor is \$177,412.00. Sixty percent of the salary is \$106,447.20.

RETURN WITH BID

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 provide a submission to a vendor portal or 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, not making a submission to a vendor portal, or who withholds a bid or submission to a vendor portal 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 or submission to a vendor portal 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.

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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 and every vendor's submission to a vendor portal 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.

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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 Section 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

Section 50-14 Environmental Protection Act violations.

The bidder or contractor or subcontractor, respectively, certifies in accordance with Section 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, 5 ILCS 385/3.

Pursuant to the Educational Loan Default Act no State agency shall contract with an individual for goods or services if that individual is in default on an educational loan.

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, 720 ILCS 5/3BE-11.

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

(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.

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.

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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 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 may 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 on the attached document.

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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.**

Additionally, Section 30-22 of the Code requires that the bidder certify that an Illinois office be maintained as the primary place of employment for persons employed for this contract.

NA-FEDERAL

The requirements of these certifications and disclosures are a material part of the contract, and the contractor shall require these certification provisions 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.

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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 or any other procurement opportunity 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.

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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 \$50,000 and all submissions to a vendor portal 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 100 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any individual 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 individual 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 individual 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 100 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any individual 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 an individual 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 individual 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 an individual that is authorized to execute contracts for your organization. The individual signing can be, but does not have to be, the individual 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 an individual that is authorized to execute contracts for your company.

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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.

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ILLINOIS DEPARTMENT OF TRANSPORTATION

Form A Financial Information & Potential Conflicts of Interest Disclosure

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

Disclosure of the information contained in this Form is required by 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 \$50,000, 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.

RETURN WITH BID

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 7 1/2% 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 statutes of the State of Illinois, which office entitles the holder to compensation in excess of the expenses incurred in the discharge of that office currently or in the previous 3 years. Yes ___ No ___

(f) Relationship to anyone holding appointive office currently or in the previous 2 years; spouse, father, mother, son, or daughter. Yes ___ No ___

(g) Employment, currently or in the previous 3 years, as or by any registered lobbyist of the State government. Yes ___ No ___

RETURN WITH BID

(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. Suspension or 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: suspension or 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: _____ Date _____
Signature of Individual or Authorized Representative

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.

_____ Date _____
Signature of Authorized Representative

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 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 all bids.

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 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 Act 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 Title 44, Illinois Administrative Code, Section 750.120. If it is determined that the contract awardee's projections reflect an underutilization of minority persons and/or women in any job classification, it shall be advised in writing of the manner in which it is underutilizing and such awardee shall be considered to be in breach of the contract unless, prior to commencement of work on the contract project, it submits revised satisfactory projections or an acceptable written affirmative action plan to correct such underutilization including a specific timetable geared to the completion stages of the contract.
- (c) The Department of Transportation shall provide to the Department of Human Rights a copy of the contract awardee's Employee Utilization Form, a copy of any required written affirmative action plan, and any written correspondence related thereto. The Department of Human Rights may review and revise any action taken by the Department of Transportation with respect to these requirements.



RETURN WITH BID

Contract No. 61C41
 KANE County
 Section 13-00215-10-PV
 Project RS-M-4003(397)
 Route FAU 2298 (Longmeadow Parkway)
 District 1 Construction Funds

PART I. IDENTIFICATION

Dept. of 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

TABLE B

TOTAL Workforce Projection for Contract												
JOB CATEGORIES	TOTAL EMPLOYEES		MINORITY EMPLOYEES						TRAINEES			
			BLACK		HISPANIC		*OTHER MINOR.		APPRENTICES		ON THE JOB TRAINEES	
	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												

CURRENT EMPLOYEES TO BE ASSIGNED TO CONTRACT			
TOTAL EMPLOYEES		MINORITY EMPLOYEES	
M	F	M	F

TABLE C

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

FOR DEPARTMENT USE ONLY

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

BC 1256 (Rev. 12/11/07)

Note: See instructions on page 2

RETURN WITH BID

**Contract No. 61C41
KANE County
Section 13-00215-10-PV
Project RS-M-4003(397)
Route FAU 2298 (Longmeadow Parkway)
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 **Illinois Department of Human Rights**.
- B. The undersigned bidder understands and agrees that the minority and female employee utilization projection submitted herein, and the goals and timetable included under an Affirmative Action Plan if required, are deemed to be part of the contract specifications.

Company _____ Telephone Number _____

Address _____

NOTICE REGARDING SIGNATURE

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

Signature: _____ Title: _____ Date: _____

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

RETURN WITH BID

ADDITIONAL FEDERAL REQUIREMENTS

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

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

RETURN WITH BID

**Contract No. 61C41
KANE County
Section 13-00215-10-PV
Project RS-M-4003(397)
Route FAU 2298 (Longmeadow Parkway)
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.



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., _____

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

(Company Name)

(Company Name)

By _____
(Signature and Title)

By _____
(Signature of Attorney-in-Fact)

Notary for PRINCIPAL

Notary for SURETY

STATE OF _____
COUNTY OF _____

STATE OF _____
COUNTY OF _____

Signed and attested before me on _____ (date)

Signed and attested before me on _____ (date)

by _____
(Name of Notary Public)

by _____
(Name of Notary Public)

(Seal) _____
(Signature of Notary Public)

(Seal) _____
(Signature of Notary Public)

(Date Commission Expires)

(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.



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., _____

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

(Company Name)

(Company Name)

By _____ (Signature and Title)

By _____ (Signature of Attorney-in-Fact)

Notary for PRINCIPAL

Notary for SURETY

STATE OF _____
COUNTY OF _____

STATE OF _____
COUNTY OF _____

Signed and attested before me on _____ (date)
by _____

Signed and attested before me on _____ (date)
by _____

(Name of Notary Public)

(Name of Notary Public)

(Seal) _____
(Signature of Notary Public)

(Seal) _____
(Signature of Notary Public)

(Date Commission Expires)

(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 _____

(1) Policy

It is public policy that disadvantageded 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 disadvantageded 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



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. Trucking participation items; description must list what is anticipated towards goal credit.

(2) Work:

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

Pay Item No.	Description (Anticipated items for trucking)*	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:
*Applies to trucking only

(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

Date _____

Contact Person _____

Title _____

Firm Name _____

Address _____

City/State/Zip _____

Phone _____

Email Address _____

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

Date _____

Contact Person _____

Title _____

Firm Name _____

Address _____

City/State/Zip _____

Phone _____

Email Address _____

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



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. 61C41
KANE County
Section 13-00215-10-PV
Project RS-M-4003(397)
Route FAU 2298 (Longmeadow Parkway)
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 scuspended 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 100 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any individual 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 individual 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 individual 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.

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 100 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any individual 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 an individual 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 individual 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 an individual that is authorized to execute contracts for your organization. The individual signing can be, but does not have to be, the individual 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 an individual 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.

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 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.

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.

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.

RETURN WITH SUBCONTRACT

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 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 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 ___

RETURN WITH SUBCONTRACT

(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. Suspension or 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: suspension or 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: _____ Date _____
Signature of Individual or Authorized Officer

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.

_____ Date _____
Signature of Authorized Officer

RETURN WITH SUBCONTRACT

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form B
Subcontractor: Other Contracts & Financial Related Information Disclosure

Form with fields: 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 Section 50-35 of the Code (30 ILCS 500). This information shall become part of the publicly available contract file.

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 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 box with fields: 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)



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 (iCX-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 a.m. January 20, 2017. 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 10:00 a.m.
- 2. DESCRIPTION OF WORK.** The proposed improvement is identified and advertised for bids in the Invitation for Bids as:

**Contract No. 61C41
KANE County
Section 13-00215-10-PV
Project RS-M-4003(397)
Route FAU 2298 (Longmeadow Parkway)
District 1 Construction Funds**

Roadway reconstruction, new roadway and alignment, storm sewers, traffic signals, pedestrian path, retaining wall and landscaping starting at the intersection of Randall Road and Longmeadow Parkway and ends approximately 0.39 miles east of White Chapel Lane.

- 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

Randall S. Blankenhorn,
Secretary

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2017

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 4-1-16) (Revised 1-1-17)

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CHECK SHEET
FOR
RECURRING SPECIAL PROVISIONS

Adopted January 1, 2017

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

RECURRING SPECIAL PROVISIONS

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CHECK SHEET
FOR
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:

LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS

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INDEX LOCAL ROADS AND STREETS SPECIAL PROVISIONS

<u>LR #</u>	<u>Pg #</u>	<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
LR SD12		<input type="checkbox"/> Slab Movement Detection Device	Nov. 11, 1984	Jan. 1, 2007
LR SD13		<input type="checkbox"/> Required Cold Milled Surface Texture	Nov. 1, 1987	Jan. 1, 2007
LR 107-2		<input type="checkbox"/> Railroad Protective Liability Insurance for Local Lettings	Mar. 1, 2005	Jan. 1, 2006
LR 107-4	257	<input checked="" type="checkbox"/> Insurance	Feb. 1, 2007	Aug. 1, 2007
LR 108		<input type="checkbox"/> Combination Bids	Jan. 1, 1994	Mar. 1, 2005
LR 109		<input type="checkbox"/> Equipment Rental Rates	Jan. 1, 2012	
LR 212		<input type="checkbox"/> Shaping Roadway	Aug. 1, 1969	Jan. 1, 2002
LR 355-1		<input type="checkbox"/> Bituminous Stabilized Base Course, Road Mix or Traveling Plant Mix	Oct. 1, 1973	Jan. 1, 2007
LR 355-2		<input type="checkbox"/> Bituminous Stabilized Base Course, Plant Mix	Feb. 20, 1963	Jan. 1, 2007
LR 400-1		<input type="checkbox"/> Bituminous Treated Earth Surface	Jan. 1, 2007	Apr. 1, 2012
LR 400-2		<input type="checkbox"/> Bituminous Surface Plant Mix (Class B)	Jan. 1, 2008	
LR 400-3		<input type="checkbox"/> Hot In-Place Recycling (HIR) – Surface Recycling	Jan. 1, 2012	
LR 400-4		<input type="checkbox"/> Full-Depth Reclamation (FDR) with Emulsified Asphalt	Apr. 1, 2012	Jun. 1, 2012
LR 400-5		<input type="checkbox"/> Cold In-Place Recycling (CIR) With Emulsified Asphalt	Apr. 1, 2012	Jun. 1, 2012
LR 400-6		<input type="checkbox"/> Cold In Place Recycling (CIR) with Foamed Asphalt	June 1, 2012	
LR 400-7		<input type="checkbox"/> Full-Depth Reclamation (FDR) with Foamed Asphalt	June 1, 2012	
LR 402		<input type="checkbox"/> Salt Stabilized Surface Course	Feb. 20, 1963	Jan. 1, 2007
LR 403-1		<input type="checkbox"/> Surface Profile Milling of Existing, Recycled or Reclaimed Flexible Pavement	Apr. 1, 2012	Jun. 1, 2012
LR 403-2		<input type="checkbox"/> Bituminous Hot Mix Sand Seal Coat	Aug. 1, 1969	Jan. 1, 2007
LR 403-3		<input type="checkbox"/> Preventive Maintenance - Bituminous Surface Treatment (A-1)	July 1, 2016	
LR 406		<input type="checkbox"/> Filling HMA Core Holes with Non-Shrink Grout	Jan. 1, 2008	
LR 420		<input type="checkbox"/> PCC Pavement (Special)	May 12, 1964	Jan. 2, 2007
LR 442		<input type="checkbox"/> Bituminous Patching Mixtures for Maintenance Use	Jan. 1, 2004	Jun. 1, 2007
LR 451		<input type="checkbox"/> Crack Filling Bituminous Pavement with Fiber-Asphalt	Oct. 1, 1991	Jan. 1, 2007
LR 503-1		<input type="checkbox"/> Furnishing Class SI Concrete	Oct. 1, 1973	Jan. 1, 2002
LR 503-2		<input type="checkbox"/> Furnishing Class SI Concrete (Short Load)	Jan. 1, 1989	Jan. 1, 2002
LR 542		<input type="checkbox"/> Pipe Culverts, Type _____ (Furnished)	Sep. 1, 1964	Jan. 1, 2007
LR 663		<input type="checkbox"/> Calcium Chloride Applied	Jun. 1, 1958	Jan. 1, 2007
LR 702		<input type="checkbox"/> Construction and Maintenance Signs	Jan. 1, 2004	Jun. 1, 2007
LR 1000-1		<input type="checkbox"/> 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		<input type="checkbox"/> Cold In-Place Recycling (CIR) and Full Depth Reclamation (FDR) with Foamed Asphalt Mix Design Procedures	June 1, 2012	
LR 1004		<input type="checkbox"/> Coarse Aggregate for Bituminous Surface Treatment	Jan. 1, 2002	Jan. 1, 2007
LR 1030		<input type="checkbox"/> Growth Curve	Mar. 1, 2008	Jan. 1, 2010
LR 1032-1		<input type="checkbox"/> Emulsified Asphalts	Jan. 1, 2007	Feb. 7, 2008
LR 1102		<input type="checkbox"/> Road Mix or Traveling Plan Mix Equipment	Jan. 1, 2007	
LR 80029-1		<input type="checkbox"/> Disadvantaged Business Enterprise Participation for Local Lettings	Aug. 26, 2016	

BDE SPECIAL PROVISIONS

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

<u>File Name</u>	<u>Pg.</u>		<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80099			Accessible Pedestrian Signals (APS)	April 1, 2003	Jan. 1, 2014
80274			Aggregate Subgrade Improvement	April 1, 2012	April 1, 2016
80192			Automated Flagger Assistance Device	Jan. 1, 2008	
80173	258	X	Bituminous Materials Cost Adjustments	Nov. 2, 2006	July 1, 2015
80241			Bridge Demolition Debris	July 1, 2009	
50261			Building Removal-Case I (Non-Friable and Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50481			Building Removal-Case II (Non-Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50491			Building Removal-Case III (Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50531			Building Removal-Case IV (No Asbestos)	Sept. 1, 1990	April 1, 2010
80366	261	X	Butt Joints	July 1, 2016	
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	July 1, 2016
80311			Concrete End Sections for Pipe Culverts	Jan. 1, 2013	April 1, 2016
80277			Concrete Mix Design – Department Provided	Jan. 1, 2012	April 1, 2016
80261	262	X	Construction Air Quality – Diesel Retrofit	June 1, 2010	Nov. 1, 2014
80029	265	X	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	July 2, 2016
* 80378	276	X	Dowel Bar Inserter	Jan. 1, 2017	
80229	283	X	Fuel Cost Adjustment	April 1, 2009	July 1, 2015
80304			Grooving for Recessed Pavement Markings	Nov. 1, 2012	Aug. 1, 2014
80246	287	X	Hot-Mix Asphalt – Density Testing of Longitudinal Joints	Jan. 1, 2010	April 1, 2016
80347			Hot-Mix Asphalt – Pay for Performance Using Percent Within Limits – Jobsite Sampling	Nov. 1, 2014	April 1, 2016
80376	288	X	Hot-Mix Asphalt – Tack Coat	Nov. 1, 2016	
80367			Light Poles	July 1, 2016	
80368			Light Tower	July 1, 2016	
80336			Longitudinal Joint and Crack Patching	April 1, 2014	April 1, 2016
80369	289	X	Mast Arm Assembly and Pole	July 1, 2016	
80045			Material Transfer Device	June 15, 1999	Aug. 1, 2014
80165			Moisture Cured Urethane Paint System	Nov. 1, 2006	Jan. 1, 2010
80349			Pavement Marking Blackout Tape	Nov. 1, 2014	April 1, 2016
80371	290	X	Pavement Marking Removal	July 1, 2016	
80298			Pavement Marking Tape Type IV	April 1, 2012	April 1, 2016
80377	291	X	Portable Changeable Message Signs	Nov. 1, 2016	
* 80359			Portland Cement Concrete Bridge Deck Curing	April 1, 2015	Jan. 1, 2017
80338			Portland Cement Concrete Partial Depth Hot-Mix Asphalt Patching	April 1, 2014	April 1, 2016
80300			Preformed Plastic Pavement Marking Type D - Inlaid	April 1, 2012	April 1, 2016
80328	292	X	Progress Payments	Nov. 2, 2013	
34261			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, 2016
* 80340			Speed Display Trailer	April 2, 2014	Jan. 1, 2017
80127	293	X	Steel Cost Adjustment	April 2, 2004	July 1, 2015
* 80379	297	X	Steel Plate Beam Guardrail	Jan. 1, 2017	
80317			Surface Testing of Hot-Mix Asphalt Overlays	Jan. 1, 2013	April 1, 2016
20338	300	X	Training Special Provisions	Oct. 15, 1975	
80318			Traversable Pipe Grate	Jan. 1, 2013	April 1, 2014
* 80381	303	X	Traffic Barrier Terminal, Type 1 Special	Jan. 1, 2017	

<u>File Name</u>	<u>Pg.</u>		<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
* 80380			Tubular Markers	Jan. 1, 2017	
80288	304	X	Warm Mix Asphalt	Jan. 1, 2012	April 1, 2016
80302	306	X	Weekly DBE Trucking Reports	June 2, 2012	April 2, 2015
80289			Wet Reflective Thermoplastic Pavement Marking	Jan. 1, 2012	
80071			Working Days	Jan. 1, 2002	

The following special provisions are in the 2017 Supplemental Specifications and Recurring Special Provisions.

<u>File Name</u>	<u>Special Provision Title</u>	<u>New Location</u>	<u>Effective</u>	<u>Revised</u>
80360	Coarse Aggregate Quality	Article 1004.01	July 1, 2015	
80363	Engineer's Field Office	Article 670.07	April 1, 2016	
80358	Equal Employment Opportunity	Recurring CS #1 and #5	April 1, 2015	
80364	Errata for the 2016 Standard Specifications	Supplemental	April 1, 2016	
80342	Mechanical Side Tie Bar Inserter	Articles 420.03, 420.05, and 1103.19	Aug. 1, 2014	April 1, 2016
80370	Mechanical Splicers	Article 1006.10	July 1, 2016	
80361	Overhead Sign Structures Certification of Metal Fabricator	Article 106.08	Nov. 1, 2015	April 1, 2016
80365	Pedestrian Push-Button	Article 888.03	April 1, 2016	
80353	Portland Cement Concrete Inlay or Overlay	Recurring CS #34	Jan. 1, 2015	April 1, 2016
80372	Preventive Maintenance – Bituminous Surface Treatment (A-1)	Recurring CS #28	Jan. 1, 2009	July 1, 2016
80373	Preventive Maintenance – Cape Seal	Recurring CS #29	Jan. 1, 2009	July 1, 2016
80374	Preventive Maintenance – Micro Surfacing	Recurring CS #30	Jan. 1, 2009	July 1, 2016
80375	Preventive Maintenance – Slurry Seal	Recurring CS #31	Jan. 1, 2009	July 1, 2016
80362	Steel Slag in Trench Backfill	Articles 1003.01 and 1003.04	Jan. 1, 2016	
80355	Temporary Concrete Barrier	Articles 704.02, 704.04, 704.05, and 704.06	Jan. 1, 2015	July 1, 2015

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

- Bridge Demolition Debris
- Building Removal-Case I
- Building Removal-Case II
- Building Removal-Case III
- Building Removal-Case IV
- Completion Date
- Completion Date Plus Working Days
- DBE Participation
- Material Transfer Device
- Railroad Protective Liability Insurance
- Training Special Provisions
- Working Days

GUIDE BRIDGE SPECIAL PROVISION INDEX/CHECK SHEET

Effective as of the: January 20, 2017 Letting

<u>Pg #</u>	<u>√</u>	<u>File Name</u>	<u>Title</u>	<u>Effective</u>	<u>Revised</u>
		GBSP 4	Polymer Modified Portland Cement Mortar	June 7, 1994	Apr 1, 2016
		GBSP 12	Drainage System	June 10, 1994	Jun 24, 2015
		GBSP 13	High-Load Multi-Rotational Bearings	Oct 13, 1988	Apr 1, 2016
		GBSP 14	Jack and Remove Existing Bearings	April 20, 1994	Jan 1, 2007
		GBSP 15	Three Sided Precast Concrete Structure	July 12, 1994	Dec 29, 2014
		GBSP 16	Jacking Existing Superstructure	Jan 11, 1993	Jan 1, 2007
		GBSP 17	Bonded Preformed Joint Seal	July 12, 1994	Jan 1, 2007
		GBSP 18	Modular Expansion Joint	May 19, 1994	Dec 29, 2014
		GBSP 21	Cleaning and Painting Contact Surface Areas of Existing Steel Structures	June 30, 2003	May 18, 2011
		GBSP 25	Cleaning and Painting Existing Steel Structures	Oct 2, 2001	Apr 22, 2016
		GBSP 26	Containment and Disposal of Lead Paint Cleaning Residues	Oct 2, 2001	Apr 22, 2016
		GBSP 28	Deck Slab Repair	May 15, 1995	Oct 15, 2011
		GBSP 29	Bridge Deck Microsilica Concrete Overlay	May 15, 1995	Apr 1, 2016
		GBSP 30	Bridge Deck Latex Concrete Overlay	May 15, 1995	Jun 24, 2015
		GBSP 31	Bridge Deck High-Reactivity Metakaolin (HRM) Conc Overlay	Jan 21, 2000	Apr 1, 2016
		GBSP 33	Pedestrian Truss Superstructure	Jan 13, 1998	Dec 29, 2014
		GBSP 34	Concrete Wearing Surface	June 23, 1994	Oct 4, 2016
		GBSP 35	Silicone Bridge Joint Sealer	Aug 1, 1995	Oct 15, 2011
		GBSP 45	Bridge Deck Thin Polymer Overlay	May 7, 1997	Feb 6, 2013
307	X	GBSP 51	Pipe Underdrain for Structures	May 17, 2000	Jan 22, 2010
		GBSP 53	Structural Repair of Concrete	Mar 15, 2006	Apr 1, 2016
		GBSP 55	Erection of Curved Steel Structures	June 1, 2007	
		GBSP 56	Setting Piles in Rock	Nov 14, 1996	Apr 1, 2016
		GBSP 59	Diamond Grinding and Surface Testing Bridge Sections	Dec 6, 2004	Jan 3, 2014
		GBSP 60	Containment and Disposal of Non-Lead Paint Cleaning Residues	Nov 25, 2004	Apr 22, 2016
		GBSP 61	Slipform Parapet	June 1, 2007	Apr 22, 2016
		GBSP 67	Structural Assessment Reports for Contractor's Means and Methods	Mar 6, 2009	Oct 5, 2015
		GBSP 71	Aggregate Column Ground Improvement	Jan 15, 2009	Oct 15, 2011
		GBSP 72	Bridge Deck Fly Ash or GGBF Slag Concrete Overlay	Jan 18, 2011	Jun 24, 2015
		GBSP 75	Bond Breaker for Prestressed Concrete Bulb-T Beams	April 19, 2012	
		GBSP 77	Weep Hole Drains for Abutments, Wingwalls, Retaining Walls And Culverts	April 19, 2012	Oct 22, 2013
		GBSP 78	Bridge Deck Construction	Oct 22, 2013	Oct 4, 2016
		GBSP 79	Bridge Deck Grooving (Longitudinal)	Dec 29, 2014	Apr 1, 2016
		GBSP 81	Membrane Waterproofing for Buried Structures	Oct 4, 2016	
		GBSP 82	Metallizing of Structural Steel	Oct 4, 2016	
		GBSP 83	Hot Dip Galvanizing for Structural Steel	Oct 4, 2016	
		GBSP 85	Micropiles	Apr 19, 1996	Oct 5, 2015
		GBSP 86	Drilled Shafts	Oct 5, 2015	Oct 4, 2016
		GBSP 87	Lightweight Cellular Concrete Fill	Nov 11, 2011	Apr 1, 2016
		GBSP 88	Corrugated Structural Plate Structures	Apr 22, 2016	
		GBSP 89	Preformed Pavement Joint Seal	Oct 4, 2016	

LIST ANY ADDITIONAL SPECIAL PROVISIONS BELOW

The following Guide Bridge Special Provisions have been incorporated into the 2016 Standard Specifications:

File Name	Title	Std Spec Location
GBSP32	Temporary Sheet Piling	522
GBSP38	Mechanically Stabilized Earth Retaining Walls	522
GBSP42	Drilled Soldier Pile Retaining Wall	522
GBSP43	Driven Soldier Pile Retaining Wall	522
GBSP44	Temporary Soil Retention System	522
GBSP46	Geotextile Retaining Walls	522
GBSP57	Temporary Mechanically Stabilized Earth Retaining Walls	522
GBSP62	Concrete Deck Beams	504
GBSP64	Segmental Concrete Block Wall	522
GBSP65	Precast Modular Retaining Wall	522
GBSP73	Cofferdams	2017 Supp
GBSP74	Permanent Steel Sheet Piling (LRFD)	522
GBSP76	Granular Backfill for Structures	2017 Supp
GBSP80	Fabric Reinforced Elastomeric	1028
GBSP84	Precast, Prestressed Concrete Beams	2017 Supp

The following Guide Bridge Special Provisions have been discontinued or have been superseded:

File Name	Title	Disposition:
GBSP70	Braced Excavation	Use TSRS per Sec 522

STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the “Standard Specifications for Road and Bridge Construction”, adopted April 1, 2016, the latest edition of the “Manual on Uniform Traffic Control Devices for Streets and Highways”, and the “Manual of Test Procedures of Materials” in effect on the date of invitation of bids, and the “Supplemental Specifications and Recurring Special Provisions” indicated on the Check Sheet included herein which apply to and govern the Longmeadow Parkway project from (and including) Randall Road Roadway Widening and Reconstruction project, Section 13-00215-10-PV, Contract 61C41, Project RS-M-4003(397), Job. C-91-064-15 in Kane County Illinois, 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 is located in Kane County, Illinois, in the Village of Algonquin, unincorporated Kane County, and Dundee Township. The project extends through the South Half of Section 5, North Half of Section 8, South Half of Section 4, North Half of Section 9, all in Township 42 North, Range 8 East of the third principal meridian. The proposed corridor improvement begins at the intersection of Randall Road and Longmeadow Parkway and ends approximately 0.39 miles east of White Chapel Lane and is under the jurisdiction of the Kane County Division of Transportation. Relative to major arterials, the project is located approximately 2.5 miles north of Illinois Route 72 and 2.0 miles southwest of Illinois Route 62. The total gross and net length of the project is 13,192.78 feet (2.50 mi.).

DESCRIPTION OF PROJECT

The work consists of existing roadway reconstruction, expansion of existing roadway facilities, earthwork moving operations, pavement and subgrade construction; storm sewer installation; two traffic signals and associated system interconnect; retaining wall construction, roadway resurfacing along Randall Road; soil erosion and sediment control measures; landscaping and tree removal & replacement; and pavement marking and signing, as well as all incidental and collateral work necessary to complete the project as shown on the plans and described herein.

COORDINATION WITH ADJACENT AND/OR OVERLAPPING CONTRACTS

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

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

MAINTENANCE OF ROADWAYS (KDOT)

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

The Contractor shall commence work on all maintenance of roadways items within 2 hours of notification by the Engineer and complete such items in an expedient and timely manner. Failure to do so may result in a *deficiency of \$2000 per calendar day*.

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

STATUS OF UTILITIES (D-1)

Effective: June 1, 2016

Utility companies and/or municipal owners located within the construction limits of this project have provided the following information in regard to their facilities and the proposed improvements. The tables below contain a description of specific conflicts to be resolved and/or facilities which will require some action on the part of the Department's contractor to proceed with work. Each table entry includes an identification of the action necessary and, if applicable, the estimated duration required for the resolution.

UTILITIES TO BE ADJUSTED

Conflicts noted below have been identified by following the suggested staging plan included in the contract. The company has been notified of all conflicts and will be required to obtain the necessary permits to complete their work; in some instances resolution will be a function of the construction staging. The responsible agency must relocate or complete new installations as noted in the action column; this work has been deemed necessary to be complete for the Department's contractor to then work in the stage under which the item has been listed.

Pre-Stage

No conflicts to be resolved

Stage 1

STAGE / LOCATION	TYPE	DESCRIPTION	RESPONSIBLE AGENCY	ACTION
<i>Longmeadow Parkway</i> Sta. 2086+91.56, 46.29' RT Sta. 2110+12.15, 44.61' RT Sta. 2123+22.48, 65.54' LT Sta. 2123+59.17, 42.74' RT	Light Poles	Light Pole conflicts	ComEd	ComEd contractor to relocate poles on new foundations as depicted on the drainage & utility plans
<i>Longmeadow Parkway</i> Sta. 2098+52.64	Light Pole	Light Pole conflicts	ComEd	Light pole and light pole foundation to be removed. 10 DAYS
<i>Sleepy Hollow Road</i> Sta. 302+40, 25.00' LT Sta. 302+60, 22.00' RT	Power Pole	Power pole to be relocated and/or braced	ComEd	Power poles need to be braced and/or relocated 5 DAYS
<i>Longmeadow Parkway</i> Sta. 2069+20, 43.70' RT <i>Randall Road</i> Sta. 200+52, 72.90' RT Sta. 201+95.00, 68.40' RT Sta. 203+75.00, 65.00' RT	12" Water Main	Water main to lowered to avoid storm sewer conflict	Village of Algonquin	Included with this Contract NOT CONTROLLING
<i>Longmeadow Parkway</i> Sta. 2086+06.64, 66.47' LT Sta. 2086+10.70, 69.10 RT Sta. 2123+57.53, 50.42' RT Sta. 2123+62.12, 1.12' RT	8" Water Main	Water main to lowered to avoid storm sewer conflict	Village of Algonquin	Included with this Contract NOT CONTROLLING

<i>Longmeadow Parkway</i> Sta. 2086+67.87, 45.84' LT	15" Sanitary Sewer	Manhole to be relocated to location depicted in the plans and reconnected with new sewer pipe	Village of Algonquin	Included with this Contract NOT CONTROLLING
<i>Longmeadow Parkway</i> Sta. 2089+96.23 LT&RT	6" Water Main	Water main out-of- service line to be cut, capped, and abandoned	Village of Algonquin	Included with this Contract NOT CONTROLLING
<i>Sleepy Hollow Road</i> Sta. 296+80.00', 35.00' RT Sta. 298+15.00, 20.00' RT Sta. 305+95, 18.00' RT	Handholes & Pedestals	Handholes & Pedestals to be Adjusted or Relocated	AT&T, Comcast	Handholes & Pedestals to be adjusted to proposed grade 5 DAYS
<i>Randall Road</i> Sta 200+29 to Sta. 205+46 LT	3 JT Poles	Remove and Relocate JT Pole	AT&T/ComEd	Pole Relocation 10 DAYS
<i>Longmeadow Parkway</i> Various Locations	Gas Main	Gas Main to Be Relocated	Nicor	Relocation is Complete. NOT CONTROLLING

Stage 2

No conflicts to be resolved. All utilities to be relocated prior to the start of construction as each utility conflicts with Stage 1 improvements.

Pre-Stage: ___ 0 ___ Days Total Installation

Stage 1: ___ 30 ___ Days Total Installation

Stage 2: ___ 0 ___ Days Total Installation

The following contact information is what was used during the preparation of the plans as provided by the Agency/Company responsible for resolution of the conflict.

Agency/Company Responsible to Resolve Conflict	Name of contact	Address	Phone	e-mail address
ComEd-Electric	Terri Bleck	1500 Franklin Boulevard Libertyville, IL 60048	847-816- 5239	terri.bleck@comed.com

Village Water and Sanitary	Michelle Zimmerman	110 Meyer Drive Algonquin, IL 60102	847-658-2754	mzimmerman@algonquin.org
AT&T Corporation	Kate Peters	1000 Commerce Drive, Oak Brook, IL 60523	630-573-5759	Kp1296@att.com
Nicor	Bruce Koppang	1844 Ferry Road, Naperville, IL 60563	630-388-3046	bkoppan@aglresources.com
Comcast	Martha Gieras	688 N. Industrial Drive, Elmhurst, IL 60126	630-600-6347	Martha.gieras@cable.comcast.com
Kane County Fiber Optics	Rick Danca	1350 W Washington, West Chicago, IL 60185	630-851-7751	rdanca@ntifiber.com

UTILITIES TO BE WATCHED AND PROTECTED

The areas of concern noted below have been identified by following the suggested staging plan included for the contract. The information provided is not a comprehensive list of all remaining utilities, but those which during coordination were identified as ones which might require the Department’s contractor to take into consideration when making the determination of the means and methods that would be required to construct the proposed improvement. In some instances the contractor will be responsible to notify the owner in advance of the work to take place so necessary staffing on the owners part can be secured.

Stage 1

AT&T & Comcast runs in rear yards along Longmeadow Parkway servicing residences. These are not in conflict but are near the right-of-way line on the residents’ side.

ComEd is only present aerially along Sleepy Hollow Road, otherwise in rear yards with AT&T & Comcast. The light poles are the responsibility of ComEd.

The following contact information is what was used during the preparation of the plans as provided by the owner of the facility.

Agency/Company Responsible to Resolve Conflict	Name of contact	Address	Phone	e-mail address
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ComEd-Electric	Terri Bleck	1500 Franklin Boulevard Libertyville, IL 60048	847-816-5239	terri.bleck@comed.com
Village Water and Sanitary	Michelle Zimmerman	110 Meyer Drive Algonquin, IL 60102	847-658-2754	mzimmerman@algonquin.org
AT&T Corporation	Kate Peters	1000 Commerce Drive, Oak Brook, IL 60523	630-573-5759	Kp1296@att.com
Nicor	Bruce Koppang	1844 Ferry Road, Naperville, IL 60563	630-388-3046	bkoppan@aglresources.com
Comcast	Martha Gieras	688 N. Industrial Drive, Elmhurst, IL 60126	630-600-6347	Martha.gieras@cable.comcast.com
Kane County Fiber Optics	Rick Danca	1350 W Washington, West Chicago, IL 60185	630-851-7751	rdanca@ntifiber.com

The above represents the best information available to the Department and is included for the convenience of the bidder. The days required for conflict resolution should be taken into account in the bid as this information has also been factored into the timeline identified for the project when setting the completion date. The applicable portions of the Standard Specifications for Road and Bridge Construction shall apply.

Estimated duration of time provided in the action column for the first conflicts identified will begin on the date of the executed contract regardless of the status of the utility relocations. The responsible agencies will be working toward resolving subsequent conflicts in conjunction with contractor activities in the number of days noted.

The estimated relocation dates must be part of the progress schedule submitted by the contractor. A utility kickoff meeting will be scheduled between the Department, the Department's contractor and the utility companies. The Department's contractor is responsible for contacting J.U.L.I.E. prior to any and all excavation work.

RESTRICTION ON WORKING DAYS AFTER A COMPLETION DATE

Effective: January 21, 2003

Revised: January 1, 2007

All temporary lane closures during the period governed by working days after a completion date will not be permitted during the hours of 6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m. Monday through Friday.

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

Failure to Open Traffic Lanes to Traffic: Should the Contractor fail to completely open and keep open all the traffic lanes to traffic in accordance with the limitations specified above, the Contractor shall be liable and shall pay to the Department the amount of \$250 per lane blocked, not as a penalty but as liquidated and ascertained damages, for each and every 15 minute interval or a portion thereof that a lane is blocked outside the allowable time limitations. The Department may deduct such damages from any monies due the Contractor. These damages shall apply during the period governed by working days after a completion date and any extensions of that contract time.

COMPLETION DATE PLUS WORKING DAYS

Effective: September 30, 1985

Revised: January 1, 2007

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

"When a completion date plus working days is specified, the Contractor shall complete all contract items and safely open all roadways to traffic by 9:00 PM on, **November 15, 2017** except as specified herein.

The Contractor will be allowed to complete all clean-up work and punch list items within 5 working days after the completion date for opening the roadway to traffic. Under extenuating circumstances the Engineer may direct that certain items of work, not affecting the safe opening of the roadway to traffic, may be completed within the working days allowed for clean-up work and punch list items. Temporary lane closures for this work may be allowed at the discretion of the Engineer.

Article 108.09 of the Recurring Specifications or the Special Provision for Failure to Complete the Work on Time shall apply to the completion date and the number of working days.

KEEPING ARTERIAL ROADWAYS OPEN TO TRAFFIC (LANE CLOSURES ONLY)

Effective: January 22, 2003

Revised: February 20, 2015

The Contractor shall provide the necessary traffic control devices to warn the public and to delineate the work zone as required in these Special Provisions, the Standard Specifications, the State Standards, and the District Details.

Arterial lane closures shall be in accordance with the Standard Specifications, Highway Standards, District Details, and the direction of the Engineer. The Contractor shall request and gain approval from the Illinois Department of Transportation's Arterial Traffic Control Supervisor at 847-705-4470 seventy-two (72) hours in advance of all long-term (24 hrs. or longer) lane closures. This advance notification is calculated based on a Monday through Friday workweek and shall not include weekends or state holidays.

Arterial lane closures not shown in the staging plans will not be permitted during **peak traffic volume hours**. Peak traffic volume hours are defined as weekdays (Monday through Friday) from **7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM**.

Private vehicles shall not be parked in the work zone. Contractor's equipment and/or vehicles shall not be parked on the shoulders or in the median during non-working hours. The parking of equipment and/or vehicles on State right-of-way will only be permitted at locations approved by the Engineer in accordance with Articles 701.08 and 701.11 of the Standard Specifications.

Should the Contractor fail to completely open and keep open all the traffic lanes to traffic in accordance with the limitations specified above, the Contractor shall be liable to the Department for the amount of:

- o **One lane or ramp blocked = \$1,000.00**
- o **Two lanes blocked = \$2,500.00**

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

TRAFFIC CONTROL AND PROTECTION (SPECIAL) (KDOT)

Special attention is called to Article 107.09 and Division 700 of the Standard Specifications and the following Highway Standards, Details, Quality Standard for Work Zone Traffic Control Devices, Supplemental Specifications and Recurring Special Provisions, and Special Provisions contained herein, relating to traffic control.

Working Hours:

For purposes of this contract, work hours are defined as 7 AM to 5 PM Monday through Friday and 8 AM to 4 PM on Saturdays; no Sunday work will be allowed. On Portland Concrete Cement pour days, the Contractor must be off the job site by 9 PM with no exceptions. Joint cutting will not be permitted overnight.

The Contractor shall contact the Engineer at least **72 hours** before beginning work.

The Contractor shall be required to use the latest version of the highway standards listed below as traffic conditions and working conditions warrant.

Highway Standards:

- 701001-02 Off-Road Operations, 2L, 2W, More than 15' Away
- 701006-05 Off-Road Operations, 2L, 2W, 15' to 24" from Pavement Edge
- 701101-05 Off Road Operations, Multilane, 15' to 24" from Pavement Edge
- 701106-02 Off Road Operations, Multilane, More than 15' Away
- 701201-04 Lane Closure, 2L, 2W, Day Only for Speeds >= 45 MPH
- 701301-04 Lane Closure, 2L, 2W, Short Time Operations
- 701311-03 Lane Closure, 2L, 2W Moving Operations, Day Only
- 701326-04 Lane Closure, 2L, 2W, Pavement Widening, For Speeds >= 45 MPH
- 701336-06 Lane Closure, 2L, 2W, Work Areas in Series for Speeds >=45 MPH
- 701422-09 Lane Closure, Multilane, For Speeds >=45 MPH to 55 MPH

- 701423-10 Lane Closure, Multilane, Intermittent or Moving Operations
- 701427-05 Lane Closure, Multilane, Intermittent or Moving Ops. for Speeds ≤ 40 MPH
- 701501-06 Urban Lane Closure, 2L, 2W, Undivided
- 701502-07 Urban Lane Closure, 2L, 2W, With Bi-Directional Turn Lane
- 701701-10 Urban Lane Closure, Multilane Intersection
- 701801-06 Sidewalk, Corner, or Crosswalk Closure
- 701901-06 Traffic Control Devices
- 704001-08 Temporary Concrete Barrier
- 782006 Guardrail and Barrier Wall Reflector Mounting Details

Special Provisions:

- Maintenance of Roadways
- Restriction on Working Days After A Completion Date
- Public Convenience and Safety (District 1) Traffic Control Plan
- Keeping Arterial Roadways Open to Traffic
- Aggregate Surface Course for Temporary Access
- Temporary Information Signing
- Wet Reflective Temporary Tape Type III Details

District One Standard Details:

- TC-10 Traffic Control & Protection for Side Roads, Intersections & Driveways
- TC-13 District One Typical Pavement Markings
- TC-14 Traffic Control and Protection at Turn Bays (to remain open to traffic)
- TC-16 Pavement Marking Letters and Symbols for Traffic Staging
- TC-18 Signing for Flagging Operations at Work Zone Openings
- TC-22 Arterial Road Information Sign
- TC-26 Driveway Entrance Signing

Recurring & Local Roads Special Provisions:

- Work Zone Traffic Control Surveillance

Two weeks before construction begins, the Contractor shall install one sign in each direction for each roadway where construction activities will be occurring. The signs shall be placed approximately 100 feet in advance of the roadway resurfacing limits or as instructed by the Engineer. The signs shall not be removed until after the work has begun. These signs shall have minimum dimensions of 48 inches by 48 inches and have a black legend and border on an orange reflectorized background. The legend shall read:

“ROAD CONSTRUCTION TO BEGIN” “WEEK OF XX/XX/17”

After the milling of the roadway has begun the Contractor shall install one sign in each direction for each roadway that has been milled. The signs shall be placed approximately 100 feet in advance of the roadway resurfacing limits or as directed by the Engineer. The signs shall not be removed until after the permanent striping has been placed. These signs shall have minimum dimensions 48 inches by 48 inches and have a black legend and border on an orange reflectorized background. The legend shall read:

“NO PASSING” “NOT STRIPED” “FOR XX MILES”

At the preconstruction meeting, the Contractor shall furnish the name of the individual in his direct employ who is to be responsible for the installation and maintenance of the traffic control for this project. If the actual installation and maintenance are to be accomplished by a subcontractor, consent shall be requested of the Engineer at the time of the preconstruction meeting in accordance with Article 108.01 of the Standard Specifications. This shall not relieve the Contractor of the requirement to have a responsible individual in his direct employ supervise this work. The Engineer will provide the Contractor the name of its representative who will be responsible for the administration of the Traffic Control Plan. The contractor must submit plans to the Engineer for review for each intersection (Longmeadow Parkway/Randall Road and Longmeadow Parkway/Sleepy Hollow Road) prior to beginning the work.

Pre-Stage 3 Note:

PRE STAGE 3 HAS BEEN PROVIDED TO PROPOSE A STAGING METHOD TO EXPEDITE THE CONSTRUCTION OF THE INTERSECTION WITH MINIMAL IMPACTS TO THE TRAVELING PUBLIC. THE CONTRACTOR IS TO COMPLETE THESE PROPOSED IMPROVEMENTS WITHIN 10 CALENDAR DAYS OF THE COMPLETION OF STAGE 2. REFER TO THE PRE-STAGE 3 PLAN SHEETS FOR MORE INFORMATION OF THE WORK ZONE AREA, TEMPORARY PAVEMENT, AND THE TEMPORARY SIGNING REQUIREMENTS.

Method of Measurement: Traffic Control and Protection shall be measured for payment as Lump Sum, which shall include all labor, materials, and equipment necessary to complete the work described above.

Basis of Payment: Traffic Control and Protection shall be paid for at the contract LUMP SUM price for TRAFFIC CONTROL AND PROTECTION (SPECIAL).

SECTION 602 RESTRICTED DEPTH DRAINAGE STRUCTURES

Description: This work shall consist of constructing restricted depth manholes, catch basins and inlets with a specified frame and grate/lid at locations identified on the plans.

Materials: The materials shall meet the requirements of Article 602.02 of the “Standard Specifications”.

General: The work shall be performed according to Section 602 of the “Standard Specifications”; the applicable IDOT Highway Standard(s) for the drainage structure type (manhole, catch basin or inlet); the IDOT Highway Standard Drawing 602601 [flat slab top] and the following:

- *The reinforced concrete slab shall be used in lieu of the cone section.*
- *A 24” sump shall be provided in a Catch Basin.*
- *For structures having Type 8 grates, a 24” inside diameter by 4” (minimum) high riser shall be installed on the flat slab to provide earth cover over the slab for vegetation.*

Method of Measurement: This work will be measured per each of the type drainage structure installed. Drainage structures of like type, size and frame and grate/lid will be counted under the same pay item regardless of whether a cone section (regular) or flat slab (restricted depth) top is used.

Basis of Payment: This work will be paid for at the contract unit price per each for MANHOLES, CATCH BASINS or INLETS, of the type and diameter specified, and with the frame and grate or frame and lid specified. The unit price shall include all equipment, labor and materials to install the drainage structure. No additional compensation will be made for drainage structures constructed as restricted depth.

PROJECT SPECIAL PROVISIONS

25200200 SUPPLEMENTAL WATERING

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

Schedule: Watering will only begin after the successful completion of all period of establishment requirements and will continue through the construction year growing season as directed by the Engineer.

Watering must be completed in a timely manner. When the Engineer directs the Contractor to do supplemental watering, the Contractor must begin the watering operation within 24 hours of notice. A minimum of 10 units of water per day must be applied until the work is complete.

Damage to plant material that is a result of the Contractor's failure to water in a timely way must be repaired or replaced at the Contractor's expense.

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

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

Class 2A Seed: 10 gallons per square yard
All Other Seeded Areas: 3 gallons per square yard

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

Method of Measurement: Supplemental watering will be measured in units of 1000 gallons (3,785 liters) of water applied as directed.

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

253XXXXX PLANTING WOODY PLANTS

Add the following to Construction Requirements:

Delete the third sentence of Article 253.07 and substitute the following:

The Contractor shall be responsible for all plant layout. The layout must be performed by qualified personnel. The planting locations must be laid out as shown in the landscape plan. This will require the

use of an engineer's scale to determine some dimensions. Tree locations within each planting area shall be marked with a different color stake/flag and labeled to denote the different tree species. Shrub beds limits must be painted. The Engineer will contact the Roadside Development Unit at (847) 705-4171 to approve the layout prior to installation. Allow a minimum of seven working (7) days prior to installation for approval.

Delete the first paragraph of Article 253.15 Plant Care and substitute the following:

The Contractor is responsible for plant care until receipt of the "Final Acceptance of Landscape Work" memorandum from the Bureau of Maintenance. The Contractor shall properly care for all plants including weeding, watering, adjusting of braces, repair of water saucers, or other work which is necessary to maintain the health, vigor, and satisfactory appearance of the plantings. This may require pruning, cultivating, tightening and repairing supports, repair of wrapping, and furnishing and applying sprays as necessary to keep the plants free of insects and disease. The Contractor shall provide plant care a minimum of every two weeks, or within 3 days following notification by the Engineer. All requirements for plant care shall be considered as included in the cost of the contract.

Delete the first paragraph of Article 253.15 Plant Care (a) and substitute the following:

During plant care watering shall be performed at least every two weeks beginning in May until receipt of the "Final Acceptance of Landscape Work" memorandum from the Bureau of Maintenance. The contractor shall apply a minimum of 35 gallons of water per tree, 25 gallons per large shrub, and 15 gallons per small shrub. The Engineer may direct the Contractor to adjust the watering rate and frequency depending upon weather conditions. Watering for trees shall not be paid for separately but considered included in the cost per tree or shrub.

Revise Basis of Payment as follows:

Basis of Payment: This work will be paid for at the contract unit price per each for TREES and SHRUBS of the species, root type, and plant size specified. Payment will be made according to the following schedule.

(a) Initial Payment. Upon completion of planting, mulch covering, wrapping, and bracing, 90 percent of the pay item(s) will be paid.

(b) Final Payment. Upon inspection and acceptance of the plant material, or upon execution of a third party bond, the remaining ten percent of the pay item(s) will be paid.

28000305 TEMPORARY DITCH CHECKS

Description: This work shall consist of constructing, maintaining, and removing temporary ditch checks.

General: The work shall be performed according to Section 280 of the "Standard Specifications", the details shown in the plans, and the following:

The temporary ditch check shall be triangular shaped, urethane foam covered with a geotextile fabric. The temporary ditch check shall be installed on a geotextile fabric apron. The temporary ditch check shall have a triangle base 16" – 20" wide and a minimum triangle height of 10". The temporary ditch

checks shall be installed at the locations specified on the Erosion Control Plan, and/or as directed by the Engineer. The temporary ditch check installation shall be according to the detail shown on the plans and the manufacturer’s recommendations.

The geotextile fabric shall conform to Article 1080.05 of the “Standard Specifications”, for Geotechnical Fabric for French Drains.

The temporary ditch checks shall remain in place until just before placing the final landscaping in the ditch area. The Contractor shall not remove the temporary ditch checks if it is raining and/or rain is in the immediate forecast.

The ditch checks shall become the property of the Contractor upon their removal.

Method of Measurement: Temporary Ditch Checks will be measured in place and the length calculated in feet for each ditch check section actually installed.

Basis of Payment: This work will be paid for at the contract unit price per foot for TEMPORARY DITCH CHECKS. The unit price shall include all labor, equipment and materials necessary for their installation and removal. The maintenance of this item shall be included with and paid for as part of the contract total price for MAINTENANCE OF EROSION CONTROL SYSTEM.

42400800 DETECTABLE WARNINGS

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

Materials: The detectable warnings shall be cast iron panels of the sizes shown on the plans and shall meet the following material specification:

The detectable warning plate shall be constructed of gray iron meeting the requirements of Article 1006.14 of the “Standard Specifications” and ASTM A48, CLASS 35B; or cast ductile iron meeting the requirements of Article 1006.15 of the “Standard Specifications”.

The coating system shall consist of a rust inhibiting epoxy primer and a finish coat.

The epoxy primer shall have the following properties:

Property	Test Method	Performance
Humidity	ASTM D1735	1000 Hours Minimum
Water Immersion	ASTM D870	250 Hours Minimum
Corrosion Resistance (Salt Spray)	ASTM B117	1000 Hours Minimum

Cold Rolled Steel Lab Panels

The finish coat shall be a powder coat and shall have the following properties:

Property	Test Method	Performance
Color	---	Federal Yellow
Corrosion Resistance (Salt Spray)	ASTM B117	1000 Hours Minimum

Cold Rolled Steel Lab Panels

General: The installation of detectable warnings shall meet the requirements of Article 424.09 of the “Standard Specifications”. Grey iron plates shall be installed in concrete accessibility ramps only. Ductile iron plates may be installed in either concrete or hot-mix asphalt (HMA) accessibility ramps.

Method of Measurement: This work will be measured for payment in place installed, in square feet. The concrete area under the detectable warnings will be measured for payment as PORTLAND CEMENT CONCRETE SIDEWALK of the thickness specified, with no deductions made for the detectable warnings panels located within the ramp.

Basis of Payment: This work will be paid for at the contract unit price per square foot of DETECTABLE WARNINGS. The unit price shall include all equipment, materials and labor required to install the panels.

52200800 SEGMENTAL CONCRETE BLOCK WALL

This work shall consist of excavation for a segmental block wall system in accordance with the applicable portions of Section 502 of the Standard Specifications and furnishing all materials and constructing a segmental block retaining wall at the locations shown on the plans in accordance with Article 522.12 of the Standard Specifications except as modified herein. This work shall include all excavation and disposal of excavated material, construction of a leveling pad and granular backfill behind the wall in accordance with the manufacturer’s recommendations. This item shall also include any geotechnical fabric, if recommended by the manufacturer, or required for drainage. The design of the segmental block wall shall follow the manufacturer’s requirements and shall be based on actual field conditions and not include any additional surcharge or loadings. Wall systems that require soil reinforcement or tiebacks shall not be used. The batter of the wall shall be in accordance with the manufacturer’s recommendations.

The Contractor shall prepare shop drawings for review by the Engineer and make recommendations as to the wall color, exposed block texture and the need for any drainage. The Engineer shall decide on the finish and color of the materials and may consult with local jurisdictions or maintenance personnel in reviewing the shop drawings and preparing recommendations. Connections between existing wall to remain and the new wall shall be in accordance with wall manufacturer’s standards and recommendations.

Measurement and Payment: This work will be measured and paid for at the contract unit price per square foot based upon the lineal foot of wall installed and measured horizontally along the base of the wall and the height of the wall. The height of the wall, for purposes of measurement, will include the height of all block courses but not the leveling pad. This work will be paid for at the contract unit price per square foot for SEGMENTAL CONCRETE BLOCK WALL, which price shall be payment in full for all labor, designs, materials and equipment necessary furnish, install the wall as shown on the plans and as described herein.

56106400 & 56106600 ADJUSTING WATER MAIN 8", 12"

This work shall follow Article 562 of the Standard Specifications and applicable portions of Section 41 of the Standard Specifications for Water and Sewer Construction in Illinois. Work shall consist of adjusting (lowering) an existing water main in the location identified on the plans to no longer conflict with the proposed storm sewer improvements. This pay item shall include all time, labor, and materials to complete the adjustment operation.

If adjustment is not feasible and the water main must be cut and new pipe laid, the cost of time, materials, and labor shall be considered included in the unit cost of this pay item and no additional compensation shall be provided.

The Village of Algonquin Public Works Department shall be notified if the main adjustment requires a shut off and must be approved by the Village prior to performing the work.

Method of Measurement & Basis of Payment: This work shall be paid for at the contract unit price per FOOT for ADJUSTING WATER MAIN 8" or ADJUSTING WATER MAIN 12".

56201600 CORPORATION STOPS 1 ½"

Description: This work shall consist of all labor, equipment, and materials required to provide and install a new corporation stop of the specified size at locations shown on the plans or as directed by the Engineer.

Material Requirements: Corporation stops shall be fabricated of brass and provided with an outlet suitable for copper connection in accordance with the requirements of AWWA Standard C-800.

Construction Requirements: Corporation stops shall be installed in accordance with the applicable requirements of Section 41-2.12 of the Water and Sewer Specifications.

Basis of Payment: This work will be paid for at the contract unit price per EACH for CORPORATION STOPS 1 ½".

56400300 FIRE HYDRANTS TO BE ADJUSTED

Description: This item shall consist of the proper adjustment of the hydrant where indicated on the plans in accordance with the Standard Specifications for Water and Sewer Construction in Illinois, 7th Edition.

Method of Measurement & Basis of Payment: This work will be measured for in payment as EACH. Work shall be paid for as FIRE HYDRANTS TO BE ADJUSTED, EACH.

56400400 FIRE HYDRANTS TO BE RELOCATED

Description: This item shall consist of the proper relocation where indicated on the plans in accordance with the Standard Specifications for Water and Sewer Construction in Illinois, 7th Edition and the *IDOT District One Detail BD-36, Fire Hydrant to be Moved*.

Method of Measurement & Basis of Payment: This work will be measured for in payment as EACH. Work shall be paid for as FIRE HYDRANTS TO BE RELOCATED, EACH and shall include all tees, fittings, valve boxes, etc. as depicted in the detail.

60610900 COMBINATION CONCRETE CURB AND GUTTER, TYPE M-6.24 (VARIABLE WIDTH GUTTER FLAG)

Description. This work shall consist of constructing Combination Concrete Curb and Gutter, Type M-6.24 (Variable Width Gutter Flag) at locations shown and dimensions detailed in the plans.

This work shall be in accordance with the applicable portions of IDOT Standard Drawing 606001 Concrete Curb, Type B, and Combination Concrete Curb and Gutter and Section 606 of the Standard Specifications

Protective coat, when required, shall be constructed according to Article 420.18 of the Standard Specifications.

Method of Measurement. This work will be measured for payment as defined in Article 606.14 of the Standard Specifications.

Basis of Payment. This work will be paid for at the contract unit price per foot for COMBINATION CONCRETE CURB AND GUTTER, TYPE M-6.24 (VARIABLE WIDTH GUTTER FLAG).

Protective coat will be paid for at the contract unit price per SQUARE YARD for PROTECTIVE COAT.

7800XXXX MODIFIED URETHANE PAVEMENT MARKING (TYPE SPECIFIED)

This work shall consist of modifying the standard specifications for modified urethane pavement marking as follows:

Description: This work shall consist of furnishing and applying a reflectorized modified urethane, plural component, durable liquid pavement marking lines, sizes and colors as shown on the plans.

Materials: All materials shall meet the following specifications:

- (a) Modified Urethane Marking: The modified urethane pavement marking material shall consist of a homogeneous blend of modified urethane resins and pigments designed to provide a simple volumetric mixing ratio of two components (must be two volumes of Part A to one volume of Part B). No volatile solvent or fillers will be allowed.
- (b) Pigmentation: The pigment content by weight of Component A shall be determined by low temperature ashing according to ASTM D 3723. The pigment content shall not vary more than \pm two percent from the pigment content of the original qualified paint.

White Pigment shall be Titanium Dioxide meeting ASTM D 476 Type II, Rutile.

Yellow Pigment shall be Organic Yellow and contain no heavy metals.

- (c) Environmental: Upon heating to application temperature, the material shall not exude fumes, which are toxic or injurious to persons or property when handled according to manufacturer specifications. The modified urethane pavement marking material compositions shall not contain free isocyanate functionality.
- (d) Daylight Reflectance: The daylight directional reflectance of the cured modified urethane material (without reflective media) shall be a minimum of 80 percent (white) and 50 percent (yellow) relative to magnesium oxide when tested using a color spectrophotometer with a 45 degree circumferential / zero degrees geometry, illuminant C, and two degrees observer angle. The color instrument shall measure the visible spectrum from 380 to 720 nm with a wavelength measurement interval and spectral bandpass of 10 nm. In addition, the color of the yellow modified urethane shall visually match Color Number 33538 of Federal Standard 595a with chromaticity limits as follows:

x	0.490	0.475	0.485	0.539
y	0.470	0.438	0.425	0.456

- (e) Weathering Resistance: The modified urethane, when mixed in the proper ratio and applied at 0.35 to 0.41 mm (14 to 16 mils) wet film thickness to an aluminum alloy panel (Federal Test Std. No. 141, Method 2013) and allowed to cure for 72 hours at room temperature, shall be subjected to accelerated weathering for 75 hours. The accelerated weathering shall be completed by using the light and water exposure apparatus (fluorescent UV – condensation type) and tested according to ASTM G 53.

The cycle shall consist of four hours UV exposure at 50 °C (122 °F) and four hours of condensation at 40 °C (104 °F). UVB 313 bulbs shall be used. At the end of the exposure period, the material shall show no substantial change in color or gloss.

- (f) Drying Time: The modified urethane material, when mixed in the proper ratio and applied at 0.35 to 0.41 mm (14 to 16 mils) wet film thickness and with the proper saturation of glass spheres, shall exhibit a no-tracking time of three minutes or less when tested according to ASTM D 711.
- (g) Adhesion: The catalyzed modified urethane pavement marking materials when applied to a 100 x 100 x 50 mm (4 x 4 x2 in) concrete block shall have a degree of adhesion which results in a 100 percent concrete failure in the performance of this test.

The concrete block shall be brushed on one side and have a minimum strength of 24,100 kPa (3,500 psi). A 50 mm (2 in) square film of the mixed modified urethane shall be applied to the brushed surface and allowed to cure for 72 hours at room temperature. A 50 mm (2 in) square cube shall be affixed to the surface of the modified urethane by means of an epoxy glue. After the glue has cured for 24 hours, the modified urethane specimen shall be placed on a dynamic testing machine in such a fashion so that the specimen block is in a fixed position and the 50 mm (2 in) cube (glued to the modified urethane surface) is attached to the dynamometer head. Direct upward pressure shall be slowly applied until the modified urethane system fails. The location of the break and the amount of concrete failure shall be recorded.

- (h) Hardness: The modified urethane marking materials, when tested according to ASTM D-2240, shall have a Shore D Hardness greater than 75. Films shall be cast on a rigid substrate at 0.35 to 0.41 mm (14 to 16 mils) in thickness and allowed to cure at room temperature for 72 hours before testing.
- (i) Abrasion: The abrasion resistance shall be evaluated on a Taber Abrader with a 1,000 gram load and CS-17 wheels. The duration of test shall be 1,000 cycles. The wear index shall be calculated based on ASTM test method D-4060 and the wear index for the catalyzed material shall not be more than 80. The tests shall be run on cured samples of modified urethane material which have been applied at a film thickness of 0.35 to 0.41 (14 to 16 mils) to code S-16 stainless steel plates. The films shall be allowed to cure at room temperature for at least 72 hours and not more than 96 hours before testing.
- (j) Tensile: When tested according to ASTM D-638, the modified urethane pavement marking materials shall have an average tensile strength of not less than 6,000 pounds per square inch. The Type IV Specimens shall be pulled at a rate of ¼” per minute by a suitable dynamic testing machine. The samples shall be allowed to cure at 75 °F± 2°F for a minimum of 24 hours and a maximum of 72 hours prior to performing the indicated tests.
- (k) Compressive Strength: When tested according to ASTM D-695, the catalyzed modified urethane pavement marking materials shall have a compressive strength of not less than 12,000 pounds per square inch. The cast sample shall be conditioned at 75°F± 2°F for a minimum of 72 hours before performing the indicated tests. The rate of compression of these samples shall be no more than ¼”per minute.
- (l) Glass Spheres: The glass spheres shall meet the requirements of Article 1095.04(m) and Article 1095.07 of the Standard Specifications for first drop and second drop glass beads.
- (m) The material shall be shipped to the job site in substantial containers and shall be plainly marked with the manufacturer’s name and address, the name and color of the material, date of manufacture and batch number.
- (n) Prior to approval and use of the modified urethane pavement marking materials, the manufacturer shall submit a notarized certification of an independent laboratory, together with the results of all

tests, stating these materials meet the requirements as set forth herein. The certification test report shall state the lot tested, manufacturer's name, brand name of modified urethane and date of manufacture. The certification shall be accompanied by one half-liter (one-pint) samples each of Part A and Part B. Samples shall be sent in the appropriate volumes for complete mixing of Part A and Part B.

After approval by the Department, certification by the modified urethane manufacturer shall be submitted for each batch used. New independent laboratory certified test results and samples for testing by the Department shall be submitted any time the manufacturing process or paint formulation is changed. All costs of testing (other than tests conducted by the Department) shall be borne by the manufacturer.

(o) Acceptance samples shall consist of one half-liter (one-pint) samples of Part A and Part B, of each lot of paint. Samples shall be sent in the appropriate volumes for complete mixing of Part A and Part B. The samples shall be submitted to the Department for testing, together with a manufacturer's certification. The certification shall state the formulation for the lot represented is essentially identical to that used for qualification testing. All, acceptance samples shall be taken by a representative of the Illinois Department of Transportation. The modified urethane pavement marking materials shall not be used until tests are completed and they have met the requirements as set forth herein.

(p) The manufacturer shall retain the test sample for a minimum of 18 months.

Application Equipment: The modified urethane pavement marking compounds shall be applied through equipment specifically designed to precisely meter the two components in the ratio of 2:1 and approved by the manufacturer of the material. This equipment shall produce the required amount of heat at the mixing head and gun tip and maintain those temperatures within the tolerances specified. This equipment shall also have as an integral part of the gun carriage, a high pressure air spray capable of cleaning the pavement immediately prior to the marking application.

The equipment shall be capable of spraying both yellow and white urethane, according to the manufacturer's recommended proportions and be mounted on a truck of sufficient size and stability with an adequate power source to produce lines of uniform dimensions and prevent application failure. The truck shall have at least two urethane tanks each of 415 L (110 gal) minimum capacity and shall be equipped with hydraulic systems. It shall be capable of placing stripes on the left and right sides and placing two lines on a three-line system simultaneously with either line in a solid or intermittent pattern, in yellow or white, and applying glass beads by the double drop pressurized bead system. The system shall apply both the first drop glass beads and the second drop glass beads at a rate of 1.2 kg per L (10 lb./gal). The equipment shall be equipped with pressure gauges for each proportioning pump. All guns shall be in full view of operators at all times. The equipment shall have a metering device to register the accumulated installed quantities for each gun, each day. Each vehicle shall include at least one operator who shall be a technical expert in equipment operations and urethane application techniques. Certification of equipment shall be provided at the preconstruction conference.

Application: The pavement shall be cleaned by a method approved by the Engineer to remove all dirt, grease, glaze or any other material that would reduce the adhesion of the markings with minimum or no damage to the pavement. New PCC pavements shall be blast-cleaned to remove all curing compounds.

Markings shall be applied to the cleaned surfaces on the same calendar day. If this cannot be accomplished, the surface shall be re-cleaned prior to applying the markings. Existing pavement markings shall be at least 90 percent removed. No markings shall be applied until the Engineer approves the cleaning.

Widths, lengths and shapes of the cleaned surface shall be prepared wider than the modified urethane pavement marking material to be applied, such that a prepared area is on all sides of the urethane pavement marking material after application.

New asphalt concrete and seal coated surfaces shall be in place a minimum of two weeks prior to marking applications.

The cleaning operation shall be a continuous moving operation process with minimum interruption to traffic.

The pavement markings shall be applied to the cleaned road surface, during conditions of dry weather and subsequently dry pavement surfaces at a minimum uniform wet thickness of 20 mils in accordance with the manufacturer's installation instructions and at the widths and patterns shown on the contract plans. The application and combination of reflective media (glass beads and/or reflective elements) shall be applied at a rate specified by the manufacturer. At the time of installation the pavement surface temperature shall be 40 ° F and rising and the ambient temperature shall be 35° F and rising. The pavement surface temperature and the ambient temperatures shall be determined and documented before the start of each of marking operation. The pavement markings shall not be applied if the pavement shows any visible signs of moisture or it is anticipated that damage causing moisture, such as rain showers, may occur during the installation and curing periods. The Engineer shall determine the atmospheric conditions and pavement surface conditions that produce satisfactory results.

Unless directed by the Engineer, lines shall not be laid directly over a longitudinal crack or joint. The edge of the center line or lane line shall be offset a minimum distance of 50 mm (2 inches) from a longitudinal crack or joint. Edge lines shall be approximately 50 mm (2 inches) from the edge of pavement. The finished center and lane lines shall be straight, with the lateral deviation of any 3 meter (10-foot) line not to exceed 25 mm (1 inch).

Notification: The Contractor shall notify the Engineer 72 hours prior to the placement of the markings in order that an inspector can be present during the operation. At the time of this notification, the Contractor shall indicate the manufacturer and lot numbers of urethane and reflective media that he intends to use. The Engineer will ensure that the approved lot numbers appear on the material package. Failure to comply with this provision may be cause for rejection.

The Contractor shall provide an accurate temperature-measuring device(s) that shall be capable of measuring the pavement temperature prior to application of the material, the material temperature at the gun tip and the material temperature prior to mixing.

The Contractor shall be required to maintain a minimum initial retroreflectivity for all epoxy pavement marking that he/she applies, as follows:

Material	Color	Retro reflectivity (millicandelas/m ² /lux)
Urethane	White	300
Urethane	Yellow	250

The Engineer will measure the retro reflectivity a minimum of **twelve (12) hours** after and within **fourteen (14) days** of the application. The Engineer will take a minimum of ten (10) readings per color line, evenly spaced, on a 1,000 meter (0.6 mile) roadway section on all roadways specified in the schedule of quantities for epoxy pavement marking or as determined by the Engineer. The Engineer will average all of the readings for each color line within the 1,000 meter section of roadway to determine the retro reflectivity. The Contractor shall be required to replace all epoxy pavement not meeting the minimum retro reflectivity requirements at no additional expense to this contract.

Inspection: The urethane pavement markings will be inspected following installation, but no later than December 15, and inspected following a winter performance period that extends 180 days from December 15 in accordance with the provisions of Article 780.10 of the Standard Specification for Road and Bridge Construction.

Method of Measurement: The lines will be measured for payment in feet of urethane pavement marking lines applied and accepted, measured in place. Double yellow lines will be measured as two separate lines. Words and symbols shall conform to the size and dimensions specified in the Manual on Uniform Traffic Control Devices and Standard 780001 and will be measured based on total areas indicated in table 1 or as specified in the plans.

Basis of Payment: This work will be paid for at the contract unit prices per FOOT of applied line for MODIFIED URETHANE PAVEMENT MARKING - LINE 4, 5, 6, 8, 12, 24 inches or per SQUARE FOOT for MODIFIED URETHANE PAVEMENT MARKING – LETTERS AND SYMBOLS measured as specified herein.

85000205 MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION (SPECIAL)

This pay item shall include the following work in addition to the standard Maintenance of Existing Traffic Signal Installation item.

The Contractor shall perform all work necessary to make an existing permanent traffic signal installation fully operational for the entire intersection as directed by the Engineer. The anticipated work includes but is not limited to removing bags from permanent traffic signal heads, connecting existing cables in the controller cabinet and/or at the traffic signal heads, and ensuring proper operation of the equipment as summarized in the Traffic Signal General Requirements special provision.

General.

1. Full maintenance responsibility shall start as soon as the Contractor begins any physical work on the intersection to be maintained. If Contract work is started prior to a traffic signal inspection, maintenance of the traffic signal installation(s) will be transferred to the Contractor without an inspection.
2. The Contractor shall have electricians with IMSA Level II certification on staff to provide signal maintenance. A copy of the certification shall be immediately available upon request of the Engineer.
3. This item shall include maintenance of all traffic signal equipment and other connected and related equipment such as flashing beacons, emergency vehicle pre-emption equipment, master controllers, uninterruptable power supply (UPS and batteries), PTZ cameras, vehicle detection, handholes, lighted signs, telephone service installations, communication cables, conduits to adjacent intersections, and other traffic signal equipment.
4. Regional transit, County and other agencies may also have equipment connected to existing traffic signal or peripheral equipment such as PTZ cameras, switches, transit signal priority (TSP and BRT) servers, radios and other devices that shall be included with traffic signal maintenance at no additional cost to the contract.
5. Maintenance shall not include Automatic Traffic Enforcement equipment, such as Red Light Enforcement cameras, detectors, or peripheral equipment. This equipment is operated and maintained by the local municipality and should be de-activated while on contractor maintenance.
6. The energy charges for the operation of the traffic signal installation shall be paid for by the Contractor.

Maintenance.

1. 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. The Contractor shall check signal system communications and phone lines to assure proper operation. 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. Prior to the traffic signal maintenance transfer, the contractor shall supply a detailed maintenance schedule that includes dates, locations, names of electricians providing the required checks and inspections along with any other information requested by the Engineer.

2. The Contractor is advised that the existing and/or span wire 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 shut down 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.
3. 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.
4. The Contractor shall provide the Engineer with 2 (two) 24 hour telephone numbers for the maintenance of the traffic signal installation and for emergency calls by the Engineer.
5. 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.
6. The Contractor shall respond to all emergency calls from the Department or others within one (1) 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. The Contractor shall be responsible for all of the State's Electrical Maintenance Contractor's costs and liquidated damages of \$1000 per day per occurrence. 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.
7. 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.

8. Equipment included in this item that is damaged or not operating properly from any cause 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.
9. Automatic Traffic Enforcement equipment, such as Red Light Enforcement cameras, detectors, and peripheral equipment, damaged or not operating properly from any cause, shall be the responsibility of the municipality or the Automatic Traffic Enforcement Company per Permit agreement.
10. The Contractor shall be responsible to clear snow, ice, dirt, debris or other condition that obstructs visibility of any traffic signal display or access to traffic signal equipment.
11. The Contractor shall maintain the traffic signal in normal operation during short or long term loss of utility or battery back-up power at critical locations designated by the Engineer. Critical locations may include traffic signals interconnected to railroad warning devices, expressway ramps, intersection with an SRA route, critical corridors or other locations identified by the Engineer. Temporary power to the traffic signal must meet applicable NEC and OSHA guidelines and may include portable generators and/or replacement batteries. Temporary power to critical locations shall not be paid for separately but shall be included in the contract.
12. Temporary replacement of damaged or knockdown of a mast arm pole assembly shall require construction of a full or partial span wire signal installation or other method approved by the Engineer to assure signal heads are located overhead and over traveled pavement. Temporary replacement of mast arm mount signals with post mount signals will not be permitted.

Basis of Payment.

This work will be paid for at the contract unit price per each for MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION (SPECIAL). Each intersection will be paid for separately.

K0013030 PERENNIAL PLANTS, WETLAND TYPE, 2" DIAMETER BY 4" DEEP PLUG

Description:

This work shall consist of providing perennial plants, as noted on the plans, and generally follow the specifications as noted in Section 254 Planting Perennial Plants, in the "Standard Specifications." The work shall consist of delivery and placement of perennial plants as noted and detailed in the plans with the following specific requirements:

1. Plants included are to be herbaceous plants and native grass as noted on the plan.
2. All plants supplied are to be in 2" x 4" rooted plugs.

3. All plants are to follow a layout of spacing of one and one-half feet (1.5 feet) in rows as noted on the plans.

A 3” mulch layer shall be placed between plug plantings. This mulch layer shall not be paid for separately but included in the cost of PERENNIAL PLANTS, WETLAND TYPE, 2” DIAMETER BY 4” DEEP PLUG.

Plug planting material shall be as follows:

<u>Common Name</u>	<u>Botanical Name</u>	<u>% of Plan Unit Quantity</u>
Little Bluestem	Schizachyrium Scoparium	60.0%
Butterfly Milkweed	Aesclepias Tuberosa	5.0%
Purple Coneflower	Echinacea Purpurea	5.0%
Sky Blue Aster	Aster Azureus	5.0%
Prairie Coreopsis	Coreopsis Palmata	5.0%
Prairie Blazing Star	Liaris Pycnostachya	5.0%
Wild Monarda	Monarda Fistulosa	5.0%
Black-Eyed Susan	Rudbeckia Hirta	5.0%
Golden Alexander	Zizia Aurea	5.0%

Method of Measurement: Perennial plants will be measured for payment per UNIT planted. One hundred (100) perennial plants are equal to one (1) UNIT.

Basis of Payment: This work shall be paid for at the contract unit price per UNIT for PERENNIAL PLANTS, WETLAND TYPE, 2” DIAMETER BY 4” DEEP PLUG and shall also include the 3” mulch layer as described. Payment is incumbent on the health and vigor of the plants after the establishment period, and correction/replacement must be made by the Contractor of those plants not living before full payment is allowed.

K0026830 SHRUB REMOVAL

Description: This work shall consist of removing existing shrubs in locations as identified in the plans. This work shall follow Article 201.08 of the Standard Specifications.

Method of Measurement & Basis of Payment: This work shall be measured and paid for per EACH for SHRUB REMOVAL.

K0029614 WEED CONTROL, AQUATIC

Description: This work shall consist of the application of a non-selective and non-residual herbicide for weed control of *Phragmites species* in wet areas. Applications may only be made for the control of undesirable vegetation in and around standing and flowing water. Equal formulation must be approved to use in or near water.

Materials: The herbicide shall have the following formulation and must be labeled for use in wetlands and over water:

Active Ingredient:

*Glyphosate, N-(phosphonomethyl) glycine, in the form of its isopropylamine salt	53.80%
Inert Ingredients	<u>46.20%</u>
TOTAL	100.00%

The Contractor shall submit a certificate, including the following, prior to starting work:

1. The chemical names of the compound and the percentage by weight of the ingredients which must match the above specified formulation.
2. A statement that the material is in a solution which will form a satisfactory emulsion for use when diluted with water for normal spraying conditions.
3. A statement that the herbicide, when mixed with water, will be completely soluble and dispersible and remain in suspension with continuous agitation.
4. A statement describing the products proposed for use when the manufacturer of the herbicide requires that surfactants, drift control agents, or other additives be used with the product. These tank mix additives shall be used as specified by the manufacturer. Required additives will not be paid for separately.

All material shall be brought to the spray area in the original, unopened containers supplied by the manufacturer.

Application Rate: The herbicide shall be applied at the rate of 1 gallon per acre. Equal formulation shall be diluted with a minimum of twenty- five (25) gallons of water and applied as a mixture. Water for dilution of the mixture will not be paid for separately.

Method of Measurement: Weed Control, Aquatic will be measured for payment in gallons of undiluted herbicide applied as specified. The gallons for payment will be determined based on the gallons specified on the label attached to the original container supplied by the manufacturer.

Basis of Payment: Weed Control, Aquatic will be paid for at the contract unit price per GALLON for WEED CONTROL, AQUATIC. Water for dilution of the mixture and additives required for application will not be paid for as separate items, but the costs shall be considered as included in the contract price for WEED CONTROL, AQUATIC, and no additional compensation will be allowed.

K0029624 WEED CONTROL, TEASEL

Description: This work shall consist of the application of a broadleaf herbicide for control of teasel and controlling broadleaf weeds in turf.

Materials: The broadleaf herbicide shall have the following formulation:

Active Ingredient:	
triclopyr: 3,5,6-trichloro-2-pyridinyloxyacetic acid, triethylamine salt	44.4%

Inert Ingredients	<u>55.6%</u>
TOTAL	100.00%

The Contractor shall submit a certificate, including the following, prior to starting work:

1. The chemical names of the compound and the percentage by weight of the ingredients which must match the above specified formulation.
2. A statement that the material is in a solution which will form a satisfactory emulsion for use when diluted with water for normal spraying conditions.
3. A statement that the herbicide, when mixed with water, will be completely soluble and dispersible and remain in suspension with continuous agitation.
4. A statement describing the products proposed for use when the manufacturer of the herbicide requires that surfactants, drift control agents, or other additives be used with the product. These tank mix additives shall be used as specified by the manufacturer. Required additives will not be paid for separately.

All material shall be brought to the spray area in the original, unopened containers supplied by the manufacturer.

Schedule: Spraying will not be allowed when temperatures exceed 90° F or under 45° F, when wind velocities exceed fifteen (15) miles per hour, when foliage is wet or rain is eminent, when visibility is poor or during legal holiday periods.

Application Rate: The broadleaf herbicide shall be applied at the rate of one (1) gallon per acre. Herbicide shall be diluted with a minimum of twenty-five gallons (25) of water and applied as a mixture. Water for dilution of the mixture will not be paid for separately.

Method of Measurement: Weed Control, Teasel will be measured for payment in gallons (liters) of undiluted herbicide or equal applied as specified.

Basis of Payment: WEED CONTROL, TEASEL will be paid for at the contract unit price per GALLON. Water for dilution of the mixture and additives required for application will not be paid for as separate items, but the costs shall be considered as included in the contract unit price for Weed Control, Teasel and no additional compensation will be allowed.

K0029634 WEED CONTROL, PRE-EMERGENT GRANULAR HERBICIDE

Description: This work shall consist of spreading a pre-emergent granular herbicide in place of weed barrier fabric in areas as shown on the plans or as directed by the Engineer. This item will be used in mulched plant beds and mulch rings.

Delete Article 253.11 and substitute the following:

Within 48 hours after planting, mulch shall be placed around all plants in the entire mulched bed or saucer area specified to a depth of 4 inches (100 mm). No weed barrier fabric will be required for tree and shrub planting. Pre-emergent Herbicide will be used instead of weed barrier fabric. The Pre-emergent Herbicide shall be applied prior to mulching. Mulch shall not be in contact with the base of the trunk.

Materials: The pre-emergent granular herbicide shall contain the chemicals Trifluralin 2% active ingredient and Isoxaben with 0.5% active ingredient. The herbicide label shall be submitted to the Engineer for approval at least seventy-two (72) hours prior to application.

Method: The pre-emergent granular herbicide shall be used in accordance with the manufacturer's directions on the package. The granules are to be applied prior to mulching.

Apply the granular herbicide using a drop or rotary-type designed to apply granular herbicide or insecticides. Calibrate application equipment to use according to manufacturer's directions. Check frequently to be sure equipment is working properly and distributing granules uniformly. Do not use spreaders that apply material in narrow concentrated bands. Avoid skips or overlaps as poor weed control or crop injury may occur. More uniform application may be achieved by spreading half of the required amount of product over the area and then applying the remaining half in swaths at right angles to the first. Apply the granular herbicide at the rate of 100 lbs/acre (112 kg/ha) or 2.3 lbs/1000 sq. ft. (11.2 kg/1000 sq. meters).

Method of Measurement: Pre-emergent granular herbicide will be measured in place in Pounds (Kilograms) of Pre-emergent Granular Herbicide applied. Areas treated after mulch placement shall not be measured for payment.

Basis of Payment: This work will be paid for at the contract unit price per POUND for WEED CONTROL, PRE-EMERGENT GRANULAR HERBICIDE.

K1005421 SEEDING (SPECIAL)

Description. This work shall consist of placing seed and other materials in accordance with Section 250 of the Standard Specifications and the following or as directed by the Engineer.

Construction Requirements. For areas shown on the plans to be seeded with the item Seeding (Special), the areas shall be seeded in accordance with Article 250.07 of the Standard Specifications using both Seeding Class 4 (MODIFIED) and Seeding Class 4B (MODIFIED) as specified in the special provisions included herein.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in acres of surface seeded.

Basis of Payment. This work will be paid for at the contract unit price per ACRE for SEEDING (SPECIAL) installed. Price shall include but not be limited to seeds and all other labor, materials, and equipment needed to perform the work as specified herein.

X0322464 ABANDON AND FILL EXISTING SANITARY MANHOLE

Description. This work shall consist of abandoning in-place an existing sanitary manhole in the location shown on the plans and filling with CLSM per the applicable portions of Article 605 and Article 593 of the standard specifications.

Construction Requirements. Work shall consist of removal of the existing frame and grate of the sanitary sewer and filling with CLSM or other material as approved by the Engineer.

Method of Measurement & Basis of Payment. This work will be measured for payment, complete in place per EACH for ABANDON AND FILL EXISTING SANITARY MANHOLE and shall consist of all time, labor, and materials to complete the operation.

X0322871 MAINTENANCE OF EROSION CONTROL SYSTEM

Description: This work shall consist of maintaining the temporary erosion control systems installed by the Contractor on the project. The maintenance shall be performed as directed by the Engineer, to control siltation at all times during the duration of the project.

General: The work shall be performed according to Section 280 of the “Standard Specifications” and the following:

The Maintenance of Erosion Control System work item shall include:

- Any repairs to the various temporary erosion control systems.
- The removal of entrapped sediment.
- Cleaning of any silt filter fabric.
- Other items as specified in project special provisions relating to erosion control.

When a temporary erosion control system is in need of maintenance, the Engineer will give the Contractor written notice. If the Contractor fails to maintain the temporary erosion control systems within 48 hours of receiving the written notice, the Engineer may proceed to maintain the systems as deemed necessary. The cost of this maintenance will be deducted from any compensation due, or which may become due the Contractor under this contract.

Sediment basin(s) shall be cleaned out (accumulated silt removed) any time the basin(s) become 75% filled. Any additional materials and work required by the Engineer will be measured and paid for as specified.

Removed sediment and other materials shall be disposed of according to Article 202.03 of the “Standard Specifications”.

Method of Measurement: Work performed under this pay item shall be submitted by the Contractor to the Engineer on a lump sum basis. The Engineer may use any, all or none of this pay item.

The quantity for this item is established based on the Engineer’s Estimate and the following formula:

<u>Contract Pay Item</u>	<u>Percent of Engineer’s Estimate for Pay Item</u>
<i>Temporary Ditch Checks/Aggregate (Erosion Control)</i>	20%
<i>Perimeter Erosion Barrier, Special</i>	20%
<i>Inlet & Pipe Protection</i>	20%
<i>Erosion Control Blanket (All Types)</i>	5%
<i>Seeding</i>	5%

** if more than one of these items is included in the pay items then the sum is used. Temporary erosion control seeding, blanket, or Class 7 seeding are not included in the maintenance calculation.*

The plan-measured quantity for MAINTENANCE OF EROSION CONTROL SYSTEM for this contract is 31,362.

Basis of Payment: The unit price for MAINTENANCE OF EROSION CONTROL SYSTEM will be LUMP SUM according to the formula as established above by plan measured quantities. Therefore the LUMP SUM will equal \$31,362.00 of work performed according to Article 109.04 (b) of the “Standard Specifications”.

X0322936 REMOVE EXISTING FLARED END SECTION

Description: This work shall consist of the removal and disposal of flared end section(s) as shown on the Plans in accordance with Section 551.

Basis of Payment: This work shall be measured and paid for at the contract unit price per EACH for REMOVE EXISTING FLARED END SECTION and shall include all labor, excavation, backfill, material, and equipment to complete this item as specified.

X0324045 SEDIMENT CONTROL, STABILIZED CONSTRUCTION ENTRANCE REMOVAL

Description: This work shall consist of the removal of a stabilized construction entrance and all items necessary for removal of the stabilized construction entrance. This includes (but not limited to) excess aggregate for mountable berms, aggregate radii abutting temporary, permanent, or existing pavement; cellular confinement grids; all unnecessary aggregate within 20 feet within the original lines and dimensions in which the original entrance was constructed. All methods of removal shall be approved by the engineer. Material shall be disposed of according to Article 202.03 or as directed by the Engineer.

Basis of Payment: This work shall be measured and paid for at the contract unit price per EACH for SEDIMENT CONTROL, STABILIZED CONSTRUCTION ENTRANCE REMOVAL and shall include all labor, excavation, and disposal of material used for the stabilized construction entrance.

X0324079 EXISTING FIELD TILE REMOVAL

Description: This work shall consist of the removal and disposal or salvaging of existing field tiles of the various sizes and types, excavation, backfilling (if required) as indicated in locations on the plans or as directed by the Engineer.

This work shall be in accordance with the applicable portions of Section 501 of the Standard Specifications which apply to Pipe Culvert Removal. Trenches resulting from the removal of existing field tile which will be allowed below the final grade shall be backfilled to the applicable requirements of Article 550.07. Any damage made by construction activities to portions of the existing field tile which is to remain shall be repaired with materials matching “in like kind” to the satisfaction of the Engineer at no additional cost to the contract.

With the Engineer’s approval, any drain tile deemed not to be in conflict with the proposed improvements can be crushed or broken at 10-foot intervals and may remain in place without removal.

Basis of Payment: This work shall be paid for at the contract unit price per FOOT for EXISTING FIELD TILE REMOVAL regardless of size or type. Backfilling (if required) for the removal of the existing field tile will not be paid for separately but will be considered included in the unit price bid for EXISTING FIELD TILE REMOVAL.

X0324775 SEDIMENT CONTROL, STABILIZED CONSTRUCTION ENTRANCE MAINTENANCE

Description: This work shall consist of maintaining stabilized construction entrances that have become ineffective as a result of standard operations and natural forces. This work will include the removal of proper disposal of excess materials and the delivery and placing of aggregate in the manner described in SEDIMENT CONTROL, STABILIZED CONSTRUCTION ENTRANCE.

This pay item shall not be paid for each time maintenance is required but shall consist of maintenance over the life of the project for which the entrance is needed.

Basis of Payment: This work shall be measured for payment to the outside dimensions of the material being removed and the area calculated in SQUARE YARDS. All excavation and grading necessary to remove and replace the sediment fill aggregate shall not be paid for separately but included in the cost of SEDIMENT CONTROL, STABILIZED ENTRANCE MAINTENANCE.

X0324993 SEPARATION JOINT WITH SLEEPER SLAB

Description. This work shall consist of installing a pavement separation joint with a sleeper slab per IDOT District 1 Standard BD-52 at locations specified on the plans.

Construction Requirements. Sleeper slab shall be 8” in thickness and no less than 4’-0” in width, centered about the pavement separation joint as indicated on the jointing plans included with the project plans. Joint filler, joint sealer, bond breaker, and sleeper slab reinforcing bars per BD-52 shall be considered included in the cost of this pay item.

Method of Measurement & Basis of Payment. This work will be measured for payment, complete in place per FOOT for SEPARATION JOINT WITH SLEEPER SLAB and shall consist of all time, labor, excavation, disposal of excess material, and materials necessary to complete the operation.

X0325405 FILL EXISTING STORM SEWERS

Description. This work shall consist of abandoning in-place existing storm sewer lines in the location shown on the plans and filling with CLSM per the applicable portions Article 593 of the standard specifications.

Construction Requirements. Work shall consist of brick and mortaring the downstream end of the pipe in the existing manhole followed by filling the pipe with CLSM or other material as approved by the engineer. Once the pipe is filled to the satisfaction of the engineer, the upstream end of the pipe shall be bricked and mortared as well.

Method of Measurement & Basis of Payment. This work will be measured for payment, complete in place per CUBIC YARD for FILL EXISTING STORM SEWERS and shall consist of all time, labor, and materials to complete the operation.

X0325476 RADAR VEHICLE DETECTION SYSTEM

Description. This work shall consist of furnishing and installing a radar/microwave vehicle detection system as specified and/or as shown on the plan. This pay item shall include all necessary work and equipment required to have a fully operational system including but not limited to the detector unit/s, the interface unit and all the necessary hardware, cable and accessories required to complete the installation in accordance with the manufacturer’s specifications.

The radar/microwave vehicle detection system shall work under all weather conditions, including rain, freezing rain, snow, wind, dust, fog, and changes in temperature and light. It shall work in an ambient temperature range of -34 to 74 degrees Celsius. It shall have a max power output of 75 watts or less. The detection system shall be capable of detecting stopped vehicles, this is often referred to as Frequency-Modulated Continuous Wave (FMCW) or true-presence detection. Each detector system

shall be capable of detecting volume, occupancy, classification, and speed while gathering this data for each detection field/travel or turn lane configured in the device.

The radar/microwave vehicle detection system shall be compatible with the County's approved traffic controller assemblies utilizing NEMA TS 1 or NEMA TS 2 controllers and cabinet components for full time operation. The radar/microwave vehicle detection system shall provide a minimum of one interface unit that has Ethernet connectivity, surge protection and shall be capable of supporting a minimum of 4 detector units. In cases where vender utilizes separate detector units between uptight and advance detection, Ethernet connectivity and surge protection shall be capable of connecting to all detector units using one IP address unless otherwise approved by the engineer.

The far back radar/microwave detection shall have a detection range of 400 feet or better.

A representative from the supplier of the radar/microwave vehicle detection system shall supervise the installation and testing of the radar/microwave vehicle detection system and shall be present at the traffic signal turn-on inspection. Once the radar/microwave vehicle detection system is configured, it shall not need reconfiguration to maintain performance, unless the roadway configuration or the application requirements change.

The mounting location/s of the detector unit/s shall be per the manufacturer's recommendations. If an extension mounting assembly is needed, it shall be included in this item. All holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent chafing of wires.

The radar/microwave vehicle detection system shall be warrantied, free from material and workmanship defects for a period of two years from final inspection. Warranty shall be furnished and provided to the District at the time of traffic signal turn on and shall include appropriate contact information (Email and direct telephone) to which all warranty concerns may be directed.

Basis of Payment. This work shall be paid for at the contract unit price per EACH for RADAR VEHICLE DETECTION SYSTEM, the price of which shall include the cost for all of the work and material described herein and includes furnishing, installing, delivery, handling, testing, set-up and all appurtenances and mounting hardware necessary for a fully operational radar vehicle detection system.

X0326694 PLUG EXISTING STORM SEWERS

Description: This work shall consist of plugging and abandoning existing storm sewers where shown on the plans in existing manholes, at right-of-way lines or as directed by the engineer. The pipe end shall be capped with bricks and mortar to seal the pipe invert with 24" of lateral length along each pipe to be filled with a slurry seal or other method approved by the engineer. This work shall be in conformance with Article 550 of the Standard Specifications.

Method of Measurement: This work shall be measured for payment by CUBIC YARD of brick and mortar and slurry seal for each storm sewer to be plugged.

Basis of Payment: This work shall be paid for at the contract unit price for PLUG EXISTING STORM SEWERS per CUBIC YARD. This item includes all material, excavation, and labor to complete the operation as described.

X0326712 ABANDON AND FILL EXISTING SANITARY SEWER

Description. This work shall consist of abandoning in-place an existing sanitary sewer line in the location shown on the plans and filling with CLSM per the applicable portions Article 593 of the standard specifications.

Construction Requirements. Work shall consist of brick and mortaring the downstream end of the pipe in the existing manhole followed by filling the pipe with CLSM or other material as approved by the engineer. Once the pipe is filled to the satisfaction of the engineer, the upstream end of the pipe shall be bricked and mortared as well.

Method of Measurement & Basis of Payment. This work will be measured for payment, complete in place per EACH for ABANDON AND FILL EXISTING SANITARY SEWER and shall consist of all time, labor, and materials to complete the operation.

X0326806 WASHOUT BASIN

Description: The WASHOUT BASIN as identified on the plans is used to contain concrete liquids when the chutes of concrete trucks are rinsed out after the delivery of concrete to the construction site. These washout facilities function to consolidate soils for disposal and prevent runoff liquids associated with concrete. Details of the construction of the non-portable facilities are included within the plans as “temporary concrete washout facilities.” Failure to comply with appropriate washout location requirements will result in monetary deficiency deduction against the Contractor.

General Requirements:

- The Contractor must submit a plan of his/her proposed temporary concrete washout facility to the Engineer for his/her approval at least 10 days prior to the first concrete pour.
- Temporary concrete washout facilities are to be in place prior to any delivery of concrete to the construction site.
- Temporary concrete washout facilities are to be located at least 50 feet from storm drain inlets, open drainage facilities, or water bodies. Each facility is to be located away from construction traffic or access areas to prevent disturbance or tracking.
- A sign is to be installed adjacent to each temporary concrete washout facility to inform concrete equipment operations of the designated washout facility.

Design:

Two types of concrete washout facilities are available for use on this project:

Prefabricated portable facilities (as approved by the Engineer)

Non-portable facilities:

- **Above Grade:** Constructed using barrier wall & polyethylene sheeting. Barrier walls are constructed to create a berm with a single sheet of 10-mil polyethylene sheeting which is free of holes, tears, or other defects which may compromise the impermeability of the material. Sandbags are used to hold the sheeting in place on top of the berm. Sheeting must extend over the entire basin and berm to prevent escape of discharge.
- **Below Grade:** Constructed via excavation and the use of polyethylene sheeting and sandbags. A pit is first excavated in a designated location with a single sheet of 10-mil polyethylene

sheeting which is free of holes, tears, or other defects, which may compromise the impermeability of the material. Sandbags are then used to hold the sheeting in place.

Size of Washouts:

Number and size of washout facility is to be determined by the Contractor. It is his/her responsibility to provide enough storage for the excess concrete and water produced on the target. Non-portable facilities are to have a minimum length and width of 10’.

Inspection/Maintenance/Removal:

- Temporary concrete washout facilities are to be inspected by the Engineer during his/her weekly erosion and sediment control inspection per the requirements of the SWPPP. The inspector is to ensure there are no leaks, spills, and the capacity of the facility has not yet been compromised.
- Any overflowing of the washout facility onto the ground must be cleaned up and removed within 24 hours of discovery.
- If a rain or snow event is forecasted, a non-collapsing, non-water collecting cover shall be placed over the washout facility and secured to prevent accumulation and overflow of precipitation.
- Contents of each facility are not to exceed 75% of design capacity. If contents reach 75% capacity, discontinue pouring concrete into the facility until it has been cleaned out.
- Allow slurry to evaporate or remove the site in a safe manner (i.e. vacuum truck). All hardened material can then be removed or disposed of properly.
- If a lined basin is used, immediately replace the liner if it becomes damaged.
- Remove temporary concrete washout facilities when they are no longer required and restore the disturbed areas to their original condition.
- Note locations of these facilities and any changes to these locations on the SWPPP.

Basis of Payment: This work shall be paid for at the contract unit price LUMP SUM for WASHOUT BASIN, which price shall be payment in full for all material, labor, excavation, and

X0327139 AGGREGATE COLUMN GROUND IMPROVEMENT

Description. This work shall consist of furnishing design calculations, shop drawings, materials, and labor necessary to construct aggregate column ground improvements, over the approximate horizontal limits below the footing, wall, or embankment as specified on the contract plans, or as modified by the Contractor’s approved design.

Submittals. No later than thirty (30) days prior to beginning work, the Contractor shall submit to the Engineer for approval the following information:

- (a) Evidence of the selected subcontractor’s successful installation of their aggregate column system on five projects under similar site conditions using the same installation technique. The documentation to be submitted shall include a description of the project, aggregate column installation technique, soil conditions and name and phone number of contracting authority.
- (b) Evidence that the proposed project superintendent for the ground improvement installation has a minimum of three years of method specific experience.

- (c) Shop Drawings sealed by an Illinois Licensed Professional Engineer showing aggregate column horizontal limits, locations, pattern, spacing, diameters, top and bottom elevations, and identification numbers. If an aggregate drainage layer is specified on the plans or a working platform proposed by the Contractor, the thickness, aggregate gradation, and plan dimensions shall be shown in addition to any other details needed to describe the work.
- (d) A description of the equipment, installation technique and construction procedures to be used, including a plan to address any water or spoils.
- (e) The source and gradation of the aggregate proposed for the aggregate columns.
- (f) Design computations, sealed by an Illinois Licensed Professional Engineer, demonstrating the proposed ground improvement plan satisfies the minimum global stability, settlement, and bearing capacity performance requirements stated in the Contract Plans and those contained in this Special Provision.
- (f) The proposed verification program methods to monitor and verify the aggregate column installation is satisfying the design and performance requirements. Also required is a sample of the daily report form to be used by the Contractor to documents the adequacy of that day's work.

Materials. The aggregate used in the columns shall be Class A quality crushed stone or crushed concrete satisfying the requirements of Section 1004 of the standard specifications. The aggregate for any drainage layer specified in the plans shall be a combination of one or more of the following gradations, FA1, FA2, CA5, CA7, CA8, CA11, or CA13 thru 15, according to Sections 1003 and 1004 of the Standard Specifications. Any fine or coarse aggregate requested by the Contractor to be used as either a drainage layer or working platform shall be approved by the Engineer.

Design Criteria. The subcontractor selected shall provide an aggregate column ground improvement plan with shop drawings, and design computations, using an Allowable Stress Design that meets the performance requirements shown on the Contract Plans. These requirements normally include the global stability factor of safety, tolerable settlement amounts at various times and in the case of walls or structure footings, the equivalent uniform service bearing pressure applied at various locations and the factor of safety required. In the absence of performance requirements shown on the plans, the following Allowable Stress minimum performance requirements shall be used:

- (a) A factor of safety of 1.5 against global slope stability failure.
- (b) A factor of safety of 2.5 against equivalent uniform service bearing pressure failure
- (c) Total settlement not to exceed 4 inches (100 mm) and settlement after completing wall or pavement construction not to exceed 1 inch (25 mm).

The design shall use short term strength parameters for the soil, obtained from the soil boring logs and any geotechnical laboratory testing data provided in the Contract Plans and specifications for stability and bearing capacity analyses. Settlement shall be assessed using appropriate soil parameters. Any additional subsurface information needed to design the aggregate columns shall be the responsibility of the Contractor. The aggregate column ground improvement design need not consider seismic loadings unless otherwise required as part of the performance requirements shown on the plans.

Construction. The construction procedures shall be determined by the aggregate column installer and submitted for approval with the shop drawings. The following are the minimum requirements that the Contactor will be expected to follow unless otherwise approved in the shop drawings submittal.

- (a) The site shall be graded as needed for proper installation of the aggregate column system. Grading along the south limit of the ground improvement area as shown on the plan shall be limited so as not to disturb the existing pavement or require sheet piling along the existing pavement/curb line.
 - a. All grading and excavation for the Contractor's procedures to establish a stable working platform and to the necessary depths for column installation shall not be paid for separately but considered included in the LUMP SUM cost for AGGREGATE COLUMN GROUND IMPROVEMENT.
 - b. All grading and excavation as well as stabilization for the Contractor's procedures to bring equipment and materials to the working platform (i.e. traversable slope) shall also be considered included and shall not be paid for separately.
- (b) Any granular base drainage layer or working platform shall be considered incidental to the improvement. Contractor requested drainage layers or working platforms will only be allowed if approved as part of the shop drawings.
- (c) The aggregate column material shall be placed in a manner that allows measurement of the tonnage or quantity of aggregate placed down the hole.
- (d) Columns shall be installed in a sequence that will minimize ground heave. Any heaving shall be re-compacted or excavated as directed by the Engineer prior to wall or embankment construction and be considered incidental to aggregate column improvement.
- (e) The Contractor shall provide a full-time qualified representative to verify all installation procedures and provide the verification program.
- (f) Disposal of any spoils generated shall be according to Article 202.03.
- (g) If an obstruction is encountered that cannot be penetrated with reasonable effort, the Contractor shall construct the element from the depth of obstruction to its design top elevation. Depending on the depth of the completed column, column location, and design requirements, the Engineer may require the construction of a replacement aggregate column at an adjacent location. Construction of additional columns will be considered extra work and paid for according to Article 109.04.
- (h) Specific Requirements for Vibrator Compacted Aggregate Columns:
 - (i) Vibrator compacted aggregate columns shall be constructed with a down-hole vibrator, probe and follower tubes of sufficient size to install the columns to the diameter and bottom elevation(s) shown on the approved shop drawings. Preboring is permitted if approved as part of the shop drawing submittal.
 - (ii) The probe and follower tubes shall have visible markings at regular increments to enable measurement of penetration and re-penetration depths.
 - (iii) Provide methods for supplying to the tip of the probe a sufficient quantity of air or water to widen the probe hole to allow adequate space for aggregate placement around the probe.

- (iv) The vibrator shall be withdrawn in 12 to 36 inch (300 to 900 mm) increments, to allow placement of the aggregate.
 - (v) Lift thickness shall not exceed 4 ft (1.2 m). After penetration to the treatment depth, slowly retrieve the vibrator in 12 to 18 inch (300 to 450 mm) increments to allow aggregate placement.
 - (vi) Compact the aggregate in each lift by re-penetrating it as needed with the vibrating probe to densify and force the aggregate radially into the surrounding soil. Repenetrate the aggregate in each increment a sufficient number of times to construct the columns as specified in the approved shop drawings and to meet the verification program requirements.
- (i) Specific Requirements for Tamper Compacted (Rammed) Aggregate Columns:
- (ii) Tamper compacted (rammed) aggregate columns shall be installed by either drilling or displacement methods, capable of constructing columns to the diameters and bottom elevation(s) shown on the approved shop drawings.
 - (iii) If temporary casing is needed to limit the sloughing of subsurface soils, the casing should be inserted to at least 2 ft (600 mm) beyond any sloughing strata. Upon extraction, the bottom of the casing shall be maintained at not more than 2 feet (600 mm) above the level of aggregate.
 - (iv) Aggregate placement shall closely follow the excavation of each column. The aggregate shall be placed in 1 to 2 ft (300 to 600 mm) thick lifts. Each lift should be rammed with a high-energy impact tamper as specified in the approved shop drawings and to meet the verification program requirements.
- (j) Contractor shall space columns to accommodate both existing and proposed storm sewers as depicted on the drainage plans.

Construction Tolerances. The aggregate columns shall be constructed to the following tolerances:

- (a) The horizontal limits and center of each constructed aggregate column shall be within 8 inches (190 mm) of the location specified on the approved the shop drawings.
- (b) The axis of the constructed aggregate columns shall not be inclined more than 1.67 percent from vertical.
- (c) The installed diameter of any aggregate column shall not be more than 10 percent below the effective diameter indicated on the approved shop drawings.
- (d) The average effective diameter of any group of 50 consecutively installed aggregate columns shall not be less than the effective diameter indicated on approved shop drawings.
- (e) The top of the aggregate column ground improvement shall be located within 8 inches (200 mm) of the top elevation shown on the approved shop drawings. When supporting MSE walls, the top elevation may need to be adjusted to the base of the MSE reinforced mass elevation as shown on the approved MSE shop drawings.
- (f) Except where obstructions, hard or very dense soils are encountered, the aggregate column shall be advanced to at least the treatment depth elevation shown on the approved in the Shop Drawings.

Any aggregate column installation not meeting the above stated tolerances, or otherwise deemed unsatisfactory by the Engineer, may require installation of a replacement aggregate column(s) at the discretion of the Engineer and at the Contractor's expense. The Contractor shall submit to the Engineer revised plans and procedures to bring installations in those areas into tolerance.

Verification Program. The Contractor shall develop and maintain a monitoring and documentation procedure during the installation of all aggregate columns to verify they satisfy the design and performance requirements. The Contractor shall provide qualified personnel to continuously observe and record the required data. The program shall include, as a minimum, the following:

- (a) Quality control procedures to allow verification that each aggregate column is being installed according to the designer's specifications and the requirements in this Special Provision. This will typically include observations of items such as electrical current or hydraulic pressure, number of high-energy impact tamps, aggregate quantity, etc. that must be obtained to achieve the performance requirements.
- (b) Monitoring methods to evaluate the performance of the global aggregate column improvement system after construction of the overlying embankment or wall. This will typically include installation of settlement plates and may also include monitoring points, inclinometers, piezometers or other instrumentation.
- (c) Proposed means and methods for verification that the installed aggregate columns meet the strength and/or stiffness criteria required by the design. This may include modulus or load tests on individual elements and/or groups, soil borings, and other methods.
- (d) A daily report form shall be completed by the Contractor and provided to the Engineer to document the work performed each day and the adequacy of each aggregate column. The form shall be signed by the Contractor's qualified personnel and include as a minimum the following:
 - i. Aggregate columns installed (identified by location number).
 - ii. Date constructed.
 - iii. Elevation of top and bottom of each aggregate column.
 - iv. Average lift thickness.
 - v. Results of quality control testing such as average power consumption or tamping energy obtained during aggregate column installation.
 - vi. Jetting pressure (air or water) if applicable.
 - vii. Description of soil and groundwater conditions.
 - viii. Details of obstructions, delays and any unusual issues.
 - ix. Amount of water used per aggregate column if applicable.
 - x. Estimated weight or volume of aggregate backfill placed in each column.
 - xi. Average installed diameter of each column.

Basis of Payment. This work will be paid at the contract Lump Sum price for AGGREGATE COLUMN GROUND IMPROVEMENT. Any temporary casing, excavation, disposal of water or spoils, drainage layers or working platforms will not be paid for separately, but shall be considered to be included with this work.

X0327036 BIKE PATH REMOVAL

Description: This work shall consist of the removal of the existing bike path/multi-use trail at the location(s) identified in the plans. This work shall conform to Articles 440.03 and 440.06 of the Standard Specifications.

Method of Measurement & Basis of Payment: Removal of the existing hot-mix asphalt path will be measured and paid for per SQUARE YARD removed. This work will be paid for at the contract unit price per SQUARE YARD for BIKE PATH REMOVAL.

X0327297 REMOVE BARRICADES

Description. This work shall consist of removing existing barricades at the Huntley-Boyer-Longmeadow intersection and at the west limit of Longmeadow on this project and delivering them to the Kane County Division of Transportation facility at 41W011 Burlington Road, St. Charles, IL or as directed by the Engineer. Phone number is 630-584-1170.

Construction Requirements. These barricades shall be removed once the work at the intersection of Longmeadow Parkway and Randall Road has been completed, including the traffic signal and pavement markings. The barricades shall not be removed until directed by the Engineer.

Basis of Payment. This work will be paid for at the contract unit price per EACH for REMOVE BARRICADES.

X0327979 PAVEMENT MARKING REMOVAL - GRINDING

Description. This work shall consist of removing existing and temporary pavement markings from existing surfaces which will ultimately be removed during later stages of the project.

Construction Requirements. Contractor shall follow applicable portions of Article 783 of the Standard Specifications. Grinders must be approved by the Engineer.

Grinding shall only be utilized on TEMPORARY PAVEMENT MARKING as indicated in the plans. Any Wet Reflective Tape shall be removed using PAVEMENT MARKING REMOVAL (SPECIAL).

Basis of Payment. This work will be paid for at the contract unit price per each per SQUARE FOOT for PAVEMENT MARKING REMOVAL – GRINDING.

X0327980 PAVEMENT MARKING REMOVAL – WATER BLASTING

Description. This work shall consist of removing temporary pavement markings from existing and proposed surfaces by water blasting but shall not include Type III Tape which is to be paid as Pavement Marking Removal (Special)

Construction Requirements. Contractor shall follow applicable portions of Article 783 of the Standard Specifications.

Water Blasting should only be utilized on paint pavement marking utilized for winterization construction, should it occur as well as removal of existing cross-hatch striping at the Huntley-Boyer intersection of Longmeadow Parkway to prepare adjacent segments of the project for corridor opening.

Basis of Payment. This work will be paid for at the contract unit price per each per SQUARE FOOT for PAVEMENT MARKING REMOVAL – WATER BLASTING

X0426200 DEWATERING

Description: DEWATERING as it pertains to this contract refers to the pumping or bypassing of water which accumulates in excavations during the process of work so that all work can be done in the dry. In addition, dewatering operations shall be conducted to prevent damage to adjacent properties, buildings, structures, utilities, and other existing features as a result of settlement or other groundwater-related effects. Dewatering shall be used in wet locations that may be encountered during construction.

General Requirements: At all times, have on the work site sufficient pumping equipment for immediate use, including standby pumps for use in case other pumps become inoperable. Contractor shall dispose of water so as to cause no injury to personnel or the public, damage to public or private property, nor menace to the public health.

Contractor may discharge no water which exceeds regulatory requirements or the County's discharge requirements. Contractor may discharge into a downstream storm sewer manhole, provided an Engineer-approved silt filtration measure is applied beforehand (silt bag, channel with polymerizing agents, etc.).

No well points shall be placed to draw down the water table.

Basis of Payment: This work will be paid for at the contract LUMP SUM unit price for DEWATERING for which unit price shall include all equipment, materials and labor required to meet the requirements of this special provision over the duration of the contract at all locations including pumps, silt bags, or other equipment necessary to maintain a dry working environment.

X0487850 SANITARY SEWER REMOVAL 15"

Description: This work shall consist of the removal and disposal of existing 15" sanitary sewer pipe as indicated in locations on the plans or as directed by the Engineer.

This work shall be in accordance with the applicable portions of Section 551 of the Standard Specifications which apply to Storm Sewer Removal Trenches resulting from the removal of existing sanitary sewer be allowed below the final grade shall be backfilled to the applicable requirements of Article 550.07. Any damage made by construction activities to portions of the existing sanitary sewer which is to remain shall be repaired with materials matching "in like kind" to the satisfaction of the Engineer at no additional cost to the contract.

This shall pay item shall also consist of any necessary sandbagging or bypass pumping required to complete the operation while the existing sewer is flowing. Method shall be approved by the Engineer before commencing.

Any trench backfill required to backfill the trench underneath the future roadway shall not be paid for separately but considered included in the unit price of this item.

Basis of Payment: This work shall be paid for at the contract unit price per FOOT for SANITARY SEWER REMOVAL 15” and includes all time, labor, materials, and excavation necessary for removal of the sewer.

X1200015 VALVE VAULTS TO BE ABANDONED

Description. This work shall consist of abandoning in-place an existing water valve vault in the location shown on the plans and filling with CLSM per the applicable portions of Article 605 and Article 593 of the standard specifications.

Construction Requirements. Work shall consist of removal of the existing frame and grate of the water valve and filling with CLSM or other material as approved by the Engineer. The cone section or manhole sections shall be removed to a distance of no less than 12” below proposed roadway subgrade or finished grade.

Method of Measurement & Basis of Payment. This work will be measured for payment, complete in place per EACH for VALVE VAULTS TO BE ABANDONED which includes all time, materials, and disposal of frame and grate or portion of the existing vault to be abandoned.

X1400081 FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL)

Description.
 This work shall consist of furnishing and installing a traffic actuated solid state digital controller in the controller cabinet of the type specified, meeting the requirements of Section 857 of the Standard Specifications, as modified herein, including malfunction management unit, load switches and flasher relays, with all necessary connections for proper operation.

If the intersection is part of an existing system and/or when specified in the plans, this work shall consist of furnishing and installing a properly configured traffic actuated solid state controller from the following list of approved models:

Firmware type	KDOT ATMS Firmware Supported	Hardware	Command protocol
Eagle SEPAC (M52)	4.52	NEMA	NTCIP
Econolite ASC/3	2.63	NEMA	NTCIP
Econolite ASC/3 (Cobalt, 2070-1C)	32.63	ATC	NTCIP
Intelight MaxTime	1.8	NEMA	NTCIP

Materials.

Add the following to Article 857.02 of the Standard Specifications:

For installation as a stand-alone traffic signal, connected to a closed loop system or integrated into an advance traffic management system (ATMS), controllers shall be Econolite ASC/3S-1000 or Eagle/Siemens M52 unless specified otherwise on the plans or elsewhere on these specifications. Only controllers supplied by one of the District One approved closed loop equipment suppliers will be allowed. Unless specified otherwise on the plans or these specifications, the controller shall be of the most recent model and software version supplied by the equipment supplier at the time of the traffic signal TURN-ON. A removable controller data key shall also be provided. 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 and shall inhibit simultaneous display of circular yellow and yellow arrow indications.

For integration into an ATMS such as Centracs, Tactics, or TransSuite, the controller shall have the latest version of NTCIP software installed. For operation prior to integration into an ATMS, the controller shall maintain existing close loop management communications.

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) (1) Revise “conflict monitor” to read “Malfunction Management Unit”
- (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 – Shall be a 120VAC Single phase Modular filter Plug-in type, supplied from an approved vendor.
- (b) (8) BIU – shall be secured by mechanical means.
- (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, 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 door switch. The LED Panels shall be provided from an approved vendor.
- (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 18 inches (610mm) wide.
- (b) (14) Plan & Wiring Diagrams – 12” x 15” (305mm x 406mm) 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.

Basis of Payment.

This work will be paid for at the contract unit price EACH for FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL).

X2111100 TOPSOIL EXCAVATION AND PLACEMENT, SPECIAL

Description. This work shall consist of stripping the roadway corridor (as defined by the construction limits of the project plans) of topsoil and placing it in a stockpile in a location as depicted on the plans. This topsoil will then be used as respread for final grading operations.

Construction Requirements. Work shall follow applicable portions of Article 211 of the Standard Specifications and as follows:

- 1) Topsoil respread has been quantified in terms of depth of respread required in the indicated areas of the project as defined within the project schedules under the “LANDSCAPING” schedule in the plans and the project typical sections.
- 2) Unused topsoil at the end of the project remaining in the stockpile shall be hauled offsite and paid for as REMOVAL AND DISPOSAL OF UNSUITABLE MATERIALS. This quantity has been calculated in the Earthwork Summary Table within the project schedules.
- 3) Temporary stabilization and erosion control blanket to stabilize the stockpile are paid for separately.
- 4) Multiple moving operations per-stage shall be considered included in the unit price for TOPSOIL EXCAVATION AND PLACEMENT, SPECIAL and shall only be paid for what is ultimately respread.
- 5) Any topsoil deemed to be unusable shall be hauled offsite and paid for as REMOVAL AND DISPOSAL OF UNSUITABLE MATERIALS unless an alternate on-site, in-ROW location for respread is specified by the Engineer in which case no additional compensation shall be provided.

Method of Measurement & Basis of Payment. This work shall be paid per CUBIC YARD for TOPSOIL EXCAVATION AND PLACEMENT, SPECIAL at the following intervals:

- 1) Initial 50% paid during initial stripping and stockpiling operation.
- 2) Remaining 50% paid once respread.

An alternate pay percentage may be agreed upon with written approval of the Engineer.

X2501800 SEEDING, CLASS 4 (MODIFIED)

Description. This work shall consist of placing seed and other materials in accordance with Section 250 of the Standard Specifications and the plans and/or as directed by the Engineer.

Construction Requirements. The seeding mixture for Class 4 shall be modified to the following:

MODIFIED- IDOT Class 4 Native Grass Mixture

Spring Oats	60 lbs. / acre
Native Grasses (below)	18 lbs. / acre

Native Grasses:		
Common Name	Scientific Name	Lbs/Acre
Big Bluestem	<i>Andropogon gerardi</i>	4
Little Bluestem	<i>Andropogon scoparius</i>	5
Side-Oats Grama	<i>Bouteloua curtipendula</i>	4
Canada Wild Rye	<i>Elymus canadensis</i>	1
Switchgrass	<i>Panicum virgatum</i>	2
Indian Grass	<i>Sorghastrum nutans</i>	2
Total		18

Method of Measurement. This work will be measured for payment, complete in place and accepted, in acres of surface seeded.

Basis of Payment. This work will be paid for at the contract unit price per ACRE for SEEDING, CLASS 4 (MODIFIED) installed. Price shall include but not be limited to seeds and all other labor, materials, and equipment needed to perform the work as specified herein.

X2502024 SEEDING, CLASS 4B (MODIFIED)

Description. This work shall consist of placing seed and other materials in accordance with Section 250 of the Standard Specifications and the plans and/or as directed by the Engineer.

Construction Requirements. The seeding mixture for Class 4B shall be modified to the following:

MODIFIED- IDOT Class 4B Wetland Grass & Sedge Mixture

Spring Oats	60 lbs. / acre
Wetland Grasses (below)	12.4 lbs. / acre

Wetland Grasses:		
Common Name	Scientific Name	Lbs/Acre
Blue Joint Grass	<i>Calamagrostis canadensis</i>	1.44
Lake-Bank Sedge	<i>Carex lacustris</i>	0.36
Awl-Fruited Sedge	<i>Carex tribuloides</i>	0.36
Tussock Sedge	<i>Carex stricta</i>	0.72
Fox Sedge	<i>Carex stipata</i>	0.72
Needle Spike Rush	<i>Eleocharis acicularis</i>	0.36
Blunt Spike Rush	<i>Eleocharis ovata</i>	0.36
Fowl Manna Grass	<i>Glyceria striata</i>	1.68
Common Rush	<i>Juncus effusus</i>	0.72
Slender Rush	<i>Juncus tenuis</i>	0.36
Torrey's Rush	<i>Juncus torreyi</i>	0.36
Rice Cut Grass	<i>Leersia oryzoides</i>	0.2
Switchgrass	<i>Panicum virgatum</i>	2
Hard-Stemmed Bulrush	<i>Scirpus acutus</i>	0.36
Dark Green Rush	<i>Scirpus atrovirens</i>	0.36
River Bulrush	<i>Scirpus fluviatilis</i>	1.2
Softstem Bulrush	<i>Schoenoplectus tabernaemontani</i>	0.36
Cord Grass	<i>Spartina pectinata</i>	0.48
Total		12.4

Method of Measurement. This work will be measured for payment, complete in place and accepted, in acres of surface seeded.

Basis of Payment. This work will be paid for at the contract unit price per ACRE for SEEDING, CLASS 4B (MODIFIED) installed. Price shall include but not be limited to seeds and all other labor, materials, and equipment needed to perform the work as specified herein.

X2511630 EROSION CONTROL BLANKET (SPECIAL)

Description: This work shall consist of furnishing and placing erosion control blanket over seeded areas on slopes 3:1 or flatter in locations as indicated on the plans. The work shall be performed according to Article 251.04 of the “Standard Specifications”.

Materials: The erosion control blanket shall meet the requirements of Article 1081.10 of the “Standard Specifications”, except that:

The blanket material shall be 100% biodegradable leno-woven agricultural straw.

List of Vendors & Product Name:

- Tensar/North American Green – S75BN
- ADS Geosynthetics – 00S2AN
- Western Excelsior Corporation – Excel SR-1AN (All-Natural)
- American Excelsior Company – Premier Single Straw
- East Coast Erosion Control – ECS-1B
- Erosion Control Blanket.com – S31 BD “Big Daddy”

Each blanket will be secured with a 12” degradable stake. Securing devices are not paid for separately but included in the cost of the pay item.

Method of Measurement: This work will be measured for payment in place in square yards of actual area covered.

Basis of Payment: This work will be paid for at the contract unit price per SQUARE YARD for EROSION CONTROL BLANKET (SPECIAL). *The unit price shall include all equipment, materials and labor required to furnish and place the erosion control blanket*

X2510635 HEAVY DUTY EROSION CONTROL BLANKET, SPECIAL

Description: This work shall consist of furnishing and placing heavy-duty erosion control blanket (turf reinforcement mat) over in anticipated heavy drainage flow ditch locations as indicated on the plans. The work shall be performed according to Article 251.04 of the “Standard Specifications”.

Materials: The erosion control blanket shall meet the requirements of Article 1081.10 of the “Standard Specifications”, except that:

The blanket material shall consist of polyolefin fibers positioned between two high-strength, biaxially oriented nets and mechanically bound together by parallel stitching with polyolefin thread. The matrix shall possess strength and elongation properties to limit stretching and shall be maintained in high-flow conditions.

List of Vendors & Product Name:

- Tensar/North American Green – C350 TRM
- ADS Geosynthetics – PP5-10 TRM
- Western Excelsior Corporation – PP5-10 TRM
- Propex Landlok TRM 1051/1060
- East Coast Erosion Control – ECC-3 Coconut TRM

Each blanket will be secured with a 12” degradable stake. Securing devices are not paid for separately but included in the cost of the pay item.

Method of Measurement: This work will be measured for payment in place in square yards of actual area covered.

Basis of Payment: This work will be paid for at the contract unit price per SQUARE YARD for HEAVY DUTY EROSION CONTROL BLANKET, SPECIAL. *The unit price shall include all equipment, materials and labor required to furnish and place the erosion control blanket*

X2511640 EROSION CONTROL BLANKET (MODIFIED)

Description: This work shall consist of furnishing and placing erosion control blanket over seeded areas on slopes 3:1 or flatter , anticipated in low-to-median flow in locations as indicated on the plans. The work shall be performed according to Article 251.04 of the “Standard Specifications”.

Materials: The erosion control blanket shall meet the requirements of Article 1081.10 of the “Standard Specifications”, except that:

Blanket shall consist of double net structure an integration of leno-woven coconut (coir) fiber in matrix of 70% agricultural straw / 30% coconut fiber.

List of Vendors & Product Name:

- Tensar/North American Green – SC150BN
- ADS Geosynthetics – 0CS2TT
- Western Excelsior Corporation – Excel CS-3
- American Excelsior Company – Premier Straw/Coconut
- East Coast Erosion Control – ECSC-2
- Erosion Control Blanket.com – SC32
- Propex – Landlok ECB-CS2

Each blanket will be secured with a 12” degradable stake. Securing devices are not paid for separately but included in the cost of the pay item.

Method of Measurement: This work will be measured for payment in place in square yards of actual area covered.

Basis of Payment: This work will be paid for at the contract unit price per SQUARE YARD for EROSION CONTROL BLANKET (MODIFIED). *The unit price shall include all equipment, materials and labor required to furnish and place the erosion control blanket*

X2800400 PERIMETER EROSION BARRIER, SPECIAL

Description: This work shall consist of constructing, removing, and disposing of perimeter erosion barrier, special as part of the project’s temporary erosion control system. Perimeter erosion control barrier, special shall be utilized adjacent to existing wetlands.

General: The work shall be performed according to Section 280 of the “Standard Specifications,” special provision 28000400 “PERIMETER EROSION BARRIER” and the following:

Materials:

Geotextile Requirements: The geotextile used for the temporary silt fence shall be classified as supported (with a wire or polymeric mesh backing) or unsupported (no backing). The temporary silt fence geotextile shall meet the requirements of the Table included below. All numeric values except Apparent Opening Size (AOS) represent Minimum Average Roll Values (MARV as defined in ASTM D4439). The values for AOS are the Maximum Average Roll Values.

Table – Temporary Silt Fence Requirements

Requirements	Test Methods	Wire Backed Supported Silt Fence ^a
Maximum Post Spacing		4 feet
Grab Strength	ASTM D4632	
Machine Direction		90 lbs
X-Machine Direction		90 lbs
Permittivity ^b	ASTM D4491	0.05 sec ⁻¹
Apparent Opening Size	ASTM D4751	0.024in maximum average roll value
Ultraviolet Stability	ASTM D4355	70% after 500 hours of exposure

Notes:

1. Silt fence support shall consist of 14-gauge steel wire with a mesh backing of 6"x6" or prefabricated polymeric mesh of equivalent strength.
2. These default filtration property values are based on empirical evidence with a variety of sediments. For environmentally sensitive areas, a review of previous experience and/or site or regionally specific geotextile tests should be performed to confirm the suitability of these requirements.

The wire support fence shall:

- 1) Be a minimum of 14-gauge
- 2) Have a minimum of six horizontal wires
- 3) The maximum vertical wire spacing shall be 6"

Method of Measurement: This work will be measured for payment in place by FOOT.

Basis of Payment: This work will be paid for at the contract unit price per FOOT for PERIMETER EROSION BARRIER, SPECIAL. The unit price shall include all work and materials necessary to properly install the barrier and to remove and dispose of the used materials at the completion of the project. Maintenance requirements shall be included and paid for according to Section 280 of the "Standard Specifications."

X5510100 STORM SEWER REMOVAL

Description: This work shall consist of removing existing elliptical storm sewer pipe, 36"x24" equivalent, in locations identified on the plans. This work shall follow applicable portions of Article 551 of the special provisions.

Method of Measurement: This work shall be measured for payment by FOOT of elliptical storm sewer to be removed.

Basis of Payment: This work shall be paid for at the contract unit price per FOOT for STORM SEWER REMOVAL. This item includes all material, excavation, and labor to complete the operation as described. Backfill of the existing trench shall be paid for separately with TRENCH BACKFILL.

X5610651 ABANDON EXISTING WATER MAIN, FILL WITH CLSM

Description. This work shall consist of abandoning in-place an existing water main in the location shown on the plans and filling with CLSM per the applicable portions Article 593 of the standard specifications.

Construction Requirements. Work shall consist of brick and mortaring at the end of the pipe cut and capped utilizing the CUT AND CAP EXISTING 8" WATER MAIN pay item followed by filling the pipe with CLSM or other material as approved by the engineer. Once the pipe is filled to the satisfaction of the engineer, the opposite end of the main shall be bricked and mortared.

Method of Measurement & Basis of Payment. This work will be measured for payment, complete in place per FOOT for ABANDON EXISTING WATER MAIN, FILL WITH CLSM and shall consist of all time, labor, and materials to complete the operation.

X5630008 CUT AND CAP EXISTING 8" WATER MAIN

Description: Work includes materials, equipment and labor, excavation, hauling, dewatering of existing main and disposal of excess material, cutting and removal of portions of existing water main in areas indicated in the plans to facilitate a water tight existing main to facilitate removal. In each case this involves installing a plug of like size to the main which is being abandoned. Where applicable a plug will be required with restrained joints and thrust blocking which shall be included with this pay item. Valve closures (as coordinated by the Engineer and the Village of Algonquin) are all included in this pay item. Work shall also include mortar placement in the abandoned ends of the water main to be abandoned

Method of Measurement & Basis of Payment – CUT AND CAP EXISTING 8" WATER MAIN shall be measured for payment for EACH water main capped.

X6020096 MANHOLES, TYPE A, 6' DIAMETER, W/2 TYPE 1 FRAME, CLOSED LID, RESTRICTOR PLATE

Description: This work shall consist of constructing a Type A manhole of the diameter specified with restrictor in accordance with Sections 602 and 1006 of the Standard Specifications and the plans and/or as directed by the Engineer.

Construction Requirements: Construction shall conform to the details shown in the plans, all applicable Standard Drawings, and all applicable portions of Sections 602 and 1006 of the Standard Specifications.

Method of Measurement: This work will be measured for payment, complete in place and accepted, in units of EACH.

Basis of Payment: This work will be paid for at the contract unit price per EACH for MANHOLES, TYPE A, 6' DIAMETER, TYPE 1 FRAME, CLOSED LID, RESTRICTOR PLATE installed. Price shall include but not be limited to all frames, grates, lids, sand cushion, steps, 6" concrete wall, flat slab tops, all excavation and backfilling, and all other labor, materials, and equipment needed to perform the work as specified herein.

X6020710 CATCH BASINS TO BE ADJUSTED WITH SPECIAL FRAME AND GRATE

Description: This work shall consist of adjusting a catch basin in accordance with Article 602 of the Standard Specifications and the plans except that the Frame and Grate shall be EAST JORDAN IRON WORKS CATALOG No. 1050-Z1 Frame with M1 Radial Grate during Stage 1A of the suggested Maintenance of Traffic along Sleepy Hollow Road. Following Stage 2A of the suggested Maintenance of Traffic, the structure shall be adjusted again except that the Frame and Grate shall be EAST JORDAN IRON WORKS CATALOG No. 7010 T-1 Back Grate, M-3 Sinoidal. Sleepy Hollow Road is under the Village of Algonquin maintenance jurisdiction and frames and grates shall conform to supply for maintenance purposes.

Basis of Payment: This work will be paid for at the contract unit price per EACH adjustment operation for CATCH BASINS TO BE ADJUSTED WITH SPECIAL FRAME AND GRATE and include the cost of both grates specified herein.

X6022402 MANHOLES, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID, SPECIAL

Description: This work shall consist of constructing a standard Type A manhole of the diameter specified in accordance with all applicable portions of Article 602 of the Standard Specifications and the plans except that the Frame and Lid shall be EAST JORDAN IRON WORKS CATALOG No. 1050-Z1 and Type A Frame & Grate with 1" concealed pick hole and the word "STORM" and Village of Algonquin Logo cast into the lid. Sleepy Hollow Road is under the Village of Algonquin maintenance jurisdiction and frames and grates shall conform to supply for maintenance purposes.

Basis of Payment: This work will be paid for at the contract unit price per EACH for MANHOLES, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID, SPECIAL installed.

X6022712 CATCH BASINS, TYPE A, 4'-DIAMETER WITH SPECIAL FRAME AND GRATE

Description: This work shall consist of constructing a standard Type A manhole of the diameter specified in accordance with all applicable portions of Article 602 of the Standard Specifications and the plans except that the Frame and Grate shall be EAST JORDAN IRON WORKS CATALOG No. 7010 T-1 Back Grate, M-3 Sinoidal. Sleepy Hollow Road is under the Village of Algonquin maintenance jurisdiction and frames and grates shall conform to supply for maintenance purposes.

Basis of Payment: This work will be paid for at the contract unit price per EACH for CATCH BASINS, TYPE A, 4'-DIAMETER WITH SPECIAL FRAME AND GRATE installed.

X6022810 MANHOLES, SANITARY, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID.

Description: This work shall consist of constructing a standard sanitary manhole of the diameter specified in accordance with all applicable portions of Article 602 of the Standard Specifications and the plans except that the Frame and Lid shall be EAST JORDAN IRON WORKS CATALOG No. 1050-Z1 with 1" concealed pick hole and the word "SANITARY" and Village of Algonquin Logo cast into the lid. The sanitary sewer is under Village of Algonquin maintenance jurisdiction and frames and grates shall conform to supply for maintenance purposes.

All exterior surfaces shall have a bituminous coating factory applied.

Basis of Payment: This work will be paid for at the contract unit price per EACH for MANHOLES, SANITARY, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID installed.

X6023508 INLETS, TYPE A, WITH SPECIAL FRAME AND GRATE

Description: This work shall consist of constructing a standard Type A inlet of the diameter specified in accordance with all applicable portions of Article 602 of the Standard Specifications and the plans except that the Frame and Grate shall be EAST JORDAN IRON WORKS CATALOG No. 7010 T-1 Back Grate, M-3 Sinoidal. Sleepy Hollow Road is under the Village of Algonquin maintenance jurisdiction and frames and grates shall conform to supply for maintenance purposes.

Basis of Payment: This work will be paid for at the contract unit price per EACH for INLETS, TYPE A, WITH SPECIAL FRAME AND GRATE installed.

X6026050 SANITARY MANHOLES TO BE ADJUSTED

Description: This work shall be done in accordance with Section 602 of the Standard Specifications and shall consist of the adjustment of sanitary manholes. Non-hardening butyl rubber mastic sealant; minimum thickness 1/4" shall be used between adjusting rings in place of mortar. In locations where external frame seals exist, it shall be removed and replaced and disposed of and an internal/external frame seal shall be installed. In locations where an internal frame seal exists, it shall be removed and disposed of and an internal/external seal shall be installed. In locations where there are no existing frame seals, an internal/external frame seal shall be installed. The installation of the internal/external frame seal will not be paid for separately and should rather be included in this pay item.

The Internal/External Frame seal shall consist of the following:

- a. Provide frame seals consisting of a flexible internal rubber sleeve, rubber ring, and external rubber sleeve and extension, and stainless steel compression bands.
- b. Rubber sleeve, ring, butyl tape, and extension:
 - a. Provide rubber sleeve and extension complying with ASTM D412 and ASTM D2240.
 - b. Provide rubber ring complying with ASTM D-2000.
 - c. Provide butyl tape: Comply with 1000% minimum webbing @ 77 degrees F, 500% minimum elongation @ 32 degrees F, and maximum 75 psi compressibility @ 7 degrees F.
 - d. Provide sleeve with a minimum thickness of 0.062” and unexpanded external vertical heights of 10 to 12 inches.
 - e. Provide an extension having a minimum thickness of 0.062”
 - f. Comply with a minimum 1500 psi tensile strength, maximum of 18 percent compression set and a hardness (durameter) of 48+/-5.
- c. Compression band:
 - a. Provide compression band to compress the sleeve to the manhole.
 - b. Use 16-gauge stainless steel conforming to ASTM A240 Type 304 with no welded attachments and having a minimum width of ½”.
 - c. Make a watertight seal having a minimum adjustment range of 2 diameter inches.
 - d. Provide stainless steel screws, bolts, and nuts conforming to ASTM F593 and 594, Type 304.

The Internal/External Frame Seal shall be installed as follows:

- d. Install internal/external rubber gasket on the manhole chimney. Provide watertight gasket to eliminate leakage between the internal/external frame seal and the adjusting ring and between each adjusting ring down to and including cone section.
- e. Clean surface and prepare the lower 2 inches of the manhole frame and exterior of all adjusting rings and cone section/corbel surfaces.
- f. Install internal rubber gasket in accordance with manufacturer’s recommendation.
 - a. Field-verify for suitable dimensions and layout prior to installation.
 - b. Realign frame as required.
- g. Repair and apply mortar grout to the adjusting rings as required to provide a smooth circular surface for the rubber gasket.
- h. Install external rubber gasket in accordance with manufacturer’s recommendations.
 - a. Field-verify for suitable dimensions and layout before installation
 - b. Utilize sealing caulk where required
 - c. Provide chimney seal extensions as required.
- i. Test installation by flooding area around the manhole with water before backfilling and surface restoration. Gaskets are required to provide watertight seal at openings between the frame and adjusting rings and between adjacent adjusting rings down to the cone/corbel section.
- j. Reinstall and retest failing gaskets at no additional cost to the contract.

Basis of Payment: This work shall be paid for at the contract unit price for EACH for SANITARY MANHOLES TO BE ADJUSTED, which price shall include all of the above.

X6026504 SANITARY MANHOLES TO BE REMOVED

Description: This work shall consist of removing Sanitary Manholes in locations depicted on the plans. Work shall be according to Article 605 of the Standard Specifications and in conjunction with the SANITARY SEWER REMOVAL 15” pay item.

Basis of Payment: This work will be paid for at the contract unit price per EACH for SANITARY MANHOLES TO BE REMOVED.

X6061100 CONCRETE MEDIAN, TYPE SB (SPECIAL)

Description. This work shall consist of constructing Concrete Median, Type SB in accordance with Section 606 of the Standard Specifications, Highway Standard 606301, and the detail on the plans.

Construction Requirements. The optional keyed construction joint or joints shown on Standard 606301 may be required in order to conform to the Construction Staging and Maintenance of Traffic shown on the plans. No extra compensation will be provided for construction either one or two keyed construction joints.

Method of Measurement. This work will be measured for payment in place and the area computed in square feet. Concrete curb and gutter around solid concrete median will not be measured separately for payment.

Basis of Payment. This work will be paid for at the contract unit price per SQUARE FOOT for CONCRETE MEDIAN, TYPE SB SPECIAL).

X6650200 WOVEN WIRE FENCE (SPECIAL)

Description. This work shall consist of placing a Woven Wire Fence according to the IDOT Highway Standard 665001 and Article 665 of the Standard Specifications with the following requirements:

- 1) Wire Mesh shall be 4”x2”
- 2) No Gaps larger than the wire mesh shall occur between the fence and the ground surface. Fencing may be pushed in the soil. Trenching is not allowed.

This fence shall be placed adjacent to PERIMETER EROSION BARRIER, SPECIAL in locations specified on the plans to prevent a potential entry to the site by a Blanding’s Turtle. Natural Resource Protection signage shall be placed according to the locations specified in the plans adjacent to the wire fence.

Method of Measurement & Basis of Payment. This work will be measured for payment in place per FOOT of WOVEN WIRE FENCE (SPECIAL).

X7800100 PAINT PAVEMENT MARKING – RAISED MEDIAN

Description. This work shall consist of painting raised medians in the locations specified in the plans according to the applicable portions of Article 780 of the Standard Specifications.

Method of Measurement & Basis of Payment. This work will be measured for payment in place per SQUARE FOOT for PAINT PAVEMENT MARKING – RAISED MEDIAN.

X8140105 HANDHOLE (SPECIAL)

Description: This work shall consist of all labor, equipment, and materials required to provide and install a new composite reinforced handhole of the specified size and structural requirements at locations shown on the plans or as directed by the Engineer.

Material Requirements: The vault portion of special handholes shall be constructed of fiberglass reinforced plastic or fiberglass reinforced polymer resin. The cover shall be polymer concrete with skid resistant surface. The special handholes shall meet or exceed the following minimum requirements:

- Designed for Tier 15 (22,500 lb) load rating
- Meet or exceed SCTE 77-2007 standards
- Minimum dimensions of 36” wide by 60” long by 36” deep with open bottom
- Include stainless steel nuts and bolts for securing the cover
- Resistance to chemicals, fertilizers, and sunlight
- Non-metallic, non-conductive, non-flammable materials
- Not affected by freeze-thaw conditions
- Impact and corrosion resistant.

Construction Requirements: Special handholes shall be installed in accordance with the applicable requirements of Section 814 of the Standard Specifications.

Basis of Payment: This work will be paid for at the contract unit price per EACH for HANDHOLE, (SPECIAL).

X8710031 FIBER OPTIC CABLE 36 FIBERS – SINGLE MODE

This work shall be in accordance with Sections 871 of the Standard Specifications except as modified herein and shall include furnishing and installing fiber optic cable in conduit and within innerduct as noted on the plans and as herein described.

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.

The fibers shall have a 9 micron core and a 125 micron cladding, thus having a type of 9µm/125µm optical fiber.

Add the following to Article 871.04 of the Standard Specifications:

Single-mode fibers shall be terminated with approved optical connectors. Twelve (12) fibers shall be terminated with ST mechanical connectors and fusion splices shall be used for the remaining 24 fibers at each termination point.

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.

FIBER OPTIC TERMINATIONS

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: Three 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

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.

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. These drop cables should be functionally equivalent to a GATOR patch™.

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 one 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-enterrable 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.

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.

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.

Measurement and Payment. This work will be paid for at the contract unit price per FOOT for FIBER OPTIC CABLE, SINGLE MODE of the number of fibers specified, which shall include all work to furnish and install the fiber optic cable as herein specified. The cost for providing Fiber Optic terminations as described are included in this pay item.

XZ127900 RETAINING WALL REMOVAL

Description: This work shall consist of existing retaining wall removal according to the applicable portions of Section 501 of the Standard Specifications. The existing wall is a metal sheet pile wall, likely driven in place at the time of installation.

Basis of Measurement & Payment: The retaining wall removal will be measured for payment per FOOT along the top of the existing wall. This work shall be paid for at the contract unit price per FOOT for RETAINING WALL REMOVAL.

XX007251 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) and have a minimum mechanical zoom of thirty (30x) plus 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. Video resolution of video feed shall have a minimum image quality of HDTV 720p.

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.

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 Kane County Department of Transportation (KDOT), Traffic Division 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 KDOT Traffic.

XX007879 EROSION CONTROL BLANKET (SPECIAL 2)

Description: This work shall consist of furnishing and placing erosion control blanket over plug plantings and promotion of wetland-type plantings. The work shall be performed according to Article 251.04 of the “Standard Specifications”.

Materials: The erosion control blanket shall meet the requirements of Article 1081.10 of the “Standard Specifications”, except that:

The blanket material shall be 100% agricultural straw with degradable thread.

List of Vendors & Product Name:

- Tensar/North American Green – DS75
- Western Excelsior Corporation – Excel SR-1RG (Rapid-Go)
- Erosion Control Blanket.com – S31 UVD
- Propex – Landlok S2-RD

Each blanket will be secured with a 12” degradable stake. Securing devices are not paid for separately but included in the cost of the pay item.

Method of Measurement: This work will be measured for payment in place in square yards of actual area covered.

Basis of Payment: This work will be paid for at the contract unit price per square yard for EROSION CONTROL BLANKET (SPECIAL 2). *The unit price shall include all equipment, materials and labor required to furnish and place the erosion control blanket*

XX007953 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 (KDOT) 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. The system shall have the capacity to add additional devices in the future.

Construction: Contractor shall include configuring Ethernet switches, terminal servers and media converters, assigning IP addresses to field devices based on KDOT Traffic staff input/standards, troubleshooting and submitting documentation to KDOT Traffic staff. A new, contractor-provided 36-strand single mode KDOT fiber optic cable shall serve as the Local Area Network (LAN) communication backhaul for this project to the traffic cabinet located at Randal Road and through the existing KDOT network to the KDOT 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. The contractor shall also coordinate final connection to the existing system network with the KDOT network contractor of record. The contractor shall setup a meeting between the contractor, KDOT IT staff, KDOT 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 KDOT Traffic for approval. The test plan shall be revised to the satisfaction of the Engineer and KDOT 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 KDOT 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 Longmeadow Parkway. 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 KDOT Traffic Office.

XX008392 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 power and connect to PTZ CCTV cameras located throughout the project.

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 Celsius to 70 degrees Celsius, with an insulation temperature from 0 degrees Celsius to 60 degrees Celsius.

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 not be less than 25 pounds (11 kg).

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

The cable shall satisfy the requirements of OUTDOOR RATED NETWORK CABLE.

RJ-45 grounded lightning protection device, RJ-45 External Ethernet and POE extender with 60W pass thru shall conform to the applicable requirements of the Standard Specifications.

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, and materials necessary to complete this work as specified including mounting hardware and terminating connectors.

XX08453 ETHERNET SWITCH, TYPE 1

Description: This work shall include all materials and work necessary to install an Ethernet 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 full duplex 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:	5 μs + packet time (10 to 100Mbps) 15 μs + packet time (10 to 10 Mbps, and 10 to 100Mbps)
Throughput with	max.- 4.17M pps (Transmit) (8 10/100links 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 SWITCH, TYPE 1, which price shall be payment in full for furnishing and installing an Ethernet Switch as specified.

XX08454 ETHERNET SWITCH, TYPE 2

Description. This work shall include all materials and work necessary to install an Ethernet Switch, Type 2 in a traffic signal cabinet. The Ethernet 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 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 2 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: (maximum)	20 W
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 μ s + packet time (100 to 100Mbps)
Throughput with	max.- 8.33M pps (Transmit)
(links) Back plane-	(8 10/100links and 4 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 mount the Ethernet switch on a standard DIN rail or mounting channel in the traffic signal cabinet or as identified on the plans. The Contractor shall secure the Ethernet Switch as appropriate and approved by the engineer. The power supply shall be hard-wired to the cabinet power.

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 SWITCH, TYPE 2, which price shall be payment in full for furnishing and installing an Ethernet Switch as specified.

XX008963 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 14-gauge tracer wire for detecting conduit. If the product is not available with a 14-gauge tracer wire then the Contractor shall install a separate 14-gauge copper wire alongside the installed innerduct.

Fabric Innerduct shall be installed in accordance with manufactures guidelines. At each end of a conduit run, the fabric innerduct shall be tied off in accordance with the manufacturer’s recommendations and the opened conduit end sealed or plugged to prevent infiltration of insects, debris or water.

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 material, equipment, labor, and tools necessary to complete this work as specified including mounting hardware and terminating the innerduct and plugging the end of the conduits.

XX009142 PAVEMENT MARKING REMOVAL (SPECIAL)

Description. This work shall consist of removing Wet Reflective Temporary Tape from final wearing surfaces utilized for traffic control during construction.

Construction Requirements. Contractor shall follow applicable portions of Article 783 of the Standard Specifications. Wet Reflective Temporary Tape must be heated and pulled. Grinding or Water-Blasting shall not be permitted.

Basis of Payment. This work will be paid for at the contract unit price per each per SQUARE FOOT for PAVEMENT MARKING REMOVAL (SPECIAL).

Z0013796 SEDIMENT CONTROL, STABILIZED CONSTRUCTION ENTRANCE

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

Materials: The materials used shall meet the requirements of the following:

Aggregate: The aggregate shall be limited to IDOT Coarse Aggregate Gradation CA-1.

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

Construction Requirements: The aggregate shall be at least six inches thick. The aggregate shall not be placed until the entrance area has been inspected and approved by the Engineer.

The aggregate shall be dumped and spread into place in approximately horizontal layers. The layer(s) shall not exceed three feet in thickness. The aggregate shall be placed in such a manner as to produce a reasonably homogeneous stable fill that contains no segregated pockets of larger or smaller fragments or large unfilled space caused by bridging of larger fragments. No compaction shall be required beyond that resulting from the placing and spreading operations.

The construction entrance shall follow the dimensions shown on the plans and/or have a minimum width of 14 feet and a minimum length of 50 feet.

All surface water flowing or diverted toward the construction entrance shall be piped across the entrance. Any pipe used for this will be considered included in the unit price for SEDIMENT CONTROL, STABILIZED CONSTRUCTION ENTRANCE. The stabilized construction entrance shall have positive drainage away from the roadway.

The entrance shall remain in place and be maintained until the disturbed area is stabilized. Any sediment spilled onto public right-of-way(s) shall be removed immediately. All removed materials shall be disposed of outside the limits of the right-of-way according to Article 202.03 of the “Standard Specifications” and/or as directed by the Engineer.

Method of Measurement: The Stabilized Construction Entrance will be measured in place and the area computed in square yards.

Basis of Payment: The work will be paid for at the contract unit price per square yard for SEDIMENT CONTROL, STABILIZED CONSTRUCTION ENTRANCE. The unit price shall include all material, including filter fabric, labor, equipment and any other items required to complete the construction entrance.

Z0013798 CONSTRUCTION LAYOUT

Description. The Contractor shall furnish and place construction layout stakes for this project. The Engineer will provide adequate reference points to the centerline of survey including all PI's, PCs, PT's, PRCs, and POT's as indicated on the plans as well as bench marks as described in the plans. Any additional control points set by the Department will be identified in the field to the Contractor and all field notes will be kept in the office of the Engineer.

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

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

Responsibility of the Contractor.

The Contractor shall establish from the given survey points and bench marks all the control points necessary to construct the individual project elements. (S)He shall provide the Engineer adequate control in close proximity to each individual element to allow adequate checking of construction operations. This includes, but is not limited to, line and grade stakes, line and grade nails in form work, and/or filed or etched marks in substantially completed construction work. It is the Contractor's responsibility to tie in centerline control points in order to preserve them during construction operations.

At the completion of the grading operations, the Contractor shall set stakes at 100 ft (25 m) station intervals along each profile grade line. These stakes will be used for final cross sectioning by the Engineer.

The Contractor shall locate the right-of-way points for the installation of right- of-way markers. The Contractor shall set all line stakes for the construction of fences by the Contractor.

All work shall be according to normally accepted self-checking surveying practices. Field notes shall

be kept in standard survey field notebooks and those books shall become the property of the Department at the completion of the project. All notes shall be neat, orderly, and in accepted form.

Measurement and Payment. This work will be paid for at the contract LUMP SUM price for CONSTRUCTION LAYOUT.

Z0015200 CURB STOPS 1 ½”

Description. This work shall consist of all labor, equipment, and materials required to provide and install a new curb stop and domestic water service box of the specified size at locations shown on the plans or as directed by the Engineer.

Material Requirements. Curb stops shall be fabricated of brass and provided with an outlet suitable for copper connection in accordance with the requirements of AWWA Standard C-800. Curb stops shall be of the round-way type, quarter-turn check and Minneapolis pattern top thread. Curb boxes shall be Minneapolis pattern and 1 ½” diameter. Domestic water service boxes shall be cast iron, screw-type, with the base set over the curb stop and of such construction that it can be extended in length to fit the particular location with a minimum 18” of adjustment left. The cover of the domestic water service box shall be marked “WATER”.

Construction Requirements. Curb stops shall be installed in accordance with the applicable requirements of Section 41-2.12 of the Water and Sewer Specifications.

Basis of Payment. This work will be paid for at the contract unit price per each for CURB STOPS 1 ½”.

Z0019600 DUST CONTROL WATERING

Description: This work shall consist of developing and implementing a detailed Dust Control Plan (DCP). Development of a DCP is required. All construction activities shall be governed by the DCP. The nature and extent of dust generating activities, and specific control techniques appropriate to specific situations shall be discussed at the pre-construction meeting, with subsequent development of the DCP to include but not be limited to the requirements below.

The Contractor is responsible for the control of dust at all times during the duration of the contract, 24 hours per day, 7 days per week, including non-working hours, weekends, and holidays. This work shall be considered complete after the completion of all permanent erosion control measures required for the contract, and after all temporary and permanent seeding is established. Work on this contract shall be conducted in a manner that will not result in generating excessive air borne particulate matter (PM) or nuisance dust conditions as determined by the Engineer.

The DCP shall include legible copies of the product literature and Material Safety Data Sheets for dust suppression agents and stabilizers the contractor proposes to use. The Dust Control Plan shall describe the plan for the implementation of control measures before, during and after conducting any dust generating operation. These controls must be in place on non-working days and after working hours, not just while work is being done on the site. The Dust Control Plan must contain information specific to the project site, proposed work, and dust control measures to be implemented. A copy of the Dust Control Plan must be available on the project site at all times.

The Dust Control Plan must contain, at a minimum, all of the following information:

- (1) Name, address and phone number of the person(s) responsible for the dust generating operation and for the submittal and implementation of the Dust Control Plan.
- (2) A drawing specifying the site boundaries of the project with the areas to be disturbed, the locations of the nearest public roads, and all planned exit and entrance locations to the site from any paved public roadways.
- (3) Control measures to be applied to all actual and potential fugitive dust sources before, during and after conducting any dust generating operation, including non-work hours and non-work days.
- (4) A list of dust suppressants to be applied, including product specifications, Material Safety Data Sheets, and product label instructions that include the method, frequency and intensity of applications and information on the environmental impacts and approval or certifications related to the appropriate and safe use for ground applications.
- (5) A contingency plan consisting of at least one contingency measure for each activity occurring on the site in case the primary control measure proves inadequate.

The Contractor shall submit two copies of the DCP that outlines in detail the measures to be implemented by the Contractor complying with this section, including prevention, cleanup, and other measures at least 14 days before beginning any dust generating activity. The Contractor shall not begin any dust generating activities until the Engineer approves the DCP in writing.

Materials.

(1) Dust Suppression Agents

- a. Dust suppression agents shall be water soluble, non-toxic, non-reactive, and non-volatile, and non-foaming. The use of petroleum for dust control is prohibited.
- b. Calcium Chloride shall conform to the requirements of Article 1013.01 of the standard specifications. Other commercially available dust suppression agents may be substituted for calcium chloride subject to the approval of the Engineer. Material Safety Data Sheets must be reviewed and approved by the Engineer prior to the use of any substances other than Calcium Chloride.
- c. Water shall meet the requirements of Section 1002 of the Standard Specifications.

Construction Methods. Dust suppression agents shall be used to provide temporary control of dust on haul roads and other active work areas. Several applications per day may be necessary to control dust depending upon meteorological conditions and work activity. The Contractor shall apply dust suppression on a routine basis as necessary or as directed by the Engineer to control dust. Wet suppression consists of the application of water or a wetting agent in solution with water. Wetting agents shall not be applied directly to live plant material. Wet suppression equipment shall consist of sprinkler pipelines, tanks, tank trucks or other devices approved by the Engineer, capable of providing a regulated flow, uniform spray and positive shut off.

Calcium chloride dust suppression agents may be used in lieu of wet suppression only when freezing conditions exist. Calcium chloride shall be uniformly applied by a mechanical spreader at a rate of 1 and 1/2 pounds per square yard or its equivalent liquid, unless otherwise directed by the Engineer. Calcium chloride shall not be directly applied to live plant material.

Calcium chloride must not be stored outdoors without an impermeable cover. Storage must be on an impermeable surface such as paved asphalt or appropriately treated concrete of sufficient thickness to avoid ex-filtration. Storage should be as airtight as possible to limit the calcium chloride's absorbing moisture from the air. No storage facilities will be allowed within 100 feet of a storm sewer, or any other drain. Positive drainage must be maintained on all treated surfaces. Ditches, culverts and other structures must be kept clean to ensure proper drainage and to limit the amount of water infiltrating earth surfaces and thereby leeching out chlorides. If calcium chloride is applied dry, or during dry periods, and crystals are seen on the road surface, the road should be wetted sufficiently to dissolve the calcium chloride. Wetting should be limited to an amount that will sufficiently cause the calcium chloride to penetrate the surface but not to the point of causing any runoff from the road surface. Other approved dust suppression agents shall be applied and used as per the manufacturer's instructions.

Haul truck cargo areas shall be securely covered during the transport of materials on public roadways that are prone to cause dust.

Public Roadway Dust Control. Track out, including carryout and spillage of material that adheres to the exterior surfaces of or are spilled from motor vehicles and/or equipment and subsequently fall onto a paved public roadway must be controlled at all times. Clean up of carryout and spillage is required immediately if it extends a cumulative distance of 50 feet or more on a paved public roadway. If the extent of carryout is less than 50 feet, clean up at the end of the day is permissible. Clean up of paved surfaces shall be by wet spray power vacuum street sweeper. Dry power sweeping is prohibited.

Control of Earthwork Dust. During batch drop operations (i.e. earthwork with a front-end loader, clamshell bucket, or backhoe), the free drop height of excavated or aggregate material shall be reduced to minimum heights as necessary to perform the specified task, and to minimize the generation of dust. To prevent spills during transport, a minimum of 2 inches of freeboard space shall be maintained between the material load and the top of the truck cargo bed rail. A maximum drop height of two feet (or minimum height allowed by equipment) will be allowed, or to heights as directed by the Engineer.

Calcium chloride and other approved dust suppression agents shall be mixed with water at the rate specified by the manufacturer and measured for payment in units of 1000 Gallons of solution applied.

All other dust control measures will not be measured for payment.

Basis of Payment. This work will be paid for at the contract unit price per UNIT for DUST CONTROL WATERING and shall include all dust suppression agents, water, calcium chloride, and labor to control dust.

Z0022800 FENCE REMOVAL

Description: This work shall consist of the removal and disposal of an existing fence from the project site.

General: The Contractor shall remove all components of the existing fence including any concrete used to anchor fence posts, bracing, guy wires, posts, and/or gates. All removed materials shall be disposed of outside the limits of the right-of-way according to Article 202.03 of the “Standard Specifications” and/or as directed by the Engineer.

Method of Measurement: This work will be measured for payment in feet, along the top of the existing fence, from center to center of end posts, excluding the length occupied by gates.

Basis of Payment: This work will be paid for at the contract unit price per foot for FENCE REMOVAL. The unit price shall include all equipment, materials and labor required to remove and dispose of the fence.

Z0023202 SEDIMENT CONTROL, DRAINAGE STRUCTURE INLET FILTER CLEANING

Description: This work shall consist of cleaning sediment out of a drainage structure inlet filter when directed by the Engineer. The Engineer will be the sole judge of the need for cleaning based on the rate that debris and silt is collected at each inlet filter cleaning.

Cleaning of the inlet filter shall consist of inspecting, cleaning (includes removal and proper disposal of debris and silt that has accumulated) by vactoring, removing and dumping, or any other method that has been approved by the engineer. For purposes of this contract, it is anticipated that inlet filter cleaning will be performed one time for all inlet filters on the project. Some filters will require no cleaning, others will require multiple cleanings. The Contractor may use some or all quantity for this pay item.

Basis of Payment: This work shall be paid at the contract unit price for EACH for SEDIMENT CONTROL, DRAINAGE STRUCTURE INLET FILTER CLEANING.

Z0033058 POST-MOUNTED FLASHING BEACON ASSEMBLY INSTALLATION (SPECIAL)

Description: This work shall consist of furnishing and installing a Rectangular Rapid Flashing Beacon (RRFB) Assembly complete with RRFB; AC power supply; traffic signal post; foundation; pedestrian push button; warning signs and plaques; pedestrian push-button sign; controller and cabinet; and communication equipment as shown on the plans and/or as specified by the Engineer. All equipment and hardware required to mount the RRFB and associated equipment to the assembly shall be included in the unit cost of this item.

Materials: All components shall be manufactured and assembled as a complete system and consist of the following:

Rectangular Rapid Flashing Beacon: Each RRFB assembly shall satisfy the FHWA Interim Approval for Optional Use of Rectangular Rapid Flashing Beacons (IA-11), dated July 16, 2008, and all subsequent FHWA Official Interpretation Letters and the 2009 edition of the Manual of Uniform Traffic Control Devices (MUTCD), including the unit size, mounting location, flash rate, and operational parameters unless modified herein by this special provision. The RRFB assembly shall be programmable to allow the County Traffic Engineer to set the duration of the flashing beacon display based on the crossing time requirements established in the MUTCD. The Contractor shall furnish and install two direction RRFB units with far side indicator light mounted to the sign structure as indicated on the plans. The RRFB shall be rated for Class I light intensity output according to the Society of Automotive Engineers (SAE) Standard J595 with a 15 year life expectancy. The minimum size of the LED beacon shall be 7 inches x 3 inches. The RRFB shall be able to be seen at least 1,000 feet in advance of the crossing during the day. The RRFB shall have an operating temperature meeting NEMA specifications.

Power Supply: The installation must be an external power supply.

- A. External Power Supply: The external power supply shall meet the following sections of the “Standard Specifications”:
 - a. Section 805, Electrical Service Installation-Traffic Signals
 - b. Section 806, Grounding
 - c. Section 810, Underground Raceways
 - d. Section 870, Multi-Conductor Power Cable
 - e. Section 873, Electric Cable
- B. AC Power service rating shall be 120VAC 10A minimum; 3-wire grounded circuit.
- C. Power feed wire type and gauge shall be per IDOT Standards.

Controller: The RRFB controller shall meet the requirements of Section 858 of the “Standard Specifications” and the following:

- A. Power Options: The controller unit shall only be AC powered. Solar powered systems are not acceptable.
- B. Controller to Controller Communication: At each location all installed RRFB assemblies shall communicate by a hard-wired connection per manufacturer’s specifications.
- C. All necessary wiring to connect the RRFB assembly from the power service drop handhole to both assemblies shall follow manufacturer’s recommendations and shall be considered included in the cost of this pay item. Galvanized steel conduit, handhole, and electric service connection shall be paid for separately.
- D. Timing: The controller shall provide the full programmed timing upon all push button activations. This timing coordination shall be acceptable to the County and the Engineer prior to acceptance.

Traffic Signal Post: The traffic signal post shall meet the requirements of Section 875 for traffic signal post or traffic signal post, special, as shown on the plans.

Foundation: The traffic signal post foundation shall be concrete. Bolt and anchor pattern shall follow manufacturer’s specifications and the following:

- A. Concrete Foundation: The concrete foundation shall meet the requirements of Section 878 of the Standard Specifications.

- B. Anchor bolts for the pole base shall be set in place prior to pouring concrete. Anchors must meet the minimum mechanical requirements of ASTM A36 and have a minimum tensile strength of 58,000 PSI and minimum yield of 36,000 PSI, ASTM F1554 Grade 36.
- C. Must be Hot-Dipped Galvanized in accordance with ASTM F2329.
- D. Nuts and washers shall comply with ASTM A563 Grade A.
- E. Anchors shall be equipped with breakaway bolts and universal couplers to ensure the RRFB Assembly is breakaway-compliant.
- F. Any deviations to the above must be approved by the Engineer prior to installation.

Pedestrian Push Button: The pedestrian push button shall meet the requirements of Section 888 of the “Standard Specifications”

Signs: Each RRFB assembly shall include two crossing signs (W11-2) 36 inch x 36 inch dimension, two diagonal downward pointing arrow (W16-7P) plaques 24 inch x 12 inch dimension, mounted back-to-back, mounted as part of or above the pedestrian push button. Push button sign shall be (R10-25) 9 inch x12 inch and mounted directly above the ADA-compliant push-button. The W-series sign panels shall be manufactured with fluorescent yellow green type ZZ sheeting meeting the requirements of Section 1091 of the “Standard Specifications. All signs shall meet the latest requirements of the MUTCD. The signs shall have brackets and sign channels which are equal to and completely interchangeable with those used by the KDOT Sign Shop.

Warranty: All materials shall be warranted for three years from date of acceptance or turn on by the KDOT Traffic Department.

Installation: The RRFB Assembly shall be installed strictly according to the manufacturer’s recommendations, the applicable portions of the “Standard Specifications” and/or as directed by the Engineer. The final elevation and location of the light bar beacons shall be approved by the Engineer prior to the Contractor beginning work.

Basis of Payment: This work will be paid at the contract unit price for each POST-MOUNTED FLASHING BEACON ASSEMBLY INSTALLATION (SPECIAL). The unit price shall include all labor, equipment, materials and documentation required to furnish and install the RRFB assembly complete with power supply; traffic signal post; foundation; pedestrian push button; signs and plaques; controller and cabinet; communication equipment; wiring; testing and timing; and mounting hardware.

Z0005608, Z0005610, Z0056612, Z0056624 STORM SEWER ADJACENT TO OR CROSSING WATER MAIN

Description: This work consists of constructing storm sewer adjacent to or crossing a water main, at the locations shown on the plans. The material and installation requirements shall be according to the latest edition of the “Standard Specifications for Water and Sewer Main Construction in Illinois”, and the applicable portions of Section 550 of the Standard Specifications; which may include concrete collars and encasing pipe with seals if required.

Pipe materials shall meet the requirements of Sections 40 and 41-2.01 of the “Standard Specifications for Water and Sewer Main Construction in Illinois”, except PVC pipe will not be allowed. Ductile-Iron pipe shall meet the minimum requirements for Thickness Class 50.

Encasing of standard type storm sewer, according to the details for “Water and Sewer Separation Requirements (Vertical Separation)” in the “STANDARD DRAWINGS” Division of the “Standard Specifications for Water and Sewer Main Construction in Illinois”, may be used for storm sewers crossing water mains.

Basis of Payment: This work will be paid according to Article 550.10 of the Standard Specifications, except the pay item shall be STORM SEWERS, WATER MAIN REQUIREMENTS of the diameter specified.

Z0057200 SANITARY SEWER 15”

This work shall consist of installation of 15” sanitary sewer. Pipe material used shall be PVC SDR 26 of the size necessary to match the existing sanitary sewer pipe diameter. Installation shall follow the Standard Specifications for Water and Sewer Construction in Illinois.

For purposes of this pay item, Trench Backfill will not be paid for separately but considered included in the cost of the sewer pipe.

Method of Measurement & Basis of Payment – SANITARY SEWER 15” shall be measured and paid for per FOOT of SANITARY SEWER 15” installed which shall include all time, materials, and labor to complete the installation.

Z0062456 TEMPORARY PAVEMENT

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

The contractor shall use either Portland cement concrete according to Sections 353 and 354 of the Standard Specifications or HMA according to Sections 355, 356, 406 of the Standard Specifications, and other applicable HMA special provisions as contained herein. The HMA mixtures to be used shall be specified in the plans. The thickness of the Temporary Pavement shall be as described in the plans. The contractor shall have the option of constructing either material type if both Portland cement concrete and HMA are shown in the plans.

Articles 355.08 and 406.11 of the Standard Specifications shall not apply.

For purposes of this contract, temporary pavement aggregate base course of 4” shall be considered included in the cost per square yard of Temporary Pavement and not paid for separately.

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

Basis of Payment. This work will be paid for at the contract unit price per SQUARE YARD for TEMPORARY PAVEMENT.

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

Z0062458 TEMPORARY PAVEMENT (VARIABLE DEPTH)

Description: This work shall consist of constructing temporary hot-mix asphalt sections at the locations shown on the plans or as directed by the Engineer. These paved sections will be necessary at various locations throughout the project, including intersections, during the course of construction to temporarily provide a surface along grade differentials due to stage construction (i.e. longitudinal sections of pavement to allow traffic to ride along or transition from new pavement constructed in Stage 1 to adjacent existing pavement remaining in place until a later stage).

The Contractor shall use HMA according to Section 406 of the Standard Specifications, and other applicable HMA special provisions as contained herein. The HMA mixtures to be used shall be specified in the plans. The thickness of the Temporary Pavement will be variable and is shown in the staging temporary pavement details. Article 406.11 of the Standard Specifications shall not apply.

The removal of the Temporary Pavement (Variable Depth), if required, shall conform to Section 440 of the Standard Specifications.

Basis of Payment: This work will be paid for at the contract unit price per TON for TEMPORARY PAVEMENT (VARIABLE DEPTH).

Removal of Temporary Pavement (Variable Depth) will not be measured separately for payment, but shall be included within the contract unit price per ton for TEMPORARY PAVEMENT (VARIABLE DEPTH).

Z0066600 & Z0066700 STABILIZED DRIVEWAYS (8",10")

Description: This work shall consist of furnishing, placing and compacting hot-mix asphalt driveway pavement at locations shown on the plans and as directed by the Engineer.

This work shall conform to the applicable Sections of Articles 311, 355 and 406.

Indicated driveways to be stabilized shall be constructed to a nominal thickness of 8 inches for a private entrance and 10" for a commercial entrance. Each shall have a minimum 2" thick surface course (HMA Surface Course, Mix "D", N70) with the balance constructed using hot mix asphalt base course (HMA Base Course, 6" or 8"). Aggregate and bituminous material prime coats shall be applied according to Article 406 and as directed by the Engineer. The driveway shall be constructed on a 4 inch compacted aggregate subbase conforming to the applicable Sections of Article 311 for Subbase Granular Materials Type B.

Method of Measurement: Stabilized driveways will be measured in place and the area computed in SQUARE YARDS. Aggregate subbase and aggregate and bituminous material prime coats will not be measured for payment but shall be considered included in payment for Stabilized Driveways of the thickness specified.

Basis of Payment: The work will be paid at the contract unit price per square yard for STABILIZED DRIVEWAYS, 8 INCH or 10 INCH.

Z0067700 STEEL CASINGS 20”

This work shall consist of installation of 20” steel casing pipe for purposes of providing a conduit for future utility installations.

Steel casings shall conform to ASTM 139 Gr. 8 with 3/8” wall thickness. A concrete bulkhead shall be provided at each end of the casing pipe and the exact location and depth recorded and provided to the Engineer for Record Drawings for future use by the Village of Algonquin.

Method of Measurement & Basis of Payment – STEEL CASINGS 20” shall be measured and paid for per FOOT of STEEL CASINGS 20” installed which shall include all time, materials, and labor to complete the installation.

Z0075505 TIMBER RETAINING WALL REMOVAL

Description: This work shall consist of removing an existing timber retaining wall at the location shown on the plans in accordance with the applicable portions of Sections 202 and 501 of the Standard Specifications.

The existing timber retaining wall shall be removed and all materials disposed of off the right-of-way as part of this item. The wall appears to have timber tie backs, thus the tie backs shall be removed or cut-off at a sufficient distance to allow a replacement segmental block wall (replacement wall to be paid for separately) to be constructed, at locations as shown on the plans, without interfering with the remaining portion of any tie backs left in place. The existing timber retaining wall is exposed approximately 2’ to 3’ above the ground along its length.

The Contractor shall carefully cut and remove the portion of the existing wall identified for replacement and that portion of the wall that is to remain in place. A smooth joint shall be prepared so the new wall will fit tight to the portion of the existing wall that is to remain in place. If any portion of the wall that is to remain in place is damaged by the Contractor, it shall be repaired by the Contractor at no additional cost to the contract.

Measurement and Payment. This work will be measured and paid for at the contract unit price per lineal foot for TIMBER RETAINING WALL REMOVAL, which price shall be payment in full for all labor, materials and equipment necessary to remove and dispose of the timber retaining wall as shown on the plans and as described herein.

AGGREGATE SURFACE COURSE FOR TEMPORARY ACCESS

Effective: April 1, 2001

Revised: January 2, 2007

Revise Article 402.10 of the Standard Specifications to read:

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

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

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

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

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

Add the following to Article 402.12 of the Standard Specifications:

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

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

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

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

- (a) Upon construction of the temporary access, sixty percent of the contract unit price per each, of the type constructed, will be paid.

- (b) Subject to the approval of the Engineer for the adequate maintenance and removal of the temporary access, the remaining forty percent of the pay item will be paid upon the permanent removal of the temporary access.”

ADJUSTMENTS AND RECONSTRUCTIONS

Effective: March 15, 2011

Revise the first paragraph of Article 602.04 to read:

“602.04 Concrete. Cast-in-place concrete for structures shall be constructed of Class SI concrete according to the applicable portions of Section 503. Cast-in-place concrete for pavement patching around adjustments and reconstructions shall be constructed of Class PP-1 concrete, unless otherwise noted in the plans, according to the applicable portions of Section 1020.”

Revise the third, fourth and fifth sentences of the second paragraph of Article 602.11(c) to read:

“Castings shall be set to the finished pavement elevation so that no subsequent adjustment will be necessary, and the space around the casting shall be filled with Class PP-1 concrete, unless otherwise noted in the plans, to the elevation of the surface of the base course or binder course. HMA surface or binder course material shall not be allowed. The pavement may be opened to traffic according to Article 701.17(e)(3)b.”

Revise Article 603.05 to read:

“603.05 Replacement of Existing Flexible Pavement. After the castings have been adjusted, the surrounding space shall be filled with Class PP-1 concrete, unless otherwise noted in the plans, to the elevation of the surface of the base course or binder course. HMA surface or binder course material shall not be allowed. The pavement may be opened to traffic according to Article 701.17(e)(3)b.”

Revise Article 603.06 to read:

“603.06 Replacement of Existing Rigid Pavement. After the castings have been adjusted, the pavement and HMA that was removed, shall be replaced with Class PP-1 concrete, unless otherwise noted in the plans, not less than 9 in. (225 mm) thick. The pavement may be opened to traffic according to Article 701.17(e)(3)b.

The surface of the Class PP concrete shall be constructed flush with the adjacent surface.”

Revise the first sentence of Article 603.07 to read:

“603.07 Protection Under Traffic. After the casting has been adjusted and the Class PP concrete has been placed, the work shall be protected by a barricade and two lights according to Article 701.17(e)(3)b.”

AGGREGATE SUBGRADE IMPROVEMENT (D-1)

Effective: February 22, 2012

Revised: April 1, 2016

Add the following Section to the Standard Specifications:

“SECTION 303. AGGREGATE SUBGRADE IMPROVEMENT

303.01 Description. This work shall consist of constructing an aggregate subgrade improvement.

303.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Coarse Aggregate	1004.07
(b) Reclaimed Asphalt Pavement (RAP) (Notes 1, 2 and 3)	1031

Note 1. Crushed RAP, from either full depth or single lift removal, may be mechanically blended with aggregate gradation CS 01 but shall not exceed 40 percent by weight of the total product. The top size of the Coarse RAP shall be less than 4 in. (100 mm) and well graded.

Note 2. RAP having 100 percent passing the 1 1/2 in (37.5 mm) sieve and being well graded, may be used as capping aggregate in the top 3 in. (75 mm) when aggregate gradation CS 01 is used in lower lifts. When RAP is blended with any of the coarse aggregates, the blending shall be done with mechanically calibrated feeders. The final product shall not contain more than 40 percent by weight of RAP.

Note 3. The RAP used for aggregate subgrade improvement shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, “Reclaimed Asphalt Pavement (RAP) for Aggregate Applications”.

303.03 Equipment. The vibratory machine shall be according to Article 1101.01, or as approved by the Engineer. The calibration for the mechanical feeders shall have an accuracy of ± 2.0 percent of the actual quantity of material delivered.

303.04 Soil Preparation. The stability of the soil shall be according to the Department’s Subgrade Stability Manual for the aggregate thickness specified.

303.05 Placing Aggregate. The maximum nominal lift thickness of aggregate gradation CS 01 shall be 24 in. (600 mm).

303.06 Capping Aggregate. The top surface of the aggregate subgrade shall consist of a minimum 3 in. (75 mm) of aggregate gradations CA 06 or CA 10. When Reclaimed Asphalt Pavement (RAP) is used, it shall be crushed and screened where 100 percent is passing the 1 1/2 in. (37.5 mm) sieve and being well graded. RAP that has been fractionated to size will not be permitted for use in capping. Capping aggregate will not be required when the aggregate subgrade improvement is used as a cubic yard pay item for undercut applications. When RAP is blended with any of the coarse aggregates, the blending shall be done with mechanically calibrated feeders.

303.07 Compaction. All aggregate lifts shall be compacted to the satisfaction of the Engineer. If the moisture content of the material is such that compaction cannot be obtained, sufficient water shall be added so that satisfactory compaction can be obtained.

303.08 Finishing and Maintenance of Aggregate Subgrade Improvement. The aggregate subgrade improvement shall be finished to the lines, grades, and cross sections shown on the plans, or as directed by the Engineer. The aggregate subgrade improvement shall be maintained in a smooth and compacted condition.

303.09 Method of Measurement. This work will be measured for payment according to Article 311.08.

303.10 Basis of Payment. This work will be paid for at the contract unit price per cubic yard (cubic meter) for AGGREGATE SUBGRADE IMPROVEMENT or at the contract unit price per square yard (square meter) for AGGREGATE SUBGRADE IMPROVEMENT, of the thickness specified.

Add the following to Section 1004 of the Standard Specifications:

“ **1004.07 Coarse Aggregate for Aggregate Subgrade Improvement.** The aggregate shall be according to Article 1004.01 and the following.

- (a) Description. The coarse aggregate shall be crushed gravel, crushed stone, or crushed concrete. The top 12 inches of the aggregate subgrade improvement shall be 3 inches of capping material and 9 inches of crushed gravel, crushed stone or crushed concrete. In applications where greater than 36 inches of subgrade material is required, rounded gravel, meeting the CS01 gradation, may be used beginning at a depth of 12 inches below the bottom of pavement.
- (b) Quality. The coarse aggregate shall consist of sound durable particles reasonably free of deleterious materials. Non-mechanically blended RAP may be allowed up to a maximum of 5.0 percent.
- (c) Gradation.
 - (1) The coarse aggregate gradation for total subgrade thicknesses of 12 in. (300 mm) or greater shall be CS 01.

Grad No.	COARSE AGGREGATE SUBGRADE GRADATIONS				
	Sieve Size and Percent Passing				
	8"	6"	4"	2"	#4
CS 01	100	97 ± 3	90 ± 10	45 ± 25	20 ± 20

Grad No.	COARSE AGGREGATE SUBGRADE GRADATIONS (Metric)				
	Sieve Size and Percent Passing				
	200 mm	150 mm	100 mm	50 mm	4.75 mm
CS 01	100	97 ± 3	90 ± 10	45 ± 25	20 ± 20

- (2) The 3 in. (75 mm) capping aggregate shall be gradation CA 6 or CA 10.

COARSE AGGREGATE FOR BACKFILL, TRENCH BACKFILL AND BEDDING (D-1)

Effective: November 1, 2011
 Revised: November 1, 2013

This work shall be according to Section 1004.05 of the Standard Specifications except for the following:

Reclaimed Asphalt Pavement (RAP) maybe blended with gravel, crushed gravel, crushed stone crushed concrete, crushed slag, chats, crushed sand stone or wet bottom boiler slag. The RAP used shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, “Reclaimed Asphalt Pavement (RAP) for Aggregate Applications”. The RAP shall be uniformly graded and shall pass the 1.0 in. (25 mm) screen. When RAP is blended with any of the coarse aggregate listed above, the blending shall be done mechanically with calibrated feeders. The feeders shall have an accuracy of ± 2.0 percent of the actual quantity of material delivered. The final blended product shall not contain more than 40 percent by weight RAP.

The coarse aggregate listed above shall meet CA 6 and CA 10 gradations prior to being blended with the processed and uniformly graded RAP. Gradation deleterious count shall not exceed 10% of total RAP and 5% of other by total weight.

DRAINAGE AND INLET PROTECTION UNDER TRAFFIC (D-1)

Effective: April 1, 2011
 Revised: April 2, 2011

Add the following to Article 603.02 of the Standard Specifications:

- “ (i) Temporary Hot-Mix Asphalt (HMA) Ramp (Note 1)1030
- (j) Temporary Rubber Ramps (Note 2)

Note 1. The HMA shall have maximum aggregate size of 3/8 in. (95 mm).

Note 2. The rubber material shall be according to the following.

Property	Test Method	Requirement
Durometer Hardness, Shore A	ASTM D 2240	75 ±15
Tensile Strength, psi (kPa)	ASTM D 412	300 (2000) min
Elongation, percent	ASTM D 412	90 min
Specific Gravity	ASTM D 792	1.0 - 1.3
Brittleness, °F (°C)	ASTM D 746	-40 (-40)°

Revise Article 603.07 of the Standard Specifications to read:

“603.07 Protection Under Traffic. After the casting has been adjusted and the Class PP concrete has been placed, the work shall be protected by a barricade and two lights according to Article 701.17(e)(3)b.

When castings are under traffic before the final surfacing operation has been started, properly sized temporary ramps shall be placed around the drainage and/or utility castings according to the following methods.

- (a) Temporary Asphalt Ramps. Temporary hot-mix asphalt ramps shall be placed around the casting, flush with its surface and decreasing to a featheredge in a distance of 2 ft (600 mm) around the entire surface of the casting.
- (b) Temporary Rubber Ramps. Temporary rubber ramps shall only be used on roadways with permanent posted speeds of 40 mph or less and when the height of the casting to be protected meets the proper sizing requirements for the rubber ramps as shown below.

Dimension	Requirement
Inside Opening	Outside dimensions of casting + 1 in. (25 mm)
Thickness at inside edge	Height of casting ± 1/4 in. (6 mm)
Thickness at outside edge	1/4 in. (6 mm) max.
Width, measured from inside opening to outside edge	8 1/2 in. (215 mm) min

Placement shall be according to the manufacturer’s specifications.

Temporary ramps for castings shall remain in place until surfacing operations are undertaken within the immediate area of the structure. Prior to placing the surface course, the temporary ramp shall be removed. Excess material shall be disposed of according to Article 202.03.”

EMBANKMENT I

Effective: March 1, 2011

Revised: November 1, 2013

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

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

- a) The laboratory Standard Dry Density shall be a minimum of 90 lb/cu ft (1450 kg/cu m) when determined according to AASHTO T 99 (Method C).
- b) The organic content shall be less than ten percent determined according to AASHTO T 194 (Wet Combustion).
- c) Soils which demonstrate the following properties shall be restricted to the interior of the embankment and shall be covered on both the sides and top of the embankment by a minimum of 3 ft (900 mm) of soil not considered detrimental in terms of erosion potential or excess volume change.

- 1) A grain size distribution with less than 35 percent passing the number 75 um (#200) sieve.
- 2) A plasticity index (PI) of less than 12.
- 3) A liquid limit (LL) in excess of 50.
- d) Reclaimed asphalt shall not be used within the ground water table or as a fill if ground water is present.
- e) The RAP used shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, “Reclaimed Asphalt Pavement (RAP) for Aggregate Applications”. Gradation deleterious count shall not exceed 10% of total RAP and 5% of other by total weight.

CONSTRUCTION REQUIREMENTS

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

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

When embankments are to be constructed on hillsides or existing slopes that are steeper than 3H:1V, steps shall be keyed into the existing slope by stepping and benching as shown in the plans or as directed by the engineer.

Compaction. Soils classification for moisture content control will be determined by the Soils Inspector using visual field examination techniques and the IDH Textural Classification Chart. When tested for density in place each lift shall have a maximum moisture content as follows.

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

Stability. The requirement for embankment stability in Article 205.04 will be measured with a Dynamic Cone Penetrometer (DCP) according to the test method in the IDOT Geotechnical Manual. The penetration rate must be equal or less than 1.5 inches (38 mm) per blow.

Basis of Payment. This work will not be paid separately but will be considered as included in the various items of excavation.

EMBANKMENT II

Effective: March 1, 2011

Revised: November 1, 2013

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

Material. Reclaimed asphalt shall not be used within the ground water table or as a fill if ground water is present. The RAP used shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, "Reclaimed Asphalt Pavement (RAP) for Aggregate Applications". Gradation deleterious count shall not exceed 10% of total RAP and 5% of other by total weight.

CONSTRUCTION REQUIREMENTS

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

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

When embankments are to be constructed on hillsides or existing slopes that are steeper than 3H:1V, steps shall be keyed into the existing slope by stepping and benching as shown in the plans or as directed by the Engineer.

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

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

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

Stability. The requirement for embankment stability in article 205.04 will be measured with a Dynamic Cone Penetrometer (DCP) according to the test method in the IDOT Geotechnical Manual. The penetration rate must be equal or less than 1.5 inches (38 mm) per blow.

Basis of Payment. This work will not be paid separately but will be considered as included in the various items of excavation.

FRICITION AGGREGATE (D-1)

Effective: January 1, 2011

Revised: April 29, 2016

Revise Article 1004.03(a) of the Standard Specifications to read:

“1004.03 Coarse Aggregate for Hot-Mix Asphalt (HMA). The aggregate shall be according to Article 1004.01 and the following.

(a) Description. The coarse aggregate for HMA shall be according to the following table.

Use	Mixture	Aggregates Allowed
Class A	Seal or Cover	<u>Allowed Alone or in Combination</u> ^{5/} : Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag Crushed Concrete
HMA Low ESAL	Stabilized Subbase or Shoulders	<u>Allowed Alone or in Combination</u> ^{5/} : Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{1/} Crushed Concrete
HMA High ESAL Low ESAL	Binder IL-19.0 or IL-19.0L SMA Binder	<u>Allowed Alone or in Combination</u> ^{5/ 6/} : Crushed Gravel Carbonate Crushed Stone ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Concrete ^{3/}

Use	Mixture	Aggregates Allowed	
HMA High ESAL Low ESAL	C Surface and Leveling Binder IL-9.5 or IL-9.5L SMA Ndesign 50 Surface	<u>Allowed Alone or in Combination</u> ^{5/} : Crushed Gravel Carbonate Crushed Stone ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{4/} Crushed Concrete ^{3/}	
HMA High ESAL	D Surface and Leveling Binder IL-9.5 SMA Ndesign 50 Surface	<u>Allowed Alone or in Combination</u> ^{5/} : Crushed Gravel Carbonate Crushed Stone (other than Limestone) ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{4/} Crushed Concrete ^{3/}	
		<u>Other Combinations Allowed:</u>	
		<i>Up to...</i>	<i>With...</i>
		25% Limestone	Dolomite
		50% Limestone	Any Mixture D aggregate other than Dolomite
75% Limestone	Crushed Slag (ACBF) or Crushed Sandstone		
HMA High ESAL	E Surface IL-9.5 SMA Ndesign 80 Surface	<u>Allowed Alone or in Combination</u> ^{5/ 6/} : Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag No Limestone.	
		<u>Other Combinations Allowed:</u>	
		<i>Up to...</i>	<i>With...</i>
		50% Dolomite ^{2/}	Any Mixture E aggregate

Use	Mixture	Aggregates Allowed	
		75% Dolomite ^{2/}	Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone
		75% Crushed Gravel ^{2/} or Crushed Concrete ^{3/}	Crushed Sandstone, Crystalline Crushed Stone, Crushed Slag (ACBF), or Crushed Steel Slag
HMA High ESAL	F Surface IL-9.5 SMA Ndesign 80 Surface	<u>Allowed Alone or in Combination</u> ^{5/ 6/} :	
		Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag No Limestone.	
		<u>Other Combinations Allowed:</u>	
		<i>Up to...</i>	<i>With...</i>
		50% Crushed Gravel ^{2/} , Crushed Concrete ^{3/} , or Dolomite ^{2/}	Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone

- 1/ Crushed steel slag allowed in shoulder surface only.
- 2/ Carbonate crushed stone (limestone) and/or crushed gravel shall not be used in SMA Ndesign 80. In SMA Ndesign 50, carbonate crushed stone shall not be blended with any of the other aggregates allowed alone in Ndesign 50 SMA binder or Ndesign 50 SMA surface.
- 3/ Crushed concrete will not be permitted in SMA mixes.
- 4/ Crushed steel slag shall not be used as leveling binder.
- 5/ When combinations of aggregates are used, the blend percent measurements shall be by volume.”
- 6/ Combining different types of aggregate will not be permitted in SMA Ndesign 80.”

GENERAL REQUIREMENTS FOR WEED CONTROL SPRAYING

Effective: February 7, 2007

Experience.

The Contractor shall have previous experience with the use of weed control chemicals. He/she shall have had at least one (1) season’s experience in the use of their chemicals in spraying highway right-of-way or at least three (3) season’s experience in their use in farm or custom spraying. The Contractor shall observe and comply with all sections of the Illinois Custom Spray Law, including licensing.

Equipment.

The equipment used shall consist of a vehicle-mounted tank, pump, spray bar and handgun, plus any other accessories needed to complete the specified work. Spraying shall be done through multiple low-pressure flooding or broad jet nozzles mounted on spray bars operated not more than 36” above the ground. If different sizes or types of nozzles are used to make up the spray pattern, the pressure, sizes and capacities shall be adjusted to provide a uniform rate of application for each segment of the spray pattern. Hand spray guns may be used for spraying areas around traffic control devices, lighting standard and similar inaccessible areas. Maximum speed of the spray vehicle during application of chemical shall be five (5) miles per hour.

Pumps used shall have a volume and pressure capacity range sufficient to deliver the mixture at a pressure to provide the required coverage and to keep the spray pattern full and steady without pulsation or excessive pressure as to cause fogging. Maximum pressure for application shall be 15 PSI. Quick acting shut-off valves and spring-loaded ball check valves shall be provided to stop the spray pattern with a minimum of nozzle drip. In areas where the spray vehicle must traverse the right-of-way, a four-wheel drive vehicle with flotation tires will be required to minimize damage to the ground surface.

Prior to beginning work, the Contractor shall obtain approval from the Engineer of the spraying equipment proposed for completing this work. The proposed equipment shall be in an operational condition and available for inspection by the Engineer at least two (2) weeks prior to the proposed starting time. If requested by the Engineer, the Contractor shall demonstrate the calibration of the equipment.

The equipment must provide consistently uniform coverage and keep the spray mixture sufficiently agitated or the work will be suspended until the equipment is repaired or replaced.

Spraying Areas.

This work includes roadsides and other types of right-of-way of various widths and gradients. Spray areas often extend more than thirty (30) feet from the edge of the roadway, requiring both spray bar and hand gun applications.

When the description of work requires weed control of a stated species, such as teasel, the chemical shall be applied only to locations where the stated species is present. When the description of work requires general weed control within a bed or area, such as broadleaf weed control in turf, then the chemical shall be applied to the entire bed or area.

Exclusion of Spraying Areas.

Areas where weed control spraying is inappropriate or detrimental to the environment, desirable planting, or private property shall be excluded from the spray area.

Spraying will not be permitted over any drainage swales or waterways, or other areas where the chemical label prohibits application. Spraying within 150 feet of a natural area or site where endangered or threatened species occur.

Responsibility for Prevention of Damage to Private Property.

The Contractor shall, at all times, exercise extreme caution to prevent damage to residential plantings, flower or vegetable gardens, vegetable crops, farm crops, orchard or desirable plants adjacent to the roadside.

The Contractor or Department receives a complaint, the Contractor shall contact a complaint within ten (10) days after receiving a claim for damages, either in person or by letter. The Contractor, or his authorized representative, shall make a personal contact with the complainant within twenty (20) days. The Engineer shall also be notified by the Contractor of all claims for damage he received and shall keep the Engineer informed as to the progress in arriving at a settlement for such claims.

Communication with the Engineer.

The Contractor is required to communicate with the Engineer to receive all required approvals in a timely way and to assure that the Engineer can accurately document the work performed.

It shall be the Contractor’s responsibility to assure that all chemical containers are opened and added to the spray mixture in the presence of the Engineer.

The Contractor shall obtain approval from the Engineer to proceed with spraying at each location 24 hours prior to the proposed spray operations.

GROUND TIRE RUBBER (GTR) MODIFIED ASPHALT BINDER (D-1)

Effective: June 26, 2006

Revised: April 1, 2016

Add the following to the end of article 1032.05 of the Standard Specifications:

“(c) Ground Tire Rubber (GTR) Modified Asphalt Binder. A quantity of 10.0 to 14.0 percent GTR (Note 1) shall be blended by dry unit weight with a PG 64-28 to make a GTR 70-28 or a PG 58-28 to make a GTR 64-28. The base PG 64-28 and PG 58-28 asphalt binders shall meet the requirements of Article 1032.05(a). Compatible polymers may be added during production. The GTR modified asphalt binder shall meet the requirements of the following table.

Test	Asphalt Grade GTR 70-28	Asphalt Grade GTR 64-28
Flash Point (C.O.C.), AASHTO T 48, °F (°C), min.	450 (232)	450 (232)
Rotational Viscosity, AASHTO T 316 @ 275 °F (135 °C), Poises, Pa·s, max.	30 (3)	30 (3)
Softening Point, AASHTO T 53, °F (°C), min.	135 (57)	130 (54)
Elastic Recovery, ASTM D 6084, Procedure A (sieve waived) @ 77 °F, (25 °C), aged, ss, 100 mm elongation, 5 cm/min., cut immediately, %, min.	65	65

Note 1. GTR shall be produced from processing automobile and/or light truck tires by the ambient grinding method. GTR shall not exceed 1/16 in. (2 mm) in any dimension and shall contain no free metal particles or other materials. A mineral powder (such as talc) meeting the requirements of AASHTO M 17 may be added, up to a maximum of four percent by weight of GTR to reduce sticking and caking of the GTR particles. When tested in accordance with Illinois modified AASHTO T 27, a 50 g sample of the GTR shall conform to the following gradation requirements:

Sieve Size	Percent Passing
No. 16 (1.18 mm)	100
No. 30 (600 μm)	95 ± 5
No. 50 (300 μm)	> 20

Add the following to the end of Note 1. of article 1030.03 of the Standard Specifications:

“A dedicated storage tank for the Ground Tire Rubber (GTR) modified asphalt binder shall be provided. This tank must be capable of providing continuous mechanical mixing throughout by continuous agitation and recirculation of the asphalt binder to provide a uniform mixture. The tank shall be heated and capable of maintaining the temperature of the asphalt binder at 300 °F to 350 °F (149 °C to 177 °C). The asphalt binder metering systems of dryer drum plants shall be calibrated with the actual GTR modified asphalt binder material with an accuracy of ± 0.40 percent.”

Revise 1030.02(c) of the Standard Specifications to read:

“(c) RAP Materials (Note 5)1031”

Add the following note to 1030.02 of the Standard Specifications:

Note 5. When using reclaimed asphalt pavement and/or reclaimed asphalt shingles, the maximum asphalt binder replacement percentage shall be according to the most recent special provision for recycled materials.

HMA MIXTURE DESIGN REQUIREMENTS (D-1)

Effective: January 1, 2013

Revised: April 1, 2016

1) Design Composition and Volumetric Requirements

Revise the table in Article 406.06(d) of the Standard Specifications to read:

"MINIMUM COMPACTED LIFT THICKNESS	
Mixture Composition	Thickness, in. (mm)
IL-4.75	3/4 (19)
SMA-9.5, IL-9.5, IL-9.5L	1 1/2 (38)
SMA-12.5	2 (50)
IL-19.0, IL-19.0L	2 1/4 (57)"

Revise the table in Article 1004.03(c) of the Standard Specifications to read:

"Use	Size/Application	Gradation No.
Class A-1, 2, & 3	3/8 in. (10 mm) Seal	CA 16
Class A-1	1/2 in. (13 mm) Seal	CA 15
Class A-2 & 3	Cover	CA 14
HMA High ESAL	IL-19.0 IL-9.5	CA 11 ^{1/} CA 16, CA 13 ^{3/}
HMA Low ESAL	IL-19.0L IL-9.5L Stabilized Subbase or Shoulders	CA 11 ^{1/} CA 16
SMA ^{2/}	1/2 in. (12.5mm) Binder & Surface IL 9.5 Surface	CA13 ^{3/} , CA14 or CA16 CA16, CA 13 ^{3/}

1/ CA 16 or CA 13 may be blended with the gradations listed.

2/ The coarse aggregates used shall be capable of being combined with stone sand, slag sand, or steel slag sand meeting the FA/FM 20 gradation and mineral filler to meet the approved mix design and the mix requirements noted herein.

3/ CA 13 shall be 100 percent passing the 1/2 in. (12.5mm) sieve.

Revise Article 1004.03(e) of the Supplemental Specifications to read:

"(e) Absorption. For SMA the coarse aggregate shall also have water absorption ≤ 2.0 percent."

Revise the last paragraph of Article 1102.01 (a) (5) of the Standard Specifications to read:

“IL-4.75 and Stone Matrix Asphalt (SMA) mixtures which contain aggregate having absorptions greater than or equal to 2.0 percent, or which contain steal slag sand, shall have minimum surge bin storage plus haul time of 1.5 hours.”

Revise the nomenclature table in Article 1030.01 of the Standard Specifications to read:

“High ESAL	IL-19.0 binder; IL-9.5 surface; IL-4.75; SMA-12.5, SMA-9.5
Low ESAL	IL-19.0L binder; IL-9.5L surface; Stabilized Subbase (HMA) ^{1/} ; HMA Shoulders ^{2/}

1/ Uses 19.0L binder mix.

2/ Uses 19.0L for lower lifts and 9.5L for surface lift.”

Revise Article 1030.02 of the Standard Specifications and Supplemental Specifications to read:

“**1030.02 Materials.** Materials shall be according to the following.

Item	Article/Section
(a) Coarse Aggregate	1004.03
(b) Fine Aggregate	1003.03
(c) RAP Material	1031
(d) Mineral Filler	1011
(e) Hydrated Lime	1012.01
(f) Slaked Quicklime (Note 1)	
(g) Performance Graded Asphalt Binder (Note 2)	1032
(h) Fibers (Note 3)	
(i) Warm Mix Asphalt (WMA) Technologies (Note 4)	

Note 1. Slaked quicklime shall be according to ASTM C 5.

Note 2. The asphalt binder shall be an SBS PG 76-28 when the SMA is used on a full-depth asphalt pavement and SBS PG 76-22 when used as an overlay, except where modified herein. The asphalt binder shall be an Elvaloy or SBS PG 76-22 for IL-4.75, except where modified herein. The elastic recovery shall be a minimum of 80.

Note 3. A stabilizing additive such as cellulose or mineral fiber shall be added to the SMA mixture according to Illinois Modified AASHTO M 325. The stabilizing additive shall meet the Fiber Quality Requirements listed in Illinois Modified AASHTO M 325. Prior to approval and use of fibers, the Contractor shall submit a notarized certification by the producer of these materials stating they meet these requirements. Reclaimed Asphalt Shingles (RAS) may be used in Stone Matrix Asphalt (SMA) mixtures designed with an SBA polymer modifier as a fiber additive if the mix design with RAS included meets AASHTO T305 requirements. The RAS shall be from a certified source that produces either Type I or Type 2. Material shall meet requirements noted herein and the actual dosage rate will be determined by the Engineer.

Note 4. Warm mix additives or foaming processes shall be selected from the current Bureau of Materials and Physical Research Approved List, “Warm Mix Asphalt Technologies”.”

Revise Article 1030.04(a)(1) of the Standard Specifications and the Supplemental Specifications to read:

- “ (1) High ESAL Mixtures. The Job Mix Formula (JMF) shall fall within the following limits.

High ESAL, MIXTURE COMPOSITION (% PASSING) ^{1/}										
Sieve Size	IL-19.0 mm		SMA ^{4/} IL-12.5 mm		SMA ^{4/} IL-9.5 mm		IL-9.5 mm		IL-4.75 mm	
	min	max	min	max	min	max	min	max	min	max
1 1/2 in (37.5 mm)										
1 in. (25 mm)		100								
3/4 in. (19 mm)	90	100		100						
1/2 in. (12.5 mm)	75	89	80	100		100		100		100
3/8 in. (9.5 mm)				65	90	100	90	100		100
#4 (4.75 mm)	40	60	20	30	36	50	34	69	90	100
#8 (2.36 mm)	20	42	16	24 ^{5/}	16	32 ^{5/}	34 ^{6/}	52 ^{2/}	70	90
#16 (1.18 mm)	15	30					10	32	50	65
#30 (600 μm)			12	16	12	18				
#50 (300 μm)	6	15					4	15	15	30
#100 (150 μm)	4	9					3	10	10	18
#200 (75 μm)	3	6	7.0	9.0 ^{3/}	7.5	9.5 ^{3/}	4	6	7	9 ^{3/}
Ratio Dust/Asphalt Binder		1.0		1.5		1.5		1.0		1.0

- 1/ Based on percent of total aggregate weight.
- 2/ The mixture composition shall not exceed 44 percent passing the #8 (2.36 mm) sieve for surface courses with N_{design} = 90.
- 3/ Additional minus No. 200 (0.075 mm) material required by the mix design shall be mineral filler, unless otherwise approved by the Engineer.

- 4/ The maximum percent passing the #635 (20 µm) sieve shall be ≤ 3 percent.
- 5/ When establishing the Adjusted Job Mix Formula (AJMF) the percent passing the #8 (2.36 mm) sieve shall not be adjusted above the percentage stated on the table.
- 6/ When establishing the Adjusted Job Mix Formula (AJMF) the percent passing the #8 (2.36 mm) sieve shall not be adjusted below 34 percent.

Revise Article 1030.04(b)(1) of the Standard Specifications to read:

“(1) High ESAL Mixtures. The target value for the air voids of the HMA shall be 4.0 percent and for IL-4.75 it shall be 3.5 percent at the design number of gyrations. The VMA and VFA of the HMA design shall be based on the nominal maximum size of the aggregate in the mix, and shall conform to the following requirements.

VOLUMETRIC REQUIREMENTS High ESAL				
Ndesign	Voids in the Mineral Aggregate (VMA), % minimum			Voids Filled with Asphalt Binder (VFA), %
	IL-19.0	IL-9.5	IL-4.75 ^{1/}	
50	13.5	15.0	18.5	65 – 78 ^{2/}
70				
90				

1/ Maximum Draindown for IL-4.75 shall be 0.3 percent

2/ VFA for IL-4.75 shall be 72-85 percent”

Replace Article 1030.04(b)(3) of the Standard Specifications with the following:

“(3) SMA Mixtures.

Volumetric Requirements SMA ^{1/}			
Ndesign	Design Air Voids Target %	Voids in the Mineral Aggregate (VMA), % min.	Voids Filled with Asphalt (VFA), %
80 ^{4/}	3.5	17.0 ^{2/}	75 - 83
		16.0 ^{3/}	

1/ Maximum draindown shall be 0.3 percent. The draindown shall be determined at the JMF asphalt binder content at the mixing temperature plus 30 °F.

2/ Applies when specific gravity of coarse aggregate is ≥ 2.760.

- 3/ Applies when specific gravity of coarse aggregate is < 2.760.
- 4/ Blending of different types of aggregate will not be permitted.
For surface course, the coarse aggregate can be crushed steel slag, crystalline crushed stone or crushed sandstone. For binder course, coarse aggregate shall be crushed stone (dolomite), crushed gravel, crystalline crushed stone, or crushed sandstone.

Add to the end of Article 1030.05 (d) (2) a. of the Standard Specifications:

“During production, the Contractor shall test SMA mixtures for draindown according to AASHTO T305 at a frequency of 1 per day of production.”

Delete last sentence of the second paragraph of Article 1102.01(a) (4) b. 2.

Add to the end of Article 1102.01 (a) (4) b. 2.:

“As an option, collected dust (baghouse) may be used in lieu of manufactured mineral filler according to the following:

- (a.) Sufficient collected dust (baghouse) is available for production of the SMA mix for the entire project.
- (b.) A mix design was prepared based on collected dust (baghouse).

2) Design Verification and Production

Revise Article 1030.04 (d) of the Standard Specifications to read:

“(d) Verification Testing. High ESAL, IL-4.75, and SMA mix designs submitted for verification will be tested to ensure that the resulting mix designs will pass the required criteria for the Hamburg Wheel Test (IL mod AASHTO T-324) and the Tensile Strength Test (IL mod AASHTO T-283). The Department will perform a verification test on gyratory specimens compacted by the Contractor. If the mix fails the Department’s verification test, the Contractor shall make the necessary changes to the mix and resubmit compacted specimens to the Department for verification. If the mix fails again, the mix design will be rejected.

All new and renewal mix designs will be required to be tested, prior to submittal for Department verification and shall meet the following requirements:

- (1)Hamburg Wheel Test criteria. The maximum allowable rut depth shall be 0.5 in. (12.5 mm). The minimum number of wheel passes at the 0.5 in. (12.5 mm) rut depth criteria shall be based on the high temperature binder grade of the mix as specified in the mix requirements table of the plans.

Illinois Modified AASHTO T 324 Requirements ^{1/}

Asphalt Binder Grade	# Repetitions	Max Rut Depth (mm)
PG 70 -XX (or higher)	20,000	12.5
PG 64 -XX (or lower)	10,000	12.5

- 1/ When produced at temperatures of 275 ± 5 °F (135 ± 3 °C) or less, loose Warm Mix Asphalt shall be oven aged at 270 ± 5 °F (132 ± 3 °C) for two hours prior to gyratory compaction of Hamburg Wheel specimens.

Note: For SMA Designs (N-80) the maximum rut depth is 6.0 mm at 20,000 repetitions.
For IL 4.75mm Designs (N-50) the maximum rut depth is 9.0mm at 15,000 repetitions.

- (2) Tensile Strength Criteria. The minimum allowable conditioned tensile strength shall be 60 psi (415 kPa) for non-polymer modified performance graded (PG) asphalt binder and 80 psi (550 kPa) for polymer modified PG asphalt binder. The maximum allowable unconditioned tensile strength shall be 200 psi (1380 kPa).”

Production Testing. Revise first paragraph of Article 1030.06(a) of the Standard Specifications to read:

“(a) High ESAL, IL-4.75, WMA, and SMA Mixtures. For each contract, a 300 ton (275 metric tons) test strip, except for SMA mixtures it will be 400 ton (363 metric ton), will be required at the beginning of HMA production for each mixture with a quantity of 3000 tons (2750 metric tons) or more according to the Manual of Test Procedures for Materials “Hot Mix Asphalt Test Strip Procedures”.

Add the following after the sixth paragraph in Article 1030.06 (a) of the Standard Specifications:

“The Hamburg Wheel test shall also be conducted on all HMA mixtures from a sample taken within the first 500 tons (450 metric tons) on the first day of production or during start up with a split reserved for the Department. The mix sample shall be tested according to the Illinois Modified AASHTO T 324 and shall meet the requirements specified herein. Mix production shall not exceed 1500 tons (1350 metric tons) or one day’s production, whichever comes first, until the testing is completed and the mixture is found to be in conformance. The requirement to cease mix production may be waived if the plant produced mixture demonstrates conformance prior to start of mix production for a contract.

If the mixture fails to meet the Hamburg Wheel criteria, no further mixture will be accepted until the Contractor takes such action as is necessary to furnish a mixture meeting the criteria”

Method of Measurement:

Add the following after the fourth paragraph of Article 406.13 (b):

“The plan quantities of SMA mixtures shall be adjusted using the actual approved binder and surface Mix Design’s G_{mb} .”

Basis of Payment.

Replace the fourth paragraph of Article 406.14 of the Standard Specifications with the following:

“Stone matrix asphalt will be paid for at the contract unit price per ton (metric ton) for POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, of the mixture composition and Ndesign specified; and POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, STONE MATRIX ASPHALT, of the mixture composition and Ndesign specified.”

PUBLIC CONVENIENCE AND SAFETY (DIST 1)

Effective: May 1, 2012

Revised: July 15, 2012

Add the following to the end of the fourth paragraph of Article 107.09:

“If the holiday is on a Saturday or Sunday, and is legally observed on a Friday or Monday, the length of Holiday Period for Monday or Friday shall apply.”

Add the following sentence after the Holiday Period table in the fourth paragraph of Article 107.09:

“The Length of Holiday Period for Thanksgiving shall be from 5:00 AM the Wednesday prior to 11:59 PM the Sunday After”

Delete the fifth paragraph of Article 107.09 of the Standard Specifications:

“On weekends, excluding holidays, roadways with Average Daily Traffic of 25,000 or greater, all lanes shall be open to traffic from 3:00 P.M. Friday to midnight Sunday except where structure construction or major rehabilitation makes it impractical.”

RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (D-1)

Effective: November 1, 2012

Revised: April 2, 2016

Revise Section 1031 of the Standard Specifications to read:

“SECTION 1031. RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES

1031.01 Description. Reclaimed asphalt pavement and reclaimed asphalt shingles shall be according to the following.

- (a) Reclaimed Asphalt Pavement (RAP). RAP is the material resulting from cold milling or crushing an existing hot-mix asphalt (HMA) pavement. RAP will be considered processed FRAP after completion of both crushing and screening to size. The Contractor shall supply written documentation that the RAP originated from routes or airfields under federal, state, or local agency jurisdiction.
- (b) Reclaimed Asphalt Shingles (RAS). Reclaimed asphalt shingles (RAS). RAS is from the processing and grinding of preconsumer or post-consumer shingles. RAS shall be a clean and uniform material with a maximum of 0.5 percent unacceptable material, as defined in Bureau of

Materials and Physical Research Policy Memorandum, “Reclaimed Asphalt Shingle (RAS) Sources”, by weight of RAS. All RAS used shall come from a Bureau of Materials and Physical Research approved processing facility where it shall be ground and processed to 100 percent passing the 3/8 in. (9.5 mm) sieve and 90 percent passing the #4 (4.75 mm) sieve. RAS shall meet the testing requirements specified herein. In addition, RAS shall meet the following Type 1 or Type 2 requirements.

- (1) Type 1. Type 1 RAS shall be processed, preconsumer asphalt shingles salvaged from the manufacture of residential asphalt roofing shingles.
- (2) Type 2. Type 2 RAS shall be processed post-consumer shingles only, salvaged from residential, or four unit or less dwellings not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP).

1031.02 Stockpiles. RAP and RAS stockpiles shall be according to the following.

(a) RAP Stockpiles. The Contractor shall construct individual, sealed RAP stockpiles meeting one of the following definitions. Additional processed RAP (FRAP) shall be stockpiled in a separate working pile, as designated in the QC Plan, and only added to the sealed stockpile when test results for the working pile are complete and are found to meet tolerances specified herein for the original sealed FRAP stockpile. Stockpiles shall be sufficiently separated to prevent intermingling at the base. All stockpiles (including unprocessed RAP and FRAP) shall be identified by signs indicating the type as listed below (i.e. “Non- Quality, FRAP -#4 or Type 2 RAS”, etc...).

- (1) Fractionated RAP (FRAP). FRAP shall consist of RAP from Class I, Superpave HMA (High and Low ESAL) or equivalent mixtures. The coarse aggregate in FRAP shall be crushed aggregate and may represent more than one aggregate type and/or quality, but shall be at least C quality. All FRAP shall be processed prior to testing and sized into fractions with the separation occurring on or between the #4 (4.75 mm) and 1/2 in. (12.5 mm) sieves. Agglomerations shall be minimized such that 100 percent of the RAP in the coarse fraction shall pass the maximum sieve size specified for the mix the FRAP will be used in.
- (2) Restricted FRAP (B quality) stockpiles shall consist of RAP from Class I, Superpave (High ESAL), or HMA (High ESAL). If approved by the Engineer, the aggregate from a maximum 3.0 in. (75 mm) single combined pass of surface/binder milling will be classified as B quality. All millings from this application will be processed into FRAP as described previously.
- (3) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I, Superpave HMA (High and Low ESAL) or equivalent mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality, but shall be at least C quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate RAP shall be processed (FRAP) prior to testing. Conglomerate RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.
- (4) Conglomerate “D” Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP from HMA shoulders, bituminous stabilized subbases or Superpave (Low ESAL)/HMA (Low ESAL) IL-19.0L binder mixture. The coarse aggregate in this RAP may be crushed

or round but shall be at least D quality. This RAP may have an inconsistent gradation and/or asphalt binder content. Conglomerate DQ RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.

- (5) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as “Non-Quality”.

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

- (b) RAS Stockpiles. Type 1 and Type 2 RAS shall be stockpiled separately and shall be sufficiently separated to prevent intermingling at the base. Each stockpile shall be signed indicating what type of RAS is present.

However, a RAS source may submit a written request to the Department for approval to blend mechanically a specified ratio of Type 1 RAS with Type 2 RAS. The source will not be permitted to change the ratio of the blend without the Department prior written approval. The Engineer’s written approval will be required, to mechanically blend RAS with any fine aggregate produced under the AGCS, up to an equal weight of RAS, to improve workability. The fine aggregate shall be “B Quality” or better from an approved Aggregate Gradation Control System source. The fine aggregate shall be one that is approved for use in the HMA mixture and accounted for in the mix design and during HMA production.

Records identifying the shingle processing facility supplying the RAS, RAS type, and lot number shall be maintained by project contract number and kept for a minimum of three years.

1031.03 Testing. FRAP and RAS testing shall be according to the following.

- (a) FRAP Testing. When used in HMA, the FRAP shall be sampled and tested either during processing or after stockpiling. It shall also be sampled during HMA production.
- (1) During Stockpiling. For testing during stockpiling, washed extraction samples shall be run at the minimum frequency of one sample per 500 tons (450 metric tons) for the first 2000 tons (1800 metric tons) and one sample per 2000 tons (1800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4000 tons (3600 metric tons).
- (2) Incoming Material. For testing as incoming material, washed extraction samples shall be run at a minimum frequency of one sample per 2000 tons (1800 metric tons) or once per week, whichever comes first.
- (3) After Stockpiling. For testing after stockpiling, the Contractor shall submit a plan for approval to the District proposing a satisfactory method of sampling and testing the RAP/FRAP pile either in-situ or by restockpiling. The sampling plan shall meet the minimum frequency required above and detail the procedure used to obtain representative samples throughout the pile for testing.

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

- (b) RAS Testing. RAS shall be sampled and tested during stockpiling according to Bureau of Materials and Physical Research Policy Memorandum, “Reclaimed Asphalt Shingle (RAS) Sources”. The Contractor shall also sample as incoming material at the HMA plant.
 - (1) During Stockpiling. Washed extraction and testing for unacceptable materials shall be run at the minimum frequency of one sample per 200 tons (180 metric tons) for the first 1000 tons (900 metric tons) and one sample per 1000 tons (900 metric tons) thereafter. A minimum of five samples are required for stockpiles less than 1000 tons (900 metric tons). Once a ≤ 1000 ton (900 metric ton), five-sample/test stockpile has been established it shall be sealed. Additional incoming RAS shall be in a separate working pile as designated in the Quality Control plan and only added to the sealed stockpile when the test results of the working pile are complete and are found to meet the tolerances specified herein for the original sealed RAS stockpile.
 - (2) Incoming Material. For testing as incoming material at the HMA plant, washed extraction shall be run at the minimum frequency of one sample per 250 tons (227 metric tons). A minimum of five samples are required for stockpiles less than 1000 tons (900 metric tons). The incoming material test results shall meet the tolerances specified herein.

The Contractor shall obtain and make available all test results from start of the initial stockpile sampled and tested at the shingle processing facility in accordance with the facility’s QC Plan.

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

1031.04 Evaluation of Tests. Evaluation of test results shall be according to the following.

- (a) Evaluation of FRAP Test Results. All test results shall be compiled to include asphalt binder content, gradation and, when applicable (for slag), G_{mm} . A five test average of results from the original pile will be used in the mix designs. Individual extraction test results run thereafter, shall be compared to the average used for the mix design, and will be accepted if within the tolerances listed below.

Parameter	FRAP
No. 4 (4.75 mm)	$\pm 6 \%$
No. 8 (2.36 mm)	$\pm 5 \%$
No. 30 (600 μm)	$\pm 5 \%$
No. 200 (75 μm)	$\pm 2.0 \%$
Asphalt Binder	$\pm 0.3 \%$
G_{mm}	± 0.03 ^{1/}

- 1/ For stockpile with slag or steel slag present as determined in the current Manual of Test Procedures Appendix B 21, “Determination of Reclaimed Asphalt Pavement Aggregate Bulk Specific Gravity”.

If any individual sieve and/or asphalt binder content tests are out of the above tolerances when compared to the average used for the mix design, the FRAP stockpile shall not be used in Hot-Mix Asphalt unless the FRAP representing those tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

The Contractor shall maintain a representative moving average of five tests to be used for Hot-Mix Asphalt production.

With the approval of the Engineer, the ignition oven may be substituted for extractions according to the ITP, “Calibration of the Ignition Oven for the Purpose of Characterizing Reclaimed Asphalt Pavement (RAP)” or Illinois Modified AASHTO T-164-11, Test Method A.

- (b) Evaluation of RAS Test Results. All of the test results, with the exception of percent unacceptable materials, shall be compiled and averaged for asphalt binder content and gradation. A five test average of results from the original pile will be used in the mix designs. Individual test results run thereafter, when compared to the average used for the mix design, will be accepted if within the tolerances listed below.

Parameter	RAS
No. 8 (2.36 mm)	± 5 %
No. 16 (1.18 mm)	± 5 %
No. 30 (600 µm)	± 4 %
No. 200 (75 µm)	± 2.5 %
Asphalt Binder Content	± 2.0 %

If any individual sieve and/or asphalt binder content tests are out of the above tolerances when compared to the average used for the mix design, the RAS shall not be used in Hot-Mix Asphalt unless the RAS representing those tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

- (c) Quality Assurance by the Engineer. The Engineer may witness the sampling and splitting conduct assurance tests on split samples taken by the Contractor for quality control testing a minimum of once a month.

The overall testing frequency will be performed over the entire range of Contractor samples for asphalt binder content and gradation. The Engineer may select any or all split samples for assurance testing. The test results will be made available to the Contractor as soon as they become available.

The Engineer will notify the Contractor of observed deficiencies.

Differences between the Contractor’s and the Engineer’s split sample test results will be considered acceptable if within the following limits.

Test Parameter	Acceptable Limits of Precision	
	FRAP	RAS
% Passing. ^{1/}		
1/2 in.	5.0%	
No. 4	5.0%	
No. 8	3.0%	4.0%
No. 30	2.0%	3.0%
No. 200	2.2%	2.5%
Asphalt Binder Content	0.3%	1.0%
G _{mm}	0.030	

1/ Based on washed extraction.

In the event comparisons are outside the above acceptable limits of precision, the Engineer will immediately investigate.

- (d) Acceptance by the Engineer. Acceptable of the material will be based on the validation of the Contractor’s quality control by the assurance process.

1031.05 Quality Designation of Aggregate in RAP and FRAP.

- (a) RAP. The aggregate quality of the RAP for homogeneous, conglomerate, and conglomerate “D” quality stockpiles shall be set by the lowest quality of coarse aggregate in the RAP stockpile and are designated as follows.
- (1) RAP from Class I, Superpave/HMA (High ESAL), or (Low ESAL) IL-9.5L surface mixtures are designated as containing Class B quality coarse aggregate.
 - (2) RAP from Superpave/HMA (Low ESAL) IL-19.0L binder mixture is designated as Class D quality coarse aggregate.
 - (3) RAP from Class I, Superpave/HMA (High ESAL) binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate.
 - (4) RAP from bituminous stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate.
- (b) FRAP. If the Engineer has documentation of the quality of the FRAP aggregate, the Contractor shall use the assigned quality provided by the Engineer.

If the quality is not known, the quality shall be determined as follows. Fractionated RAP stockpiles containing plus #4 (4.75 mm) sieve coarse aggregate shall have a maximum tonnage of 5,000 tons (4,500 metric tons). The Contractor shall obtain a representative sample witnessed by the Engineer. The sample shall be a minimum of 50 lb (25 kg). The sample shall be extracted according to Illinois Modified AASHTO T 164 by a consultant laboratory prequalified by the Department for the specified testing. The consultant laboratory shall submit the test results along with the recovered aggregate to the District Office. The cost for this testing shall be paid by the Contractor. The District will forward the sample to the Bureau of

Materials and Physical Research Aggregate Lab for MicroDeval Testing, according to ITP 327. A maximum loss of 15.0 percent will be applied for all HMA applications. The fine aggregate portion of the fractionated RAP shall not be used in any HMA mixtures that require a minimum of “B” quality aggregate or better, until the coarse aggregate fraction has been determined to be acceptable thru a MicroDeval Testing.

1031.06 Use of FRAP and/or RAS in HMA. The use of FRAP and/or RAS shall be the Contractor’s option when constructing HMA in all contracts.

(a) FRAP. The use of FRAP in HMA shall be as follows.

- (1) Coarse Aggregate Size (after extraction). The coarse aggregate in all FRAP shall be equal to or less than the nominal maximum size requirement for the HMA mixture to be produced.
- (2) Steel Slag Stockpiles. FRAP stockpiles containing steel slag or other expansive material, as determined by the Department, shall be homogeneous and will be approved for use in HMA (High ESAL and Low ESAL) mixtures regardless of lift or mix type.
- (3) Use in HMA Surface Mixtures (High and Low ESAL). FRAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall have coarse aggregate that is Class B quality or better. FRAP shall be considered equivalent to limestone for frictional considerations unless produced/screened to minus 3/8 inch.
- (4) Use in HMA Binder Mixtures (High and Low ESAL), HMA Base Course, and HMA Base Course Widening. FRAP stockpiles for use in HMA binder mixtures (High and Low ESAL), HMA base course, and HMA base course widening shall be FRAP in which the coarse aggregate is Class C quality or better.
- (5) Use in Shoulders and Subbase. FRAP stockpiles for use in HMA shoulders and stabilized subbase (HMA) shall be FRAP, Restricted FRAP, conglomerate, or conglomerate DQ.

(b) RAS. RAS meeting Type 1 or Type 2 requirements will be permitted in all HMA applications as specified herein.

(c) FRAP and/or RAS Usage Limits. Type 1 or Type 2 RAS may be used alone or in conjunction with FRAP in HMA mixtures up to a maximum of 5.0 percent by weight of the total mix.

When FRAP is used alone or FRAP is used in conjunction with RAS, the percent of virgin asphalt binder replacement (ABR) shall not exceed the amounts indicated in the table below for a given N Design.

Max Asphalt Binder Replacement for FRAP with RAS Combination

HMA Mixtures ^{1/2/4/}	Maximum % ABR		
	Binder/Leveling Binder	Surface	Polymer Modified ^{3/}
30L	50	40	30
50	40	35	30
70	40	30	30

90	40	30	30
4.75 mm N-50			40
SMA N-80			30

- 1/ For Low ESAL HMA shoulder and stabilized subbase, the percent asphalt binder replacement shall not exceed 50 % of the total asphalt binder in the mixture.
- 2/ When the binder replacement exceeds 15 % for all mixes, except for SMA and IL-4.75, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 % binder replacement using a virgin asphalt binder grade of PG64-22 will be reduced to a PG58-28). When constructing full depth HMA and the ABR is less than 15 %, the required virgin asphalt binder grade shall be PG64-28.
- 3/ When the ABR for SMA or IL-4.75 is 15 % or less, the required virgin asphalt binder shall be SBS PG76-22 and the elastic recovery shall be a minimum of 80. When the ABR for SMA or IL-4.75 exceeds 15%, the virgin asphalt binder grade shall be SBS PG70-28 and the elastic recovery shall be a minimum of 80.
- 4/ When FRAP or RAS is used alone, the maximum percent asphalt binder replacement designated on the table shall be reduced by 10 %.

1031.07 HMA Mix Designs. At the Contractor’s option, HMA mixtures may be constructed utilizing RAP/FRAP and/or RAS material meeting the detailed requirements specified herein.

- (a) FRAP and/or RAS. FRAP and /or RAS mix designs shall be submitted for verification. If additional FRAP or RAS stockpiles are tested and found to be within tolerance, as defined under “Evaluation of Tests” herein, and meet all requirements herein, the additional FRAP or RAS stockpiles may be used in the original design at the percent previously verified.
- (b) RAS. Type 1 and Type 2 RAS are not interchangeable in a mix design. A RAS stone bulk specific gravity (Gsb) of 2.300 shall be used for mix design purposes.

1031.08 HMA Production. HMA production utilizing FRAP and/or RAS shall be as follows.

To remove or reduce agglomerated material, a scalping screen, gator, crushing unit, or comparable sizing device approved by the Engineer shall be used in the RAS and FRAP feed system to remove or reduce oversized material. If material passing the sizing device adversely affects the mix production or quality of the mix, the sizing device shall be set at a size specified by the Engineer.

If during mix production, corrective actions fail to maintain FRAP, RAS or QC/QA test results within control tolerances or the requirements listed herein the Contractor shall cease production of the mixture containing FRAP or RAS and conduct an investigation that may require a new mix design.

- (a) RAS. RAS shall be incorporated into the HMA mixture either by a separate weight depletion system or by using the RAP weigh belt. Either feed system shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes. The portion of RAS shall be controlled accurately to within ± 0.5 percent of the

amount of RAS utilized. When using the weight depletion system, flow indicators or sensing devices shall be provided and interlocked with the plant controls such that the mixture production is halted when RAS flow is interrupted.

(b) HMA Plant Requirements. HMA plants utilizing FRAP and/or RAS shall be capable of automatically recording and printing the following information.

(1) Dryer Drum Plants.

- a. Date, month, year, and time to the nearest minute for each print.
- b. HMA mix number assigned by the Department.
- c. Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- d. Accumulated dry weight of RAS and FRAP in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- e. Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.
- f. Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.
- g. Residual asphalt binder in the RAS and FRAP material as a percent of the total mix to the nearest 0.1 percent.
- h. Aggregate RAS and FRAP moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAS and FRAP are printed in wet condition.)
- i. When producing mixtures with FRAP and/or RAS, a positive dust control system shall be utilized.
- j. Accumulated mixture tonnage.
- k. Dust Removed (accumulated to the nearest 0.1 ton (0.1 metric ton))

(2) Batch Plants.

- a. Date, month, year, and time to the nearest minute for each print.
- b. HMA mix number assigned by the Department.
- c. Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).
- d. Mineral filler weight to the nearest pound (kilogram).
- f. RAS and FRAP weight to the nearest pound (kilogram).

- g. Virgin asphalt binder weight to the nearest pound (kilogram).
- h. Residual asphalt binder in the RAS and FRAP material as a percent of the total mix to the nearest 0.1 percent.

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

1031.09 RAP in Aggregate Surface Course and Aggregate Wedge Shoulders, Type B. The use of RAP or FRAP in aggregate surface course and aggregate shoulders shall be as follows.

- (a) Stockpiles and Testing. RAP stockpiles may be any of those listed in Article 1031.02, except “Non-Quality” and “FRAP”. The testing requirements of Article 1031.03 shall not apply. RAP used shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, “Reclaimed Asphalt Pavement (RAP) for Aggregate Applications”.
- (b) Gradation. The RAP material shall meet the gradation requirements for CA 6 according to Article 1004.01(c), except the requirements for the minus No. 200 (75 µm) sieve shall not apply. The sample for the RAP material shall be air dried to constant weight prior to being tested for gradation.”

SLIPFORM PAVING (D-1)

Effective: November 1, 2014

Revise Article 1020.04 Table 1, Note (5) of Standard Specifications to read:

“The slump range for slipform construction shall be 1/2 to 1 1/2 in.”

Revise Article 1020.04 Table 1 (metric), Note (5) of Standard Specifications to read:

“The slump range for slipform construction shall be 13 to 40 mm.”

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:

	<u>Item</u>	<u>Article/Section</u>
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 REQUIREMENTS

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.

WINTERIZED TEMPORARY ACCESS

Effective: January 1, 2012

Revised: March 5, 2012

Description. This work shall consist of constructing, maintaining and removing winterized temporary access for private and commercial entrances and side roads designed for use throughout the winter months.

Materials. Materials shall be according to the following.

ITEM	ARTICLE/SECTION
Hot-Mix Asphalt	1030

Construction Requirements

For projects lasting longer than one construction season, the contractor shall construct and maintain temporary access composed of an HMA surface course over an existing aggregate temporary access. The contractor shall install the winterized temporary access prior to winter shut down at the direction of the engineer. The top 2” of the existing aggregate temporary access should be removed and replaced with 2” of Hot-Mix Asphalt. Compensation will be given for the winterized temporary access at the time of the installation of the Hot-Mix Asphalt surface course.

HMA Surface Course. The Hot-Mix Asphalt surface course shall be 2 in. thick when compacted. HMA Surface Course, Mix “D”, N50 shall be used except as modified by the plans or as directed by the Engineer. This work shall be constructed in accordance with the applicable portions of Section 406 of the Standard Specifications and as directed by the Engineer. The material shall conform to the applicable portions of Section 1030 of the Standard Specifications.

The winterized temporary access shall be constructed to the dimensions and grades of the existing aggregate temporary access.

Maintaining the winterized temporary access shall include repairing the HMA surface course after any operation that may disturb or remove the winterized temporary access to the satisfaction of the Engineer.

When use of the winterized temporary access is discontinued, the winterized temporary access shall be removed according to Article 440.03 of the Standard Specifications. The material shall be disposed of according to Article 202.03 of the Standard Specifications or may be utilized in the permanent construction with the approval of the Engineer.

Method of Measurement. Winterized temporary access for private and commercial entrances and roads will be measured for payment at the contract unit price per square yard for every private entrance, commercial entrance or road constructed for the purpose of winterized temporary access.

Basis of Payment. Winterized temporary access for private and commercial entrances and roads will be paid for at the contract unit price per square yard for TEMPORARY ACCESS (WINTERIZE) as specified in the plans.

Partial payment of the square yard amount bid for each winterized temporary access will be paid according to the following schedule:

(a) Upon construction of the winterized temporary access, sixty percent of the contract unit price per square yard will be paid.

(b) Subject to the approval of the Engineer for the adequate maintenance and removal of the winterized temporary access, the remaining forty percent of the pay item will be paid upon the permanent removal of the temporary access.

WET REFLECTIVE TEMPORARY TAPE TYPE III

Effective: February 1, 2007

Revised: February 1, 2011

Description.

This work shall consist of furnishing, installing, and maintaining Type III Temporary Pavement Marking Tape for Wet Conditions.

Materials.

Materials shall be according to the following.

Item	Article/Section
(a) Pavement Marking Tape	1095.06

Initial minimum reflectance values under dry and wet conditions shall be as specified in Article 1095.06. The marking tape shall maintain its reflective properties when submerged in water. The wet reflective properties will be verified by a visual inspection method performed by the Department. The surface of the material shall provide an average skid resistance of 45 BPN when tested according to ASTM E 303.

CONSTRUCTION REQUIREMENTS

Type III Temporary Tape for Wet Conditions shall meet the requirements of Article 703.03 and 703.05. Application shall follow manufacturer's recommendations.

Method of Measurement.

This work will be measured for payment in place, in feet (meters).

Basis of Payment.

This work will be paid for at the contract unit price per foot (meter) for WET REFLECTIVE TEMPORARY TAPE TYPE III of the line width specified, and at the contract unit price per square foot (square meter) for WET REFLECTIVE TEMPORARY TAPE TYPE III, LETTERS AND SYMBOLS.

TRAFFIC SIGNAL GENERAL REQUIREMENTS (D1 LR)

Effective: April 1, 2016

Revised: July 20, 2016

LR800.01TS

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 unless otherwise noted herein.
- Traffic signal construction and maintenance work shall be performed by personnel holding current IMSA Traffic Signal Technician Level II certification. A copy of the certification shall be immediately available upon request of the Engineer.
- The work to be done under this contract consists of furnishing, installing and maintaining all traffic signal work and items as specified in the Plans and as specified herein in a manner acceptable and approved by the Engineer.

Definitions of Terms.

Add the following to Section 101 of the Standard Specifications:

101.56 Vendor. Company that sells a particular type of product directly to the contractor or the Equipment Supplier.

101.57 Equipment supplier. Company that supplies, represents and provides technical support for IDOT District One approved traffic signal controllers and other related equipment. The Equipment Supplier shall be located within IDOT District One and shall:

- Be full service with on-site facilities to assemble, test and trouble-shoot traffic signal controllers and cabinet assemblies.
- Maintain an inventory of IDOT District One approved controllers and cabinets.
- Be staffed with permanent sales and technical personnel able to provide traffic signal controller and cabinet expertise and support.
- Technical staff shall hold current IMSA Traffic Signal Technician Level III certification and shall attend traffic signal turn-ons and inspections with a minimum 14 calendar day notice.

Submittals.

Revise Article 801.05 of the Standard Specifications to read:

All material approval requests shall be submitted to the Resident Engineer, who will then forward the submittal on to the IDOT Local Agency Area Engineer and the Local Agency. Electronic material submittals shall follow the District's Traffic Operations Construction Submittals guidelines. General requirements include:

1. All material approval requests shall be made prior to or no later than one week after the date of the preconstruction meeting. A list of major traffic signal items can be found 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.

2. Product data and shop drawings shall be assembled by pay item. 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.
3. Original manufacturer published product data and shop drawing sheets with legible dimensions and details shall be submitted for review.
4. When hard copy submittals are requested by the Bureau of Local Roads and Streets, the number of requested sets of the manufacturer's descriptive literatures and technical data for the traffic signal materials shall be submitted.
5. For hard copy or electronic submittals, the descriptive literature and technical data shall be adequate for determining whether the materials meet the requirements of the plans and specifications. If the literature contains more than one item, the Contractor shall indicate which item or items will be furnished.
6. When hard copy submittals are necessary for structural elements, four complete copies of the shop drawings for the mast arm assemblies and poles, and the combination mast arm assemblies and poles showing, in detail, the fabrication thereof and the certified mill analyses of the materials used in the fabrication, anchor rods, and reinforcing materials shall be submitted.
7. Partial or incomplete submittals will be returned without review.
8. Certain non-standard mast arm poles and special structural elements will require additional review from IDOT's Central Office. Examples include ornamental/decorative, non-standard length mast arm pole assemblies and monotube structures. The Contractor shall account for the additional review time in his schedule.
9. The contract number, the name of the lead local agency (as indicated on the cover sheet of the plans), section 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.
10. 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.
11. After the Engineer reviews the submittals for conformance with the design concept of the project, the Engineer will stamp the drawings indicating their status as 'Approved', 'Approved-As-Noted', 'Disapproved', or 'Information Only'. Since the Engineer's review is for conformance with the design concept only, it is the Contractor's responsibility to coordinate the various items into a working system as specified. The Contractor shall not be relieved from responsibility for errors or omissions in the shop, working, layout drawings, or other documents by the Department's approval thereof. The Contractor must still be in full compliance with contract and specification requirements.
12. The Contractor shall secure approved materials in a timely manner to assure construction schedules are not delayed.
13. All submitted items reviewed and marked 'APPROVED AS NOTED' or 'DISAPPROVED' are to be resubmitted in their entirety, unless otherwise indicated within the submittal comments or transmittal accompanying the documents, with a disposition of previous comments to verify contract compliance at no additional cost to the contract.
14. 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.

15. The Contractor shall not order major equipment such as mast arm assemblies prior to Engineer approval of the Contractor marked proposed traffic signal equipment locations to assure proper placement of contract required traffic signal displays, push buttons and other facilities. Field adjustments may require changes in proposed mast arm length and other coordination.

Marking Proposed Locations.

Revise “Marking Proposed Locations for Highway Lighting System” of Article 801.09 to read “Marking Proposed Locations for Highway Lighting System and Traffic Signals.”

Add the following to Article 801.09 of the Standard Specifications:

It shall be the contractor's responsibility to verify all dimensions and conditions existing in the field prior to ordering materials and beginning construction. This shall include locating the mast arm foundations and verifying the mast arms lengths.

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's facility prior to field installation, at no extra cost to this contract.

Maintenance and Responsibility.

Revise Article 801.11 of the Standard Specifications to read:

- a. Existing traffic signal installations and/or any electrical facilities at all or various locations may be altered or reconstructed totally or partially as part of the work on this Contract. The Contractor is hereby advised that all traffic control equipment, presently installed at these locations, may be the property of the State of Illinois, Department of Transportation, Division of Highways, County, Private Developer, Municipality or Transit Agency in which they are located. Once the Contractor has begun any work on any portion of the project, all traffic signals within the limits of this contract or those which have the item "Maintenance of Existing Traffic Signal Installation," "Temporary Traffic Signal Installation(s)" and/or "Maintenance of Existing Flashing Beacon Installation," shall become the full responsibility of the Contractor. The Contractor shall supply the Resident Engineer, IDOT Local Agency Area Engineer, Local Agency, the Owner of the traffic signal, and/or their Electrical Maintenance Contractor with two 24-hour emergency contact names and telephone numbers.
- b. Automatic Traffic Enforcement equipment such as red lighting running and railroad crossing camera systems are owned and operated by others and the Contractor shall not be responsible for maintaining this equipment.
- c. Regional transit, County and other agencies may also have equipment connected to existing traffic signal or peripheral equipment such as PTZ cameras, switches, transit signal priority (TSP and BRT) servers and other devices that shall be included with traffic signal maintenance at no additional cost to the contract.

- d. 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 the Resident Engineer, the Local Agency, the Owner of the traffic signal, and/or their 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. The Department will attempt to fulfill the Contractor’s inspection date request(s); however workload and other conditions may prevent the Department from accommodating specific dates or times. The Contractor shall not be entitled to any other compensation if the requested inspection date(s) cannot be scheduled by the Department. 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.
- e. 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 shut down 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.
- f. The Contractor shall be fully responsible for the safe and efficient operation of the traffic signals and other equipment noted herein. Any inquiry, complaint or request by the Department, the Local Agency, the Owner of the traffic signal, and/or their 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 \$1000 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 \$1000 per month per occurrence. Unpaid bills will be deducted from the cost of the Contract. The Department, the Local Agency, the Owner of the traffic signal, and/or their Electrical Maintenance Contractor may inspect any signaling device under their jurisdiction at any time without notification.
- g. 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.

- h. The Contractor shall be responsible to clear snow, ice, dirt, debris or other condition that obstructs visibility of any traffic signal display or access to traffic signal equipment.
- i. The Contractor shall maintain the traffic signal in normal operation during short or long term loss of utility or battery back-up power at critical locations designated by the Engineer. Critical locations may include traffic signals interconnected to railroad warning devices, expressway ramps, intersection with an SRA route, critical corridors or other locations identified by the Engineer. Temporary power to the traffic signal must meet applicable NEC and OSHA guidelines and may include portable generators and/or replacement batteries. Temporary power to critical locations shall not be for separately but shall be included in the contract.

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 shall be replaced with new equipment meeting current District One traffic signal specifications and/or applicable Local Agency 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 are only allowed at the bases of post and mast arms.

Temporary replacement of damaged or knockdown of a mast arm pole assembly shall require construction of a full or partial span wire signal installation or other method approved by the Engineer to assure signal heads are located overhead and over traveled pavement. Temporary replacement of mast arm mount signals with post mount signals will not be permitted.

Automatic Traffic Enforcement equipment, such as Red Light Enforcement cameras, detectors, and peripheral equipment, damaged or not operating properly from any cause, 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 Equipment Supplier 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 Bureau of Local Roads and Streets at (847) 705-4487 a minimum of seven (7) working days prior to the time of the requested inspection. The Department will attempt to fulfill the Contractor's turn-on and inspection date

request(s); however workload and other conditions may prevent the Department from accommodating specific dates or times. The Contractor shall not be entitled to any other compensation if the requested turn-on and inspection date(s) cannot be scheduled by the Department. The Department will not grant a field inspection until written or electronic notification is provided from the Contractor that the equipment has been field tested and the intersection is operating according to Contract requirements. 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 assist with traffic control at the time of testing.

The Contractor shall provide a representative from the control equipment vendor's office who is knowledgeable of the cabinet design and controller functions 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 Final Project Documentation from the Contractor at traffic signal turn-ons in electronic format in addition to hard copies where noted. A CD/DVD shall be submitted with separate folders corresponding to each numbered title below. The CD/DVD shall be labelled with date, project location, company and contract or permit number. Record Drawings, Inventory and Material Approvals shall be submitted prior to traffic signal turn-on for review by the Department as described here-in.

Final Project Documentation:

1. Record Drawings. Signal plans of record with field revisions marked in red ink. One hard copy set of 11"x17" record drawings shall also be provided.
2. Inventory. Inventory of new and existing traffic signal equipment including cabinet types and devices within cabinets in an Excel spread sheet format. One hard copy shall also be provided.
3. Pictures. Digital pictures of a minimum 12M pixels of each intersection approach showing all traffic signal displays and equipment. Pictures shall include controller cabinet equipment in enough detail to clearly identify manufacture and model of major equipment.
4. Field Testing. Written notification from the Contractor and the equipment vendor of satisfactory field testing with corresponding material performance measurements, such as for detector loops and fiber optic systems (see Article 801.13). One hard copy of all contract required performance measurement testing shall also be provided.
5. Materials Approval. The material approval letter. A hard copy shall also be provided.
6. Manuals. Operation and service manuals of the signal controller and associated control equipment. One hard copy shall also be provided.

7. Cabinet Wiring Diagram and Cable Logs. Five (5) hard copies 11” x 17” of the cabinet wiring diagrams shall be provided along with electronic pdf and dgn files of the cabinet wiring diagram. Five hard copies of the cable logs and electronic excel files shall be provided with cable #, number of conductors and spares, connected device/signal head and intersection location.
8. Controller Programming Settings. 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 controller manufacturer shall also supply a printed form, not to exceed 11” x 17” for recording that data noted above. 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.
9. Warrantees and Guarantees. All manufacturer and contractor warrantees and guarantees required by Article 801.14.
10. GPS coordinate of traffic signal equipment as describe in the Record Drawings section herein.

Acceptance of the traffic signal equipment by the Department shall be based upon inspection results at the traffic signal “turn on”, completeness of the required documentation and successful operation during a minimum 72 hour “burn-in” period following activation of the traffic signal. 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 reduced-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 CDROM as well as hardcopy for review and approval. If the contract consists of multiple intersections, each intersection shall be saved as an individual PDF file with TS# and location name in its file name.

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.”

As part of the record drawings, the Contractor shall inventory all traffic signal equipment, new or existing, on the project and record information in an Excel spreadsheet. The inventory shall include equipment type, model numbers, software manufacturer and version and quantities.

Add the following to Article 801.16 of the Standard Specifications:

“In addition to the specified record drawings, the Contractor 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
- Traffic Signal Wood Poles
- Rail Road Bungalow
- UPS
- Handholes
- Conduit roadway crossings
- Controller Cabinets
- Communication Cabinets
- Electric Service Disconnect locations
- CCTV Camera installations
- Fiber Optic Splice Locations
- Conduit Crossings

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:

- File shall be named: TSXXX-YY-MM-DD (i.e. TS22157_15-01-01)
- Each intersection shall have its own file
- Row 1 should have the location name (i.e. IL 31 @ Klausen)
- Row 2 is blank
- Row 3 is the headers for the columns
- Row 4 starts the data
- Column A (Date) – should be in the following format: MM/DD/YYYY
- Column B (Item) – as shown in the table below
- Column C (Description) – as shown in the table below
- Column D and E (GPS Data) – should be in decimal form, per the IDOT special provisions

Examples:

Date	Item	Description	Latitude	Longitude
01/01/2015	MP (Mast Arm Pole)	NEQ, NB, Dual, Combination Pole	41.580493	- 87.793378
01/01/2015	HH (Handhole)	Heavy Duty, Fiber, Intersection, Double	41.558532	- 87.792571
01/01/2015	ES (Electrical Service)	Ground mount, Pole mount	41.765532	- 87.543571
01/01/2015	CC (Controller Cabinet)		41.602248	- 87.794053
01/01/2015	RSC (Rigid Steel Crossing)	IL 31 east side crossing south leg to center HH at Klausen	41.611111	- 87.790222
01/01/2015	PTZ (PTZ)	NEQ extension pole	41.593434	- 87.769876
01/01/2015	POST (Post)		41.651848	- 87.762053
01/01/2015	MCC (Master Controller Cabinet)		41.584593	- 87.793378
01/01/2015	COMC (Communication Cabinet)		41.584600	- 87.793432
01/01/2015	BBS (Battery Backup System)		41.558532	- 87.792571
01/01/2015	CNCR (Conduit Crossing)	4-inch IL 31 n/o of Klausen	41.588888	- 87.794440

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 1 foot. 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 1 foot 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:

IDOT traffic signal facilities are not part of any of the one-call locating service such as J.U.L.I.E or Digger. 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. For non-IDOT signals, the Contractor shall coordinate with the agency owning the traffic signals for locating the existing electrical facilities. 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, 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.

Bagging Signal Heads.

Light tan colored traffic and pedestrian signal reusable covers shall be used to cover dark/un-energized signal sections and visors. Covers shall be made of outdoor fabric with urethane coating for repelling water, have elastic fully sewn around the cover ends for a tight fit over the visor, and have a minimum of two straps with buckles to secure the cover to the backplate. A center mesh strip allows viewing without removal for signal status testing purposes. Covers shall include a message indicating the signal is not in service.

OPTIMIZE TRAFFIC SIGNAL SYSTEM

Effective: May 22, 2002

Revised: July 1, 2015

800.02TS

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 noted 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 a CD, 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 and on a Saturday or Sunday, as directed by the Engineer, to account for special traffic generators such as shopping centers, educational institutes and special event facilities. 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. The consultant shall respond to IDOT comments and public complaints for a minimum period of 90 days from date of timing plan implementation.
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:

<p>Cover Page in color showing a System Map</p> <p>Figures</p> <ol style="list-style-type: none"> 1. System overview map – showing system number, system schematic map with numbered system detectors, oversaturated movements, master location, system phone number, cycle lengths, and date of completion. 2. General location map in color – showing signal system location in the metropolitan area. 3. Detail system location map in color – showing cross street names and local controller addresses. 4. Controller sequence – showing controller phase sequence diagrams.
<p>Table of Contents</p> <p>Tab 1: Final Report</p> <ol style="list-style-type: none"> 1. Project Overview 2. System and Location Description (Project specific) 3. Methodology 4. Data Collection 5. Data Analysis and Timing Plan Development 6. Implementation <ol style="list-style-type: none"> a. Traffic Responsive Programming (Table of TRP vs. TOD Operation) with am, md, and pm cycle lengths 7. Evaluation <ol style="list-style-type: none"> a. Speed and Delay runs
<p>Tab 2. Turning Movement Counts</p> <ol style="list-style-type: none"> 1. Turning Movement Counts (Showing turning movement counts in the intersection diagram for each period, including truck percentage)
<p>Tab 3. Synchro Analysis</p> <ol style="list-style-type: none"> 1. AM: Time-Space diagram in color, followed by intersection Synchro report (Timing report) summarizing the implemented timings. 2. Midday: same as AM 3. PM: same as AM 4. Special weekend or off-peak traffic generators (shopping centers, educational facilities, arenas, etc.): same as AM
<p>Tab 4: Speed, Delay Studies</p> <ol style="list-style-type: none"> 1. Summary of before and after runs results in two (2) tables showing travel time and delay time. 2. Plot of the before and after runs diagram for each direction and time period.

Tab 5: 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: <ul style="list-style-type: none">a. Electronic copy of the SCAT Report in PDF formatb. Copies of the Synchro files for the optimized systemc. Traffic counts for the optimized systemd. 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 an approved report and CD have been submitted.

RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM

Effective: May 22, 2002

Revised: July 1, 2015

800.03TS

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 discs, copies of computer simulation files for the existing optimized system and a timing database 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 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. The consultant shall respond to IDOT comments and public complaints for a minimum period of 60 days from date of timing plan implementation.
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(s) 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 and on a Saturday and/or Sunday, as directed by the Engineer, to account for special traffic generators such as shopping centers, educational institutes and special event facilities. The turning movement counts shall identify cars, and single-unit, multi-unit heavy vehicles, and transit buses.
 - b. As necessary, the intersection(s) 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(s)
 - (4) New or updated intersection(s) graphic display file for the subject intersection(s)
 - (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.

MAST ARM SIGN PANELS

Effective: May 22, 2002

Revised: July 1, 2015

720.01TS

Add the following to Article 720.02 of the Standard Specifications:

Sign stiffening channel systems shall be aluminum and meet the requirements of ASTM 6261-T5. Sign mounting banding, buckles and buckle straps shall be manufactured from AISI 201 stainless steel.

SERVICE INSTALLATION (traffic signals)

Effective: May 22, 2002

Revised: June 15, 2016

805.01TS

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 “District One Standard Traffic Signal Design Details”.

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.

- a. 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.
- b. Enclosures.
 1. 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 vendor.
 2. 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.

3. All enclosures shall include a green external power indicator LED light with circuitry as shown in the Electrical Service-Panel Diagram detail sheet. For pole mounted service enclosures, the power indicator light shall be mounted as shown in the detail. For ground mounted enclosures, the power indicator light shall be mounted on the side of the enclosure most visible from the major roadway.
- c. Electric Utility Meter Housing and Riser. The electric meter housing and meter socket shall be supplied and installed by the contractor. The contractor is to coordinate the work to be performed and the materials required with the utility company to make the final connection at the power source. Electric utility required risers, weather/service head and any other materials necessary for connection shall also be included in the pay item. Materials shall be in accordance with the electric utility's requirements. For ground-mounted service, the electric utility meter housing shall be mounted to the enclosure. The meter shall be supplied by the utility company. Metered service shall not be used unless specified in the plans.
 - d. 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.
 - e. 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.
 - f. 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.
 - g. 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.
 - h. 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.

- i. 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.

- a. General. The Contractor shall confirm the orientation of the traffic service installation and its door side with the engineer, prior to installation. All conduit entrances into the service installation shall be sealed with a pliable waterproof material.
- b. Pole Mounted. Brackets designed for pole mounting shall be used. All mounting hardware shall be stainless steel. Mounting height shall be as noted on the plans or as directed by the Engineer.
- c. Ground Mounted. The service installation shall be mounted plumb and level on the foundation and fastened to the anchor bolts with hot-dipped galvanized or stainless steel nuts and washers. The space between the bottom of the enclosure and the top of the foundation shall be caulked at the base with silicone.

Basis of Payment.

The service installation shall be paid for at the contract unit price each for SERVICE INSTALLATION of the type specified which shall be payment in full for furnishing and installing the service installation complete. The 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

Effective: May 22, 2002

Revised: July 1, 2015

806.01TS

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. This work shall be in accordance with IDOT's District One Traffic Signal Design Details.

The grounding electrode system shall include a ground rod installed with each traffic signal controller concrete foundation and all mast arm and post concrete foundations. An additional ground rod will be required at locations where measured resistance exceeds 25 ohms. Ground rods are included in the applicable 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).

- a) The grounded conductor (neutral conductor) shall be white color coded. This conductor shall be bonded to the equipment grounding conductor only at the Electric Service Installation. All power cables shall include one neutral conductor of the same size.
- b) The equipment grounding conductor shall be green color coded. The following is in addition to Article 801.04 of the Standard Specifications.
 - 1) Equipment grounding conductors shall be bonded to the grounded conductor (neutral conductor) only at the Electric Service Installation. The equipment grounding conductor is paid for separately and shall be continuous. The Earth shall not be used as the equipment grounding conductor.
 - 2) Equipment grounding conductors shall be bonded, using a UL 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 UL 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 including spare or empty conduits.
 - 3) All metallic and non-metallic raceways shall have a continuous equipment grounding conductor, except raceways containing only detector loop lead-in circuits, circuits under 50 volts and/or fiber optic cable will not be required to include an equipment grounding conductor.
 4. Individual conductor splices in handholes shall be soldered and sealed with heat shrink. When necessary to maintain effective equipment grounding, a full cable heat shrink shall be provided over individual conductor heat shrinks.
- c) The grounding electrode conductor shall be similar to the equipment grounding conductor in color coding (green) and size. The grounding electrode conductor is used to connect the ground rod to the

equipment grounding conductor and is bonded to ground rods via exothermic welding, UL listed pressure connectors, and UL listed clamps.

COILABLE NON-METALLIC CONDUIT

Effective: May 22, 2002

Revised: July 1, 2015

810.01TS

Description.

This work shall consist of furnishing and installing empty coilable non-metallic conduit (CNC).

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.

UNDERGROUND RACEWAYS

Effective: May 22, 2002

Revised: July 1, 2015

810.02TS

Revise Article 810.04 of the Standard Specifications to read:

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

Add the following to Article 810.04 of the Standard Specifications:

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

Add the following to Article 810.04 of the Standard Specifications:

“All raceways which extend outside of a structure or duct bank but are not terminated in a cabinet, junction box, pull box, handhole, post, pole, or pedestal shall extend a minimum of 300 mm (12”) or the length shown on the plans beyond the structure or duct bank. The end of this extension shall be capped and sealed with a cap designed for the conduit to be capped.

The ends of rigid metal conduit to be capped shall be threaded, the threads protected with full galvanizing, and capped with a threaded galvanized steel cap.

The ends of rigid nonmetallic conduit and coilable nonmetallic conduit shall be capped with a rigid PVC cap of not less than 3 mm (0.125”) thick. The cap shall be sealed to the conduit using a room-temperature-vulcanizing (RTV) sealant compatible with the material of both the cap and the conduit. A washer or similar metal ring shall be glued to the inside center of the cap with epoxy, and the pull cord shall be tied to this ring.”

HANDHOLES

Effective: January 01, 2002

Revised: July 1, 2015

814.01TS

Description.

Add the following to Section 814 of the Standard Specifications:

All conduits shall enter the handhole at a depth of 30 inches (762 mm) 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 (13 mm) diameter with two 90 degree bends and extend into the handhole at least 6 inches (152 mm). Hooks shall be placed a minimum of 12 inches (305 mm) below the lid or lower if additional space is required.

Precast round handholes shall not be used unless called out on the plans.

The cover of the handhole frame shall be labeled "Traffic Signals" with legible raised letters.

Revise the third paragraph of Article 814.03 of the Standard Specifications to read:

“Handholes shall be constructed as shown on the plans and shall be cast-in-place, or precast concrete units. Heavy duty handholes shall be either cast-in-place or precast concrete units.”

Add the following to Article 814.03 of the Standard Specifications:

“(c) Precast Concrete. Precast concrete handholes shall be fabricated according to Article 1042.17. Where a handhole is contiguous to a sidewalk, preformed joint filler of 1/2 inch (13 mm) thickness shall be placed between the handhole and the sidewalk.”

Cast-In-Place Handholes.

All cast-in-place handholes shall be concrete, with inside dimensions of 21-1/2 inches (546 mm) minimum. Frames and lid openings shall match this dimension.

For grounding purposes the handhole frame shall have provisions for a 7/16 inch (11 mm) diameter stainless steel 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 (305mm).

Precast Round Handholes.

All precast handholes shall be concrete, with inside dimensions of 30 inches (762mm) diameter. Frames and covers shall have a minimum opening of 26 inches (660mm) and no larger than the inside diameter of the handhole.

For grounding purposes the handhole frame shall have provisions for a 7/16 inch (11 mm) diameter stainless steel bolt cast into the frame. For the purpose of attaching the grounding conductor to the

handhole cover, the covers shall either have a 7/16 inch (11 mm) diameter stainless steel bolt cast into the cover or a stainless steel threaded stint extended from an eye hook assembly. A hole may be drilled for the bolt if one cannot be cast into the frame or cover. The head of the bolt shall be flush or lower than the top surface of the cover.

The minimum wall thickness for precast heavy duty hand holes shall be 6 inches (152 mm).

Precast round handholes shall be only produced by an approved precast vendor.

Materials.

Add the following to Section 1042 of the Standard Specifications:

“1042.17 Precast Concrete Handholes. Precast concrete handholes shall be according to Articles 1042.03(a)(c)(d)(e).”

GROUNDING CABLE

Effective: May 22, 2002

Revised: July 1, 2015

817.01TS

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 UL Listed grounding connector 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.

FIBER OPTIC TRACER CABLE

Effective: May 22, 2002

Revised: July 1, 2015

817.02TS

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.

FULL-ACTUATED CONTROLLER AND CABINET

Effective: January 1, 2002

Revised: July 1, 2015

857.02TS

Description.

This work shall consist of furnishing and installing a traffic actuated solid state digital controller in the controller cabinet of the type specified, meeting the requirements of Section 857 of the Standard Specifications, as modified herein, including malfunction management unit, load switches and flasher relays, with all necessary connections for proper operation.

If the intersection is part of an existing system and/or when specified in the plans, this work shall consist of furnishing and installing a(n) "ECONOLITE" brand traffic actuated solid state controller.

Materials.

Add the following to Article 857.02 of the Standard Specifications:

For installation as a stand-alone traffic signal, connected to a closed loop system or integrated into an advance traffic management system (ATMS), controllers shall be Econolite ASC/3S-1000 or Eagle/Siemens M52 unless specified otherwise on the plans or elsewhere on these specifications. Only controllers supplied by one of the District One approved closed loop equipment suppliers will be allowed. Unless specified otherwise on the plans or these specifications, the controller shall be of the most recent model and software version supplied by the equipment supplier at the time of the traffic signal TURN-ON. A removable controller data key shall also be provided. 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 and shall inhibit simultaneous display of circular yellow and yellow arrow indications.

For integration into an ATMS such as Centrac, Tactics, or TransSuite, the controller shall have the latest version of NTCIP software installed. For operation prior to integration into an ATMS, the controller shall maintain existing close loop management communications.

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) (1) Revise "conflict monitor" to read "Malfunction Management Unit"
- (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 – Shall be a 120VAC Single phase Modular filter Plug-in type, supplied from an approved vendor.
- (b) (8) BIU – shall be secured by mechanical means.
- (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, 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 door switch. The LED Panels shall be provided from an approved vendor.
- (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 18 inches (610mm) wide.
- (b) (14) Plan & Wiring Diagrams – 12” x 15” (305mm x 406mm) 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.

Basis of Payment.

This work will be paid for at the contract unit price each for FULL-ACTUATED CONTROLLER AND TYPE IV CABINET; FULL-ACTUATED CONTROLLER AND TYPE V CABINET; FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET; FULL-ACTUATED CONTROLLER AND TYPE SUPER R CABINET; FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL; FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL; FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL); FULL-ACTUATED CONTROLLER AND TYPE SUPER R CABINET (SPECIAL).

UNINTERRUPTABLE POWER SUPPLY, SPECIAL

Effective: January 1, 2013
Revised: May 19, 2016
862.01TS

This work shall be in accordance with section 862 of the Standard Specification except as modified herein

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 6 (six) hours.

Add the following to Article 862.02 of the Standard Specifications:

Materials shall be according to Article 1074.04 as modified in UNINTERRUPTABLE POWER SUPPLY, SPECIAL.

Add the following to Article 862.03 of the Standard Specifications:

The UPS shall additionally include, but not be limited to, a battery cabinet, where applicable. For Super-P (Type IV) and Super-R (Type V) cabinets, the battery cabinet is integrated to the traffic signal cabinet, and shall be included in the cost for the traffic signal cabinet of the size and type indicated on the plans.

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 an 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 shall be provided and be in accordance with Articles 424 and 202 of the Standard Specifications. The concrete apron shall also, follow the District 1 Standard Traffic Signal Design Detail, Type D for Ground Mounted Controller Cabinet and UPS Battery Cabinet.

This item shall include any required modifications to an existing traffic signal controller as a result of the addition of the UPS including the addition of alarms.

Materials.

Revise Article 1074.04(a)(1) of the Standard Specifications to read:

The UPS shall be line interactive or double conversion 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 load. The UPS must be able to maintain the intersection's normal operating load plus 20 percent (20%) of the intersection's normal operating load. When installed at a railroad-interconnected intersection the UPS must maintain the railroad pre-emption load, plus 20 percent (20%) of the railroad preemption-operating load. The total connected traffic signal load shall not exceed the published ratings for the UPS.

The UPS shall provide a minimum of 6 (six) hours of normal operation run-time for signalized intersections with LED type signal head optics at 77 °F (25 °C) (minimum 1000 W active output capacity, with 86 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, luminaires, 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).

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 include standard RS-232 and internal Ethernet interface.
- (10) 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. Access to the generator inlet shall be from a secured weatherproof lift cover plate or behind a locked battery cabinet police panel.
- (11) The bypass switch shall include an internal power transfer relay that allows removal of the battery back-up unit, while the traffic signal is connected to utility power, without impacting normal traffic signal operation.

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 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.

Revise Article 1074.04(d)(4) of the Standard Specifications to read:

Batteries shall be certified by the manufacturer to operate over a temperature range of -13 to 160 °F (-25 to + 71 °C) for gel cell batteries and -40 to 140 °F (-40 to + 60 °C) for AGM type batteries.

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 6 (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.

(10) Battery Heater mats shall be provided, when gel cell type batteries are supplied.

Add the following to the Article 1074.04 of the Standard Specifications:

- (e) Warranty. The warranty for an uninterruptable power supply (UPS) and batteries (full replacement) shall cover a minimum of 5 years from date the equipment is placed in operation.
- (f) Installation. Bypass switch shall completely disconnect the traffic signal cabinet from the utility provider.
- (g) The UPS shall be set-up to run the traffic signal continuously, without going to a red flashing condition, when switched to battery power unless otherwise directed by the Engineer. The Contractor shall confirm set-up with the Engineer. The continuous operation mode when switched to battery may require modification to unit connections and these modifications are included in the unit price for this item.

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, SPECIAL or UNINTERRUPTABLE POWER SUPPLY AND CABINET, SPECIAL. 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, SPECIAL or UNINTERRUPTABLE POWER SUPPLY AND CABINET, SPECIAL item. The concrete apron and earth excavation required shall be included in the cost of the UNINTERRUPTABLE POWER SUPPLY AND CABINET, SPECIAL item.

FIBER OPTIC CABLE

Effective: May 22, 2002

Revised: July 1, 2015

871.01TS

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 871.02 of the Standard Specifications:

The control cabinet distribution enclosure shall be 24 Port Fiber Wall Enclosure, unless otherwise indicated on plans. The fiber optic cable shall provide twelve 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.. 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.

Testing shall be in accordance with Article 801.13(d). Electronic files of OTDR signature traces shall be provided in the Final project documentation with certification from the Contractor that attenuation of each fiber does not exceed 3.5 dB/km nominal at 850nm for multimode fiber and 0.4 bd/km nominal at 1300nm for single mode fiber.

ELECTRIC CABLE

Effective: May 22, 2002

Revised: July 1, 2015

873.01TS

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.

EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C

Effective: January 1, 2013

Revised: July 1, 2015

873.03TS

This work shall consist of furnishing and installing lead-in cable for light detectors installed at existing and/or proposed traffic signal installations as part of an emergency vehicle priority system. The work includes installation of the lead-in cables in existing and/or new conduit. The electric cable shall be shielded and have (3) stranded conductors, colored blue, orange, and yellow with a stranded tinned copper drain wire. The cable shall meet the requirements of the vendor of the Emergency Vehicle Priority System Equipment.

Basis of Payment.

This work will be paid for at the contract unit price per foot for EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C, which price shall be payment in full for furnishing, installing and making all electrical connections necessary for proper operations.

TRAFFIC SIGNAL POST

Effective: May 22, 2002

Revised: July 01, 2015

875.01TS

Add the following to Article 1077.01 (c) of the Standard Specifications:

Washers for post bases shall be the same size or larger than the nut.

Revise the first sentence of Article 1077.01 (d) of the Standard Specifications to read:

All posts and bases shall be steel and hot dipped galvanized according to AASHTO M 111. If the Department approves painting, powder coating by the manufacturer will be required over the galvanization in accordance with 851.01TS TRAFFIC SIGNAL PAINTING Special Provisions.

MAST ARM ASSEMBLY AND POLE

Effective: May 22, 2002

Revised: July 01, 2015

877.01TS

Revise the second sentence of Article 1077.03 (a)(3) of the Standard Specifications to read:

Traffic signal mast arms shall be one piece construction, unless otherwise approved by the Engineer.

Add the following to Article 1077.03 (a)(3) of the Standard Specifications:

If the Department approves painting, powder coating by the manufacturer will be required over the galvanization in accordance with 851.01 TS TRAFFIC SIGNAL PAINTING Special Provisions.

CONCRETE FOUNDATIONS

Effective: May 22, 2002

Revised: July 01, 2015

878.01TS

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) at the threaded end.

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.

Add the following to the first paragraph of Article 878.05 of the Standard Specifications:

The price shall include a concrete apron in front of the cabinet and UPS as shown in the plans or as directed by the engineer.

LIGHT EMITTING DIODE (LED) SIGNAL HEAD AND OPTICALLY PROGRAMMED LED SIGNAL HEAD

Materials.

Add the following to Section 1078 of the Standard Specifications:

1. LED modules proposed for use and not previously approved by IDOT District One will require independent testing for compliance to current VTCSH-ITE standards for the product and be Intertek ETL Verified. This would include modules from new vendors and new models from IDOT District One approved vendors.
2. The proposed independent testing facility shall be approved by IDOT District One. Independent testing must include a minimum of two (2) randomly selected modules of each type of module (i.e. ball, arrow, pedestrian, etc.) used in the District and include as a minimum Luminous Intensity and Chromaticity tests. However, complete module performance verification testing may be required by the Engineer to assure the accuracy of the vendor's published data and previous test results. An IDOT representative will select sample modules from the local warehouse and mark the modules for testing. Independent test results shall meet current ITE standards and vendor's published data. Any module failures shall require retesting of the module type. All costs associated with the selection of sample modules, testing, reporting, and retesting, if applicable, shall be the responsibility of the LED module vendor and not be a cost to this contract.
3. All signal 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 signals 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.
4. 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 15 years from the date of traffic signal TURN-ON. 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 15 years of the date of traffic signal TURN-ON shall be replaced or repaired. The vendor's written warranty for the LED signal modules shall be dated, signed by a vendor's representative 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

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.
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

4. The LEDs utilized in the modules shall be AlInGaP technology for red and InGaN for green and amber 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. LED arrows 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
 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.

Basis of Payment.

Add the following to the first paragraph of Article 880.04 of the Standard Specifications:

The price shall include furnishing the equipment described above, all mounting hardware and installing them in satisfactory operating condition.

Revise the second paragraph of Article 880.04 of the Standard Specifications to read:

If the work consists of retrofitting an existing polycarbonate traffic signal head with light emitting diodes (LEDs), it will be paid for as a SIGNAL HEAD, LED, RETROFIT, of the type specified, and of the particular kind of material, when specified. Price shall be payment in full for removal of the existing module, 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 signal faces, the number of signal sections in each signal face and the method of mounting.

LIGHT EMITTING DIODE (LED) PEDESTRIAN SIGNAL HEAD

Effective: May 22, 2002

Revised: July 1, 2015

881.01TS

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 glossy yellow or black polycarbonate housings. All pedestrian head housings shall be the same color (yellow or black) at the intersection. For new signalized intersections and existing signalized intersections where all 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.
- (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).

Materials.

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. 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.

5. If the controller preempts during the flashing Upraised Hand, the countdown will continue to count down without interruption.
6. The next cycle, following the preemption event, shall use the correct, initially programmed values.
7. 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.
8. The digits will go dark for one pedestrian cycle after loss of power of more than 1.5 seconds.
9. The countdown numerals shall be two (2) “7 segment” digits forming the time display utilizing two rows of LEDs.
10. 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.
11. 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.
12. In the event of a power outage, light output from the LED modules shall cease instantaneously.
13. 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.
14. 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.

Basis of Payment.

Add the following to the first paragraph of Article 881.04 of the Standard Specifications:

The price shall include furnishing the equipment described above, all mounting hardware and installing them in satisfactory operating condition.

Add the following to Article 881.04 of the Standard Specifications:

If the work consists of retrofitting an existing polycarbonate pedestrian signal head and pedestrian countdown signal head with light emitting diodes (LEDs), it will be paid for as a PEDESTRIAN SIGNAL HEAD, LED, RETROFIT, of the type specified, and of the particular kind of material, when specified. 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.

TRAFFIC SIGNAL BACKPLATE

Effective: May 22, 2002

Revised: July 1, 2015

882.01TS

Delete 1st sentence of Article 1078.03 of the Standard Specifications and add “All backplates shall be louvered, formed ABS plastic”.

Add the following to the third paragraph of Article 1078.03 of the Standard Specifications. The retroreflective backplate shall not contain louvers.

Delete second sentence of the fourth paragraph of Article 1078.03 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 vendor’s recommendations. The retroreflective sheeting shall be installed under a controlled environment at the vendor/equipment supplier before shipment to the contractor. The formed plastic backplate shall be prepared and cleaned, following recommendations of the retroreflective sheeting manufacturer.

DETECTOR LOOP

Effective: May 22, 2002

Revised: January 5, 2016

886.01TS

Procedure.

A minimum of seven (7) working days prior to the Contractor cutting loops, the Contractor shall mark the proposed loop locations 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.

Revise Article 886.04 of the Standard Specifications to read:

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 water proof tag, from an approved vendor, secured to each wire with nylon ties.

Resistance to ground shall be a minimum of 100 mega-ohms under any conditions of weather or moisture. Inductance shall be more than 50 and less than 700 microhenries. Quality readings shall be more than 5.

- (a) Type I. All loops installed in new asphalt pavement shall be installed in the binder course and not in the surface course. The edge of pavement, curb and handhole shall be cut with a 1/4 inch (6.3 mm) deep x 4 inches (100 mm) saw cut to mark location of each loop cable.
- (b) Loop sealant shall be two-component thixotropic chemically cured polyurethane from an approved vendor. The sealant shall be installed 1/8 inch (3 mm) below the pavement surface. If installed above the surface the excess shall be removed immediately.
- (c) Preformed. This work shall consist of furnishing and installing a rubberized or cross linked polyethylene heat resistant preformed traffic signal loop in accordance with the Standard Specifications, except for the following:
- (d) 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.
- (e) Handholes shall be placed next to the shoulder or back of curb when preformed detector loops enter the handhole. CNC, included in this pay item, shall be used to protect the preformed lead-ins from back of curb to the handhole.

- (f) Preformed detector loops shall be factory assembled with ends capped and sealed against moisture and other contaminants. 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 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.

Add the following to Article 886.05 of the Standard Specifications:

Preformed detector loops will be measured along the detector loop embedded in the pavement, rather than the actual length of the wire. Detector loop measurements shall include the saw cut and the length of the detector loop wire to the edge of pavement. The detector loop 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. CNC, trench and backfill, and drilling of pavement or handholes shall be included in detector loop quantities.

Basis of Payment.

This work shall be paid for at the contract unit price per foot (meter) for DETECTOR LOOP, TYPE I or PREFORMED DETECTOR LOOP as specified in the plans, which price shall be payment in full for furnishing and installing the detector loop and all related connections for proper operation.

EMERGENCY VEHICLE PRIORITY SYSTEM

Effective: May 22, 2002

Revised: July 1, 2015

887.01TS

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, or a 7 watt Par 30 LED flood lamp with a 15 degree or greater spread, maximum 7 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 signaled 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 signaled by a continuous indication.

All light operated systems shall include security and transit preemption software and operate at a uniform rate of 14.035 Hz \pm 0.002, or as otherwise required by the Engineer, and provide compatible operation with other light systems currently being operated in the District.

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.

ACCESSIBLE PEDESTRIAN SIGNALS

Effective: April 1, 2003

Revised: July 1, 2015

888.02TS

Description.

This work shall consist of furnishing and installing pedestrian push button accessible pedestrian signals (APS) type. Each APS shall consist of an interactive vibrotactile pedestrian pushbutton with speaker, an informational sign, a light emitting diode (LED) indicator light, a solid state electronic control board, a power supply, wiring, and mounting hardware. The APS shall meet the requirements of the MUTCD and Sections 801 and 888 of the Standard Specifications, except as modified herein.

Electrical Requirements.

The APS shall operate with systems providing 95 to 130 VAC, 60 Hz and throughout an ambient air temperature range of -29 to +160 °F (-34 to +70 °C).

The APS shall contain a power protection circuit consisting of both fuse and transient protection.

Audible Indications.

A pushbutton locator tone shall sound at each pushbutton with volume settings a maximum of 5 dBA louder than ambient sound.

If two accessible pedestrian pushbuttons are placed less than 10 ft (3 m) apart or placed on the same pole, the audible walk indication shall be a speech walk message.

A clear, verbal message shall be used to communicate the pedestrian walk interval. This message shall sound throughout the WALK interval only. The verbal message shall be modeled after: "Street Name." Walk Sign is on to cross "Street Name." No other messages shall be used to denote the WALK interval.

Where two accessible pedestrian pushbuttons are separated by at least 10 ft (3 m), the walk indication shall be an audible percussive tone. It shall repeat at 8 to 10 ticks per second with a dominant frequency of 880 Hz.

Automatic volume adjustments in response to ambient traffic sound level shall be provided up to a maximum volume of 100 dBA. Locator tone and verbal messages shall be no more than 5 dB louder than ambient sound.

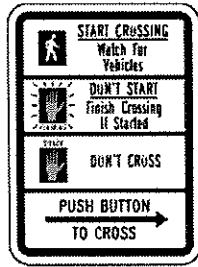
Pedestrian Pushbutton.

Pedestrian pushbuttons shall be at least 2 in. (50 mm) in diameter or width. The force required to activate the pushbutton shall be no greater than 3.5 lb (15.5 N).

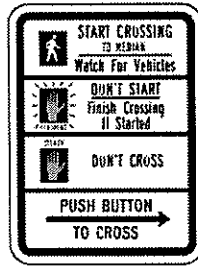
A red LED indicator shall be located on or near the pushbutton which, when activated, acknowledges the pedestrians request to cross the street. The recorded messages and roadway designations shall be confirmed with the engineer and included with submitted product data.

Signage.

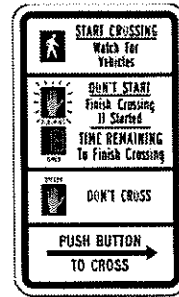
A sign shall be located immediately above the pedestrian pushbutton and parallel to the crosswalk controlled by the pushbutton. The sign shall be one of the following standard MUTCD designs: R10-3b, R10-3d, or R10-3e.



R10-3b



R10-3d



R10-3e

Tactile Arrow.

A tactile arrow, pointing in the direction of travel controlled by a pushbutton, shall be provided either on the pushbutton or its sign.

Vibrotactile Feature.

The pushbutton shall pulse when depressed and shall vibrate continuously throughout the WALK interval.

Training.

The Contractor shall provide APS onsite training for Department personnel and person(s) or group that requested the installation of the APS. APS features and operation shall be demonstrated during the training. The training shall be presented by the APS equipment supplier. Time, date, and location of the training and demonstration shall be coordinated with the Engineer.

Basis of Payment.

This work will be paid for at the contract unit price each for a pedestrian push button, ACCESSIBLE PEDESTRIAN SIGNALS type and shall include furnishing, installation, mounting hardware, message programming, and training.

LUMINAIRE, LED, HORIZONTAL MOUNT, 190 WATT (SPECIAL)

Description. This work shall consist of furnishing and installing Light Emitting Diode (LED) luminaire with photocell at locations shown on the plans. The luminaire will be nominal wattage of 190 watts.

General. Luminaires shall be installed in accordance with Sections 821.02, 821.03, and 821.04 of the Standard Specifications except as modified herein.

Materials. The material requirements shall be in accordance with Sections 1067.01 and 1067.02 of the Standard Specifications except as modified herein. In the case of any conflicting information, this special provision supersedes the Standard Specifications.

Replace Article 1067.01(e) with the following:

Housing. The luminaire shall be gasketed and sealed, and shall be UL listed for wet locations. The luminaire optical assembly shall have a minimum IEC ingress penetration rating of IP65. When furnished with a lens and frame, the lens shall be made of crystal clear, impact and heat resistant flat glass. The lens and frame shall be securely attached to the main housing and be readily removable for servicing the LED assembly. The drivers shall be mounted in the rear of the luminaire on the inside of a hinged removable door or on a removable mounting pad. The removable door or pad shall be secure when fastened in place and all individual components shall be secure upon the removable element. Each component shall be readily removable from the removable element for replacement. The luminaire mounting shall slip fit on a mast arm with a 2-inch tenon (2.375-inch outer diameter), and shall have a barrier to limit the amount of insertion. A tenon guard shall be provided to protect against wildlife intrusion. The luminaire shall be provided with a leveling surface and shall be capable of being tilted by ± 5 degrees and rotated to any degree with respect to the supporting arm. The housing shall be designed for natural removal of dirt and debris and to ensure maximum heat transfer and long LED life.

Replace Article 1067.01(f) with the following:

Electrical. The luminaire shall be suitable for operation at 120 volts. Terminal blocks shall be provided for incoming 10 gauge power wiring. Electronic LED drivers shall be provided for each luminaire. Each electronic driver shall have a power factor of greater than 90% and total harmonic distortion of less than 20%. The wattage of the luminaire shall be not less than 190 watts nor exceed 220 watts. The luminaire shall provide a minimum of 20,000 initial lumens at 4000K. The light distribution shall be Asymmetric Wide, similar to an IES Type III distribution. The electronic drivers shall be installed in a manner to keep them mechanically and thermally separated for the LED array heat sink. Integral surge protection shall be provided for each luminaire. Surge protection shall be tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario 1 Category High Exposure 10kV/10kA waveforms. The luminaire shall be furnished with NEMA twistlock photo control receptacle and photo electric control sensor.

Basis of Payment. This item will be paid for at the contract unit price per EACH for LUMINAIRE, LED, HORIZONTAL MOUNT, 190 WATT (SPECIAL), which price shall be payment in full for all materials, labor, and equipment required to perform the work.

GENERAL ELECTRICAL REQUIREMENTS

Effective: June 1, 2016

This special provision replaces Articles 801.01 – 801.07, 801.09 – 801-16 of the Standard Specifications.

Definition. Codes, standards, and industry specifications cited for electrical work shall be by definition the latest adopted version thereof, unless indicated otherwise.

Materials by definition shall include electrical equipment, fittings, devices, motors, appliances, fixtures, apparatus, all hardware and appurtenances, and the like, used as part of, or in connection with, electrical installation.

Standards of Installation. Materials shall be installed according to the manufacturer's recommendations, the NEC, OSHA, the NESC, and AASHTO's Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals.

All like materials shall be from the same manufacturer. Listed and labeled materials shall be used whenever possible. The listing shall be according to UL or an approved equivalent.

Safety and Protection. Safety and protection requirements shall be as follows.

Safety. Electrical systems shall not be left in an exposed or otherwise hazardous condition. All electrical boxes, cabinets, pole handholes, etc. which contain wiring, either energized or non-energized, shall be closed or shall have covers in place and be locked when possible, during nonworking hours.

Protection. Electrical raceway or duct openings shall be capped or otherwise sealed from the entrance of water and dirt. Wiring shall be protected from mechanical injury.

Equipment Grounding Conductor. All electrical systems, materials, and appurtenances shall be grounded. Good ground continuity throughout the electrical system shall be assured, even though every detail of the requirements is not specified or shown. Electrical circuits shall have a continuous insulated equipment grounding conductor. When metallic conduit is used, it shall be bonded to the equipment grounding conductor, but shall not be used as the equipment grounding conductor.

Detector loop lead-in circuits, circuits under 50 volts, and runs of fiber optic cable will not require an equipment grounding conductor.

Where connections are made to painted surfaces, the paint shall be scraped to fully expose metal at the connection point. After the connection is completed, the paint system shall be repaired to the satisfaction of the Engineer.

Bonding of all boxes and other metallic enclosures throughout the wiring system to the equipment grounding conductor shall be made using a splice and pigtail connection. Mechanical connectors shall have a serrated washer at the contact surface.

All connections to structural steel or fencing shall be made with exothermic welds. Care shall be taken not to weaken load carrying members. Where connections are made to epoxy coated reinforcing steel, the epoxy coating shall be sufficiently removed to facilitate a mechanical connection. The epoxy coating shall be repaired to the satisfaction of the Engineer. Where connections are made to insulated

conductors, the connection shall be wrapped with at least four layers of electrical tape extended 6 in. (150 mm) onto the conductor insulation.

Submittals. At the preconstruction meeting, the Contractor shall submit a written listing of manufacturers for all major electrical and mechanical items. The list of manufacturers shall be binding, except by written request from the Contractor and approval by the Engineer. The request shall include acceptable reasons and documentation for the change.

Major items shall include, but not limited to the following:

Type of Work (discipline)	Item
All Electrical Work	Electric Service Metering Emergency Standby System Transformers Cable Unit Duct Splices Conduit Surge Suppression System
Lighting	Tower Pole Luminaire Foundation Breakaway Device Controllers Control Cabinet and Peripherals
ITS	Controller Cabinet and Peripherals CCTV Cameras Camera Structures Ethernet Switches Detectors Detector Loop Fiber Optic Cable

Within 30 calendar days after contract execution, the Contractor shall submit, for approval, one copy each of the manufacturer's product data (for standard products and components) and detailed shop drawings (for fabricated items). Submittals for the materials for each individual pay item shall be complete in every respect. Submittals which include multiple pay items shall have all submittal material for each item or group of items covered by a particular specification, grouped together and the applicable pay item identified. Various submittals shall, when taken together, form a complete coordinated package. A partial submittal will be returned without review unless prior written permission is obtained from the Engineer.

The submittal shall be properly identified by route, section, county, and contract number.

The Contractor shall have reviewed the submittal material and affixed his/her stamp of approval, with date and signature, for each individual item. In case of subcontractor submittal, both the subcontractor and the Contractor shall review, sign, and stamp their approval on the submittal.

Illegible print, incompleteness, inaccuracy, or lack of coordination will be grounds for rejection.

Items from multiple disciplines shall not be combined on a single submittal and transmittal. Items for lighting, signals, surveillance and CCTV must be in separate submittals since they may be reviewed by various personnel in various locations.

The Engineer will review the submittals for conformance with the design concept of the project according to Article 105.04 and the following. The Engineer will stamp the drawings indicating their status as “Approved”, “Approved as Noted”, “Disapproved”, or “Information Only”. Since the Engineer’s review is for conformance with the design concept only, it shall be 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, or layout drawings by the Engineer’s approval thereof. The Contractor shall still be in full compliance with contract and specification requirements.

All submitted items reviewed and marked “Disapproved” or “Approved as Noted” shall be resubmitted by the Contractor in their entirety, unless otherwise indicated within the submittal comments.

Work shall not begin until the Engineer has approved the submittal. Material installed prior to approval by the Engineer, will be subject to removal and replacement at no additional cost.

Unless otherwise approved by the Engineer, all of the above items shall be submitted to the Engineer at the same time. Each item shall be properly identified by route, section, and contract number.

Certifications. When certifications are specified and are available prior to material manufacture, the certification shall be included in the submittal information. When specified and only available after manufacture, the submittal shall include a statement of intent to furnish certification. All certificates shall be complete with all appropriate test dates and data.

Authorized Project Delay. See Article 801.08

Maintenance transfer and Preconstruction Inspection:

General. Before performing any excavation, removal, or installation work (electrical or otherwise) at the site, the Contractor shall request a maintenance transfer and preconstruction site inspection, to be held in the presence of the Engineer and a representative of the party or parties responsible for maintenance of any lighting and/or traffic control systems which may be affected by the work. The request for the maintenance transfer and preconstruction inspection shall be made no less than seven (7) calendar days prior to the desired inspection date. The maintenance transfer and preconstruction inspection shall:

Establish the procedures for formal transfer of maintenance responsibility required for the construction period.

Establish the approximate location and operating condition of lighting and/or traffic control systems which may be affected by the work

Marking of Existing Cable Systems. The party responsible for maintenance of any existing lighting and/or traffic control systems at the project site will, at the Contractor's request, mark and/or stake, once per location, all underground cable routes owned or maintained by the Village. A project may involve

multiple "locations" where separated electrical systems are involved (i.e. different controllers). The markings shall be taken to have a horizontal tolerance of at least 304.8 mm (one (1) foot) to either side. The request for the cable locations and marking shall be made at the same time the request for the maintenance transfer and preconstruction inspection is made. The Contractor shall exercise extreme caution where existing buried cable runs are involved. The markings of existing systems are made strictly for assistance to the Contractor and this does not relieve the Contractor of responsibility for the repair or replacement of any cable run damaged in the course of his work, as specified elsewhere herein. Note that the contractor shall be entitled to only one request for location marking of existing systems and that multiple requests may only be honored at the contractor's expense. No locates will be made after maintenance is transferred, unless it is at the contractor's expense.

Condition of Existing Systems. The Contractor shall conduct an inventory of all existing electrical system equipment within the project limits, which may be affected by the work, making note of any parts which are found broken or missing, defective or malfunctioning. Megger and load readings shall be taken for all existing circuits which will remain in place or be modified. If a circuit is to be taken out in its entirety, then readings do not have to be taken. The inventory and test data shall be reviewed with and approved by the Engineer and a record of the inventory shall be submitted to the Engineer for the record. Without such a record, all systems transferred to the Contractor for maintenance during construction shall be returned at the end of construction in complete, fully operating condition.”

Marking Proposed Locations for Highway Lighting System. The Contractor shall mark or stake the proposed locations of all poles, cabinets, junction boxes, pull boxes, handholes, cable routes, pavement crossings, and other items pertinent to the work. A proposed location inspection by the Engineer shall be requested prior to any excavation, construction, or installation work after all proposed installation locations are marked. Any work installed without location approval is subject to corrective action at no additional cost to the Village.

Inspection of electrical work. Inspection of electrical work shall be according to Article 105.12 and the following.

Before any splice, tap, or electrical connection is covered in handholes, junction boxes, light poles, or other enclosures, the Contractor shall notify and make available such wiring for the Engineer's inspection.

Maintenance and Responsibility During Construction.

Lighting Operation and Maintenance Responsibility. The scope of work shall include the assumption of responsibility for the continuing operation and maintenance of the existing, proposed, temporary, sign and navigation lighting, or other lighting systems and all appurtenances affected by the work as specified elsewhere herein. Maintenance of lighting systems is specified elsewhere and will be paid for separately.

The proposed lighting system must be operational prior to opening the roadway to traffic unless temporary lighting exists which is designed and installed to properly illuminate the roadway.

Energy and Demand Charges. The payment of basic energy and demand charges by the electric utility for existing lighting which remains in service will continue as a responsibility of the Owner, unless otherwise indicated. Unless otherwise indicated or required by the Engineer duplicate lighting systems (such as temporary lighting and proposed new lighting) shall not be operated simultaneously at the Owner's expense and lighting systems shall not be kept in operation during long daytime periods at the Owner's expense. Upon written authorization from the Engineer to place a proposed new lighting system in

service, whether the system has passed final acceptance or not, (such as to allow temporary lighting to be removed), the Owner will accept responsibility for energy and demand charges for such lighting, effective the date of authorization. All other energy and demand payments to the utility shall be the responsibility of the Contractor until final acceptance.

Damage to Electrical Systems. Should damage occur to any existing electrical systems through the Contractor's operations, the Engineer will designate the repairs as emergency or non-emergency in nature.

Emergency repairs shall be made by the Contractor, or as determined by the Engineer, the Village, or its agent. Non-emergency repairs shall be performed by the Contractor within six working days following discovery or notification. All repairs shall be performed in an expeditious manner to assure all electrical systems are operational as soon as possible. The repairs shall be performed at no additional cost to the Village.

Lighting. An outage will be considered an emergency when three or more lights on a circuit or three successive lights are not operational. Knocked down materials, which result in a danger to the motoring public, will be considered an emergency repair.

Temporary aerial multi-conductor cable, with grounded messenger cable, will be permitted if it does not interfere with traffic or other operations, and if the Engineer determines it does not require unacceptable modification to existing installations.

Testing. Before final inspection, the electrical work shall be tested. Tests may be made progressively as parts of the work are completed, or may be made when the work is complete. Tests shall be made in the presence of the Engineer. Items which fail to test satisfactorily shall be repaired or replaced. Tests shall include checks of control operation, system voltages, cable insulation, and ground resistance and continuity.

The forms for recording test readings will be available from the Engineer in electronic format. The Contractor shall provide the Engineer with a written report of all test data including the following:

- Voltage Tests
- Amperage Tests
- Insulation Resistance Tests
- Continuity tests
- Detector Loop Tests

Lighting systems. The following tests shall be made.

- (1) Voltage Measurements. Voltages in the cabinet from phase to phase and phase to neutral, at no load and at full load, shall be measured and recorded. Voltage readings at the last termination of each circuit shall be measured and recorded.
- (2) Insulation Resistance. Insulation resistance to ground of each circuit at the cabinet, with all loads connected, shall be measured and recorded.

On tests of new cable runs, the readings shall exceed 50 megohms for phase and neutral conductors with a connected load over 20 A, and shall exceed 100 megohms for conductors with a connected load of 20 A or less.

On tests of cable runs which include cables which were existing in service prior to this contract, the resistance readings shall be the same or better than the readings recorded at the maintenance transfer at the beginning of the contract. Measurements shall be taken with a megohm meter approved by the Engineer.

- (3) Loads. The current of each circuit, phase main, and neutral shall be measured and recorded. The Engineer may direct reasonable circuit rearrangement. The current readings shall be within ten percent of the connected load based on material ratings.
- (4) Ground Continuity. Resistance of the system ground as taken from the farthest extension of each circuit run from the controller (i.e. check of equipment ground continuity for each circuit) shall be measured and recorded. Readings shall not exceed 2.0 ohms, regardless of the length of the circuit.
- (5) Resistance of Grounding Electrodes. Resistance to ground of all grounding electrodes shall be measured and recorded. Measurements shall be made with a ground tester during dry soil conditions as approved by the Engineer. Resistance to ground shall not exceed 10 ohms.

All test results shall be furnished to the Engineer seven working days before the date the inspection is scheduled.

Contract Guarantee. The Contractor shall provide a written guarantee for all electrical work provided under the contract for a period of six months after the date of acceptance with the following warranties and guarantees.

- (a) The manufacturer's standard written warranty for each piece of electrical material or apparatus furnished under the contract. The warranty for light emitting diode (LED) modules, including the maintained minimum luminance, shall cover a minimum of 60 months from the date of delivery.
- (b) The Contractor's written guarantee that, for a period of six months after the date of final acceptance of the work, all necessary repairs to or replacement of said warranted material or apparatus for reasons not proven to have been caused by negligence on the part of the user or acts of a third party shall be made by the Contractor at no additional cost to the Village.
- (c) The Contractor's written guarantee for satisfactory operation of all electrical systems furnished and constructed under the contract for a period of six months after final acceptance of the work.

Record Drawings. Alterations and additions to the electrical installation made during the execution of the work shall be neatly and plainly marked in red by the Contractor on the full-size set of record drawings kept at the Engineer's field office for the project. These drawings shall be updated on a daily basis and shall be available for inspection by the Engineer during the course of the work. The record drawings shall include the following:

- Cover Sheet
- Summary of Quantities, electrical items only
- Legends, Schedules and Notes
- Plan Sheet

- Pertinent Details
- Single Line Diagram
- Other useful information useful to locate and maintain the systems.

Any modifications to the details shall be indicated. Final quantities used shall be indicated on the Summary of Quantities. Foundation depths used shall also be listed.

As part of the record drawings, the Contractor shall inventory all materials, new or existing, on the project and record information on inventory sheets provided by the Engineer.

The inventory shall include:

- Location of Equipment, including rack, chassis, slot as applicable.
- Designation of Equipment
- Equipment manufacturer
- Equipment model number
- Equipment Version Number
- Equipment Configuration
 - Addressing, IP or other
 - Settings, hardware or programmed
- Equipment Serial Number

The following electronic inventory forms are available from the Engineer:

- Lighting Controller Inventory
- Lighting Inventory
- Light Tower Inspection Checklist
- ITS Location Inventory

The information shall be entered in the forms; handwritten entries will not be acceptable; except for signatures. Electronic file shall also be included in the documentation.

When the work is complete, and seven days before the request for a final inspection, the 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 CDROM as well as hardcopy’s for review and approval.

In addition to the record drawings, PDF copies of the final catalog cuts which have been Approved and Approved as Noted with applicable follow-up shall be submitted along with the record drawings. The PDF files shall clearly indicate either by filename or PDF table of contents the respective pay item number. Specific part or model numbers of items which have been selected shall be clearly visible. Hard copies of the catalog are not required with this submittal.

The Contractor shall provide two sets of electronically produced drawings in a moisture proof pouch to be kept on the inside door of the controller cabinet or other location approved by the Engineer. These drawings shall show the final as-built circuit orientation(s) of the project in the form of a single line diagram with all luminaires numbered and clearly identified for each circuit.

Final documentation shall be submitted as a complete submittal package, i.e. record drawings, test results, inventory, etc. shall be submitted at the same time. Partial piecemeal submittals will be rejected without review. A total of five hardcopies and CDROMS of the final documentation shall be submitted.

GPS Documentation (As required by the Village of Hanover Park). In addition to the specified record drawings, the Contactor shall record GPS coordinates of the following electrical components being installed, modified or being affected in other ways by this contract:

- All light poles and light towers.
- Handholes and vaults.
- Junction Boxes
- Conduit roadway crossings.
- Controllers.

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:

1. District
2. Description of item
3. Designation
4. Use
5. Approximate station
6. Contract Number
7. Date
8. Owner
9. Latitude
10. Longitude
11. Comments

A spreadsheet template will be available from the Engineer for use by the Contractor.

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 20 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. **Data collection prior to the submittal and review of the sample data of existing data points will be unacceptable and rejected.**

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 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.”

Acceptance. Acceptance of electrical work will be given at the time when the Village of Hanover Park assumes the responsibility to protect and maintain the work according to Article 107.30 or at the time of final inspection.

When the electrical work is complete, tested, and fully operational, the Contractor shall schedule an inspection for acceptance with the Engineer no less than seven working days prior to the desired inspection date. The Contractor shall furnish the necessary labor and equipment to make the inspection.

A written record of the test readings taken by the Contractor according to Article 801.13 shall be furnished to the Engineer seven working days before the date the inspection is scheduled. Inspection will not be made until after the delivery of acceptable record drawings, specified certifications, and the required guarantees.

EXPOSED RACEWAYS

Effective: January 1, 2012

Revise the first paragraph of Article 811.03(a) of the Standard Specifications to read:

“General. Rigid metal conduit installation shall be according to Article 810.05(a). Conduits terminating in junction and pull boxes shall be terminated with insulated and gasketed watertight threaded NEMA 4X conduit hubs. The hubs shall be Listed under UL 514B. The insulated throat shall be rated up to 105° C. When PVC coated conduit is utilized, the aforementioned hubs shall also be PVC coated.”

Add the following to Article 811.03(b) of the Standard Specifications:

“Where PVC coated conduit is utilized, all conduit fittings, couplings and clamps shall be PVC coated. All other mounting hardware and appurtenances shall be stainless steel.”

“The personnel installing the PVC coated conduit must be trained and certified by the PVC coated conduit Manufacturer or Manufacturer’s representative to install PVC coated conduit. Documentation demonstrating this requirement must be submitted for review and approval.”

Add the following to Article 1088.01(a) of the Standard Specifications:

All iron and steel products, which are to be incorporated into the work, including conduit and all conduit fittings, shall be domestically manufactured or produced and fabricated as specified in Article 106.”

Revise Article 1088.01(a)(3) of the Standard Specifications to read:

“a. PVC Coated Steel Conduit. The PVC coated rigid metal conduit shall be UL Listed (UL 6). The PVC coating must have been investigated by UL as providing the primary corrosion protection for the rigid metal conduit. Ferrous fittings for general service locations shall be UL Listed with PVC as the primary corrosion protection. Hazardous location fittings, prior to plastic coating shall be UL listed.

b. The PVC coating shall have the following characteristics:

Hardness:	85+ Shore A Durometer
Dielectric Strength:	400V/mil @ 60 Hz
Aging:	1,000 Hours Atlas Weatherometer
Temperature	The PVC compound shall conform at 0° F. to Federal Specifications PL-406b, Method 2051, Amendment 1 of 25 September 1952 (ASTM D 746)
Elongation:	200%

- c. The exterior and interior galvanized conduit surface shall be chemically treated to enhance PVC coating adhesion and shall also be coated with a primer before the PVC coating to ensure a bond between the zinc substrate and the PVC coating. The bond strength created shall be greater than the tensile strength of the plastic coating.
- d. The nominal thickness of the PVC coating shall be 1 mm (40 mils). The PVC exterior and urethane interior coatings applied to the conduit shall afford sufficient flexibility to permit field bending without cracking or flaking at temperatures above -1°C (30°F).
- e. An interior urethane coating shall be uniformly and consistently applied to the interior of all conduit and fittings. This internal coating shall be a nominal 2 mil thickness. 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.
- f. Conduit bodies shall have a tongue-in-groove gasket for maximum sealing capability. The design shall incorporate a positive placement feature to assure proper installation. Certified test results confirming seal performance at 15 psig (positive) and 25 in. of mercury (vacuum) for 72 hours shall be submitted for review when requested by the Engineer.
- g. The PVC conduit shall pass the following tests:

Exterior PVC Bond test RN1:

Two parallel cuts 13 mm (1/2 inch) apart and 40 mm (1 1/2 inches) 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 PVC coating for 13 mm (1/2 inch) to free the coating from the metal.

Using pliers, the freed PVC tab shall be pulled with a force applied vertically and away from the conduit. The PVC tab shall tear rather than cause any additional PVC coating to separate from the substrate.

Boil Test:

Acceptable conduit coating bonds (exterior and interior) shall be confirmed if there is no disbondment after a minimum average of 200 hours in boiling water or exposure to steam vapor at one atmosphere. Certified test results from a national recognized independent testing laboratory shall be submitted for review and approval. The RN1 Bond Test and the Standard Method for Measuring Adhesion by Tape Test shall be utilized.

Exterior Adhesion. In accordance with ASTM D870, a 6" length of conduit test specimen shall be placed in boiling water. The specimen shall be periodically removed, cooled to ambient temperature and immediately tested according to the bond test (RN1). When the PVC coating separates from the substrate, the boil time to failure in hours shall be recorded.

Interior Adhesion. In accordance with ASTM D3359, a 6" conduit test specimen shall be cut in half longitudinally and placed in boiling water or directly above boiling water with the urethane surface facing down. The specimen shall be periodically removed, cooled to ambient temperature and tested in accordance with the Standard Method of Adhesion by Tape Test (ASTM D3359). When the coating disbonds, the time to failure in hours shall be recorded.

Heat/Humidity Test:

Acceptable conduit coating bonds shall be confirmed by a minimum average of 30 days in the Heat and Humidity Test. The RN1 Bond Test and the Standard Method for Measuring Adhesion by Tape Test shall be utilized.

Exterior Adhesion. In accordance with ASTM D1151, D1735, D2247 and D4585, conduit specimens shall be placed in a heat and humidity environment where the temperature is maintained at 150°F (66°C) and 95% relative humidity. The specimens shall be periodically removed and a bond test (RN1) performed. When the PVC coating separates from the substrate, the exposure time to failure in days shall be recorded.

Interior Adhesion. In accordance with ASTM D3359, conduit specimens shall be placed in a heat and humidity environment where the temperature is maintained at 150°F (66°C) and 95% relative humidity. When the coating disbonds, the time to failure in hours shall be recorded.

Add the following to Article 1088.01(a)(4) of the Standard Specifications:

“All liquid tight flexible metal conduit fittings shall have an insulated throat to prevent abrasion of the conductors and shall have a captive sealing O-ring gasket. The fittings shall be Listed under UL 514B. The insulated throat shall be rated up to 105° C.”

Revise the second paragraph of Article 811.04 of the Standard Specifications to read:

“Expansion fittings and LFNC will not be measured for payment.”

Revise Article 811.05 of the Standard Specifications to read:

“811.05 Basis of Payment. This work will be paid for at the contract unit price per meter (foot) for CONDUIT ATTACHED TO STRUCTURE, of the diameter specified, RIGID GALVANIZED STEEL or CONDUIT ATTACHED TO STRUCTURE, of the diameter specified, RIGID GALVANIZED STEEL, PVC COATED.”

UNIT DUCT

Effective: January 1, 2012

Revise the first paragraph of Article 810.04 to read:

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

Revise Article 1088.01(c) to read:

“(c) Coilable Nonmetallic Conduit.

General:

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

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

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

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

Dimensions:

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

Nominal Size		Nominal I.D.		Nominal O.D.		Minimum Wall	
mm	in	mm	in	mm	in	mm	in
31.75	1.25	35.05	1.380	42.16	1.660	3.556 +0.51	0.140 +0.020
38.1	1.50	40.89	1.610	48.26	1.900	3.683 +0.51	0.145 +0.020

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

Marking:

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

Performance Tests:

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

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

WIRE AND CABLE

Effective: January 1, 2012

Add the following to the first paragraph of Article 1066.02(a):

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

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

Aerial Electric Cable Properties

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

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

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

Revise Article 1066.04 to read:

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

Revise the second paragraph of Article 1066.05 to read:

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

ELECTRIC SERVICE INSTALLATION

Effective: January 1, 2012

Description. This item shall consist of all material and labor required to extend, connect or modify the electric services, as indicated or specified, which is over and above the work performed by the utility. Unless otherwise indicated, the cost for the utility work, if any, will be reimbursed to the Contractor separately under ELECTRIC UTILITY SERVICE CONNECTION. This item may apply to the work at more than one service location and each will be paid separately.

Materials. Materials shall be in accordance with the Standard Specifications.

CONSTRUCTION REQUIREMENTS

General. The Contractor shall ascertain the work being provided by the electric utility and shall provide all additional material and work not included by other contract pay items required to complete the electric service work in complete compliance with the requirements of the utility.

No additional compensation will be allowed for work required for the electric service, even though not explicitly shown on the Drawings or specified herein

Method of Measurement. Electric Service Installation shall be counted, each.

Basis of Payment. This work will be paid for at the contract unit price each for ELECTRIC SERVICE INSTALLATION which shall be payment in full for the work specified herein.

ELECTRIC UTILITY SERVICE CONNECTION (COMED)

Effective: January 1, 2012

Description. This item shall consist of payment for work performed by ComEd in providing or modifying electric service as indicated. THIS MAY INVOLVE WORK AT MORE THAN ONE ELECTRIC SERVICE. For summary of the Electrical Service Drop Locations see the schedule contained elsewhere herein.

CONSTRUCTION REQUIREMENTS

General. It shall be the Contractor's responsibility to contact ComEd. The Contractor shall coordinate his work fully with the ComEd both as to the work required and the timing of the installation. No additional compensation will be granted under this or any other item for extra work caused by failure to meet this requirement. **Please contact ComEd, New Business Center Call Center, at 866 NEW ELECTRIC (1-866-639-3532) to begin the service connection process. The Call Center Representatives will create a work order for the service connection. The representative will ask the requestor for information specific to the request. The representative will assign the request based upon the location of project.**

The Contractor should make particular note of the need for the earliest attention to arrangements with ComEd for service. In the event of delay by ComEd, no extension of time will be considered applicable for the delay unless the Contractor can produce written evidence of a request for electric service within 30 days of execution.

Method of Payment. The Contractor will be reimbursed to the exact amount of money as billed by ComEd for its services. Work provided by the Contractor for electric service will be paid separately as described under ELECTRIC SERVICE INSTALLATION. No extra compensation shall be paid to the Contractor for any incidental materials and labor required to fulfill the requirements as shown on the plans and specified herein.

For bidding purposes, this item shall be estimated as **\$32,500.**

Basis of Payment. This work will be paid for at the contract lump sum price for ELECTRIC UTILITY SERVICE CONNECTION which shall be reimbursement in full for electric utility service charges.

ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED

This work shall consist of furnishing and installing electric cable in conduit of the type, size, and number of conductors specified. The construction performed and materials used shall be in conformance with applicable parts of Sections 873 and 1076 of the Standard Specifications. Physical specifications are as follows:

Conductors: 3-20 awg (7/28) tinned copper .037”

Dielectric: 25 mil wall of color coded polyethylene to a nominal diameter of .191”

Cabling: Cable together three insulated conductors with an overall aluminum/polyester tape, the foil out, and a 20 awg (7/28) tinned copper drain, in a 3” left hand lay to a nominal diameter of .191”

Jacket: 45 mil wall of black moisture resistant sunlight resistant polyvinyl chloride to a nominal diameter of .281” +/- .010”

Basis of Payment. This work will be paid for at the contract unit price foot for ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED, which price shall include all labor, equipment and materials necessary to complete the work.

REMOVE EXISTING HANDHOLE

Add the following to Article 895.05 of the Standard Specifications.

Description: The existing handhole which is to be removed and is to become the property of the Contractor shall be disposed of at the Contractor's expense. This work shall include all of the necessary work to remove the existing handholes from the ground and to restore the existing pavement or ground to match the adjacent conditions at the site. Holes created should be filled or barricaded immediately to prevent safety hazards.

Basis of Payment: This work shall be paid for at the contract unit price, per each, for REMOVE EXISTING HANDHOLE, of the type indicated on the plans, which price shall include all work, excavation, materials, all equipment and labor required to complete the work as specified and to restore the existing ground or pavement.

ELECTRIC SERVICE DISCONNECT, LIGHTING AND TRAFFIC SIGNAL

Effective: January 1, 2012

Description:

This item shall consist of furnishing and installing for the Lighting and Traffic Signal System a service disconnect box, 2 or 3 wire mounted on a wood pole as specified below, and as shown on the detail drawings and as directed by the Engineer.

Materials:

The disconnect box shall be NEMA 4X stainless steel, nominally 12" W x 16" H x 8" D with piano hinged door, steel back panel, fast acting stainless steel enclosure clamps, padlock provisions and door stop kit (Hoffman catalog #A-16H1208SS6LP/A-16P12/A-DSTOPK/C-PMK12, or approved equal).

Circuit Breakers shall be thermal magnetic bolt-on type with a minimum interrupt capacity of 25,000 symmetrical amperes at 240 volts. Breakers shall be lockable in the off position for lockout/tag-out compliance.

Bus bars, connectors, and lugs shall be copper, insulated and isolated, and configured to prevent shorted conditions from tightening terminations. Lugs and connectors shall be rated for 75°C. Overall bus sections shall be configured behind an insulating barrier shield which is removable for access to connections. The circuit breakers and bus may be part of an approved panel board assembly.

Disconnect surge protector shall be suitable for 240/120 volt single phase 60Hz, AC electrical service. Protector shall have a surge energy capability of 2160 joules or better at 8/20 microseconds, rate -40 to 60°C., with LED operating indicators and shall be UL listed per UL 1449. The surge protector shall be a Cutler Hammer CMOV230L065XST or approved equal.

Conduit, wire, and ground rods to complete the installation of the disconnect box shall be included as part of this item, as required and as indicated.

Combination ground and neutral bar shall be configured with separate ground and neutral sections and spare terminals as indicated. The heads of grounding screws shall be painted green. The heads of neutral screws shall be painted white.

A plastic laminated layout and circuit diagram shall be affixed to the interior side of the enclosure door.

A 2-color engraved plastic nameplate, attached with screws and engraved as indicated, shall be provided for each main breaker.

The exact mounting height for the Electric Service Disconnect shall be field determined and marked by the Engineer.

Electrical service shall be of the voltage indicated. Where 120 volt service is indicated, service drop cable shall be installed accordingly and lighting main breaker and all other service appurtenances shall be included regardless of the service voltage applied to the installation.

The electric service equipment assembly shall be UL labeled, suitable for use as service equipment.

Steel strut channel shall be provided for proper installation of the disconnect, as shown on the disconnect mounting detail.

Electric Utility charges will be paid separately and are not part of this item.

Installation:

The Electric Service Disconnect shall be installed as indicated in the Electric Service Disconnect detail. All work shall be fully coordinated with the electric utility company by the Contractor.

Method Of Measurement:

Each Electric Service Disconnect, installed complete as specified and as indicated on the plans, shall be counted each for payment.

Basis Of Payment:

This item shall be paid for at the contract unit price, each, for ELECTRIC SERVICE DISCONNECT, LIGHTING AND TRAFFIC SIGNAL, which shall be payment in full for the work.

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.



Route FAU 2298(Longmeadow Parkway)	Marked Route FAU2298 (Longmeadow Parkway)	Section 13-00215-10-PV
Project Number RS-M-4003(397)	County Kane County	Contract Number 61C41

This plan has been prepared to comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Permit No. ILR10 (Permit ILR10), issues by the Illinois Environmental Protection Agency (IEPA) for storm water discharges from construction site activities.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name Carl Schoedel	Title Director of Trans./County Eng.	Agency Kane County DOT
Signature 	Date 10.24.16	

I. Site Description

A. Provide a description of the project location (include latitude and longitude):

Longmeadow Parkway and Randall Road improvements consist of widening and reconstruction of the existing roadway including stormwater improvements, grading improvements, and a multi-use pedestrian path. Project limits are 0.30 miles north and south of the intersection of Randall Road and Longmeadow Parkway and 1.67 miles of improvement along Longmeadow Parkway in Kane County; Sections 4, 5, 6, 7, 8, & 9, T42N, R8E;

begin: 42deg-08'24.36"N, 88deg-20'08.52"W / end: 42deg-08'21.36"N, 88deg-18'14.44"W

B. Provide a description of the construction activity which is subject of this plan:

Construction includes the widening and reconstruction of Randall Road for installation of auxiliary turn lanes and a traffic signal and widening Longmeadow Parkway from a 2-lane section to a 4-lane lane divided by a median. A multi-use path will be installed for the length of Longmeadow Parkway. The improvements will use a combination of enclosed drainage with curb and gutter and open swale drainage systems. Stormwater detention is provided in compliance with Kane County & IDOT requirements. Water quality runoff volume retention is also provided in compliance with Kane County requirements. Temporary and permanent soil erosion and sediment control are provided for all phases of construction. Wetland boundaries and wetland disturbances are displayed on the plans sheets. There are no areas of floodplain within the limits of this contract.

C. Provide the estimated duration of this project:

Estimated duration of this project is one (1) years

D. The total area of the construction site is estimated to be 108 acres.

The total area of the site estimated to be disturbed by excavation, grading or other activities is 33 acres.

E. The following is a weighted average of the runoff coefficient for this project after construction activities are completed:

Weighted C= 0.60

F. List all soils found within project boundaries. Include map unit name, slope information and erosivity:

La Rose loam, 5 to 10 percent slopes, eroded
La Rose loam, 10 to 18 percent slopes, eroded
Herbert silt loam, 0 to 2 percent slopes
Harpster silty clay loam, 0 to 2 percent slopes
Houghton muck, 0 to 2 percent slopes
Brenton silt loam, 0 to 2 percent slopes
Drummer silty clay loam, 0 to 2 percent slopes
Thorp silt loam, 0 to 2 percent slopes
Varna silt loam, 2 to 4 percent slopes
Varna silt loam, 4 to 6 percent slopes, eroded
Peotone silty clay loam, 0 to 2 percent slopes
Elpaso silty clay loam, 0 to 2 percent slopes
Mundelein silt loam, 0 to 2 percent slopes
Kidami silt loam, 2 to 4 percent slopes
Kidami loam, 4 to 6 percent slopes, eroded
Kidami loam, 6 to 12 percent slopes, eroded
Senachwine silt loam, 12 to 20 percent slopes
Octagon silt loam, 2 to 4 percent slopes
Octagon silt loam, 4 to 6 percent slopes, eroded
Octagon silt loam, 6 to 12 percent slopes, eroded
Barony silt loam, 0 to 2 percent slopes
Barony silt loam, 2 to 5 percent slopes
Kaneville silt loam, 0 to 2 percent slopes

Please Refer to Attached Map and Summary

G. Provide an aerial extent of wetland acreage at the site:

Wetlands are depicted on the project plans. Aerial attached at end of this document.

H. Provide a description of potentially erosive areas associated with this project:

The area at the northwest corner of Barrett Drive and Longmeadow Parkway is peat and organic material which will be undercut and replaced with a combination of suitable backfill and aggregate subgrade.

I. The following is a description of soil disturbing activities by stages, their locations, and their erosive factors (e.g. steepness of slopes, length of scopes, etc.):

- 1) Installation of construction fencing, sediment control, silt fence and vegetation
- 2) Clearing of the project site as shown in the staging plan
- 3) Grading of detention ponds; this work is to be completed concurrently with the construction of sump pits, sediment basins, and temporary aggregate berms.
- 4) Storm sewer construction.
- 5) Pavement (including curb & gutter, multi-use path, etc.) construction
- 6) Topsoil spreading with temporary or permanent soil stabilization measures and the construction of permanent soil erosion and sediment control measures
- 7) Removal of temporary soil erosion and sediment control measures

J. See the erosion control plans and/or drainage plans for this contract for information regarding drainage patterns, approximate slopes anticipated before and after major grading activities, locations where vehicles enter or exit the site and controls to prevent off site sediment tracking (to be added after contractor identifies locations), areas of soil disturbance, the location of major structural and non-structural controls identified in the plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands) and locations where storm water is discharged to surface water including wetlands.

K. Identify who owns the drainage system (municipality or agency) this project will drain into:

Randall Road & Longmeadow Parkway - Kane County Division of Transportation
Portions of Longmeadow Parkway will require restricted release into Village of Algonquin storm sewer.

L. The following is a list of General NPDES ILR40 permittees within whose reporting jurisdiction this project is located.

Kane County Division of Transportation
Village of Algonquin

M. The following is a list of receiving water(s) and the ultimate receiving water(s) for this site. The location of the receiving waters can be found on the erosion and sediment control plans:

Un-named Tributaries to the Fox River
Fox River

N. Describe areas of the site that are to be protected or remain undisturbed. These areas may include steep slopes, highly erodible soils, streams, stream buffers, specimen trees, natural vegetation, nature preserves, etc.

All areas outside of the grading limits of the proposed roadway and all areas outside of the proposed ROW shall be protected and remain undisturbed.

O. The following sensitive environmental resources are associated with this project, and may have the potential to be impacted by the proposed development:

- Floodplain
- Wetland Riparian
- Threatened and Endangered Species
- Historic Preservation
- 303(d) Listed receiving waters for suspended solids, turbidity, or siltation
- Receiving waters with Total Maximum Daily Load (TMDL) for sediment, total suspended solids, turbidity, or siltation
- Applicable Federal, Tribal, State or Local Programs
- Other

1. 303(d) Listed receiving waters (fill out this section if checked above):

NA

a. The name(s) of the listed water body, and identification of all pollutants causing impairment:

NA

b. Provide a description of how erosion and sediment control practices will prevent a discharge of sediment resulting from a storm event equal to or greater than a twenty-five (25) year, twenty-four (24) hour rainfall event:

NA

c. Provide a description of the location(s) of direct discharge from the project site to the 303(d) water body:

NA

d. Provide a description of the location(s) of any dewatering discharges to the MS4 and/or water body:

NA

2. TMDL (fill out this section if checked above)

a. The name(s) of the listed water body:

NA

- b. Provide a description of the erosion and sediment control strategy that will be incorporated into the site design that is consistent with the assumptions and requirements of the TMDL:

NA

- c. If a specific numeric waste load allocation has been established that would apply to the project's discharges, provide a description of the necessary steps to meet the allocation:

NA

P. The following pollutants of concern will be associated with this construction project:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Soil Sediment | <input checked="" type="checkbox"/> Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids) |
| <input checked="" type="checkbox"/> Concrete | <input checked="" type="checkbox"/> Antifreeze / Coolants |
| <input checked="" type="checkbox"/> Concrete Truck waste | <input checked="" type="checkbox"/> Waste water from cleaning construction equipment |
| <input checked="" type="checkbox"/> Concrete Curing Compounds | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Solid waste Debris | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Paints | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Solvents | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Fertilizers / Pesticides | <input type="checkbox"/> Other (specify) _____ |

II. Controls

This section of the plan addresses the controls that will be implemented for each of the major construction activities described in I.C. above and for all use areas, borrow sites, and waste sites. For each measure discussed, the Contractor will be responsible for its implementation as indicated. The Contractor shall provide to the Resident Engineer a plan for the implementation of the measures indicated. The Contractor and subcontractors, will notify the Resident Engineer of any proposed changes, maintenance, or modifications to keep construction activities compliant with the Permit ILR10. Each such Contractor has signed the required certification on forms which are attached to, and are a part of, this plan:

- A. **Erosion and Sediment Controls:** At a minimum, controls must be coordinated, installed, and maintained to:
1. Minimize the amount of soil exposed during construction activity;
 2. Minimize the disturbance of steep slopes;
 3. Maintain natural buffers around surface waters, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration, unless infeasible;
 4. Minimize soil compaction and, unless infeasible, preserve topsoil.

- B. **Stabilization Practices:** Provided below is a description of interim and permanent stabilization practices, including site- specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices may include but are not limited to: temporary seeding, permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided below in II(B)(1) and II(B)(2), stabilization measures shall be initiated **immediately** where construction activities have temporarily or permanently ceased, but in no case more than **one (1) day** after the construction activity in that portion of the site has temporarily or permanently ceases on all disturbed portions of the site where construction will not occur for a period of fourteen (14) or more calendar days.

1. Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable.
2. On areas where construction activity has temporarily ceased and will resume after fourteen (14) days, a temporary stabilization method can be used.

The following stabilization practices will be used for this project:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Preservation of Mature Vegetation | <input checked="" type="checkbox"/> Erosion Control Blanket / Mulching |
| <input type="checkbox"/> Vegetated Buffer Strips | <input type="checkbox"/> Sodding |
| <input checked="" type="checkbox"/> Protection of Trees | <input type="checkbox"/> Geotextiles |
| <input checked="" type="checkbox"/> Temporary Erosion Control Seeding | <input checked="" type="checkbox"/> Other (specify) <u>DUST CONTROL WATERING</u> |

- | | |
|---|--|
| <input checked="" type="checkbox"/> Temporary Turf (Seeding, Class 7) | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Temporary Mulching | <input type="checkbox"/> Other (specify) _____ |
| <input checked="" type="checkbox"/> Permanent Seeding | <input type="checkbox"/> Other (specify) _____ |

Describe how the stabilization practices listed above will be utilized during construction:

- 1) Protection of Trees/Temporary Fence: All trees designated to be saved, or outside the limits of construction, shall be protected prior to beginning any clearing or removal work and shall remain protected during subsequent construction work. Protection of trees shall be as shown on the plans or directed by the Engineer and in accordance with Article 201.05 of the Illinois Department of Transportation's Standard Specifications for Road and Bridge, latest edition.

- 2) Temporary Erosion Control Seeding: This item will be applied to all bare areas every seven days to minimize the amount of exposed surface areas. Temporary Erosion Control Seeding shall consist of areas as shown on the plans, areas disturbed during the removal of Soil and Erosion measures, or directed by the Engineer and in accordance with the Illinois Department of Transportation's Standard Specifications for Road and Bridge, latest edition.

- 3) Permanent Seeding: This item will be utilized in small areas where sodding has failed as an interim remedy until sod can be replaced or as designated in rural areas where sod is not a prudent alternative, All disturbed areas, identified to receive seeding, will be stabilized via seeding immediately following final grading.

- 4) Erosion Control Blanket: This item will be used within 24 hours after seeding operations have been completed, in ditches/swales and sloped areas that require protection from erosion. Erosion control blankets shall be installed over fill slopes, high velocity areas and slopes steeper than 3:1 that have been brought to final grade. Erosion Control Blanket will be installed in accordance to IDOT Specification 251.04.

- 5) Dust Control Watering - This item will be provided for areas exposed during the mass grading/excavation to control the discharge of sediment through wind erosion during dry periods of construction, areas that are exposed during excavation shall receive dust control watering to minimize dust.

Describe how the stabilization practices listed above will be utilized after construction activities have been completed:

The erosion control practices listed above shall be removed upon final stabilization or incorporated into the final stabilization of the site.

- C. **Structural Practices:** Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include but are not limited to: perimeter erosion barrier, earth dikes, drainage swales, sediment traps, ditch checks, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. The installation of these devices may be subject to Section 404 of the Clean Water Act.

The following stabilization practices will be used for this project:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Perimeter Erosion Barrier | <input checked="" type="checkbox"/> Rock Outlet Protection |
| <input checked="" type="checkbox"/> Temporary Ditch Check | <input checked="" type="checkbox"/> Riprap |
| <input checked="" type="checkbox"/> Storm Drain Inlet Protection | <input type="checkbox"/> Gabions |
| <input type="checkbox"/> Sediment Trap | <input type="checkbox"/> Slope Mattress |
| <input type="checkbox"/> Temporary Pipe Slope Drain | <input checked="" type="checkbox"/> Retaining Walls |
| <input type="checkbox"/> Temporary Sediment Basin | <input type="checkbox"/> Slope Walls |
| <input type="checkbox"/> Temporary Stream Crossing | <input type="checkbox"/> Concrete Revetment Mats |
| <input checked="" type="checkbox"/> Stabilized Construction Exits | <input type="checkbox"/> Level Spreaders |

- Turf Reinforcement Mats
- Permanent Check Dams
- Permanent Sediment Basin
- Aggregate Ditch
- Paved Ditch

- Other (specify) CULVERT INLET PROTECTION
- Other (specify) _____
- Other (specify) _____
- Other (specify) _____
- Other (specify) _____

Describe how the structural practices listed above will be utilized during construction:

- 1) Perimeter Erosion Barrier: This item will be used to demarcate the perimeter of the project location and for the prevention of silt/sediment from leaving the site. Perimeter erosion barrier will be modified as necessary to accommodate the construction and repaired/replaced as necessary. This item will remain in place until all remaining items of the project have been completed.
- 2) Temporary Ditch Checks - These items will be used throughout the project limits as shown on the plans to reduce the runoff velocity and to trap silt before drains outside the project limit.
- 3) Storm Drain Inlet Protection: This item will be utilized at all manholes, catch basins and inlets with open grates. Inlet filters will be installed directly on the drainage structure or under the grate of the drainage structure resting on the lip of the frame. Inlet filters will be checked on a regular basis and any sediment/debris will be removed to maintain inlet protection. Storm Drain Inlet Protection will be done in accordance with Article 280.04 of the IDOT Specifications. Pipe protection will be implemented at outfalls.
- 4) Stabilized Construction Exits - Stabilized Construction Exits shall be used at the locations indicated on the plans for all construction traffic entering or exiting the construction site, Stabilized Construction Exits shall be continuously maintained during construction operations.
- 5) Rock Check Dams - This item will be provided for the proposed swales in areas with step slopes. Rock check dams will be placed at regular intervals as shown on the plans during construction and will be cleaned on a regular basis.
- 6) Stone Riprap: Stone Riprap of size and class as indicated on the plans will be placed to prevent erosion and scouring at the flared end sections at the upstream and downstream of storm sewer and culvert systems as shown on the plans and maintained as directed by the engineer.
- 8) Retaining Walls - Retaining Walls shall be used as indicated on the plans to limit the areas of excavation. Please refer to the structural drawings for detail and the plans for general layout of retaining walls
- 9) Culvert Inlet Protection - This item will be provided at locations where surface water is intercepted by a storm sewer culvert as indicated on the plans, this item will consist of stone placed in front of the culvert to prevent the discharge of transported sediment.

Describe how the structural practices listed above will be utilized after construction activities have been completed:

Temporary structural features including perimeter erosion barrier, temporary ditch checks, storm drain inlet protection, culvert inlet protection, and stabilized construction exits shall be removed upon completion of construction and final grade stabilization. Permanent structural features including rock check dams, stone riprap, and retaining walls shall be maintained throughout construction and shall become permanent features of the proposed improvements.

D. Treatment Chemicals

Will polymer flocculents or treatment chemicals be utilized on this project: Yes No

If yes above, identify where and how polymer flocculents or treatment chemicals will be utilized on this project.

Polymer flocculants may be used in conjunction with dewatering operations. At the discretion of the contractor and the direction of the engineer, polymer flocculants may be used to remove suspended solids from water pumped from excavations as required by construction operations. All pumping/dewatering shall follow the dewatering plan. All treated material resulting from the use of polymer flocculants shall be removed by the contractor.

E. **Permanent Storm Water Management Controls:** Provided below is a description of measures that will be installed during the construction process to control volume and pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water act.

1. Such practices may include but are not limited to: storm water detention structures (including wet ponds), storm water retention structures, flow attenuation by use of open vegetated swales and natural depressions, infiltration of runoff on site, and sequential systems (which combine several practices).

The practices selected for implementation were determined on the basis of the technical guidance in Chapter 41 (Construction Site Storm Water Pollution Control) of the IDOT Bureau of Design & Environment Manual. If practices other than those discussed in Chapter 41 are selected for implementation or if practices are applied to situations different from those covered in Chapter 41, the technical basis for such decisions will be explained below.

2. Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g. maintenance of hydrologic conditions such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Description of permanent storm water management controls:

Stormwater management facilities are provided throughout the proposed improvements as required by the Kane County Ordinance. Four (4) separate conventional stormwater facilities are proposed. Stormwater facilities are proposed at Randall Road STA 205+00 RT, Longmeadow Parkway 2065+00 LT, Longmeadow Parkway STA 2081+00 LT, and Longmeadow Parkway STA 2141+00 LT. The detention basins have been designed in compliance with the Kane County Stormwater Ordinance and provide both stormwater detention storage and water quality runoff volume retention. Outlet protection in the form of riprap is proposed at storm sewers outletting to ponds, at discharge points to ponds and at overflow points where flow may be concentrated. Please refer to the plan set for detailed pond plan information.

F. **Approved State or Local Laws:** The management practices, controls, and provisions contained in this plan will be in accordance with IDOT specifications, which are at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Illinois Urban Manual. Procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials shall be described or incorporated by reference in the space provided below. Requirements specified in sediment and erosion site plans, site permits, storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI, to be authorized to discharge under the Permit ILR10 incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

Description of procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials:

The management practices, controls, and other provisions contained in this plan are at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Illinois Urban Manual Standards and Specifications which was used as a guide in designing the erosion and sediment control features. Procedures and requirements specified in applicable soil erosion and sediment control plans or storm water management plans approved by local officials shall be described or incorporated by reference below. Requirements specified in soil erosion and sediment control plans, site permits, storm water management site plans, or site permits approved by county, state, or local officials that are applicable to protecting surface water resources are, upon submittal of a Notice of Intent (NOI), incorporated and enforceable under this permit even if they are not specifically included in the plan.

The soil erosion and sediment control for this site must meet the requirements of the following agencies:

Kane-DuPage Soil and Water Conservation District
Kane County Division of Transportation
Illinois Department of Transportation
Illinois Environmental Protection Agency
U.S. Army Corps of Engineers

G. **Contractor Required Submittals:** Prior to conducting any professional services at the site covered by this plan, the Contractor and each subcontractor responsible for compliance with the permit shall submit to the Resident Engineer a Contractor Certification Statement, BDE 2342a.

1. The Contractor shall provide a construction schedule containing an adequate level of detail to show major activities with implementation of pollution prevention BMPs, including the following items:
 - Approximate duration of the project, including each stage of the project
 - Rainy season, dry season, and winter shutdown dates
 - Temporary stabilization measures to be employed by contract phases
 - Mobilization time frame
 - Mass clearing and grubbing/roadside clearing dates
 - Deployment of Erosion Control Practices
 - Deployment of Sediment Control Practices (including stabilized construction entrances/exits)
 - Deployment of Construction Site Management Practices (including concrete washout facilities, chemical storage, refueling locations, etc.)
 - Paving, saw-cutting, and any other pavement related operations
 - Major planned stockpiling operations
 - Time frame for other significant long-term operations or activities that may plan non-storm water discharges such as dewatering, grinding, etc.
 - Permanent stabilization activities for each area of the project
2. The Contractor and each subcontractor shall provide, as an attachment to their signed Contractor Certification Statement, a discussion of how they will comply with the requirements of the permit in regard to the following items and provide a graphical representation showing location and type of BMPs to be used when applicable:
 - Vehicle Entrances and Exits - Identify type and location of stabilized construction entrances and exits to be used and how they will be maintained.
 - Material delivery, Storage, and Use - Discuss where and how materials including chemicals, concrete curing compounds, petroleum products, etc. will be stored for this project.
 - Stockpile Management - Identify the location of both on-site and off-site stockpiles. Discuss what BMPs will be used to prevent pollution of storm water from stockpiles.
 - Waste Disposal - Discuss methods of waste disposal that will be used for this project.
 - Spill Prevention and Control - Discuss steps that will be taken in the event of a material spill (chemicals, concrete curing compounds, petroleum, etc.).
 - Concrete Residuals and Washout Wastes - Discuss the location and type of concrete washout facilities to be used on this project and how they will be signed and maintained.
 - Litter Management - Discuss how litter will be maintained for this project (education of employees, number of dumpsters, frequency of dumpster pick-up, etc.).
 - Vehicle and Equipment Cleaning and Maintenance - Identify where equipment cleaning and maintenance locations for this project and what BMPs will be used to ensure containment and spill prevention.

- Dewatering Activities - Identify the controls which will be used during dewatering operations to ensure sediments will not leave the construction site.
- Polymer Flocculants and Treatment Chemicals - Identify the use and dosage of treatment chemicals and provide the Resident Engineer with Material Safety Data Sheets. Describe procedures on how the chemicals will be used and identify who will be responsible for the use and application of these chemicals. The selected individual must be trained on the established procedures.
- Additional measures indicated in the plan.

III. Maintenance

When requested by the Contractor, the Resident Engineer will provide general maintenance guides to the Contractor for the practices associated with this project. The following additional procedures will be used to maintain, in good and effective operating conditions, the vegetation, erosion and sediment control measures and other protective measures identified in this plan. It will be Contractor's responsibility to attain maintenance guidelines for any manufactured BMPs which are to be installed and maintained per manufacture's specifications.

The following is a description of procedures that will be used to maintain, in good and effective operating conditions, vegetation, soil erosion and sediment control measures, and other protective measures identified in this plan and standard specifications:

The contractor will identify an Erosion Control Representative for the project. His duties will be to supervise the maintenance of the soil erosion and sediment control measures and implementation of this plan.

The following shall be the minimum maintenance required:

- A. Vegetative soil erosion measures - the vegetative growth of temporary and permanent seeding, vegetative filters, etc, shall be maintained periodically and supplied adequate watering and fertilizer. The vegetative cover shall be removed and reseeded as necessary.
- B. Aggregate ditch checks / Rock Check Dams shall be cleaned of sediment when the sediment has reached a depth of 50% of the height of the aggregate berm.
- C. Sediment control, silt fence will be examined regularly and repaired as necessary. Sediment shall be removed when it reaches a height equal to 50% of the height of the barrier.
- D. Temporary seeding for erosion control will be repaired when bare spots and washout occur.
- E. Stabilized construction entrances shall have sediment build up removed as necessary.
- F. Inlet filters shall be cleaned on a regular basis.
- G. Temporary and permanent erosion control measures shall be inspected weekly or after any rainfall event in excess of 0.50".

IV. Inspections

Qualified personnel shall inspect disturbed areas of the construction site which have not yet been finally stabilized, structural control measures, and locations where vehicles and equipment enter and exit the site using IDOT Storm Water Pollution Prevention Plan Erosion Control Inspection Report (BC 2259). Such inspections shall be conducted at least once every seven (7) calendar days and within twenty-four (24) hours of the end of a storm or by the end of the following business or work day that is 0.5 inch or greater or equivalent snowfall.

Inspections may be reduced to once per month when construction activities have ceased due to frozen conditions. Weekly inspections will recommence when construction activities are conducted, or if there is 0.5" or greater rain event, or a discharge due to snowmelt occurs.

If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer shall notify the appropriate IEPA Field Operations Section office by e-mail at: epa.swnoncomp@illinois.gov, telephone or fax within twenty-four (24) hours of the incident. The Resident Engineer shall then complete and submit an "Incidence of Non-Compliance" (ION) report for the identified violation within five (5) days of the incident. The Resident Engineer shall use forms provided by IEPA and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of non-compliance shall be signed by a responsible authority in accordance with Part VI. G of the Permit ILR10.

The Incidence of Non-Compliance shall be mailed to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Compliance Assurance Section
1021 North Grand East
Post Office Box 19276
Springfield, Illinois 62794-9276

Additional Inspections Required:

The following is a description of procedures that will be used to maintain, in good and effective operating conditions, vegetation, soil erosion and sediment control measures, and other protective measures identified in this plan and standard specifications:

The contractor will designate an Erosion Control Representative for the project. His duties will be to supervise the maintenance of the soil erosion & sediment control measures and implementation of this plan.

The following shall be the minimum maintenance required:

- A. Vegetative soil erosion measures - the vegetative growth of temporary and permanent seeding, vegetative filters, etc, shall be maintained periodically and supplied adequate watering and fertilizer. The vegetative cover shall be removed and reseeded as necessary.
- B. Pumping basins shall be cleaned of sediment when the sediment has reached a depth of 50% of the height of the aggregate berm.
- C. Sediment control, silt fence will be examined regularly and repaired as necessary. Sediment shall be removed when it reaches a height equal to 50% of the height of the barrier.
- D. Temporary seeding for erosion control will be repaired when bare stops and washout occur.
- E. Stabilized construction entrances shall have sediment build up removed as necessary.³
- F. Inlet filters shall be cleaned on a regular basis
- G. Temporary and permanent erosion control measures shall be inspected weekly or after any rainfall event in excess of 0.50".

The engineer will be responsible for conducting soil erosion and sediment control inspections. The contractor's SESCO shall be notified when the inspections are to take place and is expected to be present during the inspections. A maintenance inspection report will be completed after each inspection. A copy of the report is to be completed by the inspector and stored on-site with a copy given to the contractor. The inspection shall include all disturbed areas of the construction site which have not been finally stabilized, the structural control measures, locations where vehicles enter or exit the site and all major outfalls. Such inspection shall be conducted at least once every seven calendar days and within 24 hours of the end of a rain storm (or equivalent snowfall) that is 0.5 inches or greater. Depth of rain fall will be determined by an on-site rain gauge. The engineer shall read the rain gauge daily and after each rain storm.

- A. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and waterways. Soil erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. If repair is necessary, it will be initiated within 24 hours of the completion of the inspection report. Where discharge locations or points are accessible, they shall be inspected to ascertain whether the measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site tracking.
- B. Based on the results of the inspection, the description of potential pollutant sources and pollution prevention measures shall be evaluated. The storm water pollution prevention plan shall be revised as appropriate as soon as practicable after such inspection. Any changes to this plan resulting from the required inspection shall be implemented within seven calendar days following the inspection.
- C. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of this Stormwater Pollution Prevention Plan, and action taken and retained as part of the plan for at least three years after the date of inspection. The report shall be signed in accordance with the general permit.
- D. If any violations of the provisions of this plan are identified during the conduct of the construction work covered by this plan, the engineer shall complete and file an "incidence of noncompliance" (ion) report for the identified violation. The engineer shall use forms provided by the Illinois Environmental Protection Agency and shall include specific information about the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the non-compliance. All reports of noncompliance shall be signed by a responsible authority in accordance with the general permit. The report of noncompliance shall be mailed to the Incidence of Non-Compliance Address listed above.

V. Failure to Comply

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of a National Pollutant Discharge Elimination System/Erosion and Sediment Control Deficiency Deduction against the Contractor and/or penalties under the Permit ILR10 which could be passed on to the Contractor.



Prior to conducting any professional services at the site covered by this contract, the Contractor and every subcontractor must complete and return to the Resident Engineer the following certification. A separate certification must be submitted by each firm. Attach to this certification all items required by Section II.G of the Storm Water Pollution Prevention Plan (SWPPP) which will be handled by the Contractors/subcontractor completing this form.

Route FAU2298 (Longmeadow Parkway)	Marked Route FAU2298 (Longmeadow Parkway)	Section 13-00215-10-PV
Project Number RS-M-4003(397)	County Kane County	Contract Number 61C41

This certification statement is a part of SWPPP for the project described above, in accordance with the General NPDES Permit No. ILR10 issued by the Illinois Environmental Protection Agency.

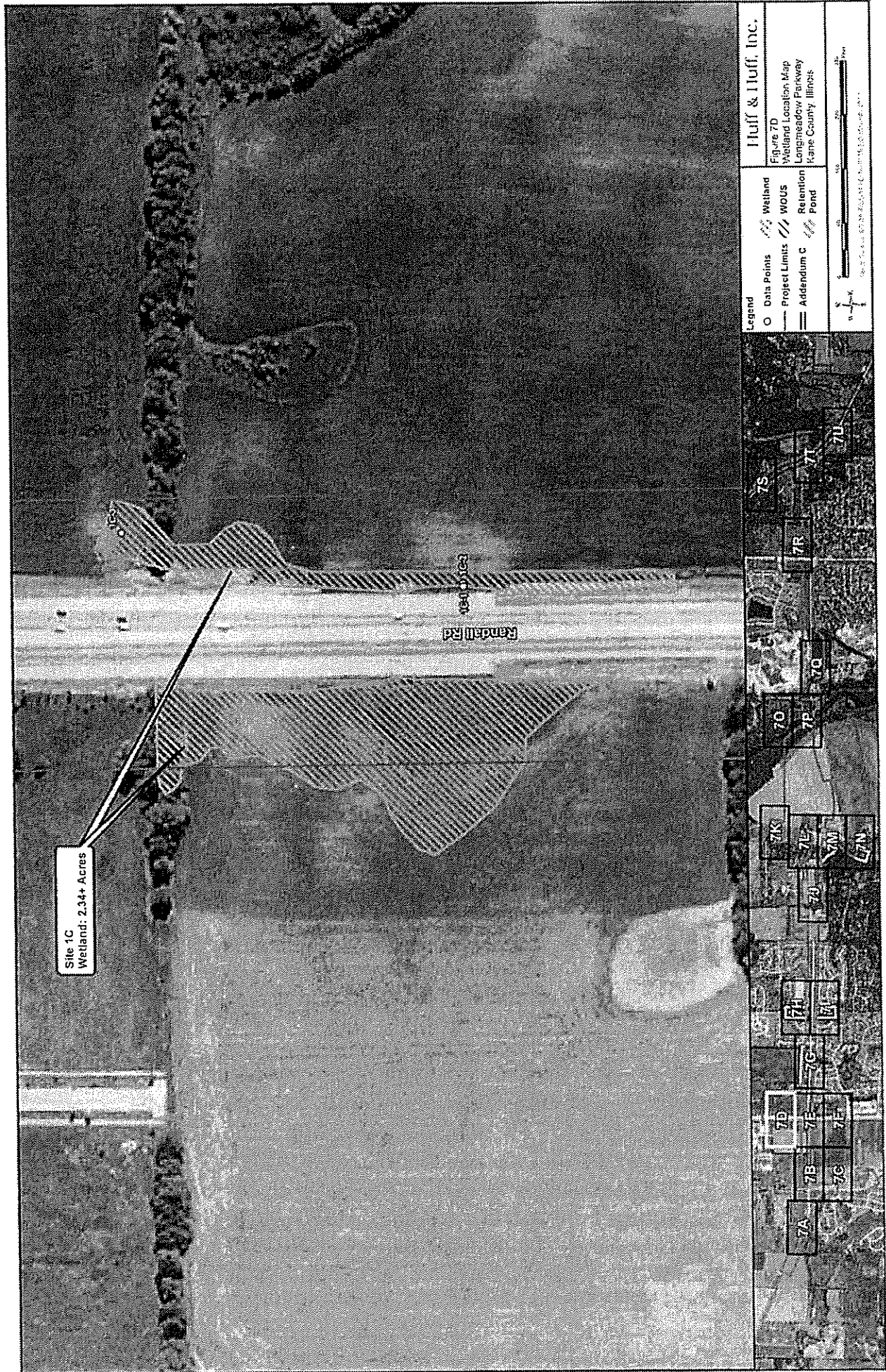
I certify under penalty of law that I understand the terms of the Permit No. ILR10 that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

In addition, I have read and understand all of the information and requirements stated in SWPPP for the above mentioned project; I have received copies of all appropriate maintenance procedures; and, I have provided all documentation required to be in compliance with the Permit ILR10 and SWPPP and will provide timely updates to these documents as necessary.

- Contractor
- Sub-Contractor

Print Name 	Signature
Title 	Date
Name of Firm 	Telephone
Street Address 	City/State/Zip

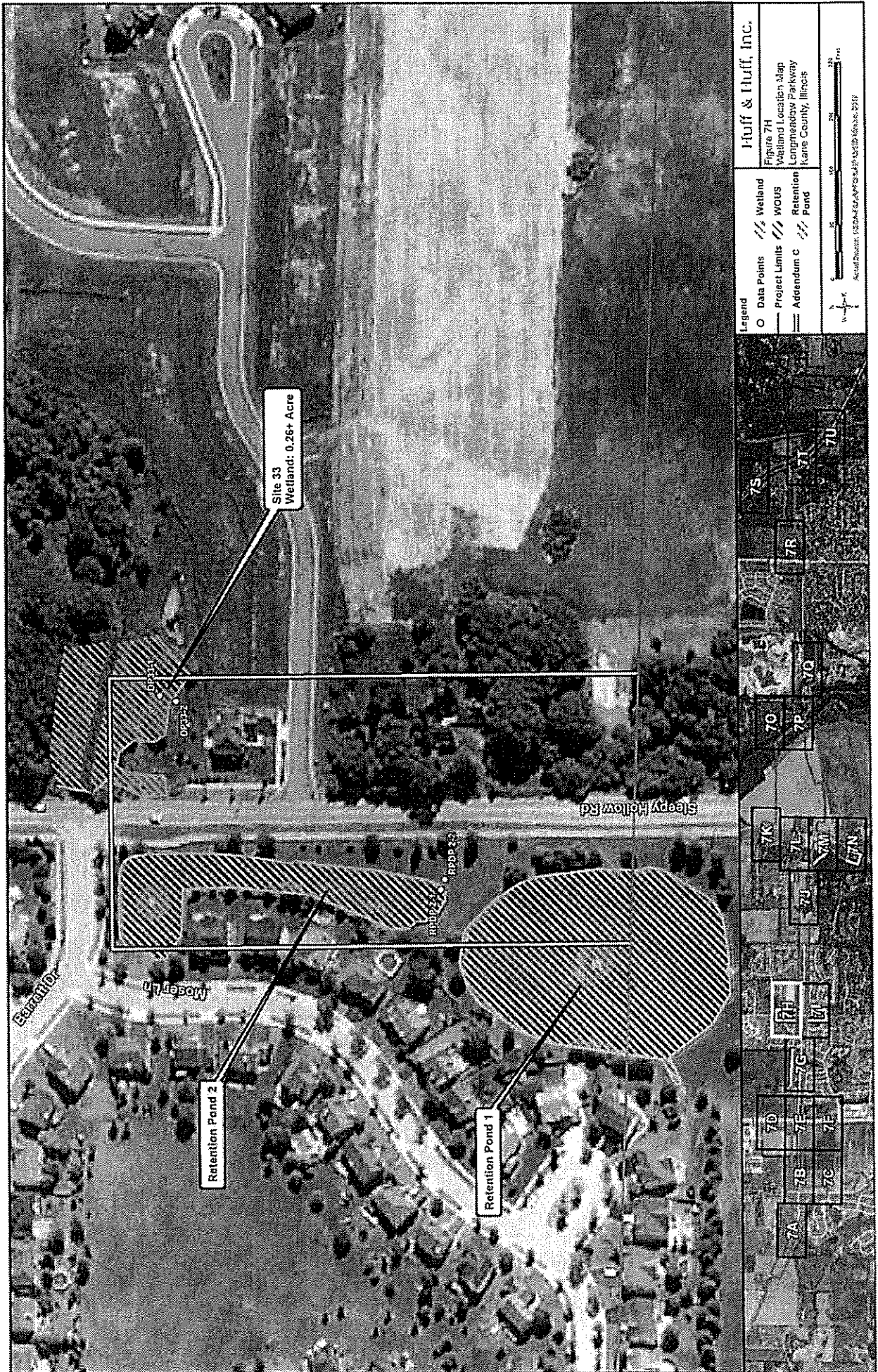
Items which the Contractor/subcontractor will be responsible for as required in Section II.G. of SWPPP:

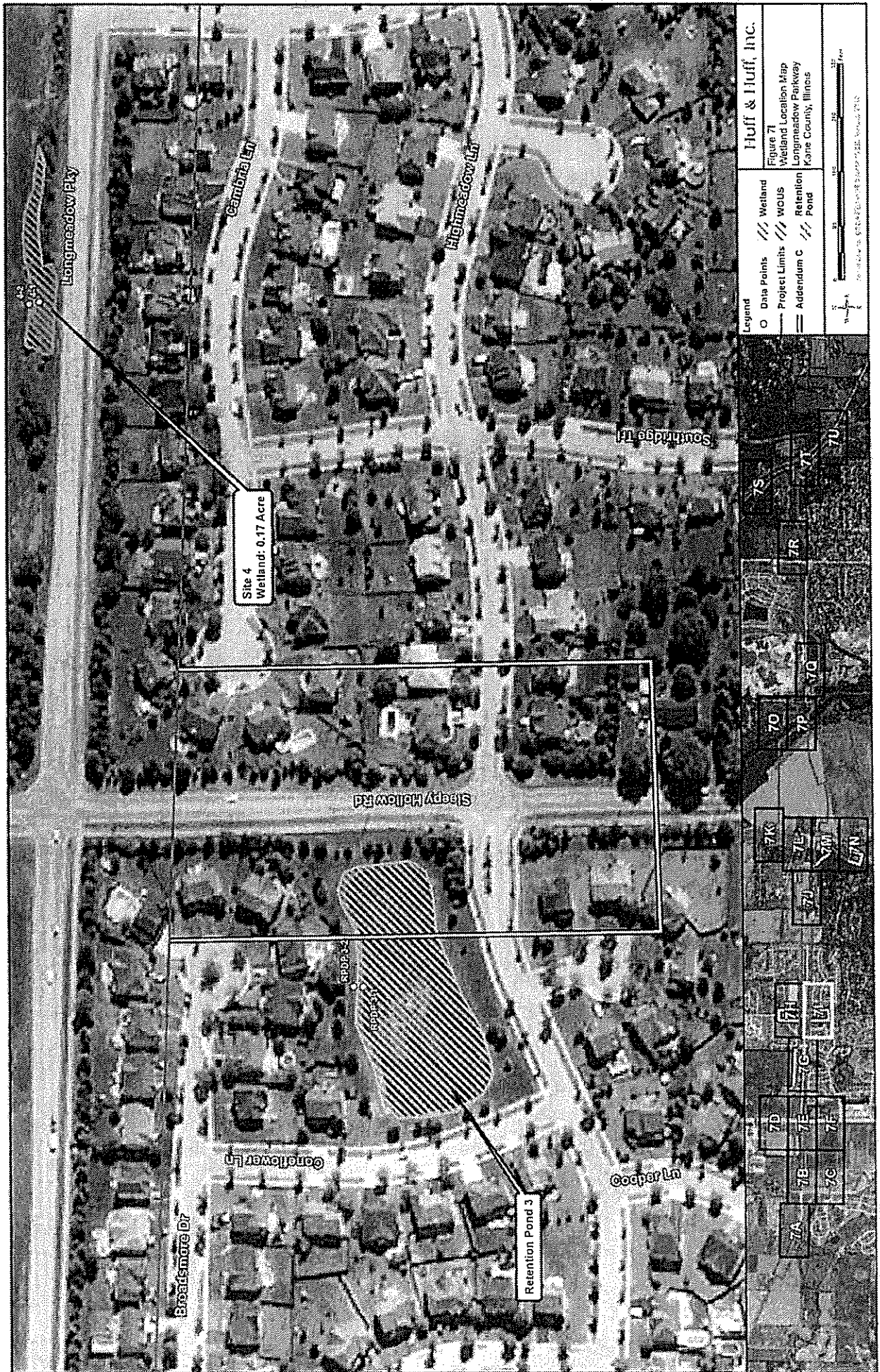


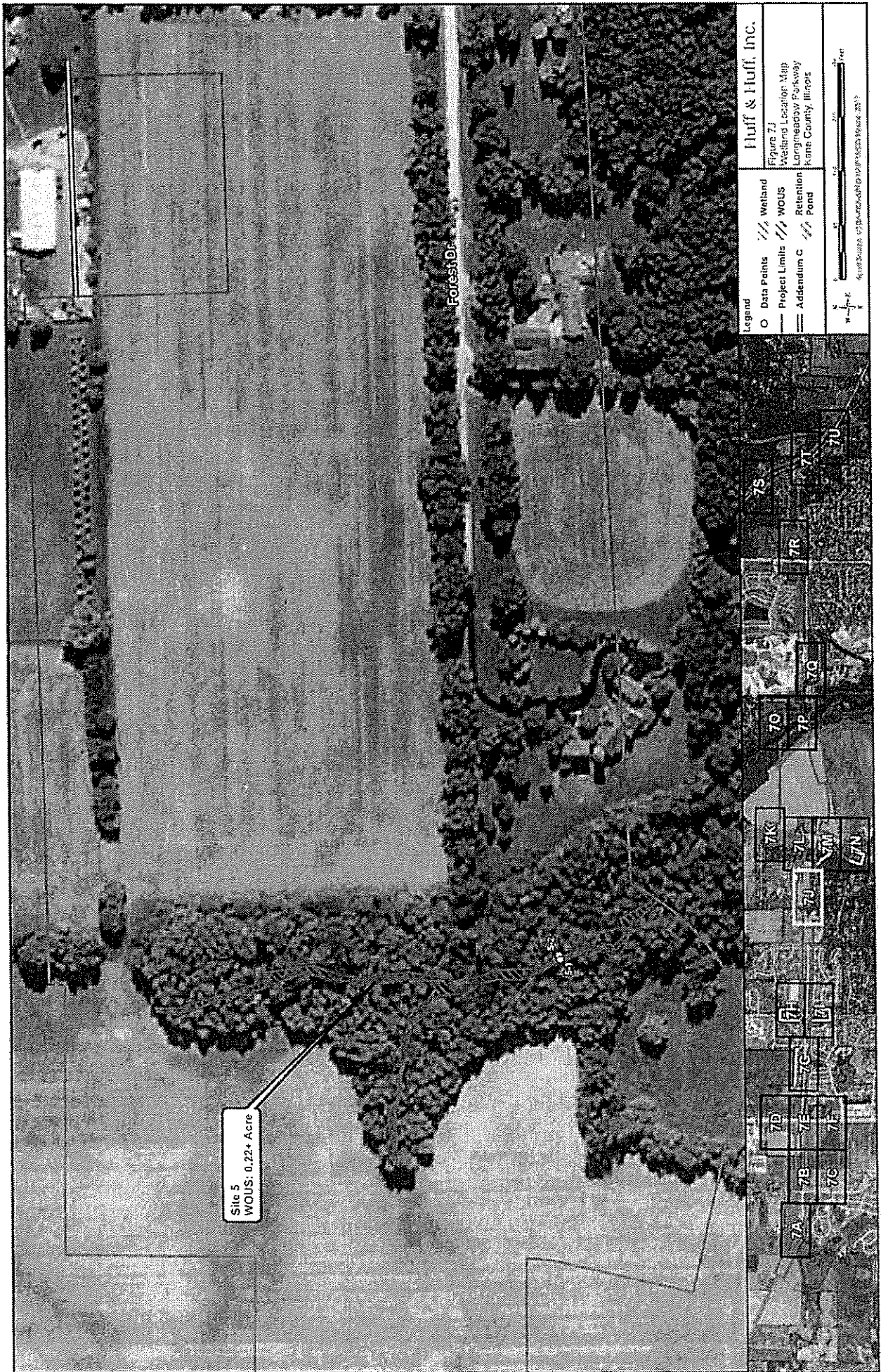












Huff & Huff, Inc.
 Figure 2J
 Wetlands Location Map
 Longmeadow Parkway
 Kane County, Illinois

Legend

- O Data Points
- Project Limits
- Addendum C
- /// Wetland
- /// WOU
- /// Retention Pond

Scale: 0 50 100 Feet
 North Arrow

Site 5
 WOU: 0.22-acre



Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Division of Water Pollution Control Notice of Intent (NOI) for General Permit to Discharge Storm Water Associated with Construction Site Activities

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Permit Section at the above address.

For Office Use Only

OWNER INFORMATION

Permit No. ILR10 _____

Company/Owner Name: Kane County Division of Transportation

Mailing Address: 41W011 Burlington Road

Phone: 630-584-1170

City: St. Charles State: IL Zip: 60175

Fax: 630-584-5265

Contact Person: Carl Schedel, P.E.

E-mail: schoedelcarl@co.kane.il.us

Owner Type (select one) County

CONTRACTOR INFORMATION

MS4 Community: Yes No

Contractor Name: _____

Mailing Address: _____ Phone: _____

City: _____ State: _____ Zip: _____ Fax: _____

CONSTRUCTION SITE INFORMATION

Select One: New Change of information for: ILR10 _____

Project Name: Longmedow Parkway County: Kane

Street Address: Longmeadow Pkwy & Randall Rd City: Algonquin IL Zip: 60102

Latitude: 42 08 24.36N Longitude: 88 20 08.52W 8,9,10 43N 7.8E
(Deg) (Min) (Sec) (Deg) (Min) (Sec) Section Township Range

Approximate Construction Start Date Mar 1, 2017 Approximate Construction End Date Nov 24, 2017

Total size of construction site in acres: 108 acres

If less than 1 acre, is the site part of a larger common plan of development?

Yes No

Fee Schedule for Construction Sites: Less than 5 acres - \$250 5 or more acres - \$750
--

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Has the SWPPP been submitted to the Agency? Yes No

(Submit SWPPP electronically to: epa.constilr10swppp@illinois.gov)

Location of SWPPP for viewing: Address: Engineer's Field Office City: Algonquin

SWPPP contact information: Inspector qualifications:

Contact Name: Carl Schoedel P.E.

Phone: 630-584-1170 Fax: 630-584-5265 E-mail: schoedelcarl@co.kane.il.us

Project inspector, if different from above Inspector qualifications:

Inspector's Name: V3 Companies of Illinois

Phone: 630-724-9200 Fax: _____ E-mail: _____

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42) and may also prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

TYPE OF CONSTRUCTION (select one)

Construction Type Transportation

SIC Code: _____

Type a detailed description of the project:

Construction includes the widening and reconstruction of Randall Road for installation of auxiliary turn lanes and a traffic signal and widening Longmenadow Parkway from a 2-lane section to a 4-lane lane divided by a median. A multi-use path will be installed for the length of Longmeadow Parkway. The improvements will use a combination of enclosed drainage with curb and gutter and open swale drainage systems. Stormwater detention is provided in compliance with Kane County & IDOT requirements. Water quality runoff volume retention is also provided in compliance with Kane County requirements.

HISTORIC PRESERVATION AND ENDANGERED SPECIES COMPLIANCE

Has the project been submitted to the following state agencies to satisfy applicable requirements for compliance with Illinois law on:

Historic Preservation Agency Yes No

Endangered Species Yes No

RECEIVING WATER INFORMATION

Does your storm water discharge directly to: Waters of the State or Storm Sewer

Owner of storm sewer system: Kane County Division of Transportation, Village of Algonquin

Name of closest receiving water body to which you discharge: Fox River

Mail completed form to: Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Permit Section
Post Office Box 19276
Springfield, Illinois 62794-9276
or call (217) 782-0610
FAX: (217) 782-9891

Or submit electronically to: epa.constilr10swppp@illinois.gov

I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the provisions of the permit, including the development and implementation of a storm water pollution prevention plan and a monitoring program plan, will be complied with.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Owner Signature:

Date:

Carl Schoedel
Printed Name:

County Engineer
Title:

INSTRUCTIONS FOR COMPLETION OF CONSTRUCTION ACTIVITY NOTICE OF INTENT (NOI) FORM

Submit original, electronic or facsimile copies. Facsimile and/or electronic copies should be followed-up with submission of an original signature copy as soon as possible. Please write "copy" under the "For Office Use Only" box in the upper right hand corner of the first page.

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Permit Section at:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Permit Section
Post Office Box 19276
Springfield, Illinois 62794-9276
or call (217) 782-0610

FAX: (217) 782-9891

Or submit electronically to: epa.constilr10swppp@illinois.gov

Reports must be typed or printed legibly and signed.

Any facility that is not presently covered by the General NPDES Permit for Storm Water Discharges From Construction Site Activities is considered a new facility.

If this is a change in your facility information, renewal, etc., please fill in your permit number on the appropriate line, changes of information or permit renewal notifications do not require a fee.

NOTE: FACILITY LOCATION IS NOT NECESSARILY THE FACILITY MAILING ADDRESS, BUT SHOULD DESCRIBE WHERE THE FACILITY IS LOCATED.

Use the formats given in the following examples for correct form completion.

	Example	Format
Section	12	1 or 2 numerical digits
Township	12N	1 or 2 numerical digits followed by "N" or "S"
Range	12W	1 or 2 numerical digits followed by "E" or "W"

For the Name of Closest Receiving Waters, do not use terms such as ditch or channel. For unnamed tributaries, use terms which include at least a named main tributary such as "Unnamed Tributary to Sugar Creek to Sangamon River."

Submission of initial fee and an electronic submission of Storm Water Pollution Prevention Plan (SWPPP) for Initial Permit prior to the Notice of Intent being considered complete for coverage by the ILR10 General Permits. Please make checks payable to: Illinois EPA at the above address.

Construction sites with less than 5 acres of land disturbance - fee is \$250.

Construction sites with 5 or more acres of land disturbance - fee is \$750.

SWPPP should be submitted electronically to: epa.constilr10swppp@illinois.gov. When submitting electronically, use Project Name and City as indicated on NOI form.



BORING LOG BLA-B01

wangeng@wangeng.com
 1145 N Main St.
 Lombard, IL 60148
 Telephone: 630-953-9928
 Fax: 630-953-9938

WEI Job No.: 310-06-01

Client **Crawford, Murphy, & Tilly, Inc.**
 Project **Longmeadow Parkway Corridor**
 Location **Kane County, Illinois**

Datum: NAVD 88
 Elevation: 911.85 ft
 North: 1993539.72 ft
 East: 985715.72 ft
 Station: 2079+29.20
 Offset: 73.98 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	910.8	13-inch thick, dark brown, Organic SILTY LOAM															
		--TOPSOIL--															
		Loose, brown ORGANIC SILT		X	1	2 2 3	NP	94									
	908.9	Very soft to soft, gray SILTY CLAY, little gravel		X	2	3 2 4	0.25 P	18									
			5	X													
				X	3	2 2 3	< 0.25 P	14									
	903.9	Stiff, gray SILTY CLAY LOAM, trace gravel		X	4	2 3 5	1.15 B	14									
			10	X													
				X	5	3 4 6	1.39 B	13									
				X													
	896.9	Boring terminated at 15.00 ft	15	X	6	3 6 9	1.56 B	12									
			20														
			25														

GENERAL NOTES

Begin Drilling **09-16-2014** Complete Drilling **09-16-2014**
 Drilling Contractor **Wang Testing Services** Drill Rig **D-25 ATV**
 Driller **P&P** Logger **D. Kolpacki** Checked by **B. Wilson**
 Drilling Method **3.25" HSA, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling DRY
 At Completion of Drilling DRY
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG INC. 3100601.GPJ WANGENG.GDT 12/22/14



BORING LOG BLA-B02

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WEI Job No.: 310-06-01

Client: **Crawford, Murphy, & Tilly, Inc.**
 Project: **Longmeadow Parkway Corridor**
 Location: **Kane County, Illinois**

Datum: NAVD 88
 Elevation: 911.41 ft
 North: 1993526.73 ft
 East: 986036.27 ft
 Station: 2082+50.02
 Offset: 74.41 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	910.2	14-inch thick, organic SILTY LOAM --TOPSOIL-- Very soft to stiff, gray SILTY CLAY, trace gravel	1	X	1	1	0.25	28									
			2	X	2	2	P										
			3	X	3	3											
			4	X	4	4											
			5	X	5	5	0.50	13									
			6	X	6	6											
			7	X	7	7											
			8	X	8	8											
			9	X	9	9											
	903.4	Medium dense, gray SANDY GRAVEL --Saturated--	10	X	4	5	NP										
			11	X	5	8											
			12	X	5	11											
			13	X	5	16											
	898.4	Dense, pinkish gray LOAM, little gravel	14	X	5	8	NP	14									
			15	X	6	14											
	896.4	Boring terminated at 15.00 ft	15	X	6	16	NP	9									

GENERAL NOTES

Begin Drilling **09-15-2014** Complete Drilling **09-15-2014**
 Drilling Contractor **Wang Testing Services** Drill Rig **D-25 ATV**
 Driller **P&P** Logger **D. Kolpacki** Checked by **B. Wilson**
 Drilling Method **2.25" HSA, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling ∇ **8.00 ft**
 At Completion of Drilling \blacktriangledown **8.00 ft**
 Time After Drilling **NA**
 Depth to Water ∇ **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG INC. 3100601.GPJ WANGENG.GDT 12/22/14



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WEI Job No.: 310-06-01

Client: **Crawford, Murphy, & Tilly, Inc.**
 Project: **Longmeadow Parkway Corridor**
 Location: **Kane County, Illinois**

Datum: NAVD 88
 Elevation: 885.32 ft
 North: 1993530.72 ft
 East: 991776.79 ft
 Station: 2140+00.83
 Offset: 205.59 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	884.0	16-inch thick, brown SILTY LOAM															
		--TOPSOIL--															
		Stiff to very stiff, brown CLAY LOAM, trace gravel		X	1	3 3 5	2.00 P	14									
			5	X	2	3 4 4	1.23 S	13									
				X	3	3 5 7	2.38 S	13									
			10	X	4	3 7 8	3.53 B	13									
				X	5	4 6 12	2.13 B	13									
	871.7	Dense, brown SANDY LOAM, trace gravel		X	6	5 13 23	NP	12									
	870.3	--Moist--	15														
		Boring terminated at 15.00 ft															
			20														
			25														

GENERAL NOTES

Begin Drilling **10-27-2014** Complete Drilling **10-27-2014**
 Drilling Contractor **Wang Testing Services** Drill Rig **D-50 ATV**
 Driller **K&K** Logger **A. Happel** Checked by **B. Wilson**
 Drilling Method **3.25" HSA; boring backfilled upon completion**

WATER LEVEL DATA

While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 3100601.GPJ WANGENG.GDT 12/22/14



BORING LOG BLA-B04

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WEI Job No.: 310-06-01

Client: **Crawford, Murphy, & Tilly, Inc.**
 Project: **Longmeadow Parkway Corridor**
 Location: **Kane County, Illinois**

Datum: NAVD 88
 Elevation: 885.29 ft
 North: 1993538.26 ft
 East: 992174.57 ft
 Station: 2144+00.44
 Offset: 200.65 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	883.8	15-inch thick, brown SILTY LOAM															
		--TOPSOIL--															
		Stiff to hard, brown CLAY LOAM to LOAM, trace gravel			1	3 3 4	1.64 S	14									
			5		2	3 5 6	2.30 S	13									
					3	4 5 7	4.18 B	14									
	875.8	Medium dense, brown LOAM	10		4	3 4 6	1.39 S	15									
	874.8	Hard drilling from 10'-11'; possible cobble--															
		Medium dense, brown SANDY LOAM, trace gravel			5	7 4 6	NP	13									
		--Moist--															
	870.3		15		6	4 6 10	NP	15									
		Boring terminated at 15.00 ft															

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling **10-27-2014** Complete Drilling **10-27-2014**
 Drilling Contractor **Wang Testing Services** Drill Rig **D-50 ATV**
 Driller **K&K** Logger **A. Happel** Checked by **B. Wilson**
 Drilling Method **3.25" HSA; boring backfilled upon completion**

While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 3100601.GPJ WANGENG.GDT 12/22/14



BORING LOG BLA-R01

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WEI Job No.: 310-06-01

Client: **Crawford, Murphy, & Tilly, Inc.**
 Project: **Longmeadow Parkway Corridor**
 Location: **Kane County, Illinois**

Datum: NAVD 88
 Elevation: 919.14 ft
 North: 1993395.84 ft
 East: 987381.17 ft
 Station: 2095+99.21
 Offset: 2.87 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	918.84	1/4-inch thick, ASPHALT															
	918.5	-PAVEMENT-															
		4-inch thick, CRUSHED STONE															
		-BASE COURSE-															
		Very stiff to hard, brown and gray SILTY CLAY LOAM, trace gravel			1	7 5 5 6	4.50	9									
		-FILL-															
	914.6	Soft to medium stiff, black and brown ORGANIC SILTY CLAY to SILTY CLAY LOAM, some silt and sand lenses	5		2	2 4 4 4	2.50	13									
					3	2 3 4 4	1.00	45									
					4	2 2 3 2	0.50	25									
			10		5	2 2 2 2	0.90	42									
					6	1 1 2	0.74	59									
					7	1 2 1	0.25	51									
			15		8	0 0 1	0.57	65									
	901.1	Very soft to soft, gray and brown SILTY CLAY, trace gravel			9	2 1 2	0.41	17									
			20		10	2 3 4 3	< 0.25	15									
	897.1	Boring terminated at 22.00 ft															
			25														

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling **06-18-2014** Complete Drilling **06-18-2014**
 Drilling Contractor **Wang Testing Services** Drill Rig **B-57 TMR**
 Driller **R&D** Logger **A. Tomaras** Checked by **B. Wilson**
 Drilling Method **2.25" HSA; boring backfilled upon completion**

While Drilling ∇ **13.00 ft**
 At Completion of Drilling ∇ **DRY**
 Time After Drilling **NA**
 Depth to Water ∇ **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 3100601.GPJ WANGENG.GDT 2/26/15



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WEI Job No.: 310-06-01

Client **Crawford, Murphy, & Tilly, Inc.**
 Project **Longmeadow Parkway Corridor**
 Location **Kane County, Illinois**

Datum: NAVD 88
 Elevation: 920.47 ft
 North: 1993336.94 ft
 East: 987384.77 ft
 Station: 2096+05.13
 Offset: 61.59 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	
	920.23	23-inch thick, dark brown SILTY LOAM --TOPSOIL-- Stiff to very stiff, brown SILTY CLAY LOAM, trace gravel --FILL--			1	3 3 4	1.07 B	15										
			5		2	3 4 6	2.13 B	12										
	915.0	Stiff, brown and gray SILTY CLAY LOAM, little gravel			3	3 5 7	1.64 B	14										
	912.5	Medium stiff to stiff, brown CLAY LOAM, little gravel	10		4	3 4 6	1.07 B	14										
					5	3 7 8	0.98 B	15										
	907.5	Stiff, gray SILTY CLAY LOAM, little gravel	15		6	3 6 9	1.72 B	13										
	903.7	Very dense, gray SILTY LOAM, trace gravel			7	15 16 28	NR											
	900.5	Boring terminated at 20.00 ft	20		8	25 26 25	NP	13										

WANGENGINC 3100601.GPJ WANGENG.GDT 12/22/14

GENERAL NOTES

Begin Drilling **09-17-2014** Complete Drilling **09-17-2014**
 Drilling Contractor **Wang Testing Services** Drill Rig **D-25 ATV**
 Driller **P&P** Logger **D. Kolpacki** Checked by **B. Wilson**
 Drilling Method **2.25" HSA, boring backfilled upon completion**

WATER LEVEL DATA

White Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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WEI Job No.: 310-06-01

Client **Crawford, Murphy, & Tilly, Inc.**
 Project **Longmeadow Parkway Corridor**
 Location **Kane County, Illinois**

Datum: NAVD 88
 Elevation: 873.93 ft
 North: 1993417.09 ft
 East: 991599.58 ft
 Station: 2138+19.47
 Offset: 94.78 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
	872.9	12-inch thick, black SILTY LOAM --TOPSOIL--								848.4	Loose, gray LOAM, trace gravel						
		Very stiff to hard, dark brown and black SILTY CLAY LOAM, trace gravel	1	X	1	7 5 7	4.25 P	19				11	X	11	3 4 5	NP	10
			5	X	2	3 3 3	3.50 P	19				30	X	12	3 3 4	NP	10
	868.4	Stiff (1.25 P), brown and gray CLAY LOAM								842.2	Medium dense, gray SILT, trace gravel						
	857.8	Loose to medium dense, brown and gray, LOAM, trace gravel --Moist--									--Saturated--						
			3	X	3	2 3 5	NP	11				35	X	13	4 7 10	NR	15
			10	X	4	6 7 8	NP	9									
	863.4	Loose to medium dense, brown and gray, fine to medium SAND --Saturated--															
			5	X	5	2 2 3	NP	28									
			15	X	6	7 12 17	NP	22		834.9	Stiff to very stiff, gray CLAY LOAM, trace gravel	40	X	14	5 6 8	1.72 B	13
	859.4	Medium stiff to hard, gray CLAY LOAM, trace gravel															
			7	X	7	4 8 11	1.07 B	10									
			20	X	8	3 5 7	1.39 B	11									
			25	X	10	3 4 6	0.82 B	11		828.9	Boring terminated at 45.00 ft	45	X	15	9 13 20	2.95 B	13

WANGENG 3100601.GPJ WANGENG.GDT 12/22/14

GENERAL NOTES

Begin Drilling **10-30-2014** Complete Drilling **10-30-2014**
 Drilling Contractor **Wang Testing Services** Drill Rig **D-50 ATV**
 Driller **K&K** Logger **A. Happel** Checked by **B. Wilson**
 Drilling Method **3.25" HSA; boring backfilled upon completion**

WATER LEVEL DATA

While Drilling ∇ **10.50 ft**
 At Completion of Drilling \blacktriangledown **9.00 ft**
 Time After Drilling **NA**
 Depth to Water ∇ **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



BORING LOG BLA-S03

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WEI Job No.: 310-06-01

Client: **Crawford, Murphy, & Tilly, Inc.**
 Project: **Longmeadow Parkway Corridor**
 Location: **Kane County, Illinois**

Datum: NAVD 88
 Elevation: 870.68 ft
 North: 1993227.81 ft
 East: 991607.45 ft
 Station: 2138+25.79
 Offset: 94.56 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
	869.7	12-inch thick, black SILTY LOAM --TOPSOIL--															
		Stiff to very stiff, brown and gray SILTY CLAY LOAM, trace gravel		X	1	4 4 6	3.20 S	18					X	11	21 25 18	NP	8
				X	2	2 2 5	1.64 S	19				30	X	12	12 16 23	NP	10
	865.2	Dense, brown and gray SANDY LOAM, little gravel --Saturated--		X	3	10 16 18	NP	17					X	13	16 40 50/4"	NP	10
				X	4	10 15 15	NP	9		836.2 835.9	Brown and gray, fine SAND Hard, pinkish gray CLAY LOAM, trace gravel		X	14	14 19 26	8.61 B	10
	858.9	Dense to very dense, pinkish gray to gray SILTY LOAM, little gravel		O	5	12 13 20	NR										
				X	6	13 14 21	NP	9		830.7	Boring terminated at 40.00 ft		X	14	14 19 26	8.61 B	10
				X	7	7 24 35	NP	9									
				X	8	22 27 33	NP	5				45					
				X	9	20 28 31	NP	7									
				X	10	20 30 29	NP	7				50					

GENERAL NOTES

Begin Drilling **10-30-2014** Complete Drilling **10-30-2014**
 Drilling Contractor **Wang Testing Services** Drill Rig **D-50 ATV**
 Driller **K&K** Logger **A. Happel** Checked by **B. Wilson**
 Drilling Method **3.25" HSA; boring backfilled upon completion**

WATER LEVEL DATA

While Drilling ∇ **5.50 ft**
 At Completion of Drilling ∇ **34.00 ft**
 Time After Drilling **NA**
 Depth to Water ∇ **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG 3100601.GPJ WANGENG.GDT 12/22/14



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BORING LOG PDB-01

WEI Job No.: 310-06-01

Client: **Crawford, Murphy, & Tilly, Inc.**
 Project: **Longmeadow Parkway Corridor**
 Location: **Kane County, Illinois**

Datum: NAVD 88
 Elevation: 913.82 ft
 North: 1993498.26 ft
 East: 985669.37 ft
 Station: 2078+84.63
 Offset: 30.62 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	912.7	14-inch thick, dark brown, organic SILTY LOAM --TOPSOIL--			1	2 2 4	1.25 P	19									
		Stiff, brown and gray SILTY CLAY LOAM, trace gravel			2	2 5 6	1.39 B	14									
					3	2 4 6	1.72 B	13									
	904.3	Medium dense, pinkish gray LOAM, trace gravel	10		4	3 9 12	1.23 B	14									
					5	10 9 14	NP	9									
	898.8	Boring terminated at 15.00 ft	15		6	4 7 7	NP	9									
			20														
			25														

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling: **09-15-2014** Complete Drilling: **09-15-2014**
 Drilling Contractor: **Wang Testing Services** Drill Rig: **D-25 ATV**
 Driller: **P&P** Logger: **D. Kolpacki** Checked by: **B. Wilson**
 Drilling Method: **2.25" HSA, boring backfilled upon completion**

While Drilling: **DRY**
 At Completion of Drilling: **DRY**
 Time After Drilling: **NA**
 Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG PDB-02

WEI Job No.: 310-06-01

Client: **Crawford, Murphy, & Tilly, Inc.**
 Project: **Longmeadow Parkway Corridor**
 Location: **Kane County, Illinois**

Datum: NAVD 88
 Elevation: 913.11 ft
 North: 1993494.11 ft
 East: 985786.92 ft
 Station: 2080+02.25
 Offset: 31.39 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	912.1	12-inch thick, dark brown, organic SILT LOAM --TOPSOIL--															
		Stiff, gray SILTY CLAY to SILTY CLAY LOAM, trace gravel	1	X	1	3 3 5	1.75 P	23									
			5	X	2	3 3 5	1.31 B	15									
				X	3	4 5 5	1.97 B	12									
			10	X	4	2 4 5	1.97 B	11									
	902.6	Medium dense, pinkish gray LOAM, little gravel															
				X	5	6 7 7	NP	9									
	898.1		15	X	6	4 5 9	NP	11									
		Boring terminated at 15.00 ft															
			20														
			25														

GENERAL NOTES

Begin Drilling: **09-16-2014** Complete Drilling: **09-16-2014**
 Drilling Contractor: **Wang Testing Services** Drill Rig: **D-25 ATV**
 Driller: **P&P** Logger: **D. Kolpacki** Checked by: **B. Wilson**
 Drilling Method: **2.25" HSA, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **DRY**
 At Completion of Drilling: **DRY**
 Time After Drilling: **NA**
 Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG INC. 3100601.GPJ WANGENG.GDT 12/22/14



BORING LOG PDB-03

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WEI Job No.: 310-06-01

Client **Crawford, Murphy, & Tilly, Inc.**
 Project **Longmeadow Parkway Corridor**
 Location **Kane County, Illinois**

Datum: NAVD 88
 Elevation: 911.35 ft
 North: 1993489.70 ft
 East: 985887.67 ft
 Station: 2081+03.10
 Offset: 31.20 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	910.6	9-inch thick, dark brown, organic SILTY LOAM															
	909.7	11-inch thick, brown PEAT			1	1 1 2	NP	186									
		Very loose, brown, organic SILT															
	907.1	Soft to stiff, gray SILTY CLAY LOAM, little gravel	5		2	1 0 1	NR										
					3	1 2 2	0.25 P	16									
					4	1 3 6	1.25 P	15									
					5	3 5 7	1.23 B	16									
					6	4 7 10	1.72 B	12									
	896.4	Boring terminated at 15.00 ft	15														

GENERAL NOTES

Begin Drilling **09-16-2014** Complete Drilling **09-16-2014**
 Drilling Contractor **Wang Testing Services** Drill Rig **D-25 ATV**
 Driller **P&P** Logger **D. Kolpacki** Checked by **B. Wilson**
 Drilling Method **2.25" HSA, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG INC 3100601.GPJ WANGENG.GDT 12/22/14



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WEI Job No.: 310-06-01

Client: **Crawford, Murphy, & Tilly, Inc.**
 Project: **Longmeadow Parkway Corridor**
 Location: **Kane County, Illinois**

Datum: NAVD 88
 Elevation: 912.75 ft
 North: 1993485.97 ft
 East: 985985.89 ft
 Station: 2082+01.38
 Offset: 31.58 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	912.2	7-inch thick, dark brown, organic SILTY LOAM --TOPSOIL-- Loose, brown SANDY LOAM, trace gravel --FILL--	0-5	X	1	4 4 5	NP	12									
			5-10	X	2	4 4 5	NP	12									
	907.3	Soft to medium stiff, gray SILTY CLAY, trace gravel	10-15	X	3	2 4 4	0.82 B	14									
			15-20	X	4	2 2 4	0.49 B	26									
	902.3	Dense, gray SILTY LOAM, some gravel --Saturated--	20-25	X	5	10 16 19	NP	12									
	899.8	Very stiff, gray SILTY CLAY LOAM, little gravel	25-30	X	6	12 10 10	2.00 P	14									
	897.8	Boring terminated at 15.00 ft	30-35														

GENERAL NOTES

Begin Drilling **09-16-2014** Complete Drilling **09-16-2014**
 Drilling Contractor **Wang Testing Services** Drill Rig **D-25 ATV**
 Driller **P&P** Logger **D. Kolpacki** Checked by **B. Wilson**
 Drilling Method **2.25" HSA, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling ∇ **11.50 ft**
 At Completion of Drilling ∇ **11.50 ft**
 Time After Drilling **NA**
 Depth to Water ∇ **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG PDB-05

WEI Job No.: 310-06-01

Client: **Crawford, Murphy, & Tilly, Inc.**
 Project: **Longmeadow Parkway Corridor**
 Location: **Kane County, Illinois**

Datum: NAVD 88
 Elevation: 911.04 ft
 North: 1993480.74 ft
 East: 986086.12 ft
 Station: 2083+01.75
 Offset: 30.55 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	909.9	14-inch thick, dark brown, organic SILTY LOAM															
		--TOPSOIL--															
		Very loose, brown PEAT			1	1 1 1	NP	341									
			5		2	1 0 1	NP	535									
	905.5	Loose, gray SILTY LOAM, little gravel															
		--Saturated--															
	903.0	Soft, gray SILTY CLAY, little gravel			3	2 2 2	NP	14									
			10		4	1 2 3	0.49 B	12									
	900.5	Medium dense, gray SILTY LOAM, trace gravel															
					5	4 7 5	NP	14									
	898.0	Medium dense, gray, coarse SAND, some gravel															
					6	3 5 6	NP	12									
	896.0	Boring terminated at 15.00 ft	15														
			20														
			25														

GENERAL NOTES

Begin Drilling **09-16-2014** Complete Drilling **09-16-2014**
 Drilling Contractor **Wang Testing Services** Drill Rig **D-25 ATV**
 Driller **P&P** Logger **D. Kolpacki** Checked by **B. Wilson**
 Drilling Method **2.25" HSA, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling ∇ **6.50 ft**
 At Completion of Drilling \blacktriangledown **12.00 ft**
 Time After Drilling **NA**
 Depth to Water ∇ **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG PDB-06

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WEI Job No.: 310-06-01

Client **Crawford, Murphy, & Tilly, Inc.**
 Project **Longmeadow Parkway Corridor**
 Location **Kane County, Illinois**

Datum: NAVD 88
 Elevation: 911.24 ft
 North: 1993539.24 ft
 East: 985836.15 ft
 Station: 2080+49.54
 Offset: 78.54 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
	910.0	15-inch thick, dark brown, organic SILTY LOAM --TOPSOIL--			1	1 1 1	NP	151									
	908.2	Very loose, brown, ORGANIC SILT			2	1 3 4	NP	14									
	905.7	Loose, gray SILTY LOAM, some gravel --Saturated--			3	1 2 3	0.25 P	19									
		Very soft to very stiff, gray SILTY CLAY LOAM, trace gravel			4	2 3 4	1.15 B	13									
					5	5 6 10	1.00 P	14									
					6	4 6 9	1.00 P	14									
					7	5 5 11	1.00 P	15									
					8	3 5 10	0.82 B	14									
					9	8 10 10	2.13 B	10									
	888.2	Medium dense, pinkish gray LOAM, trace gravel			10	8 11 14	NP	9									
	886.2				25												

Boring terminated at 25.00 ft

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling **09-15-2014** Complete Drilling **09-15-2014**
 Drilling Contractor **Wang Testing Services** Drill Rig **D-25 ATV**
 Driller **P&P** Logger **D. Kolpacki** Checked by **B. Wilson**
 Drilling Method **2.25" HSA, boring backfilled upon completion**

While Drilling ∇ **4.00 ft**
 At Completion of Drilling \blacktriangledown **3.00 ft**
 Time After Drilling **NA**
 Depth to Water ∇ **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC_3100601.GPJ WANGENG.GDT 12/22/14



BORING LOG PDB-07

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WEI Job No.: 310-06-01
 Client: **Crawford, Murphy, & Tilly, Inc.**
 Project: **Longmeadow Parkway Corridor**
 Location: **Kane County, Illinois**

Datum: NAVD 88
 Elevation: 910.98 ft
 North: 1993536.41 ft
 East: 985936.19 ft
 Station: 2081+49.62
 Offset: 79.90 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	909.7	15-inch thick, dark brown, organic SILTY LOAM															
		---TOPSOIL---															
		Very loose, brown PEAT		X	1	1 0 1	NP	458									
	906.7	Very soft to very stiff, gray SILTY CLAY LOAM, trace gravel	5	O	2	1 0 0	NR										
				X	3	1 0 2	< 0.25 P	18									
			10	X	4	1 2 4	0.66 B	14									
				X	5	3 4 6	1.64 B	14									
			15	X	6	4 7 9	2.30 B	12									
				X	7	8 13 13	2.62 B	12									
				X	8	4 6 8	1.64 B	13									
	891.0	Boring terminated at 20.00 ft	20	X													
			25														

GENERAL NOTES

Begin Drilling **09-15-2014** Complete Drilling **09-15-2014**
 Drilling Contractor **Wang Testing Services** Drill Rig **D-25 ATV**
 Driller **P&P** Logger **D. Kolpacki** Checked by **B. Wilson**
 Drilling Method **2.25" HSA, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 3100601.GPJ WANGENG.GDT 12/22/14



BORING LOG R-025

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WEI Job No.: 201-23-01

Client **McDonough Associates Inc.**
 Project **Longmeadow Parkway over Fox River**
 Location **Kane County, Illinois**

Datum: NGVD
 Elevation: 922.65 ft
 North: 1993496.30 ft
 East: 984984.14 ft
 Station: 2072+00.08
 Offset: 0.02 R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	921.6	12-inch thick, dark brown SILTY LOAM															
		-TOPSOIL-															
		Loose to medium dense, brown SANDY LOAM			1	3 6 4 4	NP	19									
	918.6	Stiff, gray SILTY CLAY	5		2	4 3 2 4	1.00 P	25									
	916.6	Loose, gray SILTY LOAM			3	4 4 5 5	NP	17									
					4	3 3 3 3	NP	19									
	913.1	Very soft to very stiff, gray SILTY CLAY LOAM	10		5	1 3 3 4	0.25 P	21									
					6	1 1 2 2	0.20 P	21									
					7	1 2 6 7	2.00 P	11									
	907.6	Boring terminated at 15.00 ft	15														
			20														
			25														

GENERAL NOTES

Begin Drilling **06-06-2005** Complete Drilling **06-06-2005**
 Drilling Contractor **PRECON DRILLING** Drill Rig **CME-75 ATV**
 Driller **K** Logger **J. Kosloski** Checked by **B. Fugiel**
 Drilling Method **3.25-inch HSA**

WATER LEVEL DATA

While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



BORING LOG R-026

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WEI Job No.: 201-23-01

Client **McDonough Associates Inc.**
 Project **Longmeadow Parkway over Fox River**
 Location **Kane County, Illinois**

Datum: NGVD
 Elevation: 922.63 ft
 North: 1993483.71 ft
 East: 985283.68 ft
 Station: 2074+99.89
 Offset: 0.06 R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	921.6	12-inch thick, dark brown SILTY LOAM															
		--TOPSOIL--															
	920.1	Stiff, brown SILTY CLAY LOAM			1	5 3 2 2	1.75	24									
		Loose, brown SILTY LOAM					P										
	918.1	Loose, brown SANDY LOAM	5		2	3 3 6 5	NP	15									
	916.6	Loose, brown SILTY LOAM			3	3 3 5 5	NP	19									
	914.6	Medium dense, brown GRAVELLY SAND			4	3 10 8 5	NP	10									
	913.9	Very stiff to hard, brown SILTY CLAY LOAM	10		5	1 1 3 6	2.00	15									
	909.6	Boring terminated at 13.00 ft			6	4 6 14 33	4.50	15									
			15														
			20														
			25														

GENERAL NOTES

Begin Drilling **06-06-2005** Complete Drilling **06-06-2005**
 Drilling Contractor **PRECON DRILLING** Drill Rig **CME-75 ATV**
 Driller **K** Logger **J. Kosloski** Checked by **B. Fugiel**
 Drilling Method **3.25-inch HSA**

WATER LEVEL DATA

While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG 2012301.GPJ WANGENG.GDT 12/22/14



BORING LOG R-027

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WEI Job No.: 201-23-01

Client **McDonough Associates Inc.**
 Project **Longmeadow Parkway over Fox River**
 Location **Kane County, Illinois**

Datum: NGVD
 Elevation: 921.00 ft
 North: 1993471.14 ft
 East: 985583.50 ft
 Station: 2077+99.96
 Offset: 0.07 R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		36-inch, stiff to very stiff, black SILTY CLAY LOAM --TOPSOIL--			1	2 2 1 2	2.00 P	20									
	918.0	Medium stiff to stiff, brown and gray SILTY CLAY, with interbedded sand lenses			2	4 4 4 5	1.25 P	26									
			5		3	5 4 6 6	0.75 P	15									
	913.5	Medium dense, brown and gray SANDY LOAM			4	2 5 6 9	1.50 P	14									
			10		5	9 7 11 17											
	910.5	Very stiff, gray SILTY CLAY LOAM			6	4 16 7 8	0.75 P	13									
					7	3 4 7 9	2.25 P	11									
	907.0	Boring terminated at 14.00 ft	15														
			20														
			25														

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling **04-27-2005** Complete Drilling **04-27-2005**
 Drilling Contractor **PRECON DRILLING** Drill Rig **CME 55 TMR**
 Driller **K&D** Logger **J. Kasnick** Checked by **B. Fugiel**
 Drilling Method **3.25-inch HSA**

While Drilling ∇ **9.00 ft**
 At Completion of Drilling \blacktriangledown **8.00 ft**
 Time After Drilling **NA**
 Depth to Water ∇ **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG R-028

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WEI Job No.: 201-23-01

Client **McDonough Associates Inc.**
 Project **Longmeadow Parkway over Fox River**
 Location **Kane County, Illinois**

Datum: NGVD
 Elevation: 919.14 ft
 North: 1993453.47 ft
 East: 985893.25 ft
 Station: 2081+09.97
 Offset: 0.47 L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	918.1	12-inch thick, black SILTY CLAY LOAM			1	3 3 3	2.75	17									
	917.4	-TOPSOIL-															
	916.1	Very stiff, brown and black SILTY CLAY			2	4 3 2 2	NP	12									
		-FILL-															
		Loose, brown LOAM															
		-FILL-															
	913.6	Medium stiff to very stiff, brown, black, and gray SILTY CLAY	5		3	3 3 3 4	0.75	20									
		-FILL-															
		Stiff to hard, brown SILTY CLAY			4	3 3 2 4	1.25	16									
	909.6	Medium stiff, gray ORGANIC SILT CLAY LOAM	10		5	3 2 4 4	4.25	13									
	907.6	Very soft, gray SILTY CLAY			6	2 3 3 3	0.50	62									
	905.6	Soft to stiff, gray SILTY CLAY LOAM			7	2 2 1 3	< 0.25	30									
			15		8	2 2 4 3	0.25	16									
	901.1	Boring terminated at 18.00 ft			9	1 2 3 4	1.25	15									
			20														
			25														

GENERAL NOTES

Begin Drilling **04-27-2005** Complete Drilling **04-27-2005**
 Drilling Contractor **PRECON DRILLING** Drill Rig **CME 55 TMR**
 Driller **K&D** Logger **J. Kasnick** Checked by **B. Fugiel**
 Drilling Method **3.25-inch HSA**

WATER LEVEL DATA

While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG 2012301.GPJ WANGENG.GDT 12/22/14



BORING LOG R-029

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WEI Job No.: 201-23-01

Client: **McDonough Associates Inc.**
 Project: **Longmeadow Parkway over Fox River**
 Location: **Kane County, Illinois**

Datum: NGVD
 Elevation: 917.45 ft
 North: 1993435.62 ft
 East: 986182.82 ft
 Station: 2083+99.81
 Offset: 0.01 L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	916.96	6-inch thick ASPHALT --PAVEMENT--															
	916.4	6-inch thick CRUSHED STONE AGGREGATE --BASE COURSE--			1	5 7 7	3.00 P	11									
		Soft to very stiff, brown SILTY CLAY LOAM --FILL--	5		2	10 6 6 9	2.25 P	14									
					3	4 5 5 6	1.50 P	13									
					4	4 5 7 7	1.75 P	15									
			10		5	3 3 3 4	0.25 P	16									
					6	5 5 4 4	2.50 P	15									
	904.9	Medium stiff to stiff, gray SILTY CLAY LOAM			7	3 3 5 4	0.50 P	15									
			15		8	4 4 4 5	0.50 P	14									
					9	2 4 6 5	1.25 P	13									
	898.4	Boring terminated at 19.00 ft	20														
			25														

GENERAL NOTES

Begin Drilling **04-27-2005** Complete Drilling **04-27-2005**
 Drilling Contractor **PRECON DRILLING** Drill Rig **CME 55 TMR**
 Driller **K&D** Logger **J. Kasnick** Checked by **B. Fugiel**
 Drilling Method **3.25-inch HSA**

WATER LEVEL DATA

While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG R-030

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Client **McDonough Associates Inc.**
 Project **Longmeadow Parkway over Fox River**
 Location **Kane County, Illinois**

Datum: NGVD
 Elevation: 919.55 ft
 North: 1993434.10 ft
 East: 986482.73 ft
 Station: 2086+99.96
 Offset: 0.02 R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	919.34	4-inch thick, dark brown SILTY CLAY LOAM			1	6 5 5 5	4.50 P	10									
	918.6	Hard, black and brown SILTY CLAY			2	7 7 8 12	2.75 P	14									
	915.8	Very stiff, brown SILTY CLAY			3	7 8 8 7	NP	19									
	913.8	Medium dense, brown and gray LOAM			4	4 9 9 7	NP	12									
	909.6	Medium dense, brown GRAVELLY SAND			5	7 12 14 14	NP	12									
	909.6	Boring terminated at 10.00 ft	10														

GENERAL NOTES

Begin Drilling **04-27-2005** Complete Drilling **04-27-2005**
 Drilling Contractor **PRECON DRILLING** Drill Rig **CME 55 TMR**
 Driller **K&D** Logger **J. Kasnick** Checked by **B. Fugiel**
 Drilling Method **3.25-inch HSA**

WATER LEVEL DATA

While Drilling ∇ **6.25 ft**
 At Completion of Drilling \blacktriangledown **6.50 ft**
 Time After Drilling **NA**
 Depth to Water ∇ **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG 2012301.GPJ WANGENG.GDT 12/22/14



BORING LOG R-031

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WEI Job No.: 201-23-01

Client **McDonough Associates Inc.**
 Project **Longmeadow Parkway over Fox River**
 Location **Kane County, Illinois**

Datum: NGVD
 Elevation: 921.25 ft
 North: 1993422.40 ft
 East: 986782.46 ft
 Station: 2089+99.92
 Offset: 0.09 L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	921.04	0.4-inch thick, dark brown SILTY CLAY LOAM			1	4 7 5 9	3.25 P	17									
	918.8	Very stiff, brown SILTY CLAY LOAM			2	8 9 9 12	2.50 P	13									
		Medium dense, brown SANDY LOAM			3	6 6 7 8	NP	10									
					4	4 7 6 8	NP	10									
					5	5 5 8 10	NP	10									
	911.3	Boring terminated at 10.00 ft	10														

GENERAL NOTES

Begin Drilling **04-27-2005** Complete Drilling **04-27-2005**
 Drilling Contractor **PRECON DRILLING** Drill Rig **CME 55 TMR**
 Driller **K&D** Logger **J. Kasnick** Checked by **B. Fugiel**
 Drilling Method **3.25-inch HSA**

WATER LEVEL DATA

While Drilling **9.25 ft**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



BORING LOG R-032

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WEI Job No.: 201-23-01

Client **McDonough Associates Inc.**
 Project **Longmeadow Parkway over Fox River**
 Location **Kane County, Illinois**

Datum: NGVD
 Elevation: 921.31 ft
 North: 1993410.59 ft
 East: 987082.36 ft
 Station: 2093+00.05
 Offset: 0.09 L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
	921.04	1-inch thick, dark brown SILTY CLAY LOAM			1	4 6 6 7	3.50 P	14									
	919.0	Very stiff, black and brown SILTY CLAY			2	6 7 7 9	2.50 P	16									
	916.8	Stiff to very stiff, brown SILTY CLAY			3	6 9 13 11	1.75 P	11									
		Loose to medium dense, brown SANDY LOAM			4	4 4 4 5	NP	11									
					5	2 4 4 4	NP	12									
					6	4 5 6 6	NP	9									
					7	3 7 9 10	NP	9									
	907.3	Boring terminated at 14.00 ft															

GENERAL NOTES

Begin Drilling **04-27-2005** Complete Drilling **04-27-2005**
 Drilling Contractor **PRECON DRILLING** Drill Rig **CME 55 TMR**
 Driller **K&D** Logger **J. Kasnick** Checked by **B. Fugiel**
 Drilling Method **3.25-inch HSA**

WATER LEVEL DATA

While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG INC 2012301.GPJ WANGENG.GDT 12/22/14



BORING LOG R-033

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WEI Job No.: 201-23-01
 Client: **McDonough Associates Inc.**
 Project: **Longmeadow Parkway over Fox River**
 Location: **Kane County, Illinois**

Datum: NGVD
 Elevation: 914.97 ft
 North: 1993426.60 ft
 East: 987383.31 ft
 Station: 2096+00.13
 Offset: 27.94 L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	914.0	Dark brown SILTY LOAM --TOPSOIL--			1	3 5 4 6	NP	13									
		Loose to medium dense, black ORGANIC SILTY LOAM			2	4 7 9 9	NP	31									
			5		3	3 3 3 5	NP	37									
	908.5	Very soft, black SILTY CLAY			4	2 4 4 4	0.20 P	68									
	906.5	Dark brown PEAT			5	3 2 3 3	NP	239									
			10		6	1 1 1 1	0.50 P	86									
	904.0	Very soft to medium stiff, gray ORGANIC SILTY CLAY LOAM			7	1 0 0 0	0.00 P	53									
			15		8	1 0 0 0	0.00 P	65									
					9	1 0 0 0	0.00 P	34									
	897.0	Very soft to stiff, gray SILTY CLAY LOAM			10	1 2 4 6	1.25 P	17									
	895.0	Boring terminated at 20.00 ft	20														
			25														

GENERAL NOTES

Begin Drilling **06-06-2005** Complete Drilling **06-06-2005**
 Drilling Contractor **PRECON DRILLING** Drill Rig **CME 55 TMR**
 Driller **K** Logger **J. Kosloski** Checked by **B. Fugiel**
 Drilling Method **3.25-inch HSA**

WATER LEVEL DATA

While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



BORING LOG R-034

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WEI Job No.: 201-23-01

Client: **McDonough Associates Inc.**
 Project: **Longmeadow Parkway over Fox River**
 Location: **Kane County, Illinois**

Datum: NGVD
 Elevation: 920.60 ft
 North: 1993410.98 ft
 East: 987685.08 ft
 Station: 2098+99.69
 Offset: 26.61 L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	919.6	12-inch thick, dark brown SILTY LOAM -TOPSOIL- Very stiff to hard, brown SILTY CLAY LOAM	0-5		1	4 5 5 5	NP	22									
			5-10		2	5 7 7 9	4.50 P	21									
			10-15		3	11 9 10 11	4.50 P	12									
			15-20		4	6 6 17 22	3.50 P	12									
	912.1	Stiff, brown SILTY CLAY	20-25		5	3 6 7 8	1.50 P	17									
	910.1	Hard, brown and gray SILTY CLAY LOAM	25-30		6	4 8 11 14	4.50 P	11									
	906.6	Boring terminated at 14.00 ft	30-35		7	4 9 11 11	4.50 P	11									

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling: **06-06-2005** Complete Drilling: **06-06-2005**
 Drilling Contractor: **PRECON DRILLING** Drill Rig: **CME-75 ATV**
 Driller: **K** Logger: **J. Kosloski** Checked by: **B. Fugiel**
 Drilling Method: **3.25-inch HSA**

White Drilling: **DRY**
 At Completion of Drilling: **DRY**
 Time After Drilling: **NA**
 Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



BORING LOG R-035

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WEI Job No.: 201-23-01

Client **McDonough Associates Inc.**
 Project **Longmeadow Parkway over Fox River**
 Location **Kane County, Illinois**

Datum: NGVD
 Elevation: 915.86 ft
 North: 1993375.04 ft
 East: 987981.62 ft
 Station: 2102+00.01
 Offset: 0.01 R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	914.9	12-inch thick, dark brown SILTY LOAM			1	3 3 5 5	NP	14									
	913.9	Loose, brown LOAM			2	5 7 6 7	4.50 P	17									
		Stiff to hard, brown SILTY CLAY LOAM			3	3 6 6 7	2.50 P	13									
					4	3 4 4 5	1.50 P	12									
	907.4	Medium dense, brown SANDY LOAM			5	3 5 5 5	NP	10									
	903.9	Boring terminated at 12.00 ft			6	3 6 8 10	NP	11									

GENERAL NOTES

Begin Drilling **06-06-2005** Complete Drilling **06-06-2005**
 Drilling Contractor **PRECON DRILLING** Drill Rig **CME-75 ATV**
 Driller **K** Logger **J. Kosloski** Checked by **B. Fugiel**
 Drilling Method **3.25-inch HSA**

WATER LEVEL DATA

While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



BORING LOG R-036

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WEI Job No.: 201-23-01

Client **McDonough Associates Inc.**
 Project **Longmeadow Parkway over Fox River**
 Location **Kane County, Illinois**

Datum: NGVD
 Elevation: 907.11 ft
 North: 1993363.18 ft
 East: 988281.41 ft
 Station: 2105+00.04
 Offset: 0.06 R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	906.1	12-inch thick, black SILTY LOAM --TOPSOIL--			1	3 2 6	1.00	25									
	905.4	Stiff, brown SILTY CLAY --FILL--			2	3 5 5 11	0.50	32									
	904.1	Medium dense, brown SILTY LOAM --FILL--			3	3 4 6 11	4.00	11									
	902.6	Medium stiff, black SILTY CLAY LOAM			4	3 7 7 8	NP	10									
	900.6	Hard, brown SILTY CLAY LOAM			5	3 6 6 7	NP	9									
	895.1	Medium dense, gray LOAM			6	5 10 9 11	NP	10									
		Boring terminated at 12.00 ft															

GENERAL NOTES

Begin Drilling **06-06-2005** Complete Drilling **06-06-2005**
 Drilling Contractor **PRECON DRILLING** Drill Rig **CME-75 ATV**
 Driller **K** Logger **J. Kosloski** Checked by **B. Fugiel**
 Drilling Method **3.25-inch HSA**

WATER LEVEL DATA

While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG 2012301.GPJ WANGENG.GDT 12/22/14



BORING LOG R-037

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WEI Job No.: 201-23-01

Client: **McDonough Associates Inc.**
 Project: **Longmeadow Parkway over Fox River**
 Location: **Kane County, Illinois**

Datum: NGVD
 Elevation: 909.94 ft
 North: 1993351.48 ft
 East: 988578.16 ft
 Station: 2108+00.01
 Offset: 0.05 L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	909.46	6-inch thick, brown SANDY LOAM			1	3 3 2 4	3.50 P	15									
	907.4	Very stiff, brown SILTY CLAY LOAM			2	4 6 5 6	3.75 P	23									
	906.4	Very stiff, black and gray CLAY LOAM			3	2 2 4 5	1.50 P	27									
	904.4	Stiff, brown and gray CLAY	5		4	3 3 4 6	2.00 P	17									
	904.4	Very stiff, brown and gray SILTY CLAY			5	3 5 6 8	3.00 P	13									
	899.9	Boring terminated at 10.00 ft	10														

GENERAL NOTES

Begin Drilling **04-11-2005** Complete Drilling **04-11-2005**
 Drilling Contractor **PRECON DRILLING** Drill Rig **CME-75 ATV**
 Driller **J&R** Logger **Y. Shiu** Checked by **B. Fugiel**
 Drilling Method **3.25-inch HSA**

WATER LEVEL DATA

While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG INC 2012301.GPJ WANGENG.GDT 12/22/14



BORING LOG R-038

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WEI Job No.: 201-23-01

Client: **McDonough Associates Inc.**
 Project: **Longmeadow Parkway over Fox River**
 Location: **Kane County, Illinois**

Datum: NGVD
 Elevation: 911.73 ft
 North: 1993339.66 ft
 East: 988880.98 ft
 Station: 2111+00.04
 Offset: 0.05 R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	911.26	11.26-inch thick, black CLAY LOAM -TOPSOIL- Medium stiff to very stiff, brown SILTY CLAY LOAM			1	1 3 6 7	2.50 P	26									
					2	3 4 4 4	0.50 P	16									
			5		3	3 4 5 8	1.50 P	14									
					4	3 4 7 6	1.50 P	14									
					5	2 4 6 7	2.00 P	13									
	901.7	Boring terminated at 10.00 ft	10														
			15														
			20														
			25														

GENERAL NOTES

Begin Drilling **04-11-2005** Complete Drilling **04-11-2005**
 Drilling Contractor **PRECON DRILLING** Drill Rig **CME-75 ATV**
 Driller **J&R** Logger **Y. Shiu** Checked by **B. Fugiel**
 Drilling Method **3.25-inch HSA**

WATER LEVEL DATA

While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG 2012301.GPJ WANGENG.GDT 12/22/14



BORING LOG R-039

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WEI Job No.: 201-23-01

Client: **McDonough Associates Inc.**
 Project: **Longmeadow Parkway over Fox River**
 Location: **Kane County, Illinois**

Datum: NGVD
 Elevation: 910.78 ft
 North: 1993336.67 ft
 East: 989180.92 ft
 Station: 2114+00.01
 Offset: 0.00 R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	910.1	8-inch thick, black CLAY LOAM --TOPSOIL-- Very stiff to hard, brown SILTY CLAY LOAM			1	3 5 7 8	2.00 P	12									
		--FILL--			2	4 5 7 8	3.00 P	17									
			5		3	5 10 8 9	3.75 P	12									
	905.3	Stiff, brown SILTY CLAY LOAM			4	4 4 5 6	1.00 P	14									
					5	4 5 8 12	1.00 P	13									
	900.8	Boring terminated at 10.00 ft	10														
			15														
			20														
			25														

GENERAL NOTES

Begin Drilling **04-11-2005** Complete Drilling **04-11-2005**
 Drilling Contractor **PRECON DRILLING** Drill Rig **CME-75 ATV**
 Driller **J&R** Logger **Y. Shiu** Checked by **B. Fugiel**
 Drilling Method **3.25-inch HSA**

WATER LEVEL DATA

While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG 2012301.GPJ WANGENG.GDT 12/22/14



BORING LOG R-040

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WEI Job No.: 201-23-01

Client **McDonough Associates Inc.**
 Project **Longmeadow Parkway over Fox River**
 Location **Kane County, Illinois**

Datum: NGVD
 Elevation: 911.67 ft
 North: 1993334.71 ft
 East: 989481.92 ft
 Station: 2117+00.0
 Offset: 0.04 R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	911.26	26-inch thick, black SILTY LOAM -TOPSOIL-			1	5 5 6	1.50 P	10									
	910.2	Stiff, brown SILTY CLAY LOAM, with gravel -FILL-			2	3 3 4 5	2.25 P	15									
		Very stiff to hard, brown and gray SILTY CLAY LOAM	5		3	2 2 4 7	2.75 P	14									
					4	5 8 12 16	4.00 P	13									
					5	8 11 11 14	3.50 P	10									
	901.7	Boring terminated at 10.00 ft	10														

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling **04-11-2005** Complete Drilling **04-11-2005**
 Drilling Contractor **PRECON DRILLING** Drill Rig **CME-75 ATV**
 Driller **J&R** Logger **Y. Shiu** Checked by **B. Fugiel**
 Drilling Method **3.25-inch HSA**

While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG INC. 2012301.GPJ WANGENG.GDT 12/22/14



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WEI Job No.: 201-23-01

Client **McDonough Associates Inc.**
 Project **Longmeadow Parkway over Fox River**
 Location **Kane County, Illinois**

Datum: NGVD
 Elevation: 909.39 ft
 North: 1993332.78 ft
 East: 989780.94 ft
 Station: 2120+00.04
 Offset: 0.04 R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	908.9	6-inch thick, dark brown CLAY LOAM			1	2 3 3 6	2.00 P	17									
		-TOPSOIL-															
	906.9	Very stiff, brown SILTY CLAY, with gravel			2	7 11 11 13	NP	10									
		-FILL-															
		Medium dense, brown SANDY LOAM	5		3	9 6 5 4	NP	12									
	903.6	Very stiff, brown SILTY CLAY LOAM			4	5 5 6 9	2.00 P	12									
					5	9 12 11 18	2.00 P	10									
	899.4	Boring terminated at 10.00 ft	10														
			15														
			20														
			25														

GENERAL NOTES

Begin Drilling **04-11-2005** Complete Drilling **04-11-2005**
 Drilling Contractor **PRECON DRILLING** Drill Rig **CME-75 ATV**
 Driller **J&R** Logger **Y. Shiu** Checked by **B. Fugiel**
 Drilling Method **3.25-inch HSA**

WATER LEVEL DATA

White Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG INC. 2012301.GPJ WANGENG.GDT 12/22/14



BORING LOG R-042

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WEI Job No.: 201-23-01

Client: **McDonough Associates Inc.**
 Project: **Longmeadow Parkway over Fox River**
 Location: **Kane County, Illinois**

Datum: NGVD
 Elevation: 903.99 ft
 North: 1993331.03 ft
 East: 990075.27 ft
 Station: 2123+00.12
 Offset: 0.14 L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	903.4	7-inch thick, dark brown SILTY CLAY LOAM			1	3 3 4 15	1.75 P	13									
		-TOPSOIL- Stiff to very stiff, brown SILTY CLAY LOAM			2	8 10 8 9	1.00 P	10									
		-FILL			3	4 4 4 6	2.50 P	17									
					4	3 2 3 4	1.50 P	32									
	895.7	Stiff, brown and gray SILTY CLAY LOAM			5	2 2 3 5	1.50 P	24									
	894.0	Boring terminated at 10.00 ft	10														

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling: **04-11-2005** Complete Drilling: **04-11-2005**
 Drilling Contractor: **PRECON DRILLING** Drill Rig: **CME-75 ATV**
 Driller: **J&R** Logger: **Y. Shiu** Checked by: **B. Fugiel**
 Drilling Method: **3.25-inch HSA**

While Drilling: **DRY**
 At Completion of Drilling: **DRY**
 Time After Drilling: **NA**
 Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG 2012301.GPJ WANGENG.GDT 12/22/14



BORING LOG R-043

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WEI Job No.: 201-23-01

Client **McDonough Associates Inc.**
 Project **Longmeadow Parkway over Fox River**
 Location **Kane County, Illinois**

Datum: NGVD
 Elevation: 905.70 ft
 North: 1993328.72 ft
 East: 990380.78 ft
 Station: 2125+99.90
 Offset: 0.25 R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
	905.26	26-inch thick, brown CLAY LOAM -TOPSOIL-			1	2 2 3 4	NP	22									
		Loose, brown LOAM															
	903.5				2	1 2 4 8	NP	20									
		Loose to medium dense, brown SILT, with interbedded sand lenses															
	900.5		5		3	4 9 11 15	NP	16									
		Very stiff to hard, brown and gray SILTY CLAY LOAM, some gravel			4	6 7 11 17	2.00 P	10									
					5	6 11 12 15	4.00 P	11									
	895.7	Boring terminated at 10.00 ft	10														
			15														
			20														
			25														

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling **04-12-2005** Complete Drilling **04-12-2005**
 Drilling Contractor **PRECON DRILLING** Drill Rig **CME-75 ATV**
 Driller **K&S** Logger **Y. Shiu** Checked by **B. Fugiel**
 Drilling Method **3.25-inch HSA**

While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG\INC 2012301.GPJ WANGENG.GDT 12/22/14



BORING LOG R-044

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WEI Job No.: 201-23-01

Client: **McDonough Associates Inc.**
 Project: **Longmeadow Parkway over Fox River**
 Location: **Kane County, Illinois**

Datum: NGVD
 Elevation: 904.68 ft
 North: 1993327.00 ft
 East: 990680.86 ft
 Station: 2128+99.98
 Offset: 0.04 R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	904.26	26-inch thick, brown CLAY LOAM --TOPSOIL--															
		Stiff, brown CLAY LOAM			1	2 5 4 5	1.75 P	15									
	902.2	Medium dense, brown SILT			2	3 5 7 7	NP	17									
	900.7	Very stiff to hard, brown SILTY CLAY LOAM	5		3	3 4 7 6	2.00 P	15									
					4	5 8 11 13	3.50 P	13									
			10		5	7 12 15 14	4.00 P	10									
					6	6 11 12 13	4.00 P	12									
	891.7	Boring terminated at 13.00 ft															
			15														
			20														
			25														

GENERAL NOTES

Begin Drilling **04-12-2005** Complete Drilling **04-12-2005**
 Drilling Contractor **PRECON DRILLING** Drill Rig **CME-75 ATV**
 Driller **K&S** Logger **Y. Shiu** Checked by **B. Fugiel**
 Drilling Method **3.25-inch HSA**

WATER LEVEL DATA

While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG 2012301.GPJ WANGENG.GDT 12/22/14



BORING LOG R-045

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WEI Job No.: 201-23-01

Client: **McDonough Associates Inc.**
 Project: **Longmeadow Parkway over Fox River**
 Location: **Kane County, Illinois**

Datum: NGVD
 Elevation: 888.11 ft
 North: 1993325.00 ft
 East: 990980.99 ft
 Station: 2132+00.11
 Offset: 0.12 R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
	887.6	6-inch thick, black CLAY LOAM --TOPSOIL-- Stiff to hard, brown SILTY CLAY LOAM	1		1	1	0.50	32									
			2		2	2	P										
			3		3	3											
			4		4	4											
			5		5	5											
	881.6	Medium dense, brown SILT	6		6	6	1.75	20									
	880.9	Hard, brown SILTY CLAY	7		7	7	P										
			8		8	8											
			9		9	9											
	879.6	Medium dense, gray LOAM, some gravel	10		10	10	4.00	13									
	878.1	Boring terminated at 10.00 ft	11		11	11	4.50	14									
			12		12	12	P										
			13		13	13											
			14		14	14											
			15		15	15											
			16		16	16											
			17		17	17											
			18		18	18											
			19		19	19											
			20		20	20											
			21		21	21											
			22		22	22											
			23		23	23											
			24		24	24											
			25		25	25											

GENERAL NOTES

Begin Drilling **04-13-2005** Complete Drilling **04-13-2005**
 Drilling Contractor **PRECON DRILLING** Drill Rig **CME-75 ATV**
 Driller **K&S** Logger **Y. Shiu** Checked by **B. Fugiel**
 Drilling Method **3.25-inch HSA**

WATER LEVEL DATA

While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG INC. 2012301.GPJ WANGENG.GDT 12/22/14



BORING LOG R-046

wangeng@wangeng.com
 1145 N Main St.
 Lombard, IL 60148
 Telephone: 630-953-9928
 Fax: 630-953-9938

WEI Job No.: 201-23-01

Client: **McDonough Associates Inc.**
 Project: **Longmeadow Parkway over Fox River**
 Location: **Kane County, Illinois**

Datum: NGVD
 Elevation: 881.33 ft
 North: 1993323.14 ft
 East: 991280.86 ft
 Station: 2134+99.99
 Offset: 0.05 R

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Cu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Cu (tsf)	Moisture Content (%)
	880.3	12-inch thick, black CLAY LOAM -TOPSOIL-			1	1 4 4 4	2.50	26									
		Very stiff, brown SILTY CLAY			2	1 3 4 4	2.00	24									
	877.1	Loose, brown SILTY LOAM	5		3	2 3 3 4	NP	23									
	875.8	Stiff, brown and black SILTY CLAY			4	5 5 7 8	1.50	23									
	872.3	Medium dense, gray SILT			5	3 6 5 5	4.00	13									
	871.8	Hard, gray SILTY CLAY LOAM	10														
	871.3	Boring terminated at 10.00 ft															

GENERAL NOTES

Begin Drilling **04-13-2005** Complete Drilling **04-13-2005**
 Drilling Contractor **PRECON DRILLING** Drill Rig **CME-75 ATV**
 Driller **K&S** Logger **Y. Shiu** Checked by **B. Fugiel**
 Drilling Method **3.25-inch HSA**

WATER LEVEL DATA

While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG 2012301.GPJ WANGENG.GDT 12/22/14



BORING LOG R-047

wangeng@wangeng.com
 1145 N Main St.
 Lombard, IL 60148
 Telephone: 630-953-9928
 Fax: 630-953-9938

WEI Job No.: 201-23-01

Client: **McDonough Associates Inc.**
 Project: **Longmeadow Parkway over Fox River**
 Location: **Kane County, Illinois**

Datum: NGVD
 Elevation: 881.10 ft
 North: 1993324.67 ft
 East: 991717.36 ft
 Station: 2139+36.52
 Offset: 0.83 L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	880.6	6-inch thick, brown CLAY LOAM -TOPSOIL- Stiff to very stiff, brown SILTY CLAY LOAM	0		1	2 4 4 5	2.25 P	17									
					2	2 4 4 3	1.25 P	16									
			5		3	2 4 3 7	2.25 P	16									
	874.9	Medium dense, brown LOAM			4	5 6 7 13	NP	10									
	872.1	Dense, brown GRAVELLY SAND			5	4 11 23 25	NP	8									
	871.1	Boring terminated at 10.00 ft	10														
			15														
			20														
			25														

GENERAL NOTES

Begin Drilling **04-13-2005** Complete Drilling **04-13-2005**
 Drilling Contractor **PRECON DRILLING** Drill Rig **CME-75 ATV**
 Driller **K&S** Logger **Y. Shiu** Checked by **B. Fugiel**
 Drilling Method **3.25-inch HSA**

WATER LEVEL DATA

While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG INC 2012301.GPJ WANGENG.GDT 12/22/14



BORING LOG R-048

wangeng@wangeng.com
 1145 N Main St.
 Lombard, IL 60148
 Telephone: 630-953-9928
 Fax: 630-953-9938

WEI Job No.: 201-23-01

Client **McDonough Associates Inc.**
 Project **Longmeadow Parkway over Fox River**
 Location **Kane County, Illinois**

Datum: NGVD
 Elevation: 885.42 ft
 North: 1993328.06 ft
 East: 991880.74 ft
 Station: 2140+99.94
 Offset: 0.09 L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	884.9	6-inch thick, black and brown CLAY LOAM			1	1 4 3 3	1.75	20									
	883.7	--TOPSOIL-- Stiff, brown CLAY LOAM			2	2 2 3 2	0.50	27									
		Medium stiff, brown SILTY CLAY			3	3 3 3 4	NP	16									
	880.4	Loose to medium dense, brown SANDY LOAM			4	3 5 7 8	NP	11									
	877.4	Very stiff, brown SILTY CLAY LOAM			5	6 6 7 7	2.50	10									
	875.4	Boring terminated at 10.00 ft	10														

GENERAL NOTES

Begin Drilling **04-13-2005** Complete Drilling **04-13-2005**
 Drilling Contractor **PRECON DRILLING** Drill Rig **CME-75 ATV**
 Driller **K&S** Logger **Y. Shiu** Checked by **B. Fugiel**
 Drilling Method **3.25-inch HSA**

WATER LEVEL DATA

While Drilling ∇ **DRY**
 At Completion of Drilling ∇ **DRY**
 Time After Drilling **NA**
 Depth to Water ∇ **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG INC. 2012301.GPJ WANGENG.GDT 12/22/14



Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: Longmeadow Parkway Project (Section B-1) Office Phone Number, if available: 630-584-1170

Physical Site Location (address, including number and street):

Longmeadow Parkway (Sta. 2055+80 to 2143+80) and Randall Rd (Sta. 188+50 to 220+10)

City: Algonquin State: IL Zip Code: 60102

County: Kane Township: Dundee

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 42.139400 Longitude: -88.321045
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS Map Interpolation Photo Interpolation Survey Other

Google Earth (lat/Long is approximate mid-point of Section at intersection of Longmeadow Parkway and Sleepy Hollow Rd)

IEPA Site Number(s), if assigned: BOL: _____ BOW: _____ BOA: _____

II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Kane County Division of Transportation

Name: Kane County Division of Transportation

Street Address: 41W011 Burlington Road

Street Address: 41W011 Burlington Road

PO Box: _____

PO Box: _____

City: St. Charles State: IL

City: St. Charles State: IL

Zip Code: 60175 Phone: 630-584-1170

Zip Code: 60175 Phone: 630-584-1170

Contact: Carl Schoedel, PE, Dir. of Trans. Co. Eng.

Contact: Carl Schoedel, PE, Dir. of Trans. Co. Eng.

Email, if available: SchoedelCarl@co.kane.il.us

Email, if available: SchoedelCarl@co.kane.il.us

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: Longmeadow Parkway Project (Section B-1)

Latitude: 42.139400 Longitude: -88.321045

Uncontaminated Site Certification

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a):

Based on PESA (Sept. 2014) and PSI (Jan. 2015) one PIP was identified in Section B-1. A total of 6 borings were completed within Section B-1 of the larger Project Corridor to address the PIP and / or for non-PIP areas.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

A total of twelve (12) soil pH samples were collect from the six (6) borings within section B-1 including CCDD-A-01, CCDD-A-04, CCDD-A-04 HA, CCDD-A-05, CCDD-A-06, and CCDD-B-B01HA with results ranging from 6.98 to 8.44. See attached documentation for further clarification.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

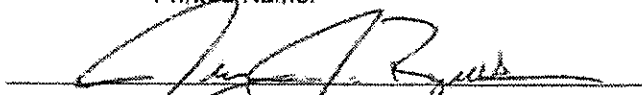
I, Jeremy J. Reynolds, P.G. (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Company Name: Huff & Huff, Inc., a subsidiary of GZA GeoEnvironmental, Inc.
 Street Address: 915 Harger Road, Suite 330
 City: Oak Brook State: IL Zip Code: 60523
 Phone: 630-684-9100

Jeremy J. Reynolds, P.G.

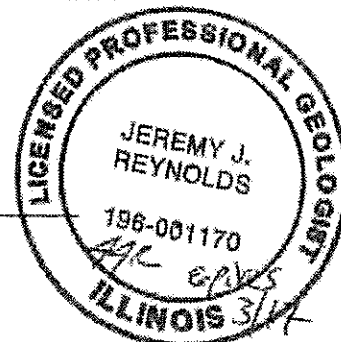
Printed Name:



Licensed Professional Engineer or
Licensed Professional Geologist Signature:

10/29/15

Date:



P.E. or L.P.G. Seal:

CLEAN CONSTRUCTION AND DEMOLITION DEBRIS

The County retained a Licensed Professional Geologist (LPG) to comply with IEPA Public Act 96-1416. The LPG conducted several environmental tests within the project limits. As a result of these tests, Form LPC-663 has been completed. These forms and all other reports associated with these test will be made available to the Contractor for review.

As presented in Form LPC-663, six total soil borings were performed within the project limits, including one boring applicable to a singular Potentially Impacted Property (PIP). The boring at the PIP was tested for BTEX and PNAs and fell within maximum allowable concentrations (MACs). All six borings were tested for pH and fell within the allowable range of 6.25 to 9.00. Therefore, the soils within the project limits are acceptable for final disposition consideration at a Clean Construction and Demolition Debris (CCDD) or soil-only facility.

The Contractor is expected to use one or more of the County's pre-approved CCDD facilities listed below. Should a Contractor elect to use an alternate facility for uncontaminated soil disposal, the Contractor shall be responsible for all costs associated with testing, trucking and tipping fees for proper disposal of all accepted loads, and all costs associated with proper disposal of all rejected loads.

The Contractor shall stage and transport material to the pre-approved CCDD facility and shall be responsible for coordination with such facilities on operating hours. The contractor shall also complete any necessary forms required by the CCDD facility.

The Contractor shall be advised that even with the executed Form LPC-663, the landfill operators retain the right to reject any or all loads from a particular construction site based on their own determination or suitability of material from that site. Each certification covers only material from that specified job site. The contractor shall take care not to stockpile or mix together material from different sites before taking that material for disposal.

Should a load be rejected by the CCDD or soil-only facility, the Resident Engineer may require the Contractor to perform Photoionization Detector (PID) tests on subsequent loads. No further compensation shall be given to the Contractor for this testing. No soil testing shall be conducted by the Contractor with the exception of onsite PID screening.

This special provision is not be construed as a requirement that obligates the contractor to dispose of surplus material at a registered unsuitable soil landfill location. *The contractor is advised to consider the cost of disposal of all unsuitable materials and properly reflect those costs in their bids for earthwork and removal items. No extra compensation will be allowed to the contractor if it is determined by the Resident Engineer that bid prices did not allow for the higher costs of disposing materials rejected by a CCDD facility.* The contractor must also be thoroughly familiar with the provisions of the Environmental Protection Act as it relates to proper disposal of excavated material and construction debris. No compensation shall be

provided for complying with all Federal and State laws, local laws, ordinances, and regulations – including, but not limited to, IEPA Public Act 96-1416.

Pre-Approved CCDD Facilities:

Beverly Materials 1100 Brandt Drive Hoffman Estates, IL 60192 (847) 695-9300	Bluff City Materials 2252 Southwind Boulevard Bartlett, IL 60103 (630) 497-8700
Consolidated Materials 1350 S. Virginia Road Crystal Lake, IL 60014 847-658-4342	



Beverly Materials, L.L.C.

1100 Brandt Drive
Hoffman Estates, Illinois 60192
847-695-9300
Fax 847-695-7251

November 11, 2015

Jeremy Reynolds, P.G.
Huff & Huff, Inc
915 Harger Rd, Suite 330
Oak Brook, IL 60523

RE: Approval for Incoming Material from Longmeadow Parkway—Section B-1—LPC 663

Dear Jeremy,

Beverly Materials LLC received the completed LPC-663 form for Section B-1 of the Longmeadow Parkway Corridor from approximately 160 feet west of Randall Road to approximately 2,000 feet west of White Chapel Lane (Station 2055+80 to Station 2143+80), or approximately 8,800 feet in length and also along Randall Road from approximately 1,300 feet south of Longmeadow Parkway to approximately 1,850 feet north of Longmeadow Parkway (Station 188+50 to Station 220+10).

At this time we approve the LPC-663 for Section B-1 for Incoming Material for final disposition at Beverly Materials LLC. We accept the material coming off of this project with the following conditions:

1. All material from the project will be in compliance with the rules set forth by the environmental report compiled by Huff & Huff Incorporated on October 30, 2015.
2. Prior to material acceptance all corresponding paperwork required by Beverly Materials LLC is properly and completely filled out—please contact me for this paperwork.
3. Prior to material acceptance contractor must submit documentation for account approval with Beverly Materials LLC.
4. Be advised that we will test each incoming load visually and with a PID to ensure compliance with Illinois EPA regulations.

Sincerely,

Karen A Crom
Environmental Coordinator
Beverly Materials LLC
Office 847-628-6130
kcrom@plote.com



BLUFF CITY MATERIALS, INC

2252 SOUTHWIND BLVD
BARTLETT, IL 60103

6 November 2015

Jeremy J. Reynolds, P.G.
Senior Geologist
Huff & Huff, Inc.
A subsidiary of GZA GeoEnvironmental, Inc.
915 Harger Road, Suite 330
Oak Brook, IL 60523
Office: 630-684-9100
Fax: 630-684-9120
Work Cell: 224-423-3489

Re: Letter of Acceptance
Longmeadow Parkway (Sections A & B-1)

Dear Mr. Reynolds:

Under a permit(s) issued by the Illinois Environmental Protection Agency (IEPA), Bluff City Materials, Inc. operates several clean construction or demolition (CCDD) facilities. Our facilities comply with all local zoning codes and all applicable local, state and federal rules and regulations.

Bluff City Materials has reviewed the Huff & Huff LPC-663 certification forms and supporting documents for the project Longmeadow Parkway (Sections A & B-1), located in portions of Dundee and Algonquin, IL. Based on the project information provided in your LPC-663 certification, Bluff City Materials will accept material from the project that meets the definition of (CCDD) at our facilities located in Elgin (IEPA permit number: CCDD2007-028-DE/OP) and Lake in the Hills, IL (IEPA permit number: CCDD2011-001-DE/OP). Specifically, the material from the following sections of the project are approved:

- **Section A:** From 2,100 feet west of Huntley Rd./Boyer Rd. to 1,300 feet east of Randall Road
- **Section B -1:** Longmeadow Parkway and Randall Road

Please note that, in accordance with the facility's permit and Title 35 of the Illinois Administrative Code, Part 1100.205(b)(1)(a), each inbound load is inspected visually and with a photoionization (PID) detector. Any loads that exhibit a PID reading above background levels will be rejected from the facility. As part of the facility's permit conditions, any rejected loads recorded at the site will be reported to the IEPA.

If you have any questions, please contact me at 630.497.8700 x 289

Sincerely,

Andy Paxson
Bluff City Materials
Environmental Assessments



Carl Schoedel, PE
Kane County Division of Transportation
41W011 Burlington Rd.
St. Charles, IL 60175

November 28, 2015

RE: CCDD Disposal Approval

Mr. Schoedel,

This is a letter of approval for disposal of the uncontaminated soil for the Longmeadow Parkway Project (Section B-1) located 160 feet west of Randall Rd. to 2,000 feet east of White Chapel Lane (Sta. 2055+80 to Sta. 2143+80).

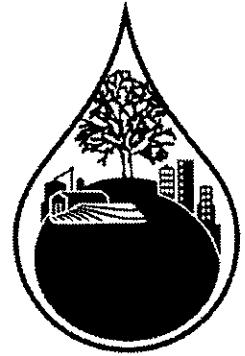
Please use **approval number 00216** when material is deposited at our facility located at 1350 S. Virginia Rd. Crystal Lake, IL 60014 and coordinate with the scale house the day before by calling 847-658-4342 x 1.

Regards,

A handwritten signature in black ink, appearing to read "Tom Kelecus", written over a white background.

Tom Kelecus
Consolidated Materials

Kane – DuPage Soil & Water Conservation District



September 16, 2016

Dan Bruckelmeyer, P.E.
Bollinger, Lach and Associates, Inc.
333 Pierce Road, Suite 200
Itasca, IL 60143

KDSWCD File: 15e061
USACE Number: LRC-2013-839
KDSWCD Approval Date: 09/16/2016
Approved Plan Set Dated: 08/24/2016

Dear Mr. Bruckelmeyer:

I received your revised soil erosion and sedimentation control plan submittal for the Longmeadow Parkway Section A2-B1 project located in Kane County, Illinois. Thank you for incorporating our comments into the plan, it will improve the quality of protection for the natural resources, both on and off site. This letter and a set of stamped plans located at the construction office on site, will serve to certify that the erosion and sediment control plans meet Technical Standards.

We will visit the site several times during the course of construction to assess compliance with the specifications and will be glad to address specific issues that may arise during the course of construction. Please note that a preconstruction notification deposit has been withheld for this project. The deposit will be refunded once KDSWCD has been notified of construction commencement (in writing) approximately one week prior to the start of construction.

Sincerely,

A handwritten signature in cursive script that reads "Ashley Curran".

Ashley Curran, CPESC
Resource Conservationist

ECC: Kimberly Kubiak, USACE
Keith Wozniak, USACE

2315 Dean Street, Suite 100 St. Charles, Illinois 60175 (630) 584-7960x3
www.kanedupageswcd.org

All programs and services of the Kane-DuPage SWCD are offered on a nondiscriminatory basis, without regard to race, color, national origin, religion, sex, marital status, or handicap.

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:

County of Kane

The entities listed above and their officers, employees, and agents shall be indemnified and held harmless in accordance with Article 107.26.

BITUMINOUS MATERIALS COST ADJUSTMENTS (BDE) (RETURN FORM WITH BID)

Effective: November 2, 2006

Revised: July 1, 2015

Description. Bituminous material cost adjustments will be made to provide additional compensation to the Contractor, or credit to the Department, for fluctuations in the cost of bituminous materials when optioned by the Contractor. The bidder shall indicate on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form, or failure to fill out the form completely, shall make this contract exempt of bituminous materials cost adjustments.

The adjustments shall apply to permanent and temporary hot-mix asphalt (HMA) mixtures, bituminous surface treatments (cover and seal coats), and preventative maintenance type surface treatments that are part of the original proposed construction, or added as extra work and paid for by agreed unit prices. The adjustments shall not apply to bituminous prime coats, tack coats, crack filling/sealing, joint filling/sealing, or extra work paid for at a lump sum price or by force account.

Method of Adjustment. Bituminous materials cost adjustments will be computed as follows.

$$CA = (BPI_P - BPI_L) \times (\%AC_V / 100) \times Q$$

Where: CA = Cost Adjustment, \$.

BPI_P = Bituminous Price Index, as published by the Department for the month the work is performed, \$/ton (\$/metric ton).

BPI_L = Bituminous Price Index, as published by the Department for the month prior to the letting for work paid for at the contract price; or for the month the agreed unit price letter is submitted by the Contractor for extra work paid for by agreed unit price, \$/ton (\$/metric ton).

%AC_V = Percent of virgin Asphalt Cement in the Quantity being adjusted. For HMA mixtures, the % AC_V will be determined from the adjusted job mix formula. For bituminous materials applied, a performance graded or cutback asphalt will be considered to be 100% AC_V and undiluted emulsified asphalt will be considered to be 65% AC_V.

Q = Authorized construction Quantity, tons (metric tons) (see below).

For HMA mixtures measured in square yards: $Q, \text{ tons} = A \times D \times (G_{mb} \times 46.8) / 2000$. For HMA mixtures measured in square meters: $Q, \text{ metric tons} = A \times D \times (G_{mb} \times 1) / 1000$. When computing adjustments for full-depth HMA pavement, separate calculations will be made for the binder and surface courses to account for their different G_{mb} and % AC_V.

For bituminous materials measured in gallons: $Q, \text{ tons} = V \times 8.33 \text{ lb/gal} \times SG / 2000$
For bituminous materials measured in liters: $Q, \text{ metric tons} = V \times 1.0 \text{ kg/L} \times SG / 1000$

Where: A = Area of the HMA mixture, sq yd (sq m).

- D = Depth of the HMA mixture, in. (mm).
- G_{mb} = Average bulk specific gravity of the mixture, from the approved mix design.
- V = Volume of the bituminous material, gal (L).
- SG = Specific Gravity of bituminous material as shown on the bill of lading.

Basis of Payment. Bituminous materials cost adjustments may be positive or negative but will only be made when there is a difference between the BPI_L and BPI_P in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(BPI_L - BPI_P) \div BPI_L\} \times 100$$

Bituminous materials cost adjustments will be calculated for each calendar month in which applicable bituminous material is placed; and will be paid or deducted when all other contract requirements for the work placed during the month are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Return With Bid

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**OPTION FOR
BITUMINOUS MATERIALS COST ADJUSTMENTS**

The bidder shall submit this completed form with his/her bid. Failure to submit the form, or failure to fill out the form completely, shall make this contract exempt of bituminous materials cost adjustments. After award, this form, when submitted, shall become part of the contract.

Contract No.: _____

Company Name: _____

Contractor's Option:

Is your company opting to include this special provision as part of the contract?

Yes No

Signature: _____ **Date:** _____

80173

BUTT JOINTS (BDE)

Effective: July 1, 2016

Add the following to Article 406.08 of the Standard Specifications.

- "(c) Temporary Plastic Ramps. Temporary plastic ramps shall be made of high density polyethylene meeting the properties listed below. Temporary plastic ramps shall only be used on roadways with permanent posted speeds of 55 mph or less. The ramps shall have a minimum taper rate of 1:30 (V:H). The leading edge of the plastic ramp shall have a maximum thickness of 1/4 in. (6 mm) and the trailing edge shall match the height of the adjacent pavement \pm 1/4 in. (\pm 6 mm).

The ramp will be accepted by certification. The Contractor shall furnish a certification from the manufacturer stating the temporary plastic ramp meets the following requirements.

Physical Property	Test Method	Requirement
Melt Index	ASTM D 1238	8.2 g/10 minutes
Density	ASTM D 1505	0.965 g/cc
Tensile Strength @ Break	ASTM D 638	2223 psi (15 MPa)
Tensile Strength @ Yield	ASTM D 638	4110 psi (28 MPa)
Elongation @ Yield ^{1/} , percent	ASTM D 638	7.3 min.
Durometer Hardness, Shore D	ASTM D 2240	65
Heat Deflection Temperature, 66 psi	ASTM D 648	176 °F (80 °C)
Low Temperature Brittleness, F ₅₀	ASTM D 746	<-105 °F (<-76 °C)

1/ Crosshead speed -2 in./minute

The temporary plastic ramps shall be installed according to the manufacturer's specifications and fastened with anchors meeting the manufacturer's recommendations. Temporary plastic ramps that fail to stay in place or create a traffic hazard shall be replaced immediately with temporary HMA ramps at the Contractor's expense."

80366

CONSTRUCTION AIR QUALITY – DIESEL RETROFIT (BDE)

Effective: June 1, 2010

Revised: November 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

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)

Effective: September 1, 2000

Revised: July 2, 2016

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, which may include, but is not limited to:

- (a) Withholding progress payments;
- (b) Assessing sanctions;
- (c) Liquidated damages; and/or
- (d) Disqualifying the Contractor from future bidding as non-responsible.

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 20.00% of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will 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:
<http://www.idot.illinois.gov/doing-business/certifications/disadvantaged-business-enterprise-certification/il-ucp-directory/index>.

BIDDING PROCEDURES. Compliance with this Special Provision is required prior to the award of the contract and the failure of the low bidder to comply will render the bid not responsive.

In order to assure the timely award of the contract, the low bidder shall submit:

- (a) The bidder shall submit a DBE Utilization Plan on completed Department forms SBE 2025 and 2026.
 - (1) The final Utilization Plan must be submitted within five calendar days after the date of the letting in accordance with subsection (a)(2) of Bidding Procedures herein.

- (2) To meet the five day requirement, the bidder may send the Utilization Plan electronically by scanning and sending to DOT.DBE.UP@illinois.gov or faxing to (217) 785-1524. The subject line must include the bid Item Number and the Letting date. The Utilization Plan should be sent as one .pdf file, rather than multiple files and emails for the same Item Number. It is the responsibility of the bidder to obtain confirmation of email or fax delivery.

Alternatively, the Utilization Plan may be sent by certified mail or delivery service within the five calendar day period. If a question arises concerning the mailing date of a Utilization Plan, the mailing date will be established by the U.S. Postal Service postmark on the certified mail receipt from the U.S. Postal Service or the receipt issued by a delivery service when the Utilization Plan is received by the Department. It is the responsibility of the bidder to ensure the postmark or receipt date is affixed within the five days if the bidder intends to rely upon mailing or delivery to satisfy the submission day requirement. The Utilization Plan is to be submitted to:

Illinois Department of Transportation
Bureau of Small Business Enterprises
Contract Compliance Section
2300 South Dirksen Parkway, Room 319
Springfield, Illinois 62764

The Department will not accept a Utilization Plan if it does not meet the five day submittal requirement and the bid will be declared not responsive. In the event the bid is declared not responsive due to a failure to submit a Utilization Plan or failure to comply with the bidding procedures set forth herein, the Department may elect to cause the forfeiture of the penal sum of the bidder's proposal guaranty, and may deny authorization to bid the project if re-advertised for bids. The Department reserves the right to invite any other bidder to submit a Utilization Plan at any time for award consideration.

- (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 Utilization 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 scanned or 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 Utilization Plan must also include a clear identification of the portion of the work to be performed by the DBE partner(s); and,
- (6) If the contract goal is not met, evidence of good faith efforts; the documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor is selected over a DBE for work on the contract.

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 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. In accordance with subsection (c)(6) of the above Bidding Procedures, the documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract.

- (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. If the Utilization Plan is not approved because it is deficient as a technical matter, unless waived by the Department, the bidder will be notified and will be allowed no more than a five calendar day period in order to cure the deficiency.
- (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 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 it receives as a result of the lease arrangement.
- (e) DBE as a material supplier:

- (1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.
- (2) 100 percent goal credit for the cost of materials 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 DBE regular dealer or DBE 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 DBE Participation Commitment 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) **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 or AER 260A, must be signed and submitted. If the commitment of work is in the form of additional tasks assigned to an existing subcontract, then a new Request for Approval of Subcontractor shall not be required. However, the Contractor must document efforts to assure that the existing DBE subcontractor is capable of performing the additional work and has agreed in writing to the change.

- (c) SUBCONTRACT. The Contractor must provide DBE subcontracts to IDOT upon request. Subcontractors shall ensure that all lower tier subcontracts or agreements with DBEs to supply labor or materials be performed in accordance with this Special Provision.
- (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 listed on the approved Utilization Plan, or perform with other forces work designated for a listed DBE except as provided in this Special Provision. The Contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the Contractor obtains the Department's written consent as provided in subsection (a) of this part. Unless Department consent is provided for termination of a DBE subcontractor, the Contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the DBE in the Utilization Plan.

As stated above, 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 1200 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 subcontractor 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. The good faith efforts shall be documented by the Contractor. If the Department requests documentation under this provision, the Contractor shall submit the documentation within seven days, which may be extended for an additional seven days if necessary at the request of the Contractor. The Department shall provide a written determination to the Contractor stating whether or not good faith efforts have been demonstrated.

- (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 Resident Engineer. If full and final payment has not been made to the DBE, the DBE Payment Agreement shall indicate whether a disagreement as to the payment required exists between the Contractor and the DBE or if the Contractor believes that the work has not been satisfactorily completed. If the Contractor does not have the full amount of work indicated in the Utilization Plan performed by the DBE companies indicated in the Utilization Plan and after good faith efforts are reviewed, the Department may deduct from contract payments to the Contractor the amount of the goal not achieved as liquidated and ascertained damages. The Contractor may request an administrative reconsideration of any amount deducted as damages pursuant to subsection (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 may request administrative reconsideration of a decision to deduct the amount of the goal not achieved as liquidated damages. A request to reconsider shall be delivered to the Contract Compliance Section and shall be handled and considered in the same manner as set forth in paragraph (c) of "Good Faith Effort Procedures" of this Special Provision, except a final decision that a good faith effort was not made during contract performance to achieve the goal agreed to in the Utilization Plan shall be the final administrative decision of the Department. The result of the reconsideration process is not administratively appealable to the U.S. Department of Transportation.

DOWEL BAR INSERTER (BDE)

Effective: January 1, 2017

Add the following to Article 420.03 of the Standard Specifications.

“(l) Mechanical Dowel Bar Inserter1103.20”

Revise Article 420.05(c) of the Standard Specifications to read:

“(c) Transverse Contraction Joints. Transverse contraction joints shall consist of planes of weakness created by sawing grooves in the surface of the pavement and shall include load transfer devices consisting of dowel bars. Transverse contraction joints shall be according to the following.”

Revise Article 420.05(c)(2) of the Standard Specifications to read:

“(2) Dowel Bars. Dowel Bars shall be installed parallel to the centerline of the pavement and parallel to the proposed pavement surface. Installation shall be according to one of the following methods.

- a. Dowel Bar Assemblies. The assembly shall act as a rigid unit with each component securely held in position relative to the other members of the assembly. The entire assembly shall be held securely in place by means of nails which shall penetrate the stabilized subbase. At least ten nails shall be used for each 10, 11, or 12 ft (3, 3.3, or 3.6 m) section of assembly.

Metal stakes shall be used instead of nails, with soil or granular subbase. The stakes shall loop over or attach to the top parallel spacer bar of the assembly and penetrate the subgrade or subbase at least 12 in. (300 mm).

At the location of each dowel bar assembly, the subgrade or subbase shall be reshaped and re-tamped when necessary.

Prior to placing concrete, any deviation of the dowel bars from the correct horizontal or vertical alignment (horizontal skew or vertical tilt) greater than 3/8 in. in 12 in (9 mm in 300 mm) shall be corrected and a light coating of oil shall be uniformly applied to all dowel bars.

Care shall be exercised in depositing the concrete at the dowel bar assemblies so the horizontal and vertical alignment will be retained.

- b. Dowel Bar Insertion. The dowel bars may be placed in the pavement slab with a mechanical dowel bar inserter (DBI) attached to a formless paver for pavements ≥ 7.0 in. (175 mm) in thickness. A light coating of oil shall be uniformly applied to all dowel bars.

The DBI shall insert the dowel bars with vibration into the plastic concrete after the concrete has been struck off and consolidated without deformation of the slab. After the bars have been inserted, the concrete shall be finished and no voids shall exist around the dowel bars. The forward movement of the paver shall not be interrupted by the inserting of the dowel bars.

The location of each row of dowel bars shall be marked in a manner to facilitate where to insert the bars, and where to saw the transverse joint.

1. Placement Tolerances for Dowel Bars. The DBI shall place the dowel bars in the concrete pavement within the following tolerances.

(a.) Longitudinal Translation (Mislocation). Longitudinal translation (mislocation) shall be defined as the position of the center of the dowel bar along the longitudinal axis, in relation to the sawed joint.

The quality control tolerance for longitudinal translation shall not exceed 2.0 in (50 mm). If this tolerance is exceeded, adjustments shall be made to the paving operation.

Any joint having two or more dowel bars with an embedment length less than 4.0 in. (100 mm) within 12 in. (300 mm) of the same wheelpath will be considered unacceptable. Any joint having an average dowel bar embedment length less than 5.25 in. (130 mm) will also be considered unacceptable. Embedment length shall be defined as the length of dowel bar embedded on the short side of the sawed joint. An unacceptable joint shall be replaced with a minimum of 6 ft (1.8 m) of pavement centered over the joint according to Section 442 for Class B patches.

(b.) Horizontal Translation (Mislocation). Horizontal translation (mislocation) shall be defined as the difference in the actual dowel bar location parallel to the longitudinal or edge joint from its theoretical position as shown on the plans.

The quality control tolerance for horizontal translation shall not exceed 2.0 in. (50 mm). If this tolerance is exceeded, adjustments shall be made to the paving operation.

Any joint having a dowel bar with a translation greater than 4.0 in. (100 mm) will be considered unacceptable, but may remain in place unless the Engineer determines the joint will not function. If the joint is unable to remain in place, the joint shall be replaced with a minimum of 6 ft (1.8 m) of pavement centered over the joint according to Section 442 for Class B patches.

(c.) Vertical Translation (Mislocation). Vertical translation (mislocation) shall be defined as the difference in the vertical position of the dowel bar relative to the theoretical midpoint of the slab.

The quality control tolerance for vertical translation shall be as shown in the following table. If these tolerances are exceeded, adjustments shall be made to the paving operation.

Pavement Thickness	Dowel Bar Diameter	Vertical Translation Tolerance Above Midpoint	Vertical Translation Tolerance Below Midpoint
≥7 in. to <8 in. (≥175 mm to <200 mm)	1.25 in. (31 mm)	0.25 in. (6 mm)	0.5 in. (13 mm)
≥8 in. to <9 in. (≥200 mm to <225 mm)	1.50 in. (38 mm)	0.25 in. (6 mm)	0.5 in. (13 mm)
≥9 in. to <10 in. (≥225 mm to <250 mm)	1.50 in. (38 mm)	0.75 in. (19 mm)	0.75 in. (19 mm)
≥10 in. (≥250 mm)	1.50 in. (38 mm)	0.75 in. (19 mm)	1.0 in. (25 mm)

Any joint having a dowel bar with top concrete cover less than T/3, where T is slab thickness, will be considered unacceptable. Any joint having 2 or more dowel bars with bottom concrete cover less than 2.0 in. (50 mm) will also be considered unacceptable. An unacceptable joint shall be replaced with a minimum of 6 ft (1.8 m) of pavement according to Section 442 for Class B patches.

(d.) Vertical Tilt or Horizontal Skew (Misalignment). Vertical tilt or horizontal skew (misalignment) shall be defined as the difference in position of the dowel bar ends with respect to each other. Vertical tilt is measured in the vertical axis whereas horizontal skew is measured in the horizontal axis. Misalignment shall be measured in terms of a joint score. The joint score shall be defined as the degree of misalignment evaluated for a single transverse joint for each lane of pavement. The joint score shall be determined as follows:

$$\text{Joint Score} = \left(1 + \left(\frac{x}{x-n} \right) \sum_{i=1}^x W_i \right)$$

where:

W_i = weighting factor (Table 1) for dowel i
 x = number of dowels in a single joint

n = number of dowels excluded from the joint score calculation due to measurement interference

Single Dowel Misalignment – The degree of misalignment applicable to a single dowel bar, calculated as:

$$\text{Single Dowel Misalignment} = \sqrt{(\text{Horizontal Skew})^2 + (\text{Vertical Tilt})^2}$$

Table 1. Weighting Factors in Joint Score Determination	
Single Dowel Bar Misalignment (SDM)	W, Weighting Factor
SDM ≤ 0.6 in. (15 mm)	0
0.6 in. (15 mm) < SDM ≤ 0.8 in. (20 mm)	2
0.8 in. (20 mm) < SDM ≤ 1 in. (25 mm)	4
1 in. (25 mm) < SDM ≤ 1.5 in. (38 mm)	5
1.5 in. (38 mm) < SDM	10

The quality control tolerance for vertical tilt or horizontal skew shall not exceed 0.6 in. (15 mm). If the tolerance is exceeded for either one, adjustments shall be made to the paving operation.

Any joint having a dowel bar with a vertical tilt or horizontal skew greater than 1.5 in. (38 mm) shall be cut. If more than one dowel bar is required to be cut in the joint, the joint will be considered unacceptable and shall be replaced with a minimum of 6 ft (1.8 m) of pavement centered over the joint according to Section 442 for Class B patches.

Single dowel bar misalignment shall be controlled to provide the joint scores shown in the following table.

Number of Dowel Bars in the Joint	Maximum Joint Score
< 5	4
≥ 5 but ≤ 9	8
> 9	12

A joint score greater than the specified maximum will be considered locked. Three consecutive joints with a score greater than the specified maximum total score will all be considered unacceptable.

Three consecutive locked joints shall be corrected by selecting one joint and cutting a dowel bar. Preference shall be given to cutting a dowel bar within the middle 2.5 ft (0.8 m) of the pavement lane to avoid the wheelpaths. If none of the three locked joints will have a joint score less than or equal to the specified maximum after selecting one dowel bar to cut, one of the joints shall be replaced with a minimum of 6 ft (1.8 m) of

pavement centered over the joint according to Section 442 for Class B patches.

(e.) For unacceptable work, the Contractor may propose alternative repairs for consideration by the Engineer.

2. Testing of Dowel Bar Placement. The placement of the dowel bars shall be tested within 24 hours of paving with a calibrated MIT Scan-2 device according to "Use of Magnetic Tomography Technology to Evaluate Dowel Placement" (Publication No. FHWA-IF-06-006) by the Federal Highway Administration.

A trained operator shall perform the testing, and all testing shall be performed in the presence of the Engineer. The device shall be calibrated to the type and size dowel bar used in the work according to the manufacturer's instructions. Calibration documentation shall be provided to the Engineer prior to construction. The device shall be recalibrated and/or validate readings as required by the Engineer. The device may be utilized as a process control and make necessary adjustments to ensure the dowel bars are placed in the correct location.

(a.) Test Section. Prior to start of production paving, a test section consisting of 30 transverse joints shall be constructed. The test section may be performed on the actual pavement, but production paving shall not begin until an acceptable test section has been constructed. The test section will be considered acceptable when all of the following are met:

- (1.) 90 percent of the dowel bars meet the quality control tolerance for longitudinal, horizontal, or vertical translation (mislocation);
- (2.) 90 percent of the dowel bars meet the quality control tolerance for vertical tilt or horizontal skew deviation (misalignment); and
- (3.) none of the joints are considered unacceptable prior to a corrective measure for mislocation or misalignment.

If the test section fails, another test section consisting of 30 joints shall be constructed.

The test section requirement may be waived by the Engineer if the Contractor has constructed an acceptable test section and successfully used the DBI on a Department contract within the same calendar year.

(b.) Production Paving. After the test section is approved, production paving may begin. The mislocation and misalignment of each dowel bar for the

first ten joints constructed, and every tenth joint thereafter, shall be tested.

If two consecutive days of paving result in 5 percent or more of the joints on each day being unacceptable prior to a corrective measure, production paving shall be discontinued and a new test section shall be constructed.

If any joint is found to be unacceptable prior to a corrective measure, testing of additional joints on each side of the unacceptable joint shall be performed until acceptable joints are found.

(c.) Test Report. Test reports shall be provided to the Engineer within two working days of completing each day's testing. The test report shall include the following.

(1.) Contract number, placement date, county-route-section, direction of traffic, scan date, Contractor, and name of individual performing the tests.

(2.) Provide the standard report generated from the on-board printer of the imaging technology used for every dowel and joint measured.

(3.) For every dowel measured, provide the joint identification number, lane number and station, dowel bar number or x-location, direction of testing and reference joint location/edge location, longitudinal translation, horizontal translation, vertical translation, vertical tilt, and horizontal skew.

(4.) Identify each dowel bar with a maximum longitudinal, horizontal, or vertical translation that has been exceeded. Identify each dowel bar with a maximum vertical tilt or horizontal skew deviation that has been exceeded.

(5.) Joint Score Details: Provide the joint identification number, lane number, station, and calculated joint score for each joint.

(6.) Locked Joint Identification: Identify each joint with a joint score > 12.

(d.) Exclusions. Exclude the following from dowel bar mislocation and misalignment measurements.

(1.) Transverse construction joints (headers).

(2.) Dowel bars within 24 in. (610 mm) of metallic manholes, inlets, metallic castings, or other nearby or underlying steel reinforced objects.

- (3.) The outside dowel bar when tie bars are installed with mechanical equipment in fresh concrete. For tie bar installations involving preformed or drilled holes, installation shall be performed after testing with the MIT Scan-2 device.
- (4.) Joints located directly under high voltage power lines.
- (5.) Subject to the approval of the Engineer, any other contributors to magnetic interference.
- (e.) Deficiency Deduction. When the Contractor has cut 25 dowel bars to correct unacceptable joints, the Contractor shall be liable and shall pay to the Department a deficiency deduction of \$500.00 for the cost of the bars. Thereafter, an additional deficiency deduction of \$20.00 for each additional bar cut will be assessed."

Add the following to Section 1103 of the Standard Specifications.

“1103.20 Mechanical Dowel Bar Inserter. The mechanical dowel bar inserter (DBI) shall be self-contained and supported on the formless paver with the ability to move separately from the paver. The DBI shall be equipped with insertion forks along with any other devices necessary for finishing the concrete the full width of the pavement. The insertion forks shall have the ability to vibrate at a minimum frequency of 3000 VPM.”

80378

FUEL COST ADJUSTMENT (BDE) (RETURN FORM WITH BID)

Effective: April 1, 2009

Revised: July 1, 2015

Description. Fuel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in fuel prices when optioned by the Contractor. The bidder shall indicate on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form or failure to indicate contract number, company name and sign and date the form shall make this contract exempt of fuel cost adjustments for all categories of work. Failure to indicate "Yes" for any category of work will make that category of work exempt from fuel cost adjustment.

General. The fuel cost adjustment shall apply to contract pay items as grouped by category. The adjustment shall only apply to those categories of work checked "Yes", and only when the cumulative plan quantities for a category exceed the required threshold. Adjustments to work items in a category, either up or down, and extra work paid for by agreed unit price will be subject to fuel cost adjustment only when the category representing the added work was subject to the fuel cost adjustment. Extra work paid for at a lump sum price or by force account will not be subject to fuel cost adjustment. Category descriptions and thresholds for application and the fuel usage factors which are applicable to each are as follows:

(a) Categories of Work.

- (1) Category A: Earthwork. Contract pay items performed under Sections 202, 204, and 206 including any modified standard or nonstandard items where the character of the work to be performed is considered earthwork. The cumulative total of all applicable item plan quantities shall exceed 25,000 cu yd (20,000 cu m). Included in the fuel usage factor is a weighted average 0.10 gal/cu yd (0.50 liters/cu m) factor for trucking.
- (2) Category B: Subbases and Aggregate Base Courses. Contract pay items constructed under Sections 311, 312 and 351 including any modified standard or nonstandard items where the character of the work to be performed is considered construction of a subbase or aggregate, stabilized or modified base course. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is a 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.
- (3) Category C: Hot-Mix Asphalt (HMA) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 355, 406, 407 and 482 including any modified standard or nonstandard items where the character of the work to be performed is considered HMA bases, pavements and shoulders. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.

- (4) Category D: Portland Cement Concrete (PCC) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 353, 420, 421 and 483 including any modified standard or nonstandard items where the character of the work to be performed is considered PCC base, pavement or shoulder. The cumulative total of all applicable item plan quantities shall exceed 7500 sq yd (6000 sq m). Included in the fuel usage factor is 1.20 gal/cu yd (5.94 liters/cu m) factor for trucking.
- (5) Category E: Structures. Structure items having a cumulative bid price that exceeds \$250,000 for pay items constructed under Sections 502, 503, 504, 505, 512, 516 and 540 including any modified standard or nonstandard items where the character of the work to be performed is considered structure work when similar to that performed under these sections and not included in categories A through D.

(b) Fuel Usage Factors.

English Units

Category	Factor	Units
A - Earthwork	0.34	gal / cu yd
B – Subbase and Aggregate Base courses	0.62	gal / ton
C – HMA Bases, Pavements and Shoulders	1.05	gal / ton
D – PCC Bases, Pavements and Shoulders	2.53	gal / cu yd
E – Structures	8.00	gal / \$1000

Metric Units

Category	Factor	Units
A - Earthwork	1.68	liters / cu m
B – Subbase and Aggregate Base courses	2.58	liters / metric ton
C – HMA Bases, Pavements and Shoulders	4.37	liters / metric ton
D – PCC Bases, Pavements and Shoulders	12.52	liters / cu m
E – Structures	30.28	liters / \$1000

(c) Quantity Conversion Factors.

Category	Conversion	Factor
B	sq yd to ton	0.057 ton / sq yd / in depth
	sq m to metric ton	0.00243 metric ton / sq m / mm depth
C	sq yd to ton	0.056 ton / sq yd / in depth
	sq m to metric ton	0.00239 m ton / sq m / mm depth
D	sq yd to cu yd	0.028 cu yd / sq yd / in depth
	sq m to cu m	0.001 cu m / sq m / mm depth

Method of Adjustment. Fuel cost adjustments will be computed as follows.

$$CA = (FPI_P - FPI_L) \times FUF \times Q$$

- Where: CA = Cost Adjustment, \$
FPI_P = Fuel Price Index, as published by the Department for the month the work is performed, \$/gal (\$/liter)
FPI_L = Fuel Price Index, as published by the Department for the month prior to the letting for work paid for at the contract price; or for the month the agreed unit price letter is submitted by the Contractor for extra work paid for by agreed unit price, \$/gal (\$/liter)
FUF = Fuel Usage Factor in the pay item(s) being adjusted
Q = Authorized construction Quantity, tons (metric tons) or cu yd (cu m)

The entire FUF indicated in paragraph (b) will be used regardless of use of trucking to perform the work.

Basis of Payment. Fuel cost adjustments may be positive or negative but will only be made when there is a difference between the FPI_L and FPI_P in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(FPI_L - FPI_P) \div FPI_L\} \times 100$$

Fuel cost adjustments will be calculated for each calendar month in which applicable work is performed; and will be paid or deducted when all other contract requirements for the items of work are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Return With Bid

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**OPTION FOR
FUEL COST ADJUSTMENT**

The bidder shall submit this completed form with his/her bid. Failure to submit the form or properly complete contract number, company name, and sign and date the form shall make this contract exempt of fuel cost adjustments in all categories. Failure to indicate "Yes" for any category of work at the time of bid will make that category of work exempt from fuel cost adjustment. After award, this form, when submitted shall become part of the contract.

Contract No.: _____

Company Name: _____

Contractor's Option:

Is your company opting to include this special provision as part of the contract plans for the following categories of work?

- | | | |
|--|-----|--------------------------|
| Category A Earthwork. | Yes | <input type="checkbox"/> |
| Category B Subbases and Aggregate Base Courses | Yes | <input type="checkbox"/> |
| Category C HMA Bases, Pavements and Shoulders | Yes | <input type="checkbox"/> |
| Category D PCC Bases, Pavements and Shoulders | Yes | <input type="checkbox"/> |
| Category E Structures | Yes | <input type="checkbox"/> |

Signature: _____ **Date:** _____

80229

HOT-MIX ASPHALT - DENSITY TESTING OF LONGITUDINAL JOINTS (BDE)

Effective: January 1, 2010

Revised: April 1, 2016

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

Quality Control/Quality Assurance (QC/QA). Delete the second and third sentence of the third paragraph of Article 1030.05(d)(3) of the Standard Specifications.

Add the following paragraphs to the end of Article 1030.05(d)(3) of the Standard Specifications:

“Longitudinal joint density testing shall be performed at each random density test location. Longitudinal joint testing shall be located at a distance equal to the lift thickness or a minimum of 4 in. (100 mm), from each pavement edge. (i.e. for a 5 in. (125 mm) lift the near edge of the density gauge or core barrel shall be within 5 in. (125 mm) from the edge of pavement.) Longitudinal joint density testing shall be performed using either a correlated nuclear gauge or cores.

- a. Confined Edge. Each confined edge density shall be represented by a one-minute nuclear density reading or a core density and shall be included in the average of density readings or core densities taken across the mat which represents the Individual Test.
- b. Unconfined Edge. Each unconfined edge joint density shall be represented by an average of three one-minute density readings or a single core density at the given density test location and shall meet the density requirements specified herein. The three one-minute readings shall be spaced 10 ft (3 m) apart longitudinally along the unconfined pavement edge and centered at the random density test location.”

Revise the Density Control Limits table in Article 1030.05(d)(4) of the Standard Specifications to read:

“Mixture Composition	Parameter	Individual Test (includes confined edges)	Unconfined Edge Joint Density Minimum
IL-4.75	Ndesign = 50	93.0 – 97.4% ^{1/}	91.0%
IL-9.5	Ndesign = 90	92.0 – 96.0%	90.0%
IL-9.5,IL-9.5L	Ndesign < 90	92.5 – 97.4%	90.0%
IL-19.0	Ndesign = 90	93.0 – 96.0%	90.0%
IL-19.0, IL-19.0L	Ndesign < 90	93.0 ^{2/} – 97.4%	90.0%
SMA	Ndesign = 50 & 80	93.5 – 97.4%	91.0%”

80246

HOT-MIX ASPHALT – TACK COAT (BDE)

Effective: November 1, 2016

Revise Article 1032.06(a) of the Standard Specifications to read:

“(a) Anionic Emulsified Asphalt. Anionic emulsified asphalts shall be according to AASHTO M 140. SS-1h emulsions used as a tack coat shall have the cement mixing test waived.”

80376

MAST ARM ASSEMBLY AND POLE (BDE)

Effective: July 1, 2016

Revise Article 1077.03(a)(1) of the Standard Specifications to read:

- “(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 “LRFD Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals” 2015 Edition. However, the arm-to-pole connection for tapered signal and luminaire arms shall be according to the “fillet welded, ring stiffened box connection” detail as shown in Figure C5.6.7-2. The mast arm and pole shall be designed assuming the ADT > 10,000, Risk Category Typical, and Fatigue Category I Natural Wind Gust only.”

80369

PAVEMENT MARKING REMOVAL (BDE)

Effective: July 1, 2016

Revise Article 783.02 of the Standard Specifications to read:

“783.02 Equipment. Equipment shall be according to the following.

Item	Article/Section
(a) Grinders (Note 1)	
(b) Water Blaster with Vacuum Recovery	1101.12

Note 1. Grinding equipment shall be approved by the Engineer.”

Revise the first paragraph of Article 783.03 of the Standard Specifications to read:

“783.03 Removal of Conflicting Markings. Existing pavement markings that conflict with revised traffic patterns shall be removed. If darkness or inclement weather prohibits the removal operations, such operations shall be resumed the next morning or when weather permits. In the event of removal equipment failure, such equipment shall be repaired, replaced, or leased so removal operations can be resumed within 24 hours.”

Revise the first and second sentences of the first paragraph of Article 783.03(a) of the Standard Specifications to read:

“The existing pavement markings shall be removed by the method specified and in a manner that does not materially damage the surface or texture of the pavement or surfacing. Small particles of tightly adhering existing markings may remain in place, if in the opinion of the Engineer, complete removal of the small particles will result in pavement surface damage.”

Revise the first paragraph of Article 783.04 of the Standard Specifications to read:

“783.04 Cleaning. The roadway surface shall be cleaned of debris or any other deleterious material by the use of compressed air or water blast.”

Revise the first paragraph of Article 783.06 of the Standard Specifications to read:

“783.06 Basis of Payment. This work will be paid for at the contract unit price per each for RAISED REFLECTIVE PAVEMENT MARKER REMOVAL, or at the contract unit price per square foot (square meter) for PAVEMENT MARKING REMOVAL – GRINDING and/or PAVEMENT MARKING REMOVAL – WATER BLASTING.”

Delete Article 1101.13 from the Standard Specifications.

80371

PORTABLE CHANGEABLE MESSAGE SIGNS (BDE)

Effective: November 1, 2016

Revise this second sentence of the first paragraph of Article 1106.02(i) of the Standard Specifications to read:

“The message panel shall be a minimum of 7 ft (2.1 m) above the edge of pavement in urban areas and a minimum of 5 ft (1.5 m) above the edge of pavement in rural areas, present a level appearance, and be capable of displaying up to eight characters in each of three lines at a time.”

80377

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

STEEL COST ADJUSTMENT (BDE) (RETURN FORM WITH BID)

Effective: April 2, 2004

Revised: July 1, 2015

Description. Steel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in steel prices when optioned by the Contractor. The bidder shall indicate on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form or failure to indicate contract number, company name, and sign and date the form shall make this contract exempt of steel cost adjustments for all items of steel. Failure to indicate "Yes" for any item of work will make that item of steel exempt from steel cost adjustment.

Types of Steel Products. An adjustment will be made for fluctuations in the cost of steel used in the manufacture of the following items:

Metal Piling (excluding temporary sheet piling)
Structural Steel
Reinforcing Steel

Other steel materials such as dowel bars, tie bars, mesh reinforcement, guardrail, steel traffic signal and light poles, towers and mast arms, metal railings (excluding wire fence), and frames and grates will be subject to a steel cost adjustment when the pay items they are used in have a contract value of \$10,000 or greater.

The adjustments shall apply to the above items when they are part of the original proposed construction, or added as extra work and paid for by agreed unit prices. The adjustments shall not apply when the item is added as extra work and paid for at a lump sum price or by force account.

Documentation. Sufficient documentation shall be furnished to the Engineer to verify the following:

- (a) The dates and quantity of steel, in lb (kg), shipped from the mill to the fabricator.
- (b) The quantity of steel, in lb (kg), incorporated into the various items of work covered by this special provision. The Department reserves the right to verify submitted quantities.

Method of Adjustment. Steel cost adjustments will be computed as follows:

$$SCA = Q \times D$$

Where: SCA = steel cost adjustment, in dollars
Q = quantity of steel incorporated into the work, in lb (kg)
D = price factor, in dollars per lb (kg)

$$D = MPI_M - MPI_L$$

Where: MPI_M = The Materials Cost Index for steel as published by the Engineering News-Record for the month the steel is shipped from the mill. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

MPI_L = The Materials Cost Index for steel as published by the Engineering News-Record for the month prior to the letting for work paid for at the contract price; or for the month the agreed unit price letter is submitted by the Contractor for extra work paid for by agreed unit price,. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

The unit weights (masses) of steel that will be used to calculate the steel cost adjustment for the various items are shown in the attached table.

No steel cost adjustment will be made for any products manufactured from steel having a mill shipping date prior to the letting date.

If the Contractor fails to provide the required documentation, the method of adjustment will be calculated as described above; however, the MPI_M will be based on the date the steel arrives at the job site. In this case, an adjustment will only be made when there is a decrease in steel costs.

Basis of Payment. Steel cost adjustments may be positive or negative but will only be made when there is a difference between the MPI_L and MPI_M in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(MPI_L - MPI_M) \div MPI_L\} \times 100$$

Steel cost adjustments will be calculated by the Engineer and will be paid or deducted when all other contract requirements for the items of work are satisfied. Adjustments will only be made for fluctuations in the cost of the steel as described herein. No adjustment will be made for changes in the cost of manufacturing, fabrication, shipping, storage, etc.

The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Attachment

Item	Unit Mass (Weight)
Metal Piling (excluding temporary sheet piling)	
Furnishing Metal Pile Shells 12 in. (305 mm), 0.179 in. (3.80 mm) wall thickness)	23 lb/ft (34 kg/m)
Furnishing Metal Pile Shells 12 in. (305 mm), 0.250 in. (6.35 mm) wall thickness)	32 lb/ft (48 kg/m)
Furnishing Metal Pile Shells 14 in. (356 mm), 0.250 in. (6.35 mm) wall thickness)	37 lb/ft (55 kg/m)
Other piling	See plans
Structural Steel	See plans for weights (masses)
Reinforcing Steel	See plans for weights (masses)
Dowel Bars and Tie Bars	6 lb (3 kg) each
Mesh Reinforcement	63 lb/100 sq ft (310 kg/sq m)
Guardrail	
Steel Plate Beam Guardrail, Type A w/steel posts	20 lb/ft (30 kg/m)
Steel Plate Beam Guardrail, Type B w/steel posts	30 lb/ft (45 kg/m)
Steel Plate Beam Guardrail, Types A and B w/wood posts	8 lb/ft (12 kg/m)
Steel Plate Beam Guardrail, Type 2	305 lb (140 kg) each
Steel Plate Beam Guardrail, Type 6	1260 lb (570 kg) each
Traffic Barrier Terminal, Type 1 Special (Tangent)	730 lb (330 kg) each
Traffic Barrier Terminal, Type 1 Special (Flared)	410 lb (185 kg) each
Steel Traffic Signal and Light Poles, Towers and Mast Arms	
Traffic Signal Post	11 lb/ft (16 kg/m)
Light Pole, Tenon Mount and Twin Mount, 30 - 40 ft (9 - 12 m)	14 lb/ft (21 kg/m)
Light Pole, Tenon Mount and Twin Mount, 45 - 55 ft (13.5 - 16.5 m)	21 lb/ft (31 kg/m)
Light Pole w/Mast Arm, 30 - 50 ft (9 - 15.2 m)	13 lb/ft (19 kg/m)
Light Pole w/Mast Arm, 55 - 60 ft (16.5 - 18 m)	19 lb/ft (28 kg/m)
Light Tower w/Luminaire Mount, 80 - 110 ft (24 - 33.5 m)	31 lb/ft (46 kg/m)
Light Tower w/Luminaire Mount, 120 - 140 ft (36.5 - 42.5 m)	65 lb/ft (97 kg/m)
Light Tower w/Luminaire Mount, 150 - 160 ft (45.5 - 48.5 m)	80 lb/ft (119 kg/m)
Metal Railings (excluding wire fence)	
Steel Railing, Type SM	64 lb/ft (95 kg/m)
Steel Railing, Type S-1	39 lb/ft (58 kg/m)
Steel Railing, Type T-1	53 lb/ft (79 kg/m)
Steel Bridge Rail	52 lb/ft (77 kg/m)
Frames and Grates	
Frame	250 lb (115 kg)
Lids and Grates	150 lb (70 kg)

Return With Bid

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**OPTION FOR
STEEL COST ADJUSTMENT**

The bidder shall submit this completed form with his/her bid. Failure to submit the form or properly complete contract number, company name, and sign and date the form shall make this contract exempt of steel cost adjustments for all items of steel. Failure to indicate "Yes" for any item of work will make that item of steel exempt from steel cost adjustment. After award, this form, when submitted shall become part of the contract.

Contract No.: _____

Company Name: _____

Contractor's Option:

Is your company opting to include this special provision as part of the contract plans for the following items of work?

- | | | |
|--|-----|--------------------------|
| Metal Piling | Yes | <input type="checkbox"/> |
| Structural Steel | Yes | <input type="checkbox"/> |
| Reinforcing Steel | Yes | <input type="checkbox"/> |
| Dowel Bars, Tie Bars and Mesh Reinforcement | Yes | <input type="checkbox"/> |
| Guardrail | Yes | <input type="checkbox"/> |
| Steel Traffic Signal and Light Poles, Towers and Mast Arms | Yes | <input type="checkbox"/> |
| Metal Railings (excluding wire fence) | Yes | <input type="checkbox"/> |
| Frames and Grates | Yes | <input type="checkbox"/> |

Signature: _____ **Date:** _____

80127

STEEL PLATE BEAM GUARDRAIL (BDE)

Effective: January 1, 2017

Revise Article 630.02 of the Standard Specifications to read:

“**630.02 Materials.** Materials shall be according to the following.

Item	Article/Section
(a) Steel Plate Beam Guardrail	1006.25
(b) Wood Posts and Wood Block	1007.01, 1007.02, 1007.06
(c) Steel Posts, Blockouts, Restraints and Wire Rope for Guardrail	1006.23
(d) Preservative Treatment	1007.12
(e) Reinforcement Bars	1006.10
(f) Plastic Blockouts (Note 1)	
(g) Chemical Adhesive Resin System	1027.01
(h) Controlled Low-Strength Material (CLSM)	1019

Note 1. Plastic blockouts may be used in lieu of wood blockouts for steel plate beam guardrail. The plastic blockouts shall be the minimum dimensions shown on the plans and shall be on the Department’s qualified product list.”

Revise Article 630.05 of the Standard Specifications to read:

“**630.05 Posts.** Posts shall be as follows.

- (a) Wood Posts. Wood posts and blocks shall be treated. The posts and blocks shall be cut to the proper dimensions before treatment. No cutting of the posts or blocks will be permitted after treatment. Posts shall be erected according to Article 634.05.
- (b) Steel Posts. Steel posts may be driven by hand or mechanical methods provided they are protected by a suitable driving cap and the earth around the posts compacted, if necessary, after driving. When steel posts are driven to incorrect alignment or grade, they shall be removed and set according to Article 634.05.

When it is necessary to shorten the posts in the field, the lower portion shall be cut off in a manner to provide a smooth cut with minimum damage to the galvanizing. Cut areas shall be repaired according to the requirements of AASHTO M 36.”

Revise Article 630.06 of the Standard Specifications to read:

“**630.06 Shoulder Stabilization at Guardrail.** Shoulder stabilization shall be constructed at the locations of steel plate beam guardrail installation according to the details shown on the plans. On new construction projects, the material used in the shoulder stabilization shall be the same as that used in the adjacent paved shoulder. On shoulder resurfacing projects, the

material used in the shoulder stabilization shall be the same as that used for the shoulder resurfacing.

When portland cement concrete is used, shoulder stabilization shall be constructed according to the applicable portions of Section 483. The shoulder stabilization shall be constructed simultaneously with the adjacent portland cement concrete shoulder. Guardrail posts shall be driven through leaveouts or holes cored in the completed shoulder stabilization. The void around each post shall be backfilled with earth or aggregate and capped with hot-mix asphalt (HMA) or CLSM.

When HMA is used, shoulder stabilization shall be constructed according to the applicable portions of Section 482. On new construction, the shoulder stabilization shall be constructed simultaneously with the HMA shoulder. On shoulder resurfacing projects, the portion of the shoulder stabilization below the surface of the existing paved shoulder shall be placed and compacted separately. The guardrail posts shall be driven through holes cored in the completed shoulder stabilization. The void around each post shall be backfilled with earth or aggregate and capped with HMA or CLSM.

When driving guardrail posts through existing shoulders, shoulder stabilization, or other paved areas, the posts shall be driven through cored holes. The void around each post shall be backfilled with earth or aggregate and capped with HMA or CLSM.”

Revise Article 630.08 of the Standard Specifications to read:

“630.08 Basis of Payment. This work will be paid for at the contract unit price per foot (meter) for NON-BLOCKED STEEL PLATE BEAM GUARDRAIL; STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT (1.83 M) POSTS; STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT (2.74 M) POSTS; STEEL PLATE BEAM GUARDRAIL, TYPE B, 6 FOOT (1.83 M) POSTS; STEEL PLATE BEAM GUARDRAIL, TYPE B, 9 FOOT (2.74 M) POSTS; or STEEL PLATE BEAM GUARDRAIL, TYPE D, 6 FOOT (1.83 M) POSTS.

When end sections are specified, they will not be paid for as a separate item, but shall be considered as included in the unit price for steel plate beam guardrail.

Steel plate beam guardrail mounted on existing culverts will be paid for at the contract unit price per foot (meter) for STRONG POST GUARDRAIL ATTACHED TO CULVERT or WEAK POST GUARDRAIL ATTACHED TO CULVERT, of the case specified.

Portland cement concrete shoulder stabilization at guardrail will be paid for according to Article 483.10.

HMA shoulder stabilization at guardrail will be paid for according to Article 482.08.

Excavation in rock will be paid for according to Article 502.13.

Steel plate beam guardrail incorporating long-span spacing will be paid for at the contract unit price per foot (meter) for LONG-SPAN GUARDRAIL OVER CULVERT, 12 FT 6 IN (3.8 M) SPAN; LONG-SPAN GUARDRAIL OVER CULVERT, 18 FT 9 IN (5.7 M) SPAN; or LONG-SPAN GUARDRAIL OVER CULVERT, 25 FT (7.6 M) SPAN.

Steel plate beam guardrail incorporating treated timber at the back side of the post will be paid for at the contract unit price per foot (meter) for BACK SIDE PROTECTION OF GUARDRAIL."

80379

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 than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the Illinois Department of Transportation and the Federal Highway Administration. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the contractor will be reimbursed 80 cents per hour of training given an employee on this contract in accordance with an approved training program. As approved by the Engineer, reimbursement will be made for training of persons in excess of the number specified herein. This reimbursement will be made even though the contractor receives additional training program funds from other sources, provided such other source does not specifically prohibit the contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the contractor where he does one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the offsite training period.

No payment shall be made to the contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the contractor and evidences a lack of good faith on the part of the contractor in meeting the requirement of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program.

It is not required that all trainees be on board for the entire length of the contract. A contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The contractor shall furnish the trainee a copy of the program he will follow in providing the training. The contractor shall provide each trainee with a certification showing the type and length of training satisfactorily complete.

The contractor will provide for the maintenance of records and furnish periodic reports documenting his performance under this Training Special Provision.

METHOD OF MEASUREMENT The unit of measurement is in hours.

BASIS OF PAYMENT This work will be paid for at the contract unit price of 80 cents per hour for TRAINEES. The estimated total number of hours, unit price and total price have been included in the schedule of prices.

20338

TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (BDE)

Effective: January 1, 2017

Revise Article 631.04 of the Standard Specifications to read:

“631.04 Traffic Barrier Terminal, Type 1 Special (Tangent) and Traffic Barrier Terminal, Type 1 Special (Flared). These terminals shall meet the testing criteria contained in either NCHRP Report 350 or MASH. In addition to meeting the criteria in one or both of these references, the terminals shall be on the Department’s qualified product list.

The terminal shall be installed according to the manufacturer’s specifications. The beginning length of need point of the terminal shall be placed within 12 ft 6 in (3.8 m) of the length of need point shown on the plans.

The terminal shall be delineated with a terminal marker direct applied. No other guardrail delineation shall be attached to the terminal section.”

80381

WARM MIX ASPHALT (BDE)

Effective: January 1, 2012

Revised: April 1, 2016

Description. This work shall consist of designing, producing and constructing Warm Mix Asphalt (WMA) in lieu of Hot Mix Asphalt (HMA) at the Contractor's option. Work shall be according to Sections 406, 407, 408, 1030, and 1102 of the Standard Specifications, except as modified herein. In addition, any references to HMA in the Standard Specifications, or the special provisions shall be construed to include WMA.

WMA is an asphalt mixture which can be produced at temperatures lower than allowed for HMA utilizing approved WMA technologies. WMA technologies are defined as the use of additives or processes which allow a reduction in the temperatures at which HMA mixes are produced and placed. WMA is produced by the use of additives, a water foaming process, or combination of both. Additives include minerals, chemicals or organics incorporated into the asphalt binder stream in a dedicated delivery system. The process of foaming injects water into the asphalt binder stream, just prior to incorporation of the asphalt binder with the aggregate.

Approved WMA technologies may also be used in HMA provided all the requirements specified herein, with the exception of temperature, are met. However, asphalt mixtures produced at temperatures in excess of 275 °F (135 °C) will not be considered WMA when determining the grade reduction of the virgin asphalt binder grade.

Equipment.

Revise the first paragraph of Article 1102.01 of the Standard Specifications to read:

"1102.01 Hot-Mix Asphalt Plant. The hot-mix asphalt (HMA) plant shall be the batch-type, continuous-type, or dryer drum plant. The plants shall be evaluated for prequalification rating and approval to produce HMA according to the current Bureau of Materials and Physical Research Policy Memorandum, "Approval of Hot-Mix Asphalt Plants and Equipment". Once approved, the Contractor shall notify the Bureau of Materials and Physical Research to obtain approval of all plant modifications. The plants shall not be used to produce mixtures concurrently for more than one project or for private work unless permission is granted in writing by the Engineer. The plant units shall be so designed, coordinated and operated that they will function properly and produce HMA having uniform temperatures and compositions within the tolerances specified. The plant units shall meet the following requirements."

Add the following to Article 1102.01(a) of the Standard Specifications.

"(11) Equipment for Warm Mix Technologies.

- a. Foaming. Metering equipment for foamed asphalt shall have an accuracy of ± 2 percent of the actual water metered. The foaming control system shall be electronically interfaced with the asphalt binder meter.

- b. Additives. Additives shall be introduced into the plant according to the supplier's recommendations and shall be approved by the Engineer. The system for introducing the WMA additive shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes."

Mix Design Verification.

Add the following to Article 1030.04 of the Standard Specifications.

"(e) Warm Mix Technologies.

- (1) Foaming. WMA mix design verification will not be required when foaming technology is used alone (without WMA additives). However, the foaming technology shall only be used on HMA designs previously approved by the Department.
- (2) Additives. WMA mix designs utilizing additives shall be submitted to the Engineer for mix design verification."

Construction Requirements.

Revise the second paragraph of Article 406.06(b)(1) of the Standard Specifications to read:

"The HMA shall be delivered at a temperature of 250 to 350 °F (120 to 175 °C).
WMA shall be delivered at a minimum temperature of 215 °F (102 °C)."

Basis of Payment.

This work will be paid at the contract unit price bid for the HMA pay items involved. Anti-strip will not be paid for separately, but shall be considered as included in the cost of the work.

80288

WEEKLY DBE TRUCKING REPORTS (BDE)

Effective: June 2, 2012

Revised: April 2, 2015

The Contractor shall submit 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 for DBE goal credit.

The report shall be submitted to the Engineer on Department form "SBE 723" within ten business days following the reporting period. The reporting period shall be Monday through Sunday for each week reportable trucking activities occur.

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

PIPE UNDERDRAINS FOR STRUCTURES

Effective: May 17, 2000

Revised: January 22, 2010

Description. This work shall consist of furnishing and installing a pipe underdrain system as shown on the plans, as specified herein, and as directed by the Engineer.

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

The perforated pipe underdrain shall be according to Article 601.02 of the Standard Specifications. Outlet pipes or pipes connecting to a separate storm sewer system shall not be perforated.

The drainage aggregate shall be a combination of one or more of the following gradations, FA1, FA2, CA5, CA7, CA8, CA11, or CA13 thru 16, according to Sections 1003 and 1004 of the Standard Specifications.

The fabric surrounding the drainage aggregate shall be Geotechnical Fabric for French Drains according to Article 1080.05 of the Standard Specifications.

Construction Requirements. All work shall be according to the applicable requirements of Section 601 of the Standard Specifications except as modified below.

The pipe underdrains shall consist of a perforated pipe drain situated at the bottom of an area of drainage aggregate wrapped completely in geotechnical fabric and shall be installed to the lines and gradients as shown on the plans.

Method of Measurement. Pipe Underdrains for Structures shall be measured for payment in feet (meters), in place. Measurement shall be along the centerline of the pipe underdrains. All connectors, outlet pipes, elbows, and all other miscellaneous items shall be included in the measurement. Concrete headwalls shall be included in the cost of Pipe Underdrains for Structures, but shall not be included in the measurement for payment.

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

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

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.

Contract Provision - Cargo Preference Requirements

In accordance with Title 46 CFR § 381.7 (b), the contractor agrees—

“(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

(2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.”

Provisions (1) and (2) apply to materials or equipment that are acquired solely for the project. The two provisions do not apply to goods or materials that come into inventories independent of the project, such as shipments of Portland cement, asphalt cement, or aggregates, when industry suppliers and contractors use these materials to replenish existing inventories.

**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.