

# **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](mailto: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](mailto: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](mailto: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

# 246

RETURN WITH BID

Proposal Submitted By
Name
Address
City

## Letting June 16, 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. 89386  
PEORIA County  
Section 05-00302-00-PV (City Of Peoria)  
Route FAU 6647 (Northmoor Road)  
Project TE-M-5093(136)  
District 4 Construction Funds**

PLEASE MARK THE APPROPRIATE BOX BELOW:

- A Bid Bond is included.
- A Cashier's Check or a Certified Check is included
- An Annual Bid Bond is included or is on file with IDOT.

Prepared by

Checked by

F

(Printed by authority of the State of Illinois)

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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. 89386  
PEORIA County  
Section 05-00302-00-PV (City Of Peoria)  
Project TE-M-5093(136)  
Route FAU 6647 (Northmoor Road)  
District 4 Construction Funds**

**Reconstruction to a 3-lane roadway from Allen Road to University Avenue in the City of Peoria.**

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)

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STATE JOB # - C-94-144-05  
 PPS NBR -

COUNTY NAME	CODE	DIST	SECTION NUMBER	PROJECT NUMBER	ROUTE
PEORIA	143	04	05-00302-00-PV (PEORIA)	TE-M-5093/136/000	FAU 6647

\*\*\* PART 1 \*\*\*

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
B2001116	T-CERCIS CAN TF 2	EACH	31.000 X	=	=	=	=
C2C016G3	S-CORNUS RACEM CG 3G	EACH	25.000 X	=	=	=	=
C2C03224	S-FOTHER GARDENI 2'C	EACH	17.000 X	=	=	=	=
C2C03432	S-HYDRA QUERCIF 2'C	EACH	193.000 X	=	=	=	=
C20058G5	S-RHUS AROMA GL 5G	EACH	243.000 X	=	=	=	=
XX000714	FENCE REM & RE-ERECT	FOOT	138.000 X	=	=	=	=
XX005298	REM EXIST TIMBER WALL	FOOT	36.000 X	=	=	=	=
XX006498	COMB C C&SIDEWLK 4 SP	SQ FT	2,225.000 X	=	=	=	=
XX006598	VINYL FENCE 6	FOOT	897.000 X	=	=	=	=
XX007021	PED ACT CRSS WARN SYS	EACH	2.000 X	=	=	=	=
XX008538	SAN SEW CASING PIPE	FOOT	67.000 X	=	=	=	=
XX008616	HMA SC SPECIAL	SQ YD	4,308.000 X	=	=	=	=
XX008662	REM EXIST LIGHT POLE	EACH	5.000 X	=	=	=	=
X0322881	TREE TRIMMING	EACH	18.000 X	=	=	=	=
X0323689	REMOV EX EROS CONTROL	L SUM	1.000 X	=	=	=	=

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
X0323777	VIDEO VEH DET 3 CAM	EACH	1.000 X	=	=	=	=
X0324028	GROUT FOR RIPRAP	CU YD	3.000 X	=	=	=	=
X0324058	OUTLET SPL	EACH	29.000 X	=	=	=	=
X0326812	CAT 5 ETHERNET CABLE	FOOT	447.000 X	=	=	=	=
X0326905	CCTV DOME CAM IP BASE	EACH	2.000 X	=	=	=	=
X0326981	ENGINEERD SOIL F P SPL	CU YD	126.000 X	=	=	=	=
X0327979	PAVMT MRKG REM GRIND	SQ FT	684.000 X	=	=	=	=
X1400094	LUM LED HM LOW WATT	EACH	106.000 X	=	=	=	=
X1400095	LUM LED HM HIGH WATT	EACH	21.000 X	=	=	=	=
X1400113	LUM LED HM MED WATT	EACH	6.000 X	=	=	=	=
X3510407	AGG BASE CSE CA-7	TON	3,142.000 X	=	=	=	=
X4404200	PAVED FLUME REMOVAL	FOOT	41.000 X	=	=	=	=
X5030225	CONC STRUCT SPL	CU YD	2.100 X	=	=	=	=
X5030305	CONC WEARING SURF 5	SQ YD	422.000 X	=	=	=	=
X5860110	GRANULAR BACKFILL STR	CU YD	106.000 X	=	=	=	=

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
X6020080	INLETS TG-1 DBL	EACH	4.000				
X6020082	INLETS TG-1	EACH	52.000				
X6021065	INLETS TG-1 SPL	EACH	1.000				
X6021814	INL-MN G-1 4D	EACH	9.000				
X6022230	MAN TA 4 DIA SPL F&G	EACH	9.000				
X6022858	MAN TA SAN 4D T1F CL	EACH	3.000				
X6023508	INLETS TA W/SPL F&G	EACH	3.000				
X6024502	INLETS TB W/SPL F&G	EACH	1.000				
X6061055	CONCRETE ISLAND SPL	SQ FT	479.000				
X6640200	TEMP CH LK FENCE	FOOT	989.000				
X6640304	CH LK FENCE REM & RE	FOOT	78.000				
X7010216	TRAF CONT & PROT SPL	L SUM	1.000				
X7015005	CHANGEABLE MESSAGE SN	CAL DA	450.000				
X7830068	GRV RCSD PVT LT N SYM	SQ FT	1,126.000				
X7830070	GRV RCSD PVT MRKG 5	FOOT	15,191.000				

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
X7830076	GRV RCSD PVT MRKG 9	FOOT	3,352.000	X	=		
X7830078	GRV RCSD PVT MRKG 13	FOOT	245.000	X	=		
X7830090	GRV RCSD PVT MRKG 25	FOOT	382.000	X	=		
X8250505	LIGHT CONTROLLER SPL	EACH	1.000	X	=		
X8300001	LIGHT POLE SPECIAL	EACH	90.000	X	=		
X8570226	FAC T4 CAB SPL	EACH	2.000	X	=		
X8710024	FOCC62.5/125 MM12SM24	FOOT	5,870.000	X	=		
X8710050	FO ETN DROP REPEAT SW	EACH	2.000	X	=		
X8950080	REMOV EX LIGHTNG CONT	EACH	1.000	X	=		
Z0007430	TEMP SIDEWALK	SQ FT	782.000	X	=		
Z0012130	BR DECK SCAR 3/4	SQ YD	422.000	X	=		
Z0012754	STR REP CON DP = < 5	SQ FT	46.000	X	=		
Z0012755	STR REP CON DP OVER 5	SQ FT	7.000	X	=		
Z0013300	CONC REM SPEC	SQ YD	41.000	X	=		
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000	X	=		

FAU 6647  
 05-00302-00-PV (PEORIA)  
 PEORIA

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT NUMBER - 89386

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 RUN DATE - 05/08/17  
 RUN TIME - 183024

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
Z0015500	DEBRIS REMOVAL	L SUM	1.000 X	=	=	=	=
Z0016001	DECK SLAB REP (FD-T1)	SQ YD	5.000 X	=	=	=	=
Z0016002	DECK SLAB REP (FD-T2)	SQ YD	5.000 X	=	=	=	=
Z0016702	DETOUR SIGNING	L SUM	1.000 X	=	=	=	=
Z0022800	FENCE REMOVAL	FOOT	909.000 X	=	=	=	=
Z0033068	TS BATT BACKUP SYSTEM	EACH	2.000 X	=	=	=	=
Z0033070	VIDEO VEH DET 4 CAM	EACH	1.000 X	=	=	=	=
Z0046304	P UNDR FOR STRUCT 4	FOOT	661.000 X	=	=	=	=
Z0056614	STORM SEW WM REQ 21	FOOT	307.000 X	=	=	=	=
Z0056648	SS 1 WAT MN 12	FOOT	1,163.000 X	=	=	=	=
Z0056650	SS 1 WAT MN 15	FOOT	50.000 X	=	=	=	=
Z0056652	SS 1 WAT MN 18	FOOT	700.000 X	=	=	=	=
Z0056653	SS 1 WAT MN 21	FOOT	177.000 X	=	=	=	=
Z0056654	SS 1 WAT MN 24	FOOT	58.000 X	=	=	=	=
Z0056668	SS 2 WAT MN 12	FOOT	140.000 X	=	=	=	=

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
Z0056670	SS 2 WAT MN 18	FOOT	26.000 X	=			
Z0056900	SAN SEW 8	FOOT	304.000 X	=			
20100110	TREE REMOV 6-15	UNIT	550.000 X	=			
20100210	TREE REMOV OVER 15	UNIT	336.000 X	=			
20101100	TREE TRUNK PROTECTION	EACH	2.000 X	=			
20200100	EARTH EXCAVATION	CU YD	20,595.000 X	=			
20300100	CHANNEL EXCAVATION	CU YD	650.000 X	=			
21101615	TOPSOIL F & P 4	SQ YD	21,879.000 X	=			
25000200	SEEDING CL 2	ACRE	1.000 X	=			
25000310	SEEDING CL 4	ACRE	0.250 X	=			
25000400	NITROGEN FERT NUTR	POUND	339.000 X	=			
25000500	PHOSPHORUS FERT NUTR	POUND	339.000 X	=			
25000600	POTASSIUM FERT NUTR	POUND	339.000 X	=			
25100115	MULCH METHOD 2	ACRE	1.250 X	=			
25100630	EROSION CONTR BLANKET	SQ YD	678.000 X	=			

FAU 6647  
 05-00302-00-PV (PEORIA)  
 PEORIA

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT NUMBER - 89386

ECMS002 DTGECM03 ECMR003 PAGE 7  
 RUN DATE - 05/08/17  
 RUN TIME - 183024

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
25100635	HD EROS CONTR BLANKET	SQ YD	536.000 X	=	=	=	=
25200110	SODDING SALT TOLERANT	SQ YD	17,645.000 X	=	=	=	=
25200200	SUPPLE WATERING	UNIT	264.700 X	=	=	=	=
28000250	TEMP EROS CONTR SEED	POUND	488.000 X	=	=	=	=
28000305	TEMP DITCH CHECKS	FOOT	480.000 X	=	=	=	=
28000400	PERIMETER EROS BAR	FOOT	2,850.000 X	=	=	=	=
28000500	INLET & PIPE PROTECT	EACH	5.000 X	=	=	=	=
28000510	INLET FILTERS	EACH	117.000 X	=	=	=	=
28100109	STONE RIPRAP CL A5	SQ YD	801.000 X	=	=	=	=
28200200	FILTER FABRIC	SQ YD	9,710.000 X	=	=	=	=
35100100	AGG BASE CSE A	TON	1,546.000 X	=	=	=	=
35101400	AGG BASE CSE B	TON	603.000 X	=	=	=	=
40200100	AGG SURF CSE A	TON	81.000 X	=	=	=	=
40201000	AGGREGATE-TEMP ACCESS	TON	305.000 X	=	=	=	=
40600982	HMA SURF REM BUTT JT	SQ YD	433.000 X	=	=	=	=

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
40603535	P HMA SC "D" N50	TON	48.000 X	=			
40800050	INCIDENTAL HMA SURF	TON	226.000 X	=			
42300200	PCC DRIVEWAY PAVT 6	SQ YD	1,148.000 X	=			
42300400	PCC DRIVEWAY PAVT 8	SQ YD	1,985.000 X	=			
42400100	PC CONC SIDEWALK 4	SQ FT	41,107.000 X	=			
42400300	PC CONC SIDEWALK 6	SQ FT	4,288.000 X	=			
42400800	DETECTABLE WARNINGS	SQ FT	728.000 X	=			
44000100	PAVEMENT REM	SQ YD	28,280.000 X	=			
44000200	DRIVE PAVEMENT REM	SQ YD	2,871.000 X	=			
44000300	CURB REM	FOOT	1,622.000 X	=			
44000500	COMB CURB GUTTER REM	FOOT	4,178.000 X	=			
44000600	SIDEWALK REM	SQ FT	31,480.000 X	=			
44003100	MEDIAN REMOVAL	SQ FT	5,632.000 X	=			
50104400	CONC HDWL REM	EACH	5.000 X	=			
50105220	PIPE CULVERT REMOV	FOOT	1,151.000 X	=			



ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
50200100	STRUCTURE EXCAVATION	CU YD	1,654.000 X	=	=	=	=
50300225	CONC STRUCT	CU YD	483.600 X	=	=	=	=
50500505	STUD SHEAR CONNECTORS	EACH	586.000 X	=	=	=	=
50800105	REINFORCEMENT BARS	POUND	500.000 X	=	=	=	=
50800205	REINF BARS, EPOXY CTD	POUND	54,740.000 X	=	=	=	=
50901720	BICYCLE RAILING	FOOT	324.000 X	=	=	=	=
52200100	FUR SOLDIER PILES HP	FOOT	1,568.000 X	=	=	=	=
52200200	DRILL SET SLD PI SOIL	CU FT	7,610.000 X	=	=	=	=
52200250	UNTREATED TIMBER LAG	SQ FT	3,115.000 X	=	=	=	=
52200700	PRECAST MOD RET WALL	SQ FT	2,216.000 X	=	=	=	=
52200800	SEG CONC BLOCK WALL	SQ FT	312.000 X	=	=	=	=
542D0217	P CUL CL D 1 12	FOOT	38.000 X	=	=	=	=
54213657	PRC FLAR END SEC 12	EACH	3.000 X	=	=	=	=
54213666	PRC FLAR END SEC 21	EACH	1.000 X	=	=	=	=
54215547	MET END SEC 12	EACH	4.000 X	=	=	=	=

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
550A0050	STORM SEW CL A 1 12	FOOT	2,886.000 X	=	=	=	=
550A0070	STORM SEW CL A 1 15	FOOT	445.000 X	=	=	=	=
550A0090	STORM SEW CL A 1 18	FOOT	384.000 X	=	=	=	=
550A0120	STORM SEW CL A 1 24	FOOT	16.000 X	=	=	=	=
550A0340	STORM SEW CL A 2 12	FOOT	579.000 X	=	=	=	=
550A0360	STORM SEW CL A 2 15	FOOT	402.000 X	=	=	=	=
550A0380	STORM SEW CL A 2 18	FOOT	311.000 X	=	=	=	=
550A0400	STORM SEW CL A 2 21	FOOT	390.000 X	=	=	=	=
550A0430	STORM SEW CL A 2 30	FOOT	56.000 X	=	=	=	=
55100300	STORM SEWER REM 8	FOOT	8.000 X	=	=	=	=
55100400	STORM SEWER REM 10	FOOT	15.000 X	=	=	=	=
55100500	STORM SEWER REM 12	FOOT	424.000 X	=	=	=	=
55100700	STORM SEWER REM 15	FOOT	561.000 X	=	=	=	=
55100900	STORM SEWER REM 18	FOOT	297.000 X	=	=	=	=
55101100	STORM SEWER REM 21	FOOT	119.000 X	=	=	=	=

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
55101600	STORM SEWER REM 36	FOOT	56.000 X	=	=	=	=
58700300	CONCRETE SEALER	SQ FT	3,248.000 X	=	=	=	=
59100100	GEOCOMPOSITE WALL DR	SQ YD	456.000 X	=	=	=	=
59300100	CONTR LOW-STRENG MATL	CU YD	2,223.000 X	=	=	=	=
60100925	PIPE DRAINS 8	FOOT	352.000 X	=	=	=	=
60100935	PIPE DRAINS 10	FOOT	78.000 X	=	=	=	=
60108204	PIPE UNDERDR T 2 4	FOOT	6,348.000 X	=	=	=	=
60218400	MAN TA 4 DIA T1F CL	EACH	13.000 X	=	=	=	=
60221100	MAN TA 5 DIA T1F CL	EACH	1.000 X	=	=	=	=
60236200	INLETS TA T8G	EACH	11.000 X	=	=	=	=
60236600	INLETS TA T9F&G	EACH	2.000 X	=	=	=	=
60240215	INLETS TB T1F CL	EACH	5.000 X	=	=	=	=
60240225	INLETS TB T4F&G	EACH	1.000 X	=	=	=	=
60240301	INLETS TB T8G	EACH	12.000 X	=	=	=	=
60255500	MAN ADJUST	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
60255800	MAN ADJ NEW T1F CL	EACH	1.000 X				
60260100	INLETS ADJUST	EACH	4.000 X				
60260400	INLETS ADJ NEW T1F CL	EACH	4.000 X				
60500040	REMOV MANHOLES	EACH	3.000 X				
60500060	REMOV INLETS	EACH	23.000 X				
60600605	CONC CURB TB	FOOT	93.000 X				
60602800	CONC GUTTER TB	FOOT	595.000 X				
60603800	COMB CC&G TB6.12	FOOT	2,102.000 X				
60604400	COMB CC&G TB6.18	FOOT	12,797.000 X				
60605000	COMB CC&G TB6.24	FOOT	34.000 X				
60608300	COMB CC&G TM2.12	FOOT	896.000 X				
63200310	GUARDRAIL REMOV	FOOT	40.000 X				
67000500	ENGR FIELD OFFICE B	CAL MO	24.000 X				
67100100	MOBILIZATION	L SUM	1.000 X				
70300100	SHORT TERM PAVT MKING	FOOT	785.000 X				

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
70300150	SHRT TRM PAVT MK REM	SQ FT	262.000 X	=			
70300220	TEMP PVT MK LINE 4	FOOT	187.000 X	=			
72000100	SIGN PANEL T1	SQ FT	113.000 X	=			
78009000	MOD URETH PM LTR-SYM	SQ FT	1,308.000 X	=			
78009004	MOD URETH PM LINE 4	FOOT	15,451.000 X	=			
78009008	MOD URETH PM LINE 8	FOOT	4,275.000 X	=			
78009012	MOD URETH PM LINE 12	FOOT	260.000 X	=			
78009024	MOD URETH PM LINE 24	FOOT	442.000 X	=			
80400100	ELECT SERV INSTALL	EACH	2.000 X	=			
80500200	SERV INSTALL TY B	EACH	1.000 X	=			
81028200	UNDRGRD C GALVS 2	FOOT	280.000 X	=			
81028340	UNDRGRD C PVC 1 1/2	FOOT	350.000 X	=			
81028350	UNDRGRD C PVC 2	FOOT	6,506.000 X	=			
81028370	UNDRGRD C PVC 3	FOOT	115.000 X	=			
81028390	UNDRGRD C PVC 4	FOOT	531.000 X	=			

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
81028740	UNDRGRD C CNC 1 1/2	FOOT	9,378.000 X				
81028750	UNDRGRD C CNC 2	FOOT	1,845.000 X				
81400700	HANDHOLE PCC	EACH	23.000 X				
81400720	DBL HANDHOLE PCC	EACH	2.000 X				
81702110	EC C XLP USE 1C 10	FOOT	3,808.000 X				
81702120	EC C XLP USE 1C 8	FOOT	12,378.000 X				
81702130	EC C XLP USE 1C 6	FOOT	24,432.000 X				
82500410	LT CONT BASM 240V200D	EACH	2.000 X				
83006200	LT P A 30MH 6MA	EACH	21.000 X				
83600200	LIGHT POLE FDN 24D	FOOT	555.000 X				
83800650	BKWY DEV COU SS SCRNR	EACH	436.000 X				
85000200	MAIN EX TR SIG INSTAL	EACH	1.000 X				
86200200	UNINTER POWER SUP STD	EACH	2.000 X				
87300925	ELCBL C TRACER 14 1C	FOOT	5,870.000 X				
87301225	ELCBL C SIGNAL 14 3C	FOOT	3,831.000 X				

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
87301245	ELCBL C SIGNAL 14 5C	FOOT	4,965.000 X	=	=	=	=
87301255	ELCBL C SIGNAL 14 7C	FOOT	2,158.000 X	=	=	=	=
87301705	ELCBL C COMM 18 3PR	FOOT	798.000 X	=	=	=	=
87301804	ELCBL C SERV 6 1C	FOOT	825.000 X	=	=	=	=
87301900	ELCBL C EGRDC 6 1C	FOOT	2,406.000 X	=	=	=	=
87502440	TS POST GALVS 10	EACH	2.000 X	=	=	=	=
87502480	TS POST GALVS 14	EACH	3.000 X	=	=	=	=
87502500	TS POST GALVS 16	EACH	5.000 X	=	=	=	=
87502520	TS POST GALVS 18	EACH	1.000 X	=	=	=	=
87600200	PED PUSH-BUT POST T2	EACH	1.000 X	=	=	=	=
87702900	STL COMB MAA&P 34	EACH	1.000 X	=	=	=	=
87702910	STL COMB MAA&P 36	EACH	1.000 X	=	=	=	=
87702930	STL COMB MAA&P 40	EACH	1.000 X	=	=	=	=
87702985	STL COMB MAA&P 52	EACH	1.000 X	=	=	=	=
87702990	STL COMB MAA&P 54	EACH	2.000 X	=	=	=	=

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
87800100	CONC FDN TY A	FOOT	36.000 X	=			
87800200	CONC FDN TY D	FOOT	6.000 X	=			
87800415	CONC FDN TY E 36D	FOOT	80.000 X	=			
87900200	DRILL EX HANDHOLE	EACH	1.000 X	=			
88040020	SH P LED 1F 1S BM	EACH	12.000 X	=			
88040070	SH P LED 1F 3S BM	EACH	7.000 X	=			
88040090	SH P LED 1F 3S MAM	EACH	9.000 X	=			
88040110	SH P LED 1F 4S BM	EACH	3.000 X	=			
88040120	SH P LED 1F 4S MAM	EACH	3.000 X	=			
88040150	SH P LED 1F 5S BM	EACH	5.000 X	=			
88040160	SH P LED 1F 5S MAM	EACH	1.000 X	=			
88102825	PED SH P LED 1F BM CT	EACH	14.000 X	=			
88200510	TS BACKPLATE RET-REFL	EACH	40.000 X	=			
88700090	CONFIRMATION BEACON	EACH	4.000 X	=			
88700200	LIGHT DETECTOR	EACH	4.000 X	=			



ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
88700300	LIGHT DETECTOR AMP	EACH	4.000 X		=		
88800100	PED PUSH-BUTTON	EACH	16.000 X		=		
89502375	REMOV EX TS EQUIP	EACH	2.000 X		=		

SUBTOTAL PART 1 \$

\*\*\*THE DEPARTMENT RESERVES THE RIGHT TO AWARD THIS CONTRACT ON THE  
 \*\*\*BASIS OF ANY OF THE ALTERNATES OR COMBINATION THEREOF.

\*\*\* PART 2 ALT A \*\*\*

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
31100100	SUB GRAN MAT A	TON	24,809.000				
40600275	BIT MATLS PR CT	POUND	1,393.000				
40600295	P BIT MATLS TACK CT	POUND	335.000				
42000301	PCC PVT 8 JOINTED	SQ YD	30,452.000				
42001300	PROTECTIVE COAT	SQ YD	34,894.000				

SUBTOTAL PART 2 ALT A \$

\*\*\* PART 2 ALT B \*\*\*

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
31100100	SUB GRAN MAT A	TON	20,027.000 X	=	=	=	=
40600275	BIT MATLS PR CT	POUND	67,474.000 X	=	=	=	=
40600295	P BIT MATLS TACK CT	POUND	20,205.000 X	=	=	=	=
40701891	HMA PAVT FD 10 1/2	SQ YD	29,440.000 X	=	=	=	=
42000301	PCC PVT 8 JOINTED	SQ YD	1,012.000 X	=	=	=	=
42001300	PROTECTIVE COAT	SQ YD	5,454.000 X	=	=	=	=

SUBTOTAL PART 2 ALT B \$  
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SUMMARY OF TOTAL ALTERNATES	
DOLLARS	CTS
TOTAL PART 1 \$	
TOTAL PART 2 ALT A \$	
TOTAL PART 2 ALT B \$	

SUMMARY OF TOTAL ALTERNATE GROUPINGS	
DOLLARS	CTS
TOTAL PARTS 1&2 ALT A \$	
TOTAL PARTS 1&2 ALT B \$	

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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.

## RETURN WITH BID

### 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.

## RETURN WITH BID

### **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.



## RETURN WITH BID

### 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.

## RETURN WITH BID

### **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**

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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.

**RETURN WITH BID**

**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.

## RETURN WITH BID

### IV. DISCLOSURES

- A. The disclosures hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder. The 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.

## RETURN WITH BID

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

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

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

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

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

RETURN WITH BID

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form A Financial Information & Potential Conflicts of Interest Disclosure

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

Disclosure of the information contained in this Form is required by 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 \_\_\_

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

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

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

1. Is your spouse or any minor children currently an officer or employee of the Capitol Development Board or the Illinois 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 \_\_\_

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(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 \_\_\_

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(d) Relationship to anyone holding elective office currently or in the previous 2 years; spouse, father, mother, son, or daughter. Yes \_\_\_ No \_\_\_

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(e) Appointive office; the holding of any appointive government office of the State of Illinois, the United State of America, or any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois, which office entitles the holder to compensation in excess of the expenses incurred in the discharge of that office currently or in the previous 3 years. Yes \_\_\_ No \_\_\_

---

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

---

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

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**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 \_\_\_

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(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 \_\_\_

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(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 \_\_\_

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**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:  \_\_\_\_\_  
Signature of Individual or Authorized Representative Date

**NOT APPLICABLE STATEMENT**

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

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

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

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

RETURN WITH BID

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form B Other Contracts & Financial Related Information Disclosure

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

Disclosure of the information contained in this Form is required by 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 Human Rights Act (775 ILCS 5/et seq), and applicable administrative rules apply:

#### **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. 89386  
PEORIA County  
Section 05-00302-00-PV (City Of Peoria)  
Project TE-M-5093(136)  
Route FAU 6647 (Northmoor Road)  
District 4 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. 89386  
PEORIA County  
Section 05-00302-00-PV (City Of Peoria)  
Project TE-M-5093(136)  
Route FAU 6647 (Northmoor Road)  
District 4 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.

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



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 \_\_\_\_\_





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 \_\_\_\_\_

Table with 5 columns: Pay Item No., Description (Anticipated items for trucking)\*, Quantity, Unit Price, Total. Includes a Total row at the bottom right.

(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. 89386  
PEORIA County  
Section 05-00302-00-PV (City Of Peoria)  
Project TE-M-5093(136)  
Route FAU 6647 (Northmoor Road)  
District 4 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 \_\_\_

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(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 \_\_\_

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(d) Relationship to anyone holding elective office currently or in the previous 2 years; spouse, father, mother, son, or daughter.  
Yes \_\_\_ No \_\_\_

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(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 \_\_\_

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**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 for Signature of Authorized Officer and 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. June 16, 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. 89386  
PEORIA County  
Section 05-00302-00-PV (City Of Peoria)  
Project TE-M-5093(136)  
Route FAU 6647 (Northmoor Road)  
District 4 Construction Funds**

### **Reconstruction to a 3-lane roadway from Allen Road to University Avenue in the City of Peoria.**

- 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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FOR  
RECURRING SPECIAL PROVISIONS

Adopted January 1, 2017

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

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LR 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	164	<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	
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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 400-8		<input type="checkbox"/> Pulverization	Jan. 24, 2017	
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 542-1		<input type="checkbox"/> Pipe Culverts, Special	Apr. 1, 2016	
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	165	<input checked="" 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
* 80382	167	X	Adjusting Frames and Grates	April 1, 2017	
80274			Aggregate Subgrade Improvement	April 1, 2012	April 1, 2016
80192			Automated Flagger Assistance Device	Jan. 1, 2008	
80173			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	169	X	Butt Joints	July 1, 2016	
* 80384	170	X	Compensable Delay Costs	June 2, 2017	
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	174	X	Concrete Mix Design – Department Provided	Jan. 1, 2012	April 1, 2016
80261			Construction Air Quality – Diesel Retrofit	June 1, 2010	Nov. 1, 2014
80029	175	X	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	July 2, 2016
80378	186	X	Dowel Bar Inserter	Jan. 1, 2017	
80229			Fuel Cost Adjustment	April 1, 2009	July 1, 2015
80304	193	X	Grooving for Recessed Pavement Markings	Nov. 1, 2012	Aug. 1, 2014
80246	196	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, 2017
* 80383			Hot-Mix Asphalt – Quality Control for Performance	April 1, 2017	
80376	197	X	Hot-Mix Asphalt – Tack Coat	Nov. 1, 2016	
80367	198	X	Light Poles	July 1, 2016	
80368			Light Tower	July 1, 2016	
80336			Longitudinal Joint and Crack Patching	April 1, 2014	April 1, 2016
80369	199	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	200	X	Pavement Marking Removal	July 1, 2016	
80298			Pavement Marking Tape Type IV	April 1, 2012	April 1, 2016
* 80377	201	X	Portable Changeable Message Signs	Nov. 1, 2016	April 1, 2017
80359	202	X	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	204	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	205	X	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			Steel Cost Adjustment	April 2, 2004	July 1, 2015
80379			Steel Plate Beam Guardrail	Jan. 1, 2017	
80317			Surface Testing of Hot-Mix Asphalt Overlays	Jan. 1, 2013	April 1, 2016

<u>File Name</u>	<u>Pg.</u>		<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
* 80298	215	X	Temporary Pavement Marking (NOTE: This special provision was previously named "Pavement Marking Tape Type IV".)	April 1, 2012	April 1, 2017
20338	218	X	Training Special Provision	Oct. 15, 1975	
80318			Traversable Pipe Grate	Jan. 1, 2013	April 1, 2014
80381			Traffic Barrier Terminal, Type 1 Special	Jan. 1, 2017	
80380			Tubular Markers	Jan. 1, 2017	
80288	221	X	Warm Mix Asphalt	Jan. 1, 2012	April 1, 2016
80302	223	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: June 16, 2017 Letting

Pg #	√	File Name	Title	Effective	Revised
		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 21, 2016
		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
224	X	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
230	X	GBSP 51	Pipe Underdrain for Structures	May 17, 2000	Jan 22, 2010
231	X	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	Mar 29, 2017
		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	
242	X	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	Dec 21, 2016
		GBSP 79	Bridge Deck Grooving (Longitudinal)	Dec 29, 2014	Mar 29, 2017
		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	
		GBSP 90	Three Sided Precast Concrete Structure (Special)	Dec 21, 2016	Mar 29, 2017
		GBSP 91	Crosshole Sonic Logging Testing of Drilled Shafts	Apr 20, 2016	
		GBSP 92	Thermal Integrity Profile Testing of Drilled Shafts	Apr 20, 2016	

Pg #	√	File Name	Title	Effective	Revised
		GBSP 93	Preformed Bridge Joint Seal	Dec 21, 2016	
		GBSP 94	Warranty for Cleaning and Painting Steel Structures	Mar 3, 2000	Nov 24, 2004

·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
GBSP95	Bridge Deck Concrete Sealer	Use July 1, 2012 version for Repair projects only

## **SPECIAL PROVISIONS**

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction", Adopted April 1, 2016, Revised January 1, 2017", 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, and the "Recommended Standards for Water Works", (Ten State Standards), latest edition, which apply to and govern the construction of Northmoor Road, Section 05-00302-00-PV, in Peoria County. 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 on Northmoor Road (FAU 6647) in the City of Peoria, Peoria County (T9N, R8E, Sections 17/18) Illinois. The project limits are from Allen Road (FAU 6584) to University Street (FAU 6593).

### **CONTACT INFORMATION**

The City's Project Manager will be Jane Gerdes, P.E. at 309-494-8819.

### **DESCRIPTION OF PROJECT**

The Northmoor Road project consists of reconstructing Northmoor Road to a 3 lane section. Improvements include new pavement, curb and gutter, storm sewer systems, traffic signals, lighting, pervious HMA bike trail, retaining walls, fencing and all incidental items shown in the plans and as described in these Special Provisions.

### **PROSECUTION AND PROGRESS OF WORK**

Special attention is called to Section 108 of the "Standard Specifications for Road and Bridge Construction," and specifically to Article 108.03, which states that the Contractor shall notify the City at least twenty-four (24) hours in advance of either discontinuing or resuming operations.

If a City representative is not on the job and notification as required has been given, the Contractor in charge of the work shall immediately notify the City, that work has been resumed and request that the City representative in charge of the work be notified.

Work performed without proper notification to the City as indicated herein may be rejected by the City and no compensation will be made for said work. In addition, the Contractor may be

required to remove the item of construction at its own expense and replace the item of construction in accordance with the specifications.

**TIME OF THE ESSENCE**

Time is an essential element of the Contract and the City will monitor the Contractor's progress towards completion. The Contractor shall adequately staff the project so that the entire project can be completed in a timely manner.

**COMPLETION DATE PLUS WORKING DAYS**

The assessment of liquidated damages in accordance with Article 108.09 of the Standard Specifications shall be defined with respect to the following substantial completion dates and final completion dates for the project.

Completion Date (Stage 1A – School Road/Expo Entrance from Rosemead Drive to Richwoods High School Parking Lot). During this stage, local two-way traffic will be maintained on Northmoor Road. Coordinate construction of the Expo Gardens main entrance with owner. Stage 1A shall be substantially complete by **September 15, 2017**. Construction operations to be performed during this time period shall include all work necessary to complete all removals; install underground utilities; construct all pavements, curbs, sidewalks, lighting, and pavement marking as shown in the plans, and other work necessary to open the road to traffic. **The full amount of liquidated damages as specified herein shall be assessed per calendar day should the Contractor fail to complete the specified work on or before midnight Friday, September 15, 2017. Landscaping shall be complete by November 15, 2017.**

Completion Date (Stage 1B – Rosemead Drive from Kensington Drive to School Road). During this stage, Northmoor Road shall be reduced to one lane to provide eastbound only local traffic. The intersection at Northmoor Road and Rosemead Drive shall be staged to maintain eastbound traffic. Expo traffic will use the old bus entrance and roadway constructed in Stage 1A. Westbound Northmoor Road traffic will detoured. Construction shall begin as soon as Stage 1A is completed. Stage 1B shall be complete by **November 17, 2017**. Construction operations to be performed during this time period shall include all work necessary to complete all removals; install underground utilities; construct all pavements, curbs, sidewalks, signals, lighting, and pavement marking as shown in the plans. **The full amount of liquidated damages as specified herein shall be assessed per calendar day should the Contractor fail to complete the specified work on or before midnight Friday, November 17, 2017. A total of ten (10) working days will be allowed beyond the Final Completion Date for completion of landscaping including topsoil, sod, and plant material.**

Completion Date (Stage 1C – School Road from Northmoor Primary School to Rosemead Drive). Stage 1C shall be complete by **November 17, 2017**. Construction operations to be performed during this time period shall include all work necessary to complete all removals; install underground utilities; construct all pavements, curbs, sidewalks, and pavement marking as shown in the plans. **The full amount of liquidated damages as specified herein shall be**



**assessed per calendar day should the Contractor fail to complete the specified work on or before midnight Friday, November 17, 2017. A total of ten (10) working days will be allowed beyond the Final Completion Date for completion of landscaping including topsoil, sod, and plant material.**

During winter shutdown, Northmoor Road shall be opened to two-way traffic from November 18, 2017 until April 1, 2018 unless otherwise approved by the Engineer.

Completion Date (Stage 2 –Northmoor Road from Rosemead Drive to University Street). During this stage Northmoor Road will be closed from Rosemead Drive to Station 60+00. From Sta. 60+00 to end of the project shall be staged to maintain access to Richwoods High School and St. Vincent de Paul. In addition, the entrance at sta. 58+00 shall be staged to provide access to Rosewood Care Center at all times. Traffic will be detoured on the roads constructed in Stage 1 through the Richwoods High School exit. Temporary access shall be constructed for the homeowner at 1428 W. Northmoor Road. Contractor shall coordinate with AT&T and Ameren to provide access to their facilities as needed. Construction shall begin in 2018 and be substantially complete by **June 30, 2018**. Construction operations to be performed during this time period shall include all work necessary to complete all removals; install underground utilities; construct all pavements, curbs, sidewalks, bike path, pavement marking, pedestrian signals, retaining wall and fence as shown in the plans. A pedestrian access route shall be maintained on one side of the roadway at all times. **The full amount of liquidated damages as specified herein shall be assessed per calendar day should the Contractor fail to complete the specified work on or before midnight Saturday, June 30, 2018. Landscaping and lighting shall be complete by November 23, 2018.**

Northmoor Road shall be open to two-way traffic from July 1, 2018 to July 15, 2018, for the Heart of Illinois Fair. Traffic shall be on a paved surface and curbs must be backfilled.

Completion Date (Stage 3 –Northmoor Road from Imperial Drive to Rosemead Drive). During this stage Northmoor Road will be closed from Imperial Drive to Rosemead Drive. Construction shall begin on July 16, 2018 and be substantially complete by **November 23, 2018**. Temporary access shall be maintained to 1714 W. Northmoor Road. A pedestrian route shall be maintained from Imperial Drive to Northmoor Primary School. In addition, the Contractor shall coordinate with Northmoor Primary School for safe and ADA/PROWAG compliant pedestrian crossing near the existing crossing at Western Avenue. Construction operations to be performed during this time period shall include all work necessary to complete all removals; install underground utilities; construct all pavements, curbs, sidewalks, pavement marking, pedestrian signals, and lighting as shown in the plans. **The full amount of liquidated damages as specified herein shall be assessed per calendar day should the Contractor fail to complete the specified work on or before midnight Friday, November 23, 2018. A total of ten (10) working days will be allowed beyond the Final Completion Date for completion of landscaping including topsoil, sod, and plant material.**

During winter shutdown, Northmoor Road shall be opened to two-way traffic from November 24, 2018 until April 1, 2019 unless otherwise approved by the Engineer.

Completion Date (Stage 4 –Northmoor Road from Hamilton Road-West to Imperial Drive). During this stage Northmoor Road will be open to one-way eastbound traffic. Westbound traffic will be detoured. Construction shall begin in 2019 and be substantially complete by **November 22, 2019**. Pavement shall be removed from south half of the street and aggregate base placed with millings for the top four inches. Traffic will then be moved to the south half of the roadway and the north half shall be fully constructed. While in use by traffic, the millings surface shall be maintained in a drivable condition that is generally level and free of ruts or holes. Additional material and grading may be needed to meet this requirement. No additional compensation will be allowed. Once the north half is completed traffic shall be moved to the new pavement on the north half and the south half shall be completed. Pedestrian access shall be maintained on one side of the roadway at all times. Construction operations to be performed during this time period shall include all work necessary to complete all removals; install underground utilities; construct all pavements, curbs, sidewalks, pavement marking, lighting and landscaping as shown in the plans. **The full amount of liquidated damages as specified herein shall be assessed per calendar day should the Contractor fail to complete the specified work on or before midnight Friday, November 22, 2019.**

Completion Date (Stage 5 –Northmoor Road from Allen Road to Hamilton Road-West). During this stage two-way traffic shall be maintained at all times. Construction can be completed in 2018 or 2019, but shall be completed in one construction season. Construction shall be complete by **November 22, 2019**. Existing median will be removed and PCC pavement constructed. Eastbound traffic will be shifted into the new median pavement and to allow the existing southern pavement to be removed and replaced. Eastbound traffic is then shifted to the new southern pavement with westbound on the median pavement to allow the northern pavement to be removed and replaced. Pedestrian access shall be maintained on one side of the roadway at all times. Construction operations to be performed during this time period shall include all work necessary to complete all removals; install underground utilities; construct all pavements, curbs, sidewalks, pavement marking, lighting, landscaping, culvert and channel work as shown in the plans. **The full amount of liquidated damages as specified herein shall be assessed per calendar day should the Contractor fail to complete the specified work on or before midnight Friday, November 22, 2019.**

#### Final Completion Date

All remaining construction work for the project required to open the facilities to normal traffic shall be completed by midnight **Friday, November 22, 2019.** Completed construction work shall include all major items of work, signage, pavement markings, and signals so that the roadways, bike path, and sidewalks can be opened to normal traffic. It is the City of Peoria's intent that all major items of work as specified in the contract will be completed on or before the final completion date. **The full amount of liquidated damages as specified herein shall be assessed per calendar day should the Contractor fail to complete the specified work on or before midnight Friday, November 22, 2019.**

A total of ten (10) working days will be allowed beyond the Final Completion Date for completion of landscaping for Stages 4 and 5 including topsoil, sod, and plant material, cleanup work, and punch list items.

The provisions for the completion date shall be as set forth in Section 108 of the Standard Specifications. All applicable provisions of Section 108 shall apply. The contractor should note that these completion dates are based on an expedited work schedule.

### **FAILURE TO COMPLETE WORK ON TIME**

Should the Contractor fail to complete work by the interim and final completion dates, or within such extra time they may have been allowed by extension, the Contractor shall be liable to the City of Peoria at a rate of \$2,500.00 per day for every calendar day over the contract time to cover all costs incurred for engineering, inspection and other expenses incurred by the City of Peoria by reason of the Contractor's failure to complete the work within the specified time, and such amount shall be deducted from the monies due the Contractor, not as a penalty, but as damages sustained.

### **COMMITMENTS**

The following commitments have been made for the project.

1. Inlets will be placed in strategic locations along the roadway to tie in private storm sewer at locations with drainage problems.
2. Trees three (3) inches or greater in diameter at breast height shall not be cleared from April 1 through October 1.

### **CONSTRUCTION ON PRIVATE PROPERTY**

Whenever excavation is made within a temporary or permanent construction easement, including tree planting easements, on private property for driveways, sidewalks, steps, retaining walls, utility connections, tree plantings or other construction, the topsoil disturbed by the excavation operations shall be restored as nearly as possible to its original position and the whole area involved in the construction operation shall be left in a neat and presentable condition.

The Contractor shall use reasonable care to avoid disturbing portions of private property not necessary to the construction operations. If, in the judgment of the Engineer, areas are disturbed unnecessarily, the Contractor shall restore these areas at his own expense. The Contractor shall not pile excavated material outside the limits of the Right-of-Way upon adjacent private property without the written consent of the property owner and the Engineer.

The cost of compliance with this Special Provision will not be paid for separately but shall be considered, as included in the cost of the EARTH EXCAVATION pay item and no additional compensation will be allowed.

### **EXISTING UNDERGROUND FACILITIES**

City of Peoria assumes no responsibility for the presence, specific size or location of underground distribution systems of the several public utility corporations. No responsibility for the protection of said underground systems will be assumed by City of Peoria. If such protection is found to be necessary for water mains, gas mains, steam mains, underground electrical distribution systems, underground telephone circuit systems or any other underground systems of City Ownership, the cost of same, in whole or in part, is disclaimed of City of Peoria.

### **COOPERATION WITH UTILITY COMPANIES**

It is understood and agreed that the Contractor has considered, in their bid, all the permanent and temporary utility appurtenances in their present or relocated positions and that no additional compensation will be allowed for any delays, inconvenience or damage sustained by the contractor due to any interference from the said utility appurtenances or the operations of moving them.

All telephone, cableway, gas, water and wire lines, within the limits of the proposed construction owned by various utility companies, are to be moved by the owners of the particular utility involved at the owner's expense.

### **GREATER PEORIA SANITARY DISTRICT (GPSD) COORDINATION**

Included in the plans are proposed sanitary sewer facilities. The contractor shall coordinate with Greater Peoria Sanitary District (GPSD) prior to starting work on any sanitary sewer improvements to allow GPSD personnel to be on site during construction of the work.

### **NOTIFICATION OF UTILITIES PRIOR TO CONSTRUCTION**

In addition to notifying J.U.L.I.E., all utility companies must be notified by the Contractor, in writing, at least one (1) week in advance prior to starting construction so that they will have adequate time to locate and mark their utility locations in the field and twenty-four (24) hours prior to commencing actual construction work. All utility companies must be notified so that they may have personnel on the job site to assist in locating their utility lines and avoid damage to their utilities, including but not limited to Ameren ILLINOIS, Comcast Communications, AT&T, Windstream, MTCO, Greater Peoria Sanitary District and the Illinois-American Water Company.

A copy of the letter notifying the utility companies of the Contractor's intention to start work must be received by the City of Peoria Engineering Department before the Contractor will be permitted to start construction.

**J.U.L.I.E. SYSTEM**

The J.U.L.I.E. (Joint Utility Locating Information for Excavators) must be notified prior to starting construction so that the respective utilities may have adequate time to locate and mark their underground facilities. Phone: 1-800-892-0123. The following information may be requested by J.U.L.I.E.:

County Name: Peoria  
 Township Name: Richwoods  
 Section Number: 17/18, T9N, R8E

**STATUS OF UTILITIES/UTILITIES TO BE ADJUSTED**

Effective: January 21, 2005

The following utilities are located within the project limits. For relocations, the utility companies have provided the estimated dates.

<b>Name, Contact, Address And Phone Number of Utility</b>	<b>Type</b>	<b>Location</b>	<b>Relocation Needed</b>	<b>Estimated Date Relocation Completed</b>
AT&T James Darr 1640 E Hazel Dell Rd. Springfield, IL 62670 217-320-8146 <a href="mailto:James.darr@att.com">James.darr@att.com</a>	Underground	South side of roadway	Yes – direct buried cable	During Construction
Comcast Cable Ray DeCroix 3517 N. Dries Lane Peoria, IL 61604 309-208-6705 <a href="mailto:Raymond.decroix@cable.comcast.com">Raymond.decroix@cable.comcast.com</a>	Aerial / Underground	West side of roadway	yes	During Construction
Ameren - Electric Waheed Shazad 8420 N. University St. Peoria, IL 61615 309-573-4477 <a href="mailto:wshahzad@ameren.com">wshahzad@ameren.com</a>	Aerial / Underground	north side of roadway some poles on south side	yes	During Construction

Ameren - Gas Kent Kowalske 1100 Monarch St. Peoria, IL 61602 309-677-5327 <a href="mailto:kkowalske@ameren.com">kkowalske@ameren.com</a>	Underground	North side of roadway	Yes – moving to south side of roadway	Spring/Summer 2017 & During Construction
Illinois American Water Mark Luft 8400 N. University St. Peoria, IL 61615 309-264-5517 <a href="mailto:Mark.luft@amwater.com">Mark.luft@amwater.com</a>	Underground	North side of roadway	Yes – fire hydrants	During Construction
GPSD 2322 S. Darst Street Peoria, IL 61607 Jim Sloan 309-678-9046 <a href="mailto:jsloan@gpsd.org">jsloan@gpsd.org</a> John Boyle 309-678-9035 <a href="mailto:jboyle@gpsd.org">jboyle@gpsd.org</a>	Underground	north side of roadway and side streets	Yes – manhole lids to be adjusted Pipe Lining	During Construction Summer 2017
MTCO Corporation Ron Dickerson 220 N. Menard St. P.O. Box 800 Metamora, IL 61548 309-367-4197 <a href="mailto:rdickerson@corp.mtco.com">rdickerson@corp.mtco.com</a>	Underground	South side of roadway	Not sure	During Construction
Windstream KDL, Inc. David Ferreira 211 SW Adams St. Peoria, IL 61602 309-282-3110 <a href="mailto:David.ferreira@windstream.com">David.ferreira@windstream.com</a>	Underground	South side of roadway	Not sure	During Construction

**UTILITIES – LOCATIONS/INFORMATION ON PLANS**

Effective: November 8, 2013

The locations of existing water mains, gas mains, sewers, electric power lines, electrical ducts, telephone lines, fiber optic lines, and any other utilities as shown on the plans are based on field investigation and locations provided by the utility companies, but they are not guaranteed. Unless elevations are shown, all utility locations shown on the cross sections are based on the approximate depth supplied by the utility company. It shall be the Contractor’s responsibility to ascertain their exact location, horizontal and vertical, from the utility companies and be verified

by field inspection (potholing). This work shall be completed prior to ordering any drainage structures or storm sewer pipes.

### **NOTIFICATION OF THE PUBLIC**

The Contractor shall notify the property owners along Northmoor Road and each side street that will be impacted by this work in writing a minimum of 7 days in advance of the start of work and prior to any changes in traffic patterns including roadway closures. The City Engineer will review and approve the letter prior to distribution to the public. Please allow at a minimum one week for City review. The typed notification letter shall include at a minimum: the work schedule, no parking restrictions, property access information, and the contractor contact person's name, local phone number, and email address. The notification shall be of the door hanger type which secures to the door handle of each dwelling. Unsecured notices will not be allowed. The contractor shall also place the notice on the windshield of any parked cars on the street. Submit a copy of the notification letter to the City for approval before distribution to the property owners and coordinate with the City on when the letters will be distributed.

The City will issue press releases based on the information provided by the contractor. Press releases will be issued 1-2 days in advance of the work. The Contractor shall provide press release information to the City a minimum of 2 days in advance of work starting and prior to changes in construction traffic.

It is the responsibility of the Contractor to post "NO PARKING" signs at least 7 days in advance of the start of work. If there are any vehicles that have to be towed the Contractor will first contact the City Police Dispatcher (309-494-8021) to get the name and address of the owner. If the owner lives in the area the Contractor will try to contact the owner directly and request that they move their vehicle. If the Contractor is unable to contact the owner to move the vehicle they will then contact Chuck's Towing at 309-637-0425 and arrange to have a tow truck move the vehicle to the nearest out of the way location. The tow truck will be paid for by the City of Peoria. The Contractor will keep a log of all vehicles moved that lists the date, time and number they tried to contact the owner, the date and time the vehicle is moved, make and model of vehicle, license plate number, name of towing company, vehicle owner's name, the location the vehicle is towed from and the location the vehicle is towed to.

### **ITEMS DESIGNATED FOR REMOVAL AND EXCAVATION**

All removal items and excavated material remain the property of the City of Peoria unless the City indicates a desire to the Contractor that they should dispose of the removed items and/or excavated material outside the limits of the improvement as the Contractor may provide. Should the City desire to keep the removed items and/or excavated material and have it disposed of at a location outside the improvement limits, the Contractor shall haul to the City's

designated disposal site, provided the disposal site is within the limits of the City of Peoria. The cost of salvaging removed items and/or excavated material, as outlined herein, will not be paid for separately, but the cost shall be included in the contract unit price for the item of construction involved. All waste sites shall be approved in accordance with Article 107.22 of the Standard Specifications.

### **SALVAGING EXISTING MATERIALS**

All existing municipally owned street castings, frames and grates on inlets and manholes, signs and posts in usable condition within the limits of the improvement shall, if not required for further use in the construction of the improvement, be carefully excavated and preserved by the Contractor. Said street castings, frames and grates on inlets and manholes, signs and posts if desired by the City, shall be picked up and hauled from the job site by the City or the Contractor shall delivered such items to a location (within the City limits) determined by the City.

The cost of salvaging existing municipally owned street castings, frames and grates on inlets and manholes, signs and posts, as outlined herein, will not be paid for separately, but the cost shall be included in the contract unit price for the item of construction involved.

### **CONSTRUCTION SEQUENCE AND SCHEDULE**

The Contractor shall prepare a progress schedule as required by Section 108 of the Standard Specifications. The Contractor shall coordinate items of work in order to keep hazards, traffic inconvenience and limited access to residences along Northmoor Road to a minimum. In particular, construction shall be staged as shown on the plans and as listed below to meet the following requirements:

- Temporary Erosion control items shall be installed before work begins on any part of the project.
- Prior to the start of any work and before the closure of Northmoor Road, the City of Peoria shall be contacted to inform them of the beginning date of construction. Road closures will be implemented according the standards listed in the plans or in the specifications. The detour route shall be set up before the roadway is closed.

A construction progress schedule indicating project milestones shall be completed and strictly adhered to by the Contractor unless a request to modify the schedule is submitted in writing and approved by the Engineer.



**X7010216 TRAFFIC CONTROL AND PROTECTION (SPECIAL)**  
**40201000 AGGREGATE FOR TEMPORARY ACCESS**  
**Z0007430 TEMPORARY SIDEWALK**  
**Z0016702 DETOUR SIGNING**  
**X7015005 CHANGEABLE MESSAGE SIGN**

Description

This work shall consist of providing the necessary traffic control personnel and devices and the installation, maintenance, relocation and removal of these devices during construction of the improvement. The City of Peoria will be responsible for notifying the public, the United States Postal Service, and the emergency service agencies for road closures and changes in the traffic control and maintenance of traffic plans.

**TRAFFIC CONTROL PLAN**

Traffic control shall be in accordance with the applicable sections of the "Standard Specifications for Road and Bridge Construction," the applicable guidelines contained in the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways," these Special Provisions, and any special details and Highway Standards contained herein and in the plans.

Special attention is called to Articles 107.09 and 107.14 and Sections 701 through 705 of the SSRBC and the traffic control related Highway Standards shown in the plans; Supplemental Specifications and Recurring Special Provisions; BDE Special Provisions; and Other Special Provisions relating to Traffic Control.

Highway Standards:

701001, 701006, 701011, 701301, 701311, 701501, 701502, 701701, 701801, 701901

Special Provisions

Check Sheet # 21	Night Time Inspection of Roadway Lighting
LRS 3	Work Zone Traffic Control Surveillance
LRS 4	Flaggers in Work Zones

Traffic/Access: The contractor is required to:

- Provide eastbound access through project limits as indicated
- Provide "all weather" pedestrian access route along Northmoor Road and side streets during the duration of the construction where existing sidewalk is present.
- Provide aggregate for temporary access at vehicle entrances.

Maintenance of Traffic

Road closures and the conveyance of thru and local traffic within and around the construction zone shall be provided for in accordance with the Plan Details noted above and the use of the above referenced Highway Standards as directed by the Engineer. Except as otherwise provided herein, the Contractor shall provide at least one entrance/exit point to properties at all

times. The Contractor shall be permitted to close Northmoor Road from Rosemead Drive to west of University Street to through traffic in stage 2 as shown on the Stage Construction and Maintenance of Traffic Plan. The Contractor shall be permitted to close Northmoor Road from Imperial Drive to Rosemead Drive to through traffic in stage 3 as shown on the Stage Construction and Maintenance of Traffic Plan. The Contractor shall maintain one-way eastbound local traffic on Northmoor Road from the west Hamilton Road intersection to Imperial Drive as shown on the Stage Construction and Maintenance of Traffic Plan. The Contractor shall also maintain two-way local traffic on Northmoor Road from Allen Road to the west intersection of Hamilton Road during the entire construction process as shown on the Stage Construction and Maintenance of Traffic Plan.

With the approval of the Engineer, the Contractor may modify the suggested construction sequence and attendant traffic control procedures as shown. The Contractor shall submit his proposed sequence of operations and any necessary revisions to attendant traffic control to the Engineer for approval before actual construction operations begin.

#### Driveways

Except where the plans expressly authorize temporary complete closures, the Contractor shall keep driveways open to local traffic by keeping at least half of the width of said driveway open or by providing access at a temporary location, as approved by the Engineer. The Contractor shall provide and maintain access to commercial and private properties abutting the roadway being improved in accordance with Article 107.09 of the Standard Specifications. Access to commercial property shall, at no time, be shut off completely except as expressly authorized in the plans. At no time shall a driveway be closed for no more than 1 hour. An estimated quantity of AGGREGATE FOR TEMPORARY ACCESS has been included in the plans for use in the conveyance of local traffic and the provision of temporary access.

Construction of driveway entrances shall be completed within 5 consecutive days before or after construction of mainline pavement in front of the driveway. This is necessary in order to accommodate vehicle turning movements in and out of the driveways after completion of construction on, and in front of, their properties thus eliminating the need for closure of these facilities twice; i.e., once for mainline pavement construction and again for the entrance or side road construction. Closures shall be coordinated with property owners to minimize disruptions to normal driveway use.

#### Removing and Resetting Traffic Signs

This work shall consist of the removal, relocation, and resetting of traffic signs which interfere with construction operations. This work shall also include the removal, relocation, and resetting of existing wood signs, delineators and other miscellaneous signs which interfere with construction operations. This work shall be performed in accordance with the applicable portions of Article 107.25 of the Standard Specifications and as directed by the Engineer. The contractor shall remove, temporarily relocate and/or permanently reset existing signs which interfere with the construction operations. This work will not be paid for separately but shall be

included in the contract lump sum price of TRAFFIC CONTROL AND PROTECTION, (SPECIAL). The Engineer will determine which signs will be removed, temporarily relocated and permanently reset. Before the completion of each construction stage the Contractor shall coordinate with the City for the City to install traffic and street name signs in accordance with the signing plan.

#### Traffic Control Surveillance

Traffic control surveillance will be required, but will not be paid for separately on this project. The special provision check sheet LRS 3 "Work Zone Traffic Control Surveillance" will apply for the inspection of traffic control devices on this project along with the following additional requirements. The minimum frequency of worksite inspections by the Contractor shall be defined as daily unless directed otherwise by the Engineer. The person responsible for surveillance shall complete an inspection form, furnished by the Engineer, on a daily basis. The completed form shall be given to the Engineer on the first working day after the inspection.

#### Quality of Traffic Control Devices

Traffic Control Devices include signs and their supports, signals, pavement markings, barricades with sand bags, channelizing devices, warning lights, arrow boards, flaggers, or any device used for the purpose of regulating, detouring, warning or guiding traffic through or around the construction zone.

Only signs, barricades, vertical panels, drums, and cones that meet the requirements of the Department's "Quality Standard for Work Zone Traffic Control Devices 2010" shall be used on this project. Copies of this publication are available from the IDOT website under "Resources". At the time of the initial setup or at the time of major stage changes, one-hundred percent (100%) of each type of device (cones, drums, barricades, vertical panels or signs) shall be acceptable as defined by the referenced publication. Throughout the duration of the project, the percentage of acceptable devices may decrease to seventy-five percent (75 %) only as a result of damage and/or deterioration during the course of the work. Work shall not begin until a determination has been made that the traffic control devices meet the quality required in this standard. The Contractor is required to conduct routine inspections of the work site at a frequency that will allow for the prompt replacement of any traffic control device that has become displaced or damaged to the extent that it no longer conforms to the shape, dimensions, color and operational requirements of the MUTCD and the Traffic Control Standards, or that it no longer presents a neat appearance to motorists. A sufficient quantity of replacement devices, based on vulnerability to damage, shall be readily available to meet this requirement.

#### Placement of Traffic Control Signs and Devices

The Contractor shall be responsible for the proper location, installation, and arrangement of all traffic advance warning signs during construction operations in order to keep lane assignment consistent with barricade placement at all times. The Contractor shall immediately remove, cover, or turn from the view of the motorists all traffic control devices which are inconsistent with

detour or lane alignment patterns and conflicting conditions during the transition from one construction stage to another. When the Contractor elects to cover conflicting or inappropriate signing materials used, he/she shall totally block out reflectivity of the sign and shall cover the entire sign. The method used for covering the signing shall meet the approval of the Engineer.

When directed by the Engineer, the Contractor shall remove all traffic control devices which were furnished and installed and maintained by him/her under this contract, and such devices shall remain the property of the Contractor. All traffic control devices shall remain in place until specific authorization for relocation or removal is received from the Engineer.

The Contractor shall ensure that all traffic control devices installed by him/her are operational, functional, and effective 24 hours a day, including Sundays and holidays.

#### Solar Powered Changeable Message Signs

Changeable message signs shall be furnished, placed and maintained in accordance with the "Stage Construction and Maintenance of Traffic Plans" and Section 701 of the Standard Specifications. All changeable message signs to be used on this project shall be solar powered. This work will be paid at the contract unit price per calendar month for each sign as CHANGEABLE MESSAGE SIGN.

#### Solar Powered Arrow Boards

Arrow boards shall be used as required by the Standards and as directed by the Engineer. All arrow boards to be used on this project shall be solar powered. Any additional cost in meeting this requirement shall be considered as included in the cost of TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

#### Construction Signs

All signing for traffic control shall meet current IDOT policy for retro-reflectivity requirements.

Construction signs referring to daytime lane closures during working hours shall be removed, covered or turned away from the view of motorists during non-working hours.

Flashing lights shall be used on each approach in advance of the work area, and in accordance with the details shown on the Plans and Standard Drawings.

All provisions of Article 107.25 of the Standard Specifications shall apply except the third paragraph shall be revised to read: "The Contractor shall maintain, furnish, and replace at his/her own expense, any traffic sign or post which has been damaged or lost by the Contractor or a third party."

#### Wayfinding or Directional Signage

The Contractor shall be responsible for the proper location, installation, and arrangement of any wayfinding or directional signage as directed by the Engineer. The wayfinding or directional signage may consist of post mounted sheet signs or changeable message boards. The cost of providing, installing and maintaining wayfinding or directional signs will not be paid for

separately but shall be included in the contract lump sum price of TRAFFIC CONTROL AND PROTECTION (SPECIAL). No additional compensation will be allowed.

#### Placement and Removal of Signs and Barricades

Placement of all signs and barricades shall proceed in the direction of flow of traffic. Removal of all signs and barricades shall start at the end of the construction areas and proceed toward oncoming traffic unless otherwise directed by the Engineer.

#### Temporary Sidewalks

It is the City's intention to maintain pedestrian access through the project site during construction of the improvement. The Contractor may restrict pedestrian access to the project site during working hours by utilizing Highway Standard 701801. During non-working hours the Contractor shall allow for pedestrian access through the project site by constructing temporary sidewalks at locations where existing sidewalks have been removed or as directed by the Engineer. This work shall consist of furnishing, placing, maintaining, and removing temporary sidewalks in accordance with Section 424 of the Standard Specifications and the plan notes. The temporary sidewalk shall consist of either Portland cement concrete (4 inches minimum thickness) or Hot-Mix Asphalt (2 inches minimum thickness) at locations shown on the plans and as directed by the Engineer. This work, including furnishing and placing the materials, as well as compaction, removal, and subsequent disposal of the material in accordance with Article 202.03 of the Standard Specifications, will not be paid for separately, but shall be considered included in the contract unit price per square foot for TEMPORARY SIDEWALK.

#### Public Safety and Convenience

The Contractor shall provide a telephone number where a responsible individual can be contacted on a 24-hour-a-day basis to receive notification of any deficiencies regarding traffic control and protection. The Contractor shall dispatch personnel, materials and equipment to correct any such deficiencies. The Contractor shall respond to any call from the Engineer or government agencies concerning any request for improving or correcting traffic control devices and begin making the requested repair within **two (2) hours** from the time of notification.

When traveling in lanes open to public traffic, the Contractor's vehicles shall always move with and not against or across the flow of traffic. These vehicles shall enter or leave work areas in a manner which will not be hazardous to, or interfere with traffic and shall not park or stop except within areas designated by the Engineer.

Personal vehicles will not be allowed to park within the right-of-way. The Contractor shall provide for off-site parking of his/her personal vehicles.

The Contractor shall maintain entrances and side roads along the proposed improvement. Interference with traffic movements and inconvenience to owners of abutting property and the public shall be kept to a minimum. Any delays or inconveniences caused to the Contractor by complying with these requirements shall be considered included in the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

### Construction Staging Requirements

Lane Closures and the conveyance of local traffic within and around the construction zone shall be provided for in accordance with the above referenced Highway Standards and as directed by the Engineer. With the approval of the Engineer, the Contractor may make modifications to the proposed traffic control plans. The Contractor shall submit his/her proposed sequence of operations, and any necessary revisions to the attendant traffic control plan, to the Engineer for approval before actual construction operations begin.

All traffic control devices and barricades throughout the project shall remain in place until the entire project is substantially complete, or as otherwise directed by the Engineer.

All proposed traffic signal heads shall be bagged until the scheduled traffic signal turn on.

### Brooming of Roadway

All traffic lanes which are closed to through traffic during construction shall be broomed or swept free of all loose gravel or construction debris before the traffic lane is reopened to traffic. All roadway surface conditions shall be approved by the Engineer before they are opened to traffic. This work will not be paid for separately, but shall be considered included in the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

### Brooming of Pedestrian Routes

All pedestrian routes which are closed during construction operations shall be broomed or swept free of all loose gravel or construction debris before the pedestrian routes are reopened. All pedestrian route surface conditions shall be approved by the Engineer before they are opened. This work will not be paid for separately, but shall be considered included in the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

### Northmoor Road Detour

When traffic is to be directed over a detour route, the Contractor shall furnish, erect, maintain and remove all applicable traffic control devices along the detour route according to the notes in the Maintenance of Traffic plans. This includes any specific destination signs required by the engineer. Signage for the detour route shall be paid for at the contract lump sum price for DETOUR SIGNING.

### **Construction Access**

The Contractor shall present a plan that will be used to provide access by the Contractor or Subcontractor to the Engineer at the time of the Pre-Construction Meeting. The Engineer and Contractor shall both examine the plan noting any areas of concern before construction begins.

Upon completion of the project the Engineer shall examine the streets prior to approving final payment to the Contractor. Any areas that have been damaged, due to construction activity, shall be repaired by the Contractor to the satisfaction of the Engineer. When work is complete, the Contractor shall arrange, within a reasonable time period, to clean up and restore areas

where equipment or material has been stored on the right-of-way or easement. This work shall be included in the cost of the contract.

The Engineer may restrict the movement of construction vehicles on the completed surface in order to prevent damage to these surfaces.

### **Contractor Access**

At road closure locations where Type III barricades are installed in a manner that will not allow Contractor access to the project without relocation of one or more of the barricades, the arrangement of the barricades at the beginning of each work day may be relocated, when approved by the Engineer, in the manner shown on Highway Standard 701901 for Road Closed to Through Traffic. "Road Closed" signs (R11-2), supplemented by "Except Authorized Vehicles" signs (R3-1101), shall be mounted on both the near-right and far-left barricade(s). At the end of each work day, the barricades shall be returned to their in-line positions. This work will be included in the cost of the contract, and no extra compensation will be allowed.

Basis of Payment: All work prescribed and referenced herein shall be measured and paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL). This price shall be considered payment in full for all labor, materials, transportation, handling and incidental work necessary to furnish, install, relocate, maintain and remove all traffic control devices as required by the traffic control plan and as directed and approved by the Engineer, for the duration of the contract. No separate payment will be made for complying with the provisions of Standard 701001, 701006, 701011, 701301, 701311, 701501, 701502, 701701, 701801, and 701901. Article 701.20 of the Standard Specifications is revised in that no additional payment will be made for furnishing, installing, maintaining, and removing additional traffic control devices or signs from those shown on the plans or as directed by the Engineer.

The cost of furnishing, placing, compacting, maintaining, removing, and disposing of coarse aggregate for temporary driveways will be paid for at the contract unit price per ton of material furnished for AGGREGATE FOR TEMPORARY ACCESS.

The cost of furnishing, placing, compacting, maintaining, removing, and disposing of Portland cement concrete or hot-mix asphalt for temporary sidewalks will be paid for at the contract unit price per square foot for TEMPORARY SIDEWALK.

All detour signing will be measured and paid for at the contract lump sum price for DETOUR SIGNING, which work shall include furnishing, installing, maintaining, replacing, relocating and removing all traffic control devices provided to detour traffic on the local streets during the road closure. See plans for detour plan.

The portable changeable message signs will be paid for at the contract unit price per calendar day for each sign as CHANGEABLE MESSAGE SIGN, which work shall include furnishing,

installing, maintaining, replacing, relocating and removing all portable changeable message signs as directed by the Engineer.

### **TOPSOIL**

The topsoil placed within the job limits shall contain not less than 12 percent nor more than 50 percent clay and shall not exceed 55 percent sand as determined in accordance with AASHTO T 88.

### **DAMAGE TO EXISTING TREES**

All necessary precautions shall be taken to prevent damage to existing trees. Precautions shall be taken to prevent damage to the bark, branches and foliage of existing trees by machinery or other means. Any damage shall be corrected as directed by the City at the expense of the Contractor.

#### **20100110 TREE REMOVAL (6 TO 15 UNITS DIAMETER)**

#### **20100210 TREE REMOVAL (OVER 15 UNITS DIAMETER)**

Trees three (3) inches or greater in diameter at breast height shall not be cleared from April 1 through October 1.

#### **25100635 HEAVY DUTY EROSION CONTROL BLANKET**

This work shall be completed in accordance with Article 251 of the Standard Specifications. This work shall also include seeding and fertilizing the area in accordance with Article 250 of the Standard Specifications.

The estimated area is approximately 0.12 acres. Seeding shall be Type Class 3. The seed mixture shall be applied at 100 pounds/acre. All seeds shall meet the purity and noxious weed requirements of Article 1081.04 of the Standard Specifications, and be approved by the engineer.

The fertilizer nutrients shall be applied at a rate of 270 lbs. of actual nutrients per acre. The fertilizer furnished shall be ready mixed material having a ratio of (1-1-1).

The Contractor shall provide the engineer with the test results from the seed container and the chemical analysis of the fertilizer nutrients.

The seed and fertilizer will not be measured for payment but will be considered included in the contract unit cost per square yard of HEAVY DUTY EROSION CONTROL BLANKET.



## **PLANT MATERIAL**

This work shall consist of planting woody plants in accordance with Section 253 of the Standard Specifications and in accordance with the Landscape Details shown in the plans.

Add the following to Section 253 of the Standard Specifications:

All plant material shall be reviewed and receive written approval by the Resident Engineer at the project site. Resident Engineer shall be notified 72 hours prior to delivery of plant material. Refer to the planting schedules on the landscaping plans for specific tagging information. Submit a complete plant material list to the Resident Engineer within 60 days of award of the project.

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

All shade tree locations shall be staked in the field and reviewed with the construction Resident Engineer prior to installation. Prior to any shrub installation, all plants shall be placed above ground. The layout shall be reviewed with the construction Resident Engineer before completing installation per the drawings and details.

No bare root stock will be allowed for this project. All plant material shall be balled and burlapped, or in containers. All open air delivery of plant material shall be tarped.

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 3 inches. 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.

This work will be paid for at the contract unit price per each for TREES or SHRUBS, of the species, root type and plant size specified. The work will include the excavation, backfill, mulch, and tree straps as shown in the plan details.

## **28200200 FILTER FABRIC**

This work shall consist of furnishing and placing a geotextile material as specified in Section 282 of the Standard Specifications and conforming to the following performance characteristics, measured per the test methods referenced:

4 ounce, nonwoven needle punched geotextile composed of 100% polypropylene staple fibers that are inert to biological degradation and resists naturally encountered chemicals, alkalis, and acids.

Grab Tensile Strength: ASTM D4632: 115 lbs  
Grab Tensile Elongation: ASTM D4632: 50%  
Trapezoidal Tear: ASTM D4533: 50 lbs  
Puncture: ASTM D4833: 65 lbs  
Apparent Opening Size: ASTM D4751: 0.212 mm, 70 U.S. Sieve  
Permittivity: ASTM D4491: 2.0 sec – 1  
Flow Rate: ASTM D4491: 140 gal/min/s.f.

Method of Measurement: This work will be measured for payment in place and the area computed in square yards. The buried edges of the fabric will not be measured for payment and the overlap joints and seams will be measured as a single placement of material.

Basis of Payment: This work will be paid for at the contract unit price per square yard for FILTER FABRIC.

### **EMBANKMENT (RESTRICTIONS)**

Effective January 21, 2005 Revised August 3, 2007

Add the following to the requirements of Article 205.04:

Gravel, crushed stone or soils having less than 35% passing the number 200 sieve and other materials as allowed by Article 202.03 of the standard specifications are further restricted. These further restricted materials are also limited to the interior of the embankment and shall have a minimum cover of 3' (1 m) of non-restricted soil (see "Borrow and Furnished Excavation" Special Provision). Alternating layers of further restricted material and cohesive soil will not be permitted. The further restricted materials may only be incorporated into the embankment by using one of the following procedures:

The further restricted materials shall be placed in 4" lifts and disked with the underlying lift material until a uniform and homogenous material is formed having more than 35% passing the number 200 sieve.

Sand, gravel or crushed stone embankment when placed on the existing ground surface will be drained using a 10' (3 m) by 10' (3 m) French drain consisting of nonwoven geotechnical fabric with 12" (0.3 m) of B-3 riprap. This shall be constructed on both sides of the embankment at the toe of the foreslope spaced 150' (46 m) apart. At locations requiring a French drain the 3' (1 m) cohesive cap shall not be installed within the 10' by 10' riprap area. If the Engineer determines that the existing ground is a granular free draining soil, the French drain may be deleted.

Sand, gravel or crushed stone embankment when placed on top of a cohesive embankment will be drained with a permanent 4" (100 mm) underdrain system. The underdrain system shall consist of a longitudinal underdrain on both sides of the embankment and transverse underdrains spaced at 250' (75 m) centers. The underdrain shall consist of a 2' (0.6 m) deep by 1' (0.3 m) wide trench, backfilled with FA4 sand and a 4" (100 mm) diameter underdrain. In addition, both sides of the embankment will have a 6" (150 mm) diameter pipe drain which will drain the underdrain system and outletted into a permanent drainage structure or outletted by a headwall at the toe of the embankment.

The above work will not be paid for separately but shall be included in the cost per cubic yard of EARTH EXCAVATION, FURNISHED EXCAVATION, or BORROW EXCAVATION.

### **EMBANKMENT**

Effective: July 1, 1990 Revised: November 1, 2007

Revise the third paragraph of Article 205.06 of the Standard Specifications to read:

All embankment shall be constructed with not more than 110% of optimum moisture content, determined according to AASHTO T 99 (Method C). The 110% of optimum moisture limit may be waived in free draining granular material when approved by the Engineer.

The Contractor may, at his option, add a drying agent to lower the moisture content as specified above. The drying agent must be approved by the Engineer prior to use. Extra compensation will not be allowed for the use of a drying agent but will be considered included in the cost of the various items of excavation.

### **PROOF ROLLING**

Effective April 23, 2004 Revised January 1, 2007

This work shall consist of proof rolling the subgrade with a fully loaded tandem axle dump truck and driver at the direction of the Engineer. The truck shall travel the subgrade in all of the proposed lanes of traffic in the presence of the Engineer.

This work will not be paid for separately, but considered included in the various earthwork pay items.

### **SUBGRADE TREATMENT**

Effective July 1, 1990 Revised April 25, 2008

Revise first sentence of first paragraph of Article 301.04 as follows:

"When compacted, the subgrade shall have a minimum dry density of 95 percent of the standard laboratory dry density and a minimum immediate bearing value (IBV) of 3.0."

Delete the second paragraph (including subparagraphs a, b, and c) of Article 301.04 of the Standard Specifications and replace it with the following:

"In cut sections the Contractor responsible for the rough grading shall obtain not less than 95% of the standard laboratory density and not more than 110% of the optimum moisture for the top 1' (300 mm) of the subgrade.

The Contractor may, at his/her option, add a drying agent to lower the moisture content as specified. The drying agent must be approved by the Engineer prior to use. Additional compensation will not be allowed for the use of a drying agent, but will be considered as included in the cost of the various earthwork items."

In the first sentence of the third paragraph delete "above steps have" and replace with "work has."

### **31100100 SUBBASE GRANULAR MATERIAL**

Effective: November 5, 2004

This work shall be in accordance with Section 311 of the Standard Specifications and as specified herein.

All Subbase Granular Material shall have a minimum IBR of 40.

### **35100100 AGGREGATE BASE COURSE, TYPE A**

This work shall consist of furnishing, placing, and compacting a permeable base course to promote infiltration of runoff below the drainage swale.

#### **PERMEABLE BASE COURSE:**

This work shall consist of furnishing, placing, and compacting a permeable base course to provide drainage below the drainage swale.

**Submittals:** Test results from an independent laboratory on the material from the supplier or suppliers to be used for the permeable base course to show compliance with the following.

1. ASTM D 448 for No. 57
2. Sieve analysis, washed gradation per ASTM C 136
3. Void space percentage per ASTM C 29

**Materials:** Provide clean gravel, clean crushed gravel , or crushed, clean, washed angular stone material conforming to ASTM C 33 and gradation requirements of ASTM D 448 No. 57 as presented in the table below or IDOT CA-7.

**PERMEABLE BASE COURSE AGGREGATE  
 GRADATION REQUIREMENTS**

ASTM No. 57 (IDOT CA-7)	
Sieve Size	Percent Passing
1-1/2 in (37.5 mm)	100
1 in (25 mm)	95 to 100
½ in (12.5 mm)	25 to 60
No. 4 (4.75 mm)	0 to 10
No. 8 (2.36 mm)	0 to 5

If using more than one supplier, the physical characteristics of material shall be nearly identical to avoid differing behaviors. If characteristics are different, only one supplier will be allowed unless a single supplier cannot meet the production rate needed to complete construction.

**Storage and Handling:** Stockpile permeable base course aggregate materials such that they are free from standing water, uniformly graded (avoid segregation), and free of organic material, sediment and debris.

**CONSTRUCTION REQUIREMENTS:**

**General:** The subgrade shall be graded and shaped and filter fabric installed in accordance with Section 282. Do not install permeable subbase on frozen or underwater subgrade. Keep the area free from sediment during the entire job. Remove and replace all contaminated or settled materials, as determined by the Engineer, with clean materials at no additional cost to the contract.

Wrap the trench with geotechnical fabric in accordance with the detail and cut off any excess. Hold the fabric in place until the trench is filled with aggregate. Place the permeable base course aggregate materials in uniform lifts and compact to at least 95 percent as per ASTM D 4254.

PIPE UNDERDRAINS, TYPE 2, 4" shall be placed at the bottom of the base course as shown in the plans and in accordance with Section 601 of the Standard Specifications.

Compact the permeable base course with at least two passes in vibratory mode and two passes in static mode with a vibratory roller until there is no visible movement. DO NOT ALLOW THE COMPACTION DEVICE TO CRUSH AGGREGATE OR PIPE UNDERDRAIN.

CHOKER COURSE:

Submittals: Test results from an independent laboratory on the material from the supplier or suppliers to be used for the choker course to show compliance with the following.

1. ASTM D 448 for No. 8
2. Sieve analysis, washed gradation per ASTM C 136
3. Void space percentage per ASTM C 29

Materials: Provide clean gravel, clean crushed gravel , or crushed, clean, washed angular stone material conforming to ASTM C 33 and gradation requirements of ASTM D 448 No. 8 as presented in the table below or IDOT CA-20\*

CHOKER COURSE AGGREGATE  
 GRADATION REQUIREMENTS

ASTM No. 8 (IDOT CA-20*)	
Sieve Size	Percent Passing
½ in (12.5 mm)	100
3/8 in (9.5 mm)	85 to 100
No. 4 (4.75 mm)	10 to 30
No. 8 (2.36 mm)	0 to 10
No. 16 (1.18 mm)	0 to 5

If IDOT CA-20 is not available at the time of construction CA-16 may be substituted with the approval of the Engineer.

If using more than one supplier, the physical characteristics of material shall be nearly identical to avoid differing behaviors. If characteristics are different, only one supplier will be allowed unless a single supplier cannot meet the production rate needed to complete construction.

Storage and Handling: Stockpile aggregate materials such that they are free from standing water, uniformly graded (avoid segregation), and free of organic material, sediment and debris.

#### CONSTRUCTION REQUIREMENTS

General: The choker course shall be prepared in accordance with the section for PERMEABLE BASE COURSE. Do not install choker course on frozen, underwater, or settled permeable base course.

Choker Course Placement: Spread aggregate evenly over the base course and screed to a nominal thickness of 1 inch. Do not exceed 1-1/2 inch thickness. Keep moisture content constant and density loose.

Method of Measurement: AGGREGATE BASE COURSE, TYPE A, including Permeable Base Course and Choker Course, will be measured for payment in TONS.

FILTER FABRIC shall be measured and paid for in accordance with Section 282 of the Standard Specifications.

PIPE UNDERDRAINS, TYPE 2, 4" shall be measured and paid for in accordance with Section 601 of the Standard Specifications.

Basis of Payment: This work will be paid for at the contract unit price per ton for AGGREGATE BASE COURSE, TYPE A and shall include all labor, equipment, and material necessary to place the two gradations of aggregate at the depths and locations indicated in the plans and in this specification.

#### 44000100 PAVEMENT REMOVAL

The existing pavement structures within the project limits vary both in type and thickness throughout. The best available information, based on original construction plans and some pavement coring, is shown in the existing typical sections. No additional compensation will be allowed for sections of pavement that may deviate from the type and depth information provided on the existing typical sections.

#### 50104400 CONCRETE HEADWALL REMOVAL

This work shall consist of the removal and disposal of existing concrete headwalls and any concrete structures attached to them at the locations shown on the plans in accordance with Section 501 of the Standard Specifications and as directed by the Engineer.

Basis of Payment: This work will be measured for payment and paid for at the contract unit price per each for CONCRETE HEADWALL, which price shall be considered payment in full for

all labor, equipment, and materials required for the satisfactory removal and disposal of the existing concrete headwalls and attached concrete structures.

**50105220 PIPE CULVERT REMOVAL**

**55100300, 55100400, 55100500, 55100700, 55100900, 55101100, 55101600**

**STORM SEWER REMOVAL**

This work shall consist of the removal and disposal of existing pipe culverts and storm sewers at the locations shown on the plans in accordance with Section 551 of the Standard Specifications and as directed by the Engineer. Pipe culvert and storm sewer materials determined not to be salvageable by the Engineer shall be disposed of by the Contractor in accordance with Article 202.03 of the Standard Specifications. Excavations resulting from the removal of the pipe culverts and storm sewers that result in holes within two feet of paved surfaces shall be backfilled with Controlled Low Strength Material (CLSM). CLSM shall not be paid for separately, but shall be included in the contract unit price per foot for PIPE CULVERT REMOVAL and STORM SEWER REMOVAL, of various sizes. Where existing pipe culverts or storm sewer that connect to an existing drainage structure to remain in place are removed any holes left by removing the culvert shall be plugged as directed by the engineer. Removal of any end sections attached to the culvert or storm sewer designated for removal shall not be paid for separately, but shall be included in the contract unit price per foot for PIPE CULVERT REMOVAL and STORM SEWER REMOVAL, of various sizes.

**Basis of Payment:** This work will be measured for payment and paid for at the contract unit price per foot for PIPE CULVERT REMOVAL and STORM SEWER REMOVAL, of various sizes, which price shall be considered payment in full for all labor, equipment, and materials required for the satisfactory removal and disposal of the existing pipe culverts and storm sewers.

**Z0013300 CONCRETE REMOVAL (SPECIAL)**

This work shall consist of removing and disposing of portions of the concrete slab at the downstream end of the existing box culvert according to applicable sections of Section 501 and as detailed in the plans.

**Method of Measurement:** This work will be measured for payment per square yard of concrete removed.

**Basis of Payment:** Debris removed will be paid at the contract square yard price for CONCRETE REMOVAL (SPECIAL).



**Z0015500 DEBRIS REMOVAL**

This work shall consist of removing and disposing of debris at the upstream end of the existing box culvert according to applicable sections of Section 501.

Method of Measurement: This work will be measured as a lump sum for the project.

Basis of Payment: Debris removed will be paid at the contract lump sum price for DEBRIS REMOVAL.

**Z0016001, Z0016002 DECK SLAB REPAIR**

This work shall consist of repairing the bottom slab of the box culvert according to GBSP 28, "Deck Slab Repair" except as noted in this special provision. The Engineer shall determine in the field if this work is necessary after hydro-scarification of the bottom slab of the culvert is complete.

Method of Measurement: When required these items will be measured in according to Article 508.10.

Basis of Payment: When corroded reinforcement bars are encountered in the performance of this work and replacement is required, the Contractor will be paid according to Article 508.11.

The quantity for REINFORCEMENT BARS and DECK SLAB REPAIR is estimated in the plans. The Engineer will determine if these items are necessary in the field. The Contractor will be paid for these pay items as measured in the field.

**Z0022800 FENCE REMOVAL**

This work shall consist of removing chain link or wooden fence at locations noted on the plans.

The fence shall be removed to a point where it can be appropriately terminated as determined in the field by the engineer. This may require ending the removal at a post or reinstalling sections to appropriately terminate the fence at the desired location to restore the fence to proper working order. Therefore this may require the fence to be removed in such a manner that some pieces will be available for reuse. Any fence or post that is reused shall be installed and stabilized to a condition equal to or greater than the existing condition.

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

Basis of Payment: The removal and re-erection of the existing fence shall be paid for at the contract unit price per foot for FENCE REMOVAL. The price will include all materials, equipment and labor necessary to complete the work.

**Z0056648, Z0056650, Z0056652, Z0056653, Z0056654, Z0056668, Z0056670**

**STORM SEWERS, WATER MAIN QUALITY PIPE**

**Z0056614 STORM SEWER (WATER MAIN REQUIREMENTS) 21 INCH**

This work consists of constructing storm sewer to meet water main standards, as required by the IEPA or when otherwise specified. The work shall be performed in accordance with applicable parts of Section 550 of the Standard Specifications, applicable sections of the current edition of the IEPA Regulations (Title 35 of the Illinois Administrative Code, Subtitle F, Chapter II, Section 653.119), the applicable sections of the current edition of the "Standard Specifications for Water and Sewer Main Construction in Illinois", and as herein specified.

This provision shall govern the installation of all storm sewers which do not meet IEPA criteria for separation distance between storm sewers and water mains. Separation criteria for storm sewers placed adjacent to water mains and water service lines are as follows:

- (1) Water mains and water service lines shall be located at least 10 feet (3.05 meters) horizontally from any existing or proposed drain, storm sewer, sanitary sewer, or sewer service connections.
- (2) Water mains and water service lines may be located closer than 10 feet (3.05 meters) to a sewer line when:
  - (a) Local conditions prevent a lateral separation of 10 feet (3.05 meters); and
  - (b) The water main or water service invert is 18 inches (460 mm) above the crown of the sewer; and
  - (c) The water main or water service is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.
- (3) A water main or water service shall be separated from a sewer so that its invert is a minimum of 18 inches (460 mm) above the crown of the drain or sewer whenever water mains or services cross storm sewers, sanitary sewers or sewer service connections. The vertical separation shall be maintained for that portion of the water main or water services located within 10 feet (3.05 meters) horizontally of any sewer or drain crossed.

When it is impossible to meet (1), (2) or (3) above, the storm sewer shall be constructed of concrete pressure pipe, slip-on or mechanical joints ductile iron pipe, or PVC pipe equivalent to water main standards of construction. Construction shall extend on each side of the crossing until the perpendicular distance from the water main or water service to the sewer or drain line is at least 10 feet (3.05 meters). Storm sewer meeting water main requirements shall be constructed of the following pipe materials:

### Concrete Pressure Pipe

Concrete pressure pipe shall conform to the latest ANSI/AWWA C300, C301, C302, or C303.

Joints shall conform to Article 41-2.07B of the "Standard Specifications for Water and Sewer Main Construction in Illinois."

### Ductile Iron Pipe

Ductile Iron pipe shall conform to ANSI A 21.51 (AWWA C151), class or thickness designed per ANSI A 21.50 (AWWA C150), tar (seal) coated and/or cement lined per ANSI A 21.4 (AWWA C104), with a mechanical or rubber ring (slip seal or push on) joints.

Joints for ductile iron pipe shall be in accordance with the following applicable specifications.

1. Mechanical Joints - AWWA C111 and C600
2. Push-On Joints - AWWA C111 and C600

### Plastic Pipe

Plastic pipe shall be marked with the manufacturer's name (or trademark); ASTM or AWWA specification; Schedule Number, Dimension Ratio (DR) Number or Standard Dimension Ratio (SDR) Number; and Cell Class. The pipe and fittings shall also meet NSF Standard 14, and bear the NSF seal of approval. Fittings shall be compatible with the type of pipe used. The plastic pipe options shall be in accordance with the following:

1. Polyvinyl Chloride (PVC) conforming to ASTM Standard D 1785. Schedule 80 is the minimum required for all pipe sizes, except when the pipe is to be threaded, and then it shall be Schedule 120. It shall be made from PVC compound meeting ASTM D 1784, Class 12454.
2. Polyvinyl Chloride (PVC) conforming to ASTM D 2241. A minimum wall thickness of SDR 26 is required for all pipe sizes (Note: The lower the SDR number, the higher the wall thickness and pressure rating). It shall be made from PVC compound meeting ASTM D 1784, Class 12454.
3. Chlorinated Polyvinyl Chloride (CPVC) conforming to ASTM f 441. A minimum of Schedule 80 is required for all pipe sizes. Threaded joints are not allowed. It shall be made from CPVC compound meeting ASTM D 1784, Class 23447.
4. Chlorinated Polyvinyl Chloride (CPVC) conforming to ASTM F 442. A minimum wall thickness of SDR 26 is required for all pipe sizes (Note: The lower the SDR number,

- the higher the wall thickness and pressure rating). It shall be made from CPVC compound meeting ASTM D 1784.
5. Polyvinyl Chloride (PVC) conforming to ANSI/AWWA C900. A minimum of wall thickness of DR 25 is required for all pipe sizes (Note: The lower the DR number, the higher the wall thickness and pressure rating). It shall be made from PVC compound meeting ASTM D 1784, Class 12454.
  6. Polyvinyl Chloride (PVC) conforming to ANSI/AWWA C905. A minimum of wall thickness of DR 26 is required for all pipe sizes (Note: The lower the DR number, the higher the wall thickness and pressure rating). It shall be made from PVC compound meeting ASTM D 1784, Class 12454.

Joining of plastic pipe shall be by push-on joint, solvent welded joint, heat welded joint, flanged joint, or threaded joint, in accordance with the pipe manufacturer's instructions and industry standards. Special precautions shall be taken to insure clean, dry contact surfaces when making solvent or heat welded joints. Adequate setting time shall be allowed for maximum strength.

Elastometric seals (gaskets) used for push-on joints shall comply with ASTM F477.

Solvent cement shall be specific for the plastic pipe material and shall comply with ASTM D 2564 (PVC) or ASTM F 493 (CPVC) and be approved by NSF.

This work will be measured and paid for at the contract unit price per Foot (Meter) for STORM SEWER, WATER MAIN QUALITY PIPE, of the diameter and type specified. Pay items without a type indicated in the name shall be Type 2.

### **X0322881 TREE TRIMMING**

The Contractor shall be responsible for all services required herein to be performed, and shall provide and furnish all labor, materials, necessary tools, expendable equipment and supplies, vehicles and transportation services required to perform and complete the Tree Trimming for the project.

This work shall consist of pruning of lower limbs and canopy of trees/plants that are growing over the sidewalk and/or the roadway space. Also, directional pruning of limbs and canopy that are growing into structures (building, street lights, walls, sidewalk, etc.) that must be pruned to direct growth away or at an angle away from the structure by cutting back to lateral branch that is growing away from structure. Trees/plants normally need to have an 8 foot clearance over sidewalks and 16 foot clearance over roadways. They also need to have a side clearance of 0 feet to 2 feet along these corridors to keep growth out of travel space. Only trees/plants with immediate clearance pruning needs are designated. No use of climbing spikes or other

equipment that is not recommended for use by an ISA Certified Arborist shall be allowed in gaining access or reaching into trees and palms for pruning.

All operations shall comply with applicable federal, state and local regulations for this occupation and work. Specifically, but not exclusively, work shall comply with applicable Occupational Safety and Health Administration (OSHA) standards and the American National Standards Institute (ANSI) A-300 Standards for Maintenance of Trees and Woody Plants and Z-133.1-1994 Safety Requirements.

The Contractor shall remove all tree limbs and tree debris from the site and dispose of these limbs and debris outside the project limits.

Notification: The Contractor shall notify the property owner or public authorities in the form of an informational letter at least three days prior to, but not more than two weeks prior to, necessary work for each tree to be trimmed. For those trees in the public rights-of-way, belonging to the City, the Contractor shall likewise notify the adjacent property owner on the same side of the street of the work. Cost for the distribution of the informational letters shall be incidental to the contract and not a separate billable item.

Protection of Property: The Contractor shall take all necessary precautions to eliminate damage to adjacent trees and shrubs, lawns, or other real or personal property. Vegetation surrounding a tree marked for pruning shall be disturbed as little as possible.

Protection of Overhead Utilities: Pruning operations may be conducted in areas where overhead electric, telephone, and cable television facilities exist. The Contractor shall protect all utilities from damage, shall immediately contact the appropriate utility if damage should occur, and shall be responsible for all claims for damage due to his operation. The Contractor shall make arrangement with the utility for removal of all necessary limbs, and branches which may conflict with or create a hazard in conducting the operations of this contract.

Method of Measurement: Tree trimming will be measured per each for every individual tree to be trimmed.

Basis of Payment: This work will be paid for at the contract price per each for TREE TRIMMING, which price shall be considered payment in full for all labor, equipment, and materials required for the satisfactory removal and disposal limbs.

### **X0323689 REMOVE EXISTING EROSION CONTROL**

This work shall consist of the complete removal and satisfactory disposal of the existing rock filled gabion baskets along the bank of Big Hollow Creek at locations noted on the plans. This work shall include all labor, materials and equipment to necessary to complete the work.

Method of Measurement: This work will be measured as a lump sum for the project.

Basis of Payment: This work will be paid for at the contract lump sum price for REMOVE EXISTING EROSION CONTROL.

**X0324028 GROUT FOR USE WITH RIPRAP**

Effective July 30, 2010

Description of Work. This work shall consist of furnishing and placing material to grout riprap in place. The riprap, bedding, and filter fabric shall be placed and paid for according to Sections 281 and 282 of the Standard Specifications.

Materials. The grout shall consist of a mixture of 490 lbs. cement, 1976 lbs. (dry weight) FA 01, 1039 lbs. (dry weight) CA 16, and 27.5 gallons of water per cubic yard. Alternatively, a mixture of 430 lbs. cement, 115 lbs. fly ash, 1937 lbs. FA 01, 1028 lbs. CA 16, and 27.5 gallons of water per cubic yard may be used. In either mixture, a high-range water reducer shall be used to attain desired consistency of the mix. The hardened grout shall have a minimum compressive strength of 2,000 pounds per square inch at 28 days.

Construction Requirements. The grout shall be pumped and placed throughout the riprap to a depth determined by the Engineer. A uniform rate of 0.22 cubic yards of grout per square yard of riprap was assumed to estimate a quantity. The grout shall fill the lower voids in the riprap and bond the riprap together.

Method of Measurement: The quantity of grout for use with riprap shall be measured in cubic yards, based on the volumes from the individual truck tickets used for the work.

Basis of Payment: This work will be paid for at the contract unit price per Cubic Yard for GROUT FOR USE WITH RIPRAP.

**X0324058 OUTLET SPECIAL**

The outlet special shall be constructed in accordance with the details shown in the plans and applicable portions of Section 606 of the Standard Specifications.

The Contractor shall determine the appropriate means of construction for this item and it shall be approved by the Engineer before construction on any work included in this item can begin.

Method of Measurement: This work will be measured for payment as each per outlet.

Basis of Payment: This work as described shall be paid for at the contract unit price per each for OUTLET SPECIAL.

**X0326981 ENGINEERED SOIL FURNISH AND PLACE (SPECIAL)**

This work shall consist of furnishing, excavating, and placing engineered soil at locations noted in the plans. The soil shall be a uniform, well blended mix, free of stones, stumps, roots or other similar objects larger than two inches. No other materials or substances shall be mixed or dumped within the area that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The soil mix shall be free of Bermuda grass, Quack grass, Johnson grass, or other noxious weeds. The planting soil shall consist of a mixture of sand or crushed glass cullet of equivalent grade, topsoil, and compost components, to obtain an engineered soil mix meeting the following specifications:

USDA Texture class: sandy loam or loamy sand. Mineral fraction consists of no less than 40% well-graded sand or glass cullet and no greater than 10% clay (dry weight basis)

Organic content: 3- 10% (dry weight basis)

pH: 6.5 – 7.0

Soluble Salts (Salinity): less than 500 mg/kg (500ppm)

Phosphorous: soil p-index should be between 15 and 40

Permeability: Minimum 0.50 inches/hour (per field test utilizing ASTM methods)

Soil chemical parameters should be tested according to Recommended Chemical Soil Test Procedures for the North Central Region, North Central Regional Research Publication No. 221, Revised 1998. Soil organic matter should be determined according to the "Loss of Weight on Ignition" procedure in the above-referenced publication. The manual is available on line at the following address: <http://extension.missouri.edu/explorepdf/specialb/sb1001.pdf>.

Volumetric proportions of the components making up the bio-retention soil mix shall be as follows:

Sand or glass cullet: 20% by volume

Compost: 40% by volume

Topsoil: 40% by volume

Existing topsoil on site may be amended to meet the specifications of the soil mix. The existing topsoil shall be tested for organic content, grain size analysis and permeability to identify necessary amendments.

Tests on amended soil shall be performed for every 50 tons of soil mix for pH and organic content

Compost shall be finished (aged), and composted material shall be of plant origin. Compost shall have a C:N ratio  $\leq 25:1$ .

In the event that sufficient topsoil cannot be obtained from common excavation, topsoil may be obtained from outside the limits of this project as directed by the ENGINEER.

Engineered Soil Furnish and Place (Special) shall not be incorporated into the work until it is approved by the Engineer.

Do not add lime to any Engineered Soil Furnish and Place (Special) areas at any point during construction for any reason.

Method of Measurement: Engineered soil shall be measured in place and the volume computed in cubic yards. The width and depth for measurement will be as shown on the plans.

Basis of Payment: This work will be paid for at the contract unit price per cubic yard for ENGINEERED SOIL FURNISH AND PLACE (SPECIAL).

#### **X3510407    AGGREGATE BASE COURSE, TYPE CA-7**

This work shall consist of furnishing, placing, and compacting a permeable base course to provide structural support and drainage for the permeable pavement system.

##### **PERMEABLE BASE COURSE:**

This work shall consist of furnishing, placing, and compacting a permeable base course to provide structural support and drainage for the permeable pavement system.

Submittals: Test results from an independent laboratory on the material from the supplier or suppliers to be used for the permeable base course to show compliance with the following.

1. ASTM D 448 for No. 57
2. Sieve analysis, washed gradation per ASTM C 136
3. Void space percentage per ASTM C 29

Materials: Provide crushed, clean, washed angular stone permeable base course aggregate materials conforming to ASTM C 33 and gradation requirements of ASTM D 448 No. 57 as presented in the table below or IDOT CA-7

#### **PERMEABLE BASE COURSE AGGREGATE GRADATION REQUIREMENTS**



ASTM No. 57 (IDOT CA-7)	
Sieve Size	Percent Passing
1-1/2 in (37.5 mm)	100
1 in (25 mm)	95 to 100
½ in (12.5 mm)	25 to 60
No. 4 (4.75 mm)	0 to 10
No. 8 (2.36 mm)	0 to 5

If using more than one supplier, the physical characteristics of material shall be nearly identical to avoid differing behaviors. If characteristics are different, only one supplier will be allowed unless a single supplier cannot meet the production rate needed to complete construction.

Storage and Handling: Stockpile permeable base course aggregate materials such that they are free from standing water, uniformly graded (avoid segregation), and free of organic material, sediment and debris.

#### CONSTRUCTION REQUIREMENTS

General: The subgrade shall be graded, shaped, and compacted in accordance with Section 301 of the Standard Specifications and filter fabric installed in accordance with Section 282. Do not install permeable subbase on frozen or underwater subgrade. Keep the area where permeable pavement is to be constructed free from sediment during the entire job. Remove and replace all contaminated or settled materials, as determined by the Engineer, with clean materials at no additional cost to the contract.

Wrap the trench with geotechnical fabric in accordance with the detail and cut off any excess. Hold the fabric in place until the aggregate is completely placed. Place the permeable base course aggregate materials in uniform lifts and compact to at least 95 percent as per ASTM D 4254.

PIPE UNDERDRAINS, TYPE 2, 4" shall be placed at the bottom of the permeable base course as shown in the plans and in accordance with Section 601 of the Standard Specifications.

Compact the permeable base course with at least two passes in vibratory mode and two passes in static mode with a minimum 10 ton vibratory roller until there is no visible movement. **DO NOT ALLOW THE COMPACTION DEVICE TO CRUSH AGGREGATE OR PIPE UNDERDRAIN.**

Tolerance: Do not exceed the specified grades of the compacted permeable base course material by more than  $\pm 1/2$  inch (13 mm) over a 10 foot (3 m) long straightedge in any direction.

Grade and compact the upper portion of the permeable base course to sufficiently prevent migration of setting bed materials into the lower layers both during construction and throughout the life of the pavement.

Tolerances shall be checked on a frequency of one check in each direction per 50 lineal feet of roadway in the presence of the Engineer. Compaction requirements must be verified by the Engineer or Engineer's geotechnical testing agency.

Method of Measurement: AGGREGATE BASE COURSE, TYPE CA-7, including Permeable Base Course and Permeable Setting Bed, will be measured for payment in TONS.

FILTER FABRIC shall be measured and paid for in accordance with Section 282 of the Standard Specifications.

PIPE UNDERDRAINS, TYPE 2, 4" shall be measured and paid for in accordance with Section 601 of the Standard Specifications.

Basis of Payment: This work will be paid for at the contract unit price per ton for AGGREGATE BASE COURSE, TYPE CA-7 and shall include all labor, equipment, and material necessary to place the two gradations of aggregate at the depths and locations indicated in the plans and in this specification.

#### **X4404200 PAVED FLUME REMOVAL**

This work shall consist of the complete removal and satisfactory disposal of the existing paved flume at locations noted on the plans. This work shall include all labor, materials and equipment to provide excavation and removal to complete the work.

Method of Measurement: This work will be measured for payment per foot along the flow line of the paved flume to be removed.

Basis of Payment: This work will be paid for at the contract unit price per foot for PAVED FLUME REMOVAL.

#### **X5030225 CONCRETE STRUCTURES (SPECIAL)**

This work shall be performed in accordance with Section 503 of the Standard Specifications except that the concrete shall be self-consolidating in accordance with Article 1021.05.

**X5030305 CONCRETE WEARING SURFACE, 5”**

**Z0012130 BRIDGE DECK SCARIFICATION, 3/4”**

Description:

This work shall consist of the preparation of the top of the existing concrete bottom slab of the culvert by hydro-scarification for the construction of a concrete wearing surface, to the specified thickness, as indicated in the Plans and as directed by the Engineer. This work shall be according to the applicable articles of Section 503 and the following.

Materials:

The concrete wearing surface shall be Class SI concrete according to Section 1020 of the Standard Specifications for Road and Bridge Construction.

Equipment:

The equipment used shall be subject to the approval of the Engineer and shall meet the following requirements:

- (a) Surface Preparation Equipment. Surface preparation equipment shall be according to the applicable portions of Section 1100.
  - (1) Mechanical Blast Cleaning Equipment. Mechanical blast cleaning may be performed by high-pressure waterblasting or shotblasting. Mechanical blast cleaning equipment shall be capable of removing weak concrete at the surface, including the microfractured concrete surface layer remaining as a result of mechanical scarification, and shall have oil traps.

Mechanical high-pressure waterblasting equipment shall be mounted on a wheeled carriage and shall include multiple nozzles mounted on a rotating assembly, and shall be operated with a 7000 psi (48 MPa) minimum water pressure. The distance between the nozzles and the deck surface shall be kept constant and the wheels shall maintain contact with the slab surface during operation.

- (2) Hand-Held Blast Cleaning Equipment. Blast cleaning using hand-held equipment may be performed by high-pressure waterblasting or abrasive blasting. Hand-held blast cleaning equipment shall have oil traps.

Hand-held high-pressure waterblasting equipment that is used in areas inaccessible to mechanical blast cleaning equipment shall have a minimum water pressure of 7000 psi (48 MPa).

- (3) Hydro-Scarification Equipment. The hydro-scarification equipment shall consist of filtering and pumping units operating with a computerized, self-propelled robotic machine with gauges and settings that can be easily verified. The equipment shall use water according to Section 1002. The equipment shall be capable of removing in a single pass, sound concrete to the specified depth, and operating at a 16,000 psi (110 MPa) minimum water pressure with a 55 gal/min (208 L/min) minimum water flow rate.
  - (4) Vacuum Cleanup Equipment. The equipment shall be equipped with fugitive dust control devices capable of removing wet debris and water all in the same pass. Vacuum equipment shall also be capable of washing the slab with pressurized water prior to the vacuum operation to dislodge all debris and slurry from the deck surface.
  - (5) Power-Driven Hand Tools. Power-driven hand tools will be permitted including jackhammers lighter than the nominal 45 lb. (20 kg) class. Jackhammers or chipping hammers shall not be operated at an angle in excess of 45 degrees measured from the surface of the slab.
- (b) Pull-off Test Equipment. Equipment used to perform pull-off testing shall be either approved by the Engineer, or obtained from one of the following approved sources:

James Equipment  
007 Bond Tester  
847-329-9999

Germann Instruments, Inc.  
BOND-TEST Pull-off System

SDS Company  
DYNA Pull-off Tester  
805-238-3229

Pull-off test equipment shall include all miscellaneous equipment and materials to perform the test and clean the equipment, as indicated in the Illinois Test procedure 304 and 305 "Pull-off Test (Surface or Overlay Method)". Prior to the start of testing, the Contractor shall submit to the Engineer a technical data sheet and material safety data sheet for the epoxy used to perform the testing. For solvents used to clean the equipment, a material safety data sheet shall be submitted.

- (c) Concrete Equipment: Equipment for proportioning and mixing the concrete shall be according to Article 1020.03.
- (d) Finishing Equipment. Finishing equipment shall be according to Article 503.03.

- (e) Mechanical Fogging Equipment. Mechanical fogging equipment shall be according to 503.03.

Construction Requirements:

Culvert top slab, sidewalls, wingwalls, and cutoff walls shall all be protected from damage during scarification and cleaning operations. All damage caused by the Contractor shall be corrected at the Contractor's expense, to the satisfaction of the Engineer.

The Contractor shall control the runoff water generated by the various construction activities in such a manner as to minimize, to the maximum extent practicable, the discharge of untreated effluent into adjacent waters, and shall properly dispose of the solids generated according to Article 202.03. The Contractor shall submit a water management plan to the Engineer specifying the control measures to be used. The control measures shall be in place prior to the start of runoff water generating activities. Runoff water shall not be allowed to constitute a hazard to the waterway nor be allowed to erode existing slopes.

The Contractor shall be responsible for diverting the water flow (stream, storm sewer, etc.) from the construction area using a method meeting the approval of the Engineer.

(a) Slab Preparation:

- (1) Top of Bottom Slab Scarification. The scarification work shall consist of removing the designated concrete bottom slab surface using hydro-scarifying equipment as specified. The areas designated shall be scarified to the depth specified on the plans. The depth specified shall be measured from the existing concrete slab surface to the top of peaks remaining after scarification. In areas of the bottom slab not accessible to the scarifying equipment, power-driven hand tools will be permitted.

At a minimum, the last 3/4 in. (19 mm) of removal shall be accomplished with hydro-scarification equipment. All damage to the existing reinforcement resulting from the Contractor's operation shall be repaired or replaced at the Contractor's expense as directed by the Engineer. Replacement shall include the removal of any additional concrete required to position or splice the new reinforcing steel. Undercutting of exposed reinforcement bars shall only be as required to replace or repair damaged reinforcement. Repairs to existing reinforcement shall be according to the Special Provision for "Deck Slab Repair".

Just prior to performing hydro-scarification, the slab shall be sounded, with unsound areas marked on the deck by the Engineer. A trial section, in an area of sound concrete, on the existing top of bottom slab surface will be designated by the Engineer to calibrate the equipment settings to remove sound concrete

to the required depth, in a single pass, and provide a highly roughened bondable surface. The trial section shall consist of approximately 30 sq. ft. (3 sq. m). After calibration in an area of sound concrete, the equipment shall be moved to a second trial section, as designated by the Engineer, in an area containing unsound concrete to verify the calibrated settings are sufficient to remove the unsound concrete. If the calibrated settings are insufficient to remove the unsound concrete, the equipment may be moved back to an area of sound concrete and the calibration settings verified. If the equipment cannot be calibrated to produce the required results in an area of sound concrete, it shall be removed and additional hydro-scarification equipment capable of producing the required results shall be supplied by the Contractor.

After the equipment settings are established, they shall be supplied to the Engineer. These settings include the following:

- a) Water pressure
- b) Water flow rate
- c) Nozzle type and size
- d) Nozzle travel speed
- e) Machine staging control (step/advance rate)

Hydro-scarification may begin after the calibration settings have been approved by the Engineer.

The removal depth shall be verified by the Engineer, as necessary. If sound concrete is being removed below the desired depth, the equipment shall be recalibrated.

After hydro-scarification the top of the bottom slab shall be thoroughly vacuum cleaned in a timely manner before the water and debris are allowed to dry and re-solidify to the slab. The uses of alternative cleaning and debris removal methods to minimize driving heavy vacuum equipment over exposed bottom slab reinforcement may be used subject to the approval of the Engineer.

- (2) Bottom Slab Patching. After the scarification and cleaning of the top of the bottom slab, the Engineer will sound the scarified slab and survey the existing reinforcement condition. All remaining unsound concrete and unacceptably corroded reinforcement bars will be marked for additional removal and/or repairs as applicable. All designated repairs and reinforcement treatment shall be completed according to the Special Provision for "Deck Slab Repair" except as noted below:

- a) In areas with unsound concrete extends below the specified removal depth and hydro-scarification completely removes unsound concrete, a full-depth repair is only required when the bottom mat of reinforcement is exposed.
  - b) All full-depth patches shall be struck off to the scarified slab surface and then roughened with a suitable stiff bristled broom or wire brush to provide a rough texture designed to promote bonding of the concrete wearing surface. Hand finishing of the patch surface shall be kept to a minimum to prevent overworking of the surface.
  - c) All full-depth repairs shall be completed prior to final surface preparation.
  - d) Any removal required or made below the specified depth for scarification of the top of the bottom slab, which does not result in full-depth repair, shall be filled with concrete at the time of the concrete wearing surface placement.
  - e) Undercutting of exposed reinforcement bars shall only be as required to replace or repair damaged or corroded reinforcement.
- (3) Final Surface Preparation. Any areas determined by the Engineer to be inaccessible to scarifying equipment shall be thoroughly blast cleaned with mechanical blast cleaning equipment.

If spoils from the scarification operation are allowed to dry and re-solidify on the slab surface, the slab surface shall be cleaned with mechanical blast cleaning equipment.

Final surface preparation shall also include the cleaning of all dust, debris, concrete fines and other foreign substances from the slab surface and beneath reinforcement bars. Hand-held high-pressure waterblasting equipment shall be used for this operation.

Exposed reinforcement bars shall be free of dirt, detrimental scale, paint, oil, and other foreign substances which may reduce bond with the concrete. A tight non-scaling coating of rust is not considered objectionable. Loose, scaling rust shall be removed by rubbing with burlap, wire brushing, blast cleaning or other methods approved by the Engineer. All loose reinforcement bars, as determined by the Engineer, shall be retied at the Contractor's expense.

All dust, concrete fines, debris, including water, resulting from the surface preparation shall be confined and shall be immediately and thoroughly removed from all areas of accumulation. If concrete placement does not follow

immediately after the final cleaning, the area shall be carefully protected with well-anchored white polyethylene sheeting.

Prior to placement of the concrete wearing surface, the Engineer will inspect the cleaned surface, all areas still contaminated shall be cleaned again at the Contractor's expense.

After the surface preparation has been completed and before placement of the overlay, the prepared surface will be tested by the Engineer according to the Illinois Test Procedure 304 "Pull-off Test (Surface Method)". The Contractor shall provide the test equipment.

- a) Start-up Testing. Prior to the first overlay placement, the Engineer will evaluate the blast cleaning method. The start-up area shall be a minimum of 600 sq. ft. (56 sq. m). After the area has been prepared, six random test locations will be determined by the Engineer, and tested according to the Illinois Test Procedure 304 "Pull-off Test (Surface Method)".

The average of the six tests shall be a minimum of 175 psi (1,207 kPa) and each individual test shall have a minimum strength of 160 psi (1,103 kPa). If the criteria are not met, the Contractor shall adjust the blast cleaning method. Start-up testing will be repeated until satisfactory results are attained.

Once an acceptable surface preparation method is established, it shall be continued for the balance of the work. The Contractor may, with the permission of the Engineer, change the surface preparation method, in which case, additional start-up testing will be required.

- b) Lot Testing. After start-up testing has been completed, the following testing frequency will be used. For each structure, each stage will be divided into lots of not more than 4500 sq. ft. (420 sq. m). Three random test locations will be determined by the Engineer for each lot, and tested according to the Illinois Test procedure 304 "Pull-off Test (Surface Method)".

The average of the three tests shall be a minimum of 175 psi (1,207 kPa) and each individual test shall have a minimum strength of 160 psi (1,103 kPa). In the case of a failing individual test or a failing average of three tests, the Engineer will determine the area that requires additional surface preparation by the Contractor. Additional test locations will be determined by the Engineer.



- (b) Pre-placement Procedure. Prior to placing the concrete wearing surface, the Engineer will inspect the top of the bottom slab surface. All contaminated areas shall be blast cleaned again at the Contractor's expense.
- (c) Placement Procedure. Concrete placement shall be according to Article 503.07 and the following:
  - (1) Bonding Method. The top of the bottom slab shall be cleaned to the satisfaction of the Engineer and shall be thoroughly or continuously wetted with water at least one hour before placement of the concrete wearing surface is started. Any excess water shall be removed by compressed air or by vacuuming prior to the beginning of concrete placement. Water shall not be applied to the top of the bottom slab within one hour before or at any time during placement of the concrete wearing surface.
  - (2) Concrete Wearing Surface Placement. Internal vibration shall be performed along edges, adjacent to bulkheads, and where the overlay thickness exceeds 3 in. (75 mm). Internal vibration along the longitudinal edges of a pour shall be performed with a minimum of 2 hand-held vibrators, one on each edge of the pour. Hand finishing shall be performed along the edges of the pour.

A construction dam or bulkhead shall be installed in case of a delay of 30 minutes or more in the concrete placement operation.

After the concreting has been completed, the top of the bottom slab shall be struck off and finished with floats and trowels. Plans for mixture-placing procedure shall be submitted to the Engineer for approval.

- (3) Limitations of Operations:
  - a) Weather limitations. Temperature control for concrete placement shall be according to 1020.14(b). The concrete protection from low air temperatures during the curing period shall be according to Article 1020.13(d). Concrete shall not be placed when rain is expected during the working period. If night placement is required, illumination and placement procedures will be subject to approval of the Engineer. No additional compensation will be allowed if night work is required.

- b) Other Limitations.

Conveyors, buggy ramps and pump piping shall be installed in a way that will not displace undercut reinforcement bars.

Concrete removal may proceed during final cleaning and concrete placement on adjacent portions of the slab, provided the removal does not interfere in any way with the cleaning or placement operations.

Water or contaminants from the hydro-scarification shall not be permitted in areas where the new concrete wearing surface has been placed until the concrete has cured a minimum of 24 hours.

No concrete shall be removed within 6 ft. (1.8 m) of a newly-placed concrete wearing surface until the concrete has obtained a minimum compressive strength of 3000 psi (20,700 kPa) or flexural strength of 600 psi (4,150 kPa).

- (4) Curing Procedure. The concrete shall be continuously wet cured for at least 14 days according to Article 1020.13(a)(5). However, if the minimum specified compressive strength or flexural strength is obtained prior to 14 days, the cure time may be reduced, but at no time shall the wet cure be less than 7 days. The concrete shall be protected from low air temperatures according to Article 1020.13(d)(1) or (2), except the protection method shall remain in place for the entire curing period.
- (5) Concrete Wearing Surface Testing. The Engineer reserves the right to conduct pull-off tests on the wearing surface to determine if any areas are not bonded to the underlying concrete, and at a time determined by the Engineer. The wearing surface will be tested according to the Illinois Test Procedure 305 "Pull-off Test (Overlay Method)", and the Contractor shall provide the test equipment. Each individual test shall have a minimum strength of 150 psi (1,034 kPa). Unacceptable test results will require removal and replacement of the wearing surface at the Contractor's expense, and the locations will be determined by the Engineer. When removing portions of an wearing surface, the saw cut shall be a minimum depth of 1 in. (25 mm).

If the wearing surface is to remain in place, all core holes due to testing shall be filled with a rapid set mortar or concrete. Only enough water to permit placement and consolidation by rodding shall be used, and the material shall be struck-off flush with the adjacent material.

For a rapid set mortar mixture, one part packaged rapid set cement shall be combined with two parts fine aggregate, by volume; or a packaged rapid set mortar shall be used. For a rapid set concrete mixture, a packaged rapid set mortar shall be combined with coarse aggregate according to the manufacturer's instructions; or a packaged rapid set concrete shall be used. Mixing of a rapid set mortar or concrete shall be according to the manufacturer's instructions.

Method of Measurement: The area of the bottom slab scarification will be measured for payment in square yards (square meters). No additional payment will be made for multiple passes of the equipment.

The concrete wearing surface will be measured for payment in square yards (square meters).

The exposed reinforcement bars needed to be replaced due to corrosion will be measured for payment according to Article 508.10. The quantity listed in the plans is an estimated quantity.

Basis of Payment: Bridge deck scarification will be paid for at the contract unit price per square yard (square meter) for BRIDGE DECK SCARIFICATION of the depth specified. Removal of unsound concrete during hydro-scarification is included in the cost of BRIDGE DECK SCARIFICATION.

Concrete wearing surface will be paid for at the contract unit price per square yard (square meter) for CONCRETE WEARING SURFACE of the thickness specified. Additional concrete placed with the overlay, required to fill all depressions, including depressions from unsound concrete, below the specified thickness are included in the cost of CONCRETE WEARING SURFACE.

When the Engineer conducts pull-off tests on the existing surface or overlay and they are acceptable, Contractor expenses incurred due to testing and for filling core holes will be paid according to Article 109.04. Unacceptable pull-off tests will be at the Contractor's expense.

Reinforcement bars will be paid for according to Article 508.11.

#### **X6020080 INLETS, TYPE G-1, DOUBLE**

Effective July 31, 2009

This work shall consist of furnishing equipment, labor, and materials for the construction of Type G-1, Double Inlets and Combination Concrete Curb and Gutter in accordance with Section 602 and 606 of the Standard Specifications and the details in the plans.

Add "INLETS, TYPE G-1, DOUBLE" to Article 602.16 of the Standard Specifications. Delete the first paragraph in Articles 606.14 and 606.15 of the Standard Specifications.

Payment for transitional Combination Concrete Curb and Gutter will be included in "INLETS, TYPE G-1, DOUBLE" in accordance with details shown in the plans.

Method of Measurement: Inlets will be paid for as each per structure scheduled in the plans.

Basis of Payment: This work will be paid for at the contract unit price per each for INLETS, TYPE G-1, DOUBLE.

**X6020082 INLETS, TYPE G-1**

Effective October 1, 1995 Revised January 1, 2007

This work shall consist of furnishing all labor, equipment, and material for the construction of Type G-1 Inlets and Combination Concrete Curb and Gutter in accordance with Sections 602 and 606 of the Standard Specifications and the details in the plans.

Add "INLETS, TYPE G-1" to Article 602.16 of the Standard Specifications. Delete the first paragraph in Articles 606.14 and 606.15.

Payment for transitional Combination Concrete Curb and Gutter will be included in "INLETS, TYPE G-1" in accordance with details shown in the plans.

Method of Measurement: Inlets will be paid for as each per structure scheduled in the plans.

Basis of Payment: This work will be paid for at the contract unit price each for INLETS, TYPE G-1.

**X6021065 INLETS, TYPE G-1, SPECIAL**

Effective October 1, 1995 Revised January 1, 2007

This work shall consist of furnishing all labor, equipment, and material for the construction of Type G-1, Special inlets and Combination Concrete Curb and Gutter in accordance with Sections 602 and 606 of the Standard Specifications and the details in the plans.

Add "INLETS, G-1, SPECIAL" to Article 602.16 of the Standard Specifications. Delete the first paragraph in Articles 606.14 and 606.15.

Payment for transitional Combination Concrete Curb and Gutter will be included in "INLETS, TYPE G-1, SPECIAL" in accordance with details shown in the plans.

Method of Measurement: Inlets will be paid for as each per structure scheduled in the plans.

Basis of Payment: This work will be paid for at the contract unit price each for INLETS, TYPE G-1, SPECIAL.

**X6021814 INLET-MANHOLE, TYPE G-1, 4' DIAMETER**

Effective October 1, 1995 Revised January 1, 2007

This work shall consist of furnishing all labor, equipment, and materials for the construction of Inlet-Manhole, Type G-1, 4' Diameter and Combination Concrete Curb and Gutter in accordance with Sections 602 and 606 of the Standard Specifications and the details in the plans.

Add "INLET-MANHOLE, TYPE G-1, 4' DIAMETER" to Article 602.16 of the Standard Specifications. Delete the first paragraph of Articles 606.14 and 606.15 of the Standard Specifications.

Payment for transitional Combination Curb and Gutter will be included in "INLET-MANHOLE, TYPE G-1, 4' DIAMETER" in accordance with details shown in the plans.

Method of Measurement: Inlet manholes will be paid for as each per structure scheduled in the plans.

Basis of Payment: This work will be paid for at the contract unit price each for INLET-MANHOLE, TYPE G-1, 4' DIAMETER.

**X6022230 MANHOLE, TYPE A, 4' DIAMETER, WITH SPECIAL FRAME AND GRATE**

This work shall consist of furnishing equipment, labor, and materials for the construction of MANHOLE, TYPE A, 4' DIAMETER WITH SPECIAL FRAME AND GRATE in accordance with Section 602 of the Standard Specifications and the details in the plans.

Add "MANHOLE, TYPE A, OF THE DIAMETER SPECIFIED WITH SPECIAL FRAME AND GRATE" of the diameter specified to Article 602.16 of the Standard Specifications.

Method of Measurement: Manholes will be paid for as each per structure scheduled in the plans.

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

**X6022858 MANHOLES, TYPE A, SANITARY, 4'- DIAMETER, TYPE 1 FRAME, CLOSED LID**

This work shall consist of furnishing and installing Sanitary Manhole and Frame and Lid, including all equipment, labor, and materials for the construction of MANHOLES, TYPE A, SANITARY, 4' - DIAMETER, TYPE 1 FRAME, CLOSED LID.

Sanitary manholes shall be constructed in accordance with the Greater Peoria Sanitary District (GPSD) specifications and policies, Section 602 of the Standard Specifications, as shown on

the plans or as directed by the Engineer. When a conflict exists, the GPSD specifications will take precedence. GPSD specifications can be found here:

<http://gpsd.dst.il.us/engineering-general-specs/>

Method of Measurement: Manholes will be paid for as each per structure scheduled in the plans.

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

### **Z0056900 SANITARY SEWER 8"**

This work shall consist of furnishing and installing Sanitary Sewer, including all equipment, labor, and materials for the construction of SANITARY SEWER 8".

Sanitary sewer shall be PVC, SDR-26 and shall be constructed in accordance with the Greater Peoria Sanitary District (GPSD) specifications and policies, as shown on the plans or as directed by the Engineer. GPSD specifications can be found here:

<http://gpsd.dst.il.us/engineering-general-specs/>

Method of Measurement: Sanitary sewers will be measured for payment in place in feet. When the sanitary sewer enters a manhole, the measurement will end at the inside wall of the manhole. Allowance will be made for the length of pipe necessary to permit the pipe to meet the sides of the manhole. No payment for sanitary sewer will be made through a manhole where the manhole is paid for as a separate item.

Bedding and initial backfill to one (1) foot above the top of pipe will not be measured for payment separately and shall be considered included in the price of the pipe.

Controlled low-strength material backfill will be measured in cubic yards in place, except that the quantity for which payment will be made shall not exceed the volume of the trench as computed using the maximum width of trench permitted by GPSD Specification Section 035 and the actual depth of the completed trench backfill above a level of one (1) foot above the top of the pipe.

Basis of Payment:

This work shall be paid for at the contract unit price per foot for SANITARY SEWER 8".

Controlled low-strength material backfill will be paid for at the contract unit price per cubic yard for Controlled Low-Strength Material.

**X6023508 INLETS, TYPE A, WITH SPECIAL FRAME AND GRATE**

Effective: August 2, 2013

This work shall consist of furnishing equipment, labor, and materials for the construction of inlets in accordance with Section 602 of the Standard Specifications, Highway Standards 602301, and the details in the plans.

Add "INLETS, TYPE A, WITH SPECIAL FRAME AND GRATE" to Article 602.16 of the Standard Specifications.

Method of Measurement: Inlets will be paid for as each per structure scheduled in the plans.

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.

**X6024502 INLETS, TYPE B, WITH SPECIAL FRAME AND GRATE**

Effective: August 2, 2013

This work shall consist of furnishing equipment, labor, and materials for the construction of inlets in accordance with Section 602 of the Standard Specifications, Highway Standards 602306, and the details in the plans.

Add "INLETS, TYPE B, WITH SPECIAL FRAME AND GRATE" to Article 602.16 of the Standard Specifications.

Method of Measurement: Inlets will be paid for as each per structure scheduled in the plans.

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

**CONNECTION INTO EXISTING DRAINAGE STRUCTURES**

This work shall consist of furnishing all labor, material, and equipment necessary to satisfactorily complete the connection of proposed storm sewer into existing drainage structures as shown in the plans and as determined by the Engineer.

At locations where proposed storm sewers are to be connected into existing drainage structures, the connections shall be made by core drilling holes into the structures and constructing brick and masonry around the connections to prevent leakage.

Basis of Payment: This work shall not be paid for separately but shall be included in the contract unit price of STORM SEWERS, of the class, type, and diameter specified.

### **CONNECTION INTO PROPOSED DRAINAGE STRUCTURES**

This work shall consist of furnishing all labor, material, and equipment necessary to satisfactorily complete the connection of existing storm sewer into proposed drainage structures as shown in the plans and as determined by the Engineer.

At locations where proposed drainage structures are to be placed at the end of existing storm sewer lines or on existing storm sewer lines, storm sewer removal may be required for installation of the proposed structure. When removal is required, a Concrete Collar shall be constructed for each existing storm sewer connecting to the proposed structure in accordance with IDOT District 4 Standard 542016-D4, where the new Storm Sewer, installed to make the connection to the proposed drainage structure, connects to existing Storm Sewer. The collar shall be constructed entirely of Class SI concrete in accordance with the applicable portions of Section 503 of the Standard Specifications. The reinforcement bars shall conform to Section 508. Controlled Low Strength Material (CLSM) that may be required shall not be paid for separately.

Basis of Payment: This work shall not be paid for separately but shall be included in the contract unit prices of the respective proposed drainage structures.

### **X6061055 CONCRETE ISLAND (SPECIAL)**

The island shall be constructed to the lines and grades shown in the plans and according to applicable portions of Section 420 of the Standard Specifications, IDOT Standards 606001 and 606301, and as specified herein.

The thickness of the pavement shall be a minimum of 6 inches and shall be constructed with Class PV concrete. The backfill material placed to pavement subgrade shall be a coarse aggregate with a minimum thickness of 4 inches and shall be compacted to the satisfaction of the Engineer.

The perimeter concrete curb shall be B-6.06 and B-6.24 and shall be constructed according to applicable portions of IDOT Standard 606001. Joint tie bars shall be No. 6 at 24 in. centers.

Method of Measurement: This work will be measured for payment in place and the area computed in square feet.

Basis of Payment: This work as described including backfilling to proposed pavement subgrade shall be paid for at the contract unit price per square foot for CONCRETE ISLAND (SPECIAL). The area measured for payment shall be the horizontal area (including the curb) within the outside edge of the gutter (joint between the gutter and pavement).



**X6640200 TEMPORARY CHAIN LINK FENCE**

The Contractor shall erect a temporary chain link fence as directed by the Engineer. This work shall follow the requirements set forth in Section 664 of the Standard Specifications. The fence shall be a minimum of 6 feet in height and shall be attached or mounted securely as to prevent the fence from being moved or knocked over. The Engineer shall approve all methods of attachment. Locations shall be as shown on the plans and as directed by the Engineer. Sight Screen for the fence shall also be provided in accordance with Section 640 of the Standard Specifications as applicable.

TEMPORARY CHAIN LINK FENCE that is determined by the Engineer to be damaged rendering it ineffective for its intended use will be immediately replaced by the Contractor. No additional compensation will be provided for replacing damaged fence.

TEMPORARY CHAIN LINK FENCE is required to secure construction site at project limits. The fence shall be placed close enough to the existing fences at each property line as to fully enclose each property. Where gaps may exist between existing fence along property lines to remain and the temporary chain link fence additional temporary fence may need to be erected to ensure closure of all gaps throughout construction.

The Engineer may adjust TEMPORARY CHAIN LINK FENCE locations as needed.

Method of Measurement: TEMPORARY CHAIN LINK FENCE will be measured for payment in feet, along the top of the fence from center to center of end posts.

Basis of Payment: This fence at all locations will be paid at the contract unit price per foot for TEMPORARY CHAIN LINK FENCE, which includes all material, labor and equipment required to construct, mount/attach, move and remove the fence sight screen, and associated hardware.

**X6640304 CHAIN LINK FENCE TO BE REMOVED AND RE-ERECTED**

This work shall consist of the removing a section of chain link fence at locations noted on the plans.

The sections shall be removed in such a manner that pieces will be available for reuse. The fence and gates shall be moved back off the ROW at a location determined by the Engineer. The posts shall be reinstalled and the fence restored to proper working order. The posts shall be installed and stabilized to a condition equal to or greater than the existing condition.

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

Basis of Payment: The removal and re-erection of the existing fence shall be paid for at the contract unit price per foot for CHAIN LINK FENCE TO BE REMOVED AND RE-ERECTED. The price will include all materials, equipment and labor necessary to complete the work.

**XX000714 FENCE TO BE REMOVED AND RE-ERECTED**

This work includes all labor, materials, and equipment necessary to remove, store and re-erect the existing fence shown on the plans to be removed and re-erected. The posts shall be reinstalled and the fence restored to proper working order. The posts shall be installed and stabilized to a condition equal to or greater than the existing condition. Any fence not used during re-erection shall be offered to the individual homeowner. Any fence not kept by the homeowner shall be disposed of by the contractor.

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

Basis of Payment: This work will be paid for at the contract unit price per foot for FENCE TO BE REMOVED AND RE-ERECTED.

**XX005298 REMOVE EXISTING TIMBER WALL**

This work shall consist of removing the existing timber wall at locations noted on the plans.

Any holes or depressions left after removing the wall shall be backfilled to proposed subgrade to the satisfaction of the Engineer. This work shall include all labor, materials and equipment to provide excavation, removal and backfill to complete the work in place.

Method of Measurement: This work will be measured for payment in feet, along the top of the wall.

Basis of Payment: The removal of the existing timber wall shall be paid for at the contract unit price per foot for REMOVE EXISTING TIMBER WALL. The price will include all materials, equipment and labor necessary to complete the work.

**XX006498 COMBINATION CONCRETE CURB AND SIDEWALK 4 INCH (SPECIAL)**

This work shall consist of constructing PCC curb and sidewalk in accordance with the plan details and Section 424 of the Standard Specifications.

Reinforcement shall not be paid for separately but included in the contract unit price.

Method of Measurement: This work will be measured for payment in place and the area computed in square feet.

**Basis of Payment:** This work will be measured for payment in place based on the top surface area of the sidewalk and curb computed in square feet. This work shall be paid for at the contract unit price per square foot for COMBINATION CONCRETE CURB AND SIDEWALK 4 INCH (SPECIAL).

**XX006598 VINYL FENCE, 6'**

Description: This item includes:

1. Polyvinyl chloride (PVC) fence components.
2. Reinforcing steel for concrete-filled, reinforced fence posts.
3. Concrete for post footings and for concrete filled reinforced fence posts

Definitions:

1. Posts are the vertical structure support members of the fence.
2. Rails are the horizontal structural support members of the fence or gate frame.
3. Pickets are the vertical, non-structural members between bottom and top rails.

Submittals:

1. General: Submit the following according to the conditions of the contract.
2. Product Data: In the form of manufacturer's technical data, specifications, and installations for fence, posts, gate uprights, post caps, gates, gate hardware and accessories.
3. Samples for verification of PVC color in form of 3-inch lengths of actual product to be used in color selection.
4. Shop Drawings showing fence design.
5. Detail of fence connection to Segmental Concrete Block Wall. Connection must be sealed by a Structural Engineer licensed with the State of Illinois. Cost of this is included in the cost for Segmental Concrete Block Wall.

Quality Assurance:

1. Installer Qualifications: Engage an experienced installer who has at least three years' experience and has completed at least five PVC fence projects with same material and of similar scope to that indicated for this project with a successful construction record of in-service performance.
2. Single-Source Responsibility: Obtain PVC fences and gates, including accessories, fittings, and fastenings, from a single source.

Project Conditions:

1. Field Measurements: Verify layout information for fences and gates shown on the drawings in relation to the property survey and existing structures. Verify dimensions by field measurements.

Warranty:

1. Manufacturer's Warranty: Lifetime non-prorated limited transferable warranty applies to original homeowner/consumer, or 30 year non-prorated limited warranty applies to commercial applications.

Fence Materials:

1. General: Provide PVC fence materials recognized to be of type indicated and tested to show compliance with indicated performances.
2. Available Manufacturer: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the work include:
  - a. Bufftech, 231 Ship Canal Parkway, Buffalo, NY 14218 (800) 333-0569
    - i. Style Name Chesterfield  
Height 6'H minimum.
    - ii. Color Match Bufftech (white, clay or almond available) almond (verify with engineer before ordering).
  - b. Weatherables by USA Vinyl Fence Company, 3830 Lacon Road, Hilliard, OH 43026
    - i. Style Name Savannah  
Height 6'H minimum.
    - ii. Color Match Savannah (white, tan or Khaki available) tan (verify with engineer before ordering).

Polyvinyl Chloride (PVC) Fence Components:

1. General: Posts, rails, pickets, gate uprights, post caps, and accessories shall be of high impact, Ultra Violet (U.V.) resistant, rigid PVC, and shall comply with ASTM D 1784, Class 14344B.
2. Fence Posts: One piece extruded, of lengths indicated and pre-routed to receive rails at spacing indicated.
  - a. Cross Section: 5" x 5" minimum
  - b. Wall Thickness: 0.170" minimum
  - c. Corner Radius: 3/8"R minimum
3. Rails: One piece extruded, of lengths indicated pre-routed to receive pickets at spacing indicated.
  - a. Cross Section: 2" X 6" Deco Rail minimum
  - b. Wall Thickness: 0.090" minimum
  - c. Corner Radius: 5/16"R minimum
4. Pickets: One piece extruded, of lengths indicated.

- a. Cross Section: 7/8" X 6" minimum
  - b. Wall Thickness: 0.060" minimum
  - c. Corner Radius: 3/16"R minimum
  - d. Picket Spacing: full privacy
  - e. Pickets per section: 13 pickets minimum
5. Post Caps: Molded, one piece.
- a. Cross Section: Match post or gate upright cross section.
  - b. Thickness: 0.095" minimum.
  - c. Configuration: Flat or four-sided as required for installation to top of posts and gate.
6. Accessories: Manufacturers' standard gate brace, screw caps, rail end reinforcers, and other accessories as required.

#### Miscellaneous Materials:

1. Stiffener Channels: Galvanized steel structural channel. Configure channels for concealed installation within PVC rails with pre-drilled holes for drainage. Aluminum extruded channel available upon request.
  - a. Cross Section: 1.775 X 1.700 galvanized steel channel
  - b. Thickness: 0.040 Gauge (minimum).
2. Fasteners and Anchorage: Stainless Steel. All fasteners to be concealed or colored heads to match. Provide sizes as recommended by fence manufacturer.
3. PVC Cement: As recommended by fence manufacturer.

#### Concrete:

1. Concrete: Provide concrete consisting of portland cement per ASTM C 150, aggregates per ASTM C 33, and potable water. Mix materials to obtain concrete with a minimum 28-day compressive strength of 3000 psi. Use at least four sacks of cement per cubic yard, 1-inch maximum size aggregate, 3-inch maximum slump. Use ½ inch maximum size aggregate in post where required.
2. Packages Concrete Mix: Mix dry-packaged normal-weight concrete conforming to ASTM C 387 with clean water to obtain a 2 to 3 inch slump.

#### Reinforcement for Filled Posts:

1. Reinforcing Steel:
  - a. Steel Reinforcing Bars: ASTM A 615. Grade 60. Deformed (#4 or ½"). Install 2 bars for each post to a length of 6' feet.

#### Installation, General:

1. Install fence in compliance with manufacturer's written instructions. During installation, PVC components shall be carefully handled and stored to avoid contact with abrasive surfaces. Install components in sequence as recommended by fence manufacturer.
  - a. Install fencing as indicated on the drawings provided.
  - b. Variations from the installation indicated must be approved.
  - c. Variations from the fence and gate installation indicated and all costs for removal and replacement will be the responsibility of the contractor.

Fence Installation:

1. Excavation: Drill or hand-excavate (using post hole digger) holes for posts to diameters and spacings indicated, in firm, undisturbed or compacted soil.
  - a. If not indicated on drawings, excavate holes for each post to a minimum diameter of 12 inches.
  - b. Unless otherwise indicated, excavate hole depths not less than 30 inches or to frost line.
2. Posts: Install posts in one piece, plumb and in line. Space a maximum of 8 feet o.c. unless otherwise indicated. Enlarge excavation as required to provide clearance indicated between post and side of excavation.
  - a. Protect portion of posts above ground from concrete splatter. Place concrete around posts and vibrate or tamp for consolidation. Check each post for vertical and top alignment and hold in position during placement and finishing operations.
    - i. Unless otherwise indicated, terminate top of concrete footings 3 inches below adjacent grade and trowel to a crown to shed water.
    - ii. Secure posts in position for manufacturers' recommendations until concrete sets.
    - iii. After installation of rails and unless otherwise indicated, install reinforcing in posts in opposing corners of post as shown and fill end and gate posts with concrete to level as indicated. Concrete fill shall completely cover the reinforcing steel and gate hardware fasteners. Consolidate the concrete by striking the post face with a rubber mallet, carefully tamping around the exposed post bottom.
    - iv. Install post caps. Use #8 screws, nylon washers and snap caps.
    - v. Remove concrete splatters from PVC fence materials with care to avoid scratching.
3. Top and Bottom Rails: Install rails in one piece into routed hole fabricated into posts to receive top and bottom rails, and middle where necessary. Except at sloping terrain, install rails level.
  - a. Prior to installation of rails into posts, insert concealed steel channel stiffeners in top rail, where necessary. Bottom rails shall include minimum (2) ¼" drainage holes.

- b. At posts to receive concrete fill, tape rail ends to prevent seepage when filling post with concrete.
4. Middle Rails: Where necessary, install middle rails in one piece into routed hole in posts with larger holes facing down. Except at sloping terrain, install middle rails level. Secure mid rail to pickets with 2-#8 x 1-1/2" screws evenly spaced.
  - a. At posts to receive concrete fill, tape rail ends to prevent seepage when filling post with concrete.
5. Pickets: Install pickets in one piece as per manufacturer recommendations. Install pickets plumb.
6. Fence Installation at Sloping Terrain: At sloping terrain rails may be racked (sloped) or stepped to comply with manufacturers' recommendations.

Adjusting and Cleaning: Remove all traces of dirt and soiled areas.

Demonstration: Instruct the owner's personnel on proper operation and maintenance of fence components.

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

Basis of Payment: All work noted above including materials, equipment, and labor required to construct the Vinyl Fence according to this specification and the manufacturer's instructions will be paid for at the contract unit price per foot for VINYL FENCE, 6'.

### **XX008538 SANITARY SEWER CASING PIPE**

This work shall include consist of constructing a ductile iron pipe that will be used as a casing pipe for future sanitary sewer main.

Ductile iron pipe and fittings for sanitary sewers shall meet the requirements of ASTM Specification A746. The class thickness for pipe diameters of four (4) through sixty (60) inches shall be determined by using a Type 4 laying condition and Class 1 Bedding as specified by ASTM D2321. The thickness of ductile iron pipe shall be in accordance with ANSI/AWWA C150/A21.50.

All ductile iron pipe and fittings shall be cement lined.

Pipe installation and bedding shall be in accordance with Section 035 of the GPSD Standard Specification.

Joints for ductile iron pipe may be of the mechanical or push-on type meeting the requirements of ANSI/AWWA C111/A21.11. The joints and fittings shall have the same pressure rating as the pipe which it shall join and be cement lined.

The ends of the casing pipe shall be plugged by installing a cap over the end of the pipe.

Method of Measurement: This work shall be measured for payment in place in feet.

Basis of Payment: This work shall be paid for at the contract unit price per foot for SANITARY SEWER CASING PIPE for the size specified, which shall include all labor, equipment and materials required to construct the casing pipe.

**XX008616 HOT-MIX ASPHALT SURFACE COURSE, SPECIAL**

This work shall include preparing and placing HOT-MIX ASPHALT SURFACE COURSE, SPECIAL on a prepared subbase and subgrade. All work shall be performed in accordance with Sections 406 and 1030 of the IDOT Standard Specifications for Road and Bridge Construction (SSRBC), except as herein modified.

Materials

- (a) Aggregate. Aggregate shall be crushed Class B quality in accordance with Article 1004.01 of the Standard Specifications.
- (b) Recycled Asphalt Pavement. Up to 20% coarse Fractionated Recycled Asphalt Pavement (FRAP) may be included in the mixture. In addition, FRAP shall conform to the current IDOT Special Provision RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES.
- (c) Recycled Asphalt Shingles. Option 3 requires 2.5% to 5.0% Type 2 recycled asphalt shingles (RAS). The source shall be listed on the current IDOT Approved List CERTIFIED SOURCES FOR RECLAIMED ASPHALT SHINGLES (RAS). In addition, RAS shall conform to the current IDOT Special Provision RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES. The use of RAS in any other asphalt cement binder option must be approved by the Department.
- (d) Aggregate Blending. The combined aggregate blend shall meet the following gradation:

Sieve Size	Percent Passing
3/4 in.	100
1/2 in.	85 - 100
3/8 in.	55 - 75
No. 4	10 - 25
No. 8	5 - 10
No. 200	0 - 4

No individual aggregate gradation is specified. For production control, the aggregate blend shall include at least two coarse aggregate products.



(e) Asphalt Cement Binder. The Contractor three asphalt cement binder (AC) options: (Option 1) A ground-tire rubber (GTR) modified binder, (Option 2) A conventional polymer modified performance graded (PG) binder, or (Option 3) A neat asphalt that includes post-consumer recycled asphalt shingles (RAS).

1. (Option 1) GTR Modified Binder. The PG Binder shall be an approved Ground-Tire Rubber (GTR) modified asphalt cement. The base asphalt cement shall be IDOT approved PG 64-22.

2. (Option 2) Polymer Modified Binder. The PG Binder shall be IDOT approved SBS/SBR PG 76-22. The elastic recovery of the asphalt cement used shall be a minimum of 0.80.

3. (Option 3) Neat Binder. 2.5% to 5.0% RAS must be used in accordance with the current IDOT Special Provision RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES. The base binder shall be PG 58-28.

(f) Ground Tire Rubber (GTR) Modified Asphalt Binder. The modified binder shall be according to the Ground Tire Rubber Modified Asphalt Binder special provision except as herein modified.

(g) Warm Mix Asphalt Technology. The Contractor has the option to produce this as a Warm Mix Asphalt Mixture. All work shall be performed in accordance with the current IDOT Special Provision WARM MIX ASPHALT (BDE).

(h) Fiber Additive. A stabilizing fiber additive may be required to prevent draindown. Typical ranges of dosage rates are included; however, the actual dosage rate will be determined by the Engineer.

Fibers may be either cellulose or mineral, complying with this specification. The dosage rate for cellulose shall be approximately 0.4% by total mixtures mass and sufficient to prevent draindown. Cellulose used in mixtures shall conform to the properties outlined in Table 1. For mineral fiber, the dosage rate shall be approximately 0.5% by total mixture mass and sufficient to prevent draindown. Mineral fibers used in mixtures shall conform to the properties outlined in Table 2.

Table 1. Cellulose Fiber Quality Requirements

Property	Requirement
Sieve Analysis Method A – Alpine Sieve 1/ Analysis Fiber Length Passing No. 100 (0.015 mm) sieve	0.25 in. (6 mm) maximum 70 ± 10%
Method B – Mesh Screen 2/ Analysis Fiber Length Passing No. 20 (850 µm) sieve No. 40 (425 µm) sieve No. 140 (106 µm) sieve	0.25 in (6 mm) maximum 85 ± 10% 65 ± 10% 30 ± 10%

Ash Content 3/ pH 4/ Oil Absorption 5/ Moisture Content 6/	18 ± 5 NON VOLATILES 7.5 + 1.0 5.0 ± 1.0 (Times fiber mass) Less than 5% (by mass)
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1/ Method A – Alpine Sieve Analysis. This test is performed using an Alpine Air Jet Sieve (Type 200 LS). A representative five gram sample of fiber is sieved for 14 minutes at a controlled vacuum of 11 psi (75 kPa) of water. The portion remaining on the screen is weighed.

2/ Method B – Mesh Screen Analysis. This test is performed using standard No. 20, No. 40, No. 60, No. 80, No. 100 and No. 140 (850 µm, 425 µm, 250 µm, 180 µm, 150 µm and 106 µm) sieves, nylon brushes and a shaker. A representative 0.35 oz. (10 g) sample of fiber is sieved, using a shaker and two nylon brushes on each screen. The amount retained in each sieve is weighed and the percentage passing calculated. Repeatability of this method is suspect and needs to be verified.

3/ Ash Content. A representative 0.07 to 0.11 oz. (2 to 3 g) sample of fiber is placed in a tared crucible and heated between 1100 and 1200°F (595 and 650°C) for not less than 2 hours. The crucible and ash are cooled in a desiccator and weighed.

4/ pH Test. A representative 0.176 oz. (5 g) of fiber is added to 0.10 quarts (100 mL) of distilled water, stirred and let sit for 30 minutes. The pH is determined with a probe calibrated with pH 7.0 buffer.

5/ Oil Absorption Test. A representative 0.176 oz. (5 g) of fiber is accurately weighed and suspended in an excess of mineral spirits for not less than 5 minutes to ensure total saturation. It is then placed in a screen mesh strainer (approximately 0.0008 in<sup>2</sup> (0.5 mm<sup>2</sup>) opening size) and shaken on a wrist action shaker for 10 minutes (approximately 1-¼ in. (32 mm) motion at 240 shakes per minute). The shaken mass is then transferred without touching to a tared container and weighed. Results are reported as the amount (number or times its own weight) the fibers are able to absorb.

6/ Moisture Content. A representative 0.35 oz. (10 g) of fiber is weighed and placed in a 250°F (121 °C) forced air oven for 2 hours. The sample is then reweighed immediately upon removal from the oven.

Table 2. Mineral Fiber Quality Requirements

Property	Requirements
Sieve Analysis	0.25 in. (6 mm) Maximum mean test value
Fiber Length 1/ Thickness 2/	0.0002 in (0.005 mm) Maximum mean test value
Shot Content 3/	70 ± 10%

Passing No. 230 (63 $\mu$ m) Sieve	
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- 1/ The fiber length is determined according to the Bauer McNett Fractionation.
- 2/ The fiber diameter is determined by measuring at least 200 fibers in a phase contrast microscope.
- 3/ Shot content is a measure of non-fibrous material. The shot content is determined on vibration sieves. Two sieves, No. 60 and No. 230 (250  $\mu$ m and 63  $\mu$ m), are typically utilized.

Prior to approval and use of the mineral fiber, the Contractor shall submit a notarized certification by the producer of these materials, stating they meet these requirements.

General Requirements

Mixture Design. The Contractor shall provide a mix design for the HMA mix. The Design must be performed in accordance with the procedures set forth in the IDOT Level III HMA Manual. The Engineer will verify the mix design according to the IDOT, HMA Design Guideline.

(a) Volumetric Requirements:

- N-Design.....50
- Design Air Voids... 18.0% Minimum
- % AC.....5.5% Minimum (5.7% with GTR AC or RAS)

(b) Fiber Requirements: A fiber additive shall be included when using Option 2, or any other options if shown to be required by testing according to Illinois Modified AASHTO T 305, Determination of Draindown Characteristics in Uncompacted Asphalt Mixtures. Draindown of the binder shall be no greater than 0.3%.

(c) Performance Testing: Mix designs shall be tested prior to submittal for verification, according to Illinois Modified AASHTO T 324 (Hamburg Wheel). The maximum rut depth at 15,000 repetitions shall be 12.5 mm.

Construction Requirements

- (a) Storage and Conveyance. Silo or surge bin storage of these HMA mixtures shall not exceed four hours.
- (b) Construction Joints. Transition to impervious bituminous paving shall be merged neatly with a flush, clean line. Transition to adjacent, impervious concrete pavements shall be saw-cut and merged neatly with a flush, clean line. Finished paving shall be even, without pockets, and graded to elevations shown on the plans and/or work order.

- (c) Placing. The first lift of HMA shall be nominal 4 inches. Subsequent lifts shall be a minimum of 2 inches and maximum of 4 inches. No more than 2 lifts may be placed in a single production day.
- (d) Compaction. Compaction shall be accomplished with all rollers operating in the static mode. Equipment shall include one two-axle tandem static roller with a minimum compactive effort of 200 pounds per inch of width of the drive roller, and one non-ballasted breakdown roller. The second roller can be a finish roller or vibratory roller operated in static mode.

Along forms, curbs, headers, walls, and other places not accessible to the rollers, the mixture shall be thoroughly compacted with mechanical tampers.

- (e) Protection of Pavement. No traffic will be permitted on the pavement surface until the material has been thoroughly compacted and has been permitted to cool below 140°F (60°C). The use of water to cool the pavement is not allowed. Erection and maintenance of standard warning signs, lights, barricades, etc., shall be provided as shown on the plans and/or work order.

Pervious pavement areas shall not be used for equipment or materials storage during construction, and under no circumstances shall vehicles be allowed to deposit soil on paved pervious surfaces.

#### QC/QA Requirements

Shall be according to Article 1030.05 of the SSRBC except as herein modified.

The frequency of plant testing shall be according to Article 1030.05(d) (2) a for a High ESAL Mixture.

Delete Articles 1030.05(d) (2) b and 1030.05(d) (2) d.

Revise Article 1030.05(d) (3) to read:

“Required Field Tests. The Contractor shall control the compaction process by testing the mix density at random locations as determined according to the QC/QA document, "Determination of Random Density Test Site Locations", and recording the results on forms approved by the Engineer. Density shall be according to the IDOT Bureau of Local Road and Streets Special Provision, LR 1030, SPECIAL PROVISION FOR GROWTH CURVE, except as herein modified.

Revise the first sentence of the second paragraph of LR 1030 to read:

“The Contractor shall perform a growth curve at the beginning of placement of each type of mix for each lift on each day of placement, unless directed otherwise by the Department.”

Revise the first sentence of the fifth paragraph of LR 1030 to read:

“Daily core samples are not required, and shall only be taken when requested by the Department.”

Replace the last sentence of the sixth paragraph of LR 1030 with the following:

“An average nuclear gauge density results shall be based on all tests across the mat, including all confined longitudinal joint density tests, at each test location. Unconfined longitudinal density tests will be evaluated separately as detailed above. Each location shall consist of five tests across the mat including both longitudinal joint density tests, unless directed otherwise by the Department.”

Revise the first sentence of the seventh paragraph of LR 1030 to read:

“Quality Control density tests shall be performed at randomly selected locations within ¼ mile intervals per lift per lane.”

Revise Control Limits Tables in Article 1030.05(d) (4) to read:

CONTROL LIMITS		
Parameter	Individual Test	Moving Avg. of 4
% Passing: 1/ 3/8 in. (9.5 mm)	± 6%	± 4%
No. 4 (4.75 mm)	± 5%	± 4%
No. 8 (2.36 mm)	± 5%	± 3%
Total Dust Content No. 200 (75 μm)	± 1.5%	± 1.0%
Asphalt Binder Content	± 0.3%	± 0.2%
Voids 2/	± 2.0%	± 1.5%

1/ Based on washed ignition oven

2/ Minimum air voids in production not allowed to be less than 18.0%

DENSITY CONTROL LIMITS		
Mixture Composition	Parameter	Individual Test
Pervious HMA	N <sub>design</sub> = 50	95 - 102% Target Density

Control Charts shall be according Article 1030.05(d) (5) for High ESAL mixes.

Revise Article 1030.05(d) (6) to read:

“a. Individual Test Results. When an individual test result exceeds its control limit, the Contractor shall immediately resample and retest. If at the end of the day no material remains from which to resample, the first sample taken the following day shall serve as the resample as well as the first sample of the day. This result shall be recorded as a retest. If the retest passes, the Contractor may continue the required plant test frequency. Additional check samples should be taken to verify mix compliance.

1. Voids and Asphalt Binder Content.

If the retest for voids or asphalt binder content exceeds control limits, HMA production shall cease and immediate corrective action shall be instituted by the Contractor. After corrective action, HMA production shall be restarted, the HMA production shall be stabilized, and the Contractor shall immediately resample and retest. HMA production may continue when approved by the Engineer. The corrective action shall be documented.

2. Gradation. For gradation retest failures, immediate corrective action shall be instituted by the Contractor. After corrective action, the Contractor shall immediately resample and retest. The corrective action shall be documented.” Delete the fourth paragraph of Article 1030.05(e). Start-up procedures shall be according to Article 1030.06(a) and nuclear/core correlations shall not apply.

Method of Measurement: This work will be measured for payment in place and the area computed in square feet.

Basis of Payment: This work will be paid for at the contract unit price per square yard for HOT-MIX ASPHALT SURFACE COURSE, SPECIAL.

### **GROUND TIRE RUBBER MODIFIED ASPHALT BINDER**

Description. This work shall consist of constructing Hot Mix Asphalt (HMA) mixtures containing ground tire rubber (GTR) modified asphalt binder. Work shall be according to Sections 406, 1030, and 1032 of the Standard Specifications for Road and Bridge Construction (SSRBC), except as herein modified.

Materials.

Ground Tire Rubber (GTR) Modified Asphalt Binder. A minimum of twelve percent GTR (Note 1) shall be blended by dry unit weight with a PG 64-22 (Note 2) to produce a consistent, homogenous blend. Compatible polymers may be added during production. The GTR modified asphalt binder shall meet the requirements of the following table.

PG 64-22 GTR Modified Asphalt Binder		
Test	Specification	Test Method
Flash Point (C.O.C.), °F (°C), min.	450 (232)	AASHTO T 48
Rotational Viscosity @ 275 °F (135 °C), Poises (Pa·s), max.	30 (3)	AASHTO T316
Softening Point, °F (°C), min.	135 (57)	AASHTO T 53
Elastic Recovery @ 77 °F, (25 °C), unaged, ss, 100 mm elongation, 5 cm/min., cut immediately, %, min.	65	ASTM D 6084 Procedure A (sieve waived)

**Note 1** GTR shall be produced from processing automobile and/or truck tires by the ambient grinding method. Heavy equipment tires, uncured or de-vulcanized rubber will not be permitted. The GTR shall not exceed 1/16 in. (2 mm) in any dimension and shall contain no free metal particles or other foreign contaminating materials. Detection of free metal particles shall be determined by thoroughly passing a magnet through a 50 g sample. Metal embedded in rubber particles will be permitted.

The GTR shall be stored in a dry location protected from the rain. The GTR shall have a maximum of 0.75 percent moisture by weight and shall be free flowing. When the GTR is combined with the asphalt binder, the moisture content of the GTR shall not cause foaming of the blend.

When tested in accordance with Illinois modified AASHTO T 27, *Sieve Analysis of Fine and Coarse Aggregates*, a 50 g sample of the GTR shall conform to the following gradation requirements:

Sieve Size	Percent Passing
No. 8 (2.36 mm)	100
No. 16 (1.18 mm)	98 ± 2

Sieve Size	Percent Passing
No. 30 (600 $\mu\text{m}$ )	95 $\pm$ 5
No. 50 (300 $\mu\text{m}$ )	> 20

A mineral powder (such as talc) meeting the requirements of AASHTO M 17, *Mineral Filler for Bituminous Paving Mixtures*, may be added, up to a maximum of four percent by weight of GTR to reduce sticking and caking of the GTR particles.

The GTR shall have a specific gravity of  $1.150 \pm 0.050$  when tested in accordance with ASTM D 1817, *Standard Test Method for Rubber Chemicals-Density*.

The GTR may be provided in bulk or in whole plastic containers. Plastic containers shall be made from low density polyethylene having a melting point less than 240 °F (115 °C). The manufacturer shall ship along with the GTR, certificates of compliance which certify that all requirements of this specification are complied with for each production lot number or shipment. Copies of all GTR certificates of compliance shall be provided to the Department when requested.

**Note 2** PG 64-22 shall meet the requirements of Article 1032.05(a).

Equipment. The type of plant used for the manufacture of GTR modified asphalt binder HMA mixtures may be either a batch or dryer drum plant meeting the requirements of Article 1102.01, except as herein modified:

- (A) A dedicated storage tank for the GTR modified asphalt binder shall be provided at the HMA plant. This tank must be capable of providing continuous mechanical mixing throughout 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  $\pm 0.40$  percent. The maximum storage time of the asphalt binder in the HMA plant's asphalt binder storage tank shall be 3 days maximum, unless approved by the Engineer.
- (B) The temperature of the GTR asphalt binder HMA mixture when discharged from the plant shall be 300 °F to 350 °F (149 °C to 177 °C).
- (C) Storage and Conveyance. Hot-mix surge bin storage of GTR asphalt binder HMA mixtures shall not exceed four hours.



Construction Requirements. The GTR HMA shall be placed according to Section 406 of the SSRBC, except as herein modified.

- (A) An emulsified asphalt tack coat according to Article 1032.06 shall be used on all milled surfaces prior to paving the GTR HMA lifts and applied according to Article 406.05(b). A polymer modified emulsified asphalt tack coat according to Article 1032.06(f) shall be required on all existing unmilled surfaces prior to paving the GTR HMA lifts and applied according to Article 406.05(b).
- (B) The GTR HMA mixtures shall be delivered at a temperature of 300 °F to 350 °F (149 °C to 177 °C). The mixture shall not be placed when the ambient (or surface) temperature is below 55 °F (13 °C), during wet weather, or when local conditions indicate rain is imminent.
- (C) Breakdown compaction should be done while the mat is between 265 °F and 350 °F (130 °C and 177 °C). Finish compaction should be completed before the mat reaches a temperature of 240 °F (115 °C).
- (D) The addition of a non-foaming detergent to the roller water will be allowed to prevent sticking, if necessary.
- (E) Opening to traffic shall not be permitted on the new surface until the temperature of the mat has dropped below 140 °F (60 °C). After compaction, sand may be applied to the mat at a rate of 1 to 2 lb/sq yd (0.5 to 1.0 kg/sq m), as determined by the Engineer, to prevent pick-up or tracking. In no case shall sand be placed on or around pervious pavement.

Basis of Payment. The addition of GTR modified asphalt binder in connection with the construction of HMA mixtures will not be paid for separately but shall be considered as included in the contract unit price of the HMA mixture.

#### **XX008662 REMOVE EXISTING LIGHT POLE**

This work shall consist of removing the existing light poles and foundations at location indicated in the plans. The light poles shall remain the property of the City of Peoria and be delivered to a location to be specified by the City.

Any holes or depressions left after removing the light pole foundation shall be backfilled to proposed subgrade to the satisfaction of the Engineer. This work shall include all labor, materials and equipment to provide excavation, removal and backfill to complete the work in place.

Method of Measurement: This work will be measured for payment in each per light pole location to be removed.

Basis of Payment: The removal of the existing light poles shall be paid for at the contract unit price per each for REMOVE EXISTING LIGHT POLE. The price will include all materials, equipment and labor necessary to complete the work.

### **DOWEL BAR ASSEMBLIES**

Effective: January 20, 2017

If the Contractor chooses to use Dowel Bar Assemblies instead of using a Dowel Bar Inserter, the following installation method shall be followed:

Revise Article 420.05(c)(2) to read:

"Dowel Bar Assemblies. Dowel bar assemblies shall be installed at right angles to the centerline of the pavement with the dowel bars parallel to the proposed pavement surface and to each other.

The assembly shall at 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 metal stakes which shall penetrate both the stabilized subbase and soil or granular subbase. At least ten stakes shall be used for each 10, 11, or 12-ft. (3, 3.3, or 3.6 m) section of assembly.

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 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 the dowel bars.

Care shall be exercised in depositing the concrete at the dowel bar assemblies so that the horizontal and vertical alignment will be retained.

### **PCC SLIPFORM PAVING AGGREGATE OPTIMIZATION**

Effective August 3, 2012 Revised November 7, 2014

Delete Note 8/ of Article 1004.01(c) and replace Article 1004.02(d)(1) with the following:

For the slipform paving of concrete pavement, the Class PV concrete shall be uniformly graded. This may be accomplished by using a uniformly graded single coarse aggregate, or by blending

two or more coarse aggregate sizes. As a minimum for multiple coarse aggregate sizes, CA 7 or CA 11 shall be blended with CA 13, CA 14, or CA 16. The final single coarse aggregate or combined coarse aggregate gradation shall have minimum 45 percent and maximum 60 percent passing the 1/2 in. (12.5 mm) sieve. However, the Contractor may propose for approval by the Engineer an alternate uniformly graded concrete mixture using the information in the "Portland Cement Concrete Level III Technician Course – Manual of Instructions for Design of Concrete Mixtures".

### **MEMBRANE CURING METHOD**

Effective: July 29, 2016

Revise Article 1020.13(a)(4) paragraph 2 to read:

"After all finishing work to the concrete surface has been completed, the surface and all exposed edges shall be sealed with membrane curing compound of the type specified within ten minutes. The seal shall be maintained for the specified curing period. The edges of the concrete shall, likewise, be sealed within ten minutes after the forms are removed. Two separate applications, applied at least one minute and no more than fifteen (15) minutes apart, each at the rate of not less than 1 gal./25 sq. ft. (0.16L/sq. m) will be required upon the surfaces and edges of the concrete. These applications shall be made with the mechanical equipment specified. Type III compound shall be agitated immediately before and during the application.

### **PCC QC/QA ELECTRONIC REPORTS SUBMITTAL**

Effective April 26, 2013 Revised: April 26, 2015

The Contractor's QC personnel shall be responsible for electronically submitting PRO and IND MI 654 Air, Slump, Quantity Reports, PRO MI 655 PCC Strength Reports, and MI 504 Field/Lab Gradations to the Department. The format for the electronic submittals will be the PCC QC/QA reporting program, which will be provided by the Department. Microsoft Office 2007 or newer is required for this program which must be provided by the Contractor.

### **PCC AUTOMATIC BATCHING EQUIPMENT**

Effective April 23, 2010 Revised November 7, 2014

Portland cement concrete provided shall be produced from batch plants that conform to the requirements of Article 1103.03 (a) and (b) of the Standard Specifications for Road and Bridge Construction. Semi-automatic batching will not be allowed.

Route: FAU 6647  
County: Peoria  
Local Agency: City of Peoria  
Section: 05-00302-00-PV  
Project: M-5093(136)  
Job: C-94-144-05

In addition, the batching plant shall be a computerized plant interfaced with a printer and shall print actual batch weights and aggregate mixtures, all water added, amount of each admixture or additive per batch, and percentage variance from design. The ticket shall also state the actual water-cement ratio as batched, and the amount of water that can be added to the batch without exceeding the maximum water-cement ratio. Truck delivery tickets will still be required as per Article 1020.11 (a)(7) of the Standard Specifications.

## **TRAFFIC SIGNAL SPECIAL PROVISIONS**

### **85000200 MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION**

The existing traffic signals shall be maintained while new signal is being installed. Any work necessary to temporarily change existing signal equipment including but not limited to cable or conduit runs to avoid proposed traffic signal equipment or foundations shall be included in this pay item.

Method of Measurement: This work will be measured as a lump sum for the project.

Basis of Payment: This work will be paid for at the contract unit price each for MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION.

### **80500100 SERVICE INSTALLATION, TYPE A**

This work shall be in accordance with Section 805 and 1086 of the Standard Specifications except as modified herein.

Galvanized steel conduit shall be used for the service riser. The use of PVC conduit will not be allowed.

The service disconnect enclosed shall be a stainless steel, weatherproof NEMA 4X enclosure that meets the following specifications:

60-Ampere Fused Disconnect Switch: The fused disconnect switch shall be single-throw, three-wire (two poles, two fuses, and solid neutral). The switch shall provide for locking the blades in either the "On" or "Off" position with one or two padlocks and for locking the cover in the closed position. The fuses shall be cartridge fuses and contacts shall be rated 60 amperes, 240 volts and included with the disconnect installation.

The service for each proposed traffic signal will be pulled from the existing service location. It is the contractor's responsibility to verify the existing location and determine the wire, conduit, and any other material necessary to extend the existing service to the proposed traffic signal controller location. The wire, conduit, and any other material to extend from the existing service to the proposed traffic signal controller location will be paid for separately.

The proposed service will be metered. Applicable sections of the Standard Specifications and State Standards for Service Installation, Type A shall be followed.

Method of Measurement: This work will be measured for payment in place as each per installation.

Basis of Payment: This work shall be paid for at the contract unit price each for SERVICE INSTALLATION, TYPE A which price shall be payment in full for all labor, equipment, and materials required to provide the electrical service installation described above, complete.

**81400700 HANDHOLE, PORTLAND CEMENT CONCRETE**

This work shall consist of furnishing the materials and constructing a handhole in accordance with the applicable Articles of Section 814 and 1088 of the Standard Specifications with the following modifications:

The lift ring for the cover shall consist of a solid closed ring of stainless steel at least 3/8 inch in diameter. The lift ring shall be attached to the cover by a loop of stainless steel at least 3/8 inch in diameter. The lift ring and loop shall be recessed in the cover.

The Contractor shall install heavy-duty, fully-galvanized hooks, with a minimum diameter of 1/2" in the proposed handhole. The Contractor shall submit this material to the Engineer prior to construction of the handholes.

The lid shall be marked with the legend "Traffic Signals".

Pre-cast handholes are not allowed.

All unsuitable materials shall be disposed of by the Contractor outside the job limits.

Method of Measurement: This work will be measured for payment as each per handhole, portland cement concrete shown in the plans.

Basis of Payment: This work will be paid for at the contract unit price each for HANDHOLE, PORTLAND CEMENT CONCRETE which price shall be payment in full for all labor, materials, and equipment required to provide the handhole described above as well as any necessary excavating, backfilling, disposal of unsuitable materials, and furnishing all materials within the limits of the handhole.

**81400720 DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE**

This work shall consist of furnishing the materials and constructing a double handhole in accordance with the applicable Articles of Section 814 and 1088 of the Standard Specifications with the following modifications:

The lift ring for the cover shall consist of a solid closed ring of stainless steel at least 3/8 inch in diameter. The lift ring shall be attached to the cover by a loop of stainless steel at least 3/8 inch in diameter. The lift ring and loop shall be recessed in the cover.

The Contractor shall install heavy-duty, fully-galvanized hooks, with a minimum diameter of ½” in the proposed handhole. The Contractor shall submit this material to the Engineer prior to construction of the handholes.

The lid shall be marked with the legend "Traffic Signals".

Pre-cast handholes are not allowed.

All unsuitable materials shall be disposed of by the Contractor outside the job limits.

Method of Measurement: This work will be measured for payment as each per DOUBLE handhole, portland cement concrete shown in the plans.

Basis of Payment: This work will be paid for at the contract unit price each for DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE which price shall be payment in full for all labor, materials, and equipment required to provide the handhole described above as well as any necessary excavating, backfilling, disposal of unsuitable materials, and furnishing all materials within the limits of the handhole.

**87301900 ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1/C**

This work shall be in accordance with the applicable Articles of Sections 801, 806, 873, 1076, and 1088 of the Standard Specifications with the following modifications:

This work shall consist of furnishing and installing a grounding wire to bond all traffic signal handholes (lids and rings), mast arm assemblies, posts, light poles, cabinets and exposed metallic conduits.

The proposed ground wire shall be an insulated #6 XLP copper conductor with green insulation.

Method of Measurement: This work will be measured for payment in feet according to Article 873.05.

Basis of Payment: This work will be paid for at the contract unit price per foot for ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1/C which price shall be payment in full for all labor, materials, and equipment required to provide the grounding system described above.

**87502440, 87502490, 87502510, 87502520**  
**TRAFFIC SIGNAL POST, GALVANIZED STEEL**

This work shall be in accordance with Sections 878 and 1077 of the Standard Specifications except as modified herein.

The traffic signal post shall be attached to the foundation with four 3/4" x 18" galvanized anchor bolts. The post base shall be secured to the foundation using galvanized nuts and galvanized steel flat washers that have a minimum thickness of 1/4" and are trapezoidal in shape. The washers shall be sized so as to completely capture the mounting flanges of the traffic signal base. Round washers will not be acceptable.

The traffic signal post shall be galvanized with a high gloss black finish.

Method of Measurement: This work will be measured for payment as each per traffic signal post.

Basis of Payment: This work will be paid for at the contract unit price each for TRAFFIC SIGNAL POST, GALVANIZED STEEL of the length specified which price shall be payment in full for all labor, material, and equipment required to furnish and install the traffic signal post and base described above.

#### **87602000 PEDESTRIAN PUSH-BUTTON POST**

This work shall consist of furnishing the materials and constructing a pedestrian pushbutton post in accordance with the applicable Articles of Section 876, 1020, and 1077 of the Standard Specifications with the following modifications:

The pedestrian push-button post shall be an engineered system that consists of a breakaway base, safety cable to prevent post from causing damage to pedestrians and property in the event of a knockdown, aluminum post, and post cap.

The breakaway base shall have a minimal footprint to reduce intrusion into the pedestrian walkway and be installed on a concrete foundation with a minimum depth of 24" and four galvanized steel anchor bolts with a 6" minimum bolt circle.

The post shall consist of a schedule 40 aluminum pole with a 4 1/2" outside diameter. The post shall have a minimum height of 48". The post cap shall be free from external bolt heads or other hardware that would present a hazard to pedestrians.

The pedestrian push-button base and post shall have a black powder coated, durable finish.

Frey manufacturing pedestrian push-button posts shall be used.

The Contractor shall submit catalog cut sheets for all components for review prior to procurement.

Method of Measurement: This work will be measured for payment as each per pedestrian push-button signal post.



Basis of Payment: This work will be paid for at the contract unit price each for PEDESTRIAN PUSH-BUTTON POST which price shall be payment in full for all labor, materials, and equipment required to furnish and install the pedestrian post described above.

**87800100, 87800150, 87800415 CONCRETE FOUNDATION**

This work shall consist installing a Concrete Foundations in accordance with Section 878 of the Standard Specifications for Road and Bridge Construction and State Standard 878001-10 with no exceptions.

The proposed location of the Concrete Foundations may be moved in the field to avoid conflicts, or to place pedestrian push buttons at the proper locations at the approval of the Engineer. If the foundation is moved to an area not within the removal limits shown on the plans, removal of the existing sidewalk or earth disturbance shall be completed in accordance with Section 895 of the Standard Specifications for Road and Bridge Construction and any applicable notes or Special Provisions provided in these construction documents.

Method of Measurement: This work will be measured for payment in feet according to Article 878.04.

Basis of Payment: This work will be paid for at the contract unit price per foot for Concrete Foundation of the type specified, which price shall be payment in full for all labor, material, and equipment necessary to perform the work described above.

**88040070, 88040090, 88040110, 88040120, 88102825 TRAFFIC SIGNAL LED MODULE SPECIFICATIONS**

The material requirement shall be in accordance with Sections 880 and 1078 of the Standard Specifications except as modified herein.

The LED assemblies for the red, yellow, and green solid and arrow indications shall meet or exceed the following minimum specifications:

**Solid Indication LED Module Specifications**

Compliance: Fully compliant with ITE VTCSH LED Circular Signal Supplement specifications dated and adopted June 27, 2005

Compliance Verification: Intertek ETL verified compliance – Product must be listed on the “Directory of LED Modules Certified Products” list located on the ETL website at <http://www.intertek.com/lighting/performance-testing/traffic-signals/>

Diameter:	12" (300mm)
Lens:	UV stabilized scratch resistant polycarbonate, tinted red or yellow, clear for green, uniform non-pixelated illumination, Incandescent Appearance
LEDS:	Hi-Flux
Operating Temperature Range:	-40 to +74C (-40 to +165F)
Operating Voltage Range:	80 to 135 V (60Hz AC)
Power Factor (PF):	> 90%
Total Harmonic Distortion (THD):	< 20%
Minimum Voltage Turn-Off:	35V
Turn-On/Turn-Off Time:	<75 ms
Nominal Power:	10.0 W (Red), 18.0W (Yellow), 12.5 W (Green)
Nominal Wavelength:	625-626 nm (Red), 589-590 nm (Yellow), 500-502 nm (Green)
Minimum Maintained Intensity:	365 Cd (Red), 910 Cd (Yellow), 475 Cd (Green)
Standard Conformance:	FCC compliant for electrical noise, MIL-STD-810F for moisture resistance, MIL-STD-883 for mechanical vibration, NEMA TS2 Transient Voltage Protection
Warranty:	5 year replacement (materials, workmanship, and intensity)

Arrow Indication LED Module Specifications (Red, Yellow, Green)

Compliance:	Fully compliant with ITE VTCSH LED Vehicle Arrow Supplement specifications adopted July 1, 2007
Compliance Verification:	Intertek ETL verified compliance – Product must be listed on the "Directory of LED Modules Certified Products" list located on the ETL website at <a href="http://www.intertek.com/lighting/performance-testing/traffic-signals/">http://www.intertek.com/lighting/performance-testing/traffic-signals/</a>

Diameter:	12" (300mm)
Lens:	Clear Frosted, UV stabilized scratch resistant polycarbonate, tinted red or yellow, clear for green, uniform non-pixelated illumination, incandescent appearance, omni-directional
LEDS:	Hi-flux LEDs
Operating Temperature Range:	-40 to +74C (-40 to +165F)
Operating Voltage Range:	80 to 135 V (60Hz AC)
Power Factor (PF):	> 90%
Total Harmonic Distortion (THD):	< 20%
Minimum Voltage Turn-Off:	35V
Turn-On/Turn-Off Time:	<75 ms
Nominal Power:	5.0-7.0 W (Red), 6.0-12.5W (Yellow), 5.0-7.0 W (Green)
Nominal Wavelength:	625-628 nm (Red), 590 nm (Yellow), 500nm (Green)
Minimum Maintained Intensity:	56.8-58.4 Cd (Red), 141.6-146.0 Cd (Yellow), 73.9-76.0 Cd (Green)
Standard Conformance:	FCC compliant for electrical noise, MIL-STD-810F for moisture resistance, MIL-STD-883 for mechanical vibration, NEMA TS2 Transient Voltage Protection
Warranty:	5 year replacement (materials, workmanship, and intensity)

Arrow Indication LED Module Specifications (Yellow/Green Dual Mode)

Diameter:	12" (300mm)
LEDS:	Interconnected to minimize the effect of single LED failures
Lens:	Clear UV stabilized scratch resistant polycarbonate, uniform non-pixelated illumination, incandescent appearance

Operating Temperature Range:	-40 to +74C (-40 to +165F)
Operating Voltage Range:	80 to 135 V (60Hz AC)
Power Factor (PF):	> 90%
Total Harmonic Distortion (THD):	< 20%
Minimum Voltage Turn-Off:	35V
Turn-On/Turn-Off Time:	<75 ms
Nominal Power:	8.0-10.0 W (Yellow), 8.0-10.0 W (Green)
Nominal Wavelength:	590-592 nm (Yellow), 505-508 nm (Green)
Minimum Maintained Intensity:	141.6-146.0 Cd (Yellow), 73.9-76.0 Cd (Green)
Standard Conformance:	FCC compliant for electrical noise, MIL-STD-810F for moisture resistance, MIL-STD-883 for mechanical vibration, NEMA TS2 Transient Voltage Protection
Warranty:	5 year replacement (materials, workmanship, and intensity)

12" Pedestrian LED Module Specifications (Man/Hand, Countdown Timer)

Compliance:	Fully compliant with ITE PTCSI Part-2 LED Pedestrian Traffic Signal Modules specification adopted August 4, 2010
Compliance Verification:	Intertek ETL verified compliance – Product must be listed on the “Directory of LED Modules Certified Products” list located on the ETL website at <a href="http://www.intertek.com/lighting/performance-testing/traffic-signals/">http://www.intertek.com/lighting/performance-testing/traffic-signals/</a>
Size:	12" x 12"
Configuration:	Full Man/Full Hand Overlay Module, Countdown Timer Module
Lens:	Clear Frosted, UV stabilized scratch resistant polycarbonate, uniform non-pixelated illumination,

	incandescent appearance
Operating Temperature Range:	-40 to +74C (-40 to +165F)
Operating Voltage Range:	80 to 135 V (60Hz AC)
Power Factor (PF):	> 90%
Total Harmonic Distortion (THD):	< 20%
Minimum Voltage Turn-Off:	35V
Turn-On/Turn-Off Time:	<75 ms
Nominal Power:	5.0-9.0 W (Man), 5.0-11.0W (Hand), 5.0-8.0 W (Timer)
Minimum Maintained Intensity:	1,400 Cd (Hand), 1,400 Cd (Timer), 2,200 Cd (Man)
Standard Conformance:	FCC compliant for electrical noise, MIL-STD-810F for moisture resistance, MIL-STD-883 for mechanical vibration, NEMA TS2 Transient Voltage Protection
Warranty:	5 year replacement (materials, workmanship, and intensity)

16" Pedestrian LED Module Specifications (Man/Hand with Countdown Timer)

Compliance:	Fully compliant with ITE PTCSI Part-2 LED Pedestrian Traffic Signal Modules specification adopted August 4, 2010
Compliance Verification:	Intertek ETL verified compliance – Product must be listed on the “Directory of LED Modules Certified Products” list located on the ETL website at <a href="http://www.intertek.com/lighting/performance-testing/traffic-signals/">http://www.intertek.com/lighting/performance-testing/traffic-signals/</a>
Size:	16" x 18"
Configuration:	Man/Hand Overlay with Countdown Timer
Lens:	UV stabilized scratch resistant polycarbonate, uniform non-pixelated illumination, incandescent appearance
Operating Temperature Range:	-40 to +74C (-40 to +165F)

Operating Voltage Range:	80 to 135 V (60Hz AC)
Power Factor (PF):	> 90%
Total Harmonic Distortion (THD):	< 20%
Minimum Voltage Turn-Off:	35V
Turn-On/Turn-Off Time:	<75 ms
Nominal Power:	6.0-9.0 W (Man), 7.0-9.0W (Hand), 5.0-8.0 W (Timer)
Minimum Maintained Intensity:	1,400 Cd (Hand), 1,400 Cd (Timer), 2,200 Cd (Man)
Standard Conformance:	FCC compliant for electrical noise, MIL-STD-810F for moisture resistance, MIL-STD-883 for mechanical vibration, NEMA TS2 Transient Voltage Protection
Warranty:	5 year replacement (materials, workmanship, and intensity)

**88040070, 88040090, 88040110, 88040120      SIGNAL HEAD, LED**

This work shall be in accordance with Sections 880 and 1078 of the Standard Specifications except as modified herein.

The traffic signal heads shall consist of 12" polycarbonate sections and shall be equipped with LED assemblies for all red bulb, yellow bulb, green bulb, red arrow, yellow arrow, and green arrow indications.

The traffic signal heads shall have a black finish with black doors and tunnel visors.

The LED signal faces shall be equipped with spade connectors and connected to the traffic signal head terminal block.

The LED modules shall conform to the specifications listed under the section TRAFFIC SIGNAL LED MODULE SPECIFICATIONS.

Method of Measurement: This work will be measured for payment as each per signal head.

Basis of Payment: This work will be paid for at the contract unit prices each for Signal Head, LED of the type specified and shall be payment in full for all labor, materials, and equipment required to provide and install the traffic signal heads described above, complete.

**88102717 PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER**

This work shall be in accordance with Section 881 and 1078 of the Standard Specifications except as modified herein.

The pedestrian signal head shall consist of a single 16" polycarbonate section and shall be equipped with an overlaid LED indication with countdown timer (Walking Person/Upraised Hand).

The traffic signal head shall have a black finish with black doors and tunnel visors.

The LED signal faces shall be equipped with spade connectors and connected to the traffic signal head terminal block.

The LED signal face shall have international symbols (Upraised Hand - Color: Portland Orange, Walking Person - Color: Lunar White). Only filled indications will be allowed.

The LED assembly shall meet or exceed the following minimum specifications:

Currently, only the following models are approved by the Department for use provided that they meet the minimum specifications list below:

GELcore Model PS7-CFF1-26A (Filled Walking Person/Upraised Hand Overlay, with Countdown Timer)

Dialight Model 430-6479-001X (Filled Walking Person/Upraised Hand Overlay, with Countdown Timer)

The LED assembly must conform to the following minimum specifications:

Lens: 16" x 18", Hard Coated for Abrasion Resistance, UV Stabilized Dome

LEDs: Interconnected to minimize the effect of single LED failures, Nominal Wattage White: 8W or less, Nominal Wattage Orange: 11W or less, Nominal Wattage Countdown: 6W

Luminous Intensity (min): Countdown = 1,400 cd/m<sup>2</sup>, Hand = 1,400 cd/m<sup>2</sup>, Person = 2,200 cd/m<sup>2</sup>

Product Warranty: 5 Year Replacement

Combination hand/person pedestrian signal modules shall incorporate separate power supplies for the hand and the person displays.

The assembly shall be capable of operating from 80 to 135 VAC with less than 10% variation in intensity, shall have an operating temperature range of -40° to 74°C, and shall be sealed and highly resistant to water intrusion.

All LED Pedestrian Signal Modules shall be fully compliant to the ITE PTCSI Part-2: LED Pedestrian Traffic Signal Modules specifications adopted March 19, 2004 or the latest adopted version as listed on the ITE website at time of bid.

The assembly shall be compatible with signal control equipment per NEMA TS-2, NEMA TS-1 standards, and include transient voltage protection and fusing to withstand high-repetition noise transients and low repetition high energy transients per NEMA standard 1992 per ITE VTCSH - STD Part 2.

Method of Measurement: This work will be measured for payment as each per pedestrian signal head.

Basis of Payment: This work will be paid for at the contract unit prices each for PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER and will be payment in full for all labor, equipment, and materials required to provide and install the pedestrian traffic signal heads equipped with LED indications described above, complete.

**88200510 TRAFFIC SIGNAL BACKPLATE, RETROREFLECTIVE**

This work shall be in accordance with Sections 882 and 1078 of the Standard Specifications except as modified herein.

The traffic signal backplates shall be of the same material as the traffic signal heads as specified on the plans.

A three (3) inch wide strip of reflective sheeting shall be applied to the outside perimeter of the face of the backplates. The reflective tape shall be fluorescent yellow in color and shall consist of type AZ sheeting.

Method of Measurement. The traffic signal backplate, retroreflective bid item will be measured for payment by the actual number of traffic signal backplate, retroreflective assemblies furnished, installed, and accepted.

Basis of Payment: This work will be paid for at the contract unit price each for TRAFFIC SIGNAL BACKPLATE, RETROREFLECTIVE and shall be payment in full for all labor, materials, and equipment required to furnish and install a traffic signal backplate with reflective tape as described above, complete.

**88700200 LIGHT DETECTOR**

**88700090 CONFIRMATION BEACON**

This work shall be in accordance with Sections 887 and 1072 of the Standard Specifications except as modified herein.



The emergency vehicle preemption system shall be fully compatible with the existing Global Traffic Technologies Opticom GPS/secure radio communication system that is installed at multiple intersections in the city of Peoria.

The emergency vehicle preemption system shall include a multiple direction detector (Opticom Model 1010 GPS Radio Unit), Opticom Model 1000 GPS Phase Selector, Opticom Model 1030 GPS Auxiliary Interface Panel, LED confirmation beacons, all cables, brackets, mounting hardware, and all necessary components for a complete and fully functional system. The system shall be fully tested by the contractor at the time of installation.

Method of Measurement: This work will be measured for payment as each per light detector or confirmation beacon.

Basis of Payment: This work will be paid for at the contract unit price each for LIGHT DETECTOR or CONFIRMATION BEACON and shall be payment in full for all labor, materials, and equipment required to provide, install, and test the equipment described above, complete.

#### **88800100 PEDESTRIAN PUSH BUTTON**

This work shall be in accordance with Sections 888 and 1074 of the Standard Specifications except as modified herein.

The Contractor shall install the proposed pedestrian pushbuttons and signs on the traffic signal mast arms and posts. The proposed pedestrian pushbuttons and signs shall be installed so that the arrow on the sign corresponds to the associated street crossing and crosswalk.

All pedestrian pushbuttons shall have a round case and be equipped with a 2" diameter mushroom head for easy access.

The following models are approved for use within District 4:

- Polara, BullDog with momentary LED Indicator with audible buzzer, Round, Yellow Housing, Model (BDLL2-B)
- Campbell 4EVR, with momentary LED Indicator with audible buzzer, Round, Yellow Housing.

The pedestrian pushbutton installation shall include all hardware required to mount the pedestrian pushbutton. All hardware shall be of stainless steel construction. All bolts shall be 1/4" Hex Head and no self-tapping/drilling screws will be allowed.

The Contractor shall furnish and install anti-seize paste on all pedestrian pushbutton mounting hardware.

A pedestrian pushbutton station shall be provided. The pedestrian pushbutton station shall have provisions for the installation of an integrated sign along with the pushbutton.

The following models are approved for use:

- Polara, Standard Profile Push Button Frame (Accommodates 9" x 12" pedestrian sign), Black, Model PBF5X7-B
- Campbell, Standard Profile Push Button Frame (Accommodates 9" x 12" pedestrian sign), Black, Model 912H

All pedestrian pushbutton signs shall be retroflective and be designed to minimize the effects of fading from exposure to sunlight.

The following pedestrian pushbutton signs currently meet Department Specifications: Pelco, Models SF-1013-08, SF-1014-08.

Method of Measurement: This work will be measured for payment as each per pedestrian push button.

Basis of Payment: This work shall be paid for at the contract unit price each for PEDESTRIAN PUSH BUTTON and shall be payment in full for all labor, equipment, and materials required to supply and install the pedestrian push buttons described above, complete.

#### **89502375 REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT**

This work shall be in accordance with Section 895 of the Standard Specifications except as modified herein.

The Contractor shall remove all wires pertaining to existing traffic signals, pedestrian signal accommodations, grounding, and loops at the intersection of Northmoor Road and Allen Road and the crosswalk signals at Western Avenue and Northmoor Road. The contractor shall remove all handholes, signal posts, mast arms, and poles and corresponding foundations. This work shall be included in the bid price for this pay item.

Method of Measurement: All Traffic signal equipment including but not limited to controllers, handholes, cabinets, push buttons, signs, signal posts, mast arms, concrete foundations, cable, and vehicle or pedestrian signal heads for a particular intersection will be paid for as each (per intersection).

Basis of Payment: The above work will be paid for at the contract unit price each (per intersection) for REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT and shall be payment in full for removing, disposing of, and transporting the equipment described above, complete. No additional compensation will be allowed.

**X0323777 VIDEO VEHICLE DETECTION SYSTEM, 3 CAMERAS**

**Z0033070 VIDEO VEHICLE DETECTIONSISTEM, 4 CAMERAS**

Video Vehicle Detection System, 3 Camera (Northmoor & Allen)

Video Vehicle Detection System, 4 Camera (Northmoor & Rosemead)

The video detection system shall be an Iteris VantageNext or Econolite Autoscope Vision furnished with the specified number of cameras.

The video vehicle detection system shall include all necessary electric cable, electrical junction boxes, electrical and communications surge suppression, hardware, software, programming, and any camera brackets that are required for installation and configuration. These items should be taken into consideration and shall be included in the bid price for the video detection system.

One 12" – 15" color LCD video monitor and 4-camera video selector (if required to switch camera videos) shall be included for each installation to allow for the setup and monitoring of the video detection system.

All vehicle video detection systems shall be equipped with the latest software or firmware revisions.

The video vehicle system shall be configured and installed to NEMA TS2 Standards (use of the SDLC port and BIU). Installation conforming to NEMA TS1 standards will not be allowed.

The minimum requirements for a video vehicle detection system are listed below:

**1.0 General**

This Specification sets forth the minimum requirements for a system that monitors vehicles on a roadway via processing of video images and provides detector outputs to a traffic controller or similar device.

**1.1 System Hardware**

The system shall consist of four video cameras and an automatic control unit (ACU). The ACU shall process all detected calls and shall be equipped with the latest firmware revisions.

**1.2 System Software**

The system shall be able to detect either approaching or receding vehicles in multiple traffic lanes. A minimum of 24 detection zones shall be user-definable per camera. The user shall be able to modify and delete previously defined detection zones. The software shall provide remote access operation and shall be the latest revision.

## 2.0 Functional Capabilities

### 2.1 Real-Time Detection

2.2 The ACU shall be capable of simultaneously processing information from up to four (4) digital video sources. The video shall be digitized and analyzed at a rate of 30 times per second.

2.3 The system shall be able to detect the presence of vehicles in a minimum of 96 detection zones within the combined field of view of the image sensors.

## 3.0 Vehicle Detection

### 3.1 Detection Zone Placement

The video detection system shall provide flexible detection zone placement anywhere and at any orientation within the combined field of view of the image sensors. In addition, detection zones shall have the capability of implementing logical functions including AND and OR.

### 3.2 Optimal Detection

The video detection system shall reliably detect vehicle presence when the image sensor is mounted 10m (30 ft.) or higher above the roadway, when the image sensor is adjacent to the desired coverage area, and when the length of the detection area or field of view (FOV) is not greater than ten (10) times the mounting height of the image sensor. The image sensor shall not be required to be mounted directly over the roadway. A single image sensor, placed at the proper mounting height with the proper lens, shall be able to monitor six (6) to eight (8) traffic lanes simultaneously.

### 3.3 Detection Performance

Overall performance of the video detection system shall be comparable to inductive loops. Using standard image sensor optics and in the absence of occlusion, the system shall be able to detect vehicle presence with 98% accuracy under normal conditions, (days & night) and 96% accuracy under adverse conditions (fog, rain, snow). The ACU shall output a constant call for each enabled detector output channel if a loss of video signal occurs in any camera.

The ACU shall be capable of processing a minimum of twenty detector zones placed anywhere in the field of view of the camera.

## 4.0 ACU Hardware

### 4.1 ACU Mounting

The ACU shall be shelf or rack mountable. Nominal outside dimensions excluding connectors shall not exceed 180mm (7.25") x 475mm (19") x 260mm (10.5") (H x W x D).

#### 4.2 ACU Environmental

The ACU shall be designed to operate reliably in the adverse environment found in the typical roadside traffic cabinet. It shall meet the environmental requirements set forth by the NEMA (National Electrical Manufacturers Association) TS1 and TS2 standards as well as the environmental requirements for Type 170 and Type 179 controllers. The minimum operating temperature range shall be from -35 to +74 degrees C at 0% to 95% relative humidity, non-condensing.

#### 5.0 ACU Electrical

- 5.1 The ACU shall be modular in design and provide processing capability equivalent to the Intel Pentium microprocessor. The bus connections used to interconnect the modules of the ACU shall be gold-plated DIN connectors.
- 5.2 The ACU shall be powered by 89 - 135 VAC, 60 Hz, single phase, and draw 0.25 amps, or by 190 - 270 VAC, 50 Hz, single phase and draw 0.12 amps. If a rack mountable ACU is supplied, it shall be capable of operating from 10 to 28 VDC. The power supply shall automatically adapt to the input power level. Surge ratings shall be as set forth in the NEMA TS1 and TS2 specifications.
- 5.3 Serial communications to a remote computer equipped with remote monitoring software shall be through a RJ-45 Ethernet port.
- 5.4 The ACU shall be equipped with a NEMA TS2 RS-485 SDLC interface for communicating input and output information. Front panel LEDs shall provide status information when communications are open.
- 5.5 The ACU and/or camera hookup panel shall be equipped with four RJ-45 connector based/terminal block connections for cameras so that signals from four image sensors can be processed in real-time.
- 5.6 The ACU shall be equipped with USB ports, WiFi, and Ethernet ports to provide communications to a computer running the configuration and remote access software.
- 5.7 The ACU and/or camera hookup panels used for a rack mountable ACU shall be equipped with a video output port.
- 5.8 The ACU shall be equipped with viewable front panel detection LED indications.

#### 6.0 Camera

- 6.1 The video detection system shall use high resolution, color, cameras as the video source for real-time vehicle detection. As a minimum, each image sensor shall provide the following capabilities:
- a. MPEG-4 and H.264 video compression and transport
  - b. Support video streaming that is viewable through a standard web browser with an adjustable frame rates of 5/15/30 fps
  - c. Images shall be produced with a CCD sensing element with horizontal resolution of at least 720 lines and vertical resolution of at least 480 lines.
  - d. Useable video and resolvable features in the video image shall be produced when those features have luminance levels as low as 0.1 lux at night.
  - e. Useable video and resolvable features in the video image shall be produced when those features have luminance levels as high as 10,000 lux during the day.
  - f. Automatic gain, automatic iris, and absolute black reference controls shall be furnished.
  - g. An optical filter and appropriate electronic circuitry shall be included in the image sensor to suppress "blooming" effects at night.
- 6.2 The image sensor shall be equipped with an integrated zoom lens with zoom and focus capabilities that can be changed using either configuration computer software or hand-held controller. The machine vision processor (MVP) may be enclosed within the camera.
- 6.3 The image sensor and lens assembly shall be housed in an environmental enclosure that provides the following capabilities:
- a. The enclosure shall be waterproof and dust-tight to NEMA-4 specifications. The camera shall be IP-67 rated.
  - b. The enclosure shall allow the image sensor to operate satisfactorily over an ambient temperature range from -34C to +74C while exposed to precipitation as well as direct sunlight.
  - c. The enclosure shall allow the image sensor horizon to be rotated in the field during installation.
  - d. A heater shall be at the front of the enclosure to prevent the formation of ice and condensation in cold weather, as well as to assure proper operation of the lens' iris mechanism. The heater shall not interfere with the operation of the image sensor electronics, and it shall not cause interference with the video signal.

- e. The enclosure shall be light-colored and shall include a sun shield to minimize solar heating. The front edge of the sunshield shall protrude beyond the front edge of the environmental enclosure and shall include provision to divert water flow to the sides of the sunshield. The amount of overhang of the sun shield shall be adjustable to prevent direct sunlight from entering the lens or hitting the faceplate.
  - f. The total weight of the image sensor in the environmental enclosure with sunshield shall be less than 2.7 kg (6 pounds).
  - g. When operating in the environmental enclosure with power and video signal cables connected, the image sensor shall meet FCC class B requirements for electromagnetic interference emissions.
- 6.3 The video output of the image sensor shall be isolated from earth ground. All video connections from the image sensor to the video interface panel shall also be isolated from earth ground.
- 6.4 The video output, communication, and power to the image sensor shall include transient protection to prevent damage to the sensor due to transient voltages occurring on the cable leading from the image sensor to other field locations.
- 6.5 A stainless steel junction box shall be available as an option with each image sensor for installation on the structure used for image sensor mounting. The junction box shall contain a terminal block for terminating power to the image sensor and connection points for cables from the image sensor and from the ACU.

## 7.0 Software

- 7.1 The system shall include the remote access software that is used to setup and configure the video detection system. The software shall be of the latest revision.
- 7.2 All necessary cable, adapters, and other equipment shall be included with the system.

## 8.0 Installation and Training

- 8.1 The supplier of the video detection system shall supervise the installation and testing of the video and video vehicle detection equipment. A factory certified representative from the supplier shall be on-site during installation.

## 9.0 Warranty, Maintenance, and Support

- 9.1 The video detection system shall be warranted by its supplier for a minimum of three (3) years from date of turn-on. This warranty shall cover all material defects and shall also provide all parts and labor as well as unlimited technical support.

- 9.2 Ongoing software support by the supplier shall include updates of the ACU and supervisor software. These updates shall be provided free of charge during the warranty period.
- 9.3 The supplier shall maintain a program for technical support and software updates following expiration of the warranty period. This program shall be made available to the contracting agency in the form of a separate agreement for continuing support.

Method of Measurement: This work will be measured for payment as each per video vehicle detection system included in the plans.

Basis of Payment: This work will not be paid for separately, but shall be included in the contract unit price each for VIDEO VEHICLE DETECTION SYSTEM, 3 CAMERA OR VIDEO VEHICLE DETECTION SYSTEM, 4 CAMERA. Which price shall be payment in full for all labor, equipment, and materials required to furnish, install, and test the video vehicle detection system described above, complete.

**X8570231 FULL ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL**

This work shall be in accordance with Sections 857, 1073, and 1074 of the Standard Specifications except as modified herein. The Contractor shall provide all labor, materials, and equipment required for the work described above. The cost of this work shall be included in the bid price for this pay item, including painting the controller cabinet black prior to installation. There will be no additional compensation for this work.

The cabinet and controller shall be compatible with the existing Econolite closed loop system and Aries remote monitoring software.

The traffic signal cabinet shall have a NEMA TS-2 back panel. The cabinet shall include a malfunction management unit to allow enhanced fault monitoring capabilities. The malfunction management unit shall support flashing yellow arrow operation and be a Reno A&E model MMU-1600G equipped with a graphical display and Ethernet port.

The controller shall be an Econolite ASC/3-2100 NEMA TS-2 Type 2 controller. The controller shall be equipped with the latest firmware revision.

The cabinet, controller, and malfunction management unit shall be configured by the manufacturer for flashing yellow arrow operation.

The malfunction management unit shall be equipped with the latest software and firmware revisions.

The cabinet shall be equipped with a plexi-glass shield that covers the power panel which houses the mercury bus relay, line filter, circuit breakers, and other electrical components.

The cabinet shall be equipped with a plexi-glass shield that covers the thermostat and a fluorescent lighting assembly that turns on when the door is opened. The fluorescent lighting



assembly shall be equipped with a cold weather ballast and mounted in a location that will not interfere with cabinet maintenance.

The traffic signal cabinet shall be equipped with a sixteen load switch back panel to accommodate future expansion.

The cabinet shall be furnished with a compact heater strip to be used for moisture reduction during cold weather. The heater shall be thermostatically controlled, operate at 120 volts, have a minimum wattage of 150 watts, a maximum wattage of 250 watts, have a shield to protect service personnel and equipment from damaging heat, be separately fused, and be mounted where it does not interfere with a person working in the cabinet.

The traffic signal cabinets shall be equipped with two non GFCI duplex NEMA 5-15R receptacles to be used to provide power to auxiliary equipment.

The cabinet shall be equipped with a twenty-four fiber wall-mountable interconnect center and two six fiber bulkheads. The cabinet shall also be equipped with any and all other components necessary to provide for a complete and functional fiber optic telemetry.

The cabinet shall be equipped with toggle switch guards for all switches located on the door to prevent accidental switching. The cabinet shall include a high quality deluxe pleated filter.

The cabinet shall be equipped with additional surge protection for the controller, malfunction management unit, and detector amplifiers, and/or video detection system. The surge protector shall be a Transtector model ACP100BWN3 and shall be included in addition to an EDCO SHA-1250 IRS protector. The EDCO SHA-1250 IRS surge protector is to be provided in accordance with Section 1085.47 A (4a) and shall be wired to provide surge protection for the controller, malfunction management unit, and detector amplifiers. The Transtector surge suppressor may be wired to the equipment protected power terminals of the EDCO SHA-1250 IRS unit provided that the controller, MMU, and detection system are protected.

The controller cabinet shall contain one 10A, 120V, single pole circuit breaker for the control equipment and one 40A, 120V, single pole circuit breaker for the signal load.

The Contractor shall set up each cabinet in his or her shop for inspection by the Engineer. All phases that are utilized shall be hooked up to a light board to provide observation for each signal indication.

The Engineer shall be notified when the setup is complete so that all pertinent timings may be entered into the each traffic signal controller. The facility shall be subject to a seven day burn-in period before installation will be allowed.

After installing the cabinet in the field, prior to resuming normal signal operation, the Contractor shall test the cabinet by connecting a jumper to the cabinet field terminals to ensure that all conflicting signals will place the cabinet into conflict flash and to verify that the cabinet,

controller, and malfunction management unit are operating correctly. The Contractor shall make arrangements with the local police agency to provide traffic control during the conflict test.

The controller cabinet shall be constructed of aluminum and painted black.

Method of Measurement: This work will be measured for payment as each per controller and cabinet included in the plans.

Basis of Payment: This work will be paid for at the contract unit price each for FULL ACTUATED CONTROLLER AND TYPE IV CABINET SPECIAL and shall be payment in full for all labor, materials, and equipment required to remove the existing traffic signal cabinet and furnish, install, and test the traffic signal cabinet described above, complete.

**X8710024 FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 MM12F SM24F**

This work shall be in accordance with Sections 801, 864, 871, and 1076 of the Standard Specifications except as modified herein.

The fiber optic cable shall be a loose tube outdoor rated and be a Hybrid type cable with 12 strands of 62.5/125 micrometer Multimode and 24 strands of 8/125 micrometer single mode fibers.

The Contractor shall terminate twelve multimode and twelve single mode fibers in each traffic signal cabinet or lighting controller cabinet with ST connectors. The remaining twelve single mode fibers shall be spliced continuous in all cabinets.

The Contractor shall furnish all labor, equipment, and materials needed to complete the work described above. The cost of this work shall be included in the bid price for this pay item.

Each cable shall be clearly labeled in each cabinet utilizing a durable computer generated label. The label shall contain information in regards to the location where the cable is going to or coming from.

Fibers shall be terminated as shown on the plan sheets. All terminated fibers shall be clearly labeled. All required equipment, including but not limited to fiber optic cables, connectors, splicing boots, cable trays, distribution enclosures, and hardware shall be included in this pay item.

Fibers not being used shall be labeled "spare", and fibers not attached to a distribution enclosure shall be capped and sealed.

All ancillary components, required to complete the fiber optic cable plant, including but not limited to, moisture and water sealants, cable caps, fan-out kits, weather-proof splice kits, boots, etc., shall be supplied under this pay item and will not be paid for separately.

The fiber optic cable shall be clearly marked in each handhole and cabinet with a brightly colored (orange or yellow) weather resistant label securely attached to the cable.

The Contractor shall provide and install a 12 Ga., stranded (THHN), insulated orange tracer cable in all conduits that contain fiber optic cable. This work shall be done at the same time the fiber optic cable is pulled. There will be no additional compensation for this work.

Materials. The single-mode, fiber optic cable shall incorporate a loose, buffer-tube design. The cable shall conform to the requirements of RUS 7 CFR1755.900 (PE-90) for a single sheathed, non-armored cable, and shall be new, unused and of current design and manufacture. The number of fibers in each cable shall be as specified on the plans. The cable shall be outdoor rated. The cable shall utilize water blocking gel or a dry block tape. Fiber cable installed indoors shall be appropriately rated in accordance with NEC and NFPA requirements.

Minimum Bending Radius.

The cable shall be capable of withstanding a minimum-bending radius of 20 times its outer diameter during installation and 10 times its outer diameter during operation without changing the characteristics of the optical fibers.

Environmental Requirements:

The cable shall meet all of specified requirements under the following conditions:

Shipping/storage temperature: -58°F to +158°F (-50°C to +70°C)

Installation temperature: -22°F to +158°F (-30°C to +70°C)

Operating temperature: -40°F to +158°F (-40°C to +70°C)

Relative humidity from 0% to 95%, non-condensing

Construction Requirements:

Experience Requirements.

Personnel involved in the installation, splicing and testing of the fiber optic cables shall meet the following requirements:

A minimum of three (3) years' experience in the installation of fiber optic cables, including: splicing, terminating and testing multi-mode and single mode fibers.

Install two systems where fiber optic cables are outdoors in conduit and where the systems have been in continuous satisfactory operation for at least two years. The Contractor shall submit as proof, photographs or other supporting documents, and the names, addresses and telephone numbers of the operating personnel who can be contacted regarding the installed fiber optic systems.

One fiber optic cable system (which may be one of the two in the preceding paragraph), which the Contractor can arrange for demonstration to the Department representatives and the Engineer.

Installers shall be familiar with the cable manufacturer's recommended procedures for installing the cable. This shall include knowledge of splicing procedures for and equipment being used on this project and knowledge of all hardware such as breakout (furcation) kits and splice closures. The Contractor shall submit documented procedures to the Engineer for approval and to be used by Construction inspectors.

Personnel involved in testing shall have been trained by the manufacturer of the fiber optic cable test equipment to be used, in fiber optic cable testing procedures. Proof of this training shall be submitted to the Engineer for approval. In addition, the Contractor shall submit documentation of the testing procedures for approval by the Engineer.

#### Installation in Conduit.

During cable pulling operations, the Contractor shall ensure that the minimum bending of the cable is maintained during the unreeling and pulling operations. Entry guide chutes shall be used to guide the cable into the handhole conduit ports. Lubricating compound shall be used to minimize friction. Corner rollers (wheels), if used, shall not have radii less than the minimum installation-bending radius of the cable. A series array of smaller wheels can be used for accomplishing the bend if the cable manufacturers specifically approve the array.

The pulling tension shall be continuously measured and shall not be allowed to exceed the maximum tension specified by the manufacturer of the cable. Fuse links and breaks can be used to ensure that the cable tensile strength is not exceeded. The pulling system shall have an audible alarm that sounds whenever a pre-selected tension level is reached. Tension levels shall be recorded continuously and shall be given to the Engineer upon request.

The cable shall be pulled into the conduit as a single component, absorbing the pulling force in all tension elements. The central strength member and Aramid yarn shall be attached directly to the pulling eye during cable pulling. "Basket grip" or "Chinese-finger type" attachments, which only attach to the cable's outer jacket, shall not be permitted. A breakaway swivel, rated at 95% of the cable manufacturer's approved maximum tensile loading, shall be used on all pulls. When simultaneously pulling fiber optic cable with other cables, separate grooved rollers shall be used for each cable.

#### Splicing Requirements:

Splices shall be made at locations shown on the Plans. Any other splices shall be permitted only with the approval of the Engineer.

#### Operation and Maintenance Documentation:

After the fiber optic cable plant has been installed, two (2) complete sets of Operation and Maintenance Documentation shall be provided. The documentation shall, as a minimum, include the following:

- Complete and accurate as-built diagrams showing the entire fiber optic cable plant including locations of all splices.
- Final copies of all approved test procedures.
- Complete performance data of the cable plant showing the losses at each terminal connector.
- Complete parts list including names of vendors.

#### Testing Requirements:

The Contractor shall submit detailed test procedures for approval by the Engineer. All fibers shall be tested bi-directionally at both 1310 nm and 1550 nm with both an Optical Time Domain Reflectometer (OTDR) and a power meter and optical source. For testing, intermediate breakout fibers may be concatenated and tested end-to-end. Any discrepancies between the measured results and these specifications will be resolved to the satisfaction of the Engineer.

The Contractor shall provide the date, time and location of any tests required by this specification to the Engineer at least 5 days before performing the test. Upon completion of the cable installation, splicing, and termination, the Contractor shall test all fibers for continuity, events above 0.1 dB, and total attenuation of the cable. The test procedure shall be as follows:

A Certified Technician utilizing an Optical Time Domain Reflectometer (OTDR) and Optical Source/Power Meter shall conduct the installation test. The Technician is directed to conduct the test using the standard operating procedures defined by the manufacturer of the test equipment. All fibers installed shall be tested in both directions.

The method of connectivity between the OTDR and the cable shall be a factory patch cord of a length equal to the "dead zone" of the OTDR. Optionally, the Technician can use a factory "fiber box" of 328 ft (100 m) minimum with no splices within the box. The tests shall be conducted at 1310 and 1550 nm for all fibers.

At the completion of the test, the Contractor shall provide two copies of documentation of the test results to the Project Engineer. The test documentation shall be bound and shall include the following:

Cable & Fiber Identification:

Cable ID

Cable Location - beginning and end point

Fiber ID, including tube and fiber color  
Operator Name  
Date & Time  
Setup Parameters  
Wavelength  
Pulse width (OTDR)  
Refractory index (OTDR)  
Range (OTDR)  
Scale (OTDR)  
Setup Option chosen to pass OTDR "dead zone"

Test Results:

A. OTDR Test

Total Fiber Trace  
Splice Loss/Gain  
Events > 0.10 dB  
Measured Length (Cable Marking)  
Total Length (OTDR)

Test results and traces shall also be provided electronically.

B. Optical Source/Power Meter

Total Attenuation  
Attenuation (dB/km)

These results shall be provided in tabular form. The following shall be the criteria for the acceptance of the cable:

The test results shall show that the dB/km loss does not exceed +3% of the factory test or 1% of the cable's published production loss. However, no event shall exceed 0.10 dB. If any event is detected above 0.10 dB, the Contractor shall replace or repair the fiber including that event point.

The total dB loss of the cable, less events, shall not exceed the manufacturer's production specifications as follows: 0.5 dB/km at both 1310 and 1550 nm.

If the total loss exceeds these specifications, the Contractor shall replace or repair that cable run at the Contractor's expense, both labor and materials. Elevated attenuation due to exceeding the pulling tension during installation shall require the replacement of the cable run at the Contractor's expense, including labor and materials.

The Contractor shall label the destination of each trunk cable onto the cable in each handhole, vault or cable termination panel.

Splicing Requirements

All optical fibers shall be spliced as indicated on the Plans. If no information is provided, mainline splices will concatenate the fibers from the two cable segments, that is, the colors of the buffer tubes and fibers shall be the same across the splice. For splices that breakout the individual fibers, the fibers shall be spliced in accordance with the Plans.

Slack Storage of Fiber Optic Cables.

A part of this pay item, slack fiber shall be supplied as necessary to allow splicing the fiber optic cables in a controlled environment, such as a splicing van or tent. After splicing has been completed, the slack fiber shall be stored underground in handholes and in the traffic controller cabinets.

The amount of slack cable listed in Article 873.03 shall be revised as follows:

<u>Location</u>	<u>Length of Slack Cable (Ft.)</u>
Handhole	10.0
Double Handhole	30.0
Communication Vault	30.0
Junction Box	8.0
Controller Cabinet	10.0
Equipment Cabinet	3.0

Method of Measurement: This work will be measured for payment in feet according to Article 871.05.

Basis of Payment: This work will be paid for at the contract unit price per foot for FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 MM12F SM24F and shall be payment in full for all labor, equipment, and materials required to provide, install, and test the fiber optic cable described above, complete.

**XX007021 PEDESTRIAN ACTIVATED CROSSWALK WARNING SYSTEM**

This work shall consist of furnishing and installing a controller for a wigwag flashing beacon pedestrian activated crosswalk warning system. The beacon assembly shall be hardwired and

activated by pedestrian push buttons. The pedestrian activated crosswalk warning system shall be placed at locations shown in the plans. Final locations shall be approved by the Engineer.

## REQUIREMENTS

### GENERAL

Warning beacons shall be in conformance with all applicable MUTCD standards and guidelines. After activation, the top and bottom yellow signal faces shall alternate flashing as described in the plans.

The Warning System shall include the mounted cabinet, controller, and electrical components (wiring, solid-state circuit boards, etc.) required to operate the pedestrian activated crosswalk warning system.

Individual components shall be replaceable independently of other components, equipped with approved terminal strips or wire-end molded connectors.

System shall be approved by the Engineer in writing prior to ordering the device.

### FUNCTIONAL

The Warning Beacons shall be normally dark, shall initiate operation only upon pedestrian actuation, and shall cease operation at a predetermined time after the pedestrian actuation. Pedestrian activation shall occur when the pedestrian push button is activated at the crossing.

The flash cycle duration should be based on the MUTCD procedures for timing of pedestrian clearance times for pedestrian signals: refer to MUTCD 2009 Section 4E.06 and any State-specified regulations.

The requirements for the flash rate of beacons shall meet the standards as stated in 2009 MUTCD Section 4L.01.

The Warning System shall require 110VAC provided from a new electric service installation as indicated in the plans.

The Warning System shall be activated by an ADA compliant push button.

When activated, the Warning System unit indications shall flash in alternating "wigwag" flashing sequence (top light on, then bottom light on).

All Warning System light indications shall be wired and synchronized (All lights will turn on within 120msec and remain synchronized through-out the duration of the flashing cycle).

The activation length of the flashing lights shall be programmable 1 second to 24 hours in increment of seconds, minutes and hours.



The system shall include an actuation counter providing data that can be downloaded on-site to a laptop computer using DB9 or USB type cables.

## MATERIALS

### CONTROLLER

The Controller shall be housed in a NEMA 4X rated aluminum enclosure, intended for indoor or outdoor use, primarily to provide a degree of protection against corrosion, windblown dust and rain, splashing water, hose-directed water, and damage from ice formation.

The Controller shall be reconfigurable if future MUTCD or State guidelines specify a different flash pattern.

The Controller shall be capable of storing input count data in preset intervals, with downloadable capabilities using optional Windows-based PC software program and standard RS232 programming cable.

The Controller shall be, in the unlikely event of failure, replaceable independently of other components.

### POWER SUPPLY

Power shall be supplied from the service installation for the lighting system.

The maximum total output from this supply is 30 watts.

### TESTING

The Contractor shall set up each cabinet in his or her shop for inspection by the Engineer. All phases that are utilized shall be hooked up to a light board to provide observation for each signal indication. The operation time shall be set to 17 seconds from activation of either pedestrian push button. A second activation during the 17 second initial period shall reset the timer to 17 seconds allowing additional users to cross the road. The Engineer shall be notified when the setup is complete so that all pertinent timings may be entered into the traffic signal controller. The facility shall be subject to a seven day burn-in period before installation will be allowed.

### CONSTRUCTION

The Warning System will be assembled, wired, and installed according to manufacturer's specifications and as detailed in the plans.

The push button shall be mounted on each sign post at right angles to the direction of approaching pedestrians and cyclists and be adjacent to a the level landing area portion of the sidewalk or multiuse path.

The controller shall be placed on the post where indicated in the plans.

All installation and user manuals shall be provided to the City of Peoria upon completion of the project.

A 30 day testing period shall follow completion of the installation before the improvements are turned over to the City of Peoria. During this period the Contractor will be responsible for maintaining the systems and addressing any problems noted by the Engineer with construction or performance of the system.

#### WARRANTY

The installation shall have a 3 year warranty on all parts and 1 year warranty on labor from the date of acceptance by the Engineer.

Method of Measurement: This work will be measured for payment as each per pedestrian activated crosswalk warning system included in the plans.

Basis of Payment: This work will be paid for at the contract unit price per Each for PEDESTRIAN ACTIVATED CROSSWALK WARNING SYSTEM which price shall be payment in full for all labor, materials, and equipment required to erect, wire, test and program the warning beacon controller and assembly.

The traffic signal post, foundations for each post, sign panels, pushbuttons, wiring between the push buttons and controller, signal heads, backplates, conduit and electrical wiring from the service installation to the controller, and conduit between the posts will be paid for separately.

#### **Z0033068 TRAFFIC SIGNAL BATTERY BACKUP SYSTEM**

The following models of Battery Backup Systems are approved for use within District Four:

Alpha Technologies Novus XFM 1100 (with standard IDOT cabinet or Alpha Technologies Side Mount 6 Integrated BBS Cabinet), Equipped with Ethernet SNMP Interface and Enhanced Capability Battery Monitoring System (AlphaGuard Plus)

Techpower Development DBL 1000MX. Equipped with Ethernet Communications Module

The Contractor shall be responsible for providing Battery Backup Systems that are sized appropriately for the intersection load. The total system load shall not exceed the manufacturer's specifications.

The battery backup systems for the existing traffic signal cabinets shall be installed as shown on the plan detail sheets and as follows:

- A separate circuit breaker shall be installed in the battery backup system cabinet (or in the traffic signal cabinet). The circuit breaker shall be rated equivalent to the main power circuit breaker rating in the existing traffic signal cabinet. The Contractor shall install #6 wiring from the test circuit breaker to the line voltage in the traffic signal cabinet. The circuit breaker shall be used to shut off the incoming utility power to test the battery backup system.

- The cabinet light, ventilation fans, heater strips, and service receptacle shall be wired to a separate circuit that will not be powered by the battery backup system
- A hole of sufficient size for the cables will be drilled into the side of the cabinet to accommodate the battery backup system cables and harnesses from the BBS cabinet. The hole shall be free of sharp edges and equipped with a plastic or rubber grommet.
- The fail safe automatic by-pass switch and blue indicator light shall be installed in the battery backup cabinet (or in the existing traffic signal cabinet).

GENERAL REQUIREMENTS: The Battery Back-up System (BBS) shall include, but not be limited to the following: inverter/charger, power transfer relay, batteries, battery cabinet, a separate failsafe automatic bypass switch and all necessary hardware and interconnect wiring. The BBS shall provide reliable emergency power to a traffic signal in the event of a power failure or interruption. The transfer from utility power to battery power and vice versa shall not interfere with the normal operation of traffic controller, conflict monitor/malfunction management unit or any other peripheral devices within the traffic controller assembly.

The BBS shall provide power for full run-time operation for an "LED-only" intersection (all colors red, yellow, and green) or flashing mode operation for an intersection using Red LED's. As the battery reserve capacity reaches 50%, the intersection shall automatically be placed in all-red flash. The BBS shall allow the controller to automatically resume normal operation after the power has been restored. The BBS shall log an alarm in the controller for each time it is activated.

All Battery Backup Systems shall include four batteries.

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

The BBS shall conform to the following specifications:

#### 1.0 OPERATION

- 1.1 The BBS shall be on line and provide voltage regulation and power conditioning when utilizing utility power.
- 1.2 The BBS shall provide a minimum two (2) hours of full run-time operation and four (4) hours all-red flash operation for an "LED-only" intersection (minimum 1000W/1000VA active output capacity, with 80% minimum inverter efficiency).
- 1.3 The maximum transfer time from loss of utility power to switchover to battery backed inverter power shall be 150 milliseconds.

- 1.4 The BBS shall provide the user with 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, rated at a minimum 120V/1A, and labeled so as to identify each contact. For typical configuration, see the plan detail sheet.
- 1.5 A first set of NO and NC contact closures shall be energized whenever the unit switches to battery power. Contact shall be labeled or marked "On Batt."
- 1.6 The second set of NO and NC contact closures shall be energized whenever the battery approaches approximately 40% of remaining useful capacity. Contact shall be labeled or marked "Low Batt."
- 1.7 The third set of NO and NC contact closures shall be energized two hours after the unit switches to battery power. Contact shall be labeled or marked "Timer."
- 1.8 The fourth set of NO and NC contact closures shall be energized in the event of inverter/charger failure, battery failure or complete battery discharge. Contact shall be labeled or marked "BBS Fail or Status."
- 1.9 A surge suppression unit shall be provided for the output power if available as an option by the BBS manufacturer.
- 1.10 Operating temperature for both the inverter/power transfer relay and failsafe automatic bypass switch shall be -37 °C to +74 °C.
- 1.11 The Power Transfer Relay shall be rated at 240VAC/30AMPS minimum and failsafe automatic bypass switch shall be rated at 240VAC/20 amps, minimum.
- 1.12 The fail safe automatic bypass switch shall be wired to provide power to the BBS when the switch is set to bypass.
- 1.13 The BBS shall use a temperature-compensated battery charging system. The charging system shall compensate over a range of 2.5 – 4.0 mV/°C per cell.
- 1.14 The temperature sensor shall be external to the inverter/charger unit. The temperature sensor shall come with 2 meters (6'6") of wire.
- 1.15 Batteries shall not be recharged when battery temperature exceeds 50°C ± 3°C.
- 1.16 BBS shall bypass the utility line power whenever the utility line voltage is outside of the following voltage range: 100VAC to 130VAC (± 2VAC).
- 1.17 When utilizing battery power, the BBS output voltage shall be between 110 VAC and 125 VAC, pure sine wave output, ± 3% THD, 60Hz ± 3Hz.
- 1.18 BBS shall be compatible with Illinois DOT's traffic controller assemblies utilizing NEMA TS 1 or NEMA TS 2 controllers and cabinet components for full time operation.
- 1.19 When the utility line power has been restored at above 105 VAC ± 2 VAC for more than 30 seconds, the BBS shall dropout of battery backup mode and return to utility line mode.

- 1.20 When the utility line power has been restored at below 125VAC  $\pm$  2 VAC for more than 30 seconds, the BBS shall dropout of battery backup mode and return to utility line mode.
- 1.21 BBS shall be equipped to prevent a malfunction feedback to the cabinet or from feeding back to the utility service.
- 1.22 In the event of inverter/charger failure, battery failure or complete battery discharge, the power transfer relay shall revert to the NC state, where utility line power is reconnected to the cabinet. The BBS shall always revert back to utility line power and shall be designed to revert back to utility line power in the event of a BBS fault condition.
- 1.23 Recharge time for the battery, from "protective low-cutoff" to 80% or more of full battery charge capacity, shall not exceed twenty (20) hours.
- 1.24 When the intersection is in battery operation, the BBS shall bypass all internal cabinet lights, ventilation fans, heater strips, and service receptacles.
- 1.25 The fail safe automatic bypass switch shall be wired to provide power to the BBS when the switch is set to bypass.
- 1.26 A blue LED indicator light shall be mounted on the front of the traffic signal cabinet or on the side of the BBS cabinet facing traffic and shall turn on to indicate when the cabinet power has been disrupted and the BBS is in operation. The light shall be a minimum 1" diameter, be viewable from the driving lanes, and shall be large enough and visible enough to be seen from 200 ft. away.
- 1.27 All 36 volt and 48 volt systems shall include an external component that monitors battery charging to ensure that every battery in the string is fully charged. The device shall compensate for the effects of adding a new battery to an existing battery system by ensuring that the charge voltage is spread equally across all batteries. All cables, harnesses, cards, and other components that are required to provide the functionality described above shall be included in the unit bid price for the battery backup system. The following products are currently approved for use within District 4: Alpha Technologies: AlphaGuard with Charge Management Technology Module.
- 1.28 The BBS shall be equipped with an integrated safety switch that will interrupt inverter output power in the event of a cabinet knockdown. The safety switch may be either internal to the inverter/charger or externally mounted inside of the BBS cabinet. The safety switch shall be designed to interrupt output power in the event that the charger/inverter is tilted more than twenty degrees on any axis. The switch shall be mechanically latching to ensure that power is not automatically restored to the BBS until the charger/inverter has been "reset". The switch shall also be resettable and reusable unless it has been physically damaged.

## 2.0 MOUNTING AND CONFIGURATION

### 2.1 GENERAL

- 2.2 Inverter/Charger Unit shall be rack or shelf-mounted.
- 2.3 (Reserved).
- 2.4 All interconnect wiring provided between Power Transfer Relay, Bypass Switch and Cabinet Terminal Service Block shall be no greater than two (2) meters (6'6") of #10 AWG wire.
- 2.5 Relay contact wiring provided for each set of NO/NC relay contact closure terminals shall be #18 AWG wire.
- 2.6 All necessary hardware for mounting (shelf angles, rack, etc) shall be included in the bid price of the BBS. The swing-trays shall be screwed to the Type IV or Type V NEMA cabinets using continuous stainless steel or aluminum piano hinge. All bolts/fasteners and washers shall be ½" diameter galvanized or stainless steel.
- 3.0 EXTERNAL BATTERY CABINET
- 3.1 The external cabinet shall be a rated NEMA Type 3R Cabinet.
- 3.2 Inverter/Charger and Power Transfer Relay shall be installed inside the external battery cabinet and the failsafe automatic bypass switch shall be installed inside the existing traffic signal cabinet or proposed battery backup cabinet.
- 3.3 Batteries shall be housed in the external cabinet which shall be NEMA Standard rated cabinet mounted to the side of the Type IV or Type V Cabinet (see plan sheets for details). This external battery cabinet shall conform to the IDOT Standard Specifications for traffic signal cabinets for the construction and finish of the cabinet.
- 3.4 The external battery cabinet shall mount to the Type IV or Type V NEMA Cabinet with a minimum of four (4) bolts to the satisfaction of the Engineer.
- 3.5 The dimensions of the external battery cabinet shall be 25" (L) x 16" (W) x 41" (H) and installed in accordance with the plan sheet cabinet detail and this specification.
- 3.6 The cabinet shall include heater mats for each battery shelf and/or battery. If the BBS charger/inverter does not have facilities to accommodate heater mat connections, thermostatically controlled heater mats shall be provided with the system. The heater mat thermostat shall be a separate thermostat (from the ventilation fan thermostat) and be adjustable from 0°F to 32°F for heater mat turn-on.
- 3.7 A warning sticker shall be placed on the outside of the cabinet indicating that there is an Uninterruptible Power Supply inside the cabinet.
- 3.8 The external battery cabinet shall be ventilated through the use of louvered vents (2), filters, and one thermostatically controlled fan as per NEMA TS 2 Specifications. The cabinet shall include a cleanable or replaceable cabinet filter.
- 3.9 External battery cabinet fan shall be AC operated from the same line output of the bypass Switch that supplies power to the Type IV or Type V Cabinet.

3.10 The BBS with external battery cabinet shall come with all bolts, conduits and bushings, gaskets, shelves, and hardware needed for mounting. The external battery cabinet shall have a hinged door opening to the entire cabinet. The cabinet shall include a bottom constructed from the same material as the cabinet.

3.11 The external cabinet shall be equipped with a power receptacle to accommodate the inverter/charger. The receptacle shall be wired to the line output of the manual bypass switch.

#### 4.0 MAINTENANCE, DISPLAYS, CONTROLS AND DIAGNOSTICS

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

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

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

4.4 The BBS and batteries shall be easily replaced with all needed hardware and shall not require any special tools for installation.

4.5 The BBS shall be equipped with a RS-232 port.

4.6 The BBS shall include a resettable front-panel event counter display to indicate the number of times the BBS was activated and a front-panel hour meter to display the total number of hours the unit has operated on battery power.

4.7 Manufacturer shall include two (2) sets of equipment lists, operation and maintenance manuals, and board-level schematic and wiring diagrams of the BBS, and the battery data sheets. Manufacturer shall include any software needed to monitor, diagnose, and operate the BBS. The manufacturer shall include any required cables to connect to a laptop computer.

4.8 The BBS shall include a data cable for the serial connection to the RS232 port and diagnostic software if it is available as an option with the unit (only two cables required for project).

4.9 One copy of the owner/maintenance manuals shall be provided with the BBS.

#### 5.0 BATTERY SYSTEM

5.1 Individual batteries shall be 12V type and shall be easily replaced and commercially available off the shelf.

5.2 The batteries shall be premium gel type with a 5 year full replacement warranty.

5.3 Batteries used for BBS shall consist of a minimum of four (4) to eight (8) batteries with a cumulative minimum rated capacity of 240 amp-hours.

- 5.4 Batteries shall be deep cycle, completely sealed, silver alloy VRLA (Valve Regulated Lead Acid) requiring no maintenance with maximum run time.
- 5.5 Batteries shall be certified by the manufacturer to operate over a temperature range of –40°C to +71°C.
- 5.6 The batteries shall be provided with appropriate interconnect wiring and corrosion-resistant mounting trays and/or brackets appropriate for the cabinet into which they will be installed.
- 5.7 Batteries shall indicate maximum recharge data and recharging cycles.
- 5.8 Battery interconnect wiring shall be via modular harness. Batteries shall be shipped with positive and negative terminals pre-wired with red and black cabling that terminates into a typical power-pole style connector. Harness shall be equipped with mating power-pole style connectors for batteries and a single, insulated plug-in style connection to inverter/charger unit. Harness shall allow batteries to be quickly and easily connected in any order and shall be keyed and wired to ensure proper polarity and circuit configuration.
- 5.9 Battery terminals shall be covered and insulated so as to prevent accidental shorting.

#### 6.0 QUALITY ASSURANCE

- 6.1 BBS shall be manufactured in accordance with a manufacturer quality assurance (QA) program. The QA program shall include two types of quality assurance: (1) Design quality assurance and (2) Production quality assurance. The production quality assurance shall include statistically controlled routine tests to ensure minimum performance levels of BBS units built to meet this specification and a documented process of how problems are to be resolved.
- 6.2 QA process and test results documentation shall be kept on file for a minimum period of seven years.
- 6.3 Battery Backup System designs not satisfying design qualification testing and the production quality assurance testing performance requirements described below shall not be labeled, advertised, or sold as conforming to this specification.

#### 7.0 DESIGN QUALIFICATION TESTING

- 7.1 The manufacturer, or an independent testing lab hired by the manufacturer, shall perform design Qualification Testing on new BBS designs, and when a major design change has been implemented on an existing design. A major design change is defined as a design change (electrical or physical) which changes any of the performance characteristics of the system, or results in a different circuit configuration.
- 7.2 Burn In. The sample systems shall be energized for a minimum of 5 hours, with full load of 700 watts, at temperatures of +74°C and -37°C., excluding batteries, before performing any design qualification testing.



- 7.3 Any failure of the BBS, which renders the unit non-compliant with the specification after burn-in, shall be cause for rejection.
- 7.4 For Operational Testing, all specifications may be measured including, but not limited to:
- 7.5 Run time while in battery backup mode, at full load.
- 7.6 Proper operation of all relay contact closures ("On-Batt", "Low-Batt", "Timer" and "BBS-Fail").
- 7.7 Inverter output voltage, frequency, harmonic distortion, and efficiency, when in battery backup mode.
- 7.8 All utility mode – battery backup mode transfer voltage levels. See Section 1 Operation.
- 7.9 Power transfer time from loss of utility power to switchover to battery backed inverter power.
- 7.10 Backfeed voltage to utility when in battery backup mode.
- 7.11 IEEE/ANSI C.62.41 compliance.
- 7.12 Battery charging time.
- 7.13 Event counter and runtime meter accuracy.

#### 8.0 PRODUCTION QUALITY CONTROL TESTING

- 8.1 Production Quality Control tests shall consist of all of the above listed tests and shall be performed on each new system prior to shipment. Failure to meet requirements of any of these tests shall be cause for rejection. The manufacturer shall retain test results for seven years.
- 8.2 Each BBS shall be given a minimum 100-hour burn-in period to catch any premature failures.
- 8.3 Each system shall be visually inspected for any exterior physical damage or assembly anomalies. Any defects shall be cause for rejection.

#### 9.0 WARRANTY

- 9.1 Manufacturers shall provide a minimum two (2) year factory-repair warranty for parts and labor on the BBS from date of acceptance by the State. Batteries shall be warranted for full replacement for five (5) years from date of purchase. The warranty shall be included in the total bid price of the BBS.
- 9.2 The Contractor shall furnish a warranty certificate for each Battery Backup System that includes the equipment description and details, serial numbers, effective dates, and the details of the warranty regarding materials and labor. The warranty period shall begin on the date of installation and the warranty certificate shall reflect this date.

Method of Measurement: This work will be measured for payment as each per traffic signal battery backup signal included in the plans.

Basis of Payment: The above work will be paid for at the contract unit price each for TRAFFIC SIGNAL BATTERY BACKUP SYSTEM shall be payment in full for all labor, materials, and equipment required to provide, install, and test the battery backup system described above, complete.

## **CCTV CAMERA INSTALLATION SPECIAL PROVISIONS**

### **CONTRACT GUARANTEE**

The Contractor shall guarantee all electrical equipment, apparatus, materials, and workmanship provided under the contract for a period of six (6) months after the date of final inspection according to Article 801.14.

All instruction sheets required to be furnished by the manufacturer for materials and supplies and for operations shall be delivered to the Engineer prior to the acceptance of the project, with the following warranties and guarantees:

1. The manufacturer's standard written warranty for each piece of electrical equipment or apparatus furnished under the contract.
2. The Contractor's written guarantee that, for a period of six (6) months after the date of final inspection of the project, all necessary repairs to or replacement of said warranted equipment, or apparatus shall be made by the Contractor at no cost to the Department.
3. The Contractor's written guarantee for satisfactory operation of all electrical systems furnished and constructed under the contract for a period of 6 months after final inspection of the project.

### **SYSTEM IMPLEMENTATION, EQUIPMENT INTEGRATION AND SUPPORT**

The Contractor shall install the CCTV cameras at the locations indicated on the plans.

All furnished components shall be subject to a 30 day burn-in period. The system along with all of its components shall be fully and functionally operational before any acceptance testing will be initiated. After the system has been accepted by the Engineer, the system shall begin a thirty-day "burn-in" period immediately after the successful completion of the acceptance test. During the "burn-in" period, all components shall perform continuously, without any interruption of operation, for a period of thirty days. In the event that there are operational problems during the burn-in period, the burn-in period shall reset back to day one.

After the successful completion of the burn-in period, the system will have completed final acceptance.

Integration of the proposed cameras into the existing ITS system will be by others. The contractor shall be responsible for installing the proposed CCTV cameras on the proposed mast arm structures and proposed lighting pole structures in accordance with the plans, specifications, and manufacturers recommended practices.

This work will not be paid for separately, but shall be included in the contract bid price.

**LOCATION OF UNDERGROUND CITY MAINTAINED FACILITIES**

The Contractor shall be responsible for locating and providing protection for facilities during all phases of construction. If at any time, the facilities are damaged, the Contractor shall immediately notify the City Engineering Department and make all necessary arrangements for repair to the satisfaction of the Engineer. The work shall be included in the contract bid price and no additional compensation will be allowed.

**X0326812 CAT 5 ETHERNET CABLE**

This work shall be in accordance with Sections 873, 1076, and 1088 of the Standard Specifications except as modified herein.

This work shall consist of furnishing and installing an outdoor rated CAT5E cable in conduits, handholes, and poles.

The cable shall be rated for outdoor use and conform to the following specifications:

- Outdoor CMX Rated Jacket (climate/oil resistant jacket)
- UV Resistant Outer Jacket Material (PVC-UV, UV Stabilized)
- Outer Jacket Ripcord
- Designed For Outdoor Above- Ground or Conduit Duct applications
- Cat5E rated to 350MHz (great for 10/100 or even 1000mbps Gigabit Ethernet)
- Meets TIA/EIA 568b.2 Standard
- Shielded Twist Pair
- 4 Pairs, 8 Conductors
- 24AWG, Solid Core Copper
- UL 444 ANSI TIA/EIA-568.2 ISO/IEC 11801
- RoHS Compliant
- Water Blocking Gel

Method of Measurement: This work will be measured for payment in feet according to Article 873.05.

Basis of Payment: This work will be paid for at the contract unit price per foot for CAT 5 ETHERNET CABLE, which shall be payment in full for all labor, equipment, and materials required to provide and install the cable described above, complete.

**X0326905 CLOSED-CIRCUIT TELEVISION DOME CAMERA, IP BASED**

Description. This work shall consist of furnishing and installing an integrated Closed-Circuit Television (CCTV) Dome Camera Assembly, camera brackets, and all other items required for installation and operation. This assembly shall contain all components identified in the Materials Section and shall be configured as indicated on the plan sheets.

Materials.

The CCTV camera shall be an Axis Model Q6055-E Dome Camera Assembly for integration into the existing District 4 ITS system.

The Contractor shall provide all materials required to install the proposed camera on the proposed sign structure camera mast as shown on the plan sheets.

The Contractor shall submit catalog cut sheets to the Department for all items (mounting brackets, hardware, etc.) that will be utilized for review prior to commencing work.

The Department will program the cameras.

The camera shall meet or exceed the following specifications:

CAMERA

VIDEO:	60 Hz (NTSC), 50 Hz (PAL)
IMAGE SENSOR:	1/2.8" progressive scan CMOS
LENS:	4.44–142.6 mm, F1.6–4.41 Horizontal angle of view: 62.8°–2.23° Vertical angle of view: 36.8°–1.3° Autofocus, auto-iris
DAY AND NIGHT:	Automatically removable infrared-cut filter
MINIMUM ILLUMINATION:	Color: 0.3 lux at 30 IRE F1.6 B/W: 0.03 lux at 30 IRE F1.6 Color: 0.5 lux at 50 IRE F1.6 B/W: 0.04 lux at 50 IRE F1.6
SHUTTER TIME: NTSC:	1/33000 s to 1/3 s with 50 Hz 1/33000 s to 1/4 s with 60 Hz
PAN/TILT/ZOOM:	Pan: 360° endless, 0.05° - 450°/s Tilt: 220°, 0.05°-450°/s 32x optical zoom and 12x digital zoom, total 384x zoom E-flip, 256 preset positions, Tour recording, Guard tour, Control queue, On-screen directional indicator, Set new pan 0°, Adjustable zoom speed

VIDEO

VIDEO COMPRESSION:	H.264 (MPEG-4 Part 10/AVC), Motion JPEG
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RESOLUTIONS: HDTV 1080p 1920x1080 to 320x180  
HDTV 720p 1280x720 to 320x180

FRAME RATE (H.264): Up to 60/50 fps (60/50 Hz) in HDTV 720p  
Up to 30/25 fps (60/50 Hz) in HDTV 1080p

VIDEO STREAMING: Multiple, individually configurable streams in H.264 and Motion JPEG, Axis' Zipstream technology, Controllable frame rate and bandwidth, VBR/MBR H.264

IMAGE SETTING: Manual shutter time, compression, color, brightness, sharpness, white balance, exposure control, exposure zones, fine tuning of behavior at low light, rotation: 0°, 180°, text and image overlay, 32 individual 3D privacy masks, image freeze on PTZ, automatic defog, backlight compensation Wide Dynamic Range (WDR): Up to 120 dB depending on scene, highlight compensation

## NETWORK

SECURITY: Password protection, IP address filtering, HTTPSa encryption, IEEE 802.1Xa network access control, Digest authentication, User access log, Centralized Certificate Management

PROTOCOLS: IPv4/v6, HTTP, HTTPSa, SSL/TLSa, QoS Layer 3 DiffServ, FTP, CIFS/SMB, SMTP, Bonjour, UPnP, SNMP v1/v2c/v3 (MIB-II), DNS, DynDNS, NTP, RTSP, RTP, SFTP, TCP, UDP, IGMP, RTCP, ICMP, DHCP, ARP, SOCKS, SSH, NTCIP

## SYSTEM INTEGRATION

APPLICATION PROG Open API for software integration, including VAPIX®

INTERFACE: and AXIS Camera Application Platform; specifications at [www.axis.com](http://www.axis.com), AXIS Video Hosting System (AVHS) with One-Click Connection, ONVIF Profile S, specification at [www.onvif.org](http://www.onvif.org)

ANALYTICS: Video motion detection, Autotracking, Active Gatekeeper Basic Analytics (not to be compared with third-party analytics): Object removed, Enter/Exit detector, Fence detector, Object Counter, Highlight compensation, Support for AXIS Camera Application Platform enabling installation of third-party applications, see [www.axis.com/acap](http://www.axis.com/acap)

EVENT TRIGGERS: Detectors: Live stream accessed, Video motion detection, Shock Detection, Object removed, Enter/Exit detector, Fence detector,

Object counter; Hardware: Fan, Network, Temperature, Casing Open; PTZ: Autotracking, Error, Moving, Ready, Preset Reached; Storage: Disruption, Recording; System: System Ready; Time: Recurrence, Use Schedule; Input signal: Manual trigger, Virtual input

EVENT ACTIONS: Day/night mode, overlay text, video recording to edge storage, pre- and post-alarm video buffering, send SNMP trap  
PTZ: PTZ preset, start/stop guard tour  
File upload via FTP, SFTP, HTTP, HTTPS network share and Email; Notification via email, HTTP, HTTPS and TCP

DATA STREAMING Event data

BUILT IN INSTALLATION Pixel Counter  
AIDS

#### GENERAL

CASING: IP66-, NEMA 4X- and IK10-rated  
Metal casing (aluminum), polycarbonate (PC) clear dome, sunshield (PC/ASA)

SUSTAINABILITY: PVC Ffree

MEMORY: 512 MB RAM, 128 MB Flash

POWER CAMERA: Axis High PoE midspan 1-port: 100–240 V AC, max 74 W  
Camera consumption: typical 16 W, max 60 W

CONNECTORS: RJ45 10BASE-T/100BASE-TX PoE, RJ45 Push-pull Connector (IP66) included

EDGE STORAGE: Support for SD/SDHC/SDXC card  
Support for recording to dedicated network-attached storage (NAS); For SD card and NAS recommendations see [www.axis.com](http://www.axis.com)

OPERATING With 30 W midspan: -20 °C to 50 °C (-4 °F to 122 °F)

CONDITIONS: With 60 W midspan: -50 °C to 50 °C (-58 °F to 122 °F)  
Maximum temperature (intermittent): 60 °C (140 °F)  
Arctic Temperature Control: Start-up as low as -40 °C (-40 °F)  
Humidity 10–100% RH (condensing)

APPROVALS:	EMC: EN 55022 Class A, EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, EN 61000-6-2, EN 55024, FCC Part 15 Subpart B Class A, ICES-003 Class A, VCCI Class A, RCM AS/NZS CISPR 22 Class A, KCC KN32 Class A, KN35  Safety: IEC/EN/UL 60950-1, IEC/EN/UL 60950-22  Environment: EN 50121-4, IEC 62236-4, IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60721-4-3, NEMA 250 Type 4X, IEC 60068-2-30, IEC 60068-2-60, IEC 60068-2-78, IEC/EN 60529 IP66, NEMA TS-2-2003 v02.06, Subsection 2.2.7, 2.2.8, 2.2.9; IEC 62262 IK10, ISO 4892-2  Midspan: EN 60950-1, GS, UL, cUL, CE, FCC, VCCI, CB, KCC, UL-AR
WEIGHT:	3.7 kg (8.2 lb.)
INCLUDED ACCESSORIES:	Axis High PoE 60 W midspan 1-port, RJ45 Push-pull Connector (IP66), Sunshield, Installation Guide, Windows decoder 1-user license
VIDEO MANAGEMENT:	AXIS Camera Companion, AXIS Camera Station, Video
SOFTWARE:	management software from Axis' Application Development Partners available on <a href="http://www.axis.com/techsup/software">www.axis.com/techsup/software</a>
WARRANTY:	Axis 3-year warranty and AXIS Extended Warranty option

#### Environmental Enclosure/Housing

The environmental enclosure shall be designed to physically protect the integrated camera from the outdoor environment and moisture via a sealed enclosure. If the option exists in the standard product line of the manufacturer, the assembly shall be supplied with an integral sun shield. The enclosure shall be fully water and weather resistant with a NEMA 4 rating or better.

The camera dome shall be constructed of distortion free acrylic or equivalent material that must not degrade from environmental conditions. The environmental housing shall include a camera-mounting bracket. In addition, the environmental housing shall include a heater, blower, and power surge protector. An integral fitting compatible with a standard 1-1/2 in (38.1 mm) NPT pipe, suitable for outdoor pendant mounting shall also be provided.

The enclosure shall be equipped with a heater controlled by a thermostat. The heater shall turn on when the temperature within the enclosure falls below 40° F (4.4°C). The heater shall turn

off when the temperature exceeds 60°F (15.6°C). The heater will minimize internal fogging of the dome faceplate when the assembly is operated in cold weather.

In addition, a fan shall be provided as part of the enclosure. The fan will provide airflow to ensure effective heating and to minimize condensation.

The enclosure shall be equipped with a hermetically sealed, weatherproof connector, located near the top for external interface with power, video, and control feeds.

#### CCTV Dome Camera Mounting Supports

The Contractor shall furnish and install an Axis Pole Mount Bracket T91A67 (Part Number 5017-671) for camera installation on traffic signal mast arms and CCTV camera poles and stainless steel banding as required.

Mounting supports shall be configured as shown on the camera support detail plans and as approved by the Engineer. Mount shall be of aluminum construction with enamel or polyester powder coat finish. Braces, supports, and hardware shall be stainless steel. Wind load rating shall be designed for sustained gusts up to 90 mph (145 km/hr), with a 30% gust factor. Load rating shall be designed to support up to 75 lb (334 N). For roof or structural post/light pole mounting, mount shall have the ability to swivel inward for servicing. The mounting flange shall use standard 1-1/2 inch (38.1 mm) NPT pipe thread.

#### Connecting Cables

The Contractor shall furnish and install outdoor rated, shielded CAT 5E cable. The cable shall be terminated using the IP66 rated RJ-45 connector on the camera end and a shielded RJ-45 connector in the cabinet. The Contractor shall test the cable prior after termination.

Cable will be paid for separately under the pay item CAT 5 ETHERNET CABLE.

#### Construction Requirements.

##### General

The Contractor shall prepare a shop drawing detailing the complete CCTV Dome Camera Assembly and installation of all components to be supplied for approval of the Engineer. Particular emphasis shall be given to the cabling and the interconnection of all of the components.

The Contractor shall install the CCTV dome camera assembly at the locations indicated in the Plans. The CCTV Dome Camera Assembly shall be mounted on a pole, wall, or other structure.

##### Testing



The Contractor shall test each installed CCTV Dome Camera Assembly. The test shall be conducted from the field cabinet using the standard communication protocol and a laptop computer. The Contractor shall verify that the camera can be fully exercised and moved through the entire limits of Pan, Tilt, Zoom, Focus and Iris adjustments, using both the manual control and presets. The Contractor shall maintain a log of all testing and the results. A representative of the Contractor and a representative of the Engineer shall sign the log as witnessing the results. Records of all tests shall be submitted to the Engineer prior to accepting the installation.

Method of Measurement. The closed circuit television dome camera bid item will be measured for payment by the actual number of CCTV dome camera assemblies furnished, installed, tested, and accepted.

Basis of Payment. Payment will be made at the contract unit price for each CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED including all equipment, material, testing, documentation, and labor detailed in the contract documents for this bid item.

#### **X8710050 FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH**

The Contractor shall furnish a fiber optic drop and repeat switch (material only) complete with the accessories specified below and deliver it to the Department.

The fiber optic drop and repeat switch shall meet or exceed the following minimum specifications:

Approved Models: Antaira (Aaxeon) Technologies Model LNX-0702G-SFP-T (7-Port (5-port 10/100T + 2 10/100/1000T SFP ports Industrial Ethernet Switch, Wide Operating Temperature).

Features:

- 5-Port 10/100/1000TX + 2-Port 10/100/1000T/ SFP Slots
- Supports Auto MDI/MDI-X Function
- Store-and-Forward Switching Architecture
- 10Gbps Back-Plane (Switching Fabric)
- 1 Mbits Memory Buffer
- 8K MAC Address Table
- 9.6 Kbytes Jumbo Frame Support
- Wide-Range Redundant Power Design
- Power Polarity Reserve Protect
- Provides EFT Protection 2000 VDC for Power Line
- Supports 6000 VDC Ethernet ESD Protection
- IP30 Rugged Aluminum Case Design
- 5-Year Warranty

- Standard:
- IEEE 802.3 10BaseT Ethernet
  - IEEE 802.3u 100BaseTX Fast Ethernet
  - IEEE 802.3ab 1000BaseT
  - IEEE 802.3az Gigabit Fiber
- Protocol:
- CSMA/CD
- Switch Architecture:
- Back-Plane (Switching Fabric): 10Gbps
  - Packet Throughput Ability (Full-Duplex): 10.7Mpps @ 64bytes
- Transfer Rate:
- 14,880pps for Ethernet Port
  - 148,800pps for Fast Ethernet Port
  - 1,488,000pps for Gigabit Fiber Ethernet Port
- MAC Address:
- 8K MAC Address Table
- Jumbo Frame:
- 9.6 Kbytes
- Memory Buffer:
- 7,926 pps (default)
- LED:
- Unit: Power 1, Power 2, Fault
  - 10/100 TX: Link/Activity, Full Duplex/Collision
  - Gigabit Copper: Link/Activity, Speed
  - SFP: Link/Activity
- Connector:
- 5 x 10/100/1000T
  - 2 x 100/1000 SFP Sockets
- Network Cable:
- 10BaseT: 2-pair UTP/STP Cat. 3, 4, 5 cable EIA/TIA-568 100-ohm (100m)
  - 100BaseTX: 2-pair UTP/STP Cat. 5 cable EIA/TIA-568 100-ohm (100m)
  - 1000BaseTX: 2-pair UTP/STP Cat. 5/5E
- Power Supply:
- DC 12 ~ 48V, Redundant Power with Polarity Reverse Protect Function and Removable Terminal Block
- Power Consumption:
- 9 Watts
- Reverse Polarity Protection:
- Present
- Overload Current Protection:
- Present
- Mechanical:
- Casing: IP30 Metal Case
  - Dimension (W x H x D): 72 x 152 x 105 mm (2.83 x 4.13 x 5.98 in.)
  - Installation: DIN-Rail/Wall Mountable

- Weight:
- Unit Weight: 1.0 lbs.
  - Shipping Weight: 1.5 lbs.
- Operation Temperature:
- Wide Operating Temperature: -40° C to 75° C (-40° F to 176° F)
- Operation Humidity:
- 5% to 95% (Non-condensing)
- Storage Temperature:
- -40° C to 85° C
- EMI:
- FCC Class A
- EMS:
- EN6100-4-2,3,4,5,6,8,11,12
  - EN6100-6-2,4
- Safety:
- UL, cUL, CE EN60950-1
- Stability Testing:
- Shock: IEC60068-2-27
  - Free Fall: IEC60068-2-32
  - Vibration: IEC60068-2-6
- Warranty:
- 5-Year Warranty

The following items shall also be included with each switch:

- SFP Fiber Optic Module – Qty. 2 (Aaxeon SFP-S10-T, 1.25Gbps Ethernet SFP Transceiver, Single Mode 10KM / LC / 1310nm, -40°C~85°C)
- Fiber Optic Patch Cables – Qty. 2 (single mode fiber, 1 meter length, duplex, LC/ST connectors)

Basis of Payment: This work will be paid for at the contract unit price per each for FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH which price shall be payment in full for all labor, materials, and equipment required to provide the fiber optic Ethernet drop and repeat switch and associated equipment and deliver it to the Department.

## **LIGHTING SPECIAL PROVISIONS**

### **RESPONSIBILITY OF CONTRACTOR**

The Contractor shall deliver complete lighting systems, thoroughly tested and in operating condition. He is cautioned to use the procedures outlined. For example, it is necessary that the wiring be meggered in the presence of the Engineer. All defective or damaged parts must be replaced at no extra cost before payment will be made, even though approval has been given to use the parts on the basis of manufacturer's specifications and descriptions.

Any negligence on the part of the Contractor to comply with these provisions or any part thereof, may be considered by the City of Peoria as cause for default of contract in accordance with Section 105 of the "Standard Specifications for Road and Bridge Construction".

### **DELIVERY OF MATERIALS**

The Contractor shall designate on his progress schedule the quoted shipment on the poles, luminaries, ballasts, and wiring materials that he will use to construct the project.

### **GUARANTEES**

If a guarantee is included in the standard sales prices of any items at no extra cost, the Contractor shall supply the Engineer with a copy. Lamps, luminaries, ballasts, photocells, contactors, and circuit breakers may have such a guarantee.

### **EXCAVATION OF FOUNDATIONS NEAR UTILITIES**

Due to the presence of numerous utilities within the project limits, especially in the areas where light poles will be erected, the contractor shall hydrovac excavate all foundations where a potential utility conflict may exist with any existing facility to remain in service at the completion of construction. This is expected to include nearly all of the proposed light pole locations. The cost for hydrovac excavation shall be included with the light pole foundation pay item.

### **PROSECUTION OF WORK**

The Engineer will determine the date for starting the work on the contract and shall give the Contractor ten (10) days' notice thereof.

The Contractor shall construct the lighting system in the following stages:

1. *Conduits, except for services*
2. *Foundations and handholes*
3. *Wiring, except in poles and services*
4. *Poles, luminaires, ballasts, lamps and pole wiring*
5. *Controllers and services*

Stages may run in succession in any order or concurrently. Stages running concurrently will be combined into a single stage.

### **GROUNDING**

All poles and the control cabinet shall be connected to a continuous ground consisting of copper wire 1/C #6 AWG, green color insulated or bare electric cable, and the handhole cover and frame shall be grounded in accordance with State Standard 873001-02. The conductor shall be installed with the insulated cables inside the conduit.

The ground conductor shall have no splices or kinks below grade. It shall be solidly connected to the grounding lug on each pole and to the ground rod at the service installation.

Driven ground rods, connectors, connecting ground wire and their installation are included with the device being grounded. No extra compensation will be allowed.

### **WIRING TESTS**

The tests outlined in this section are witness tests to be performed during construction in the presence of the Engineer at times approved by the Engineer. They shall be performed by the Contractor's personnel and with his equipment. The cost is incidental and no extra compensation will be allowed.

Testing will be performed at opportune times before final inspection. Defects shall be corrected and testing repeated until all sections of the installation are sound. Splicing or repairing of insulation below grade is not permissible except in handhole.

All data required herein shall be read and recorded at the time of the test by the Engineer in the log which will be retained by him for examination and approval at the time of final inspection. It is the responsibility of the Contractor to make certain that the log is complete and the data proves that the system performance exceeds the minimum requirements. Approval for payment will be given only if a complete log is submitted by the Engineer at time of final inspection and the final, corrected system meets the minimum requirements.

It is the purpose of the test to confirm the quality of insulation in the wiring.

All construction shall be finished when tests are made. The pole shall be erected with Drivers and LED Light Engines in-place. Trenches shall be backfilled and all connection shall be made up in handholes, poles and control cabinets.

Insulation resistance shall be measured with a megger generating not less than 500 nor more than 1,000 volts. A multimeter is not acceptable because it applies only a few volts which will permit some insulation defects to go undetected. Erratic behavior of the megger during the test indicates an intermittent weakness which must be corrected. Only the lowest value indicated shall be considered or recorded.

The Engineer shall log the serial number and voltage rating of the megger used by the Contractor. He shall then confirm the calibration of the megger by connecting the two leads of the megger together so that the resistance to be measured by the megger when it is turned to full speed is zero. Unless this is true, the megger will give false readings under all other circumstances as well.

Each circuit shall be permanently tagged for identification and then tested at the control centers. The full voltage of the megger shall be applied between ground and each insulated wire in each circuit. The ground shall consist of a driven copper clad rod 2.4 m x 16 mm or larger, connected by #6 AWG wire to the power company neutral in the control cabinet. Circuits shall be isolated from each other by opening the circuit breakers.

All conductors shall be meggered pole to pole before connecting to the light fixtures.

**83006200 LIGHT POLE, ALUMINUM, 30 FT. M.H., 6 FT. MAST ARM**

Description: This work shall consist of furnishing all equipment, material and labor necessary to properly install the proposed sidewalk luminaires at locations as indicated on the plans.

Materials: The materials shall be in accordance with Article 830.02 of the "Standard Specifications", plan details, and the following:

Intersection lighting poles shall be 30 feet in height with 6-foot decorative mast arms. For intersection lighting poles that include sidewalk lighting fixtures, the sidewalk fixtures shall be mounted at 12 feet in height with 16-inch decorative arms.

Roadway lighting poles shall be manufactured by U.S Architectural Lighting, Sternberg Lighting, or Kim Lighting.

Arm: Durable Corrosion Resistant, Extruded Aluminum Construction.

Shaft: 16 sharp flute, round tapered steel shaft has 9.0" butt tapering to 5.2" top (7 gauge). Minimum yield strength 55,000 P.S.I. Handhole is provided with cover at 20" from bottom of base plate. Shaft provided with 42" smooth bottom section.

Anchor Base: Fabricated from structural quality hot rolled steel base telescopes and is circumferentially welded to shaft.

Base Cover: Two piece wraparound, corrosion resistant, durable cast aluminum construction, minimum 0.25" wall thickness. Base consists of a smooth tapered bottom section and a decorative tapered fluted section with evenly spaced raised vertical flutes. Base is furnished with a contoured, fluted flush handhole and cover. Handhole cover supplied with tamper resistant hardware. (4) 1/4"-20 set screws provided to secured decorative base to shaft.

Anchorage: (4) 1" X 36" anchor bolt, each supplied with two nuts and two washers.

Finish: The aluminum pole, pole base, bracket arms and attachments shall be painted black using a powder coat process. They shall be cleaned prior to the powder coat process by the immersion process using both an alkaline and acid bath. The black finish shall be a thermosetting powder coat. The powder resin shall be type TGIC super durable polyester. The aluminum shall be preheated to a sufficient temperature, prior to the coating process, to insure all water vapor is removed in order to fuse the powder to the metal. The pole and appurtenances shall be over cured, after spraying, for a cycle of 5 to 15 minutes at a temperature of 375 to 400 degrees Fahrenheit. The finished coat shall have a dry coat minimum of 3 mil.

A thorough visual inspection shall be made of the painted finish of the installed pole and a field touchup or recoat shall be performed by the Contractor at no additional cost.

General: The work shall be completed in accordance with Section 830 of the "Standard Specifications", plan details, and as modified herein.

Method of Measurement: This work will be measured for payment as each per light pole.

Basis of Payment: The work will be paid for at the contract unit price per each for LIGHT POLE, ALUMINUM, 30 FT. M.H., 6 FT. MAST ARM. The unit price shall include the cost of all materials, equipment and labor required to furnish and install the light poles with clamshell base and mast arms of the length specified from the manufacturers above with a smooth powder finish.

#### **X1400094 LUMINAIRE, LED, HORIZONTAL MOUNT, LOW WATTAGE**

Description: This work shall consist of furnishing all equipment, material and labor necessary to properly install the proposed sidewalk luminaires at locations as indicated on the plans.

Materials: The materials shall be in accordance with Article 821.02 of the "Standard Specifications", plan details, and the following:

Sidewalk lighting fixtures and mounted at 12 feet height.

Sidewalk Luminaires shall be 53 Watt, LED. Luminaires on aluminum light poles with mast arms shall be catalog number DSS2-VLED-II-80LED-350mA-NW-240-RAL-9005-T-PC240 as manufactured by U.S. Architectural Lighting, 1A-1531LED-R-8ARC-45-T2-MDL05-FG by Sternberg Lighting, or 1A-RA173-E35-60L4K208-BL by Kim Lighting.

Housing and Reflector: Heavy Wall Aluminum Construction.

VLED Optical Module: Sealed LED Optical Module. Low copper A356 alloy (<0.2% Copper) cast aluminum housing. Integrated clear tempered 3/16" glass lens sealed with a continuous silicone gasket protects emitters (LEDs) and emitter reflector-prism optics, and seals the module from water intrusion and environmental contaminants. Entire module meets IP67 rating.

VLED Emitters and Optics: 48 (53 Total Input Watts) Luxeon T emitters (LEDs) driven at 350 mA. High output, neutral white nominal 4000K CCT. Each emitter is optically controlled by a reflector-prism injection molded from H12 acrylic (3 types per module; one from 0°-50°; one from 50°-65°; one from 65°-70°). The reflector-prisms are arrayed to produce IES type 3 light distribution. The entire optical module is field rotatable in the luminaire in 90° increments.

VLED Driver: Constant current LED driver operates on input voltages from 120-277V, 50/60Hz. Factory wired driver is independently sealed and UL listed for wet location.

General: The work shall be completed in accordance with Section 821 of the "Standard Specifications", plan details, and as modified herein.

Method of Measurement: This work will be measured for payment as each per luminaire.

Basis of Payment: The work will be paid for at the contract unit price per each for LUMINAIRE, LED, HORIZONTAL MOUNT, LOW WATTAGE. The unit price shall include the cost of all materials, equipment and labor required to furnish and install the light fixtures specified above with a smooth powder finish.

**X1400095 LUMINAIRE, LED, HORIZONTAL MOUNT, HIGH WATTAGE**

Description: This work shall consist of furnishing all equipment, material and labor necessary to properly install the proposed roadway luminaires at locations as indicated on the plans.

Materials: The materials shall be in accordance with Article 821.02 of the "Standard Specifications", plan details, and the following:

Roadway lighting poles shall be 30 feet mounting height with 6-foot mast arms for roadway lighting fixtures.

Roadway lighting poles shall be manufactured by Philip Lumec, Cree, or American Electric Lighting.



Roadway Luminaires shall be 160 Watt, LED. Luminaires on aluminum light poles with mast arms shall be catalog number RFM0160W-48LED-4K-T-R3S-UNIV manufactured by Philip Lumec, STE-LWY-3M-HT-09-E-UL-BK-525 by Cree, or ATB2-40BLEDE13-MVOLT-R3 by American Electric Lighting.

Housing and Reflector: Heavy Wall Aluminum Construction.

VLED Optical Module: Sealed LED Optical Module. Low copper A356 alloy (<0.2% Copper) cast aluminum housing. Integrated clear tempered 3/16" glass lens sealed with a continuous silicone gasket protects emitters (LEDs) and emitter reflector-prism optics, and seals the module from water intrusion and environmental contaminants. Entire module meets IP67 rating.

VLED Emitters and Optics: 80 (160 Total Input Watts) Luxeon T emitters (LEDs) driven at 525 mA. High output, neutral white nominal 4000K CCT. Each emitter is optically controlled by a reflector-prism injection molded from H12 acrylic (3 types per module; one from 0°-50°; one from 50°-65°; one from 65°-70°). The reflector-prisms are arrayed to produce IES type 3 light distribution. The entire optical module is field rotatable in the luminaire in 90° increments.

VLED Driver: Constant current LED driver operates on input voltages from 120-277V, 50/60Hz. Factory wired driver is independently sealed and UL listed for wet location.

General: The work shall be completed in accordance with Section 821 of the "Standard Specifications", plan details, and as modified herein.

Method of Measurement: This work will be measured for payment as each per luminaire.

Basis of Payment: The work will be paid for at the contract unit price per each for LUMINAIRE, LED, HORIZONTAL MOUNT, HIGH WATTAGE. The unit price shall include the cost of all materials, equipment and labor required to furnish and install the light poles with clamshell base and mast arms of the length specified including the smooth powder finish.

#### **X1400113 LUMINAIRE, LED, HORIZONTAL MOUNT, MEDIUM WATTAGE**

**Description:** This work consists of furnishing all materials, equipment, and labor necessary to install Light-Emitting Diode (LED) luminaires as shown on the plans, in accordance with the applicable requirements of Section 821 of the Standard Specifications for Road and Bridge Construction, and as specified herein.

**General:** The luminaire shall be assembled in the continental U.S.A. and shall be assembled by and manufactured by the same Manufacturer. Quick connect/disconnect plugs shall be supplied between the discrete electrical components within the luminaire such as the driver, surge protection device, and optical assembly for easy removal. The quick connect/disconnect plugs shall be operable without the use of tools and while wearing insulated gloves. The luminaire shall be in compliance with ANSI C136.37. LED light source(s) and driver(s) shall meet the

material requirements of the Restriction of Hazardous Substances (RoHS) Directive 2011/65/EU.

**Manufacturer Experience.** The luminaire shall be designed to be incorporated into a lighting system with an expected 30-year lifetime. The luminaire Manufacturer shall have a minimum of 30 years' experience manufacturing High Intensity Discharge (HID) roadway luminaires and shall have a minimum of 5 years' experience manufacturing LED roadway luminaires. The Manufacturer shall have a minimum of 5,000 total LED roadway luminaires installed on a minimum of 30 separate installations, all within the continental U.S.A.

**Housing:** The housing shall be designed to ensure maximum heat dissipation and to prevent the accumulation of water, ice, dirt and debris. A passive cooling method with no moving or rotating parts shall be employed for heat management. The effective projected area of the luminaire shall not exceed 1.4 sq. ft. The total weight of the luminaire(s) and accessories shall not exceed 75 pounds. Wiring within the electrical enclosure shall be rated at 600 V, 221 °F (105 °C) or higher.

**Finish.** Painted or finished luminaire surfaces exposed to the environment, shall exceed a rating of six according to ASTM D1654 after 1000 hours of ASTM B117 testing. The coating shall exhibit no greater than 30 % reduction of gloss according to ASTM D523, after 500 hours of ASTM G154 Cycle 6 QUV® accelerated weathering testing.

**Attachment.** The luminaire shall slip-fit on a mounting arm with a 2 in (5 cm) diameter tenon (2.375 in (6 cm) outer diameter), and shall have a barrier to limit the amount of insertion. The luminaire shall be provided with a leveling surface and shall be capable of being tilted  $\pm 5$  degrees from the axis of attachment in not more than 2.5 degree increments and rotated to any degree with respect to the supporting arm.

**Receptacle.** The luminaire shall include a fully prewired, 7-pin twist lock ANSI C136.41 compliant receptacle. Unused pins shall be connected as directed by the Manufacturer and as approved by the Engineer. A shorting cap shall be provided with the luminaire.

**Vibration Characteristics.** All luminaires shall pass ANSI C136.31 requirements. Roadway luminaires mounted on a bridge and high mast luminaires shall be rated for "3G" peak acceleration. Vibration testing shall be run using the same luminaire in all three axes.

**Labels and Decals.** All luminaires shall have external labels in compliance with the latest version of ANSI C136.15 and internal labels in compliance with the latest version of ANSI C136.22.

The luminaire shall be listed for wet locations by a Nationally Recognized Testing Laboratory (NRTL) as defined by OSHA and shall be in compliance with UL 8750 and UL 1598. It shall be identified as such by the holographic UL tag/sticker on the inside of the luminaire.

Hardware. All external fasteners shall be stainless steel. All hardware shall have corrosion resistance.

**Optical Assembly:** The LED optical assembly, consisting of LED packages, shall have a minimum Ingress Protection rating of IP66 according to ANSI/IEC 60529. Circuiting shall be designed to minimize the impact of individual LED failures on the operation of the other LEDs.

The optical assembly shall utilize high brightness, long life, minimum 70 color rendering index (CRI), 4,000 K color temperature (+/-300 K) LEDs binned according to ANSI C78.377. Lenses shall be UV-stabilized acrylic or glass. Provisions for house-side shielding shall be provided when specified.

Lumen depreciation at 50,000 hours of operation shall not exceed 15% of initial lumen output at the specified LED drive current and an ambient temperature of 77 °F (25 °C).

The assembly shall have individual serial numbers or other means for Manufacturer tracking.

**Photometric Performance:** The classification of LED luminaires shall be as follows:

VLW – Wattages  $\leq$  100, minimum delivered lumens 5,000,

LW – Wattages 101 - 200, minimum delivered lumens 10,000,

MW – Wattages 201 - 300, minimum delivered lumens 20,000,

HW – Wattages 301 - 400, minimum delivered lumens 30,000,

VHW – Wattages  $\geq$  401, minimum delivered lumens 40,000.

VLW= very low watt, LW = low watt, MW = medium watt, HW = high watt, and VHW = very high watt luminaire. Luminaires with lumens below the stated minimums will not be accepted.

Testing. Luminaires shall be tested according to IES LM-79. The laboratory performing this test shall hold accreditation from the National Voluntary Laboratory Accreditation Program (NVLAP) under NIST. Submitted reports shall have a backlight, upright, and glare (BUG) rating according to IESNA TM-15 including a luminaire classification system graph with both the recorded lumen value and percent lumens by zone.

Lumen maintenance shall be measured for the LEDs according to LM-80, or when available for the luminaires according to LM-84. The LM-80 report shall be based on a minimum of 6,000 hours, yet 10,000 hour reports shall be provided for luminaires where those tests have been completed.

Thermal testing shall be provided according to UL 1598. The luminaire shall start and operate in the ambient temperature range specified. The maximum rated case temperature of the driver,

LEDs, and other internal components shall not be exceeded when the luminaire is operated in the ambient temperature range specified.

Mechanical design of protruding external surfaces such as heat sink fins shall facilitate hose-down cleaning and discourage debris accumulation. Testing shall be submitted when available to show the maximum rated case temperature of the driver, LEDs, and other internal components are not exceeded when the luminaire is operated with the heat sink filled with debris.

Calculations. Complete point-by-point luminance and veiling luminance calculations as well as listings of all indicated averages and ratios as applicable shall be provided according to IES RP-8 recommendations. Lighting calculations shall be performed using AGI32 software with calculations performed to two decimal places (i.e. x.xx cd/m<sup>2</sup>). Calculation results shall demonstrate that the submitted luminaire meets the lighting metrics specified in the project Luminaire Performance Tables (see exhibit B). Scotopic or mesopic factors will not be allowed.

Lumen Maintenance Projection. The LEDs shall have long term lumen maintenance documented according to IESNA TM-21, or when available for the luminaires according to IESNA TM-28. The submitted calculations shall incorporate an in situ temperature measurement test (ISTMT) and LM-80 data with TM-21 inputs and reports according to the TM-21 calculator, or when available ISTMT and LM-84 data with TM-28 inputs and reports according to the TM-28 calculator. Ambient temperature shall be 77 °F (25 °C).

**Driver:** The driver for the luminaire shall be integral to the unit. It shall be mounted in the rear of the luminaire on the inside of a 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 secured upon the removable element. Each component shall be readily removable from the removable door or pad for replacement.

Circuit Protection. Shall tolerate indefinitely open and short circuit output conditions without damage.

Ingress Protection. IP66 rating.

Input Voltage. Shall be suitable for operation over a range of 120 to 277 volts or 347 to 480 volts as required by the system operating voltage.

Operating Temperature. Operating ambient temperature range of -40 to 104 °F (-40 to 40 °C).

Driver Life. Life time of 100,000 hours at 77 °F (25 °C) ambient.

Safety/UL. Listed under UL 1310 or UL 1012.

Power Factor. Shall maintain a power factor of 0.9 or higher and total harmonic distortion of less than 20 % at 50% load across the full supply voltage range.

Driver efficiency. Minimum efficiency of 90% at maximum load and a minimum efficiency of 85% for the driver operating at 50% power with driver efficiency defined as output power divided by input power.

Electrical Interference. Shall meet the Electromagnetic Compatibility (EMC) requirements for Class A digital devices included in the FCC Rules and Regulations, Title 47, Part 15.

Thermal Fold Back. The driver shall reduce the current to the LED module if the driver is overheating due to abnormal conditions.

Dimming. 0-10 V dimming capability.

Leakage current. Compliance with safety standards according to IEC 61347-1 and UL 1012.

**Surge Protection Device:** SPD shall be labeled as Type 4 in accordance to UL 1449 and be an integral part of the luminaire. It shall provide a minimum system protection level of 10 kV, 10 kA. To protect for a 10 kV, 10 kA surge the required clamping voltage of the external Metal Oxide Varistor (MOV) or other SPD shall be lower than 1 kV at 8 kA  $\{(10 \text{ kV}-2 \text{ kV})/1 \text{ ohm}=8 \text{ kA}\}$ .

The SPD shall comply with the following standards:

- 1) IEEE C62.41.1, IEEE Guide on the Surge Environment in Low-Voltage (1000 V and Less) AC Power Circuits,
- 2) IEEE C62.41.2, IEEE Recommended Practice on Characterization of Surges in Low-Voltage (1000 V and Less) AC Power Circuits,
- 3) IEEE C62.45, IEEE Recommended Practice on Surge Testing for Equipment Connected to Low-Voltage (1000 V and Less) AC Power Circuits, and
- 4) ANSI C136.2, American National Standard for Roadway and Area Lighting Equipment – Luminaire Voltage Classification.

The SPD and performance parameters shall be posted at [www.UL.com](http://www.UL.com) under Category Code: VZCA2.

**Warranty:** The entire luminaire and all of its component parts shall be covered by a 10 year warranty. Failure is when one or more of the following occur:

- 1) Negligible light output from more than 10 percent of the LED packages
- 2) Condensed moisture inside the optical assembly
- 3) driver that continues to operate at a reduced output below 15% of the rated nominal output

The warranty period shall begin on the date of final acceptance of the lighting work as documented in the Resident Engineer's project notes.

**Submittal Requirements:** The Contractor shall submit, for approval, an electronic version of all associated luminaire IES files, AGi32 files and the TM-21 calculator spreadsheet with inputs and reports associated with the project luminaires. The Contractor shall also provide an

electronic version of each of the following Manufacturer's product data for each type of luminaire.

- 1) Descriptive literature and catalogue cuts for luminaire, LED package, driver, and surge protection device.
- 2) LED drive current, total luminaire input wattage and total luminaire current at the system operating voltage or voltage range and ambient temperature of 77 °F (25 °C).
- 3) Luminaire efficacy expressed in lumens per watt (lpw) per luminaire.
- 4) Initial delivered lumens at the specified color temperature, drive current and ambient temperature.
- 5) Computer photometric calculation reports.
- 6) TM-15 BUG rating report.
- 7) Documentation of Manufacturers experience and certification that luminaires were assembled in the U.S.A.
- 8) Supporting documentation of compliance with ANSI standards as well as listing requirements.
- 9) Supporting documentation of laboratory accreditations and certifications for specified testing.
- 10) Thermal testing documents.
- 11) IES LM-79, LM-80 (or LM-84) and TM-21 (or TM-28) reports.
- 12) Salt spray (fog) test reports and certification.
- 13) Vibration characteristics test reports and certification.
- 14) IP test reports.
- 15) Manufacturer written warranty.
- 16) Luminaire installation, maintenance, and washing instructions.

**Luminaire Testing:** When a contract has 30 or more luminaires of the same type, wattage and distribution, that luminaire shall be tested. The quantity of luminaires requiring testing shall be one luminaire for the first 30 plus one additional luminaire for each additional 50 luminaires of that type, wattage, and distribution. Testing is not required for temporary lighting luminaires. The Contractor shall coordinate the luminaire testing, propose a properly accredited laboratory and an independent witness, submit their qualifications for approval prior to any testing, and pay all associated costs including travel expenses for the independent witness. Delays caused by the luminaire testing process shall not be grounds for additional compensation or extension of time.

The independent witness shall be present when tests are performed by the luminaire manufacturer. A laboratory independent of the luminaire manufacturer, distributor, and Contractor may self-certify the test results, in which case the independent witness need not be present during the testing.

After all qualifications have been approved, the independent witness shall select from the project luminaires at the manufacturer's facility the luminaires for testing. In all cases, the selection of luminaires shall be a random selection from the entire completed lot of luminaires required for the contract. Selections from partial lots will not be allowed. The independent

witness shall mark each sample luminaire's shipping carton with the IDOT contract number and a unique sample identifier.

At the time of random selection, the independent witness shall inspect the luminaire(s) for compliance with all physical, mechanical, and labeling requirements for luminaires according to Sections 821 and 1067 and as stated herein. If deficiencies are found during the physical inspection, the Contractor shall have all luminaires of that type, wattage, and distribution inspected for the identified deficiencies and shall correct the problem(s) where found. Random luminaire selection and physical inspection must then be repeated. When the physical inspection is successfully completed, the independent witness shall mark the project number and sample identifier on the interior housing and ballast of the luminaires and have them shipped to the laboratory.

The testing performed by the laboratory shall include photometric, colorimetric, and electrical testing. Colorimetric values shall be determined from total spectral radiant flux measurements using a spectroradiometer. Photometric testing shall be according to IES recommendations and as a minimum, shall yield an isofootcandle chart, with max candela point and half candela trace indicated, an isocandela diagram, maximum plane and maximum cone plots of candela, a candlepower table (house and street side), a coefficient of utilization chart, a luminous flux distribution table, BUG rating report, and complete calculations based on specified requirements and test results. All testing shall cover the full spherical light output at a maximum of 5 degree intervals on both the vertical planes and the cones. Tests that "mirror" results from one hemisphere or quadrant to another are not acceptable.

The results for each photometric and colorimetric test performed shall be presented in a standard LM-79 report that includes the IDOT contract number, sample identifier, and the outputs listed above. The calculated results for each sample luminaire shall meet or exceed the contract specified levels in the luminaire performance table(s). The laboratory shall mark its test identification number on the interior of each sample luminaire.

Electrical testing shall be in accordance with LM-79.

The summary test report shall consist of a narrative documenting the test process, highlight any deficiencies and corrective actions, and clearly state which luminaires have met or exceeded all test requirements and may be released for delivery to the jobsite. Photographs shall also be used as applicable to document luminaire deficiencies and shall be included in the test report. The summary test report shall include the Luminaire Physical Inspection Checklist (see exhibit A), photometric and electrical test reports, and point-by-point photometric calculations performed in AGi32 sorted by luminaire type, wattage, and distribution. All test reports shall be certified by the independent test laboratory's authorized representative or the independent witness, as applicable, by a dated signature on the first page of each report. The summary test reports shall be delivered to the Engineer and the Contractor as an electronic submittal. Hard copy reports shall be delivered to the Engineer for record retention.

Should any of the tested luminaires fail to satisfy the specifications and perform according to approved submittal information, all luminaires of that type, wattage, and distribution shall be deemed unacceptable and shall be replaced by alternate equipment meeting the specifications. The submittal and testing process shall then be repeated in its entirety. The Contractor may request in writing that unacceptable luminaires be corrected in lieu of replacement. The request shall identify the corrections to be made and upon approval of the request, the Contractor shall apply the corrections to the entire lot of unacceptable luminaires. Once the corrections are completed, the testing process shall be repeated, including selection of a new set of sample luminaires. The number of luminaires to be tested shall be the same quantity as originally tested.

The process of retesting corrected or replacement luminaires shall be repeated until luminaires for each type, wattage, and distribution are approved for the project. Corrections and re-testing shall not be grounds for additional compensation or extension of time. No luminaires shall be shipped from the manufacturer to the jobsite until all luminaire testing is completed and approved in writing.

Submittal information shall include a statement of intent to provide the testing as well as a request for approval of the chosen independent witness laboratory. All summary test reports, written reports, and the qualifications of the independent witness and laboratory shall be submitted for approval to the Bureau of Design and Environment in Springfield.

**Construction:** Examine all luminaires delivered to the jobsite prior to installation to ensure all specification requirements and Shop Drawing comments have been incorporated by the Manufacturer. Deficient luminaires shall not be installed and the Engineer shall be notified immediately.

Luminaires shall be adjusted with the use of a level placed along the fixture housing or other means approved by the manufacturer to make sure they are installed with their optics set to deliver optimum designed light levels on the roadway. Any dirt or film on LEDs and/or the optical assembly shall be thoroughly removed using cleaning methods approved by the manufacturer.

**Basis of Payment:** This work will be paid for at the contract unit price per each for Luminaire, LED, Horizontal Mount, of the wattage specified which shall be payment in full for all labor, equipment and material necessary to perform the work specified herein.

#### **X8250505 LIGHTING CONTROLLER, SPECIAL**

This work shall consist of furnishing, transporting, and installing the Lighting Controller Combination Unit, concrete foundation, and all electrical cable connections in the unit in accordance with Section 825 of the Standard Specifications, the plans, and as directed by the Engineer. The Controller Combination Unit shall be manufactured and assembled by Milbank (Catalog #CP3B51C19, 120/240 VAC, 1-phase, 3 wire; output 60 Amp, 100 Amp main circuit



breaker, 2A Pole Load center, Photocell, Rainproof – Type3R, Steel Enclosure, painted Ebony 334 Black). Ameren approval of meter components must be satisfied. Unit exterior will be free of defects and have no sharp edges. The concrete foundation shall be Type D constructed per Highway Standard 878001-10.

Measurement and Payment: This work will be measured and paid for at the contract unit price per each for LIGHTING CONTROLLER, SPECIAL. The concrete foundation will not be paid for separately but shall be included in the price of the Lighting Controller, Special.

### **X8300001 LIGHT POLE, SPECIAL**

Description: This work shall consist of furnishing all equipment, material and labor necessary to properly install the proposed sidewalk luminaires at locations as indicated on the plans.

Materials: The materials shall be in accordance with Article 830.02 of the "Standard Specifications", plan details, and the following:

Sidewalk lighting poles shall be 17 feet in height with 16-inch decorative arms at a 12 foot mounting height.

Roadway lighting poles shall be manufactured by U.S Architectural Lighting, Sternberg Lighting, or Kim Lighting.

Arm: Durable Corrosion Resistant, Extruded Aluminum Construction.

Shaft: 16 sharp flute, round tapered steel shaft has 9.0" butt tapering to 5.2" top (7 gauge). Minimum yield strength 55,000 P.S.I. Handhole is provided with cover at 20" from bottom of base plate. Shaft provided with 42" smooth bottom section.

Anchor Base: Fabricated from structural quality hot rolled steel base telescopes and is circumferentially welded to shaft.

Base Cover: Two piece wraparound, corrosion resistant, durable cast aluminum construction, minimum 0.25" wall thickness. Base consists of a smooth tapered bottom section and a decorative tapered fluted section with evenly spaced raised vertical flutes. Base is furnished with a contoured, fluted flush handhole and cover. Handhole cover supplied with tamper resistant hardware. (4) 1/4"-20 set screws provided to secured decorative base to shaft.

Anchorage: (4) 1" X 36" anchor bolt, each supplied with two nuts and two washers.

Finish: The aluminum pole, pole base, bracket arms and attachments shall be painted black using a powder coat process. They shall be cleaned prior to the powder coat process by the immersion process using both an alkaline and acid bath. The black finish shall be a thermosetting powder coat. The powder resin shall be type TGIC super durable polyester. The aluminum shall be preheated to a

sufficient temperature, prior to the coating process, to insure all water vapor is removed in order to fuse the powder to the metal. The pole and appurtenances shall be over cured, after spraying, for a cycle of 5 to 15 minutes at a temperature of 375 to 400 degrees Fahrenheit. The finished coat shall have a dry coat minimum of 3 mil.

A thorough visual inspection shall be made of the painted finish of the installed pole and a field touchup or recoat shall be performed by the Contractor at no additional cost.

General: The work shall be completed in accordance with Section 830 of the "Standard Specifications", plan details, and as modified herein.

Method of Measurement: This work will be measured for payment as each per light pole.

Basis of Payment: The work will be paid for at the contract unit price per each for LIGHT POLE, SPECIAL. The unit price shall include the cost of all materials, equipment and labor required to furnish and install the light poles with clamshell base and mast arms of the length specified from the manufacturers above with a smooth powder finish.

**WIRING TEST LOG SHEET**

(One REQUIRED for each control of service center)

Control Center Number: \_\_\_\_\_

MEGGER DATA:

Volts generated \_\_\_\_\_ volts.

(Must be 500 to 1,000)

Scale used: 0 to \_\_\_\_\_ megohms.

Manufactured by: \_\_\_\_\_

Serial Number: \_\_\_\_\_

CONSTRUCTION STATUS:

Wiring complete \_\_\_\_\_

Incomplete \_\_\_\_\_

Trenches open \_\_\_\_\_

Backfilled \_\_\_\_\_

MEGOHMS TO GROUND:

Wire A to power supply	_____	megohms
Wire B to power supply	_____	megohms
Wire A to lighting circuit 1	_____	megohms
Wire B to lighting circuit 1	_____	megohms
Wire A to lighting circuit 2	_____	megohms
Wire B to lighting circuit 2	_____	megohms

AMPERES:

Wire A to power supply, initial	_____	amperes
Wire B to power supply, initial	_____	amperes
Wire A to power supply, after 5 minutes on	_____	amperes
Wire B to power supply, after 5 minutes on	_____	amperes
Wire A, Circuit 1 - after 5 minutes on	_____	amperes
Wire A, Circuit 2 - after 5 minutes on	_____	amperes
Wire B, Circuit 1 - after 5 minutes on	_____	amperes
Wire B, Circuit 2 - after 5 minutes on	_____	amperes

REGULATION: (Make following tests in order shown with lights burning after they have been on for five (5) minutes or more).

- (1) Voltage in control cabinet between Wire A and Wire B to Power supply  
 \_\_\_\_\_ Volts.
- (2) Voltage between Wire A and Wire B at most distance light (designated by engineer)  
 \_\_\_\_\_ Volts.
- (3) Voltage in control cabinet between Wire A and Wire B to Power supply (same as 1)  
 \_\_\_\_\_ Volts.

\_\_\_\_\_  
 Engineer

**ILLINOIS DEPARTMENT OF TRANSPORTATION LUMINAIRE PERFORMANCE TABLE  
 (ALLEN INTERSECTION LIGHTING)**

GIVEN CONDITIONS		
<b>ROADWAY DATA</b>	Pavement Width	50 (ft)
	Number of Lanes	6
	Median Width	N/A
	I.E.S. Surface Classification	R3
	Q-Zero Value	.07
<b>LIGHT POLE DATA</b>	Mounting Height	35 (ft)
	Davit Arm Length	15 (ft)
	Pole Set-Back From Edge of Curb	Varies
<b>LUMINAIRE DATA</b>	Lamp Type	160W LED
	Lamp Lumens	16285
	I.E.S. Vertical Distribution	Medium
	I.E.S. Control Of Distribution	Full Cutoff
	I.E.S. Lateral Distribution	Type III
	Total Light Loss Factor	0.765
<b>LAYOUT DATA</b>	Spacing	80 to 90 (ft)
	Configuration	4 new 160W LED fixtures mounted to combination traffic signal/light poles around perimeter of the intersection
	Luminaire Overhang over edge of pavement	Varies

**NOTE:** Variations from the above specified I.E.S. distribution pattern may be requested and acceptance of variations will be subject to review by the Engineer based on how well the performance requirements are met.

PERFORMANCE REQUIREMENTS		
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**NOTE:** These performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions listed above.

<b>ILLUMINATION</b>	Ave. Horizontal Illumination, $E_{AVE}$	2.2	fc
	Uniformity Ratio, $E_{AVE}/E_{MIN}$	3.0	
<b>LUMINANCE</b>	Average Luminance, $L_{AVE}$	0.9	Cd/m <sup>2</sup>
	Uniformity Ratio, $L_{AVE}/L_{MIN}$	3.0	
	Uniformity Ratio, $L_{MAX}/L_{MIN}$	5.0	
	Veiling Luminance Ratio, $L_V/L_{AVE}$	0.03	

**ILLINOIS DEPARTMENT OF TRANSPORTATION LUMINAIRE PERFORMANCE TABLE  
 (WARWICK, HAMILTON, & IMPERIAL INTERSECTION LIGHTING)**

GIVEN CONDITIONS		
<b>ROADWAY DATA</b>	Pavement Width	50 (ft)
	Number of Lanes	6
	Median Width	N/A
	I.E.S. Surface Classification	R3
	Q-Zero Value	.07
<b>LIGHT POLE DATA</b>	Mounting Height	35 (ft)
	Davit Arm Length	15 (ft)
	Pole Set-Back From Edge of Curb	Varies
<b>LUMINAIRE DATA</b>	Lamp Type	160W LED
	Lamp Lumens	16285
	I.E.S. Vertical Distribution	Medium
	I.E.S. Control Of Distribution	Full Cutoff
	I.E.S. Lateral Distribution	Type III
	Total Light Loss Factor	0.765
<b>LAYOUT DATA</b>	Spacing	80 to 90 (ft)
	Configuration	4 new 160W LED fixtures mounted to combination traffic signal/light poles around perimeter of the intersection
	Luminaire Overhang over edge of pavement	Varies

**NOTE:** Variations from the above specified I.E.S. distribution pattern may be requested and acceptance of variations will be subject to review by the Engineer based on how well the performance requirements are met.

PERFORMANCE REQUIREMENTS		
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**NOTE:** These performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions listed above.

<b>ILLUMINATION</b>	Ave. Horizontal Illumination, $E_{AVE}$	2.0	fc
	Uniformity Ratio, $E_{AVE}/E_{MIN}$	3.0	
<b>LUMINANCE</b>	Average Luminance, $L_{AVE}$	0.9	Cd/m <sup>2</sup>
	Uniformity Ratio, $L_{AVE}/L_{MIN}$	3.0	
	Uniformity Ratio, $L_{MAX}/L_{MIN}$	5.0	
	Veiling Luminance Ratio, $L_V/L_{AVE}$	0.03	

## **ENVIRONMENTAL PERMITTING**

### **NATIONWIDE 404 PERMIT REQUIREMENTS**

The bridge replacement included with this project is authorized under a Nationwide Permit, provided all terms and conditions of the Nationwide Permit and any special conditions outlined in the Corps of Engineers' verification letter are met. A copy of the permit should be included within these special provisions. If they are not, a copy of these can be requested from the Department.

The Contractor will not be allowed to complete the structure replacement using any in-stream access fill, cofferdams, or causeways unless shown on the plans or unless the proper permits are acquired by the Contractor for these activities. The existing permit may be amended to include these activities once the contractor determines the plan for completion of the work and it is submitted to the Department for submission to the Corps of Engineers'. The Department will not be held responsible for any delays incurred due to acquisition of additional permits or amending the existing permit. Determination of allowable methods for completion of this work under the current permit can be obtained from the Corps of Engineers.

### **NPDES PERMIT**

The Engineer will apply for and obtain a National Pollutant Discharge Elimination System Construction General Permit (NPDES CGP) prior to beginning construction.

The CGP has four main elements:

- Notice of Intent (NOI)
- Storm Water Pollution Prevention Plan (SWPPP)
- Incident of Non-Compliance (ION)
- Notice of Termination (NOT)

The Notice of Intent (NOI) serves as the application for the CGP. A Notice of Intent must be post-marked at least thirty days prior to the commencement of any construction activity on site. The Erosion Control Plan sheets will convey the information required for a Storm Water Pollution Prevention Plan (i.e. drainage patterns, area of soil disturbance, location of storm water discharges, etc.). The Contractor shall be responsible for having these plan sheets available for viewing during business hours at the project site. An Incident of Non-Compliance must be completed and submitted to the IEPA if, at any time, an erosion or sediment control device fails.



Storm Water Pollution Prevention Plan



Route Northmoor Road	Marked Route FAU 6647	Section 05-00302-00-PV
Project Number M-5093(136)	County Peoria	Contract Number 89386

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 Bill Lewis	Title City Engineer	Agency City of Peoria
Signature Bill Lewis		Date 3.24.17

I. Site Description

A. Provide a description of the project location (include latitude and longitude):

The project is located in the City of Peoria on Northmoor Road from Allen Road to University Street. 40 Deg 45'42" 89 Deg 39'20"

B. Provide a description of the construction activity which is subject of this plan:

The proposed project consist of the reconstruction of Northmoor Road and the construction of new local roads adjacent to Expo Gardens, Richwoods High School, and Northmoor Primary School. Construction activities will consist of pavement removal, earthwork, underground utilities, PCC and HMA pavement, retaining walls, fencing and landscaping.

C. Provide the estimated duration of this project:

2.5 Years

D. The total area of the construction site is estimated to be 16.2 acres.

The total area of the site estimated to be disturbed by excavation, grading or other activities is 16.2 acres.

E. The following is a weighted average of the runoff coefficient for this project after construction activities are completed:

C = 0.70

F. List all soils found within project boundaries. Include map unit name, slope information and erosivity:

17A Keomah silt loam, 0 to 2 percent slopes, K=0.49  
224D2 Strawn silt loam, 10 to 18 percent slopes, eroded, K=0.32  
279B Rozetta silt loam, 2 to 5 percent slopes, K=0.37  
857G Strawn-Hennepin loams, 35 to 60 percent slopes, K=0.37  
3028A Jules silt loam, 0 to 2 percent slopes, frequently flooded, K=0.49

G. Provide an aerial extent of wetland acreage at the site:

137

N/A

H. Provide a description of potentially erosive areas associated with this project:

Roadway, swale, and stream stabilization work near and adjacent to Big Hollow Creek near the western end of the project limits.

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.):

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:

City of Peoria

L. The following is a list of General NPDES ILR40 permittees within whose reporting jurisdiction this project is located.

City of Peoria

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:

Big Hollow Creek and Dry Run Creek which are tributaries to the Illinois 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.

There are no protected areas located within the project limits.

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):

a. The name(s) of the listed water body, and identification of all pollutants causing impairment:

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:

c. Provide a description of the location(s) of direct discharge from the project site to the 303(d) water body:

d. Provide a description of the location(s) of any dewatering discharges to the MS4 and/or water body:



2. TMDL (fill out this section if checked above)

a. The name(s) of the listed water body:

[Empty text box for water body name]

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:

[Empty text box for erosion and sediment control strategy]

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:

[Empty text box for waste load allocation steps]

P. The following pollutants of concern will be associated with this construction project:

- Soil Sediment
- Concrete
- Concrete Truck waste
- Concrete Curing Compounds
- Solid waste Debris
- Paints
- Solvents
- Fertilizers / Pesticides
- Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids)
- Antifreeze / Coolants
- Waste water from cleaning construction equipment
- Other (specify) \_\_\_\_\_
- Other (specify) \_\_\_\_\_
- Other (specify) \_\_\_\_\_
- Other (specify) \_\_\_\_\_
- 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:

- Preservation of Mature Vegetation
- Erosion Control Blanket / Mulching

- |   |  |
|---|--|
| <input type="checkbox"/> Vegetated Buffer Strips                      | <input checked="" type="checkbox"/> Sodding    |
| <input checked="" type="checkbox"/> Protection of Trees               | <input type="checkbox"/> Geotextiles           |
| <input checked="" type="checkbox"/> Temporary Erosion Control Seeding | <input type="checkbox"/> Other (specify) _____ |
| <input 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:

During construction areas of disturbance will be limited to only the area required for construction of the proposed roadway to preserve and protect existing vegetation and trees. Temporary seeding will be used as required to reduce erosion during construction activity.

Describe how the stabilization practices listed above will be utilized after construction activities have been completed:

After construction activities have been completed, permanent seeding and sodding will be completed.

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 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 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 type="checkbox"/> Stabilized Construction Exits           | <input type="checkbox"/> Level Spreaders         |
| <input type="checkbox"/> Turf Reinforcement Mats                 | <input type="checkbox"/> Other (specify) _____   |
| <input type="checkbox"/> Permanent Check Dams                    | <input type="checkbox"/> Other (specify) _____   |
| <input type="checkbox"/> Permanent Sediment Basin                | <input type="checkbox"/> Other (specify) _____   |
| <input type="checkbox"/> Aggregate Ditch                         | <input type="checkbox"/> Other (specify) _____   |
| <input type="checkbox"/> Paved Ditch                             | <input type="checkbox"/> Other (specify) _____   |

Describe how the structural practices listed above will be utilized during construction:

Erosion Barrier will be constructed in locations noted on the plans to prevent sediment from leaving the site. Ditch checks will be installed to minimize erosion in ditch sections while construction activity is ongoing and as seeding/sodding is established. Inlet protection will be used on existing and proposed inlets within the project limits to prevent sediment from entering local waterways.

Describe how the structural practices listed above will be utilized after construction activities have been completed:

Riprap will be used at the culvert outlet and along the stream banks for energy dissipation and to maintain the existing stream banks.

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.

[Empty box for identifying polymer flocculents or treatment chemicals utilization]

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:

[Empty box for description of permanent storm water management controls]

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:

N/A

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.

### 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](mailto: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:

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#### 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 Northmoor Road	Marked Route FAU 6647	Section 05-00302-00-PV
Project Number M-5093(136)	County Peoria	Contract Number 89386

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:



DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, ROCK ISLAND DISTRICT  
P.O. BOX 2004 CLOCK TOWER BUILDING  
ROCK ISLAND, ILLINOIS 61204-2004

REPLY TO  
ATTENTION OF

February 22, 2017

Operations Division

SUBJECT: CEMVR-OD-P-2017-0251

Ms. Jane Gerdes  
City of Peoria, Illinois  
3505 N. Dries Ln.  
Peoria, Illinois 61604

Dear Ms. Gerdes:

Our office reviewed your application dated 10 February 2017, concerning the proposed replacement of the bridge on Northmoor Road over Big Hollow Creek in Peoria, Section 17 & 18, Township 9 North, Range 8 East in Peoria County, Illinois.

The construction activities will meet the criteria specified under Regional Permit 38, if the work is done in accordance with the General and Special Conditions and attached drawings. We are enclosing a copy for your compliance. The decision regarding this action is based on information found in the administrative record, which documents the District's decision-making process, the basis for the decision, and the final decision. You may initiate work on your project under this Regional Permit upon receipt of this letter.

This letter also contains a preliminary jurisdictional determination for your proposed project. If you agree with the jurisdictional determination, please sign and date and return a copy of the form with your signed permits.

If you find that it is necessary to make changes in the plans or work being authorized, you must submit the revised plans to this office for the District Engineer's approval before you begin work. Also, make certain that you have received all other required Federal, state, and local approvals before beginning work.

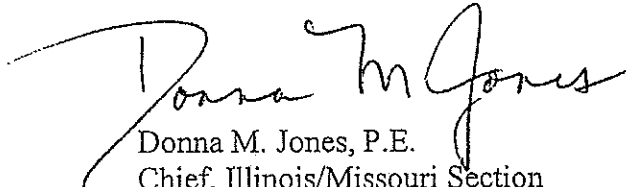
Please notify this office prior to starting and completion of work. You are required to complete and return the enclosed "Complete Work Certification" upon completion of your project. A representative of this office will make periodic inspections of the work.

The Rock Island District Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to complete the attached postcard and return it or go to our Customer Service Survey found on our web site at [http://corpsmapu.usace.army.mil/cm\\_apex/f?p=regulatory\\_survey](http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey). (Be sure to select "Rock Island District" under the area entitled: Which Corps office did you deal with?)

We appreciate the cooperation you have shown during the processing of your permit.

Should you have any questions, please contact our Regulatory Branch by letter, or telephone Mr. Gene Wassenhove 309/794-5368.

Sincerely

  
Donna M. Jones, P.E.  
Chief, Illinois/Missouri Section  
Regulatory Branch

When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s), of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

\_\_\_\_\_  
Transferee

\_\_\_\_\_  
Date

Enclosures

Copies Furnished:

Mr. Steve Altman  
Office of Water Resources  
IL Department of Natural Resources  
One Natural Resources Way  
Springfield, Illinois 62701-1271 (w/o  
enclosures)  
Steve.Altman@illinois.gov (email)

Mr. Dan Heacock  
Illinois Environmental Protection Agency  
Watershed Management Section, Permit Sec. 15  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276 (w/o enclosures)  
Epa.401.bow@illinois.gov (email)

U.S. Army Corps of Engineers  
Illinois Waterway Project Office  
257 Grant Street  
Peoria, Illinois 61603

Mr. Jeffery Bushur  
Hanson Professional Services Inc.  
1525 S. Sixth Street  
Springfield, Illinois 62703



DEPARTMENT OF THE ARMY PERMIT  
Regional Permit 38  
Fill Material Placed in Waters of the U.S. for Road Crossings  
in the State of Illinois

**Permittee:** General Public meeting the terms and conditions herein.  
**Number:** CEMVR-OD-P-2016-0049 (Regional Permit 38)  
**Expiration Date:** October 21, 2021  
**Issuing Office:** U.S. Army Corps of Engineers, Rock Island District  
Clock Tower Building-P.O. Box 2004  
Rock Island, Illinois 61204-2004

**NOTE:** The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers (Corps) having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the Commanding Officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

**1. Authorized Work.**

**Proposed Limits.** (a) Activities required for the construction, expansion, modification, or improvement of linear transportation projects that result in impacts of up to 1 acre of waters of the United States. (b) Temporary fills for construction are authorized. (c) The affected reach of stream must occur within 300 feet upstream and downstream of the centerline of the roadway (existing channel length), with a maximum distance of existing channel length impacted (filled or abandoned) not to exceed 500 feet.

**2. Project Location.** All waters of the United States in Illinois within the regulatory boundaries of the Rock Island District, St. Louis District and Memphis District.

**3. Permit Conditions:**

**A. General Conditions:**

1. The time limit for completing the work authorized ends is the expiration date of the permit. If underway or under contract by expiration date, you have one year to complete your project. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least two months before that date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party, in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archaeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

**B. Special Conditions:**

1. All work authorized under this regional permit will be in association with bridge, culvert, and roadway construction across waters of the United States.
2. This regional permit is limited to excavation activities and fill material placed in wetlands or below the ordinary high water mark of other waters for bridge and/or culvert construction or replacement associated with bridge and/or culvert removal, or culvert extension. Bridge and/or culvert construction on new alignments must be located within 500 feet of either side of the centerline of existing structures. New bridge, culvert, or roadway alignments must be based upon sound conservation and safety bases.
3. Riprap shall be clean native fieldstone, clean quarry run rock, or appropriately graded clean broken concrete with all reinforcing rods and / or wire cut flush with the surface of the concrete. It shall be the permittee's responsibility to maintain the riprap such that any reinforcement material that becomes exposed in the future is removed, the concrete pieces shall be appropriately graded and no piece shall be larger than 3 feet across the longest flat surface. The width for placing a riprap toe in the streambed will vary depending on the size of the riprap used (see attached drawing). Asphalt, broken concrete containing asphalt, petroleum-based material, and items such as car bodies are specifically excluded from this authorization.
4. Material used as temporary fill for access, cofferdams, or other temporary structures required for the construction of highway crossings shall be included in the project plans or specifications and shall be clean, appropriately sized material (less than 15% fines passing a Number 200 US sieve) and shall be free of loam, sod, and other deleterious materials.
5. All temporary structures and fill will be removed completely no later than 30 days after they are no longer needed for construction activities. Temporary fill materials, cleared vegetative materials, construction debris, including old bridge materials, and other fill not necessary for meeting the project purpose must be disposed of at an upland area or licensed landfill as appropriate.
6. Compensatory mitigation may be required for any stream or wetland impacts, however, for projects impacting jurisdictional wetlands or other special aquatic sites, the permittee will provide a mitigation plan for approval which follows the regulations published in the Federal Register dated April 10, 2008 under 33 CFR Parts 325 and 332 and 40 CFR Part 230 entitled "Compensatory Mitigation for Losses of Aquatic Resources; Final Rule". Permittees must take all practicable measures to avoid and minimize impacts to waters of the United States by both temporary and permanent fills. Once such measures are taken, no more than 1 acre of wetland area may be filled in conjunction with each road crossing project. Compensatory wetland mitigation is required at a ratio of 1.5:1 or more if the loss of wetland exceeds 0.10 acre. Mitigation must be adequate to offset unavoidable impacts or losses to regulated waters of the United States. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal: (a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., onsite). (b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal. (c) For stream and wetland losses of 1/10-acre or less the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. The amount of mitigation required will be determined during review for authorization under this permit as per the mitigation rule requirements. Existing wetland banks should be utilized (where appropriate) to compensate for wetland impacts. Prior to commencing land disturbing activities, the applicant shall submit documentation of the purchase/allocation of mitigation credits from the appropriate wetland bank. Specific mitigation conditions to insure mitigation success will be included on a case by case basis in the authorization letter accompanying this permit.
7. This permit does not authorize construction in environmentally sensitive areas, such as mussel beds, fish spawning areas, waterfowl nesting areas, fens, bogs, seeps, or sedge meadows, etc.
8. Minor stream shaping and channel realignment is authorized where necessary to provide adequate flow conveyance and proper alignment of the channel through the bridge or culvert. Such activities must occur within 300 feet upstream and downstream of the centerline of the pre-existing roadway (existing

channel length), with a maximum distance of existing channel length impacted (filled or abandoned) not to exceed 500 feet. Mitigation for stream impacts will follow the Mitigation Rule requirements (referenced in Section 3. B. 6 above). Prospective permittees shall provide a stream mitigation plan with their Department of the Army application. Proposed project designs resulting in reductions in stream length will require applicants to seek foot-for-foot stream length replacement where practicable. If stream loss is determined unavoidable, prospective permittees will provide adequate mitigation to replace lost aquatic functions and values. Such mitigation shall include but is not limited to the following:

- a. The Purchase of credits at an approved mitigation bank or in-lieu fee program.
- b. For permittee responsible mitigation:
  - If a side slope of a newly constructed or modified channel is not protected by a suitable structural element, it will be no steeper than 2:1 and planted to permanent, perennial, vegetation or armored.
  - Native grass filter strips a minimum of 50 feet in width (measured from the top of the bank landward) shall be established along both sides of the realigned or modified channel unless there is a physical reason for not including one (such as a rock ledge). Filter strip establishment will be considered successful when there is at least 50% aerial coverage of native grasses and forbs in each 100 square foot area. Land ownership is not an acceptable reason for limiting filter strips.
  - Native trees and/or shrubs shall be planted along both sides of the realigned or modified channel. Replanting rates of trees and/or shrubs will be based on existing pre-project baseline vegetation conditions and the size of the selected tree/shrubs to be replanted. A survival rate of 100% of the replanted species shall be achieved each year for a period of 10 years from the establishment of the tree plantings.
  - Stream banks shall be stabilized with planted vegetation, riprap, or other suitable permanent bank stabilization measures to the limits of stream bank disturbance. Plantings of native prairie grasses are recommended where appropriate to diversify the stream bank protection.
  - The proposed channel shall have the same carrying capacity as the existing channel.
  - If the proposed channel grade is steeper than the grade of the existing channel, grade control structures are required at the upstream and downstream ends of the proposed channel. The downstream slopes of the grade control structures shall be no steeper than 20H: 1V and upstream slopes shall be no steeper than 4H: 1V. All structures must be keyed into the channel bed and banks and must be able to withstand and pass expected high flows. The structures must be V- shaped with the point of the V pointing upstream. The sides of the V must be angled upstream (approximately 30 degrees measured along the shoreline). The center section will be lower in elevation than the outer sections to concentrate flows to the stream middle during periods of low flow. The structures must be submerged at normal stream flow (75% of the year). The structures must be fish passable at all times.
  - In-stream habitat structures and / or the use of rock riffles may be used to enhance aquatic habitat in the stream stretch modified by stream shaping or channel alignment. In-stream habitat structures should be constructed similar to grade control structures.
  - In areas where the stream channel is relocated, by-passed meanders must be preserved if they will not be a safety or structural hazard. The preserved meanders will remain as oxbow wetlands or pools.
  - Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes.
  - Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
  - The applicant shall not cause:
    - A violation of applicable provisions of the Illinois Environmental Protection Act;
    - Water pollution defined and prohibited by the Illinois Environmental Protection Act;
    - Violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
    - Interference with water use practices near public recreation areas or water supply intakes

- All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of staked straw bales, sedimentation basins and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) or more acres, total land area. An NPDES Storm Water Permit may be obtained by submitting a properly completed Notice of Intent (NOI) form by certified mail to the Illinois Environmental Protection Agency's (IEPA) Division of Water Pollution Control, Permit Section.
  - The applicant shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2010).
  - Temporary work pads, cofferdams, access roads and other temporary fills shall be constructed of clean coarse aggregate or non-erodible non-earthen fill material that will not cause siltation. Sandbags, pre-fabricated rigid materials, sheet piling, inflatable bladders and fabric lined basins may be used for temporary facilities. Temporary work/fills shall be constructed in a manner to maintain flow in these waters by utilizing dam and pumping, fluming, culverts or other such techniques.
9. Measures must be taken for heavy equipment usage in wetland areas to minimize soil disturbance and compaction. All exposed soils and other fills as well as any work below the ordinary high water mark must be permanently stabilized at the earliest practicable date using permanent native vegetation, bioengineering methods, or armoring.
  10. Any excavation or placement of temporary or permanent fill must be performed in a way that would not result in the physical destruction of important fish spawning areas, including smothering of downstream spawning areas via turbidity.
  11. Petroleum products, other chemicals, and other unsuitable materials (e.g. trash, debris, asphalt, etc.) will be prevented from entering water bodies, streams, and wetlands.
  12. Appropriate soil erosion and sediment control measures must be used and maintained during project construction. Erosion control and sediment control features (i.e. silt fences, silt ditches, silt dikes, silt basins etc.) must be installed to provide continuous control throughout the construction and post construction period as well as the re-vegetation of all disturbed areas upon project completion.
  13. Temporary and permanent structures must be installed to maintain low flow conditions and to pass normal and expected high flows.
  14. Historic Properties.
    - a. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.
    - b. Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.
    - c. Non-federal permittee's must submit information to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the information must state which historic properties may be affected by the proposed work and include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from

the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). The district engineer shall make a reasonable and good faith effort to ensure that appropriate identification efforts are carried out, which may include background research, consultation, history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties which the activity may have the potential to cause effects, and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects, or that consultation under Section 106 of the NHPA has been completed.

- d. The district engineer will notify the prospective permittee within 45 days of receipt of a complete application whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). If NHPA Section 106 consultation is required the non-Federal applicant cannot begin work until Section 106 consultation is completed.
  - e. Permittees should be aware that section 110k of the NHPA (16 U.S.C. 16 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.
  - f. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the Nation Register of Historic Places.
15. Endangered Species.
- a. No activity is authorized under this Regional Permit which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species that is proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under the Regional Permit which "may affect" a listed species or critical habitat, unless Section 7 consultation with the U.S. Fish and Wildlife Service has been completed to address the effects of the proposed activity on a listed species or critical habitat. Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the Corps with the appropriate documentation to demonstrate compliance with those requirements. The Corps will review the documentation and determine whether it is sufficient to address ESA compliance for the Regional Permit activity, or whether additional ESA consultation is necessary. Non-Federal permittees must provide the Corps with the appropriate documentation to supplement the Corps determination on whether the proposed activity "may affect" or will have "no effect" to listed species or critical habitat. The Corps will review all the available information and determine whether it is sufficient to address ESA compliance for the Regional Permit activity, or whether additional ESA consultation is necessary.

- b. The habitat range of the decurrent false aster (*Boltonia decurrens*) is located within the floodplain of the Mississippi River (St. Clair, Alexander, Jackson, Monroe, Randolph, and Union Counties) and the floodplain of the Illinois River (Bureau, Fulton, Jersey, Marshall, Mason, Morgan, Peoria, Putnam, Schuyler, Tazewell, Woodford, Brown, Calhoun, Cass, Green, Grundy, LaSalle, Madison, Pike, and Scott Counties). The proponent of any project proposed within one of these counties in the 100-year floodplain of the Mississippi River or the Illinois River or where a tributary stream flows into the 100-year floodplain of Mississippi River or the Illinois River must arrange for the project site to be investigated by a qualified botanist or environmental scientist for the occurrence of the Federally threatened plant species. Written documentation, provided by the botanist or environmental scientist, must be provided to the Corps of Engineers for consultation with the U.S. Fish and Wildlife Service to ensure compliance with the Endangered Species Act of 1973 as amended (16 U.S.C. 1531 et seq.).
- c. Other species of potential concern for Regional Permit projects include species of threatened and endangered bats, endangered birds, and several threatened and endangered mussels found in several Illinois counties. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS on their webpage: <http://www.fws.gov/> or <http://www.fws.gov/endangered>.
16. Permittee Mitigation. When permittee responsible mitigation is deemed appropriate to compensate for stream/wetland impacts, the following conditions will apply:
- Mitigation shall be constructed prior to or concurrent with the construction of the main project. The technical specifications listed in the permittee's mitigation document will be used as a compliance document for construction, monitoring, site protection, etc., of the mitigation plan. However, the information contained in this document is superseded by any additional permit conditions or written specifications provided by the Corps of Engineers. If excavation and construction are completed outside an optimal seeding period, temporary erosion control protection shall be implemented immediately upon completion of excavation and construction and shall be maintained until such time as riparian or wetland plantings can be completed during an optimal period. Permanent plantings shall then be completed during the next optimal seeding period.
  - The boundaries of mitigation sites shall be identified clearly by the placement of permanent markers.
  - If tiling is present in a wetland mitigation site the tile must not detract from the function of the wetland.
  - Mitigation sites shall be fenced with a permanent fence if any domestic livestock are to be allowed to graze adjacent areas.
  - Your responsibility to complete the required mitigation as set forth in the project details will not be considered fulfilled until you have demonstrated mitigation success and have received written verification from the Corps of Engineers.
  - The mitigation site shall be protected from future activities that may interfere with or be detrimental to stream or wetland functions and values.
  - An as-built mitigation plan must be submitted to the Corps of Engineers and the Illinois Environmental Protect Agency by December 31 in the year that the mitigation is complete. This information will use GPS coordinates for location information. The as-built plan must include details, plan view drawings, and cross sectional drawings of all excavations and fills at the mitigation site(s). It must also include planting plans, planting lists, and maps showing the locations of all areas that were wetland prior to construction, all areas that are to be created wetland, all preserved stream channel segments, created or relocated stream channels, existing and proposed riparian buffers, riffle-pool structures, filter strips, all splash basins, and all other structures (including all streambed stabilization structures).
  - Annual monitoring reports shall be submitted to the Corps of Engineers by December 31 for at least five years for emergent wetland or grass/shrub riparian mitigation sites, and at least 10 years for forested wetland or forested riparian mitigation sites, or in-stream structures. The annual reports must include photos, a map with drawn boundaries indicating exactly what areas are wetland according to the 1987 Corps of Engineers Wetland Delineation Manual (Technical Report Y-87-1) and 2008 Midwest Regional Supplement, a vegetative cover map of created wetlands indicating Dominant species in each vegetative community, and an assessment of wetland hydrology in each vegetative community. The reports must also include assessments of the functionality of each splash basin stabilization structure,

new stream meandered sections, and aerial coverage calculations of native vegetation within each filter strip or riparian zone and any corrective actions taken or needed. The results of the reports will be documented annually on the Rock Island District Standard Mitigation Reporting Form available at: <http://www.mvr.usace.army.mil/Missions/Regulatory/WetlandMitigion.aspx> or in an annual progress report as specified in RGL 06-03, <http://www.usace.army.mil/CECW/Documents/cecwo/reg/rjls/rj06-03.pdf>. All annual monitoring reports shall be formatted for 8.5 x 11- inch paper.

- The permittee (in a timely manner) will perform any corrective measures and monitoring deemed necessary by the Corps of Engineers to insure the success of the project (including mitigation). The permittee will assume all liability for accomplishing this corrective work. The corrective actions may include such modifications to the mitigation site as re-grading, re-planting, additional erosion control, etc., or may involve relocating the mitigation to another location. The permittee must accomplish corrective measures involving re-grading or erosion control within 60 days from the date that they are notified of a need. Deadlines for corrective measures involving re-planting will be determined based on best planting dates. Deadlines for corrective measures involving the relocation of mitigation will be determined by the Corps of Engineers. Corrective action may also involve additional monitoring to ensure success.
  - Your responsibility to complete the required compensatory mitigation will not be considered fulfilled until you have demonstrated mitigation success and have received written verification from the Corps of Engineers.
  - Any future development or land-use conversion of the mitigation area for any purpose which may interfere with or be detrimental to stream or wetland functions is prohibited without prior written approval from the Corps of Engineers.
  - Projects with mitigation require recording of the permit with the Register of Deeds or other appropriate official charged with the responsibility for maintaining records of title to or interest in real property and provide proof of recording to the Corps of Engineers. If the permit cannot be recorded in the manner indicated, the permittee shall provide the Corps of Engineers with documentation of agreements, contracts, etc., demonstrating to the Corps of Engineers' satisfaction that the mitigation site will be protected from future activities that may interfere with or be detrimental to wetland functions and values to a level of assurance equivalent to that provided by the aforementioned recording process. This requirement should be met prior to the project's construction.
17. That the conditions listed in the attached Section 401 Water Quality Certification from the Illinois Environmental Protection Agency (dated August 5, 2008) are part of this permit.
18. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

Further information:

to: 1. **Congressional Authorities:** You have been authorized to undertake the activity described above pursuant

(X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. **Limits of this authorization.**

- a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
- b. This permit does not grant any property rights or exclusive privileges.
- c. This permit does not authorize any injury to the property or rights of others.
- d. This permit does not authorize interference with any existing or proposed Federal project.

3. **Limits of Federal Liability.** In issuing this permit, the Federal Government does not assume any liability for the following:

- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
- b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
- c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
- d. Design or construction deficiencies associated with the permitted work.
- e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. **Reliance on Applicant's Data.** The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. **Reevaluation of Permit Decision.** This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.



Such a reevaluation may result in a determination that is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. **Extensions.** General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

This permit becomes effective when the Federal official, designated to act for the District Engineer, has signed below.

Ward Lenz  
G. Ward Lenz  
Chief, Regulatory Branch  
Rock Island District

21/Oct/2016  
Date

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

\_\_\_\_\_  
Transferee

\_\_\_\_\_  
Date



# ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397

BRUCE RAUNER, GOVERNOR

ALEC MESSINA, ACTING DIRECTOR

217/782-3362

OCT 11 2016

Rock Island District  
Corps of Engineers  
Regulatory Branch  
Post Office Box 2004  
Clock Tower Building  
Rock Island, IL 61204-2004

OCT 13 2016

Memphis District  
Corps of Engineers  
Regulatory Branch  
167 North Main, B-202  
Memphis, TN 38103-1894

St. Louis District  
Corps of Engineers  
Regulatory Branch  
1222 Spruce Street  
St. Louis, MO 63103

Re: U.S. Army Corps of Engineers Districts: Rock Island District, St. Louis District, and Memphis District  
Issuance of Regional Permit 38 Fill Material Placed in Waters of the U.S. for Road Crossings or Linear Transportation Projects  
Log # C-0193-16 [CoE appl. # 2016-0049]

Gentlemen:

This Agency received a request on June 27, 2016 from the U.S. Army Corps of Engineers, Rock Island District, St. Louis District, and Memphis District requesting necessary comments concerning the re-issuance of Regional Permit 38 Fill Material Placed in Waters of the U.S. for Road Crossings or Linear Transportation Projects. We offer the following comments.

Based on the information included in this submittal, it is our engineering judgment that the proposed project may be completed without causing water pollution as defined in the Illinois Environmental Protection Act, provided the project is carefully planned and supervised.

These comments are directed at the effect on water quality of the construction procedures involved in the above described project and are not an approval of any discharge resulting from the completed facility, nor an approval of the design of the facility. These comments do not supplant any permit responsibilities of the applicant toward the Agency.

This Agency hereby issues certification under Section 401 of the Clean Water Act (PL 95-217), subject to the applicant's compliance with the following conditions:

1. The applicant shall not cause:
  - a. A violation of applicable provisions of the Illinois Environmental Protection Act;
  - b. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulations;
  - c. water pollution defined and prohibited by the Illinois Environmental Protection Act; or
  - d. interference with water use practices near public recreation areas or water supply intakes.

2. The applicant shall provide adequate planning and supervision during the project construction period for implementing construction methods, processes and cleanup procedures necessary to prevent water pollution and control erosion.
3. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by this Agency. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
4. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of staked straw bales, sedimentation basins and temporary mulching. All construction within the waterway shall be constructed during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) or more acres, total land area. An NPDES Storm Water Permit may be obtained by submitting a properly completed Notice of Intent (NOI) form by certified mail to the Agency's Division of Water Pollution Control, Permit Section.
5. The applicant shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2015).
6. Prior to proceeding with any work in accordance with Regional Permit 38, potential impacts to threatened or endangered species shall be identified through use of the State's Ecological Compliance Assessment Tool (EcoCAT) at <http://dnr.illinois.gov/EcoPublic/>. If potential impacts to State threatened or endangered species are identified, the Illinois Department of Natural Resources shall be consulted with.
7. The applicant shall implement Best Management Practices (BMPs) to protect water quality, preserve natural hydrology and minimize the overall impacts to aquatic resources during and after construction. If the project involves a water with an approved Total Maximum Daily Load (TMDL) allocation for any parameter, measures which ensure consistency with the assumption and requirements of the TMDL shall be included. TMDL program information and water listings are available at <http://www.epa.illinois.gov/topics/water-quality/watershed-management/tmdls/index>. If the project involves an impaired water listed on the Illinois Environmental Protection Agency's Section 303(d) list for suspended solids, turbidity, or siltation, measures designed for at least a 25-year, 24-hour rainfall event shall be incorporated. Impaired waters are identified at <http://www.epa.illinois.gov/topics/water-quality/watershed-management/tmdls/303d-list/index>.

This certification becomes effective when the Department of the Army, Corps of Engineers, includes the above conditions # 1 through # 7 as conditions of the requested permit issued pursuant to Section 404 of PL 95-217.

This certification does not grant immunity from any enforcement action found necessary by this Agency to meet its responsibilities in prevention, abatement, and control of water pollution.

Sincerely,



Alan Keller, P.E.  
Manager, Permit Section  
Division of Water Pollution Control

SAK:TJF:0193-16.docx

cc: IEPA, Records Unit  
IEPA, DWPC, FOS, Rockford  
IEPA, DWPC, FOS, Des Plaines  
IEPA, DWPC, FOS, Peoria  
IEPA, DWPC, FOS, Champaign  
IEPA, DWPC, FOS, Springfield  
IEPA, DWPC, FOS, Collinsville  
IEPA, DWPC, FOS, Marion  
IDNR, OWR, Springfield  
USEPA, Region 5  
Corps of Engineers, Louisville District  
Corps of Engineers, Louisville District (Newburgh Regulatory Office)  
Corps of Engineers, Louisville District (Indianapolis Regulatory Office)  
Corps of Engineers, Chicago District



# Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271  
www.dnr.illinois.gov

Bruce Rauner, Governor  
Wayne A. Rosenthal, Director

March 28, 2017

SUBJECT: Permit No. DS2017020  
Culvert Replacement, Regrading, Bank Stabilization  
Big Hollow Creek  
Peoria County

City of Peoria  
Attn: Jane Gerdes  
3505 North Dries Lane  
Peoria, Illinois 61604

Dear Ms. Gerdes:

Enclosed is Illinois Department of Natural Resources, Office of Water Resources Permit No. DS2017020 authorizing the subject project. This approval is based on our determination that the project will not restrict the river's flood carrying capacity or storage and therefore complies with our Part 3700 Floodway Construction rules.

This permit does not supersede any other federal, state or local authorizations that may be required for the project. If any changes of the permitted work are found necessary, revised plans should be submitted promptly to this office for review and approval. Also, this permit expires on the date indicated in Condition (13). If unable to complete the work by that date, the permittee may make a written request for a time extension.

Please feel free to contact Kristian Peterson of my staff at 217/558-4532 if you have any questions concerning this authorization.

Sincerely,

Stephen C. Altman, P.E., CFM  
Chief, Downstate Regulatory Programs Section

SCA:KAP:cjp  
Enclosure:

cc: Hanson Professional Services Inc. (Cindy Loos) ✓  
City of Peoria Permits Engineer (Ken Andrejasich)



PERMIT NO. DS2017020  
DATE: March 28, 2017

**State of Illinois**  
Department of Natural Resources, Office of Water Resources

Permission is hereby granted to:

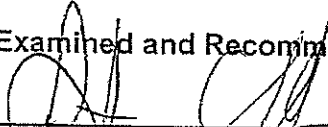
CITY OF PEORIA  
3505 NORTH DRIES LANE  
PEORIA, ILLINOIS 61604

to construct a replacement culvert, regrade the channel banks, and install riprap within the channel and floodplain of the Big Hollow Creek in Section 18, Township 9 North, Range 8 East of the 4<sup>th</sup> Principal Meridian in Peoria County,


in accordance with an application dated January 31, 2017, and the plans and specifications entitled:

**NORTHMOOR ROAD CULVERT REPAIRS**  
(Sheet 1 of 1, Dated August 11, 2016, Received by mail January 31, 2017),  
**CULVERT GENERAL PLAN STRUCTURE NO.072-8001**  
(Sheet 1 of 1, Dated December 13, 2016, Received by mail January 31, 2017),  
**NORTHMOOR ROAD CHANNEL PROTECTION PLAN**  
(Sheet 1 of 1, Dated December 6, 2016, Received by mail January 31, 2017),  
and **NORTHMOOR ROAD CHANNEL SITE DEVELOPMENT PLAN**  
(Sheet 1 of 1, Dated December 6, 2016, Received by mail January 31, 2017).

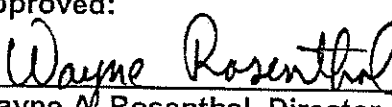
Examined and Recommended:

  
Stephen C. Altman, Chief  
Downstate Regulatory Programs Section

Approval Recommended:

  
Daniel A. Injerd, Director  
Office of Water Resources

Approved:

  
Wayne A. Rosenthal, Director  
Department of Natural Resources

This PERMIT is subject to the terms and special conditions contained herein.

**THIS PERMIT IS SUBJECT TO THE FOLLOWING CONDITIONS:**

- 1) This permit is granted in accordance with the Rivers, Lakes and Streams Act "615 ILCS 5."
- 2) This permit does not convey title to the permittee or recognize title of the permittee to any submerged or other lands, and furthermore, does not convey, lease or provide any right or rights of occupancy or use of the public or private property on which the activity or any part thereof will be located, or otherwise grant to the permittee any right or interest in or to the property, whether the property is owned or possessed by the State of Illinois or by any private or public party or parties.
- 3) This permit does not release the permittee from liability for damage to persons or property resulting from the work covered by this permit, and does not authorize any injury to private property or invasion of private rights.
- 4) This permit does not relieve the permittee of the responsibility to obtain other federal, state or local authorizations required for the construction of the permitted activity; and if the permittee is required by law to obtain approvals from any federal or other state agency to do the work, this permit is not effective until the federal and state approvals are obtained. If construction does not begin within two years of the date of this permit, the permittee must submit the project to EcoCAT (<http://dnr.illinois.gov/EcoPublic/>) for an updated consultation under the Illinois Endangered Species Protection Act and the Illinois Natural Areas Preservation Act.
- 5) The permittee shall, at the permittee's own expense, remove all temporary piling, cofferdams, false work, and material incidental to the construction of the project. If the permittee fails to remove such structures or materials, the Department may have removal made at the expense of the permittee.
- 6) In public waters, if future need for public navigation or other public interest by the state or federal government necessitates changes in any part of the structure or structures, such changes shall be made by and at the expense of the permittee or the permittee's successors as required by the Department or other properly constituted agency, within sixty (60) days from receipt of written notice of the necessity from the Department or other agency, unless a longer period of time is specifically authorized.
- 7) The execution and details of the work authorized shall be subject to the review and approval of the Department. Department personnel shall have the right of access to accomplish this purpose.
- 8) Starting work on the activity authorized will be considered full acceptance by the permittee of the terms and conditions of the permit.
- 9) The Department in issuing this permit has relied upon the statements and representations made by the permittee; if any substantive statement or representation made by the permittee is found to be false, this permit will be revoked; and when revoked, all rights of the permittee under the permit are voided.
- 10) In public waters, the permittee and the permittee's successors shall make no claim whatsoever to any interest in any accretions caused by the activity.
- 11) In issuing this permit, the Department does not ensure the adequacy of the design or structural strength of the structure or improvement.
- 12) Noncompliance with the conditions of this permit will be considered grounds for revocation.
- 13) If the construction activity permitted is not completed on or before December 31, 2020, this permit shall cease and be null and void.

**THIS PERMIT IS SUBJECT TO THE FOLLOWING SPECIAL CONDITIONS:**

## **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 4 . 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.

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:

City of Peoria

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The entities listed above and their officers, employees, and agents shall be indemnified and held harmless in accordance with Article 107.26.

State of Illinois  
DEPARTMENT OF TRANSPORTATION  
Bureau of Local Roads & Streets

SPECIAL PROVISION  
FOR  
GROWTH CURVE

Effective: March 1, 2008  
Revised: January 1, 2010

All references to Sections and Articles in this Special Provision shall be construed to mean specific Sections and Articles in the Standard Specifications for Road and Bridge Construction adopted by the Department of Transportation.

The Contractor shall perform a growth curve at the beginning of placement of each type of mix and each lift. The growth curve for each type of mix and each lift shall be performed within the first 200 tons (180 metric tons). If an adjustment is made to the specific mix design, the Engineer reserves the right to request an additional growth curve and supporting tests at the Contractor's expense.

Compaction of the growth curve shall commence immediately after the course is placed and at a temperature of not less than 280 °F (140 °C). The growth curve, consisting of a plot of lb/cu ft (kg/cu m) vs. number of passes with the project breakdown roller, shall be developed. Roller speed during the growth curve testing shall be the same as the normal paving operation. This curve shall be established by use of a nuclear gauge. Tests shall be taken after each pass until the highest lb/cu ft (kg/cu m) is obtained. This value shall be the target density provided the HMA Gyratory air voids are within acceptable limits. If the HMA Gyratory air voids are not within the specified limits, corrective action shall be taken, and a new target density shall be established.

A new growth curve is required if the breakdown roller used on the growth curve is replaced with a new roller during production. The target density shall apply only to the specific gauge used. If additional gauges are to be used to determine density specification compliance, the Contractor shall establish a unique minimum allowable target density from the growth curve location for each gauge.

At least one core sample per day shall be taken at a location specified by the Engineer. Core densities will be determined using the Illinois-Modified AASHTO T 166 or T 275 procedure by the Department. The core density shall be according to Articles 1030.05(d)(4) and (d)(7). The QA Manager is responsible for assuring and documenting that the determined number of roller passes has been accomplished. The Engineer reserves the right to take core samples at any time to verify density from the nuclear gauge,

All lifts and confined longitudinal joint edges shall be compacted to an average nuclear gauge density of not less than 95 percent nor greater than 102 percent of the target density obtained on the growth curve. Unconfined longitudinal joint edges shall be compacted to an average nuclear gauge density of not less than 93 percent nor greater than 102 percent of the target density obtained on the growth curve. The average nuclear gauge density shall be based on tests representing one day's production.

Quality Control density tests shall be performed at randomly selected locations within 1/2 mile (800 m) intervals per lift per lane. In no case shall more than one half day's production be completed without density testing being performed. 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 2 in. (50 mm) from each pavement edge.

If the Contractor is not controlling the compaction process and is making no effort to take corrective action, the operation shall stop as directed by the Engineer.

## ADJUSTING FRAMES AND GRATES (BDE)

Effective: April 1, 2017

Add the following to Article 602.02 of the Standard Specifications:

- “(s) High Density Expanded Polystyrene Adjusting Rings  
with Polyurea Coating (Note 4) ..... 1043.04  
(t) Expanded Polypropylene (EPP) Adjusting Rings (Note 5) ..... 1043.05

Note 4. High density expanded polystyrene adjusting rings with polyurea coating shall meet the design load requirements of AASHTO HS20/25. The rings may be used to adjust the frames and grates of drainage and utility structures up to a maximum of 6 in. (150 mm). They shall be installed and sealed underneath the frames according to the manufacturer’s specifications.

Note 5. Riser rings fabricated from EPP may be used to adjust the frames and grates of drainage and utility structures up to a maximum of 6 in. (150 mm). An adhesive meeting ASTM C 920, Type S, Grade N5, Class 25 shall be used with EPP adjustment rings. The top ring of the adjustment stack shall be a finish ring with grooves on the lower surface and flat upper surface. The joints between all manhole adjustment rings and the frame and cover shall be sealed using the approved adhesive. In lieu of the use of an adhesive, an internal or external mechanical frame-chimney seal may be used for watertight installation. EPP adjustment rings shall not be used with heat shrinkable infiltration barriers.”

Add the following to Section 1043 of the Standard Specifications:

**“1043.04 High Density Expanded Polystyrene Adjusting Rings with Polyurea Coating.** High density expanded polystyrene adjustment rings with polyurea coating shall be designed and tested to meet or exceed an HS25 wheel load according to the AASHTO Standard Specifications for Highway Bridges (AASHTO M306 HS-25). The raw material suppliers shall provide certifications of quality or testing using the following ASTM standards, and upon request, certify that only virgin material was used in the manufacturing of the expanded polystyrene rings.

Physical Property	Test Standard	Value	
		3.0 lb/cu ft	4.5 lb/cu ft
Compression Resistance at 10% deformation at 5% deformation at 2% deformation	ASTM D 1621	50 - 70	70 - 90
		45 - 60	60 - 80
		15 - 20	20 - 40
Flexural Strength	ASTM D 790	90 - 120	130 - 200
Water Absorption	ASTM D 570	2.0%	1.7%
Coefficient of Linear Expansion	ASTM D 696	2.70E-06 in./in./°F	2.80E-06 in./in./°F
Sheer Strength	ASTM D 732	55	80

Tensile Strength	ASTM D 1623	70 - 90	130 - 140
Water Vapor Transmission	ASTM C 355	0.82 – 0.86 perm – in.	

High density expanded polystyrene adjustment rings with polyurea coating shall have no void areas, cracks, or tears. The actual diameter or length shall not vary more than 0.125 in. (3 mm) from the specified diameter or length. Variations in height are limited to  $\pm 0.063$  in. ( $\pm 1.6$  mm). Variations shall not exceed 0.25 in. (6 mm) from flat (dish, bow, or convoluting edge) or 0.125 in. (3 mm) for bulges or dips in the surface.

**1043.05 Expanded Polypropylene (EPP) Adjusting Rings.** The EPP adjusting rings shall be manufactured using a high compression molding process to produce a minimum finished density of 7.5 lb/cu ft (120 g/l). The EPP rings shall be made of materials meeting ASTM D 3575 and ASTM D 4819-13. The grade adjustments shall be designed and tested according to the AASHTO Standard Specifications for Highway Bridges (AASHTO M 306 HS-25).

Grade rings shall contain upper and lower keyways (tongue and groove) for proper vertical alignment and sealing. The top ring, for use directly beneath the cast iron frame, shall have keyways (grooves) on the lower surface with a flat upper surface.

Adhesive or sealant used for watertight installation of the manhole grade adjustment rings shall meet ASTM C 920, Type S, Grade NS, Class 25, Uses NT, T, M, G, A, and O.

EPP adjustment rings shall have no void areas, cracks, or tears. The actual diameter or length shall not vary more than 0.125 in. (3 mm) from the specified diameter or length. Variations in height are limited to  $\pm 0.063$  in. ( $\pm 1.6$  mm). Variations shall not exceed 0.25 in. (6 mm) from flat (dish, bow, or convoluting edge) or 0.125 in. (3 mm) for bulges or dips in the surface.”

80382

## 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 <sup>1/</sup> , 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 <sub>50</sub>	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

## COMPENSABLE DELAY COSTS (BDE)

Effective: June 2, 2017

Revise Article 107.40(b) of the Standard Specifications to read:

“(b) Compensation. Compensation will not be allowed for delays, inconveniences, or damages sustained by the Contractor from conflicts with facilities not meeting the above definition; or if a conflict with a utility in an unanticipated location does not cause a shutdown of the work or a documentable reduction in the rate of progress exceeding the limits set herein. The provisions of Article 104.03 notwithstanding, compensation for delays caused by a utility in an unanticipated location will be paid according to the provisions of this Article governing minor and major delays or reduced rate of production which are defined as follows.

- (1) Minor Delay. A minor delay occurs when the work in conflict with the utility in an unanticipated location is completely stopped for more than two hours, but not to exceed two weeks.
- (2) Major Delay. A major delay occurs when the work in conflict with the utility in an unanticipated location is completely stopped for more than two weeks.
- (3) Reduced Rate of Production Delay. A reduced rate of production delay occurs when the rate of production on the work in conflict with the utility in an unanticipated location decreases by more than 25 percent and lasts longer than seven calendar days.”

Revise Article 107.40(c) of the Standard Specifications to read:

“(c) Payment. Payment for Minor, Major, and Reduced Rate of Production Delays will be made as follows.

- (1) Minor Delay. Labor idled which cannot be used on other work will be paid for according to Article 109.04(b)(1) and (2) for the time between start of the delay and the minimum remaining hours in the work shift required by the prevailing practice in the area.

Equipment idled which cannot be used on other work, and which is authorized to standby on the project site by the Engineer, will be paid for according to Article 109.04(b)(4).

- (2) Major Delay. Labor will be the same as for a minor delay.

Equipment will be the same as for a minor delay, except Contractor-owned equipment will be limited to two weeks plus the cost of move-out to either the Contractor's yard or another job and the cost to re-mobilize, whichever is less.



Rental equipment may be paid for longer than two weeks provided the Contractor presents adequate support to the Department (including lease agreement) to show retaining equipment on the job is the most economical course to follow and in the public interest.

- (3) Reduced Rate of Production Delay. The Contractor will be compensated for the reduced productivity for labor and equipment time in excess of the 25 percent threshold for that portion of the delay in excess of seven calendar days. Determination of compensation will be in accordance with Article 104.02, except labor and material additives will not be permitted.

Payment for escalated material costs, escalated labor costs, extended project overhead, and extended traffic control will be determined according to Article 109.13.”

Revise Article 108.04(b) of the Standard Specifications to read:

“(b) No working day will be charged under the following conditions.

- (1) When adverse weather prevents work on the controlling item.
- (2) When job conditions due to recent weather prevent work on the controlling item.
- (3) When conduct or lack of conduct by the Department or its consultants, representatives, officers, agents, or employees; delay by the Department in making the site available; or delay in furnishing any items required to be furnished to the Contractor by the Department prevents work on the controlling item.
- (4) When delays caused by utility or railroad adjustments prevent work on the controlling item.
- (5) When strikes, lock-outs, extraordinary delays in transportation, or inability to procure critical materials prevent work on the controlling item, as long as these delays are not due to any fault of the Contractor.
- (6) When any condition over which the Contractor has no control prevents work on the controlling item.”

Revise Article 109.09(f) of the Standard Specifications to read:

- “(f) Basis of Payment. After resolution of a claim in favor of the Contractor, any adjustment in time required for the work will be made according to Section 108. Any adjustment in the costs to be paid will be made for direct labor, direct materials, direct equipment, direct jobsite overhead, direct offsite overhead, and other direct costs allowed by the resolution. Adjustments in costs will not be made for interest charges, loss of anticipated profit, undocumented loss of efficiency, home office overhead and unabsorbed overhead

other than as allowed by Article 109.13, lost opportunity, preparation of claim expenses and other consequential indirect costs regardless of method of calculation.

The above Basis of Payment is an essential element of the contract and the claim cost recovery of the Contractor shall be so limited.”

Add the following to Section 109 of the Standard Specifications.

“**109.13 Payment for Contract Delay.** Compensation for escalated material costs, escalated labor costs, extended project overhead, and extended traffic control will be allowed when such costs result from a delay meeting the criteria in the following table.

Contract Type	Cause of Delay	Length of Delay
Working Days	Article 108.04(b)(3) or Article 108.04(b)(4)	No working days have been charged for two consecutive weeks.
Completion Date	Article 108.08(b)(1) or Article 108.08(b)(7)	The Contractor has been granted a minimum two week extension of contract time, according to Article 108.08.

Payment for each of the various costs will be according to the following.

- (a) Escalated Material and/or Labor Costs. When the delay causes work, which would have otherwise been completed, to be done after material and/or labor costs have increased, such increases will be paid. Payment for escalated material costs will be limited to the increased costs substantiated by documentation furnished by the Contractor. Payment for escalated labor costs will be limited to those items in Article 109.04(b)(1) and (2), except the 35 percent and 10 percent additives will not be permitted.
- (b) Extended Project Overhead. For the duration of the delay, payment for extended project overhead will be paid as follows.
  - (1) Direct Jobsite and Offsite Overhead. Payment for documented direct jobsite overhead and documented direct offsite overhead, including onsite supervisory and administrative personnel, will be allowed according to the following table.

Original Contract Amount	Supervisory and Administrative Personnel
Up to \$5,000,000	One Project Superintendent
Over \$ 5,000,000 - up to \$25,000,000	One Project Manager, One Project Superintendent or Engineer, and One Clerk
Over \$25,000,000 - up to \$50,000,000	One Project Manager, One Project Superintendent, One Engineer, and

	One Clerk
Over \$50,000,000	One Project Manager, Two Project Superintendents, One Engineer, and One Clerk

(2) Home Office and Unabsorbed Overhead. Payment for home office and unabsorbed overhead will be calculated as 8 percent of the total delay cost.

(c) Extended Traffic Control. Traffic control required for an extended period of time due to the delay will be paid. For working day contracts the payment will be made according to Article 109.04. For completion date contracts, an adjustment will be determined as follows.

Extended Traffic Control occurs between April 1 and November 30:

$$\text{ETCP Adjustment (\$)} = \text{TE} \times (\% / 100 \times \text{CUP} / \text{OCT})$$

Extended Traffic Control occurs between December 1 and March 31:

$$\text{ETCP Adjustment (\$)} = \text{TE} \times 1.5 (\% / 100 \times \text{CUP} / \text{OCT})$$

Where: TE = Duration of approved time extension in calendar days.

% = Percent maintenance for the traffic control, % (see table below).

CUP = Contract unit price for the traffic control pay item in place during the delay.

OCT = Original contract time in calendar days.

Original Contract Amount	Percent Maintenance
Up to \$2,000,000	65%
\$2,000,000 to \$10,000,000	75%
\$10,000,000 to \$20,000,000	85%
Over \$20,000,000	90%

When an ETCP adjustment is paid under this provision, an adjusted unit price as provided for in Article 701.20(a) for increase or decrease in the value of work by more than ten percent will not be paid.

Upon payment for a contract delay under this provision, the Contractor shall assign subrogation rights to the Department for the Department's efforts of recovery from any other party for monies paid by the Department as a result of any claim under this provision. The Contractor shall fully cooperate with the Department in its efforts to recover from another party any money paid to the Contractor for delay damages under this provision."

**CONCRETE MIX DESIGN – DEPARTMENT PROVIDED (BDE)**

Effective: January 1, 2012

| Revised: April 1, 2016

| For the concrete mix design requirements in Article 1020.05(a) of the Standard Specifications, the Contractor has the option to request the Engineer determine mix design material proportions for Class PV, PP, RR, BS, DS, SC, and SI concrete. A single mix design for each class of concrete will be provided. Acceptance by the Contractor to use the mix design developed by the Engineer shall not relieve the Contractor from meeting specification requirements.

80277

## **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 7.00 % 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.DBEP@illinois.gov](mailto:DOT.DBEP@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 is receives as a result of the lease arrangement.
- (e) DBE as a material supplier:

- (1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.
- (2) 100 percent goal credit for the cost of materials of supplies obtained from a DBE manufacturer.
- (3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a 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 Inserter .....1103.20”

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  $\geq 7.0$  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 refinished 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

## **GROOVING FOR RECESSED PAVEMENT MARKINGS (BDE)**

Effective: November 1, 2012

Revised: August 1, 2014

Description. This work shall consist of grooving the pavement surface in preparation for the application of recessed pavement markings.

Equipment. Equipment shall be according to the following.

- (a) **Pavement Marking Tape Installations:** The grooving equipment shall have a free-floating saw blade cutting head equipped with gang-stacked diamond saw blades. The diamond saw blades shall be of uniform wear and shall produce a smooth textured surface. Any ridges in the groove shall have a maximum height of 15 mils (0.38 mm).
- (b) **Liquid and Thermoplastic Pavement Marking Installations:** The grooving equipment shall be equipped with either a free-floating saw blade cutting head or a free-floating grinder cutting head configuration with diamond or carbide tipped cutters and shall produce an irregular textured surface.

### CONSTRUCTION REQUIREMENTS

General. The Contractor shall supply the Engineer with a copy of the pavement marking material manufacturer's recommendations for constructing a groove.

Pavement Grooving Methods. The grooves for recessed pavement markings shall be constructed using the following methods.

- (a) **Wet Cutting Head Operation.** When water is required or used to cool the cutting head, the groove shall be flushed with high pressure water immediately following the cut to avoid build up and hardening of slurry in the groove. The pavement surface shall be allowed to dry for a minimum of 24 hours prior to the final cleaning of the groove and application of the pavement marking material.
- (b) **Dry Cutting Head Operation.** When used on HMA pavements, the groove shall be vacuumed or cleaned by blasting with high-pressure air to remove loose aggregate, debris, and dust generated during the cutting operation. When used on PCC pavements, the groove shall be flushed with high pressure water or shot blasted to remove any PCC particles that may have become destabilized during the grooving process. If high pressure water is used, the pavement surface shall be allowed to dry for a minimum of 24 hours prior to the final cleaning of the groove and application of the pavement marking material.

Pavement Grooving. Grooving shall not cause ravels, aggregate fractures, spalling or disturbance of the joints to the underlying surface of the pavement. Grooves shall be cut into

the pavement prior to the application of the pavement marking material. Grooves shall be cut such that the width is 1 in. (25 mm) greater than the width of the pavement marking line as specified on the plans. Grooves for letters and symbols shall be cut in a square or rectangular shape so that the entire marking will fit within the limits of the grooved area. The position of the edge of the grooves shall be a minimum of 4 in. (100 mm) from the edge of all longitudinal joints. The depth of the groove shall not be less than the manufacturer's recommendations for the pavement marking material specified, but shall be installed to a minimum depth of 110 mils (2.79 mm) and a maximum depth of 200 mils (5.08 mm) for pavement marking tapes thermoplastic markings and a minimum depth of 40 mils (1.02 mm) and a maximum depth of 80 mils (2.03 mm) for liquid markings. The cutting head shall be operated at the appropriate speed in order to prevent undulation of the cutting head and grooving at an inconsistent depth.

At the start of grooving operations, a 50 ft (16.7 m) test section shall be installed and depth measurements shall be made at 10 ft (3.3 m) intervals within the test section. The individual depth measurements shall be within the allowable ranges according to this Article. If it is determined the test section has not been grooved at the appropriate depth or texture, adjustments shall be made to the cutting head and another 50 ft (16.7 m) test section shall be installed and checked. This process shall continue until the test section meets the requirements of this Article.

For new HMA pavements, grooves shall not be installed within 14 days of the placement of the final course of pavement.

Final Cleaning. Immediately prior to the application of the pavement marking material or primer sealer, the groove shall be cleaned with high-pressure air blast.

Method of Measurement. This work will be measured for payment in place, in feet (meter) for the groove width specified.

Grooving for letter, numbers and symbols will be measured in square feet (square meters).

Basis of Payment. This work will be paid for at the contract unit price per foot (meter) for GROOVING FOR RECESSED PAVEMENT MARKING of the groove width specified, and per square foot (square meter) for GROOVING FOR RECESSED PAVEMENT MARKING, LETTERS AND SYMBOLS.

The following shall only apply when preformed plastic pavement markings are to be recessed:

Add the following paragraph after the first paragraph of Article 780.07 of the Standard Specifications.

"The markings shall be capable of being applied in a grooved slot on new and existing portland cement concrete and HMA surfaces, by means of a pressure-sensitive, precoated adhesive, or liquid contact cement which shall be applied at the time of installation. A primer sealer shall be applied with a roller and shall cover and seal the entire bottom of the groove.



The primer sealer shall be recommended by the manufacturer of the pavement marking material and shall be compatible with the material being used. The Contractor shall install the markings in the groove as soon as possible after the primer sealer cures according to the manufacturer's recommendations. The markings placed in the groove shall be rolled and tamped into the groove with a roller or tamper cart cut to fit the groove and loaded with or weighing at least 200 lb (90kg). Vehicle tires shall not be used for tamping. The Contractor shall roll and tamp the material with a minimum of 6 passes to prevent easy removal or peeling."

80304

## 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% <sup>1/</sup>	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 <sup>2/</sup> – 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

## **LIGHT POLES (BDE)**

Effective: July 1, 2016

Revise the second paragraph of Article 1069.01 of the Standard Specifications to read:

“The detailed design and fabrication of the pole shaft, arms, tenons, and attachments shall be according to AASHTO “LRFD Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals” current at the time the project is advertised. Light poles shall be designed for ADT > 10,000 and Risk Category Typical. If Fatigue design is required, light poles shall be designed for Importance Category I.”

Revise the fifth paragraph of Article 1069.01(a) of the Standard Specifications to read:

“Deflection of the pole top as caused by the combined effect of deadload referenced above and wind speed prescribed by AASHTO shall be as required by AASHTO. Pole deflection and loading compliance, certified by the manufacturer, shall be noted on the pole submittal.”

80367

## **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

Revised: April 1, 2017

Revise the second paragraph of Article 701.20(h) of the Standard Specifications to read:

“For all other portable changeable message signs, this work will be paid for at the contract unit price per calendar day for each sign as CHANGEABLE MESSAGE SIGN.”

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

## PORTLAND CEMENT CONCRETE BRIDGE DECK CURING (BDE)

Effective: April 1, 2015

Revised: January 1, 2017

Revise the following two entries in the table in Article 1020.13 of the Standard Specifications to read:

"INDEX TABLE OF CURING AND PROTECTION OF CONCRETE CONSTRUCTION			
TYPE OF CONSTRUCTION	CURING METHODS	CURING PERIOD DAYS	LOW AIR TEMPERATURE PROTECTION METHODS
Superstructure (Approach Slab)	1020.13(a)(5)(6) <sup>19/</sup>	3	1020.13(d)(1)(2) <sup>17/</sup>
Deck	1020.13(a)(5)(6) <sup>19/</sup>	7	1020.13(d)(1)(2) <sup>17/</sup>

Add the following footnote to the end of the Index Table of Curing and Protection of Concrete Construction in Article 1020.13 of the Standard Specifications:

"19/ The cellulose polyethylene or synthetic fiber with polymer polyethylene blanket method shall not be used on latex modified concrete."

Revise Article 1020.13(a)(5) of the Standard Specifications to read:

"(5) Wetted Cotton Mat Method. After the surface of concrete has been textured or finished, it shall be covered immediately with dry or damp cotton mats. Cotton mats in poor condition will not be allowed. The cotton mats shall be placed in a manner which will not create indentations greater than 1/4 in. (6 mm) in the concrete surface. Minor marring of the surface is tolerable and is secondary to the importance of timely curing. The cotton mats shall then be wetted immediately and thoroughly soaked with a gentle spray of water. Thereafter, the cotton mats shall be covered with white polyethylene sheeting or burlap-polyethylene blankets. The cotton mats shall be kept saturated with water.

- a. Bridge Decks. For bridge decks, a foot bridge shall be used to place and wet the cotton mats. The cotton mats shall be maintained in a wetted condition until the concrete has hardened sufficiently to place soaker hoses without indentations to the concrete surface. The soaker hoses shall be placed on top of the cotton mats at a maximum 4 ft (1.2 m) spacing. The cotton mats shall be kept wet with a continuous supply of water for the remainder of the curing period. Other continuous wetting systems may be used if approved by the Engineer.

For areas inaccessible to the cotton mats, curing shall be according to Article 1020.13(a)(3)."



Add the following to Article 1020.13(a) of the Standard Specifications.

“(6) Cellulose Polyethylene Blanket Method and Synthetic Fiber with Polymer Polyethylene Blanket Method. After the surface of concrete has been textured or finished, it shall be covered immediately with a cellulose polyethylene or synthetic fiber with polymer polyethylene blanket. Damaged blankets will not be allowed. The blankets shall be installed with the white perforated polyethylene side facing up. Adjoining blankets shall overlap a minimum of 8 in. (200 mm). Any air bubbles trapped during placement shall be removed. The blankets shall then be wetted immediately and thoroughly soaked with a gentle spray of water. Thereafter, the blankets shall be kept saturated with water. For bridge decks, the blankets shall be placed and kept wet according to Article 1020.13(a)(5)a.”

Revise the first paragraph of Article 1022.03 of the Standard Specifications to read:

**“1022.03 Waterproof Paper Blankets, White Polyethylene Sheeting, Burlap-Polyethylene Blankets, Cellulose Polyethylene Blankets, and Synthetic Fiber with Polymer Polyethylene Blankets.** These materials shall be white and according to ASTM C 171, except moisture loss test specimens shall be made according to Illinois Modified AASHTO T 155.

The cellulose polyethylene blanket shall consist of a white polyethylene sheeting with cellulose fiber backing and shall be limited to single use only. The cellulose polyethylene blankets shall be delivered to the jobsite unused and in the manufacturer's unopened packaging until ready for installation. Each roll shall be clearly labeled with product name, manufacturer, and manufacturer's certification of compliance with ASTM C 171.

The synthetic fiber with polymer polyethylene blanket shall consist of a white polyethylene sheeting with absorbent synthetic fibers and super absorbent polymer backing, and shall be limited to single use only. The synthetic fiber with polymer polyethylene blankets shall be delivered to the jobsite unused and in the manufacturer's unopened packaging until ready for installation. Each roll shall be clearly labeled on the product with product name, manufacturer, and manufacturer's certification of compliance with ASTM C 171.”

80359

## **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

## RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (BDE)

Effective: November 1, 2012

Revise: April 1, 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 produced by cold milling or crushing an existing hot-mix asphalt (HMA) pavement. The Contractor shall supply written documentation that the RAP originated from routes or airfields under federal, state, or local agency jurisdiction.
- (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 93 percent passing the #4 (4.75 mm) sieve based on a dry shake gradation. RAS shall be uniform in gradation and asphalt binder content and 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. No additional RAP shall be added to the pile after the pile has been sealed. Stockpiles shall be sufficiently separated to prevent intermingling at the base. Stockpiles shall be identified by signs indicating the type as listed below (i.e. "Homogeneous Surface").

Prior to milling, the Contractor shall request the District provide documentation on the quality of the RAP to clarify the appropriate stockpile.

- (1) Fractionated RAP (FRAP). FRAP shall consist of RAP from Class I, HMA (High and Low ESAL) 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 fractionated prior to testing by screening into a minimum of two size 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 shall pass the sieve size specified below for the mix into which the FRAP will be incorporated.

Mixture FRAP will be used in:	Sieve Size that 100 % of FRAP Shall Pass
IL-19.0	1 1/2 in. (40 mm)
IL-9.5	3/4 in. (20 mm)
IL-4.75	1/2 in. (13 mm)

- (2) Homogeneous. Homogeneous RAP stockpiles shall consist of RAP from Class I, HMA (High and Low ESAL) mixtures and represent: 1) the same aggregate quality, but shall be at least C quality; 2) the same type of crushed aggregate (either crushed natural aggregate, ACBF slag, or steel slag); 3) similar gradation; and 4) similar asphalt binder content. If approved by the Engineer, combined single pass surface/binder millings may be considered "homogeneous" with a quality rating dictated by the lowest coarse aggregate quality present in the mixture.
- (3) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I, HMA (High and Low ESAL) 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 prior to testing by crushing to where all RAP shall pass the 5/8 in. (16 mm) or smaller screen. Conglomerate RAP stockpiles shall not contain steel slag.
- (4) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as "Non-Quality".

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

- (b) RAS Stockpiles. Type 1 and Type 2 RAS shall be stockpiled separately and shall not be intermingled. Each stockpile shall be signed indicating what type of RAS is present.

Unless otherwise specified by the Engineer, mechanically blending manufactured sand (FM 20 or FM 22) up to an equal weight of RAS with the processed RAS will be permitted to improve workability. The sand shall be "B Quality" or better from an approved Aggregate Gradation Control System source. The sand shall be 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.** RAP/FRAP and RAS testing shall be according to the following.

(a) RAP/FRAP Testing. When used in HMA, the RAP/FRAP shall be sampled and tested either during or after stockpiling.

(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) 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.

Each sample shall be split to obtain two equal 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 or RAS blended with manufactured sand shall be sampled and tested during stockpiling according to Bureau of Materials and Physical Research Policy Memorandum, "Reclaimed Asphalt Shingle (RAS) Source".

Samples shall be collected during stockpiling 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 250 tons (225 metric tons) thereafter. A minimum of five samples are required for stockpiles less than 1000 tons (900 metric tons). Once a  $\leq 1000$  ton (900 metric ton), five-sample/test stockpile has been established it shall be sealed. Additional incoming RAS or RAS blended with manufactured sand shall be stockpiled 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.

Before testing, each sample shall be split to obtain two test samples. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall perform a washed extraction and test for unacceptable materials on 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.

If the sampling and testing was performed at the shingle processing facility in accordance with the QC Plan, the Contractor shall obtain and make available all of the test results from start of the initial stockpile.

**1031.04 Evaluation of Tests.** Evaluation of test results shall be according to the following.

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

Parameter	FRAP/Homogeneous/ Conglomerate
1 in. (25 mm)	
1/2 in. (12.5 mm)	± 8 %
No. 4 (4.75 mm)	± 6 %
No. 8 (2.36 mm)	± 5 %
No. 16 (1.18 mm)	
No. 30 (600 µm)	± 5 %
No. 200 (75 µm)	± 2.0 %
Asphalt Binder	± 0.4 % <sup>1/</sup>
$G_{mm}$	± 0.03

1/ The tolerance for FRAP shall be ± 0.3 %.

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

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

- (b) Evaluation of RAS and RAS Blended with Manufactured Sand 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. Individual test results, when compared to the averages, 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)	± 2.0 %
Asphalt Binder Content	± 1.5 %

If more than 20 percent of the individual sieves and/or asphalt binder content tests are out of the above tolerances, or if the percent unacceptable material exceeds 0.5 percent by weight of material retained on the # 4 (4.75 mm) sieve, the RAS or RAS blend shall not be used in Department projects. All test data and acceptance ranges shall be sent to the District for evaluation.

**1031.05 Quality Designation of Aggregate in RAP/FRAP.**

(a) RAP. The aggregate quality of the RAP for homogeneous and conglomerate 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 Class I binder, Superpave/HMA (High ESAL) binder, or (Low ESAL) IL-19.0L binder mixtures are designated as containing Class C 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. Coarse and fine FRAP stockpiles containing plus #4 (4.75 mm) sieve coarse aggregate shall have a maximum tonnage of 5000 tons (4500 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.

**1031.06 Use of RAP/FRAP and/or RAS in HMA.** The use of RAP/FRAP and/or RAS shall be the Contractor's option when constructing HMA in all contracts.

(a) RAP/FRAP. The use of RAP/FRAP in HMA shall be as follows.

- (1) Coarse Aggregate Size. The coarse aggregate in all RAP shall be equal to or less than the nominal maximum size requirement for the HMA mixture to be produced.
  - (2) Steel Slag Stockpiles. Homogeneous RAP stockpiles containing steel slag will be approved for use in all HMA (High ESAL and Low ESAL) Surface and Binder Mixture applications.
  - (3) Use in HMA Surface Mixtures (High and Low ESAL). RAP/FRAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall be FRAP or homogeneous in which the coarse aggregate is Class B quality or better. RAP/FRAP from Conglomerate stockpiles shall be considered equivalent to limestone for frictional considerations. Known frictional contributions from plus #4 (4.75 mm) homogeneous RAP and FRAP stockpiles will be accounted for in meeting frictional requirements in the specified mixture.
  - (4) Use in HMA Binder Mixtures (High and Low ESAL), HMA Base Course, and HMA Base Course Widening. RAP/FRAP stockpiles for use in HMA binder mixtures (High and Low ESAL), HMA base course, and HMA base course widening shall be FRAP, homogeneous, or conglomerate, in which the coarse aggregate is Class C quality or better.
  - (5) Use in Shoulders and Subbase. RAP/FRAP stockpiles for use in HMA shoulders and stabilized subbase (HMA) shall be FRAP, homogeneous, or conglomerate.
  - (6) When the Contractor chooses the RAP option, the percentage of RAP shall not exceed the amounts indicated in Article 1031.06(c)(1) below for a given Ndesign.
- (b) RAS. RAS meeting Type 1 or Type 2 requirements will be permitted in all HMA applications as specified herein.
- (c) RAP/FRAP and/or RAS Usage Limits. Type 1 or Type 2 RAS may be used alone or in conjunction with RAP or FRAP in HMA mixtures up to a maximum of 5.0 percent by weight of the total mix.
- (1) RAP/RAS. When RAP is used alone or RAP is used in conjunction with RAS, the percentage of virgin asphalt binder replacement shall not exceed the amounts listed in the Max RAP/RAS ABR table listed below for the given Ndesign.

**RAP/RAS Maximum Asphalt Binder Replacement (ABR) Percentage**

HMA Mixtures <i>1/, 2/</i>	RAP/RAS Maximum ABR %		
	Binder/Leveling Binder	Surface	Polymer Modified
30	30	30	10



50	25	15	10
70	15	10	10
90	10	10	10

1/ For Low ESAL HMA shoulder and stabilized subbase, the RAP/RAS ABR shall not exceed 50 percent of the mixture.

2/ When RAP/RAS ABR exceeds 20 percent, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28). If warm mix asphalt (WMA) technology is utilized and production temperatures do not exceed 275 °F (135 °C), the high and low virgin asphalt binder grades shall each be reduced by one grade when RAP/RAS ABR exceeds 25 percent (i.e. 26 percent RAP/RAS ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28).

(2) FRAP/RAS. When FRAP is used alone or FRAP is used in conjunction with RAS, the percentage of virgin asphalt binder replacement shall not exceed the amounts listed in the FRAP/RAS table listed below for the given Ndesign.

**FRAP/RAS Maximum Asphalt Binder Replacement (ABR) Percentage**

HMA Mixtures <i>1/, 2/</i>	FRAP/RAS Maximum ABR %			
	Ndesign	Binder/Leveling Binder	Surface	Polymer Modified <sup>3/, 4/</sup>
	30	50	40	10
	50	40	35	10
	70	40	30	10
	90	40	30	10

1/ For Low ESAL HMA shoulder and stabilized subbase, the FRAP/RAS ABR shall not exceed 50 percent of the mixture.

2/ When FRAP/RAS ABR exceeds 20 percent for all mixes, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28). If warm mix asphalt (WMA) technology is utilized and production temperatures do not exceed 275 °F (135 °C), the high and low virgin asphalt binder grades shall each be reduced by one grade when FRAP/RAS ABR exceeds 25 percent (i.e. 26 percent ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28).

3/ For SMA the FRAP/RAS ABR shall not exceed 20 percent.

4/ For IL-4.75 mix the FRAP/RAS ABR shall not exceed 30 percent.

**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) RAP/FRAP and/or RAS. RAP/FRAP and/or RAS mix designs shall be submitted for verification. If additional RAP/FRAP and/or RAS stockpiles are tested and found that no more than 20 percent of the results, as defined under "Testing" herein, are outside of the control tolerances set for the original RAP/FRAP and/or RAS stockpile and HMA mix design, and meets all of the requirements herein, the additional RAP/FRAP and/or RAS stockpiles may be used in the original mix 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 RAP/FRAP and/or RAS shall be as follows.

- (a) RAP/FRAP. The coarse aggregate in all RAP/FRAP used shall be equal to or less than the nominal maximum size requirement for the HMA mixture being produced.

To remove or reduce agglomerated material, a scalping screen, gator, crushing unit, or comparable sizing device approved by the Engineer shall be used in the RAP feed system to remove or reduce oversized material. If material passing the sizing device adversely affects the mix production or quality of the mix, the sizing device shall be set at a size specified by the Engineer.

If the RAP/FRAP control tolerances or QC/QA test results require corrective action, the Contractor shall cease production of the mixture containing RAP/FRAP and either switch to the virgin aggregate design or submit a new RAP/FRAP design.

- (b) 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  $\pm 0.5$  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.
- (c) RAP/FRAP and/or RAS. HMA plants utilizing RAP/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 RAP/FRAP/RAS 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 RAP/FRAP material as a percent of the total mix to the nearest 0.1 percent.
- h. Aggregate and RAP/FRAP moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAP/FRAP are printed in wet condition.)

(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).
- e. RAP/FRAP/RAS weight to the nearest pound (kilogram).
- f. Virgin asphalt binder weight to the nearest pound (kilogram).
- g. Residual asphalt binder in the RAP/FRAP/RAS 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 in aggregate surface course (temporary access entrances only) and aggregate wedge shoulders, Type B 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. One hundred percent of the RAP material shall pass the 1 1/2 in. (37.5 mm) sieve. The RAP material shall be reasonably well graded from coarse to fine. RAP material that is gap-graded or single sized will not be accepted."

80306

**TEMPORARY PAVEMENT MARKING (BDE)**

Effective: April 1, 2012

Revised: April 1, 2017

Revise Article 703.02 of the Standard Specifications to read:

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

- (a) Pavement Marking Tape, Type I and Type III ..... 1095.06
- (b) Paint Pavement Markings ..... 1095.02
- (c) Pavement Marking Tape, Type IV ..... 1095.11”

Revise the second paragraph of Article 703.05 of the Standard Specifications to read:

“Type I marking tape or paint shall be used at the option of the Contractor, except paint shall not be applied to the final wearing surface unless authorized by the Engineer for late season applications where tape adhesion would be a problem. Type III or Type IV marking tape shall be used on the final wearing surface when the temporary pavement marking will conflict with the permanent pavement marking such as on tapers, crossovers and lane shifts.”

Revise Article 703.07 of the Standard Specifications to read:

**“703.07 Basis of Payment.** This work will be paid for as follows.

- a) Short Term Pavement Marking. Short term pavement marking will be paid for at the contract unit price per foot (meter) for SHORT TERM PAVEMENT MARKING. Removal of short term pavement markings will be paid for at the contract unit price per square foot (square meter) for SHORT TERM PAVEMENT MARKING REMOVAL.
- b) Temporary Pavement Marking. Where the Contractor has the option of material type, temporary pavement marking will be paid for at the contract unit price per foot (meter) for TEMPORARY PAVEMENT MARKING of the line width specified, and at the contract unit price per square foot (square meter) for TEMPORARY PAVEMENT MARKING LETTERS AND SYMBOLS.

Where the Department specifies the use of pavement marking tape, the Type III or Type IV temporary pavement marking will be paid for at the contract unit price per foot (meter) for PAVEMENT MARKING TAPE, TYPE III or PAVEMENT MARKING TAPE, TYPE IV of the line width specified and at the contract unit price per square feet (square meter) for PAVEMENT MARKING TAPE, TYPE III - LETTERS AND SYMBOLS or PAVEMENT MARKING TAPE, TYPE IV – LETTERS AND SYMBOLS.

Removal of temporary pavement markings will be paid for at the contract unit price per square foot (square meter) for TEMPORARY PAVEMENT MARKING REMOVAL.

When temporary pavement marking is shown on the Standard, the cost of the temporary pavement marking and its removal will be included in the cost of the Standard.”

Add the following to Section 1095 of the Standard Specifications:

**“1095.11 Pavement Marking Tape, Type IV.** The temporary, preformed, patterned markings shall consist of a white or yellow tape with wet retroreflective media incorporated to provide immediate and continuing retroreflection during both wet and dry conditions. The tape shall be manufactured without the use of heavy metals including lead chromate pigments or other similar, lead-containing chemicals.

The white and yellow Type IV marking tape shall meet the Type III requirements of Article 1095.06 and the following.

- (a) Composition. The retroreflective pliant polymer pavement markings shall consist of a mixture of high-quality polymeric materials, pigments and glass beads distributed throughout its base cross-sectional area, with a layer of wet retroreflective media bonded to a durable polyurethane topcoat surface. The patterned surface shall have approximately 40% ± 10% of the surface area raised and presenting a near vertical face to traffic from any direction. The channels between the raised areas shall be substantially free of exposed beads or particles.
- (b) Retroreflectance. The white and yellow markings shall meet the following for initial dry and wet retroreflectance.
  - (1) Dry Retroreflectance. Dry retroreflectance shall be measured under dry conditions according to ASTM D 4061 and meet the values described in Article 1095.06 for Type III tape.
  - (2) Wet Retroreflectance. Wet retroreflectance shall be measured under wet conditions according to ASTM E 2177 and meet the values shown in the following table.

**Wet Retroreflectance, Initial  $R_L$**

Color	$R_L$ 1.05/88.76
White	300
Yellow	200

- (c) Color. The material shall meet the following requirements for daylight reflectance and color, when tested, using a color spectrophotometer with 45 degrees circumferential/zero degree geometry, illuminant D65, and a two degree observer angle. The color instrument shall measure the visible spectrum from 380 to 720 nm with a wavelength measurement interval and spectral bandpass of 10 nm.

Color	Daylight Reflectance %Y
White	65 minimum
*Yellow	36-59

\*Shall match Federal 595 Color No. 33538 and the chromaticity limits as follows.

x	0.490	0.475	0.485	0.530
y	0.470	0.438	0.425	0.456

- (d) Skid Resistance. The surface of the markings shall provide an average minimum skid resistance of 50 BPN when tested according to ASTM E 303.
- (e) Sampling, Testing, Acceptance, and Certification. Prior to approval and use of the wet reflective, temporary, removable pavement marking tape, the manufacturer shall submit a notarized certification from an independent laboratory, together with the results of all tests, stating that the material meets the requirements as set forth herein. The certification test report shall state the lot tested, manufacturer's name, and date of manufacture.

After approval by the Department, samples and certification by the manufacturer shall be submitted for each batch used. The manufacturer shall submit a certification stating that the material meets the requirements as set forth herein and is essentially identical to the material sent for qualification. The certification shall state the lot tested, manufacturer's name, and date of manufacture.

All costs of testing (other than tests conducted by the Department) shall be borne by the manufacturer."

80298

**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 4 . 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

## 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  $\pm 2$  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

## **DECK SLAB REPAIR**

Effective: May 15, 1995

Revised: October 15, 2011

This work shall consist of hot-mix asphalt surface removal, when required, the removal and disposal of all loose and deteriorated concrete from bridge deck and the replacement with new concrete to the original top of deck. The work shall be done according to the applicable requirements of Sections 501, 503 and 1020 of the Standard Specifications and this Special Provision.

Deck slab repairs will be classified as follows:

(a) Partial-Depth. Partial-depth repairs shall consist of removing the loose and unsound deck concrete, disposing of the concrete removed and replacing with new concrete. The removal may be performed by chipping with power driven hand tools or by hydro-scarification equipment. The depth shall be measured from the top of the concrete deck surface, at least 3/4 in. (20 mm) but not more than 1/2 the concrete deck thickness.

(b) Full-Depth. Full-depth repairs shall consist of removing concrete full-depth of the deck, disposing of the concrete removed, and replacing with new concrete to the original concrete deck surface. The removal may be performed with power driven hand tools, hydraulic impact equipment, or by hydro-scarification equipment. Full-depth repairs shall be classified for payment as Full-Depth, Type I and Full-Depth, Type II according to the following:

Type I Full-depth patches less than or equal to 5 sq. ft. (0.5 sq m) in area. The minimum dimensions for a patch shall be 1 ft. x 1 ft. (300 mm x 300 mm).

Type II Full-depth patches greater than 5 sq. ft. (0.5 sq. m) in area.

### Materials.

Materials shall be according to Article 1020.02.

Portland cement concrete for partial and full-depth repairs shall be according to Section 1020. Class PP-1, PP-2, PP-3, PP-4, PP-5 or BS concrete shall be used at the Contractor's option unless noted otherwise on the contract plans. For Class BS concrete, a CA 13, 14, or 16 shall be used. If the BS concrete mixture is used only for full depth repairs, a CA-11 may be used.

### Equipment:

The equipment used shall be subject to the approval of the Engineer and shall meet the following requirements:

(a) Surface Preparation Equipment. Surface preparation and concrete removal equipment shall be according to the applicable portions of Section 1100 and the following:

(1) Sawing Equipment. Sawing equipment shall be a concrete saw capable of sawing concrete to the specified depth.

(2) Blast Cleaning Equipment. The blast cleaning may be performed by wet sandblasting, high-pressure waterblasting, shotblasting or abrasive blasting. Blast cleaning equipment shall be capable of removing rust and old concrete from exposed reinforcement bars, and shall have oil traps.

(3) Power-Driven Hand Tools. Power-driven hand tools will be permitted including jackhammers lighter than the nominal 45 lb. (20 kg) class. Chipping hammers heavier than a nominal 15 lb. (6.8 kg) class shall not be used for removing concrete from below any reinforcing bar for partial depth repairs, or for removal within 1 ft (300 mm) of existing beams, girders or other supporting structural members that are to remain in service or within 1 ft (300 mm) of the boundaries of full-depth repairs. Jackhammers or chipping hammers shall not be operated at an angle in excess of 45 degrees measured from the surface of the slab.

(4) Hydraulic Impact Equipment. Hydraulic impact equipment with a maximum rated striking energy of 360 ft-lbs (270 J) may be permitted only in areas of full depth removal more than 1 ft (300 mm) away from existing beams, girders or other supporting structural members that are to remain in service or more than 1 ft (300 mm) from the boundaries of full-depth repairs.

(5) Hydro-Demolition Equipment. The hydro-demolition equipment shall consist of filtering and pumping units operating with a remote-controlled robotic device. The equipment shall use water according to Section 1002. The equipment shall be capable of being controlled to remove only unsound concrete.

(b) Concrete Equipment: Equipment for proportioning and mixing the concrete shall be according to Article 1020.03.

(c) Finishing Equipment: Finishing equipment shall be according to Article 1103.17. Adequate hand tools will be permitted for placing and consolidating concrete in the patch areas and for finishing small patches.

Construction Requirements: Sidewalks, curbs, drains, reinforcement and/or existing transverse and longitudinal joints which are to remain in place shall be protected from damage during removal and cleaning operations.

The Contractor shall control the runoff water generated by the various construction activities in such a manner as to minimize, to the maximum extent practicable, the discharge of untreated effluent into adjacent waters, and shall properly dispose of the solids generated according to Article 202.03. The Contractor shall submit a water management plan to the Engineer

specifying the control measures to be used. The control measures shall be in place prior to the start of runoff water generating activities. Runoff water shall not be allowed to constitute a hazard to adjacent or underlying roadways, waterways, drainage areas or railroads nor be allowed to erode existing slopes.

(a) Hot-Mix Asphalt Surface Removal.

The hot-mix asphalt surface course and all waterproofing membrane shall be removed and disposed of according to applicable portions of Articles 440.04 and 440.06, except milling equipment will not be allowed if the deck is to receive a waterproofing membrane system. If the overlay or waterproofing membrane contains asbestos fibers, removal shall be in accordance with the Special Provision for "Asbestos Waterproofing Membrane or Asbestos Hot-mix Asphalt Surface Removal". Removal of the hot-mix asphalt surface by the use of radiant or direct heat will not be permitted.

(b) Surface Preparation:

All loose, disintegrated and unsound concrete shall be removed from portions of the deck slab shown on the plans or as designated by the Engineer. The Engineer will determine the limits of removal as the work progresses.

The Contractor shall take care not to damage reinforcement bars or expansion joints which are to remain in place. Any damage to reinforcement bars or expansion joints shall be corrected at the Contractor's expense. All loose reinforcement bars, as determined by the Engineer, shall be retied at the Contractor's expense.

- (1) Partial-Depth. Areas to be repaired will be determined and marked by the Engineer. A concrete saw shall be used to provide vertical edges approximately 3/4 in. (20 mm) deep around the perimeter of the area to be patched when a concrete overlay is not specified. Where high steel is present, the depth may be reduced as directed by the Engineer. A saw cut will not be required on those boundaries along the face of the curb, parapet or joint or when sharp vertical edges are provided by hydro-demolition.

The loose and unsound concrete shall be removed by chipping, with power driven hand tools or by hydro-demolition equipment. All exposed reinforcing bars and newly exposed concrete shall be thoroughly blast cleaned. Where, in the judgment of the Engineer, the bond between existing concrete and reinforcement steel within the patch area has been destroyed, the concrete adjacent to the bar shall be removed to a depth that will permit new concrete to bond to the entire periphery of the exposed bar. A minimum of 1 in. (25 mm) clearance will be required. The Engineer may require enlarging a designated removal area should inspection indicate deterioration beyond the limits previously designated. In this event, a new saw cut shall be made around the extended area before additional removal is begun. The removal area shall not be enlarged solely to correct debonded reinforcement or deficient lap lengths.



- (2) Full-Depth. Concrete shall be removed as determined by the Engineer within all areas designated for full-depth repair and in all designated areas of partial depth repair in which unsound concrete is found to extend below half the concrete deck thickness. Full depth removal shall be performed according to Article 501.05 except that hydraulic impact equipment may be permitted in areas of full depth removal more than 1 ft (300 mm) away from the edges of existing beams, girders or other supporting structural members or more than 1 ft (300 mm) from the boundaries of full-depth repairs. Saw cuts shall be made on the top of the deck, except those boundaries along the face of curbs, parapets and joints or where hydro-demolition provided sharp vertical edges. The top saw cut may be omitted if the deck is to receive an overlay.

Forms for full-depth repair may be supported by hangers with adjustable bolts or by blocking from the beams below. When approved by the Engineer, forms for Type 1 patches may be supported by No. 9 wires or other devices attached to the reinforcement bars.

All form work shall be removed after the curing sequence is complete and prior to opening to traffic.

- (3) Reinforcement Treatment. Care shall be exercised during concrete removal to protect the reinforcement bars and structural steel from damage. Any damage to the reinforcement bars or structural steel to remain in place shall be repaired or replaced. All existing reinforcement bars shall remain in place except as herein provided for corroded bars. Tying of loose bars will be required. Reinforcing bars which have been cut or have lost 25 percent or more of their original cross sectional area shall be supplemented by new in kind reinforcement bars. New bars shall be lapped a minimum of 32 bar diameters to existing bars. An approved mechanical bar splice capable of developing in tension at least 125 percent of the yield strength of the existing bar shall be used when it is not feasible to provide the minimum bar lap. No welding of bars will be permitted.
- (4) Cleaning. Immediately after completion of the concrete removal and reinforcement repairs, the repair areas shall be cleaned of dust and debris. Once the initial cleaning is completed, the repair areas shall be thoroughly blast cleaned to a roughened appearance free from all foreign matter. Particular attention shall be given to removal of concrete fines. Any method of cleaning which does not consistently produce satisfactory results shall be discontinued and replaced by an acceptable method. All debris, including water, resulting from the blast cleaning shall be confined and shall be immediately and thoroughly removed from all areas of accumulation. If concrete placement does not follow immediately after the final cleaning, the area shall be carefully protected with well-anchored polyethylene sheeting.

Exposed reinforcement bars shall be free of dirt, detrimental scale, paint, oil, or other foreign substances which may reduce bond with the concrete. A tight non-scaling

coating of rust is not considered objectionable. Loose, scaling rust shall be removed by rubbing with burlap, wire brushing, blast cleaning or other methods approved by the Engineer.

(c) Placement & Finishing of Concrete Repair:

(1) Bonding Method. The patch area shall be cleaned to the satisfaction of the Engineer and shall be thoroughly wetted and maintained in a dampened condition with water for at least 12 hours before placement of the concrete. Any excess water shall be removed by compressed air or by vacuuming prior to the beginning of concrete placement. Water shall not be applied to the patch surface within one hour before or at any time during placement of the concrete.

(2) Concrete Placement.

The concrete shall be placed and consolidated according to Article 503.07 and as herein specified. Article 1020.14 shall apply.

When an overlay system is not specified, the patches shall be finished according to Article 503.16 (a), followed by a light brooming.

(d) Curing and Protection.

Concrete patches shall be cured by the Wetted Burlap or Wetted Cotton Mat Method according to Article 1020.13 (a)(3) or Article 1020.13 (a)(5). The curing period shall be 3 days for Class PP-1, PP-2, PP-3, PP-4, and PP-5 concrete. The curing period shall be 7 days for Class BS concrete. In addition to Article 1020.13, when the air temperature is less than 55° F (13° C), the Contractor shall cover the patch according to Article 1020.13 (d)(1) with minimum R12 insulation. Insulation is optional when the air temperature is 55° F. - 90° F (13° C - 32° C). Insulation shall not be placed when the air temperature is greater than 90° F (32° C). A 72-hour minimum drying period shall be required before placing waterproofing or hot-mix asphalt surfacing.

(e) Opening to Traffic.

No traffic will be permitted on a patch until after the specified cure period, and the concrete has obtained a minimum compressive strength of 4000 psi (27.6 MPa) or flexural strength of 675 psi (4.65 MPa).

Construction equipment will be permitted on a patch during the cure period if the concrete has obtained the minimum required strength. In this instance, the strength specimens shall be cured with the patch.

Method of Measurement.

When specified, hot-mix asphalt surface removal and full or partial depth repairs will be measured for payment and computed in square yards (square meters).

Basis of Payment.

The hot-mix asphalt surface removal will be paid for at the contract unit price per square yard (square meter) for HOT-MIX ASPHALT SURFACE REMOVAL (DECK). Areas removed and replaced up to and including a depth of half the concrete deck thickness will be paid for at the contract unit price per square yard (square meter) for DECK SLAB REPAIR (PARTIAL). Areas requiring removal greater than a depth of half the concrete deck thickness shall be removed and replaced full depth and will be paid for at the contract unit price per square yard (square meter) for DECK SLAB REPAIR (FULL DEPTH, TYPE I) and/or DECK SLAB REPAIR (FULL DEPTH, TYPE II).

When corroded reinforcement bars are encountered in the performance of this work and replacement is required, the Contractor will be paid according to Article 109.04.

No payment will be allowed for removal and replacement of reinforcement bars damaged by the Contractor in the performance of his/her work or for any increases in dimensions needed to provide splices for these replacement bars.

Removal and disposal of asbestos waterproofing and/or asbestos bituminous concrete will be paid for as specified in the Special Provision for "Asbestos Waterproofing Membrane or Asbestos Hot-Mix Asphalt Surface Removal".

## **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.

## STRUCTURAL REPAIR OF CONCRETE

Effective: March 15, 2006

Revised: April 1, 2016

Description. This work shall consist of structurally repairing concrete.

Materials. Materials shall be according to the following.

Item	Article/Section
(a) Portland Cement Concrete (Note 1) .....	1020
(b) R1 or R2 Concrete (Note 2)	
(c) Normal Weight Concrete (Notes 3 and 4)	
(d) Shotcrete (High Performance) (Notes 5 and 6)	
(e) Reinforcement Bars .....	1006.10
(f) Anchor Bolts .....	1006.09
(g) Water .....	1002
(h) Curing Compound .....	1022.01
(i) Cotton Mats .....	1022.02
(j) Protective Coat .....	1023.01
(k) Epoxy (Note 7) .....	1025
(l) Mechanical Bar Splicers .....	508.06(c)

Note 1. The concrete shall be Class SI, except the cement factor shall be a minimum 6.65 cwt/cu yd (395 kg/cu m), the coarse aggregate shall be a CA 16, and the strength shall be a minimum 4000 psi (27,500 kPa) compressive or 675 psi (4650 kPa) flexural at 14 days. A high range water-reducing admixture shall be used to obtain a 5-7 in. (125-175 mm) slump, but a cement factor reduction according to Article 1020.05(b)(8) is prohibited. A self-consolidating concrete mixture is also acceptable per Article 1020.04, except the mix design requirements of this note regarding the cement factor, coarse aggregate, strength, and cement factor reduction shall apply.

Note 2. The R1 or R2 concrete shall be from the Department's approved list of Packaged, Dry, Rapid Hardening, Cementitious Materials for Concrete Repairs. The R1 or R2 concrete shall comply with the air content and strength requirements for Class SI concrete as indicated in Note 1. Mixing shall be per the manufacturer's recommendations, except the water/cement ratio shall not exceed the value specified for Class SI concrete as indicated in Note 1. A high range water-reducing admixture shall be used to obtain a 5-7 in. (125-175 mm) slump, and a retarder may be required to allow time to perform the required field tests. The admixtures shall be per the manufacturer's recommendation, and the Department's approved list of Concrete Admixtures shall not apply.

Note 3. The "high slump" packaged concrete mixture shall be from the Department's approved list of Packaged, Dry, Formed, Concrete Repair Mixtures. The materials and preparation of aggregate shall be according to ASTM C 387. The cement

factor shall be 6.65 cwt/cu yd (395 kg/cu m) minimum to 7.05 cwt/cu yd (418 kg/cu m) maximum. Cement replacement with fly ash or ground granulated blast-furnace slag shall be according to Section 1020. The "high slump" packaged concrete mixture shall have a water soluble chloride ion content of less than 0.40 lb/cu yd (0.24 kg/cu m). The test shall be performed according to ASTM C 1218, and the "high slump" packaged concrete mixture shall have an age of 28 to 42 days at the time of test. The ASTM C 1218 test shall be performed by an independent lab a minimum of once every two years, and the test results shall be provided to the Department. The coarse aggregate shall be a maximum size of 1/2 in. (12.5 mm). The packaged concrete mixture shall comply with the air content and strength requirements for Class SI concrete as indicated in Note 1. Mixing shall be per the manufacturer's recommendations, except the water/cement ratio shall not exceed the value specified for Class SI concrete as indicated in Note 1. A high range water-reducing admixture shall be used to obtain a 5-7 in. (125-175 mm) slump. The admixture shall be per the manufacturer's recommendation, and the Department's approved list of Concrete Admixtures shall not apply. A maximum slump of 10 in. (250 mm) may be permitted if no segregation is observed by the Engineer in a laboratory or field evaluation.

Note 4 The "self-consolidating concrete" packaged concrete mixture shall be from the Department's approved list of Packaged, Dry, Formed, Concrete Repair Mixtures. The materials and preparation of aggregate shall be according to ASTM C 387. The cement factor shall be 6.65 cwt/cu yd (395 kg/cu m) minimum to 7.05 cwt/cu yd (418 kg/cu m) maximum. Cement replacement with fly ash or ground granulated blast-furnace slag shall be according to Section 1020. The "self-consolidating concrete" packaged concrete mixture shall have a water soluble chloride ion content of less than 0.40 lb/cu yd (0.24 kg/cu m). The test shall be performed according to ASTM C 1218, and the "self-consolidating concrete" packaged concrete mixture shall have an age of 28 to 42 days at the time of test. The ASTM C 1218 test shall be performed by an independent lab a minimum of once every two years, and the test results shall be provided to the Department. The concrete mixture should be uniformly graded, and the coarse aggregate shall be a maximum size of 1/2 in. (12.5 mm). The fine aggregate proportion shall be a maximum 50 percent by weight (mass) of the total aggregate used. The packaged concrete mixture shall comply with the air content and strength requirements for Class SI concrete as indicated in Note 1. Mixing shall be per the manufacturer's recommendations, except the water/cement ratio shall not exceed the value specified for Class SI concrete as indicated in Note 1. The admixtures used to produce self-consolidating concrete shall be per the manufacturer's recommendation, and the Department's approved list of Concrete Admixtures shall not apply. The packaged concrete mixture shall meet the self-consolidating requirements of Article 1020.04.

Note 5. Packaged shotcrete that includes aggregate shall be from the Department's approved list of Packaged High Performance Shotcrete, and independent

laboratory test results showing the product meets Department specifications will be required. The product shall be a packaged, pre-blended, and dry combination of materials, for the wet-mix shotcrete method according to ASTM C 1480. A non-chloride accelerator may be used according to the shotcrete manufacturer's recommendations. The shotcrete shall be Type FA or CA, Grade FR, and Class I. The fibers shall be Type III synthetic according to ASTM C 1116.

The packaged shotcrete shall have a water soluble chloride ion content of less than 0.40 lb/cu yd (0.24 kg/cu m). The test shall be performed according to ASTM C 1218, and the hardened shotcrete shall have an age of 28 to 42 days at the time of test. The ASTM C 1218 test shall be performed by an independent lab a minimum of once every two years, and the test results shall be provided to the Department.

Each individual aggregate used in the packaged shotcrete shall have either a maximum ASTM C 1260 expansion of 0.16 percent or a maximum ASTM C 1293 expansion of 0.040 percent. However, the ASTM C 1260 value may be increased to 0.27 percent for each individual aggregate if the cement total equivalent alkali content ( $\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$ ) does not exceed 0.60 percent. As an alternative to these requirements, ASTM C 1567 testing which shows the packaged shotcrete has a maximum expansion of 0.16 percent may be submitted. The ASTM C 1260, C 1293, or C 1567 test shall be performed a minimum of once every two years.

The 7 and 28 day compressive strength requirements in ASTM C 1480 shall not apply. Instead the shotcrete shall obtain a minimum compressive strength of 4000 psi (27,500 kPa) at 14 days.

The packaged shotcrete shall be limited to the following proportions:

The portland cement and finely divided minerals shall be 6.05 cwt/cu yd (360 kg/cu m) to 8.50 cwt/cu yd (505 kg/cu m) for Type FA and 6.05 cwt/cu yd (360 kg/cu. m) to 7.50 cwt/cu yd (445 kg/cu m) for Type CA. The portland cement shall not be below 4.70 cwt/cu yd (279 kg/cu m) for Type FA or CA.

The finely divided mineral(s) shall constitute a maximum of 35 percent of the total cement plus finely divided mineral(s).

Class F fly ash is optional and the maximum shall be 20 percent by weight (mass) of cement.

Class C fly ash is optional and the maximum shall be 25 percent by weight (mass) of cement.

Ground granulated blast-furnace slag is optional and the maximum shall be 30 percent by weight (mass) of cement.

Microsilica is required and shall be a minimum of 5 percent by weight (mass) of cement, and a maximum of 10 percent. As an alternative to microsilica, high-reactivity metakaolin may be used at a minimum of 5 percent by weight (mass) of cement, and a maximum of 10 percent.

Fly ash shall not be used in combination with ground granulated blast-furnace slag. Class F fly ash shall not be used in combination with Class C fly ash. Microsilica shall not be used in combination with high-reactivity metakaolin. A finely divided mineral shall not be used in combination with a blended hydraulic cement, except for microsilica or high-reactivity metakaolin.

The water/cement ratio as defined in Article 1020.06 shall be a maximum of 0.42.

The air content as shot shall be 4.0 – 8.0 percent.

Note 6 Packaged shotcrete that does not include pre-blended aggregate shall be from the Department's approved list of Packaged High Performance Shotcrete, and independent laboratory test results showing the product meets Department specifications will be required. The shotcrete shall be according to Note 5, except the added aggregate shall be according to Articles 1003.02 and 1004.02 in addition to each individual aggregate meeting the maximum expansion requirements of Note 5. The aggregate gradation shall be according to the manufacturer. The shotcrete shall be batched and mixed with added aggregate according to the manufacturer.

Note 7. In addition ASTM C 881, Type IV, Grade 2 or 3, Class A, B, or C may be used.

Equipment. Equipment shall be according to Article 503.03 and the following.

Chipping Hammer – The chipping hammer for removing concrete shall be a light-duty pneumatic or electric tool with a 15 lb. (7 kg) maximum class or less.

Blast Cleaning Equipment – Blast cleaning equipment for concrete surface preparation shall be the abrasive type, and the equipment shall have oil traps.

Hydrodemolition Equipment – Hydrodemolition equipment for removing concrete shall be calibrated, and shall use water according to Section 1002.

High Performance Shotcrete Equipment – The batching, mixing, pumping, hose, nozzle, and auxiliary equipment shall be for the wet-mix shotcrete method, and shall meet the requirements of ACI 506R.

### Construction Requirements



General. The repair methods shall be either formed concrete repair or shotcrete. The repair method shall be selected by the Contractor with the following rules.

- (a) Rule 1. For formed concrete repair, a subsequent patch to repair the placement point after initial concrete placement will not be allowed. As an example, this may occur in a vertical location located at the top of the repair.
- (b) Rule 2. Formed concrete repair shall not be used for overhead applications.
- (c) Rule 3. If formed concrete repair is used for locations that have reinforcement with less than 0.75 in. (19 mm) of concrete cover, the concrete mixture shall contain fly ash or ground granulated blast-furnace slag at the maximum cement replacement allowed.
- (d) Rule 4. Shotcrete shall not be used for any repair greater than 6 in. (150 mm) in depth, except in horizontal applications, where the shotcrete may be placed from above in one lift.
- (e) Rule 5. Shotcrete shall not be used for column repairs greater than 4 in. (100 mm) in depth, unless the shotcrete mixture contains 3/8 in. (9.5 mm) aggregate.

Temporary Shoring or Cribbing. When a temporary shoring or cribbing support system is required, the Contractor shall provide details and computations, prepared and sealed by an Illinois licensed Structural Engineer, to the Department for review and approval. When ever possible the support system shall be installed prior to starting the associated concrete removal. If no system is specified, but during the course of removal the need for temporary shoring or cribbing becomes apparent or is directed by the Engineer due to a structural concern, the Contractor shall not proceed with any further removal work until an appropriate and approved support system is installed.

Concrete Removal. The Contractor shall provide ladders or other appropriate equipment for the Engineer to mark the removal areas. Repair configurations will be kept simple, and squared corners will be preferred. The repair perimeter shall be sawed a depth of 1/2 in. (13 mm) or less, as required to avoid cutting the reinforcement. Any cut reinforcement shall be repaired or replaced at the expense of the Contractor. If the concrete is broken or removed beyond the limits of the initial saw cut, the new repair perimeter shall be recut. The areas to be repaired shall have all loose, unsound concrete removed completely by the use of chipping hammers, hydrodemolition equipment, or other methods approved by the Engineer. The concrete removal shall extend along the reinforcement bar until the reinforcement is free of bond inhibiting corrosion. Reinforcement bar with 50 percent or more exposed shall be undercut to a depth of 3/4 in. (19 mm) or the diameter of the reinforcement bar, whichever is greater.

If sound concrete is encountered before existing reinforcement bars are exposed, further removal of concrete shall not be performed unless the minimum repair depth is not met.

The repair depth shall be a minimum of 1 in. (25 mm). The substrate profile shall be  $\pm 1/16$  in. ( $\pm 1.5$  mm). The perimeter of the repair area shall have a vertical face.

If a repair is located at the ground line, any excavation required below the ground line to complete the repair shall be included in this work.

The Contractor shall have a maximum of 14 calendar days to complete each repair location with concrete or shotcrete, once concrete removal has started for the repair.

The Engineer shall be notified of concrete removal that exceeds 6 in. (150 mm) in depth, one fourth the cross section of a structural member, more than half the vertical column reinforcement is exposed in a cross section, more than 6 consecutive reinforcement bars are exposed in any direction, within 1.5 in. (38 mm) of a bearing area, or other structural concern. Excessive deterioration or removal may require further evaluation of the structure or installation of temporary shoring and cribbing support system.

Surface Preparation. Prior to placing the concrete or shotcrete, the Contractor shall prepare the repair area and exposed reinforcement by blast cleaning. The blast cleaning shall provide a surface that is free of oil, dirt, and loose material.

If a succeeding layer of shotcrete is to be applied, the initial shotcrete surface and remaining exposed reinforcement shall be free of curing compound, oil, dirt, loose material, rebound (i.e. shotcrete material leaner than the original mixture which ricochets off the receiving surface), and overspray. Preparation may be by lightly brushing or blast cleaning if the previous shotcrete surface is less than 36 hours old. If more than 36 hours old, the surface shall be prepared by blast cleaning.

The repair area and perimeter vertical face shall have a rough surface. Care shall be taken to ensure the sawcut face is roughened by blast cleaning. Just prior to concrete or shotcrete placement, saturate the repair area with water to a saturated surface-dry condition. Any standing water shall be removed.

Concrete or shotcrete placement shall be done within 3 calendar days of the surface preparation or the repair area shall be prepared again.

Reinforcement. Exposed reinforcement bars shall be cleaned of concrete and corrosion by blast cleaning. After cleaning, all exposed reinforcement shall be carefully evaluated to determine if replacement or additional reinforcement bars are required.

Reinforcing bars that have been cut or have lost 25 percent or more of their original cross sectional area shall be supplemented by new in kind reinforcement bars. New bars shall be lapped a minimum of 32 bar diameters to existing bars. A mechanical bar splicer shall be used when it is not feasible to provide the minimum bar lap. No welding of bars shall be performed.

Intersecting reinforcement bars shall be tightly secured to each other using 0.006 in. (1.6 mm) or heavier gauge tie wire, and shall be adequately supported to minimize movement during concrete placement or application of shotcrete.

For reinforcement bar locations with less than 0.75 in. (19 mm) of cover, protective coat shall be applied to the completed repair. The application of the protective coat shall be according to Article 503.19, 2nd paragraph, except blast cleaning shall be performed to remove curing compound.

The Contractor shall anchor the new concrete to the existing concrete with 3/4 in. (19 mm) diameter hook bolts for all repair areas where the depth of concrete removal is greater than 8 in. (205 mm) and there is no existing reinforcement extending into the repair area. The hook bolts shall be spaced at 15 in. (380 mm) maximum centers both vertically and horizontally, and shall be a minimum of 12 in. (305 mm) away from the perimeter of the repair. The hook bolts shall be installed according to Section 584.

Repair Methods. All repair areas shall be inspected and approved by the Engineer prior to placement of the concrete or application of the shotcrete.

- (a) Formed Concrete Repair. Falsework shall be according to Article 503.05. Forms shall be according to Article 503.06. Formwork shall provide a smooth and uniform concrete finish, and shall approximately match the existing concrete structure. Formwork shall be mortar tight and closely fitted where they adjoin the existing concrete surface to prevent leakage. Air vents may be provided to reduce voids and improve surface appearance. The Contractor may use exterior mechanical vibration, as approved by the Engineer, to release air pockets that may be entrapped.

The concrete for formed concrete repair shall be a Class SI Concrete, or a packaged R1 or R2 Concrete with coarse aggregate added, or a packaged Normal Weight Concrete at the Contractor's option. The concrete shall be placed and consolidated according to Article 503.07. The concrete shall not be placed when frost is present on the surface of the repair area, or the surface temperature of the repair area is less than 40 °F (4 °C). All repaired members shall be restored as close as practicable to their original dimensions.

Curing shall be done according to Article 1020.13.

If temperatures below 45°F (7°C) are forecast during the curing period, protection methods shall be used. Protection Method I according to Article 1020.13(d)(1), or Protection Method II according to Article 1020.13(d)(2) shall be used during the curing period.

The surfaces of the completed repair shall be finished according to Article 503.15.

- (b) Shotcrete. Shotcrete shall be tested by the Engineer for air content according to Illinois Modified AASHTO T 152. The sample shall be obtained from the discharge end of the nozzle by shooting a pile large enough to scoop a representative amount for filling the air meter measuring bowl. Shotcrete shall not be shot directly into the measuring bowl for testing.

For compressive strength of shotcrete, a 18 x 18 x 3.5 in. (457 x 457 x 89 mm) test panel shall be shot by the Contractor for testing by the Engineer. A steel form test panel shall have a minimum thickness of 3/16 in. (5 mm) for the bottom and sides. A wood form test panel shall have a minimum 3/4 in. (19 mm) thick bottom, and a minimum 1.5 in. (38 mm) thickness for the sides. The test panel shall be cured according to Article 1020.13 (a) (3) or (5) while stored at the jobsite and during delivery to the laboratory. After delivery to the laboratory for testing, curing and testing shall be according to ASTM C 1140.

The method of alignment control (i.e. ground wires, guide strips, depth gages, depth probes, and formwork) to ensure the specified shotcrete thickness and reinforcing bar cover is obtained shall be according to ACI 506R. Ground wires shall be removed after completion of cutting operations. Guide strips and formwork shall be of dimensions and a configuration that do not prevent proper application of shotcrete. Metal depth gauges shall be cut 1/4 in. (6 mm) below the finished surface. All repaired members shall be restored as close as practicable to their original dimensions.

For air temperature limits when applying shotcrete in cold weather, the first paragraph of Article 1020.14(b) shall apply. For hot weather, shotcrete shall not be applied when the air temperature is greater than 90°F (32°C). The applied shotcrete shall have a minimum temperature of 50°F (10°C) and a maximum temperature of 90°F (32°C). The shotcrete shall not be applied during periods of rain unless protective covers or enclosures are installed. The shotcrete shall not be applied when frost is present on the surface of the repair area, or the surface temperature of the repair area is less than 40°F (4°C). If necessary, lighting shall be provided to provide a clear view of the shooting area.

The shotcrete shall be applied according to ACI 506R, and shall be done in a manner that does not result in cold joints, laminations, sandy areas, voids, sags, or separations. In addition, the shotcrete shall be applied in a manner that results in maximum densification of the shotcrete. Shotcrete which is identified as being unacceptable while still plastic shall be removed and re-applied.

The nozzle shall normally be at a distance of 2 to 5 ft. (0.6 to 1.5 m) from the receiving surface, and shall be oriented at right angles to the receiving surface. Exceptions to this requirement will be permitted to fill corners, encase large diameter reinforcing bars, or as approved by the Engineer. For any exception, the nozzle shall never be oriented more than 45 degrees from the surface. Care shall be taken to keep the front face of the reinforcement bar clean during shooting operations. Shotcrete shall be built up from behind the reinforcement bar. Accumulations of rebound and overspray shall be continuously removed prior to application of new shotcrete. Rebound material shall not be incorporated in the work.

Whenever possible, shotcrete shall be applied to the full thickness in a single layer. The maximum thickness shall be according to Rules 4 and 5 under Construction Requirements, General. When two or more layers are required, the minimum number shall be used and shall be done in a manner without sagging or separation. A flash coat (i.e. a thin layer of up to 1/4 in. (6 mm) applied shotcrete) may be used as the final lift for overhead applications.

Prior to application of a succeeding layer of shotcrete, the initial layer of shotcrete shall be prepared according to the surface preparation and reinforcement bar cleaning requirements. Upon completion of the surface preparation and reinforcement bar treatment, water shall be applied according to the surface preparation requirements unless the surface is moist. The second layer of shotcrete shall then be applied within 30 minutes.

Shotcrete shall be cut back to line and grade using trowels, cutting rods, screeds or other suitable devices. The shotcrete shall be allowed to stiffen sufficiently before cutting. Cutting shall not cause cracks or delaminations in the shotcrete. For depressions, cut material may be used for small areas. Rebound material shall not be incorporated in the work. For the final finish, a wood float shall be used to approximately match the existing concrete texture. A manufacturer approved finishing aid may be used. Water shall not be used as a finishing aid. All repaired members shall be restored as close as practicable to their original dimensions.

Contractor operations for curing shall be continuous with shotcrete placement and finishing operations. Curing shall be accomplished using wetted cotton mats, membrane curing, or a combination of both. Cotton mats shall be applied according to Article 1020.13(a)(5) except the exposed layer of shotcrete shall be covered within 10 minutes after finishing, and wet curing shall begin immediately. Curing compound shall be applied according to Article 1020.13(a)(4), except the curing compound shall be applied as soon as the shotcrete has hardened sufficiently to prevent marring the surface, and each of the two separate applications shall be applied in opposite directions to ensure coverage. The curing compound shall be according to Article 1022.01. Note 5 of the Index Table in Article 1020.13 shall apply to the membrane curing method.

When a shotcrete layer is to be covered by a succeeding shotcrete layer within 36 hours, the repair area shall be protected with intermittent hand fogging, or wet curing with either

burlap or cotton mats shall begin within 10 minutes. Intermittent hand fogging may be used only for the first hour. Thereafter, wet curing with burlap or cotton mats shall be used until the succeeding shotcrete layer is applied. Intermittent hand fogging may be extended to the first hour and a half if the succeeding shotcrete layer is applied by the end of this time.

The curing period shall be for 7 days, except when there is a succeeding layer of shotcrete. In this instance, the initial shotcrete layer shall be cured until the surface preparation and reinforcement bar treatment is started.

If temperatures below 45°F (7°C) are forecast during the curing period, protection methods shall be used. Protection Method I according to Article 1020.13(d)(1), or Protection Method II according to Article 1020.13(d)(2) shall be used during the curing period

Inspection of Completed Work. The Contractor shall provide ladders or other appropriate equipment for the Engineer to inspect the repaired areas. After curing but no sooner than 28 days after placement of concrete or shooting of shotcrete, the repair shall be examined for conformance with original dimensions, cracks, voids, and delaminations. Sounding for delaminations will be done with a hammer or by other methods determined by the Engineer.

The acceptable tolerance for conformance of a repaired area shall be within 1/4 in. (6 mm) of the original dimensions. A repaired area not in dimensional conformance or with delaminations shall be removed and replaced.

A repaired area with cracks or voids shall be considered as nonconforming. Exceeding one or more of the following crack and void criteria shall be cause for removal and replacement of a repaired area.

1. The presence of a single surface crack greater than 0.01 in. (0.25 mm) in width and greater than 12 in. (300 mm) in length.
2. The presence of two or more surface cracks greater than 0.01 in. (0.25 mm) in width that total greater than 24 in. (600 mm) in length.
3. The presence of map cracking in one or more regions totaling 15 percent or more of the gross surface area of the repair.
4. The presence of two or more surface voids with least dimension 3/4 in. (19 mm) each.

A repaired area with cracks or voids that do not exceed any of the above criteria may remain in place, as determined by the Engineer.

If a nonconforming repair is allowed to remain in place, cracks greater than 0.007 in. (0.2 mm) in width shall be repaired with epoxy according to Section 590. For cracks less than or equal to

0.007 in. (0.2 mm) in width, the epoxy may be applied to the surface of the crack. Voids shall be repaired according to Article 503.15.

Publications and Personnel Requirements. The Contractor shall provide a current copy of ACI 506R to the Engineer a minimum of one week prior to start of construction.

The shotcrete personnel who perform the work shall have current American Concrete Institute (ACI) nozzle men certification for vertical wet and overhead wet applications, except one individual may be in training. This individual shall be adequately supervised by a certified ACI nozzle men as determined by the Engineer. A copy of the nozzle men certificate(s) shall be given to the Engineer.

Method of Measurement. This work will be measured for payment in place and the area computed in square feet (square meters). For a repair at a corner, both sides will be measured.

Basis of Payment. This work will be paid for at the contract unit price per square foot (square meter) for STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 IN. (125 MM), STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN. (125 MM)).

When not specified to be paid for elsewhere, the work to design, install, and remove the temporary shoring and cribbing will be paid for according to Article 109.04.

With the exception of reinforcement damaged by the Contractor during removal, the furnishing and installation of supplemental reinforcement bars, mechanical bar splicers, hook bolts, and protective coat will be paid according to Article 109.04.

**WEEP HOLE DRAINS FOR ABUTMENTS, WINGWALLS, RETAINING WALLS AND CULVERTS**

Effective: April 19, 2012

Revised: October 22, 2013

Delete the last paragraphs of Articles 205.05 and 502.10 and replace with the following.

"If a geocomposite wall drain according to Section 591 is not specified, a prefabricated geocomposite strip drain according to Section 1040.07 shall be placed at the back of each drain hole. The strip drain shall be 24 inches (600 mm) wide and 48 inches (1.220 m) tall. The strip drain shall be centered over the drain hole with the bottom located 12 inches (300 mm) below the bottom of the drain hole. All form boards or other obstructions shall be removed from the drain holes before placing any geocomposite strip drain."

Revise the last sentence of the first paragraph of Article 503.11 to read as follows.

"Drain holes shall be covered to prevent the leakage of backfill material according to Article 502.10."

Revise the title of Article 1040.07 to Geocomposite Wall Drains and Strip Drains.



## 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.