

RETURN WITH BID

State of _____)
) ss.
County of _____)

AFFIDAVIT

_____ (name of affiant), of _____,

_____, being first duly sworn upon oath, states as follows:

1. That I am the _____ (officer or position) of _____ (bidder) and have personal knowledge of the facts herein stated.
2. That, if selected under this proposal, _____ (bidder) will maintain a business office in the State of Illinois which will be located in _____ County, Illinois.
3. That this business office will serve as the primary place of employment for any persons employed in the construction contemplated by this proposal.
4. That this Affidavit is given as a requirement of state law as provided in Section 30-22(8) of the Illinois Procurement Code.

Signature

Print Name of Affiant

This instrument was acknowledged before me on the _____ day of _____,
20___ by _____.

Notary Public

(SEAL)

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. These documents must be received three days before the letting date.

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

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

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

IDOT IS NOT RESPONSIBLE FOR ANY E-MAIL FAILURES.

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

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

BID SUBMITTAL GUIDELINES AND CHECKLIST

- 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 of the page.
- 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.
- 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).
- 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 Pay Items)**. If you are using special software or CBID to generate your schedule of prices, do not include the blank pages of the schedule of prices that came with the proposal package.

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

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

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

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

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 Form A that is filled out.

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 financial 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 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 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”.

Bid Bond – (After the Proposal Signature Page) Submit your bid bond (if applicable) using the current Bid Bond Form provided in the proposal package. The Power of Attorney page should be stapled to the Bid Bond. If you are using an electronic bond, include your bid bond number on the form and attach the Proof of Insurance printed from the Surety 2000 Web Site.

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

The Bid Letting is now available in streaming Audio/Video from the IDOT Web Site. A link to the stream will be placed on the main page of the current letting on the day of the Letting. The stream will not begin until 10 AM. The actual reading of the bids does not begin until approximately 10:20 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 page of the current letting.

QUESTIONS: pre-letting up to execution of the contract

Contractor/Subcontractor 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

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

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RETURN WITH BID

Proposal Submitted By
Name
Address
City

Letting August 2, 2013

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. 89419
KNOX County
Section 05-00501-21-GS (Galesburg)
Route FAU 6801 (Seminary Street)
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.

Prepared by

S

Checked by

(Printed by authority of the State of Illinois)

Page intentionally left blank

RETURN WITH BID



PROPOSAL

TO THE DEPARTMENT OF TRANSPORTATION

1. Proposal of _____

Taxpayer Identification Number (Mandatory) _____ a

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

**Contract No. 89419
KNOX County
Section 05-00501-21-GS (Galesburg)
Route FAU 6801 (Seminary Street)
District 4 Construction Funds**

Construct a single span bridge with MSE retaining walls to carry Seminary St. over the BNSF Railroad, the re-alignment of Seminary St. from Water St. to Cedar Creek construction of a cast-in-place box culvert over Cedar Creek and the reconstruction of Kellogg St. from Main St. to North St. and the reconstruction of Main St. Ferris St., Water St., North St., and Peck St. all located in the City of Galesburg.

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

RETURN WITH BID

3. **ASSURANCE OF EXAMINATION AND INSPECTION/WAIVER.** The undersigned further declares that he/she has carefully examined the proposal, plans, specifications, addenda, form of contract and contract bond, and special provisions, and that he/she has inspected in detail the site of the proposed work, and that he/she has familiarized themselves with all of the local conditions affecting the contract and the detailed requirements of construction, and understands that in making this proposal he/she waives all right to plead any misunderstanding regarding the same.
4. **EXECUTION OF CONTRACT AND CONTRACT BOND.** The undersigned further agrees to execute a contract for this work and present the same to the department within fifteen (15) days after the contract has been mailed to him/her. The undersigned further agrees that he/she and his/her surety will execute and present within fifteen (15) days after the contract has been mailed to him/her contract bond satisfactory to and in the form prescribed by the Department of Transportation, in the penal sum of the full amount of the contract, guaranteeing the faithful performance of the work in accordance with the terms of the contract.
5. **PROPOSAL GUARANTY.** Accompanying this proposal is either a bid bond on the department form, executed by a corporate surety company satisfactory to the department, or a proposal guaranty check consisting of a bank cashier's check or a properly certified check for not less than 5 per cent of the amount bid or for the amount specified in the following schedule:

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

Bank cashier's checks or properly certified checks accompanying proposals shall be made payable to the Treasurer, State of Illinois, when the state is awarding authority; the county treasurer, when a county is the awarding authority; or the city, village, or town treasurer, when a city, village, or town is the awarding authority.

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

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

Attach Cashier's Check or Certified Check Here

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

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

Item _____

Section No. _____

County _____

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

RETURN WITH BID

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

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

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

Schedule of Combination Bids

Combination No.	Sections Included in Combination	Combination Bid	
		Dollars	Cents

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

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

9. **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)

10. **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.

STATE JOB # - C-94-118-06
 PPS NBR -

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 89419
 ECMS002 DTGECM03 ECMR003 PAGE 1
 RUN DATE - 07/02/13
 RUN TIME - 183056

COUNTY NAME | CODE | DIST | SECTION NUMBER | PROJECT NUMBER | ROUTE
 KNOX | 095 | 04 | 05-00501-21-GS (GALESBURG) | | FAU 6801

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE DOLLARS	CENTS	TOTAL PRICE DOLLARS	CTS
A2002816	T-CATALPA SPEC	EACH	13.000	X	=		
A2002916	T-CELTIS OCCID	EACH	7.000	X	=		
A2003216	T-CORYLUS COLU	EACH	14.000	X	=		
XX000300	CONCRETE STEPS	SQ FT	65.000	X	=		
XX001186	PLANTER REMOVAL	EACH	3.000	X	=		
XX001249	ORNAMENTAL FENCE	FOOT	106.000	X	=		
XX002090	STAIR SIDE RAILING	FOOT	37.000	X	=		
XX003711	BUS SHELTER REMOVAL	EACH	2.000	X	=		
XX006429	SIDEWALK, SPECIAL	SQ FT	30.000	X	=		
XX006498	COMB C C&SIDEWALK 4 SP	SQ FT	630.000	X	=		
XX006653	FENCE (SPECIAL)	FOOT	258.000	X	=		
XX008258	STAMP COL PCC SDWLK 6	SQ FT	314.000	X	=		
XX008376	CONCRETE GUTTER FLAG	FOOT	34.000	X	=		
XX008732	VAULT LID RESURFACING	L SUM	1.000	X	=		
XX008880	STORM SEW CL B 1	FOOT	56.000	X	=		

FAU 6801
 05-00501-21-GS (GALESBURG)
 KNOX

ILLINOIS DEPARTMENT OF TRANSPORTATION
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 CONTRACT NUMBER - 89419

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
XX008881	CONDUIT SPECIAL	FOOT	14.000	=			
XX008882	LT P ORN A 33MH 8MA	EACH	24.000	=			
XX008883	LT P ORN A 35MH 8MA	EACH	25.000	=			
XX008884	LUM LED DEC 34W	EACH	4.000	=			
XX008885	LUM LED ORN 53W	EACH	39.000	=			
XX008886	LUM LED ORN 96W	EACH	10.000	=			
XX008887	FORM LINER PAR SURF	SQ YD	1,485.000	=			
XX008888	HANDRAIL SPL	FOOT	1,740.000	=			
XX008889	PVC CASING PIPE 15	FOOT	44.000	=			
XX008890	PVC CASING PIPE 6	FOOT	44.000	=			
XX008891	6 SERVICE LATERAL	FOOT	126.000	=			
XX008892	MAN ADD DEPTH 4D	FOOT	23.000	=			
XX008893	MAN ADD DEPTH 5D	FOOT	26.000	=			
XX008894	SLOPE WALL SPL 6	SQ YD	738.000	=			
X0300635	PLANTER	EACH	3.000	=			

FAU 6801
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ILLINOIS DEPARTMENT OF TRANSPORTATION
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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
X0322024	TRENCH DRAIN	EACH	2.000	=			
X0326864	BRICK SIDEWALK REM	SQ FT	5,060.000	=			
X0327139	AGG COLUMN GRND IMPRV	L SUM	1.000	=			
X0539200	DROP MAN CONNECTION	EACH	2.000	=			
X0540000	BRICK PAVERS	SQ FT	669.000	=			
X4240800	DETECTABLE WARN SPL	SQ FT	12.000	=			
X5860110	GRANULAR BACKFILL STR	CU YD	8.000	=			
X6022810	MAN SAN 4 DIA T1F CL	EACH	3.000	=			
X6022820	MAN SAN 5 DIA T1F CL	EACH	5.000	=			
X6061100	CONC MED TSB SPL	SQ FT	86.000	=			
X6700410	ENGR FLD OFF A SPL	CAL MO	20.000	=			
X7010216	TRAF CONT & PROT SPL	L SUM	1.000	=			
X8050135	SERV INSTALL TY C MOD	EACH	1.000	=			
X8210675	LUM METAL HAL HM 400W	EACH	4.000	=			
X8780105	CONC FDN SPL	EACH	1.000	=			

FAU 6801
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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
X8950224	RELOCATE CONTR CABINT	EACH	1.000	=			
Z0004002	BOLLARDS	EACH	4.000	=			
Z0007601	BLDG REMOV NO 1	L SUM	1.000	=			
Z0007602	BLDG REMOV NO 2	L SUM	1.000	=			
Z0007603	BLDG REMOV NO 3	L SUM	1.000	=			
Z0013797	STAB CONSTR ENTRANCE	SQ YD	301.000	=			
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000	=			
Z0014900	CURB STOPS 3/4	EACH	3.000	=			
Z0015300	CURB STOPS 2	EACH	1.000	=			
Z0018002	DRAINAGE SCUPPR DS-11	EACH	4.000	=			
Z0018800	DRAINAGE SYSTEM	L SUM	1.000	=			
Z0022800	FENCE REMOVAL	FOOT	96.000	=			
Z0034210	MECH ST EARTH RET WL	SQ FT	37,726.000	=			
Z0037300	PAVT GROOVING	SQ YD	2,531.000	=			
Z0046304	P UNDR FOR STRUCT 4	FOOT	479.000	=			

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ILLINOIS DEPARTMENT OF TRANSPORTATION
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ECMS002 DTGECM03 ECMR003 PAGE 5
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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE
				DOLLARS	CENTS	
Z0048665	RR PROT LIABILITY INS	L SUM	1.000 X	=		
Z0049801	R&D FRIABL ASB BLD 1	L SUM	1.000 X	=		
Z0049803	R&D FRIABL ASB BLD 3	L SUM	1.000 X	=		
Z0056608	STORM SEW WM REQ 12	FOOT	791.000 X	=		
Z0056610	STORM SEW WM REQ 15	FOOT	230.000 X	=		
Z0056612	STORM SEW WM REQ 18	FOOT	8.000 X	=		
Z0056620	STORM SEW WM REQ 30	FOOT	179.000 X	=		
Z0057500	SAN SEW 24	FOOT	329.000 X	=		
Z0057600	SAN SEW 27	FOOT	257.000 X	=		
Z0067900	STEEL CASINGS 24	FOOT	209.000 X	=		
Z0068400	STEEL CASINGS 42	FOOT	76.000 X	=		
Z0076600	TRAINEES	HOUR	500.000 X	=	0.80	400.00
Z0076604	TRAINEES TPG	HOUR	500.000 X	=	10.00	5,000.00
20100110	TREE REMOV 6-15	UNIT	93.000 X	=		
20100210	TREE REMOV OVER 15	UNIT	228.000 X	=		

FAU 6801
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ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 89419

ECMS002 DTGECM03 ECMR003 PAGE 6
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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
20200100	EARTH EXCAVATION	CU YD	5,992.000	=			
20201200	REM & DISP UNS MATL	CU YD	1,000.000	=			
20400800	FURNISHED EXCAVATION	CU YD	453.000	=			
20600200	GRAN EMBANK SPEC	CU YD	9,630.000	=			
20700220	POROUS GRAN EMBANK	CU YD	1,000.000	=			
20800150	TRENCH BACKFILL	CU YD	2,191.000	=			
20900110	POROUS GRAN BACKFILL	CU YD	226.000	=			
21001000	GEOTECH FAB F/GR STAB	SQ YD	7,676.000	=			
21101625	TOPSOIL F & P 6	SQ YD	20,866.000	=			
25000110	SEEDING CL 1A	ACRE	4.000	=			
25000400	NITROGEN FERT NUTR	POUND	371.000	=			
25000500	PHOSPHORUS FERT NUTR	POUND	371.000	=			
25000600	POTASSIUM FERT NUTR	POUND	371.000	=			
25100115	MULCH METHOD 2	ACRE	4.000	=			
25200100	SODDING	SQ YD	1,831.000	=			

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
25200110	SODDING SALT TOLERANT	SQ YD	1,209.000	=			
25200200	SUPPLE WATERING	UNIT	46.000	=			
28000250	TEMP EROS CONTR SEED	POUND	430.000	=			
28000305	TEMP DITCH CHECKS	FOOT	394.000	=			
28000400	PERIMETER EROS BAR	FOOT	1,209.000	=			
28000510	INLET FILTERS	EACH	73.000	=			
30300011	AGG SUBGRADE IMPROVE	TON	8,529.000	=			
35300200	PCC BSE CSE 7	SQ YD	205.000	=			
40201000	AGGREGATE-TEMP ACCESS	TON	517.000	=			
40600115	P BIT MATLS PR CT	GALLON	884.000	=			
40600982	HMA SURF REM BUTT JT	SQ YD	456.000	=			
40603080	HMA BC IL-19.0 N50	TON	303.000	=			
40603540	P HMA SC "D" N70	TON	425.000	=			
42000301	PCC PVT 8 JOINTED	SQ YD	9,072.000	=			
42001300	PROTECTIVE COAT	SQ YD	14,542.000	=			

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				DOLLARS	CENTS		
42001420	BR APPR PVT CON (PCC)	SQ YD	670.000	=			
42300200	PCC DRIVEWAY PAVT 6	SQ YD	901.000	=			
42300400	PCC DRIVEWAY PAVT 8	SQ YD	344.000	=			
42400100	PC CONC SIDEWALK 4	SQ FT	18,717.000	=			
42400300	PC CONC SIDEWALK 6	SQ FT	1,035.000	=			
42400410	PC CONC SIDEWALK 8	SQ FT	3,514.000	=			
42400800	DETECTABLE WARNINGS	SQ FT	294.000	=			
44000100	PAVEMENT REM	SQ YD	11,062.000	=			
44000159	HMA SURF REM 2 1/2	SQ YD	1,073.000	=			
44000200	DRIVE PAVEMENT REM	SQ YD	1,340.000	=			
44000500	COMB CURB GUTTER REM	FOOT	5,379.000	=			
44000600	SIDEWALK REM	SQ FT	24,824.000	=			
44201329	CL C PATCH T2 8	SQ YD	6.000	=			
50100100	REM EXIST STRUCT	EACH	1.000	=			
50101500	REM EXIST SUP-STR	EACH	1.000	=			

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				DOLLARS	CENTS		
50102400	CONC REM	CU YD	25.000	=			
50200100	STRUCTURE EXCAVATION	CU YD	4,479.000	=			
50300225	CONC STRUCT	CU YD	1,444.000	=			
50300255	CONC SUP-STR	CU YD	696.000	=			
50300260	BR DECK GROOVING	SQ YD	670.000	=			
50300300	PROTECTIVE COAT	SQ YD	1,319.000	=			
50500105	F & E STRUCT STEEL	L SUM	1.000	=			
50500505	STUD SHEAR CONNECTORS	EACH	1,548.000	=			
50800105	REINFORCEMENT BARS	POUND	140,910.000	=			
50800205	REINF BARS, EPOXY CTD	POUND	275,060.000	=			
50800515	BAR SPLICERS	EACH	176.000	=			
50901760	PIPE HANDRAIL	FOOT	172.000	=			
51200958	FUR M S PILE 14X0.250	FOOT	2,717.000	=			
51202305	DRIVING PILES	FOOT	2,717.000	=			
51203200	TEST PILE MET SHELLS	EACH	2.000	=			

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
51500100	NAME PLATES	EACH	4.000	X	=		
52000110	PREF JT STRIP SEAL	FOOT	184.000	X	=		
52100010	ELAST BEARING ASSY T1	EACH	6.000	X	=		
52100520	ANCHOR BOLTS	EACH	12.000	X	=		
52100530	ANCHOR BOLTS	EACH	12.000	X	=		
54003000	CONC BOX CUL	CU YD	619.000	X	=		
550A0050	STORM SEW CL A 1	FOOT	43.000	X	=		
550A0340	STORM SEW CL A 2	FOOT	1,476.000	X	=		
550A0380	STORM SEW CL A 2	FOOT	5.000	X	=		
550A0400	STORM SEW CL A 2	FOOT	241.000	X	=		
550A0640	STORM SEW CL A 3	FOOT	62.000	X	=		
550A0730	STORM SEW CL A 3	FOOT	21.000	X	=		
550B1840	STORM SEW CL B 7	FOOT	135.000	X	=		
55100300	STORM SEWER REM	FOOT	34.000	X	=		
55100400	STORM SEWER REM	FOOT	204.000	X	=		

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
55100500	STORM SEWER REM	FOOT	353.000	X	=		
55100700	STORM SEWER REM	FOOT	29.000	X	=		
55100800	STORM SEWER REM	FOOT	22.000	X	=		
55100900	STORM SEWER REM	FOOT	396.000	X	=		
55101300	STORM SEWER REM	FOOT	146.000	X	=		
56100600	WATER MAIN	FOOT	334.000	X	=		
56100700	WATER MAIN	FOOT	1,147.000	X	=		
56100900	WATER MAIN 12	FOOT	464.000	X	=		
56104900	WATER VALVES	EACH	6.000	X	=		
56105000	WATER VALVES	EACH	3.000	X	=		
56105400	WATER VALVES	EACH	2.000	X	=		
56108710	TAP VALVE & SLEEVE	EACH	1.000	X	=		
56108800	TAP VALVE & SLEEVE	EACH	1.000	X	=		
56108900	TAP VALVE & SLEEVE	EACH	4.000	X	=		
56109100	TAP VALVE & SLEEVE	EACH	1.000	X	=		

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE
				DOLLARS	CENTS	
56200200	WATER SERV LINE 3/4	FOOT	467.000	X	=	
56200300	WATER SERV LINE 1	FOOT	267.000	X	=	
56200500	WATER SERV LINE 1 1/2	FOOT	119.000	X	=	
56200700	WATER SERV LINE 2	FOOT	113.000	X	=	
56400600	FIRE HYDRANTS	EACH	5.000	X	=	
58700300	CONCRETE SEALER	SQ FT	1,839.000	X	=	
59100100	GEOCOMPOSITE WALL DR	SQ YD	176.000	X	=	
60100915	PIPE DRAINS 6	FOOT	56.000	X	=	
60218300	MAN TA 4 DIA T1F OL	EACH	1.000	X	=	
60218400	MAN TA 4 DIA T1F CL	EACH	22.000	X	=	
60219000	MAN TA 4 DIA T8G	EACH	2.000	X	=	
60219200	MAN TA 4 DIA T10F&G	EACH	2.000	X	=	
60219300	MAN TA 4 DIA T11F&G	EACH	6.000	X	=	
60236200	INLETS TA T8G	EACH	5.000	X	=	
60236700	INLETS TA T10F&G	EACH	4.000	X	=	

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE
				DOLLARS	CENTS	
60236825	INLETS TA T11V F&G	EACH	4.000	X	=	
60240215	INLETS TB T1F CL	EACH	1.000	X	=	
60240301	INLETS TB T8G	EACH	6.000	X	=	
60240312	INLETS TB T11V F&G	EACH	44.000	X	=	
60255800	MAN ADJ NEW T1F CL	EACH	5.000	X	=	
60500040	REMOV MANHOLES	EACH	9.000	X	=	
60500060	REMOV INLETS	EACH	27.000	X	=	
60603800	COMB CC&G TB6.12	FOOT	3,875.000	X	=	
63000001	SPBGR TY A 6FT POSTS	FOOT	82.000	X	=	
66400105	CH LK FENCE 4	FOOT	150.000	X	=	
66900200	NON SPL WASTE DISPOSL	CU YD	100.000	X	=	
66900530	SOIL DISPOSAL ANALY	EACH	1.000	X	=	
67100100	MOBILIZATION	L SUM	1.000	X	=	
72000100	SIGN PANEL T1	SQ FT	107.000	X	=	
72000200	SIGN PANEL T2	SQ FT	80.000	X	=	

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
72900100	METAL POST TY A	FOOT	123.000				
72900200	METAL POST TY B	FOOT	174.000				
78009000	MOD URETH PM LTR-SYM	SQ FT	406.000				
78009004	MOD URETH PM LINE 4	FOOT	9,398.000				
78009006	MOD URETH PM LINE 6	FOOT	450.000				
78009008	MOD URETH PM LINE 8	FOOT	1,431.000				
78009012	MOD URETH PM LINE 12	FOOT	996.000				
78009024	MOD URETH PM LINE 24	FOOT	51.000				
78300100	PAVT MARKING REMOVAL	SQ FT	251.000				
80400100	ELECT SERV INSTALL	EACH	2.000				
81028340	UNDRGRD C PVC	FOOT	1,010.000				
81028350	UNDRGRD C PVC	FOOT	2,517.000				
81028370	UNDRGRD C PVC	FOOT	8.000				
81028390	UNDRGRD C PVC	FOOT	256.000				
81200210	CON EMB STR 1 PVC	FOOT	105.000				

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
81200230	CON EMB STR 2 PVC	FOOT	3,080.000	X	=		
81301370	JUN BX SS ES 18X12X8	EACH	1.000	X	=		
81400100	HANDHOLE	EACH	10.000	X	=		
81400700	HANDHOLE PCC	EACH	4.000	X	=		
81702110	EC C XLP USE 1C 10	FOOT	10,810.000	X	=		
81702130	EC C XLP USE 1C 6	FOOT	17,356.000	X	=		
82500410	LT CONT BASM 240V200D	EACH	2.000	X	=		
83600300	LIGHT POLE FDN 30D	FOOT	163.000	X	=		
84400105	RELOC EX LT UNIT	EACH	2.000	X	=		
87301245	ELCBL C SIGNAL 14 5C	FOOT	2,315.000	X	=		
87301255	ELCBL C SIGNAL 14 7C	FOOT	502.000	X	=		
87301515	ELCBL C LEAD 18 3PR	FOOT	200.000	X	=		
87301900	ELCBL C EGRDC 6 1C	FOOT	425.000	X	=		
87502470	TS POST GALVS 13	EACH	1.000	X	=		
87502490	TS POST GALVS 15	EACH	4.000	X	=		

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				DOLLARS	CENTS	
87702910	STL COMB MAA&P 36	EACH	1.000	=		
87702960	STL COMB MAA&P 46	EACH	1.000	=		
87704549	S C MAA&P DMA 54 & 36	EACH	1.000	=		
87800100	CONC FDN TY A	FOOT	15.000	=		
87800415	CONC FDN TY E 36D	FOOT	40.000	=		
87900200	DRILL EX HANDHOLE	EACH	3.000	=		
88040070	SH P LED 1F 3S BM	EACH	3.000	=		
88040090	SH P LED 1F 3S MAM	EACH	6.000	=		
88040110	SH P LED 1F 4S BM	EACH	2.000	=		
88040120	SH P LED 1F 4S MAM	EACH	2.000	=		
88102717	PED SH LED 1F BM CDT	EACH	8.000	=		
88200310	TS BACKPLATE LOU PLAS	EACH	13.000	=		
88500100	INDUCTIVE LOOP DETECT	EACH	4.000	=		
88600100	DET LOOP T1	FOOT	778.000	=		
88800100	PED PUSH-BUTTON	EACH	8.000	=		

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
89502210	MOD EX CONTR CAB	EACH	1.000		=		
89502375	REMOV EX TS EQUIP	EACH	2.000		=		
89502380	REMOV EX HANDHOLE	EACH	7.000		=		
TOTAL				\$			

NOTE:

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

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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.

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

1. The Code provides in pertinent part:

Section 50-13. Conflicts of Interest.

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

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

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

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

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

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

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

B. Negotiations

1. The Code provides in pertinent part:

Section 50-15. Negotiations.

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

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

C. Inducements

1. The Code provides:

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

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

D. Revolving Door Prohibition

1. The Code provides:

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.

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

E. Reporting Anticompetitive Practices

1. The Code provides:

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.

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

F. Confidentiality

1. The Code provides:

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.

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

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G. Insider Information

1. The Code provides:

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

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

III. CERTIFICATIONS

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

1. The Code provides:

Section 50-5. Bribery.

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

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

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

(b) Businesses. No business shall be barred from contracting with any unit of State or local government, 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 1961.

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

(d) Certification. Every bid submitted to and contract executed by the State, 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.

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

B. Felons

1. The Code provides:

Section 50-10. Felons. Unless otherwise provided, no person or business convicted of a felony shall do business with the State of Illinois or any State agency, 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.

2. 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.

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C. Debt Delinquency

1. The Code provides:

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

1. The Code provides:

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

The bidder or contractor or subcontractor, respectively, certifies in accordance with 30 ILCS 500/50-10.5 that no officer, director, partner or other managerial agent of the contracting business has been convicted of a felony under the Sarbanes-Oxley Act of 2002 or a Class 3 or Class 2 felony under the Illinois Securities Law of 1953 or if in violation of Subsection (c) for a period of five years from the date of conviction. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the Code shall contain a certification by the bidder, contractor, or subcontractor, respectively, that the bidder, contractor, or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the CPO shall declare the related contract void if any of the certifications completed pursuant to this Section are false.

E. Section 42 of the Environmental Protection Act

The bidder or contractor or subcontractor, respectively, certifies in accordance with 30 ILCS 500/50-14 that the bidder, contractor, or subcontractor, is not barred from being awarded a contract or entering into a subcontract under this Section which prohibits the bidding on or entering into contracts with the State of Illinois or a State agency, or entering into any subcontract, that is subject to the Code by a person or business found by a court or the Pollution Control Board to have committed a willful or knowing violation of Section 42 of the Environmental Protection Act for a period of five years from the date of the order. The bidder or contractor or subcontractor, respectively, acknowledges that the CPO may declare the contract void if this certification is false.

F. Educational Loan

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

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

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

G. Bid-Rigging/Bid Rotating

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

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

(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.

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

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

H. International Anti-Boycott

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

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

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

I. Drug Free Workplace

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

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

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

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

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

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

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

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

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

RETURN WITH BID

J. Disclosure of Business Operations in Iran

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

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

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

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

Check the appropriate statement:

Company has no business operations in Iran to disclose.

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

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.**

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

TO BE RETURNED 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 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 business entity certifies that it has registered as a business with the State Board of Elections and acknowledges a continuing duty to update the registration in accordance with the above referenced statutes. 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: _____

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IV. DISCLOSURES

- A. The disclosures hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder. The bidder further certifies that the Department has received the disclosure forms for each bid.

The CPO may void the bid, or contract, respectively, if it is later determined that the bidder or subcontractor rendered a false or erroneous disclosure. A contractor or subcontractor may be suspended or debarred for violations of the Code. Furthermore, the CPO may void the contract and the surety providing the performance bond shall be responsible for completion of the contract.

B. Financial Interests and Conflicts of Interest

1. Section 50-35 of the Code provides that all bids of more than \$25,000 shall be accompanied by disclosure of the financial interests of the bidder. This disclosed information for the successful bidder, will be maintained as public information subject to release by request pursuant to the Freedom of Information Act, filed with the Procurement Policy Board, and shall be incorporated as a material term of the contract. Furthermore, pursuant to Section 5-5, the Procurement Policy Board may review a proposal, bid, or contract and issue a recommendation to void a contract or reject a proposal or bid based on any violation of the Code or the existence of a conflict of interest as provided in subsections (b) and (d) of Section 50-35.

The financial interests to be disclosed shall include ownership or distributive income share that is in excess of 5%, or an amount greater than 60% of the annual salary of the Governor, of the bidding entity or its parent entity, whichever is less, unless the contractor or bidder is a publicly traded entity subject to Federal 10K reporting, in which case it may submit its 10K disclosure in place of the prescribed disclosure. If a bidder is a privately held entity that is exempt from Federal 10K reporting, but has more than 200 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. The disclosure shall include the names, addresses, and dollar or proportionate share of ownership of each person making the disclosure, their instrument of ownership or beneficial relationship, and notice of any potential conflict of interest resulting from the current ownership or beneficial interest of each person making the disclosure having any of the relationships identified in Section 50-35 and on the disclosure form.
The current annual salary of the Governor is \$177,412.00

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

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

C. Disclosure Form Instructions

Form A Instructions for Financial Information & Potential Conflicts of Interest

If the bidder is a publicly traded entity subject to Federal 10K reporting, the 10K Report may be submitted to meet the requirements of Form A. If a bidder is a privately held entity that is exempt from Federal 10K reporting, but has more than 200 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. If a bidder is not subject to Federal 10K reporting, the bidder must determine if any individuals are required by law to complete a financial disclosure form. To do this, the bidder should answer each of the following questions. A "YES" answer indicates Form A must be completed. If the answer to each of the following questions is "NO", then the NOT APPLICABLE STATEMENT on Form A must be signed and dated by a person that is authorized to execute contracts for the bidding company. Note: These questions are for assistance only and are not required to be completed.

1. Does anyone in your organization have a direct or beneficial ownership share of greater than 5% of the bidding entity or parent entity? YES ___ NO ___
2. Does anyone in your organization have a direct or beneficial ownership share of less than 5%, but which has a value greater than 60% of the annual salary of the Governor? YES ___ NO ___
3. Does anyone in your organization receive more than 60% of the annual salary of the Governor of the bidding entity's or parent entity's distributive income? YES ___ NO ___

(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 bidding entity's or parent entity's total distributive income, but which is less than 60% of the annual salary of the Governor? YES ___ NO ___

(Note: Only one set of forms needs to be completed per person per bid even if a specific individual would require a yes answer to more than one question.)

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

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

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

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

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

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

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

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

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

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

Disclosure of the information contained in this Form is required by the Section 50-35 of the Code (30 ILCS 500). Vendors desiring to enter into a contract with the State of Illinois must disclose the financial information and potential conflict of interest information as specified in this Disclosure Form. This information shall become part of the publicly available contract file. This Form A must be completed for bids in excess of \$25,000, and for all open-ended contracts. **A publicly traded company may submit a 10K disclosure (or equivalent if applicable) in satisfaction of the requirements set forth in Form A. See Disclosure Form Instructions.**

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

DISCLOSURE OF FINANCIAL INFORMATION

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

FOR INDIVIDUAL (type or print information)	
NAME:	_____
ADDRESS	_____
Type of ownership/distributable income share:	
stock _____ sole proprietorship _____ Partnership _____ other: (explain on separate sheet):	
% or \$ value of ownership/distributable income share:	_____

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

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

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

- Are you currently an officer or employee of either the Capitol Development Board or the Illinois State Toll Highway Authority? Yes ___ No ___
- Are you currently appointed to or employed by any agency of the State of Illinois? If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 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 the aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of two times the salary of the Governor?
Yes ___ No ___

(b) State employment of spouse, father, mother, son, or daughter, including contractual employment 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 your spouse and/or minor children, the name of the State agency for which he/she is employed and his/her annual salary. _____

3. If your spouse or any minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of 100% of the annual salary of the Governor?
Yes ___ No ___

4. If your spouse or any minor children are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, are you and your spouse or minor children entitled to receive (i) more than 15 % in the aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of two times the salary of the Governor?
Yes ___ No ___

(c) Elective status; the holding of elective office of the State of Illinois, the government of the United States, any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois currently or in the previous 3 years.
Yes ___ No ___

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

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

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

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

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

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

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

3. Communication Disclosure.

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

Name and address of person(s): _____

RETURN WITH BID

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

Name of person(s): _____

Nature of disclosure: _____

APPLICABLE STATEMENT

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

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

NOT APPLICABLE STATEMENT

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

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

_____ Date _____
Signature of Authorized Representative

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

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ILLINOIS DEPARTMENT OF TRANSPORTATION

Form B Other Contracts & Financial Related Information Disclosure

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

Disclosure of the information contained in this Form is required by the Section 50-35 of the Code (30 ILCS 500). This information shall become part of the publicly available contract file. This Form B must be completed for bids in excess of \$25,000, and for all open-ended contracts.

DISCLOSURE OF OTHER CONTRACTS AND PROCUREMENT RELATED INFORMATION

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

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

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

THE FOLLOWING STATEMENT MUST BE CHECKED

Signature of Authorized Representative, Date

OWNERSHIP CERTIFICATION

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

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

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

RETURN WITH BID

SPECIAL NOTICE TO CONTRACTORS

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

CONSTRUCTION EMPLOYEE UTILIZATION PROJECTION

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

RETURN WITH BID



Contract No. 89419
KNOX County
Section 05-00501-21-GS (Galesburg)
Route FAU 6801 (Seminary Street)
District 4 Construction Funds

PART I. IDENTIFICATION

Dept. Human Rights # _____ Duration of Project: _____

Name of Bidder: _____

PART II. WORKFORCE PROJECTION

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

TABLE A

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

TABLE B

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

TABLE C

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

FOR DEPARTMENT USE ONLY

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

Note: See instructions on page 2

RETURN WITH BID

**Contract No. 89419
KNOX County
Section 05-00501-21-GS (Galesburg)
Route FAU 6801 (Seminary Street)
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 **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 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

Contract No. 89419

KNOX County

Section 05-00501-21-GS (Galesburg)

Route FAU 6801 (Seminary Street)

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)
(IF A JOINT VENTURE, USE THIS SECTION FOR THE MANAGING PARTY AND THE SECOND PARTY SHOULD SIGN BELOW) Corporate Name _____
By _____
Signature of Authorized Representative _____
Typed or printed name and title of Authorized Representative _____
Attest _____
Signature _____
Business Address _____

(IF A JOINT VENTURE) Corporate Name _____
By _____
Signature of Authorized Representative _____
Typed or printed name and title of Authorized Representative _____
Attest _____
Signature _____
Business Address _____

If more than two parties are in the joint venture, please attach an additional signature sheet.



Return with Bid

Division of Highways
Proposal Bid Bond
(Effective November 1, 1992)

Item No.
Letting Date

KNOW ALL MEN BY THESE PRESENTS, That We

as PRINCIPAL, and

as SURETY, are held jointly, severally and firmly bound unto the STATE OF ILLINOIS in the penal sum of 5 percent of the total bid price, or for the amount specified in 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, submit a DBE Utilization Plan that is accepted and approved by the Department; and if, after award by the Department, the PRINCIPAL shall enter into a contract in accordance with the terms of the bidding and contract documents including evidence of the required insurance coverages and providing such bond as specified with good and sufficient surety for the faithful performance of such contract and for the prompt payment of labor and material furnished in the prosecution thereof; or if, in the event of the failure of the PRINCIPAL to make the required DBE submission or to enter into such contract and to give the specified bond, the PRINCIPAL pays to the Department the difference not to exceed the penalty hereof between the amount specified in the bid proposal and such larger amount for which the Department may contract with another party to perform the work covered by said bid proposal, then this obligation shall be null and void, otherwise, it shall remain in full force and effect.

IN THE EVENT the Department determines the PRINCIPAL has failed to comply with any requirement as set forth in the preceding paragraph, then Surety shall pay the penal sum to the Department within fifteen (15) days of written demand therefor. If Surety does not make full payment within such period of time, the Department may bring an action to collect the amount owed. Surety is liable to the Department for all its expenses, including attorney's fees, incurred in any litigation in which it prevails either in whole or in part.

In TESTIMONY WHEREOF, the said PRINCIPAL and the said SURETY have caused this instrument to be signed by their respective officers this day of A.D.,

PRINCIPAL SURETY
(Company Name) (Company Name)
By (Signature & Title) By: (Signature of Attorney-in-Fact)

Notary Certification for Principal and Surety

STATE OF ILLINOIS,
County of
I, a Notary Public in and for said County, do hereby certify that
and
(Insert names of individuals signing on behalf of PRINCIPAL & SURETY)

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

Given under my hand and notarial seal this day of A.D.
My commission expires
Notary Public

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

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

(1) Policy

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

(2) Obligation

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

(3) Project and Bid Identification

Complete the following information concerning the project and bid:

Route _____	Total Bid _____
Section _____	Contract DBE Goal _____ (Percent) (Dollar Amount)
Project _____	
County _____	
Letting Date _____	
Contract No. _____	
Letting Item No. _____	

(4) Assurance

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

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

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

Failed to meet contract award goals and has included good faith effort documentation to meet the goals and that my company has provided participation as follows:
Disadvantaged Business Participation _____ percent

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

Company

By _____

Title _____

Date _____

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

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

Bureau of Small Business Enterprises **Local Let Projects**
2300 South Dirksen Parkway Submit forms to the
Springfield, Illinois 62764 Local Agency



Illinois Department of Transportation

DBE Participation Statement

Subcontractor Registration _____

Letting _____

Participation Statement

Item No. _____

(1) Instructions

Contract _____

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

(2) Work

Pay Item No.	Description	Quantity	Unit Price	Total
Total				

(3) Partial Payment Items

For any of the above items which are partial pay items, specifically describe the work and subcontract dollar amount:

(4) Commitment

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. 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 Prime Contractor

Signature for DBE Firm

Title _____

Title _____

Date _____

Date _____

Contact _____

Contact _____

Phone _____

Phone _____

Firm Name _____

Firm Name _____

Address _____

Address _____

City/State/Zip _____

City/State/Zip _____

E _____

WC _____

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

PROPOSAL ENVELOPE



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. 89419
KNOX County
Section 05-00501-21-GS (Galesburg)
Route FAU 6801 (Seminary Street)
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

1. The Code provides:

Section 50-5. Bribery.

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

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

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

(b) Businesses. No business shall be barred from contracting with any unit of State or local government, 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 1961.

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

(d) Certification. Every bid submitted to and contract executed by the State, 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.

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

B. Felons

1. The Code provides:

Section 50-10. Felons. Unless otherwise provided, no person or business convicted of a felony shall do business with the State of Illinois or any State agency, 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.

2. 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

1. The Code provides:

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

1. The Code provides:

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 500/50-12 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.

<hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> Name of Subcontracting Company		
<hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> Authorized Officer	<hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> Date	

RETURN WITH SUBCONTRACT
SUBCONTRACTOR DISCLOSURES

I. DISCLOSURES

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

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

B. Financial Interests and Conflicts of Interest

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

The financial interests to be disclosed shall include ownership or distributive income share that is in excess of 5%, or an amount greater than 60% of the annual salary of the Governor, of the subcontracting entity or its parent entity, whichever is less, unless the subcontractor is a publicly traded entity subject to Federal 10K reporting, in which case it may submit its 10K disclosure in place of the prescribed disclosure. If a subcontractor is a privately held entity that is exempt from Federal 10K reporting, but has more than 200 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. The disclosure shall include the names, addresses, and dollar or proportionate share of ownership of each person making the disclosure, their instrument of ownership or beneficial relationship, and notice of any potential conflict of interest resulting from the current ownership or beneficial interest of each person making the disclosure having any of the relationships identified in Section 50-35 and on the disclosure form.

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

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

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

C. Disclosure Form Instructions

Form A Instructions for Financial Information & Potential Conflicts of Interest

If the subcontractor is a publicly traded entity subject to Federal 10K reporting, the 10K Report may be submitted to meet the requirements of Form A. If a subcontractor is a privately held entity that is exempt from Federal 10K reporting, but has more than 200 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. If a subcontractor is not subject to Federal 10K reporting, the subcontractor must determine if any individuals are required by law to complete a financial disclosure form. To do this, the subcontractor should answer each of the following questions. A "YES" answer indicates Form A must be completed. If the answer to each of the following questions is "NO", then the **NOT APPLICABLE STATEMENT** on the second page of Form A must be signed and dated by a person that is authorized to execute contracts for the subcontracting company. Note: These questions are for assistance only and are not required to be completed.

1. Does anyone in your organization have a direct or beneficial ownership share of greater than 5% of the bidding entity or parent entity? YES ___ NO ___
2. Does anyone in your organization have a direct or beneficial ownership share of less than 5%, but which has a value greater than 60% of the annual salary of the Governor? YES ___ NO ___
3. Does anyone in your organization receive more than 60% of the annual salary of the Governor of the subcontracting entity's or parent entity's distributive income? YES ___ NO ___

(Note: Distributive income is, for these purposes, any type of distribution of profits. An annual salary is not distributive income.)

4. Does anyone in your organization receive greater than 5% of the subcontracting entity's or parent entity's total distributive income, but which is less than 60% of the annual salary of the Governor? YES ___ NO ___

(Note: Only one set of forms needs to be completed per person per subcontract even if a specific individual would require a yes answer to more than one question.)

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

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

RETURN WITH SUBCONTRACT

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

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

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

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

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

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

Disclosure of the information contained in this Form is required by the Section 50-35 of the Code (30 ILCS 500). Subcontractors desiring to enter into a subcontract of a State of Illinois contract must disclose the financial information and potential conflict of interest information as specified in this Disclosure Form. This information shall become part of the publicly available contract file. This Form A must be completed for subcontracts with a total value of \$50,000 or more, from subcontractors identified in Section 20-120 of the Code, and for all open-ended contracts. **A publicly traded company may submit a 10K disclosure (or equivalent if applicable) in satisfaction of the requirements set forth in Form A. See Disclosure Form Instructions.**

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

DISCLOSURE OF FINANCIAL INFORMATION

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

FOR INDIVIDUAL (type or print information)	
NAME:	_____
ADDRESS	_____
Type of ownership/distributable income share:	
stock _____ sole proprietorship _____ Partnership _____ other: (explain on separate sheet):	
% or \$ value of ownership/distributable income share:	_____

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

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

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

1. Are you currently an officer or employee of either the Capitol Development Board or the Illinois State Toll Highway Authority? Yes ___ No ___

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

RETURN WITH SUBCONTRACT

3. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor, are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of 100% of the annual salary of the Governor?
Yes ___ No ___

4. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor, are you and your spouse or minor children entitled to receive (i) more than 15 % in the aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of two times the salary of the Governor?
Yes ___ No ___

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

Yes ___ No ___

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

1. Is your spouse or any minor children currently an officer or employee of the Capitol Development Board or the Illinois 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, as of 7/1/07) are you entitled to receive (i) more then 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 annual salary of the Governor?
Yes ___ No ___

(c) Elective status; the holding of elective office of the State of Illinois, the government of the United States, any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois currently or in the previous 3 years.
Yes ___ No ___

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

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

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

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

RETURN WITH SUBCONTRACT

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

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

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

3 Communication Disclosure.

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

Name and address of person(s): _____

RETURN WITH SUBCONTRACT

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

Name of person(s): _____

Nature of disclosure: _____

APPLICABLE STATEMENT

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

Completed by: _____ 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 the 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 the bottom of this page.

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

THE FOLLOWING STATEMENT MUST BE CHECKED

Signature box with fields: 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)



NOTICE TO BIDDERS

- 1. TIME AND PLACE OF OPENING BIDS.** Sealed proposals for the improvement described herein will be received by the Department of Transportation at the Harry R. Hanley Building, 2300 South Dirksen Parkway, in Springfield, Illinois until 10:00 o'clock a.m., August 2, 2013. All bids will be gathered, sorted, publicly opened and read in the auditorium at the Department of Transportation's Harry R. Hanley Building shortly after the 10:00 a.m. cut off time.
- 2. DESCRIPTION OF WORK.** The proposed improvement is identified and advertised for bids in the Invitation for Bids as:

**Contract No. 89419
KNOX County
Section 05-00501-21-GS (Galesburg)
Route FAU 6801 (Seminary Street)
District 4 Construction Funds**

Construct a single span bridge with MSE retaining walls to carry Seminary St. over the BNSF Railroad, the re-alignment of Seminary St. from Water St. to Cedar Creek construction of a cast-in-place box culvert over Cedar Creek and the reconstruction of Kellogg St. from Main St. to North St. and the reconstruction of Main St. Ferris St., Water St., North St., and Peck St. all located in the City of Galesburg.

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

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

By Order of the
Illinois Department of Transportation

Ann L. Schneider,
Secretary

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2013

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

ERRATA Standard Specifications for Road and Bridge Construction (Adopted 1-1-12) (Revised 1-1-13)

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LR SD13		<input type="checkbox"/> Required Cold Milled Surface Texture	Nov. 1, 1987	Jan. 1, 2007
LR SD406		<input type="checkbox"/> Safety Edge	April 1, 2011	
LR 105		<input type="checkbox"/> Cooperation with Utilities	Jan. 1, 1999	Jan. 1, 2007
LR 107-2		<input type="checkbox"/> Railroad Protective Liability Insurance for Local Lettings	Mar. 1, 2005	Jan. 1, 2006
LR 107-4	197	<input checked="" type="checkbox"/> Insurance	Feb. 1, 2007	Aug. 1, 2007
LR 107-7		<input type="checkbox"/> Wages of Employees on Public Works	Jan. 1, 1999	Jan. 2, 2013
LR 108		<input type="checkbox"/> Combination Bids	Jan. 1, 1994	Mar. 1, 2005
LR 109		<input type="checkbox"/> Equipment Rental Rates	Jan. 1, 2012	
LR 212		<input type="checkbox"/> Shaping Roadway	Aug. 1, 1969	Jan. 1, 2002
LR 355-1		<input type="checkbox"/> Bituminous Stabilized Base Course, Road Mix or Traveling Plant Mix	Oct. 1, 1973	Jan. 1, 2007
LR 355-2		<input type="checkbox"/> Bituminous Stabilized Base Course, Plant Mix	Feb. 20, 1963	Jan. 1, 2007
LR 400-1		<input type="checkbox"/> Bituminous Treated Earth Surface	Jan. 1, 2007	Apr. 1, 2012
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LR 400-5		<input type="checkbox"/> Cold In-Place Recycling (CIR) With Emulsified Asphalt	Apr. 1, 2012	Jun. 1, 2012
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LR 406		<input type="checkbox"/> Filling HMA Core Holes with Non-shrink Grout	Jan. 1, 2008	
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LR 503-2		<input type="checkbox"/> Furnishing Class SI Concrete (Short Load)	Jan. 1, 1989	Jan. 1, 2002
LR 542		<input type="checkbox"/> Pipe Culverts, Type _____ (Furnished)	Sep. 1, 1964	Jan. 1, 2007
LR 663		<input type="checkbox"/> Calcium Chloride Applied	Jun. 1, 1958	Jan. 1, 2007
LR 702		<input type="checkbox"/> Construction and Maintenance Signs	Jan. 1, 2004	Jun. 1, 2007
LR 1000-1		<input type="checkbox"/> Cold In-Place Recycling (CIR) and Full Depth Reclamation (FDR) with Emulsified Asphalt Mix Design Procedures	Apr. 1, 2012	Jun. 1, 2012
LR 1000-2		<input type="checkbox"/> Cold In-Place Recycling (CIR) and Full Depth Reclamation (FDR) with Foamed Asphalt Mix Design Procedures	June 1, 2012	
LR 1004		<input type="checkbox"/> Coarse Aggregate for Bituminous Surface Treatment	Jan. 1, 2002	Jan. 1, 2007
LR 1030		<input type="checkbox"/> Growth Curve	Mar. 1, 2008	Jan. 1, 2010
LR 1032-1		<input type="checkbox"/> Emulsified Asphalts	Jan. 1, 2007	Feb. 7, 2008
LR 1102		<input type="checkbox"/> Road Mix or Traveling Plan Mix Equipment	Jan. 1, 2007	

BDE SPECIAL PROVISIONS
For the August 2 and September 20, 2013 Lettings

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

<u>File Name</u>	<u>Pg.</u>		<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80240	198	X	Above Grade Inlet Protection	July 1, 2009	Jan. 1, 2012
80099			Accessible Pedestrian Signals (APS)	April 1, 2003	Jan. 1, 2007
80274	200	X	Aggregate Subgrade Improvement	April 1, 2012	Jan. 1, 2013
80309	203	X	Anchor Bolts	Jan. 1, 2013	
80192			Automated Flagger Assistance Device	Jan. 1, 2008	
* 80173			Bituminous Materials Cost Adjustments	Nov. 2, 2006	Aug. 1, 2013
80241			Bridge Demolition Debris	July 1, 2009	
80276			Bridge Relief Joint Sealer	Jan. 1, 2012	Aug. 1, 2012
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	204	X	Building Removal-Case III (Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50531	210	X	Building Removal-Case IV (No Asbestos)	Sept. 1, 1990	April 1, 2010
80292	212	X	Coarse Aggregate in Bridge Approach Slabs/Footings	April 1, 2012	April 1, 2013
80310			Coated Galvanized Steel Conduit	Jan. 1, 2013	
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	
80294	213	X	Concrete Box Culverts with Skews ≤ 30 Degrees Regardless of Design Fill and Skews > 30 Degrees with Design Fills > 5 Feet	April 1, 2012	
80311			Concrete End Sections for Pipe Culverts	Jan. 1, 2013	
80277	214	X	Concrete Mix Design – Department Provided	Jan. 1, 2012	
80261			Construction Air Quality – Diesel Retrofit	June 1, 2010	
80029	215	X	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	Aug. 2, 2011
80312			Drain Pipe, Tile, Drainage Mat, and Wall Drain	Jan. 1, 2013	
80313			Fabric Bearing Pads	Jan. 1, 2013	
80265			Friction Aggregate	Jan. 1, 2011	
80229	225	X	Fuel Cost Adjustment	April 1, 2009	July 1, 2009
80303	229	X	Granular Materials	Nov. 1, 2012	
80304			Grooving for Recessed Pavement Markings	Nov. 1, 2012	Jan. 1, 2013
80169			High Tension Cable Median Barrier	Jan. 1, 2007	Jan. 1, 2013
80246			Hot-Mix Asphalt – Density Testing of Longitudinal Joints	Jan. 1, 2010	April 1, 2012
80315			Insertion Lining of Culverts	Jan. 1, 2013	
80320	230	X	Liquidated Damages	April 1, 2013	
80045			Material Transfer Device	June 15, 1999	Jan. 1, 2009
80297	231	X	Modified Urethane Pavement Marking	April 1, 2012	
80165			Moisture Cured Urethane Paint System	Nov. 1, 2006	Jan. 1, 2010
80253			Movable Traffic Barrier	Jan. 1, 2010	Jan. 1, 2013
80231			Pavement Marking Removal	April 1, 2009	
80298			Pavement Marking Tape Type IV	April 1, 2012	
80254	239	X	Pavement Patching	Jan. 1, 2010	
80321	240	X	Pavement Removal	April 1, 2013	
80022	241	X	Payments to Subcontractors	June 1, 2000	Jan. 1, 2006
80316	243	X	Placing and Consolidating Concrete	Jan. 1, 2013	
80278	246	X	Planting Woody Plants	Jan. 1, 2012	Aug. 1, 2012
80305			Polyurea Pavement Markings	Nov. 1, 2012	Jan. 1, 2013
80279	248	X	Portland Cement Concrete	Jan. 1, 2012	Jan. 1, 2013
80300			Preformed Plastic Pavement Marking Type D - Inlaid	April 1, 2012	

<u>File Name</u>	<u>Pg.</u>	<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80218		Preventive Maintenance – Bituminous Surface Treatment	Jan. 1, 2009	April 1, 2012
80219		Preventive Maintenance – Cape Seal	Jan. 1, 2009	April 1, 2012
80220		Preventive Maintenance – Micro-Surfacing	Jan. 1, 2009	April 1, 2012
80221		Preventive Maintenance – Slurry Seal	Jan. 1, 2009	April 1, 2012
80281	291	X Quality Control/Quality Assurance of Concrete Mixtures	Jan. 1, 2012	Jan. 1, 2013
34261		Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
80157	307	X Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	
80306	309	X Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS)	Nov. 1, 2012	Jan. 1, 2013
80283	320	X Removal and Disposal of Regulated Substances	Jan. 1, 2012	Nov. 2, 2012
80319	324	X Removal and Disposal of Surplus Materials	Nov. 2, 2012	
80224		Restoring Bridge Approach Pavements Using High-Density Foam	Jan. 1, 2009	Jan. 1, 2012
80307		Seeding	Nov. 1, 2012	
80127	325	X Steel Cost Adjustment	April 2, 2004	April 1, 2009
* 80255		Stone Matrix Asphalt	Jan. 1, 2010	Aug. 1, 2013
80143	329	X Subcontractor Mobilization Payments	April 2, 2005	April 1, 2011
80317		Surface Testing of Hot-Mix Asphalt Overlays (NOTE: This special provision was previously named "Surface Testing of Pavements".)	Jan. 1, 2013	
80308		Synthetic Fibers in Concrete Gutter, Curb, Median and Paved Ditch	Nov. 1, 2012	
80286	330	X Temporary Erosion and Sediment Control	Jan. 1, 2012	
80225		Temporary Raised Pavement Marker	Jan. 1, 2009	
80256		Temporary Water Filled Barrier	Jan. 1, 2010	Jan. 1, 2013
80301		Tracking the Use of Pesticides	Aug. 1, 2012	
80273	331	X Traffic Control Deficiency Deduction	Aug. 1, 2011	
20338	332	X Training Special Provisions	Oct. 15, 1975	
80318		Traversable Pipe Grate	Jan. 1, 2013	April 1, 2013
80270	335	X Utility Coordination and Conflicts	April 1, 2011	Jan. 1, 2012
80288		Warm Mix Asphalt	Jan. 1, 2012	Nov. 1, 2012
80302	341	X Weekly DBE Trucking Reports	June 2, 2012	
80289		Wet Reflective Thermoplastic Pavement Marking	Jan. 1, 2012	
80071		Working Days	Jan. 1, 2002	

The following special provisions have been deleted from use:

80271 Safety Edge

The following special provisions are either in the 2013 Standard Specifications, the 2013 Recurring Special Provisions, or the special provisions Portland Cement Concrete, QC/QA of Concrete Mixtures, or Placing and Consolidating Concrete:

<u>File Name</u>	<u>Special Provision Title</u>	<u>New Location</u>	<u>Effective</u>	<u>Revised</u>
80275	Agreement to Plan Quantity	Article 202.07	Jan. 1, 2012	
80291	Calcium Chloride Accelerator for Class PP-2 Concrete	Recurring CS #28	April 1, 2012	
80237	Construction Air Quality – Diesel Vehicle Emissions Control	Articles 105.03 and 107.41	April 1, 2009	Jan. 2, 2012
80239	Construction Air Quality – Idling Restrictions	Articles 105.03 and 107.41	April 1, 2009	
80177	Digital Terrain Modeling for Earthwork Calculations	Recurring CS #32	April 1, 2007	
80272	Drainage and Inlet Protection Under Traffic	Articles 603.02 and 603.07	April 1, 2011	Jan. 1, 2012
80228	Flagger at Side Roads and Entrances	Articles 701.13 and 701.20	April 1, 2009	
80109	Impact Attenuators	Section 643	Nov. 1, 2003	Jan. 1, 2012
80110	Impact Attenuators, Temporary	Section 706	Nov. 1, 2003	Jan. 1, 2012
80203	Metal Hardware Cast into Concrete	Articles 503.02, 504.02, and 1006.13	April 1, 2008	Jan. 1, 2012
80290	Payrolls and Payroll Records	Recurring CS #5	Jan. 2, 2012	

<u>File Name</u>	<u>Special Provision Title</u>	<u>New Location</u>	<u>Effective</u>	<u>Revised</u>
80299	Portland Cement Concrete Inlay or Overlay	Recurring CS #29	April 1, 2012	
80280	Portland Cement Concrete Sidewalk	Article 424.07	Jan. 1, 2012	
80152	Self-Consolidating Concrete for Cast-In-Place Construction	The following special provisions: Portland Cement Concrete, QC/QA of Concrete Mixtures and Placing and Consolidating Concrete	Nov. 1, 2005	April 1, 2012
80132	Self-Consolidating Concrete for Precast and Precast Prestressed Products	The following special provisions: Portland Cement Concrete, QC/QA of Concrete Mixtures and Placing and Consolidating Concrete	July 1, 2004	April 1, 2012
80284	Shoulder Rumble Strips	Article 642.05	Jan. 1, 2012	
80285	Sidewalk, Corner or Crosswalk Closure	Articles 701.03, 701.15, and 1106.02	Jan. 1, 2012	
80075	Surface Testing of Pavements (Section 406 overlay portion will remain a special provision and will now be called "Surface Testing of HMA Overlays".)	Articles 407.09, 407.12, 420.10, 420.20, and 1101.10	April 1, 2002	Jan. 1, 2007
80287	Type G Inlet Box	Article 610.09	Jan. 1, 2012	

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: April 26, 2013 Letting

Pg #	√	File Name	Title	Effective	Revised
		GBSP 4	Polymer Modified Portland Cement Mortar	June 7, 1994	Feb 6, 2013
		GBSP 11	Permanent Steel Sheet Piling	Dec 15, 1993	Jan 1, 2007
342	X	GBSP 12	Drainage System	June 10, 1994	Jan 1, 2007
		GBSP 13	High-Load Multi-Rotational Bearings	Oct 13, 1988	Oct 30, 2012
		GBSP 14	Jack and Remove Existing Bearings	April 20, 1994	Jan 1, 2007
		GBSP 15	Three Sided Precast Concrete Structure	July 12, 1994	Oct 15, 2011
		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	Jan 1, 2007
		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	April 19, 2012
		GBSP 26	Containment and Disposal of Lead Paint Cleaning Residues	Oct 2, 2001	April 30, 2010
		GBSP 28	Deck Slab Repair	May 15, 1995	Oct 15, 2011
		GBSP 29	Bridge Deck Microsilica Concrete Overlay	May 15, 1995	Oct 30, 2012
		GBSP 30	Bridge Deck Latex Concrete Overlay	May 15, 1995	Jan 18, 2011
		GBSP 31	Bridge Deck High-Reactivity Metakaolin (HRM) Conc Overlay	Jan 21, 2000	Oct 30, 2012
		GBSP 32	Temporary Sheet Piling	Sept 2, 1994	Jan 31, 2012
		GBSP 33	Pedestrian Truss Superstructure	Jan 13, 1998	Aug 17, 2012
		GBSP 34	Concrete Wearing Surface	June 23, 1994	Feb 6, 2013
		GBSP 35	Silicone Bridge Joint Sealer	Aug 1, 1995	Oct 15, 2011
343	X	GBSP 38	Mechanically Stabilized Earth Retaining Walls	Feb 3, 1999	Feb 6, 2013
		GBSP 42	Drilled Soldier Pile Retaining Wall	Sept 20, 2001	Aug 17, 2012
		GBSP 43	Driven Soldier Pile Retaining Wall	Nov 13, 2002	Aug 17, 2012
		GBSP 44	Temporary Soil Retention System	Dec 30, 2002	May 11, 2009
		GBSP 45	Bridge Deck Thin Polymer Overlay	May 7, 1997	Feb 6, 2013
		GBSP 46	Geotextile Retaining Walls	Sept 19, 2003	Oct 30, 2012
		GBSP 47	High Performance Concrete Structures	Aug 5, 2002	Jan 1, 2007
352	X	GBSP 51	Pipe Underdrain for Structures	May 17, 2000	Jan 22, 2010
		GBSP 52	Porous Granular Embankment (Special)	Sept 28, 2005	Nov 14, 2008
		GBSP 53	Structural Repair of Concrete	Mar 15, 2006	Feb 6, 2013
		GBSP 55	Erection of Curved Steel Structures	June 1, 2007	
		GBSP 56	Setting Piles in Rock	Nov 14, 1996	April 19, 2012
		GBSP 57	Temporary Mechanically Stabilized Earth Retaining Walls	Jan 6, 2003	Feb 6, 2013
		GBSP 59	Diamond Grinding and Surface Testing Bridge Sections	Dec 6, 2004	July 9, 2008
		GBSP 60	Containment and Disposal of Non-Lead Paint Cleaning Residues	Nov 25, 2004	Mar 6, 2009
		GBSP 61	Slipform Parapet	June 1, 2007	Aug 17, 2012
		GBSP 62	Concrete Deck Beams	June 13, 2008	Oct 9, 2009
		GBSP 64	Segmental Concrete Block Wall	Jan 7, 1999	Oct 30, 2012
		GBSP 65	Precast Modular Retaining Walls	Mar 19, 2001	Oct 30, 2012
		GBSP 66	Wave Equation Analysis of Piles	Nov 14, 2008	
353	X	GBSP 67	Structural Assessment Reports for Contractor's Means and Methods	Mar 6, 2009	
		GBSP 70	Braced Excavation	Aug 9, 1995	May 18, 2011
357	X	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	Oct 15, 2011
		GBSP 73	Cofferdams	Oct 15, 2011	
		GBSP 74	Permanent Steel Sheet Piling (LRFD)	Jan 31, 2012	Aug 17, 2012
		GBSP 75	Bond Breaker for Prestressed Concrete Bulb-T Beams	April 19, 2012	
362	X	GBSP 76	Granular Backfill for Structures	April 19, 2012	Oct 30, 2012
364	X	GBSP 77	Weep Hole Drains for Abutments, Wingwalls, Retaining Walls And Culverts	April 19, 2012	

LIST ANY ADDITIONAL SPECIAL PROVISIONS BELOW

The following Guide Bridge Special Provisions have been incorporated into the 2012 Standard Specifications:

File Name	Title	Std Spec Location
GBSP22	Cleaning and Painting New Metal Structures	506
GBSP36	Surface Preparation and Painting Req. for Weathering Steel	506
GBSP50	Removal of Existing Non-composite Bridge Decks	501
GBSP58	Mechanical Splicers	508
GBSP63	Demolition Plans for Removal of Existing Structures	501
GBSP68	Piling	512
GBSP69	Freeze-Thaw Aggregates for Concrete Superstructures Poured on Grade	1004

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

File Name	Title	Disposition:
GBSP37	Underwater Structure Excavation Protection	Replaced by GBSP73

**STATE OF ILLINOIS
KNOX COUNTY
CITY OF GALESBURG**

SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction", adopted January 1, 2012, the latest edition of the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways", the "Manual of Test Procedures For Materials" in effect on the date of invitation for bids, and the "Supplemental Specifications and Recurring Special Provisions", as indicated on the Check Sheet included herein, which apply to and govern the construction of the Seminary Street / Kellogg Street Overpass Improvements, Section 05-00501-21-GS, in Knox County, Illinois. In case of conflict with any part, or parts, of said Specifications, the said Special Provisions shall take precedence and shall govern.

DESCRIPTION OF WORK

This work consists of furnishing all labor, materials, and equipment necessary to construct the Seminary Street / Kellogg Street Overpass. Improvements include construction of bridge, mechanically stabilized earth (MSE) retaining wall, new full depth concrete pavement, curb and gutter, storm sewer systems, sanitary sewer construction, water main construction, street lighting systems, traffic signals, and all miscellaneous appurtenant items shown in the plans and as described in these Special Provisions.

PRE-BID MEETING

A voluntary pre-bid meeting has been scheduled for July 18, 2013 at 10:00 am in the City Hall Council Chambers at 55 W. Tompkins Street, Galesburg, IL 61401. While attending is not mandatory, it is recommended that all bidders attend. Subcontractors are welcome to attend.

EXISTING UNDERGROUND FACILITIES

The City of Galesburg 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 the City. 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 non-municipal ownership, the cost of same, in whole or in part, is disclaimed of the City of Galesburg.

NOTIFICATION OF UTILITIES PRIOR TO CONSTRUCTION

All utility companies must be notified, in writing, by the Contractor at least one (1) week in advance prior to starting construction. 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. A copy of the letter notifying the utility companies of the Contractor's intention to start work must be received by the City of Galesburg before he will be permitted to start construction.

PREVAILING RATE

Not less than the Prevailing Rate of Wages as found by the City of Galesburg, or the Department of Labor, or determined by the Court of Review, shall be paid to all Laborers, Workmen and Mechanics performing work under this contract.

CERTIFIED PAYROLLS

All work is subjected to the Davis-Bacon Act and all prevailing wage laws. The contractor and all subcontractors shall submit certified copies of his payroll weekly for all work undertaken on the project. Failure to keep current on submittal of payrolls shall be cause to withhold payment for completed work.

PROOF OF INSURANCE

The contractor shall carry insurance as required by the Standard Provisions. Proof of insurance coverage shall be submitted to the City and shall be kept in force until all work to be performed under the terms of the contract has been accepted.

LABOR AND MATERIAL PAYMENT

The contractor shall not commence work under this contract until he has obtained a labor and Material Payment Bond, which has been approved by the City, nor shall the Contractor allow any subcontractor to commence work on his subcontract until subcontractor has a similar bond or the Contractor's bond covers the subcontractor's Labor and Material Payment.

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: Knox
Township Name: Galesburg City Township
Section Numbers: Township 11 N, Range 1E, Sections 10, 11, and 15.

COMPLETION DATE PLUS WORKING DAYS

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

"When a completion date plus working days is specified, the Contractor shall complete all contract items and safely open all roadways to traffic by 11:59 PM on November 30, 2014 except as specified herein.

The Contractor will be allowed to complete all clean-up work and punch list items within 20 working days after the completion date for opening the roadway to traffic. Under extenuating circumstances the Engineer may direct that certain items of work, not affecting the safe opening of the roadway to traffic, may be completed within the working days allowed for clean-up work and punch list items. Temporary lane closures for this work will be allowed at the discretion of the Engineer.

Article 108.09 or the Special Provision for "Failure to Complete the Work on Time", if included in this contract, shall apply to both the completion date and the number of working days.

COOPERATION WITH UTILITY COMPANIES

It is understood and agreed that the Contractor has considered, in his 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 him due to any interference from the said utility appurtenances or the operations of moving them.

All telephone, telegraph, cableway, gas, water, electrical 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.

STATUS OF UTILITIES TO BE ADJUSTED AND ABANDONED

All known existing utilities within the limits of the retaining wall will be relocated. The existing facilities will be removed and/or abandoned in place. The sanitary sewer (Galesburg Sanitary District) and the water main (City of Galesburg – Water Division) will be relocated as part of this project. Other utilities, including Ameren Electric, Ameren Gas, and Century Telephone, will be relocated by those companies and are not included in the project.

Abandonment of Sanitary Sewer and Water Main: Once the proposed sanitary sewer and water main are constructed, the existing sewer and water facilities that remain within the limits of the retaining wall will either be removed and/or abandoned. Where there is a direct conflict between the reinforced section of the MSE wall and the abandoned sewer or water main, the plans will call for the removal of the abandoned utility. This work will be paid for separately. However, where there is not a direct conflict between the reinforced section and the abandoned sewer or water main, the Contractor's aggregate column ground improvement layout shall consider these as possible obstructions. If the Contractor's ground improvement design requires the removal of an abandoned utility, that work shall be included in the cost of aggregate column installation.

Abandonment of Other Utilities: Abandonment of facilities that are to be relocated and are not part of this project (i.e. gas, electric and telephone) will be accomplished prior to beginning of the work associated with the overpass project. Existing pipe and/or manhole structures that are abandoned by Ameren and Century Telephone will remain in place. Where there is a direct conflict between the reinforced section of the MSE wall and the abandoned gas main or telephone duct, the plans will call for the removal of the abandoned utility. This work will be paid for separately. However, where there is not a direct conflict between the reinforced section and the abandoned gas main or telephone duct, the Contractor's aggregate column ground improvement layout shall consider these as possible obstructions. If the Contractor's ground improvement design requires

the removal of an abandoned utility, that work shall be included in the cost of aggregate column installation.

For information, the pipe material and diameter of the pipes to be abandoned in place will be noted on the plans and as described below. The locations as noted below and in the plans should be considered approximate. It is the Contractor's responsibility to verify exact locations in field.

<u>Utility Company</u>	<u>Contact</u>	<u>Phone Number</u>
Ameren – IP	Julie Cone	309-345-5169
Comcast Communications		309-342-2161
City of Galesburg - Water	Richard Nelson	309-345-3649
Galesburg Sanitary District	Marshall Schrader	309-342-0131
Century Telephone	Darrell Schmidt	309-477-0255

RESPONSIBILITY FOR DAMAGE CLAIMS

The Contractor shall indemnify and hold harmless the CITY of GALESBURG, its officers and employees against all loss, damage or expense that it or they may sustain as a result of any suits, actions, or claims of any character brought on account of injury to or death of any person or persons, including all persons performing any work under this contract, which may arise in any way in connection with the work to be performed under this contract, including but not limited to, suits, actions or claims arising under "An Act Providing for the Protection and Safety of Persons In and About the Construction, Repairing, Alteration or Removal of Buildings, Bridges, Viaducts, and Other Structures, and to Provide For the Enforcement Thereof", approved June 3, 1907, (Ill. Rev. Stats., Ch. 48, Sec. 60, et seq.), as amended. The Contractor shall also indemnify and hold harmless the CITY of GALESBURG, its officers and employees from all suits, actions, or claims of any character brought because of any injuries or damages received or sustained by any person, persons or property, on account of, or in consequence of, any neglect by Contractor or a Subcontractor in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect or misconduct of said Contractor; or because of any claim or amounts recovered for any infringements of patent, trademark or copyright; or from any claims or amounts arising or recovered under the "Workmen's Compensation Act", or any other law, ordinance, order or decree, and so much of the money due the said Contractor under and by virtue of his contract as shall be considered necessary by the Department for such purposes, may be retained for the use of the ENGINEERING DIVISION; or, in case no money is due, his surety shall be held until such suits, actions or claims have been settled and suitable evidence to that effect furnished to the Department.

TRAFFIC CONTROL PLAN / CONSTRUCTION STAGING

Traffic control shall be in accordance with the applicable sections of the Standard Specifications for Road and Bridge Construction, the Supplemental Specifications, the applicable guidelines contained in the National Manual on Uniform Traffic Control Devices (MUTCD), Illinois MUTCD, these special provisions herein, and any special details and Highway Standards and in the plans.

The governing factor in the execution and staging of work for this project is to provide the motoring public with the safest possible travel conditions through the construction work zone. Motorists shall be guided in a clear and positive manner while approaching and traversing construction work areas. The Contractor shall arrange his/her operations to keep the closing of lanes to a minimum. The Contractor will notify the Engineer in writing ten calendar days prior to any activities that will disrupt normal traffic flow including road closures, lane closures, or work directly adjacent to traffic lanes. To ensure acceptable levels of operation, routine inspection of traffic control elements shall be performed. The Contractor will be required to inspect and initiate any needed maintenance to the traffic control devices in this contract. Construction equipment, materials and debris shall be stored in such a manner as not to be vulnerable to vehicle impact and as directed by the Engineer.

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 normal traffic, and shall not park or stop except within designated work areas. Personal vehicles will not be permitted to park within the right-of-way, except in specific areas designated by the Engineer.

The Contractor shall be responsible for the proper location, installation, and arrangement of all traffic control devices. Special attention shall be given to existing warning signs and guide signs during all construction operations. Warning signs and existing guide signs with arrows shall be kept consistent with the barricade placement at all times. The Contractor shall immediately remove, completely cover or turn from the motorist's view all signs that are inconsistent with lane assignment patterns.

No work shall commence on any stage of construction until all required traffic control is in place. At the completion of each stage of construction or whenever operations indicate that a relocation of a proposed or existing traffic control device is advisable, as determined by the Engineer, the Contractor will be required to remove, relocate, reinstall, and maintain the device as herein specified. All traffic control devices must remain in place until specific authorization for relocation or removal is received from the Engineer.

The placement of barricades and warning signs for the required lane closures shall be as specified herein and the applicable highway standards shall proceed in the direction of the flow of traffic. The removal of all signs and barricades shall begin at the end of the construction areas and proceed toward on-coming traffic.

At road closure locations where 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 changed, when approved by the Engineer, in the manner shown on Highway Standard 701901 for Road Closed to Through Traffic. At the end of each work day the barricades shall be returned to their in-line positions. This work will be considered included in the contract, and no extra compensation will be allowed.

Special attention is called to Articles 107.09, 107.14, 107.15, 107.16 and 107.20 of the Standard Specifications for Road and Bridge Construction, the following Highway Standards and Recurring Special Provisions relating to traffic control:

Standard Specifications:

- Section 701 – Work Zone Traffic Control and Protection
- Section 703 – Work Zone Pavement Marking
- Section 783 – Pavement Marking and Marker Removal
- Section 1106 – Work Zone Traffic Control Devices

Supplemental Specifications:

- Section 701 – Work Zone Traffic Control and Protection
- Section 1106 – Work Zone Traffic Control Devices

Highway Standards:

- 701006, 701301, 701311, 701501, 701502, 701701, 701801, 701901, and BLR 22.

BDE Special Provisions:

- Traffic Control Deficiency Deduction

Traffic Control Standards shall be applied as directed by the Engineers. Suggested applications for each standard or details as follows:

Standard 701006: This standard shall apply when any vehicles, equipment, workers or their activities will encroach in the area from 15' to 24" the edge of pavement. This traffic control and protection standard shall not be paid for separately, but shall be included in the cost of TRAFFIC CONTROL AND PROTECTION (SPECIAL).

Standard 701901: This standard is applicable to all standards Traffic Control and Protection. This traffic control and protection standard shall not be paid for separately, but shall be included in the cost of TRAFFIC CONTROL AND PROTECTION (SPECIAL).

Standard BLR 22: This work shall consist of providing traffic control and protection according to the highway standard for the closure of Kellogg Street from Main Street to North Street and Seminary Street from North Street to Grove Street except that signage

shall be in accordance with the applicable portions of the plans. Staggered Type III barricades shall be placed in the north direction on Seminary Street south of Grove Street and the south direction on the north side of Main Street. The staggered Type III barricades shall be placed on North Street on both the east and west side of Seminary Street, Peck St. between Grove St. and North St. shall have staggered Type III barricades facing the east direction. Staggered Type III barricades shall also be placed on Kellogg St. facing the north direction on the south side of North St. and facing the south direction on the north side of Main St. The staggered Type III barricades facing in the west direction will be placed on Water St. and Ferris St. on the west side of Kellogg St. This traffic control and protection standard shall not be paid for separately, but shall be included in the cost of TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

The Contractor shall furnish the name of the individual in his direct employ who is responsible for the installation and maintenance of the traffic control for this project. This person shall be able to be contacted on a 24-hour per day basis to furnish and maintain traffic control in case of an emergency. The Contractor shall be responsible to communicate with impacted property owners when their driveway/entrance will be shut down for any period of time.

The staging of the improvements will allow for full closure of Kellogg Street and Seminary Street at different times during the project as defined below. The staging of the improvements can be done in various orders and does not need to follow the numerical stages below:

Stage 1 (Sta 109+75 to Sta 114+50): Due to a Quiet Zone agreement, the existing railroad crossing at Kellogg Street will be removed by October 31, 2013. Therefore, the contractor will need to construct the entrance to 287 E. Water Street, 234/236 N. Kellogg Street, and 246 N. Kellogg Street prior to October 31, 2013.

Also included in Stage 1 is the construction of the Water Street intersection from Station 109+75 to Sta 111+00.

Stage 1 will include the construction of the proposed improvements on Kellogg Street south of Main Street. In addition, Seminary Street will be closed from North Street to 225 feet south of Grove Street. Access to the commercial and residential parcels north of the closure area must be maintained at all time. This construction will continue into Stage 2. Prior to moving to next stage, Water Street roadway improvements and access to Kellogg Street parcels between North Street and Water Street must be provided from Kellogg/Seminary roadway.

Stage 2 (Station 122+65 to Northern End of Project): During Stage 2, the roadway improvements along Seminary Street will be constructed. As noted in Stage 1, access to the commercial and residential parcels must be maintained at all times during construction. If Stage 1 is constructed first, Stage 3 can be constructed concurrently with Stage 2.

Stage 3 (Station 103+40 to Station 110+00): This segment of roadway can be completely shut down (i.e between Main Street and Station 110+00). Access to the buildings on either side of this segment of Kellogg Street can be accessed via the adjacent side streets (Ferris Street and Water Street). If this Stage is constructed first, access to the parking lot on the west side of Kellogg Street just south of Water Street must be provided prior to beginning Stage 2.

Specific traffic control provisions have been added to the contract as commitments to the property owners. The commitments are for the property owners as noted below.

- 277 E. Water Street: Contractor shall not block driveway entrance with construction equipment at any time. Access shall be maintained to this residence at all times except for times of concrete construction (sidewalk, curb & gutter, etc).
- 420 N. Seminary Street: Access to this business shall be maintained at all times. The construction of the proposed driveway shall be staged so access can be provided at all times. In addition, an electric box is buried in the front yard on the property. The Contractor shall adjust the box as necessary to match proposed grade and shall protect the box during construction of the improvements. Underground electric is buried from this box to the north side of the building. This utility shall not be disturbed during construction. Any outages (electric service or water) shall be scheduled with the owners in advance of the work being performed.
- 443 and 459 N. Seminary Street: A shared driveway exists for these two residences. Contractor shall not block driveway entrance with construction equipment at any time. Access shall be maintained to this residence at all times except for times of concrete construction (sidewalk, curb & gutter, etc).
- The railroad crossing on Kellogg Street just south of North Street will be removed by October 31, 2013. The contractor shall make provisions to maintain access to the driveways along Kellogg Street between Water Street and North Street at all times. Specifically, the Contractor needs to maintain access to 287 E. Water Street, 234/236 N. Kellogg Street, and 246 N. Kellogg Street.

TRAFFIC CONTROL AND PROTECTION (SPECIAL)

This work shall consist of furnishing, erecting, maintaining, and removing all signs and traffic control devices shown on the Traffic Control Plan Detour Signage sheets. All signs shall be erected prior to any roadway closures. The Contractor will be required to cover any conflicting signs when not in use.

For the reconstruction of the Seminary Street and Kellogg Street pavement and construction of the Seminary Street/Kellogg Street Overpass, traffic will use the detour as shown on the Traffic Control Plan Detour Signage plan.

All traffic control indicated on the detour plan sheets will be included in the cost of this pay item except for items such as changeable message signs, pavement marking removal, temporary pavement marking, and work zone pavement marking removal, which shall be paid for separately.

All warning signs shall be 36" x 36" fluorescent orange. The road closure limits on Kellogg Street and Seminary Street may be adjusted as determined by the Engineer for work activities near the project limits. Access to existing entrances shall be provided at all times.

All traffic control and protection, except for additional flaggers, as described will be paid for at the contract unit price lump sum for TRAFFIC CONTROL AND PROTECTION (SPECIAL).

Route signs are not available from IDOT. The Contractor must supply them at his/her own expense.

SEQUENCE OF CONSTRUCTION

The Contractor shall conduct his/her operations in accordance with the Traffic Control Plan specified elsewhere in these Special Provisions. Kellogg Street and Seminary Street will be closed to thru traffic at all times during all associated roadway work. Traffic control will be as shown on the Traffic Control Plan Detour Signage Plan. The Contractor will be required to maintain access to all adjacent properties during construction.

NOTIFICATION OF ROAD CLOSURE

The contractor shall notify the Resident Engineer a minimum of 14 days prior to the actual road closure. The Resident Engineer will in turn notify the District 4 Bureau of Operations – Traffic Unit of the impending closure. This will allow time for the Resident Engineer to contact emergency services (police, fire, ambulance, etc.). Pedestrian Traffic will be maintained throughout the duration of construction activities on both road closures. The Contractor will make coordination efforts with First United Methodist Church to facilitate movement of vehicular traffic and pedestrians into the church property.

The Contractor will not be allowed to close the road without the 14 day notice and failure to provide proper notice will delay the road closure. This notice of road closure is considered to be part of the Contractor's approved work schedule. Delays caused by failure to provide the required notice shall not be considered justification for additional work days.

DETOUR ROUTING

North and Southbound vehicular traffic along Seminary Street will be routed to Chambers Street as shown in the Traffic Control Plan Detour Signage. North and Southbound large truck traffic will be routed to Main Street, Henderson Street, and Fremont Street as shown in the Traffic Control Plan Detour Signage.

CONSTRUCTION ACCESS

The Contractor shall present a plan of access that will be used during construction of said project 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.

As noted in the Traffic Control Plan/Construction Staging special provision, the BNSF railroad crossing at Kellogg Street will be removed by October 31, 2013. If a temporary crossing is desired by the Contractor to construct the improvements, they will be responsible to contract BNSF to arrange temporary crossings. Any costs associated with the temporary crossing shall be incidental to the contract.

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.

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' (300mm) 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.”

MECHANICALLY STABILIZED EARTH RETAINING WALLS

This construction of the Mechanically Stabilized Earth (MSE) Retaining Walls will be governed by the Guide Bridge Special Provision (GBSP) 38, except as modified herein.

Due to Cedar Creek, there are areas within the retaining wall mass that could become inundated for periods of time. At those locations, select fill gradation must meet the requirements of GBSP 38 and be a coarse aggregate with $2 \pm 2\%$ passing the #200 sieve. This restriction would apply only to the portion of the reinforced soil mass and wall backfill between Stations 120+40 and Station 120+72 and below the elevation of 756.70.

In addition, the contractor will be responsible to install and monitor settlement platforms. The suggested location of the platforms is Station 115+25, Station 119+00, and Station 121+85.

The contractor shall install select fill in accordance with GBSP 38 between the MSE retaining wall sections at all locations. This select fill, in addition to all other embankment, shall be compacted to 95% standard density.

This work, including all items noted in GBSP 38 and all items above, will be paid for at the contract unit price per square foot for MECHANICALLY STABILIZED EARTH RETAINING WALLS.

GRANULAR EMBANKMENT, SPECIAL

This work shall consist of construction of the embankment between the Reinforced Soil Mass by depositing, placing, and compacting aggregate materials of acceptable quality. The work will be performed in general accordance with Article 206 of the Standard Specifications.

The embankment shall be constructed with select fill as defined in Guide Bridge Special Provision 38 (Mechanically Stabilized Earth Retaining Walls).

This work will be paid for at the contract unit price per ton for GRANULAR EMBANKMENT, SPECIAL.

ENVIRONMENTAL REVIEWS

Prior to use of any proposed borrow areas, use areas (temporary access roads, detours, run-arounds, etc.) and/or waste areas, the Contractor shall file the required environmental resource request surveys according to Section 107.22 of the Standard Specifications. These surveys are required in order for the Department to conduct cultural and biological resource surveys for the proposed site.

Prior to any waste materials being removed from the construction site, the required environmental resource surveys will need to be obtained and filed by the Contractor. Excess waste products removed from the construction site shall be disposed of as required in Section 202.03 of the Standard Specifications.

Any protruding metal bars shall be removed prior to the disposal of broken concrete at approved disposal sites.

The required environmental recourse documentation shall include the following:

- BDE Form 2289 (Environmental Survey Request)
- A location map showing the size limits and location of the use area
- Signed Property Owner Agreement Form –D4 PIO100
- Color photographs depicting the use area
- Borrow Area Entry Agreement form – D4 PIO101

Please note that a minimum of two weeks shall be allowed for the District to obtain the required environmental clearances.

BORROW AND FURNISHED EXCAVATION

Effective march 7, 2000 Revised April 27, 2007

Add the following to the requirements of Article 204:

“Soils which demonstrate the following properties shall be restricted to the interior of the embankment and shall be covered on both sides and top with a minimum of 3 feet of non-restricted soil not considered detrimental in terms of erosion potential or excess volume change. A restricted soil is defined as having any one of the following properties.”

- A grain size distribution with less than 35% passing the number 75um (#200) sieve.
- A plasticity index of less than 12.
- A liquid limit in excess of 50.

“All restricted and non-restricted embankment materials shall have the following minimum strengths for the indicated moistures.”

<u>Immediate Bearing Value</u>	<u>Shear Strength At 95% Density*</u>	<u>Moisture</u>
3.0	1000 PSF (50 Kpa)	120%
4.0	1300 PSF (62 Kpa)	110%

*Granular Soils $\phi=35^\circ$

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 materials may only be incorporated in to the embankment by using one of the following procedures:

The further restricted materials shall be placed in 4" lifts and disked with underlying lift material until a uniform and homogeneous 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) French drain consisting of nonwoven geotechnical fabric at the toe of the foreslope spaced 150' (46 m) apart. At locations requiring a French drain the 3' (1m) cohesive cap shall not be installed within the 10' by 10' riprap area. If the Engineer determines that the existing ground is 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 traverse 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 of Earth Excavation, Furnished excavation, or Borrow Excavation.

AGGREGATE SUBGRADE IMPROVEMENT

This work shall be in accordance with the Bureau of Design and Environment (BDE) Special Provision for Aggregate Subgrade Improvement (80274) and as specified herein.

Aggregate Subgrade Improvement shall be placed in accordance with the limits shown on the plans. The Contractor will be allowed to place the aggregate up to six (6) inches outside of the limits of the PCC pavement in order to construct a solid pavement platform. Compensation will not be allowed for any additional aggregate that is placed outside of the six (6) inch limit.

STORM SEWER (WATER MAIN REQUIREMENTS)

~~The storm sewer shall be constructed to the lines and grades shown in the plans and according to applicable portions of Section 550 of the Standard Specifications and as specified herein.~~

Storm sewer pipes designated as "water main requirements" will require water main quality pipe due to the proximity to the existing water main. This pipe shall be Polyvinyl Chloride (PVC) conforming to AWWA C 900 or C 905. Pipe shall be rated at 160 pounds per square inch (psi). Elastomeric seals (gaskets) used for push-on joints shall comply with ASTM F 477, and shall be pressure rated in accordance with ASTM D 3139.

Basis of Payment: This work shall be paid for at the contract unit price per foot for STORM SEWER, (WATER MAIN REQUIREMENTS) of the size specified.

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. It is the contractor's responsibility to submit the NOI form and be in compliance with all NPDES requirements. 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.

PCC AUTOMATIC BATCHING EQUIPMENT

Effective: April 23, 2010

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.

In addition, the batching plant shall be a computerized plant interfaced with a printer and shall print actual batch weights, added water, tempering water, mixing time, and amount of each additive per batch. At the discretion of the Engineer, archived electronic versions of batch proportions will be acceptable. Truck delivery tickets will still be required as per Article 1020.11 (a) (7).

PLACEMENT OF HOT-MIX ASPHALT SURFACE COURSES

Effective: March 22, 2001

Revised: January 1, 2007

Placement of hot-mix asphalt surface courses shall not be allowed after October 15th of any calendar year. The contractor is responsible for scheduling construction activities to complete placement of surface courses prior to October 15th. If surface courses are not in place by October 15th, the contractor is responsible for implementing any measures needed to make the roadway suitable for winter traffic and snow plowing activities. Any additional costs associated with this provision shall be considered included in the cost of the unit prices bid for hot-mix asphalt surface course items.

HOT-MIX ASPHALT SURFACE COURSE SURFACE TESTS

Effective: November 1, 2003

Revised January 1, 2007

The Contractor shall provide a person to operate the straight edge in accordance with Article 406.11 of the Standard Specifications and communicate with City/IDOT personnel to minimize the surface course bumps. If surface course bumps cannot be removed at this time, IDOT personnel will record the locations and provide deductions as stated in Article 406.11.

REMOVAL OF BRICK SIDEWALK

The work shall be in accordance with the applicable portions of Section 440 of the Standard Specifications.

This work includes the careful removal of the existing brick sidewalk. This consists of removal of the existing brick wearing surface and the PCC base course (existing roadway only and if present). The brick wearing surface shall be removed separately from the base course. The bricks shall then be hauled separately to an off-site location for cleaning and palletizing. The Contractor shall properly dispose of waste materials produced by the cleaning process.

Bricks to be re-laid on this project may be stored at the job site provided proper security and traffic protection measures are taken. All bricks shall be temporarily palletized and shrink-wrapped, using standard-sized durable pallets (to be furnished by the Contractor.) Pallets shall not be stacked over three pallets high nor should there be more than eight layers of bricks per pallet, nor shall the total weight of the bricks exceed the pallet manufacturer's weight limits. Bricks to be re-laid may also be stored off-site at a location provided by the Contractor. Regardless of the storage location, the Contractor shall be responsible for any brick broken due to carelessness or lost due to theft. These bricks shall be replaced by the Contractor at his/her expense. Upon return to the jobsite, the bricks will be inspected; all uncleaned or broken brick shall not be used. No full, partial, or broken bricks are to be disposed of unless approved by the Resident Engineer. Cleaned and palletized brick that are not re-laid as part of the improvements shall be transported to the City of Galesburg's brick storage areas at Gunther Construction A4 asphalt plant outside of Galesburg.

This work shall be paid for at the contract unit price per square foot for BRICK SIDEWALK REMOVAL.

RELOCATE EXISTING LIGHTING UNIT

This work shall be done in accordance with Section 844 of the Standard Specifications except as modified herein. Any damage done to the light posts/poles during the relocation process shall be repaired to the satisfaction of the Engineer at the Contractor's expense. The existing foundation shall be removed according to Section 842 of the Standard Specifications. A new foundation (30" diameter and 6'-6" in depth) shall be poured in place at the locations noted on the plans according to Section 836 of the Standard Specifications and the applicable IDOT Standard Drawing. The bolt pattern shall be modified as necessary to match the bolt pattern of the existing light pole to be relocated.

BASIS OF PAYMENT:

This work will be paid for at the contract unit price per each for RELOCATE EXISTING LIGHTING UNIT which shall include all labor, equipment, foundation removal and placement, conduit, wiring and other materials necessary to complete the work as specified herein.

SIDEWALK, SPECIAL AND DETECTABLE WARNINGS, SPECIAL

This work shall consist of modifications to be made to the existing handicap ramp at the northeast quadrant of the Main Street and Kellogg Street intersection as noted on the plans.

Sidewalk, Special

The contractor shall be required to grind the existing PCC sidewalk ramp to provide a minimum sidewalk width of six (6) feet. All slopes of the handicap ramp shall comply with IDOT Standard Highway Detail 424001. The surface of the sidewalk shall be ground smooth to within 1/16".

Detectable Warnings, Special

The contractor shall be required to install a surface applied detectable warning with ADA compliant dome geometry at the handicap ramp in the northeast quadrant of the Main Street and Kellogg Street intersection. The installation of the detectable warnings shall include epoxy adhesive and epoxy anchors into the existing sidewalk. All manufacturer's recommendations shall be adhered to.

This work will be paid for at the contract unit price per square foot for SIDEWALK, SPECIAL and at the contract unit price per square foot for DETECTABLE WARNINGS, SPECIAL.

FENCE REMOVAL

This work shall consist of the removal of existing fence at locations noted in the plans.

All components of the existing fence shall be removed to at least one (1) foot below the existing ground line, or as required for the construction of adjacent proposed improvements. If any holes are created by the removal of the fence, they shall be backfilled with suitable material approved by the Engineer. All debris resulting from this operation shall be removed from the project site.

This work will be paid for at the contract unit price per foot for FENCE REMOVAL.

REMOVAL OF EXISTING SUPERSTRUCTURE

This work shall consist of the removal and satisfactory disposal of Structure Number 048-6015 (Kellogg Street) and 048-6001 (Seminary Street) as detailed in the plans, described herein, according to Section 501 of the Standard Specifications, and as directed by the Engineer. The scope of this item shall also include removal and disposal of miscellaneous items appurtenant to this structure, including but not limited to aluminum handrail, reinforcing steel, etc.

Description of Kellogg Street Bridge: Single span reinforced concrete tee beam on reinforced concrete closed abutment on spread footings. The width of the bridge is 26'-10" back to back of abutments, and 66'-0" out to out of deck.

Description of Seminary Street Bridge: Single span reinforced concrete tee beam on reinforced concrete closed abutment. This bridge will be removed in total. Refer to plan sheets for information on existing bridge.

Superstructure: Remove existing superstructure and beams to be flush with existing retaining walls.

This work will be paid for at the contract unit price per each for REMOVAL OF EXISTING SUPERSTRUCTURE, which price includes all labor, materials, tools, and equipment required for removal and disposal of the existing structure and miscellaneous items, as detailed in the plans, described herein, and as directed by the Engineer.

CONCRETE STRUCTURES

Any shoring that the railroad may require will be the Contractors responsibility to provide. This work will be included in the contract unit bid price per CU YD for CONCRETE STRUCTURES and no additional compensation will be allowed.

All labor, equipment, and material necessary to complete this work shall be paid for at the contract unit price bid per CU YD for CONCRETE STRUCTURES and no additional compensation will be allowed.

STAMPED COLORED PORTLAND CEMENT CONCRETE SIDEWALK, 6"

This work shall consist of furnishing and installing a integrally colored portland cement concrete sidewalk with a stamped and accent colored surface, constructed on a prepared subbase as detailed herein for a thickness and at locations shown on the plans. This work will be in accordance with Section 420 of the Standard Specifications for Road and Bridge Construction.

The coloring of the concrete shall consist of the following:

- Integral Color – SGS 238 Thyme by Solomon Colors or approved equal
- Accent-Colour Release – RA-110 Light Gray Antique by Legacy Decorative Concrete Systems or approved equal.

Submittals

The Contractor shall submit a sample of the stamp pattern and color for approval prior to placing any materials.

Pattern

The stamp pattern shall be a herringbone pattern. The specifics of pattern to be coordinated with the City of Galesburg.

Execution

The Contractor will be required to prepare a one (1) square yard full-scale-mock-up sample. Actual job specific materials, colors, methods, and workmanship shall be provided by the Contractor. The accepted mock-up will be the standard by which remaining work will be evaluated for technical and aesthetic merit. The mock-up may be in a location of proposed installation where it may remain if approved by Engineer.

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 SQ FT for STAMPED COLORED PORTLAND CEMENT CONCRETE SIDEWALK, 6"

BRICK PAVERS

The work under this pay item shall consist of placing prime on the new concrete base, placing a bituminous mastic cushion, placing the brick pavers on top of the mastic cushion, and filling all joints with a sand-cement mixture.

The Contractor shall re-use the cleaned and palletized brick pavers salvaged from the street and/or sidewalk first. Any additional pavers needed shall come from the City's storage location, located at Gunther's asphalt plant, off of Lincoln Street on the southeast corner of the I-74/US 34 interchange. It shall be the Contractor's responsibility to coordinate the locating and transporting of these brick pavers from the storage location to the jobsite when necessary. The Contractor must inform the Resident Engineer of this activity, and allow him/her to be present to inspect and approve the bricks prior to transport. No bricks shall be removed from the storage yard without the Resident Engineer's approval. Bricks transported from the City storage yard shall be the Contractor's responsibility to transport to the jobsite. The harvested sidewalk bricks shall be used first. However, if the number of bricks is insufficient from the harvesting, then the balance of bricks needed shall be taken from the City Storage area.

The bricks to be used from the City's storage yard may need to be stacked and palletized in order to be transported. The Contractor will be responsible for supplying any additional pallets needed, re-palletizing these brick, stacking and palletizing any additional brick that are currently located in piles, and transporting the brick to the jobsite. This work shall not be paid for separately, but shall be included in the unit bid price for this pay item.

The Bituminous mastic shall consist of a mixture of Asphalt Cement complying with Section 1009 and Fine Aggregate complying with Section 1003. The AC used shall be SC-250 and the fine aggregate used shall be a 50/50 blend of FA20 and FA1. The ingredients shall be combined in such proportions as to produce a mixture conforming to the following composition limits by weight:

Fine Aggregate	93%-95%
Bitumen	5% - 7%

Prime for the concrete base shall be MC-30 Grade Asphalt. Apply primer at a rate of 0.08 gal/SY to concrete base immediately before placing mastic material.

Mastic material shall be plant mixed. Place mastic material to approximately 1.0" uncompacted thickness. The mastic material shall be screeded to the specified 1.0" thickness by means of a straightedge with screws set at 1.0" (or other approved methods) to ensure that the correct amount of mastic cushion is being placed. Once the mastic has been screeded, add fresh bituminous material to low spots after each pass of the striking boards. A minimum of two (2) passes with the strike-off will be required. The screws and screed may need to be adjusted during construction to allow for accurate setting of the brick pavers to the proposed finish grade. The Resident Engineer shall approve all adjustments to the thickness of the mastic.

After the mastic has been placed and screeded, it is not to be compacted, walked upon, or otherwise disturbed except by the bricks being placed. If walked upon or compacted in any way, the Contractor will be required to remove and relay mastic at no additional compensation. The Contractor shall limit the placement of mastic material to the current day's rate of placing the brick wearing surface, allowing no more than three (3) feet of mastic beyond the working edge of the brick. Mastic material left uncovered overnight shall be reworked and rescreeded the next day.

In delivering bricks from the pallets for placement in the street, no wheeling in barrows will be allowed on the brick surface. Bricks shall not be dumped into piles. All bricks when laid shall be clean and kept clean and entirely free from dirt or other foreign matter until the pavement is complete. All the brick-laying work shall be done over the brick already laid. The disturbing of any exposed mastic cushion is prohibited.

The bricks shall be laid by hand with the best face up in straight courses (at right angles to the curbs) from curb to curb in a running bond pattern with a uniform top surface. The brick abutting the curb shall be placed parallel to the curb line. Each alternative course is started with a half brick. The bricks are laid so that they are "hand-tight".

Except when encountering a utility, a maximum of two partial bricks shall be used in any one course of brick. Partial brick shall be machine-sawed and may not be less than three (3) inches in length. Gaps narrower than three (3) inches at the end of a course shall result in the last two bricks being cut to fit. The fractured or cut ends of partial bricks shall be laid towards the center of the pavement. Broken and chipped brick

suitable for partial bricks shall be used so far as practical in obtaining the necessary partial brick instead of breaking otherwise whole and sound bricks.

All joints in adjacent courses and rows shall be staggered by at least three (3) inches unless directed by the Resident Engineer. After every fourth course of brick has been laid, the courses shall be straightened (racked) by tapping with a rubber sledge on a 4" x 4" timber at least three (3) feet in length.

A taut string line shall be used when laying the brick to establish line and grade. The crown, grade, and slope shall frequently be checked with a ten (10) foot straightedge with no greater variation in the surface than one quarter (1/4) inch. Any low or high spots shall require corrective realignment (corrected by removing the brick(s) and removing or adding bedding material). Mechanical force, driving and ramming shall not be used to straighten rows.

Any chips or spalls shall be swept from the surface to prevent them from entering the joints between the bricks. Prior to filling the joints, the surface shall be inspected and all defective brick removed and replaced with acceptable brick.

After the bricks have been placed, a 4 to 1 sand-cement mixture shall be broomed into the gaps or joints between the bricks. The sand shall meet an FA 9 gradation as specified in the Standard Specifications.

After the joints have been filled with the sand-cement mixture, the bricks shall be rolled with a power-driven tandem roller weighing not less than two (2) nor more than five (5) tons. Rolling shall be done longitudinally and at a SLOW pace. Rolling shall start at the curb and proceed toward the centerline and shall not progress more than one (1) foot transversely at each longitudinal roll. The roller is then taken to the opposite side of the street and the operation repeated. After the first rolling, the surface shall be inspected and all broken, spalled, chipped, loose, or otherwise damaged brick during the rolling operation shall be removed and replaced. After inspection, the joints shall have another application of 4 to 1 sand-cement mixture broomed into the gaps or joints between the bricks. The bricks shall again be rolled, this time diagonally across the pavement, first in one direction and then in the other. A final rolling parallel to the curb may be required but in no case shall the rolling be continued longer than is necessary to bed the brick firmly and create a smooth surface. Once this rolling has been completed, light construction equipment such as a backhoe or skid steer loader may be driven carefully on the new brick wearing surface.

Portions of the pavement not accessible to the power-driven tandem roller shall be tamped with a plate compactor. The plate compactor shall have a plate size of about two feet by two feet and a centrifugal force of 3,000 to 5,000 pounds.

The surface shall be checked after rolling and any variation of one-quarter (1/4) inch in ten (10) feet shall result in the removal of the brick in the area of variance and re-laid until the surface is within the allowable tolerance.

At the completion of the day, all areas of brick paver installation shall be rolled except six (6) feet from the working edge.

After each stage of the brick-wearing surface has been completed, one additional application of the sand-cement mixture will be required to the entire completed pavement surface for that stage, and the surface wet down and allowed to dry.

After the entire brick-wearing surface has been completed for all stages, two additional applications of the sand-cement mixture will be required to the entire pavement surface. After each application, the entire pavement will be wet down and allowed to dry before the next application of the sand-cement mixture is applied. There shall temporarily be no parking on both sides of the street while the last two application of the sand-cement mixture is taking place. Therefore there will be a total of five (5) applications of joint filler before the brick wearing surface is complete.

The Contractor shall be limited in allowing heavy equipment on the newly constructed brick paver surface. Materials stockpiled on the pavement shall be set on ¾" thick plywood.

All the above described work including but not limited to the transporting of the brick pavers, MC-30 prime, bituminous mastic, sand-cement joint filler, and placing and rolling the brick wearing surface shall be paid for at the contract unit price per square foot for BRICK PAVERS.

PLANTER

This work shall consist of removal, storage and relocation of existing planters that are located at the intersection of Main Street and Kellogg Street.

The existing planter on the northwest quadrant, southwest quadrant and southeast quadrant of the Kellogg Street and Main Street intersections shall be removed and relocated to the proposed locations as shown on the plans. The geometric configuration of each planter will be maintained in the proposed improvements.

Demolition of Planter:

The planter curb and planter fence shall be removed from the existing location and stored. The edge of the existing precast planter curb shall be saw cut for removal. The existing planter curb are doweled into existing adjacent pavement. The saw cut shall cut through the dowel to facilitate removal. Contractor shall be responsible to mark pieces of planter for re-assembly at a later date.

Re-Assembly of Planter:

This work will consist of placement of existing planter curb pieces. The contractor will dowel the planter curb pieces to the existing/proposed sidewalk by use of ½" diameter x

6" long epoxy coated dowel bars. Since the dowel bars in the existing condition were "saw cut" to remove the planter curb, the contractor shall take care in locating the proposed holes for the dowel bars. For re-establishment of the planter fence, square (1" or 1 1/2" as required) mounting brackets shall be bolted to the planter curb to facilitate installation of the fence.

The interior of the re-assembled planter box shall be left open and topsoil, mulch, and plantings placed in the planter.

Basis of Payment:

This work will be paid for at the contract unit price per EACH for PLANTER REMOVAL and PLANTER.

VAULT LID RESURFACING

Description. This work shall consist of the preparation of the existing vault lid and the construction of a microsilica concrete overlay to the specified thickness. The Contractor shall coordinate with the adjacent building owner to protect any items located under the vault lid. Any damage and required replacement to these items shall be the responsibility of the Contractor.

Materials. Materials shall meet the requirements of the following Articles of Section 1000:

<u>Item</u>	<u>Article/Section</u>
(a) Microsilica	1010
(b) Portland Cement Concrete (Notes 1-6)	1020
(c) Packaged Rapid Hardening Mortar or Concrete	1018
(d) Concrete Curing Materials	1022.02

Note 1: Cement shall be Type I portland cement. Fine aggregate shall be natural sand and the coarse aggregate shall be crushed stone or crushed gravel. The gradation of the coarse aggregate shall be CA 11, CA 13, CA 14 or CA 16.

Note 2: Mix Design Criteria.

Article 1020.04 shall not apply. The microsilica concrete mix design shall meet the following requirements:

Cement Factor	565 lb./cu. yd. (335 kg/cu. m)
Microsilica Solids	33 lb./cu. yd. (20 kg/cu. m)
Water/Cement Ratio	0.37 to 0.41

(including water in the slurry)

Mortar Factor	0.88 to 0.92
Slump	3 to 6 in. (75 to 150 mm)
Air Content	5.0 to 8.0 percent
Compressive Strength (14 days)	4000 psi (27,500 kPa) minimum
Flexural Strength (14 days)	675 psi (4,650 kPa) minimum

Note 3: Admixtures.

Article 1020.05(b) shall apply except as follows:

High-range water reducing admixtures (superplasticizers) shall be added as determined by the Engineer.

Note 4: Fly Ash.

Article 1020.05(c)(1) shall apply except as follows:

Only Class C fly ash may be used to partially replace portland cement. The amount of cement replaced and replacement ratio shall be the same as for Class BS concrete.

Note 5: Ground Granulated Blast-Furnace Slag.

Ground granulated blast-furnace slag may be used according to Article 1020.05(c)(2). The amount of cement replaced and replacement ratio shall be the same as for Class BS concrete.

Note 6: Mixing.

The mixing requirements shall be according to Article 1020.11, except as follows:

(a) Water-based microsilica slurry:

(1) Truck Mixer:

Combine simultaneously air entraining admixture, water-reducing admixture and/or retarding admixture, microsilica slurry and 80 percent of the water with cement, fly ash (if used) and aggregates.

Add remaining water.

Mix 30-40 revolutions at 12-15 RPM.

Add high range water-reducing admixture.

Mix 60-70 revolutions at 12-15 RPM.

(2) Stationary Mixer:

The microsilica slurry shall be diluted into the water stream or weigh box prior to adding into mixer. Combine simultaneously air entraining admixture, water-reducing admixture and/or retarding admixture, microsilica slurry and 80 percent of the water with cement, fly ash (if used) and aggregates.

Add remaining water.

After mixing cycle is completed deposit into truck mixer.

Add high range water-reducing admixture.

Mix 60-70 revolutions at 12-15 RPM.

(b) Densified microsilica (bulk):

(1) Truck Mixer:

Same as (a)1 above except the densified microsilica shall be added with the cement.

(2) Stationary Mixer:

Same as (a)2 above except the densified microsilica shall be added with the cement.

(c) Densified microsilica (bag):

Bagged microsilica shall be kept dry. No bag or material containing moisture shall be introduced into the concrete mixer.

(1) Truck Mixer:

Combine air entraining admixture, water-reducing admixture and/or retarding admixture and 80 percent of the water.

Add cement, fly ash (if used), and aggregates.

Add remaining water.

Mix 30-40 revolutions at 12-15 RPM.

Add microsilica.

Mix 70-80 revolutions at 12-15 RPM.

Add high range water-reducing admixture.

Mix 60-70 revolutions at 12-15 RPM.

(2) Stationary Mixer:

Combine air entraining admixture, water-reducing admixture and/or retarding admixture and 80% of the water.

Add cement, fly ash (if used), and aggregates.

Add remaining water.

After mixing cycle is completed deposit into truck mixer.

Add microsilica to truck.

Mix 70-80 revolutions at 12-15 RPM.

Add high range water-reducing admixture.

Mix 60-70 revolutions at 12-15 RPM.

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 and the following:

Sawing Equipment. Sawing equipment shall be a concrete saw capable of sawing concrete to the specified depth.

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; shall be capable of removing rust and old concrete from reinforcement bars; 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 deck surface during operation.

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).

Mechanical Scarifying Equipment. Scarifying equipment shall be a power-operated, mechanical scarifier capable of uniformly scarifying or removing the old concrete surface and new patches to the depths required in a satisfactory manner. Other types of removal devices may be used if their operation is suitable and they can be demonstrated to the satisfaction of the Engineer.

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.

(6) 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 deck with pressurized water prior to the vacuum operation to dislodge all debris and slurry from the deck surface.

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.

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
800-426-6500

Germann Instruments, Inc.
BOND-TEST Pull-off System
847-329-9999

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.

Concrete Equipment: Equipment for proportioning and mixing the concrete shall be according to Article 1020.03.

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: Sidewalks, curbs, drains, reinforcement and/or existing transverse and longitudinal joints which are to remain in place shall 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 adjacent or underlying roadways, waterways, drainage areas or railroads nor be allowed to erode existing slopes.

The Contractor shall verify that the equipment used will not overload the structural capacity of the vault lid. Reinforcing steel may be encountered in the vault lid.

Vault Lid Preparation:

Vault Lid Scarification. The scarification work shall consist of removing the designated concrete vault lid surface using mechanical and 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 vault lid surface to the top of peaks remaining after scarification. In areas of the vault lid not accessible to the scarifying equipment, power-driven hand tools will be permitted. Power driven hand tools shall be used for removal around areas to remain in place.

The Contractor shall use mechanical scarification equipment to remove an initial depth of concrete roughening the concrete vault lid surface to facilitate hydro-scarification. At a minimum, the last 1/2 in. (13 mm) of removal shall be accomplished with hydro-scarification equipment. If the Contractor's use of mechanical scarifying equipment results in exposing, snagging, or dislodging the top mat of reinforcing steel, the mechanical scarifying depth shall be reduced as necessary immediately. If the exposing, snagging, or dislodging the top mat of reinforcing steel cannot be avoided, the mechanical scarifying shall be stopped immediately and the remaining removal shall be accomplished using the 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. 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.

Just prior to performing hydro-scarification, the vault lid 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 vault lid 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 vault lid shall be thoroughly vacuum cleaned in a timely manner before the water and debris are allowed to dry and re-solidify to the vault lid. The uses of alternative cleaning and debris removal methods to minimize driving heavy vacuum equipment over exposed deck reinforcement may be used subject to the approval of the Engineer.

Vault Lid Patching. After vault lid scarification and cleaning, the Engineer will sound the scarified vault lid 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 as noted below:

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.

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.

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.

In areas where 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.

All full-depth patches shall be struck off to the scarified vault lid surface and then roughened with a suitable stiff bristled broom or wire brush to provide a rough texture designed to promote bonding of the overlay. Hand finishing of the patch surface shall be kept to a minimum to prevent overworking of the surface.

All full-depth repairs shall be completed prior to final surface preparation.

Any removal required or made below the specified depth for scarification of the vault lid, which does not result in full-depth repair, shall be filled with the overlay material at the time of the overlay placement.

Epoxy coating, on existing reinforcement bars, damaged during hydro-scarification shall not be repaired.

Undercutting of exposed reinforcement bars shall only be as required to replace or repair damaged or corroded reinforcement.

Final Surface Preparation. Any areas determined by the Engineer to be inaccessible to scarifying equipment shall be thoroughly blast cleaned with hand-held equipment.

If spoils from the scarification operation are allowed to dry and re-solidify on the deck surface, the deck 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 deck surface including vertical faces of curbs, previously placed adjacent overlays, barrier walls up to a height of 1 in. (25 mm) above the overlay, depressions, and beneath reinforcement bars. Hand-held high-pressure waterblasting equipment shall be used for this operation.

The Department may require surface pull-off testing of areas inaccessible to scarifying equipment. Testing shall be in accordance to the Illinois Test Procedure 304 "Pull-off Test (Surface Method)". The Contractor shall provide the test equipment.

The Engineer shall determine each test location, and each individual test shall have a minimum strength of 175 psi (1,207 kPa). In the case of a failing test, the Contractor shall adjust the blast cleaning method and re-clean the area. Testing will be repeated until satisfactory results are attained.

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.

Pre-placement Procedure. Prior to placing the overlay, the Engineer will inspect the deck surface. All contaminated areas shall be blast cleaned again at the Contractor's expense.

Before placing the overlay, the finishing machine shall be operated over the full length of vault segment to be overlaid to check support rails for deflection and confirm the minimum overlay thickness. All necessary adjustments shall be made and another check performed, unless otherwise directed by the Engineer.

Placement Procedure: Concrete placement shall be according to Article 503.07 and the following:

Bonding Method. The deck 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 overlay. Any excess water shall be removed by compressed air or by vacuuming prior to the beginning of overlay placement. Water shall not be applied to the deck surface within one hour before or at any time during placement of the overlay.

Overlay Placement. Placement of the concrete shall be according to Article 503.16.

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 and shall be done from sidewalks, curbs or work bridges.

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

All construction joints shall be formed. When required by the Engineer the previously placed overlay shall be sawed full-depth to a straight and vertical edge before fresh concrete is placed. The Engineer will determine the extent of the removal. When longitudinal joints are not shown on the plans, the locations shall be subject to approval by the Engineer and shall not be located in the wheel paths.

Limitations of Operations:

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.

Other Limitations. Concrete delivery vehicles driven on the structure shall be limited to a maximum load of 6 cu. yd. (4.6 cu. m).

Truck mixers, concrete pumps, or other heavy equipment will not be permitted on any portion of the deck where the top reinforcing mat has been exposed. Conveyors, buggy ramps and pump piping shall be installed in a way that will not displace undercut reinforcement bars. Air compressors may be operated on the deck only if located directly over a pier and supported off undercut reinforcement bars. Compressors will not be allowed to travel over undercut reinforcement bars.

Concrete removal may proceed during final cleaning and concrete placement on adjacent portions of the deck, 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 overlay has been placed until the overlay has cured a minimum of 24 hours.

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

Curing Procedure. The surface shall be continuously wet cured for at least 7 days according to Article 1020.13(a)(5) Wetted Cotton Mat Method. When the cotton mats have been pre-dampened, excess water shall not be allowed to drip from the cotton mats onto the overlay during placement of the mats.

Opening to Traffic. No pedestrians or construction equipment will be permitted on the overlay until after the specified cure period and the concrete has obtained a minimum compressive strength of 4000 psi (27,500 kPa) or flexural strength of 675 psi (4,650 kPa) unless permitted by the Engineer.

Overlay Testing. The Engineer reserves the right to conduct pull-off tests on the overlay to determine if any areas are not bonded to the underlying concrete, and at a time determined by the Engineer. The overlay 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 overlay at the Contractor's expense, and the locations will be determined by the Engineer. When removing portions of an overlay, the saw cut shall be a minimum depth of 1 in. (25 mm).

If the overlay 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.

Basis of Payment. The work described above and as detailed in the plans will be paid for at the contract unit price per lump sum for VAULT LID RESURFACING. This includes all equipment, labor, material, and testing necessary to complete the work.

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.

SANITARY MANHOLES TO BE ADJUSTED

This work shall consist of adjusting sanitary manholes with existing frame and lids/grates to the elevations as noted on the plans.

Precast concrete adjusting rings or cast-in-place concrete shall be constructed to adjust structure to the required elevation. For placing of castings adjacent to rigid pavement, the castings shall be placed in full mortar beds. Castings shall be set to the finished pavement elevation so no subsequent adjustment will be necessary.

This work shall be paid for at the contract unit price per each for SANITARY MANHOLES TO BE ADJUSTED.

WATER VALVES TO BE ADJUSTED

This work shall consist of adjusting existing potable water valves to the elevations as noted on the plans.

The top of the water valve shall be set to the finished pavement elevation so no subsequent adjustment will be necessary.

This work shall be paid for at the contract unit price per each for WATER VALVES TO BE ADJUSTED.

PAVEMENT GROOVING

This work shall consist of cutting grooves into the proposed pavement surface at locations noted in the plans.

The pavement grooves shall be constructed in general accordance with Article 503.16 of the Standard Specifications. The grooves shall be cut into the hardened concrete using a mechanical saw device.

Texturing of the concrete pavement by saw cut grooving will be paid for at the contract unit price per square yard for PAVEMENT GROOVING.

BUS SHELTER REMOVAL

Description: This work shall consist of the removal and disposal of existing bus shelters at locations noted on the plans.

The existing bus shelter shall be detached from the concrete sidewalk. The bus shelter shall become the property of the contractor. If removal of the shelter leaves holes in the sidewalk structure, the contractor will be required to fill the holes with a water tight grout or epoxy.

This work will be paid for at the contract unit price per each for BUS SHELTER REMOVAL.

ANALYSIS AND DISPOSAL OF REGULATED SUBSTANCES

This work shall be performed in accordance with Article 669 of the Standard Specifications and as supplemented with this special provision.

General: Implementation of this Special Provision will likely require the Contractor to subcontract for the execution of certain activities. It will be the Contractor's responsibility to assess the working conditions and adjust anticipated production rates accordingly.

A Preliminary Site Investigation (PSI) of the properties that may be disturbed during construction of the proposed Seminary/Kellogg Street overpass was performed. The PSI addresses the recognized environmental conditions (RECs) identified in a November 2009 Preliminary Environmental Site Assessment (PESA) performed by the Illinois State Geological Survey (ISGS) for the project area. Seven soil borings were completed to determine if the identified RECs may have impacted the project construction limits. The results of the soil sampling did not indicate soil contamination would be encountered during construction of the project that would require environmental remediation, construction worker protection, or special management of excavated materials. These conclusions are based on soil sample results collected at specific locations and may not be representative for all construction activities in connection with this project.

There are two properties within the project limits however that will require special attention by the contractor. Those properties are the Cedar Creek Channel at Peck Street and 57 North Kellogg Street. There were RECs at these locations due to water quality issues in the creek and the property at 57 North Kellogg Street being used as a dry cleaning business in the past. Borings during the design phase of the project could not be taken at these two locations.

During construction, for excavations from the two properties listed above, the contractor is required to observe and field-screen for potential presence of contaminants during construction. If field observations and/or screening results indicate the potential presence of contaminants, the contractor shall provide soil sampling and analyses of excavated soil. This work will be paid for at the contract unit price per each for SOIL DISPOSAL ANALYSIS.

If contaminated soils are found, the removal and disposal of this material will need to be done in accordance with the BDE Special Provision 80283. As the existence of contaminated material is not known, a nominal quantity of soil to be removed and disposed has been established as part of the improvements. This work will be paid for at the contract unit price per cubic yard for NON-SPECIAL WASTE DISPOSAL.

FORM LINER, SIMULATED LARGE SANDSTONE ASHLAR FOR MSE WALL

Description of Work

This work shall consist of designing, developing, furnishing and installing form liners and forming concrete using reusable, high-strength urethane form liners to achieve the various concrete treatment as shown in the drawings and specifications. Form lined surfaces shall include areas of pre-cast retaining walls. Work shall be performed in

accordance with applicable portions of Sections 503 and 504 of the Standard Specifications and as specified herein.

Fabrication Requirements

The following form liner manufacturers have been approved to provide limestone surface form liners.

Form Liners for Retaining Walls

Custom Rock International, St. Paul, MN (Jim Rogers; 800-637-2447)
Milestones Incorporated, Hudson, WI (Paul Nasvik; 715-381-9660)

The pattern shall consist of a 6" to 48" random ashlar stone with a maximum 2" relief. The form liner pattern shall be Custom Rock Formliner Pattern #1501-R2 or approved equal.

Shop Drawings

Shop drawings of the facing pattern shall be submitted.

Shop drawings submittals shall include:

Form liner pattern descriptions, dimensions, and sequencing of form liner sections. Include details showing typical cross sections, joints, corners, stone relief and stone size.

Color photographs of a typical MSE wall panel with the pattern as described above.

Basis of Payment

This work shall not be paid for separately but included in the contract unit price for Mechanically Stabilized Earth Retaining Wall.

FORM LINER FOR PARAPET SURFACE

Description of Work

This work shall consist of designing, developing, furnishing and installing form liners and forming concrete using form liners to achieve a smooth surface finish on the vertical face(s) of parapets and the outside surfaces (visible below the outside parapet face) of the bridge deck, anchor slabs and sidewalk. Work shall comply with Section 503 of the Standard Specifications and as specified herein.

Materials

Form release agents shall be non-staining, non-residual, non-reactive and shall not contribute to the degradation of the form liner material. Forms for smooth faced surfaces shall be plastic coated or metal to provide a smooth surface free of any impression or pattern.

If the contractor elects to use form ties for concrete forming, only fiberglass form ties will be permitted. Use of removable metallic form ties will not be allowed.

Cast Concrete Mockup

The Contractor shall provide a cast concrete mockup of the smooth form liner surface. The mockup shall be a minimum of 3'-6" high and 4'-6" wide and shall include the typical pattern elements. The mockup shall be constructed at or near the project location and shall be removed and disposed of on approval of the Engineer.

The finish on the mockup shall be the same architectural grade finish that is described in the "Installation" section of this special provision.

Upon receipt of comments from inspection of the mockup, adjustments or corrections shall be made. If required, additional mockups shall be prepared when the initial mockup is found to be unsatisfactory.

Installation

Form liners shall be installed in accordance with the manufacturer's recommendations to achieve the highest quality concrete appearance possible. Form liners shall withstand concrete placement pressures without leakage causing physical or visual defects. A form release agent shall be applied to all surfaces of the liner which will come in contact with concrete as per the manufacturer's recommendations. After each use, liners shall be cleaned and made free of build-up prior to the next placement, and visually inspected for blemished or tears. If necessary, the form liners shall be repaired in accordance with the manufacturer's recommendations. All form liners panels that will not perform as intended or are no longer repairable shall be replaced.

The liner shall be securely attached to the forms according to the manufacturer's recommendations. Liners shall be attached to each other with flush seams and seams filled as necessary to eliminate visible evidence in cast concrete. Liner butt joints shall be blended into the pattern so as to create no visible vertical or horizontal seams or conspicuous form butt joint marks. Liner joints must fall within reveals. Continuous or single liner panels shall be used where liner joints may interrupt the intended pattern. Panel remnants shall not be pieced together.

The Contractor shall coordinate concrete pours to prevent visible differences between individual pours or batches. Concrete pours shall be continuous between construction or expansion joints. Wall ties shall be coordinated with the liner and form so that no visual effects of the wall ties are evident on the completed surface. Liners shall be stripped between 12 and 24 hours as recommended by the manufacturer. Curing methods shall be compatible with the desired aesthetic result. Use of curing compounds will not be allowed. Concrete slump requirements shall meet the form liner manufacturer's recommendations for optimizing the concrete finish.

The finish on all form lined surfaces is to be of the highest quality, architectural-grade finish, so that patching or rubbing of the finished surface shall not be needed.

“Architectural-grade finish” is defined as follows: the finished surface shall be smooth and free of air holes and voids; the surface shall contain less than 2% (by area) of voids in any 10 square feet area; the maximum allowable area of any void shall be 0.5 in²; and the maximum depth of any void shall be 1/8”. All form lined seams shall be tight in order to eliminate any visual evidence of the seam. Patching or rubbing of the finished surface is specifically prohibited as a means to meet the requirements of the architectural-grade finish.

The Contractor shall employ consolidation methods to achieve the architectural-grade finish through the use of internal and external vibration methods.

Internal vibration shall be achieved with a vibrator of appropriate size, the highest frequency and low to moderate amplitude. Concrete placement shall be in lifts not to exceed 18”. Internal vibrator operation shall be at appropriate intervals and depths and withdrawn slowly enough to assure the minimum amount of surface air voids and the best possible finish without causing segregation. Any use of external form vibrators must be approved by the form liner manufacturer.

No additional compensation will be directly provided for any methods or materials used to achieve the architectural-grade finish, but shall be considered to be included in the unit prices of the associated pay items. Failure to meet any requirements of this Special Provision shall be caused for rejection and replacement of the structure.

Method of Measurement

This work shall be measured and paid for in place and the area computed in square yards of actual concrete surface area formed with concrete form liners. The pay area shall be the actual measured area in square yards of the vertical face(s) of the parapet and the outside surfaces (visible below the outside parapet face) of the bridge deck, anchor slabs and sidewalk.

Cast concrete form liner mockups will be not be measured for payment separately, but shall be included in the cost for FORM LINER PARAPET SURFACE. Required adjustments or corrections needed to address mockup comments and the cost of additional mockup, if required, will not be paid for separately, but shall be included in the cost for FORM LINER PARAPET SURFACE.

Basis of Payment

Form liner textured surfaces will be paid for at the contract unit price per square yard for FORM LINER PARAPET SURFACE. For all form lined surfaces, the unit price bid shall include all design, material, hardware, labor delivery, storage, installation, and use of patterns as specified in this special provision. Cast concrete form liner mockups will be not be paid for separately, but shall be included in the cost for FORM LINER PARAPET SURFACE.

FURNISH AND INSTALL BOLLARD

Description

This work shall consist of finishing, furnishing, transporting, and installing eight (8) precast concrete Bollards as shown on the plans and finishing, furnishing, transporting and delivering two (2) precast concrete Bollards to an alternate location to be determined by the Engineer. The work includes but is not limited to structural design, required submittals, precast concrete units, steel reinforcement, unloading, storing, placing, aligning, drilling, grouting, fastening, and all other miscellaneous work and materials required for complete installation. All work shall conform to the Standard Specifications and as specified herein.

1. General

- a. Related Documents: Drawings and general provisions of the Contract and applicable portions of Section 504 of the Standard Specifications.
- b. Definitions:
 - i. Fabricator: Fabricator (supplier) of precast concrete Bollards
 - ii. Contractor: The general contractor(s) awarded a highway construction contract, includes responsibility for Bollard installation
 - iii. Engineer: IDOT's designated representative
 - iv. Bollard: Bollard and connection assembly
 - v. Unit: Precast concrete unit: Bollard
 - vi. Architectural Precast Concrete: Refers to precast bollards with a specified standard of uniform appearance, surface details, color and texture.
- c. Performance Requirements:
 - i. Bollards shall be installed per Fabricator's design and instruction, capable of withstanding design loads within limits and under conditions indicated.
 1. The bollards and connections to the bollard shall be designed in accordance to the latest AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries, and Traffic Signals.
 2. Perform comprehensive engineering analysis for the above, including computations, signed and sealed by an Illinois (or equivalent) licensed structural engineer responsible for its preparation.
 3. Refer to Fabricator's Shop Drawings that have been approved by the Engineer.
 - ii. Bollards shall be installed, as shown in the plans. Bollards shall be installed true, plumb and level.
 - iii. Live Load Vibrations: Design precast bollards to absorb without detrimental effect all vibrations imposed by live loads introduced by vehicular traffic.

2. Materials

- a. Grout Materials: Provide grout materials that meet the specifications as noted below:
 - i. Non-metallic, Non-shrink Grout: Premixed, non-metallic, non-corrosive, non-staining grout containing selected silica sands, Portland cement, shrinkage-compensating agents, plasticizing and water-reducing agents, complying with ASTM C1107, of consistency suitable for application
 - ii. Epoxy Grout: The Contractor shall use a sealed glass capsule or a sealed glass adhesive cartridge that has been previously tested and given prior approval by the Department, containing premeasured amounts of the adhesive chemical

- b. Architectural Precast Concrete Materials:
 - i. Portland Cement: ASTM C 150, Type I or Type III, gray, unless otherwise indicated. For surfaces exposed to view in finished cladding, mix gray with white cement, of same type, brand, and mill source.
 - ii. Normal-Weight Aggregates: Except as modified by PCI MNL 117, ASTM C 33, with coarse aggregates complying with Class 5S. Stockpile fine and coarse aggregates for each type of exposed finish from a single source (pit or quarry) for Project. Face-Mixture-Fine Aggregates: Selected, natural or manufactured sand of same material as coarse aggregate, unless otherwise approved by the Architect.
 - iii. Coloring Admixture: ASTM C 979, synthetic or natural mineral-oxide pigments or colored water-reducing admixtures, temperature stable, and non-fading.
 - iv. Water: Potable; free from deleterious material that may affect color stability, setting, or strength of concrete and complying with chemical limits of PCI MNL 117.
 - v. Air-Entraining Admixture: ASTM C 260, certified by manufacturer to be compatible with other required admixtures.
 - vi. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and to not contain calcium chloride, or more than 0.15 percent chloride ions or other salts by weight of admixture.

- c. Reinforcement Steel: All reinforcement steel shall be epoxy coated or galvanized.

- d. Finishes: Panel faces shall be free of joint marks, grain, and other obvious defects. Corners, including false joints shall be uniform, straight, and sharp. Finish exposed-face surfaces of architectural precast concrete units to match approved design reference panel, sample panels and mockups and as follows:

- i. Architectural face mix for color and finish shall be similar to sample design #109 SB-M as published in Architectural Precast Concrete Color and Texture Selection Guide 2nd Edition as published by PCI.
- ii. As-Cast Surface Finish: Provide surfaces free of pockets, sand streaks, and honeycombs.
- iii. Abrasive-Blast Finish: Use abrasive grit, equipment, application techniques, and cleaning procedures to expose aggregate and surrounding matrix surfaces.

3. Submittals

- a. Product Data: For each type of product indicated.
- b. Design Mixtures: For each precast concrete mixture. Include compressive strength and water absorption tests.
- c. Shop Drawings: These drawing shall include the following:
 - i. Detail installation of Bollards including plans, elevations, dimensions, as all necessary information to fully describe the installation
 - ii. Sequence of installation operations
 - iii. Lifting methods and devices
 - iv. Locations and details of anchorage devices to be embedded in other construction
 - v. Indicate locations, extent and treatment of dry joints if two-stage casting is proposed.
 - vi. Provide comprehensive engineering analysis signed and sealed by a structural engineer licensed in the State of Illinois and responsible for their preparation.
- d. Obtain copy of Fabricator's, final, approved Shop Drawings and include with Shop Drawing submittal.
- e. Samples: For each type of finish indicated on exposed surfaces of architectural precast concrete bollards, in sets of 3, illustrating full range of finish, color and texture variations expected; minimum 12 by 12 by 12 inches.
 - i. Include 6 submittals of sample sets (3 samples per set) to finalize and approve finishes, colors and textures in the bid for approval of full range of finish, color and texture.
- f. Qualification Data: For installer and Fabricator.
- g. Material Test Reports: For aggregates.
- h. Material Certificates: For the following items, signed by manufacturers:
 - i. Cementitious materials.
 - ii. Reinforcing materials.
 - iii. Admixtures.
 - iv. Bearing Pads.
- i. Source quality-control test reports.
- j. Field quality control test and special inspection reports.

4. Quality Assurance / Quality Control

- a. The Contractor will be held responsible for any damage to the units during the Contractor handling and installation. The Contractor shall comply with the applicable guidelines of the most recent State of Illinois Department of Transportation, Bureau of Materials and Physical Research, Springfield, POLICY MEMORANDUM: QUALITY CONTROL/QUALITY ASSURANCE PROGRAM FOR PRECAST CONCRET PRODUCTS.
 - i. Cracks or Fractures: These are considered cause for rejection if they pass through the unit. A single end crack that does not extend into the unit is not a cause for rejection. Any crack having a surface width of 0.009" or more and more than 12" in length, regardless of position in the unit, is considered cause of rejection.
 - ii. Chipped or Damaged Ends: This is considered cause for rejection if the damage is 1" or more into an edge and has a length of more than 10 percent of the end circumference or perimeter. Small chips may be properly patched and accepted, subject to approval by the Engineer.
- b. Contractor Qualifications: Fabrication, installation and erection of Architectural Precast Concrete Work must be performed only by a qualified fabricator and Installer. The term qualified means experienced in performing the Work required by this section on projects of comparable scope, size and complexity. The Contractor must be able to demonstrate to the satisfaction of the Architect that it and/or any subcontractors performing such Work have the qualifications, experience and, if applicable, licenses and permits to perform the Work in accordance with the terms and conditions of this Contract. The Contractor must submit evidence of such qualifications, licenses and permits upon request by the Architect.
- c. Additional Installer Qualifications: A precast concrete erector qualified and designated by PCI's Certificate of Compliance to erect Category A (Architectural Systems) for non-load-bearing members.
- d. Additional Fabricator Qualifications: A firm that assumes responsibility for engineering architectural precast concrete units to comply with performance requirements. This responsibility includes preparation of Shop Drawings and comprehensive engineering analysis by a qualified structural engineer licensed in the State of Illinois.
 - i. Participates in PCI's plant certification program and is designated a PCI-certified plant for Group A, Category A1 - Architectural Cladding and Load Bearing Units.
- e. Testing Agency Qualifications: An independent testing agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.
- f. Design Standards: Comply with ACI 318 (ACI 318M) and design recommendations of PCI MNL 120, "PCI Design Handbook - Precast and Pre-stressed Concrete," applicable to types of architectural precast concrete units indicated.

- g. Quality-Control Standard: For manufacturing procedures and testing requirements, quality-control recommendations, and dimensional tolerances for types of units required, comply with PCI MNL 117, "Manual for Quality Control for Plants and Production of Architectural Precast Concrete Products."
- h. Sample Panels: After sample approval and before fabricating architectural precast concrete units, produce a minimum of two sample panels approximately 16 sq. ft. in area for review by the Architect and Owner. Incorporate full-scale details of architectural features, finishes, textures, and transitions in sample panels.
 - i. Locate panels where indicated or, if not indicated, as directed by the Architect.
 - ii. Damage part of an exposed-face surface for each finish, color, and texture, and demonstrate adequacy of repair techniques proposed for repair of surface blemishes.
 - iii. After acceptance of repair technique, maintain one sample panel at manufacturer's plant and one at Project site in an undisturbed condition as a standard for judging the completed Work.
 - iv. Demolish and remove sample panels when directed.
- i. Pre-installation Conference: Conduct conference at Project site. At a minimum, representatives of the General Contractor, precast manufacturer, Architect and Owner shall be present. Representatives of other entities required for proper coordination of installation of precast units shall also attend. Minutes of the conference shall be recorded by the Contractor and distributed to all attendees for review, comment and approval prior to installation of precast units.

5. Delivery, Storage, and Handling

- a. The Contractor shall supply the Engineer with a delivery schedule for each Bollard within 6 weeks of contract award. The Contractor shall supply the delivery schedule to the Fabricator upon approval. It shall be the responsibility of the Contractor to coordinate delivery with the Fabricator.
 - i. Delivery should be coordinated as to minimize handling and on-site storage requirements. If required, storage at the project site shall be provided by the Contractor.
 - ii. Bollards shall be stored in such a manner as to prevent staining, discoloration, or other damage.
 - iii. Obtain Fabricator's recommendations for the handling of Bollards. Lift and support only at designated lifting and supporting points as shown on the Fabricator's approval Shop Drawings.
 - iv. Inspection and Acceptance: The Contractor shall examine and document the condition of the Bollards, in the presence of the Engineer, before accepting delivery. The Contractor shall be held responsible for any repairs or replacements required due to any change in condition caused by site handling, storage and installation.

6. Installation

- a. Examine substrates and conditions for compliance with requirements for installation tolerances, true and level bearing surfaces, and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.
- b. Install precast concrete Bollard Assemblies:
 - i. Establish and verify proper alignment and positioning of anchorage devices to ensure accurate installation of Bollards.
 - ii. Provide temporary supports and bracing as required to maintain position, stability, and alignment as units are being permanently connected.
 - iii. Anchor precast concrete units in position by bolting, welding, grouting, or as otherwise indicated. Remove temporary shims, wedges, and spacers as soon as possible after anchoring and grouting are completed.
 - iv. Protect precast concrete units and adjacent construction from damage by installation operations and provide non-combustible shields as required.
 - v. Grouting Connections and Joints: After precast concrete units have been placed and secured, grout open spaces at connections, and joints as follows:
 1. Joints shall be grouted using non-metallic, non-shrink grout as follows: Provide forms or other approved method to retain grout in place until hard enough to support itself. Pack spaces with stiff grout material, tamping unit voids re completely filled. Place grout to finish smooth, level, and plumb with adjacent concrete surfaces. Keep grouted joints damp for not less than 24 hours after initial set. Exposed grout surfaces shall be finished to match adjacent surface of precast concrete.
 2. Anchor rods shall be grouted using a sealed glass capsule or a sealed glass adhesive cartridge according to the manufacturer's recommendations and procedures.

7. Repairs and Cleaning

- a. Repair as necessary exposed exterior surfaces of Bollards to match color, texture, and uniformity of surrounding material as subject to approval by Engineer.
- b. Cracks shall be repaired according to the provisions of Article 590 of the Standard Specifications with the following exceptions:
 - i. The concrete surface should not be drilled for grout injection.
 - ii. The concrete surface should not be chipped. Loose materials and dirt should be removed before grouting in such a way that will leave the least noticeable repair.

- c. Chipped or damaged ends shall be repaired using an approved commercial patch mix or grout applied as recommended by the manufacturer.
- d. All repairs are subject to approval by the Engineer. Remove and replace damaged Bollards if repairs do not comply with requirements.
- e. Clean exposed surfaced of Bollards after installation to remove weld marks, other marking, dirt, stains, etc.
 - i. Wash and rinse according to Fabricator's written recommendations. Protect other work after staining or damage due to cleaning operations.
 - ii. Do not use cleaning materials or processed that could damage the appearance of exposed finishes.

8. Manufacturers

- a. Fabricators: Subject to compliance with requirements, provide products by one of the following:
 - i. High Concrete Technology, LLC, Paxton, Illinois.
 - ii. JW Peters, Burlington, Wisconsin
 - iii. Lombard Architectural Precast Products Company, Alsip, Illinois
 - iv. Precast Concrete Specialties, Inc., Omro, Wisconsin.

9. Basis of Payment:

This work will be paid for at the contract unit price per each for BOLLARDS which price shall include furnishing all material, hardware, and labor required to complete installation of four (4) Bollards.

FENCE (SPECIAL) and HANDRAIL (SPECIAL)

1. Description

This work shall consist of furnishing and installing FENCE (SPECIAL) and HANDRAIL (SPECIAL). The work includes but is not limited to coordination, submittals, materials, fabrication, finishing, transportation, installation, and all other miscellaneous elements required for complete provision of the railings. Work shall comply with section 509 of the Standard Specifications.

2. General

- a. Performance Requirements
 - i. Provide a comprehensive 10-year warranty on finish system for the fence and the handrail.
- b. Submittals
 - i. Mockup: Submit a mockup consisting of a minimum 2 feet of complete Bridge Fence Railing and of complete Parapet Railing with the complete proposed finish system including galvanizing and finish coats. Submit the mockups for approval by the Engineer.

Resubmit until approval is obtained. Do not fabricate railings until the mockups have been approved.

- ii. Product Data: Submit product data for each type of product indicated:
 1. Steel components: structural steel tubing, plates, splices
 2. Fasteners
 3. Finish Systems – Including factory and field applied systems.
- iii. Material Certifications: Submit material certifications signed by manufacturers certifying that each of the following items complies with requirements:
 1. Steel
 2. Fasteners
 3. Finish Systems
- iv. Shop Drawings: Detail fabrication and installation of fence and handrail, indicated plans, elevations, dimensions, shapes, cross sections and limits of each finish.
 1. Show fence and handrail layouts and indicate post and panel types, sizes, orientations and locations. Indicate critical adjacent rustication and joints.
 2. Indicate welded connections by AWS standard symbols. Detail loose and cast-in hardware, inserts, connections, and joints, including accessories.
 3. Indicate locations and details of anchorage devices to be embedded in other construction.
- v. Design calculations required to satisfy section 2.2(a) & (b) for this special provision.
- vi. Test results, certified by an independent testing laboratory, from test required in section 3.3(e).

3. Materials

a. Finish

- i. All posts, railings, anchor devices, plates, and structural steel tubing shall be hot-dip galvanized after shop fabrication according to AASHTO M111. All bolts, nuts, washers, and anchor rods shall be galvanized according to AASHTO M232. Stainless Steel materials shall not be galvanized. Galvanizing shall be smooth and free of drops, spikes, inclusions, blobs, etc. and otherwise optimized to achieve a smooth finished surface.
- ii. Prior to finish coat, mechanically clean galvanized surfaces to smooth the surface and remove large deposits from the galvanizing process. Do not damage or remove the galvanizing material as to compromise the corrosion resistance of the system. Alternately, provide other approved method(s) to ensure smooth final finished surface.
- iii. Prior to finish coat, mechanically clean and roughen stainless steel elements with sandblast for optimal coating adhesion.

- iv. Finish all exposed surfaces of the fence with 2 coats of an electrostatic polyester, TGIC powder coating, colored black (Munsell Number N1), with high UV stability, impact, corrosion, heat and humidity resistance. The combined total thickness of the two finish coats shall be a minimum of 6 mils.
- v. Finish system shall meet or exceed the following:
 1. ASTM B117 Salt Spray (fog) test – 1,000 hrs. The coated steel shall exhibit no visible evidence of rust.
 2. ASTM D3363 Hardness, ASTM D2793 Direct Impact, ASTM D822 Weatherability.
 3. ASTM D3363 Mechanical Adhesion Test
- vi. The exposed heads and nuts of all hot-dip galvanized anchor rods shall be spot painted with an approved paint system to match finish color. The surface to be painted shall first be cleaned with an approved solvent.
- vii. Any damage to the coatings will be repaired promptly in accordance with the manufacturer's recommendations or replaced with undamaged components. Repairs shall be subject to approval by the Engineer. Finish all damaged, cut or other surfaces not powder coated, subject to approval by the Engineer, with zinc-rich primer (if not already galvanized) & high performance finish coat, compatible with factory coating system, to match finish color.

4. Tolerance

Openings between the railings and adjacent surfaces shall not exceed 3".

5. Method of Measurement

Fence (Special) will be measured for payment in linear feet along the top of the fence from center to center of the end post, excluding the length of any gaps. Handrail (Special) will be measured for payment in linear feet along the top rail, including the gaps between individual segments.

6. Basis of Payment

This item shall be paid for at the contract unit price per foot for FENCE (SPECIAL) and HANDRAIL (SPECIAL), which price shall include all material, hardware, installation, transportation, cleaning, finishing and all railing extensions at joints, light posts and bollards as specified herein.

SANITARY SEWER REMOVAL AND WATER MAIN REMOVAL

This work shall consist of the removal of existing sanitary sewer and existing water main at locations noted in the plans.

Excavation of trenches necessary to remove the existing sanitary sewer and existing water main shall be performed according to the applicable requirements of Article 550.04 of the Standard Specifications. Backfill of trenches shall be performed according to applicable requirements of Article 550.07. Sewer and water main shall be disposed of in accordance with Article 202.03.

This work will be measured for payment in place in feet. This work will be paid for at the contract unit price per foot for SANITARY SEWER REMOVAL, of the diameter specified and WATER MAIN REMOVAL. Backfilling of the trench shall be included in the cost per foot for SANITARY SEWER REMOVAL, of the diameter specified and WATER MAIN REMOVAL.

FURNISHED EXCAVATION

This work shall consist of the removal of excavating soil within the project limits as noted on the plans. This work shall be done in general accordance with Article 204 of the Standard Specifications.

Add the following to the requirements of Article 204.04:

Any hedges that are within the limits of the soil to be excavated shall be removed. All hedges/shrubs to be removed and all roots within the slope limits of embankments two feet or more in depth shall be cut off at the ground level. All other hedges/shrubs and roots within the right-of-way shall be removed to a depth of not less than 12 inches below the elevation of the subgrade, the finished surface, or the ground line.

This work will not be paid for separately, but shall be included in the cost of FURNISHED EXCAVATION.

PROTECTION OF FRAMES AND LIDS OF UTILITY STRUCTURES

Effective March 6, 1991

Revised January 1, 2007

This work shall consist of protecting frames and lids of utility structures in the pavement after the adjacent hot-mix asphalt surface has been removed to the required depth by cold milling or by hand methods.

After the area has been swept clean and before the lane is opened to traffic, a hot bituminous mixture shall be placed around the casting, flush with its surface and decreasing to a featheredge in a distance of 4 feet around the entire surface of the casting. Cold mix or milled material will not be permitted. This mixture shall remain in place until the day surfacing operations are undertaken within the immediate area of the structure. Prior to placing the surface course, the temporary hot-mix asphalt mixture

shall be removed and disposed of by the Contractor as specified in Article 202.03 of the Standard Specifications.

The temporary tapers and their removal shall be considered included in the contract unit price per square yard for HOT-MIX ASPHALT SURFACE REMOVAL, 2 ½", and no additional compensation will be allowed.

REMOVING INLETS/MANHOLES

This work shall consist of removing existing manholes and inlets.

This work will be done in general conformance with Article 605 of the Standard Specifications. The Contractor shall salvage the existing frames and grates and deliver them to the City of Galesburg Street Department.

This work will be paid for at the contract unit price per each for REMOVING INLETS and REMOVING MANHOLES.

PORTLAND CEMENT CONCRETE SIDEWALK

This work shall consist of constructing portland cement concrete sidewalk and sidewalk accessibility ramps on a prepared subgrade.

All sidewalk will be constructed with a maximum cross slope of 2%. The subgrade shall be tamped and rolled until thoroughly compacted and to the correct grade. Additional earth or aggregate required to bring the subgrade up to the correct elevation shall be included in the pay item PORTLAND CEMENT CONCRETE SIDEWALK. For sidewalk adjacent to the back of curb, Contractor shall provide expansion material between the concrete. The joint between the back of curb and the sidewalk shall be filled with ¾ inch Preformed Expansion Joint Filler. At locations of curb ramps where vertical side walls are specified and indicated in the plan details, the construction of the side walls is included in the cost of the sidewalk pay item.

This work will be paid for at the contract unit price per square foot for PORTLAND CEMENT CONCRETE SIDEWALK.

Portions of the Cedar Creek concrete lined channel will be required to be removed for the installation of storm sewer pipe at various locations that will outlet to the creek. After installation of the pipe, the concrete shall be replaced at a depth that matches the existing channel. From record drawings, this depth is estimated to be six (6) inches. This concrete replacement will be measured and paid for at the contract unit price per square foot for PORTLAND CEMENT CONCRETE SIDEWALK, 6". The unit cost at this location will include the cost of removing the existing concrete.

PORTLAND CEMENT CONCRETE DRIVEWAY

This work shall consist of constructing portland cement concrete driveway on a prepared subgrade.

The subgrade shall be tamped and rolled until thoroughly compacted and to the correct grade. Four (4) inches of AGGREGATE SUBGRADE IMPROVEMENT shall be placed under the driveway and compacted. Additional earth or aggregate required to bring the subgrade up to the correct elevation shall be included in the pay item PORTLAND CEMENT CONCRETE DRIVEWAY. For driveway adjacent to the back of curb, Contractor shall provide expansion material between the concrete. The joint between the back of curb and the driveway shall be filled with ¾ inch Preformed Expansion Joint Filler. Any Earth Excavation required to bring the driveway to plan grades shall be included in the cost of the aggregate base (AGGREGATE SUBGRADE IMPROVEMENT).

This work will be paid for at the contract unit price per square foot for PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, of the thickness specified.

STORM SEWER

The storm sewer shall be constructed to the lines and grades shown in the plans and according to applicable portions of Section 550 of the Standard Specifications and as specified herein.

All storm sewer used on the project, with the exception of STORM SEWER (WATERMAIN REQUIREMENT) and STORM SEWER, CLASS B, TYPE 1, 6" shall be a Reinforced Concrete Culvert Pipe (RCCP) in accordance with Article 1042 of the Standard Specifications.

All six inch storm sewer to be installed as part of the proposed improvements shall be PVC SDR 35 pipe meeting ASTM D-3034.

Basis of Payment: This work shall be paid for at the contract unit price per foot for STORM SEWER, CLASS A, of the type and size specified and per foot for STORM SEWER, CLASS B, TYPE 1, 6".

ENGINEER'S FIELD OFFICE, TYPE A (SPECIAL)

This item shall consist of furnishing and maintaining an Engineer's Field Office as specified in Article 670.01 of the Standard Specifications and herein.

The field office shall have a ceiling height of not less than seven (7) feet and a floor space of not less than 2000 square feet. The office shall be provided with sufficient heat, natural or artificial light and air conditioning. Doors and windows shall be equipped with locks approved by the Engineer.

Adequate all weather parking space shall be available to accommodate a minimum of twenty (20) vehicles. Sanitary facilities shall include hot and cold potable running water, lavatory and toilet as an integral part of the office. Solid waste disposal consisting of ten waste baskets and an outside trash container of sufficient size to accommodate a weekly-provided pick-up service. Weekly garbage pickup service shall be provided.

The Contractor shall provide the following equipment and furniture meeting the approval of the Engineer.

- Eight desks with minimum working surface 6 foot by 4 foot each.
- Two desks with minimum working surface 3.5 foot by 2.5 foot with height adjustment of 23 inches to 30 inches for computer use.
- Ten non-folding office chairs on wheels with upholstered seats, arm rests and backs.
- Three 4-post drafting tables with minimum top size of 37.5 inches by 48 inches. The top shall be basswood or equivalent and capable of being tilted through an angle of 50 degrees. Three adjustable height drafting stools with upholstered seats and backs shall be provided.
- Three freestanding file cabinets with locks, legal size, four drawers, with an Underwriter's Laboratories insulated file device 350 degrees one hour rating.
- Fifteen folding chairs or stackable chairs.
- One equipment cabinet with lock of minimum dimension of 44 inches by 24 inches by 30 inches deep. The walls shall be of steel with a 2 mm minimum thickness with concealed hinges and enclosed lock construction in such a manner as to prevent entry by force. The cabinet assembly shall be permanently attached to a structural element of the office in a manner to prevent theft of the entire cabinet.
- One office-style refrigerator with a minimum size of 16 cubic feet with a freezer unit.
- Four electric desk type tape printing calculators and four pocket scientific notation calculators with a 1000 hour battery life.
- Five telephones, including at least two cordless phones, and three telephone answering machines (or voice mail feature on 3 phone lines). One telephone shall have speaker phone capability. Six telephone lines shall be provided including one for the fax machine and two modems. Additional features on the three voice lines shall include caller ID and 3-way calling.
- One photocopy machine (including maintenance and operating supplies) capable of copying field books. Supply paper and trays for 8.5 inch by 11

inch, 8.5 inch by 14 inch, and 11 inch by 17 inch sizes. The copier shall be completed with automatic feed and sorter.

- One telecommunication fax machine, including maintenance and operating supplies. The fax machine shall use plain paper. One table for the fax machine.
- One electric water cooler dispenser.
- One first-aid cabinet fully equipped.
- Two dry-erase marker boards minimum size 28 inch by 40 inch with markers and erasers.
- Four bulletin boards minimum size 28 inch by 40 inch.
- One microwave oven
- One conference table or group of tables which can be arranged together to create a table that will seat at least 15 people.
- One storage cabinet minimum size 18 inches wide by 12 inches by 60 inches with four adjustable shelves.
- Bookshelves – A minimum of 12 inches deep and a minimum total available length of 100 foot.
- DSL or internet connection.

The office space shall be maintained and kept in a clean condition, and free of insects and rodents, at all times. The Contractor shall provide a janitorial and/or cleaning service a minimum of once a week. Windows should be cleaned as directed by the Engineer. Maintenance shall include, but not be limited to, paper towels, soap, toilet paper, and other necessary supplies. No additional compensation will be allowed for providing this service, but it shall be included in the item ENGINEER'S FIELD OFFICE, TYPE A (SPECIAL).

An electronic security system that will respond to any breach of exterior doors and windows with an on-site alarm shall be provided. The Contractor shall be responsible for security of the field office building and is liable for damages incurred as a result of vandalism, theft, and other criminal activities. Broken windows shall be replaced at no additional cost.

The Contractor will be responsible for systems maintenance and repairs, which shall include the heating, cooling, sanitary, and water distribution systems and light bulb replacements. Fire extinguishers meeting the local municipalities' requirements shall be provided. Window shades or blinds shall be provided for all windows, as directed by the Engineer. The Contractor shall be responsible for snow removal from parking areas and sidewalks surrounding the building. The Contractor shall pay the cost of any building or equipment inspections by the local municipality. The Contractor shall also pay all costs to comply with the maintenance type inspection findings. The Contractor shall provide one subscription to high speed or broad band internet service. The Engineer will install this service on his (or his consultant's) desktop computer for use in the field office.

Basis of Payment. The building, fully equipped as specified herein and accepted by the Engineer, will be paid for on a monthly basis until the building is released by the Engineer. The Contractor will be paid the contract bid price each month, provided the building is maintained, equipped, and utilities furnished. The building, fully equipped and maintained as specified herein, will be paid for at the contract unit price per calendar month or fraction thereof for ENGINEER'S FIELD OFFICE, TYPE A (SPECIAL). This price shall include all utility costs and shall reflect the salvage value of the building, equipment and furniture which becomes the property of the Contractor after release by the Engineer, except that the Department will pay that portion of each monthly long distance telephone bill in excess of \$50.

The Contractor shall be responsible for the repair and maintenance of the field office. No extra payment will be made for systems maintenance, repairs or for damages incurred as a result of vandalism, theft or other criminal activities.

SANITARY SEWER TO BE ABANDONED

General: This section covers CLSM, including pumping and placing. At locations shown in the Plans, CLSM shall be placed as a backfill inside of abandoned sewers.

Mix Design: This mixture design for CLSM shall yield approximately one cu. yd.

Portland Cement	75 lbs.
Fly Ash	650 lbs.
Fine Aggregate	2,350 lbs.
Water	50 gal./yd.

CLSM shall be placed to completely fill all voids and crevices within the abandoned sewer.

CLSM shall be placed by low pressure pumping.

CLSM placed by the low pressure pumping method shall have a maximum length of flow limited only by the safe allowable load that may be applied to the abandoned pipe. Additional access holes, where required as shown on the Plans or as directed by the Engineer, shall be opened to assure the complete filling of the sewer.

CLSM shall be placed from the upstream end of the sewer, when practical.

The Contractor is responsible for creating temporary bulkheads at the locations between where the pipe is to be filled and where the sewer is to be removed by others.

Removal of manhole castings shall be included in this cost for filling existing sewers.

In areas of abandonment of sanitary sewers and manholes, if the Contractor elects to abandon a manhole and not remove it, the manhole shall be filled with CLSM as noted above.

This work shall be paid for at the contract unit price per foot for SANITARY SEWER TO BE ABANDONED for the diameter of pipe specified. This pay item shall include backfilling/abandoning of sewer manholes as noted above.

ABANDONMENT OF EXISTING WATER MAINS

This item of work consists of abandoning the existing 16" diameter water mains in place. Where the existing water main is not at a location that is in conflict with the MSE wall's reinforced soil mass, the contractor may abandon the water main in place. The water mains to be abandoned shall be plugged to prevent the migration of soil into the main.

The contractor shall squarely cut the end of the water main to be abandoned. A 16" diameter mechanical joint cap shall be installed on the saw cut end. Three cubic feet of Class SI concrete shall be poured around the cap. If the abandoned main is to be braced against, bracing shall be installed prior to adding the concrete.

This work shall be paid for at the lump sum price of ABANDONMENT OF EXISTING WATER MAINS.

CONCRETE SUPERSTRUCTURE AGGREGATE OPTIMIZATION

Effective: August 4, 2006

Revised August 3, 2012

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

For the bridge superstructure and bridge approach slab, the Class BS 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 ½ 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 Technical Course – Manual of Instructions for Design of Concrete Mixtures".

Concrete Superstructures Aggregate Optimization will not be paid for separately, but shall be considered as included in the unit cost of CONCRETE SUPERSTRUCTURES.

CONCRETE PAVEMENT AGGREGATE OPTIMIZATION

For the construction of concrete pavement placed adjacent to concrete superstructure, the Class PV concrete shall contain two or more coarse aggregate sizes blended in accordance with the first paragraph of Article 1004.02(d), or as otherwise approved by the Engineer. The combined sizes shall consist of CA-7 or CA-11 blended with CA-13, CA-14, or CA-16. The blended coarse aggregate gradation shall have a minimum of 45 percent and a maximum of 60 percent passing the ½ inch sieve.

Concrete Pavement Aggregate Optimization will not be paid for separately, but shall be considered as included in the unit cost of PORTLAND CEMENT CONCRETE PAVEMENT.

BUILDING DEMOLITION

The demolition of three (3) buildings will be required as part of this construction contract. The specifications for the tasks associated with this work, including building demolition, asbestos removal, and collection/disposal of waste materials, are noted in the stand alone Project Specifications for Seminary Street Demolition. These specifications are located in Attachment A.

This work will be paid for at the contract unit cost per Lump Sum for BUILDING REMOVAL NO. 1, BUILDING REMOVAL NO. 2, and BUILDING REMOVAL NO. 3, REMOVAL AND DISPOSAL OF FRIABLE ASBESTOS BUILDING NO. 1 and REMOVAL AND DISPOSAL OF FRIABLE ASBESTOS BUILDING NO. 3.

RAILROAD FLAGGER

This work will consist of providing a certified flagger for construction activities that are adjacent to BNSF Railway property.

The Contractor must give the BNSF Roadmaster a minimum of thirty (30) days advance notice when flagging services will be required. A railway flagger will be required when the Contractor's work activities are located over, under and/or within twenty-five (25) feet measured horizontally from centerline of the nearest track and when cranes or similar equipment positioned beyond 25-feet from the track centerline could foul the track in the event of tip over or other catastrophic occurrence.

All certified flagger work required shall be paid for according to Section 109.04 of the Standard Specifications for Road and Bridge Construction.

REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL

This work will consist of over-excavating soil that is determined unsuitable for the proposal construction and providing porous granular embankment backfill for the over-excavated areas.

For areas where it is determined that the soil is unsuitable, the Contractor shall over-excavated the soil to a suitable depth in general accordance with Article 202 of the Standard Specifications. Upon excavating to suitable soil, the Contractor shall place a Geotechnical Fabric suitable for ground stabilization and backfill with porous granular embankment. The fabric shall be in conformance to Article 210 of the Standard Specifications. The porous granular embankment shall be in conformance with Article 207 of the Standard Specifications.

A quantity for each item noted above is included in the contract documents and will be used to establish a unit price. This work will be paid for at the contract unit price per cubic yard for REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL, per ton for POROUS GRANULAR EMBANKMENT, and per square yard for GEOTECHNICAL FABRIC FOR GROUND STABILIZATION.

SUB-CONTRACTOR APPROVAL FORMS

The Contractor will be required to submit Forms BC 260A and 261 for each subcontractor to the IDOT District office for approval by the District in order to verify the Prime Contractor is performing greater than 50% of the work on the contract. Approval of the IDOT Central Office will not be required.

RAILROAD PROTECTIVE LIABILITY INSURANCE

Railroad Protective Liability Insurance is only required to be approved by BNSF and the City of Galesburg. IDOT approval is not required.

SLOPE WALL, SPECIAL

Description. This work shall consist of the removal and disposal of the existing concrete paved channel at locations as shown on the plans, the placement and preparation of the surface upon which the slope wall is to be constructed and the placement of the new slope wall at the locations shown on the plans and as directed by the Engineer. Existing reinforcement extending into the proposed slope wall shall be cleaned, straightened and reused into the proposed slope wall and lapped with new welded wire fabric.

Construction Requirements. This work shall be done as specified in the applicable portions of Section 511 and as detailed in the contract plans. Prior to placing the slope wall the slope shall be compacted to a uniform density as directed by the Engineer. The earth bed shall be shaped to conform to the cross section details and slope transitions as shown on the plans. The earth bed shall consist of materials excavated at the site and as approved by the Engineer and any surplus material shall be disposed of by the Contractor as provided in Section 502 of the Standard Specifications.

Basis of Payment. This work shall be paid for at the contract unit price per sq. yd. measured in place for SLOPE WALL, SPECIAL, of the thickness specified which price shall include the removal and disposal of the existing concrete paved channel, excavation, cleaning and straightening of existing reinforcement to be reused, furnishing, placement and preparation of the proposed earth bed, disposal of surplus material and the furnishing and placing of all materials as specified in Section 511.

ORNAMENTAL FENCE

Description. This work includes: furnishing and installing ornamental metal fencing as specified in the plans; also included is all excavating/coring, preparation, cleaning and painting of all metal work, backfilling and all related work, complete as shown on drawings and as specified.

General:

Shop Drawings. Show the location of fencing and posts, and details of post installation, expansion joints, and attachment details.

Quality Assurance. Contractor must have completed at least five fence projects with similar material and scope to that indicated for this Project with a successful construction record of in-service performance.

Project Conditions. Field Measurements: Verify layout information for fencing shown on the Drawings in relation to the property survey and structures. Verify dimensions by field measurements.

Products. Ornamental fence to be **Alumi-Guard Panel Ascot/Canterbury 3-CH Industrial** or approved equal. Adornments to the fence shall include standard Ball Post Caps at each post and standard "Ring" adornment between the top two channels of the fencing.

Miscellaneous Items. This specification is intended to include complete fence materials, and the Contractor must furnish all necessary bolts, nuts, latches, fittings, and all other connections necessary to securely and rigidly install the fence. Color must be black. All materials to be the same color; black.

Welding and cutting must be in accordance with the Standard Code for Arc and Gas Welding of the American Welding Society. Welding must be done in a manner that will prevent permanent buckling in the finished work. Certified welders using E 70xx electrodes must do the welding. All welds and spatter must be ground smooth prior to coating with galvanizing primer and finished with epoxy enamel.

In locations where proposed fence is located on sound concrete, contractor must drill epoxy anchors in order to mount the fence post. This work will be paid for at the contract price per foot ORNAMENTAL FENCE which price will include all materials, equipment and labor necessary to complete this work.

Finish:

Surface Preparation.

1. All surfaces of the fence system must be sandblasted to prepare for the electrodeposition coating and powder coating process. Blasting must take place no more than 8 hours prior to the coating process. All parts must then be cleaned in a heated two-stage process including spray washing and cleaning all areas utilizing a total immersion cleaning process. Both stages must use a heated alkaline cleaner to remove all grease, dirt or other contaminants.
2. Rinsing must be performed by totally immersing parts in a continuously overflowing rinse tank and then totally immersed in a continuously overflowing conditioner to prepare surface for phosphating.

Powder Coat Specifications.

1. Color; black
2. **Armor Guard** powder coating and related processes or approved equal with 30 year warranty.

Execution:

Submittals. The following items must be submitted to the Commissioner for approved before production can begin:

1. Complete, signed, and sealed manufacturer's shop drawings.
2. Specifications and color sample for all coatings, epoxy sealers and grouts.

Cleaning. Clean connections and abraded areas and apply two (2) coats of repair paint compatible with finish preparation utilized. Apply primer and finish paint according to manufacturer's directions. Match original color.

Method of Measurement. ORNAMENTAL FENCE will be measured for payment in place per foot.

Basis of Payment. This work will be paid for at the contract unit price per foot ORNAMENTAL FENCE, of the type and size specified which price will include all materials, equipment and labor necessary to complete the work.

SIDEWALK REMOVAL

This work shall consist of the complete removal of existing sidewalk at locations noted on the plan and in accordance to the applicable portions of Section 440 of the Standard Specifications and as specified herein.

A curb wall approximately 6" to 8" in height exists at two locations within the proposed improvements.

- 287 Kellogg Street: Back of the sidewalk along Kellogg Street adjacent to the east side of the residence (Station 111+72, 45.6' Left to Station 112+43, 66.6' Left).
- 459 Seminary Street to 487 Seminary Street: Back of the sidewalk along Seminary Street adjacent to the west side of residences (Station 123+34, 33.7' Right to Station 124+85, 33' Right).

The removal of the curb wall is included as part of the required sidewalk removal.

The removal of the curb wall shall not be paid for separately but shall be included at the contract unit price per square foot for SIDEWALK REMOVAL.

CONCRETE MEDIAN, TYPE SB (SPECIAL)

This work shall consist of constructing concrete median at locations noted on the plans and in accordance to the applicable portions of Section 606 of the Standard Specifications and as specified herein.

The configuration and pay limits of the median are noted in the plan detail. The aggregate subgrade improvement shown under the concrete median will be measured and paid for separately.

Basis of Payment: This work will be paid for at the contract unit price per square foot for CONCRETE MEDIAN, TYPE SB (SPECIAL).

CONCRETE STEPS AND STAIR SIDE RAILING

This work shall consist of construction of concrete steps and railing at locations noted on the plans.

The existing sidewalk shall be saw cut at the limits of the concrete steps or sidewalk to be removed. All debris resulting from this operation shall be removed from the project site. Preformed Expansion Joint Filler will be placed at the saw cut location between the existing sidewalk and the proposed concrete steps or sidewalk. The concrete steps shall be constructed in accordance with the details noted on the plans. All reinforcement shall be epoxy coated and shall be included in the cost of the Concrete Steps.

Also included in the construction of the concrete steps is the installation of handrail. The handrail shall be installed in accordance with the details noted in the plans.

This work will be paid for at the contract unit price per square foot for CONCRETE STEPS and at the contract unit price per foot for STAIR SIDE RAILING. The price will include all materials, equipment and labor necessary to complete the work.

COMBINATION CONCRETE CURB AND SIDEWALK 4 INCH (SPECIAL)

This work shall be in accordance with the applicable portions of Section 424 of the Standard Specifications and as detailed in the plans except as modified herein.

The curb and sidewalk shall be reinforced with 6" x 6" – 10/10, 21 pounds per 100 square feet steel wire mesh as indicated in the plans. Upon approval of the engineer, the mesh may be omitted if the contractor uses Class PV concrete containing the required amount of "fibermesh" additive.

Method of Measurement: The method of measurement shall be the total area of the sidewalk in square feet plus the area of exposed face of the curb in square feet.

Basis of Payment: This work shall be paid for at the contract unit price per square foot for COMBINATION CONCRETE CURB AND SIDEWALK 4 INCH (SPECIAL) which shall be payment in full for all materials (including the wire or fiber mesh), labor, tools and equipment necessary to complete this work.

STABILIZED CONSTRUCTION ENTRANCE

This work shall consist of the installation of a stabilized construction entrance at various locations within the project limits as noted on the plans. The entrance shall be constructed in accordance with applicable specifications and details in the Illinois Urban Manual.

Aggregate used for the stabilized construction entrance shall meet one of the following IDOT coarse aggregate gradations, CA-1, CA-2, CA-3 or CA-4. The aggregate shall be placed according to the construction specification for Rockfill in the Illinois Urban

placed according to the construction specification for Rockfill in the Illinois Urban Manual. Filter fabric shall meet the requirements of the Geotextile material specification in the Illinois Urban Manual.

Basis of Payment: This work shall be paid for at the contract unit price per square yard for STABILIZED CONSTRUCTION ENTRANCE which shall be payment in full for all materials, labor, tools and equipment necessary to complete this work.

AGGREGATE FOR TEMPORARY ACCESS

This work shall consist of furnishing and placing aggregate on a prepared subgrade for the purpose of providing temporary access to entrances along the project limits. This work shall be performed in accordance with applicable sections of Article 402 of the Standard Specifications.

A temporary access road is specified to be placed from North Street (near Seminary Street) to Kellogg Street to provide access to the driveways for 287 E. Water Street, 234/236 N. Kellogg Street, and 246 N. Kellogg Street. The access road will remain in place until the Water Street/Kellogg Street intersection and the entrances to the above noted properties are completed. After completion of the permanent entrances, the aggregate used for the temporary access road shall be removed and stockpiled for future use.

Basis of Payment: This work shall be paid for at the contract unit price per ton for AGGREGATE FOR TEMPORARY ACCESS.

CONCRETE GUTTER FLAG

This work shall be in accordance with the applicable portions of Section 606 of the Standard Specifications and as detailed in the plans.

Concrete Gutter Flag will be constructed at locations as noted in the plans and in conformance with the detail noted in the plans. Concrete Gutter Flag will be measured for payment in feet along the face of the curb.

Basis of Payment: This work will be paid for at the contract unit price per foot for CONCRETE GUTTER FLAG.

TRENCH DRAIN

This work will consist of installing a trench drain at the locations specified in the plans. The trench drain shall be Neenah R-4996-C, Type Q Grate, Bottom Outlet. This work will be paid for at the contract unit price per each for TRENCH DRAIN.

ELECTRICAL SPECIAL PROVISIONS

LUMINAIRE, LED, ORNAMENTAL, 53 WATT

Luminaire shall meet the requirements of Section 821 of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2012, with the following modifications:

Luminaire light distribution shall be Type IIIIR full cutoff. Light bars/driver shall be LED's and driver system having 3,830 lumens, minimum of 72.3 lumens/watt. LED driver shall be 350ma, minimum 0.9 power factor, and 20 percent THD. System shall have an average rated life of 70,000 hours. Lamps shall have color of 4500 Deg. Kelvin and minimum CRI of 70. LED driver voltage shall be multi-tap set for 240 VAC, 60 Hz. Luminaire shall have a cast aluminum housing with tool less access to driver and LED compartment, tempered flat glass lens, IP65 weatherproof rating, and stainless steel hardware, with black powder coat finish. Luminaire shall be a Sternberg 1-1521RLED/FG/HS-B/3ARC45T3R-MDL03/BK full-cutoff Type IIIIR optics model or of equal specifications with prior approval of the City Engineer.

The luminaire shall be installed on the 8 foot mast arm of the pole with hang straight ball fixture coupling.

The luminaire shall be fused separately at the base of the pole.

The fuse holders for the light fixtures shall be double pole, breakaway, waterproof with insulating boots. The fuse holders shall be a Bussmann Tron type HEX Series, of equal specifications with prior approval of the City Engineer, which has a connecting tab to prevent accidental switching of terminals upon connection.

The wiring of the luminaire shall be as follows, starting from the line side: any splices for other luminaires in the circuit; fuseholder; surge protector.

The surge protector shall conform to Article 1065.02 of the Standard Specifications.

Basis of Payment. This work shall be paid for at the contract unit price each for LUMINAIRE, LED, ORNAMENTAL, 53WATT of the type indicated, which shall be payment in full for the luminaire complete. The luminaire complete includes branch circuit / extension wire as applicable, lamp, fuseholders, mounting hardware, fusing, and surge protectors.

LUMINAIRE, LED, ORNAMENTAL, 96 WATT

Luminaire shall meet the requirements of Section 821 of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2012, with the following modifications:

Luminaire light distribution shall be Type IIIR full cutoff. Light bars/driver shall be LED's and driver system having 7,700 lumens, minimum of 80.2 lumens/watt. LED driver shall be 350ma, minimum 0.9 power factor, and 20 percent THD. System shall have an average rated life of 70,000 hours. Lamps shall have color of 4500 Deg. Kelvin and minimum CRI of 70. LED driver voltage shall be multi-tap set for 240 VAC, 60 Hz. Luminaire shall have a cast aluminum housing with tool less access to driver and LED compartment, tempered flat glass lens, IP65 weatherproof rating, and stainless steel hardware, with black powder coat finish. Luminaire shall be a Sternberg 1-1521RLED/FG/HS-B/6ARC45T3R-MDL03/BK full-cutoff Type IIIR optics model or of equal specifications with prior approval of the City Engineer.

The luminaire shall be installed on the 8 foot mast arm of the pole with hang straight ball fixture coupling.

The luminaire shall be fused separately at the base of the pole.

The fuse holders for the light fixtures shall be double pole, breakaway, waterproof with insulating boots. The fuse holders shall be a Bussmann Tron type HEX Series, of equal specifications with prior approval of the City Engineer, which has a connecting tab to prevent accidental switching of terminals upon connection.

The wiring of the luminaire shall be as follows, starting from the line side: any splices for other luminaires in the circuit; fuseholder; surge protector.

The surge protector shall conform to Article 1065.02 of the Standard Specifications.

Basis of Payment. This work shall be paid for at the contract unit price each for LUMINAIRE, LED, ORNAMENTAL, 96 WATT of the type indicated, which shall be payment in full for the luminaire complete. The luminaire complete includes branch circuit / extension wire as applicable, lamp, fuseholders, mounting hardware, fusing, and surge protectors.

LIGHT POLE ORNAMENTAL, ALUMINUM, 33 FT. M.H., 8 FT MAST ARM

Light pole shall meet the requirements of Section 830 of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2012, with the following modifications:

The pole shall be an aluminum pole according to Article 1069.02 with a nominal 33 foot height designed to accommodate one luminaire, and achieve a 33 foot luminaire mounting height above pavement with mast arm for MSE wall and bridge foundations. The luminaire shall be mounted to the pole with an 8 foot one piece decorative aluminum mast arm. The pole shall be a one piece tapered round shaft of aluminum and welded to a flat aluminum anchor base. The pole shall have a minimum 0.250" wall thickness. A flush sided cast aluminum ball type pole top cap shall be provided. The pole shall include a 4" x 8" handhole with ground lug (1/2"-13) and gasketed cover plate secured with stainless steel screws. The pole base shall have an 18-inch dia. one piece cast aluminum slip over base cover. Pole shall be Sternberg 1-CAS8/2433ARTS/BCC4/1-GFI-IUC/1-BDBA/BK or of equal specifications with prior approval of the City Engineer.

The base plate shall be arranged to accept four (4) one-inch diameter anchor bolts on a 11 1/2" bolt circle. Bridge mount poles shall include a 1/2" thick vibration isolation mounting pad and washers per Article 1069.07, and a pole vibration damper, and an extension to the pole base cover.

The pole shall include an extruded arm plate integrally welded to the top and shall be sized to accept an 8 foot luminaire mast arm.

The luminaire mast arm shall be an 8 foot upsweep decorative scroll, aluminum arm assembly and conform to the requirements of 6063-T4 alloy and aged to T6 temper. The arm shall fit securely onto the pole at 90 degrees and shall be secured by four (4) 3/8-inch minimum stainless steel bolts, nuts, and flat washers. Arm shall be Sternberg #CAS8 Series, powder coat Black or of equal specifications with prior approval of the City Engineer.

The pole and arm shall be able to withstand AASHTO 2009 requirements for 90 mile per hour wind load with a 30 percent gust factor.

Banner Arm shall be an 36" bolt on banner arm with end caps, model DBA as manufactured by Sternberg, powder coat Black or of equal specifications with prior approval of the City Engineer. Banner arm to be mounted to road side of pole.

Weatherproof Receptacle shall be a single duplex receptacle with small in-use wet location cover, 20A, 120V, NEMA 5-20R, weather resistant GFCI type, model GFI as manufactured by Sternberg, powder coat Black or of equal specifications with prior approval of the City Engineer.

The festoon receptacle shall be fused separately at the base of the pole.

The light pole shall be finished with a UV resistant coating of paint. Surface preparation shall be a chemical treatment process. The finish shall be oven baked. The color shall be powder coat Black.

Warranty: All materials supplied shall be warranted by the manufacturer for one (1) year after delivery against faulty materials and workmanship. The paint finish on pole and accessories shall be warranted by the manufacturer for five (5) years after delivery against faulty materials and workmanship.

Basis of Payment. This work will be paid for at the contract unit price each for LIGHT POLE ORNAMENTAL, ALUMINUM, 33 FT. M.H., 8 FT. MAST ARM.

LIGHT POLE ORNAMENTAL, ALUMINUM, 35 FT. M.H., 8 FT MAST ARM

Light pole shall meet the requirements of Section 830 of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2012, with the following modifications:

The pole shall be an aluminum pole according to Article 1069.02 with a nominal 35 foot height designed to accommodate one luminaire, and achieve a 33 foot luminaire mounting height above pavement with mast arm for at grade foundations. The luminaire shall be mounted to the pole with a 8 foot one piece decorative aluminum mast arm. The pole shall be a one piece tapered round shaft of aluminum and welded to a flat aluminum anchor base. The pole shall have a minimum 0.250" wall thickness. A flush sided cast aluminum ball type pole top cap shall be provided. The pole shall include a 4" x 8" handhole with ground lug (1/2"-13) and gasketed cover plate secured with stainless steel screws. The pole base shall have an 20-inch dia. one piece cast aluminum slip over base cover, with a 6-inch base extension. Pole shall be Sternberg 1-CAS8/3035ARTS/BCC4/1-GFI-IUC/1-BDBA/BK or of equal specifications with prior approval of the City Engineer.

The base plate shall be arranged to accept four (4) one-inch diameter anchor bolts on a 15" bolt circle.

The pole shall include an extruded arm plate integrally welded to the top and shall be sized to accept an 8 foot luminaire mast arm.

The luminaire mast arm shall be an 8 foot upsweep decorative scroll, aluminum arm assembly and conform to the requirements of 6063-T4 alloy and aged to T6 temper. The arm shall fit securely onto the pole at 90 degrees and shall be secured by four (4) 3/8-inch minimum stainless steel bolts, nuts, and flat washers. Arm shall be Sternberg #CAS8 Series, powder coat Black or of equal specifications with prior approval of the City Engineer.

The pole and arm shall be able to withstand AASHTO 2009 requirements for 90 mile per hour wind load with a 30 percent gust factor.

Banner Arm shall be an 36" bolt on banner arm with end caps, model DBA as manufactured by Sternberg, powder coat Black or of equal specifications with prior approval of the City Engineer. Banner arm to be mounted to road side of pole.

Weatherproof Receptacle shall be a single duplex receptacle with small in-use wet location cover, 20A, 120V, NEMA 5-20R, weather resistant GFCI type, model GFI as manufactured by Sternberg, powder coat Black or of equal specifications with prior approval of the City Engineer.

The festoon receptacle shall be fused separately at the base of the pole.

The light pole shall be finished with a UV resistant coating of paint. Surface preparation shall be a chemical treatment process. The finish shall be oven baked. The color shall be powder coat Black.

Warranty: All materials supplied shall be warranted by the manufacturer for one (1) year after delivery against faulty materials and workmanship. The paint finish on pole and accessories shall be warranted by the manufacturer for five (5) years after delivery against faulty materials and workmanship.

Basis of Payment. This work will be paid for at the contract unit price each for LIGHT POLE ORNAMENTAL, ALUMINUM, 35 FT. M.H., 8 FT. MAST ARM.

LIGHTING CONTROLLER

Lighting controller shall meet the requirements of Section 825 of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2012, with the following modifications:

Lighting controller shall be suitable for 120/240 Volt, single-phase electric service.

Lighting controller shall include two (2) contactors – one for lighting control and one for festoon receptacle control.

Lighting controller work shall include constructing a concrete foundation and concrete work pad, as indicated on the plans. The concrete used shall be Class SI concrete in accordance with the requirements of Section 1020 of the Standard Specifications.

Foundations shall include the raceways and grounding electrode and conductor as indicated on the plans.

Grounding electrode and conductor shall be in accordance with Section 806.

Basis of Payment: This work will be paid for at the contract unit price each for LIGHTING CONTROLLER, BASE MOUNTED, 240 VOLT, 200 AMP (DUAL) of the enclosure and control type indicated.

LUMINAIRE, LED, DECORATIVE, 34 WATT

Luminaire shall meet the requirements of Section 821 of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2012, with the following modifications:

Luminaire light distribution shall be Type V. Light bars/driver shall be LED's and driver system having 1,550 lumens, minimum of 45.6 lumens/watt. LED driver shall be 350ma, minimum 0.9 power factor, and 20 percent THD. System shall have an average rated life of 70,000 hours. Lamps shall have color of 4500 Deg. Kelvin and minimum CRI of 70. LED driver voltage shall be multi-tap set for 240 VAC, 60 Hz. Luminaire shall have a cast aluminum housing with tool less access to driver and LED compartment, frosted glass lens, IP65 weatherproof rating, and stainless steel hardware, with black powder coat finish. Luminaire shall be a Sternberg MS805BLED/3-PT/1RND45T5-ML/FG/BK full-cutoff Type V optics model or of equal specifications with prior approval of the City Engineer.

The luminaire shall be installed on a mounting arm with black powder coat finish attached to traffic signal pole.

The luminaire shall be fused separately at the base of the pole.

The fuse holders for the light fixtures shall be double pole, waterproof with insulating boots. The fuse holders shall be a Bussmann Tron type HEX Series, of equal specifications with prior approval of the City Engineer, which has a connecting tab to prevent accidental switching of terminals upon connection.

The wiring of the luminaire shall be as follows, starting from the line side: any splices for other luminaires in the circuit; fuseholder; surge protector.

The surge protector shall conform to Article 1065.02 of the Standard Specifications.

Basis of Payment. This work shall be paid for at the contract unit price each for LUMINAIRE, LED, DECORATIVE, 34 WATT of the type indicated, which shall be payment in full for the luminaire complete. The luminaire complete includes branch circuit / extension wire as applicable, lamp, fuseholders, mounting hardware, fusing, and surge protectors.

JUNCTION BOX, STAINLESS STEEL, EMBEDDED IN STRUCTURE, 18" x 12" x 8"

Junction Box shall meet the requirements of Section 813 of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2012, with the following modifications:

The exact location shall be as shown on the plans and as directed by the Engineer.

The embedded junction box shall be set flush with the adjoining surface and shall be properly supported during concrete placement.

Basis of Payment: This work will be paid for at the contract unit price each for **JUNCTION BOX, STAINLESS STEEL, EMBEDDED IN STRUCTURE, 18" x 12" x 8"** of the type indicated.

TRAFFIC SIGNAL SPECIAL PROVISIONS

LOCATION OF UNDERGROUND STATE AND CITY OF GALESBURG MAINTAINED ELECTRICAL FACILITIES

The Contractor shall be responsible for locating existing IDOT and City of Galesburg electrical facilities prior to performing any work at his/her own expense if required. The Contractor shall also be liable for any damage to IDOT facilities resulting from inaccurate locating.

The Contractor may obtain, on request, plans for the existing electrical facilities from the Department and city of Galesburg.

The Contractor shall also be responsible for locating and providing protection for IDOT facilities during all phases of construction. If at any time, the facilities are damaged, the Contractor shall immediately notify the Department and make all necessary arrangements for repair to the satisfaction of the Engineer. This work shall be included in the contract bid price.

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.

OPERATION OF EXISTING TRAFFIC SIGNALS

The existing traffic signals shall be completely removed, and the proposed signals shall be reconstructed as a part of the construction of the construction of Kellogg Street south of Water Street and the intersection of Kellogg Street and Main Street. The existing traffic signals shall remain in operation until such time that Kellogg Street is closed to through traffic directly north and south of the Main Street intersection. The Contractor shall furnish all labor, materials, and equipment required to keep the existing traffic signals operational for as long as is required to follow the construction staging described above; including, but not limited to, temporary traffic signal posts, temporary signal heads, and temporary wiring. The Contractor shall notify the City of Galesburg prior to changing the construction staging adjacent to and at the intersection. Any work changes affecting the traffic signal construction staging will not be paid for separately, but shall be included in the bid price for the project.

SIGN PANEL – TYPE 1

This work shall be in accordance with Sections 720 and 1090, 1091, and 1092 of the Standard Specifications except as modified herein.

The Contractor shall furnish “Left Turn Yield on Flashing Arrow” signs as shown on the plan sheet detail and install them on the mast arms (to the right of the flashing yellow arrow signal head) at the locations indicated on the plan sheets.

The contractor shall supply all materials required to install the sign (stainless steel banding, brackets, hardware, etc.) as a part of this pay item.

Basis of Payment: This work shall be paid for at the contract unit price per square foot for SIGN PANEL – TYPE 1 which price shall be payment in full for all labor, equipment, and materials required to supply and install the sign panel described above, complete.

RELOCATE CONTROLLER CABINET

This work shall be in accordance with Sections 857, 895, 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. There will be no additional compensation for this work.

The existing cabinet shall be relocated to the location shown in plans, and all existing equipment shall be removed and returned to the city of Galesburg at the desired location. The point of contact is Wayne Carl at (309) 345-3625.

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

MODIFY EXISTING CONTROLLER CABINET

This work shall be in accordance with the applicable Articles of Sections 895, 1073, and 1074 of the Standard Specifications with the following modifications:

This item shall consist of providing equipment and modifying cabinet wiring as required to convert the existing protected/permissive turn phases to FYA (flashing yellow arrow) operation and integrate four channels of vehicle detection.

The existing controller cabinet is an Econolite TS-1 cabinet that is equipped with an ASC/2S controller and 12 position load bay. Upon request, the Department will provide a complete list of equipment and a cabinet drawing for the intersection.

The Contractor shall perform the following:

- The Contractor shall obtain an existing cabinet print for the intersection from the Department and forward these prints to the existing traffic signal controller manufacturer. The manufacturer shall revise the cabinet prints for FYA operation. The manufacturer shall return four copies of the updated prints for each intersection. The Contractor shall leave one copy in the controller cabinet, and deliver the other copies to the Department.
- The Contractor shall furnish and install the following items:
 - TS-2 Type 2 controller with data key and FSK telemetry module – Qty. 1
 - Reno A & E malfunction management unit model MMU-1600G or EDI MMU-16LEip with graphical display and Ethernet port (pre-programmed by the manufacturer for FYA operation at the intersection) – Qty. 1
 - Two channel shelf mount detector amplifier with LCD display and built in diagnostic capabilities (furnished under separate pay item for INDUCTIVE LOOP DETECTOR)

- Load switches, flash transfer relays, wiring harnesses, terminal strips, and all other equipment required to modify the cabinet to support FYA operation and integrate the proposed detector loops into the cabinet.
- The Contractor shall deliver all items that are removed from the controller cabinets to the City of Galesburg. The Contractor shall notify Justin McNaught at (309) 299-0534 a minimum of forty eight hours prior to delivery.
- The Contractor shall rewire each cabinet and install updated controller and malfunction management unit firmware as required to provide correct operation of FYA, all-red flash, and conflict monitoring.
- The Contractor will be allowed to place the intersection into all-way red flash mode and all-way stop control between the hours of 8:30AM to 3:30PM to facilitate the controller cabinet modification. The Contractor shall furnish and install a minimum of two stop signs per approach when the intersection is operating in all-red flash mode or all-way stop control. Stop signs shall be displayed in accordance with MUTCD requirements.
- The Contractor shall arrange for technical support from the controller cabinet manufacturer as needed for the modification. The controller cabinet vendor shall be on-site to assist with the first five intersection conversions.
- The cabinet sequencing shall conform to MUTCD requirements.
- At the conclusion of the cabinet modification prior to resuming normal signal operation, the Contractor shall test the modified 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.

Basis of Payment: This work will be paid for at the contract unit price per each for **MODIFY EXISTING CONTROLLER CABINET** which price shall be payment in full for all labor, materials, and equipment required to modify the cabinet to support flashing yellow operation and test the modified cabinet as described above.

INDUCTIVE LOOP DETECTOR

This work shall be in accordance with Sections 885 and 1079 of the Standard Specifications except as modified herein.

The detector amplifier shall be equipped with an LCD display that is capable of displaying the loop frequency and inductance and shall conform to the following specifications:

- Shelf mounted
- Custom LCD displays complete status and function settings of the detector.
- All functions are programmable from the front panel LCD "Menu" - no removing of detector to change function settings.
- LCD displays loop frequency, loop inductance, & -L/L% values.
- LCD displays the accumulated number of loop failure incidents since the detector was last reset - helps diagnose intermittent systems.
- LCD bar graph displays loop inductance change to verify ideal sensitivity level setting.
- Selectable "Continuous-CALL" and "Channel-Off" to aid system troubleshooting.
- 8 loop frequencies and 9 levels of sensitivity.
- 2 Selectable modes of operation: Presence or Pulse.
- 255 second CALL Delay and 25.5 second Extension timers.
- 999 second Max. Presence Timer. NEMA TS 2 Status Output.
- EOG (end of green) reset synchronization for Max. Presence timer.
- Super bright LEDS indicate vehicle detection or loop failure.
- Environmentally sealed push button switches to insure trouble-free service.
- Phase Green (Delay Override) input.

The detector amplifier shall be equipped with relay or solid state outputs to ensure that the detectors fail in a constant call mode.

The RENO A&E Model C-1200 Series and EDI Oracle Series are currently approved for use within the District.

Basis of Payment: This work shall be paid for at the contract unit price each for INDUCTIVE LOOP DETECTOR which price shall be payment in full for all labor, equipment, and materials required to supply and install the inductive loop detector described above, complete.

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

<u>Compliance:</u>	Fully compliant with ITE VTCSH LED Circular Signal Supplement specifications dated and adopted June 27, 2005
<u>Compliance Verification:</u>	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/
<u>Diameter:</u>	12” (300mm)
<u>Lens:</u>	UV stabilized scratch resistant polycarbonate, tinted red or yellow, clear for green, uniform non-pixelated illumination, Incandescent Appearance
<u>LEDS:</u>	Hi-Flux
<u>Operating Temperature Range:</u>	-40 to +74C (-40 to +165F)
<u>Operating Voltage Range:</u>	80 to 135 V (60Hz AC)
<u>Power Factor (PF):</u>	> 90%
<u>Total Harmonic Distortion (THD):</u>	< 20%
<u>Minimum Voltage Turn-Off:</u>	35V
<u>Turn-On/Turn-Off Time:</u>	<75 ms
<u>Nominal Power:</u>	10.0 W (Red), 18.0W (Yellow), 12.5 W (Green)
<u>Nominal Wavelength:</u>	625-626 nm (Red), 589-590 nm (Yellow), 500-502 nm (Green)
<u>Minimum Maintained Intensity:</u>	365 Cd (Red), 910 Cd (Yellow), 475 Cd (Green)
<u>Standard Conformance:</u>	FCC compliant for electrical noise, MIL-STD-810F for moisture resistance, MIL-STD-883 for mechanical vibration, NEMA TS2 Transient Voltage Protection
<u>Warranty:</u>	5 year replacement (materials, workmanship, and intensity)

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

<u>Compliance:</u>	Fully compliant with ITE VTCSH LED Vehicle Arrow Supplement specifications adopted July 1, 2007
<u>Compliance Verification:</u>	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/
<u>Diameter:</u>	12” (300mm)
<u>Lens:</u>	Clear Frosted, UV stabilized scratch resistant polycarbonate, tinted red or yellow, clear for green, uniform non-pixelated illumination, incandescent appearance, omni-directional
<u>LEDS:</u>	Hi-flux LEDs
<u>Operating Temperature Range:</u>	-40 to +74C (-40 to +165F)
<u>Operating Voltage Range:</u>	80 to 135 V (60Hz AC)
<u>Power Factor (PF):</u>	> 90%
<u>Total Harmonic Distortion (THD):</u>	< 20%
<u>Minimum Voltage Turn-Off:</u>	35V
<u>Turn-On/Turn-Off Time:</u>	<75 ms
<u>Nominal Power:</u>	5.0-7.0 W (Red), 6.0-12.5W (Yellow), 5.0-7.0 W (Green)
<u>Nominal Wavelength:</u>	625-628 nm (Red), 590 nm (Yellow), 500nm (Green)
<u>Minimum Maintained Intensity:</u>	56.8-58.4 Cd (Red), 141.6-146.0 Cd (Yellow), 73.9-76.0 Cd (Green)
<u>Standard Conformance:</u>	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)

<u>Compliance:</u>	Fully compliant with ITE PTCSI Part-2 LED Pedestrian Traffic Signal Modules specification adopted August 4, 2010
<u>Compliance Verification:</u>	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/
<u>Size:</u>	12” x 12”
<u>Configuration:</u>	Full Man/Full Hand Overlay Module, Countdown Timer Module
<u>Lens:</u>	Clear Frosted, UV stabilized scratch resistant polycarbonate, uniform non-pixelated illumination, incandescent appearance
<u>Operating Temperature Range:</u>	-40 to +74C (-40 to +165F)
<u>Operating Voltage Range:</u>	80 to 135 V (60Hz AC)
<u>Power Factor (PF):</u>	> 90%
<u>Total Harmonic Distortion (THD):</u>	< 20%
<u>Minimum Voltage Turn-Off:</u>	35V
<u>Turn-On/Turn-Off Time:</u>	<75 ms
<u>Nominal Power:</u>	5.0-9.0 W (Man), 5.0-11.0W (Hand), 5.0-8.0 W (Timer)
<u>Minimum Maintained Intensity:</u>	1,400 Cd (Hand), 1,400 Cd (Timer), 2,200 Cd (Man)
<u>Standard Conformance:</u>	FCC compliant for electrical noise, MIL-STD-810F for moisture resistance, MIL-STD-883 for mechanical vibration, NEMA TS2 Transient Voltage Protection
<u>Warranty:</u>	5 year replacement (materials, workmanship, and intensity)

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

<u>Compliance:</u>	Fully compliant with ITE PTCSI Part-2 LED Pedestrian Traffic Signal Modules specification adopted August 4, 2010
<u>Compliance Verification:</u>	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/
<u>Size:</u>	16” x 18”
<u>Configuration:</u>	Man/Hand Overlay with Countdown Timer
<u>Lens:</u>	UV stabilized scratch resistant polycarbonate, uniform non-pixelated illumination, incandescent appearance
<u>Operating Temperature Range:</u>	-40 to +74C (-40 to +165F)
<u>Operating Voltage Range:</u>	80 to 135 V (60Hz AC)
<u>Power Factor (PF):</u>	> 90%
<u>Total Harmonic Distortion (THD):</u>	< 20%
<u>Minimum Voltage Turn-Off:</u>	35V
<u>Turn-On/Turn-Off Time:</u>	<75 ms
<u>Nominal Power:</u>	6.0-9.0 W (Man), 7.0-9.0W (Hand), 5.0-8.0 W (Timer)
<u>Minimum Maintained Intensity:</u>	1,400 Cd (Hand), 1,400 Cd (Timer), 2,200 Cd (Man)
<u>Standard Conformance:</u>	FCC compliant for electrical noise, MIL-STD-810F for moisture resistance, MIL-STD-883 for mechanical vibration, NEMA TS2 Transient Voltage Protection
<u>Warranty:</u>	5 year replacement (materials, workmanship, and intensity)

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 yellow 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.

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.

SERVICE INSTALLATION, TYPE C (MODIFIED)

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.

All conduit and wiring needed to provide service to the existing cabinet shall be included in the cost of this pay item. No additional compensation will 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 disconnect shall be installed on the relocated cabinet.

The City of Galesburg will furnish all padlocks.

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

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

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.

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.

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.

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.

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.

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.

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 crossing signs and 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 following pedestrian pushbutton signs currently meet Department Specifications: Pelco, Models SF-1013-08, SF-1014-08 or approved equivalent.

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.

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 yellow 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/m², Hand = 1,400 cd/m², Person =
2,200 cd/m²

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.

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.

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

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

The list of removal items shown below should represent an accurate listing of removal items along with other associated work; however, it is the Contractor's responsibility to verify all quantities prior to bidding. All traffic signal equipment at each intersection will be removed in full and no additional compensation will be granted.

The Contractor shall remove all wires pertaining to existing traffic signals and grounding, existing traffic signal heads, existing pedestrian signal heads, existing pedestrian push buttons, existing luminaries if present, existing mast arms and posts, existing concrete foundations for mast arms and posts, and existing controller foundations at the intersection of Kellogg Street and Main Street. In areas where existing foundations and hand holes are removed and existing sidewalk is not proposed for construction this pay item shall cover all work related to any sidewalk removal or replacement. This work shall be included in the bid price for this pay item. Additionally, It is the intent of the project to remove all existing handholes located within the limits of the proposed pavement and relocate, as necessary, those handholes to a location adjacent to the back of curb.

Several lighting systems and a traffic signal interconnect system route through the intersection of Kellogg Street and Main Street. The wiring for these systems shall be disconnected and pulled back to the undisturbed handhole closest to the construction limits of the intersection. The wiring shall be stored in the handhole and pulled to reconnect the existing systems as soon as the intersection removals are complete. No additional compensation will be allowed to disconnect the existing systems, pull the wiring to the undisturbed handhole, repulling the existing wiring, or reconnection of the existing systems. Field adjustments to handhole and conduit locations and quantities will be allowed at the contract unit price for those items. It is suggested the Contractor contact Wayne Carl at the City of Galesburg (see phone number below) prior to bidding to investigate the existing lighting and interconnect systems routed through the intersection.

The Contractor shall deliver all removal items to the City of Galesburg to their desired location. The point of contact is Wayne Carl at (309) 345-3625.

The Contractor shall dispose of all other items off of the right-of-way and reflect the salvage value of this equipment in the unit bid price for this pay item.

Method of Measurement: All traffic signal equipment at each intersection listed (as shown above for each 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.

REMOVE EXISTING HANDHOLE

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

The list of handholes to be removed shown in the plans should represent an accurate listing of removal items; however, it is the Contractor's responsibility to verify all quantities prior to bidding. All existing handholes at the intersection of Kellogg Street and Main Street will be removed in full and no additional compensation will be granted.

The Contractor shall remove each handhole, splice any existing conduit, and complete any wiring required to maintain power to all existing electrical systems routed through existing handholes scheduled for removal. In areas where existing existing handholes are removed and existing pavement and/or sidewalk is not proposed for construction, this pay item shall cover all work related to any pavement and/or sidewalk removal or replacement. Additionally, It is the intent of the project to remove all existing handholes located within the limits of the proposed pavement and relocate, as necessary, those handholes to a location adjacent to the back of curb. This work shall be included in the bid price for this pay item.

Several lighting systems and a traffic signal interconnect system route through the intersection of Kellogg Street and Main Street. The wiring for these systems shall be disconnected and pulled back to the undisturbed handhole closest to the construction limits of the intersection. The wiring shall be stored in the handhole and pulled to reconnect the existing systems as soon as the intersection removals are complete. No additional compensation will be allowed to disconnect the existing systems, pull the wiring to the undisturbed handhole, repulling the existing wiring, or reconnection of the existing systems. Field adjustments to handhole and conduit locations and quantities will be allowed at the contract unit price for those items. It is suggested the Contractor contact Wayne Carl at the City of Galesburg (see phone number above) prior to bidding to investigate the existing lighting and interconnect systems routed through the intersection. The Contractor shall dispose of all other items off of the right-of-way and reflect the salvage value of this equipment in the unit bid price for this pay item.

Method of Measurement: All traffic signal equipment at each intersection listed (as shown above for each 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 HANDHOLE and shall be payment in full for removing, disposing of, and transporting the equipment described above, complete. No additional compensation will be allowed.

CONDUIT, SPECIAL

This work shall consist installing Conduit, Special in accordance with Section 810 of the Standard Specifications for Road and Bridge Construction and the detail in the plans with no exceptions.

This pay item shall include any work related to cutting a slot in the existing 6" concrete slab for conduit placement, placing the conduit and any couplings to proposed conduits,

placing of grout covering the conduit, sealant, and any work required to place the conduit and make it water tight will be paid for with this pay item.

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

CONCRETE FOUNDATION, SPECIAL

This work shall consist installing a concrete foundation in accordance with Section 878 of the Standard Specifications for Road and Bridge Construction, State Standard 878001-09, and the detail provided in the plans.

Basis of Payment: This work will be paid for at the contract unit price per each for CONCRETE FOUNDATION, Special, which price shall be payment in full for all labor, material, and equipment necessary to perform the work described above.

CONCRETE FOUNDATION, TYPE A

This work shall consist installing a Concrete Foundation, Type A in accordance with Section 878 of the Standard Specifications for Road and Bridge Construction and State Standard 878001-09 with no exceptions.

The proposed location of the Concrete Foundation, Type A may be moved in the field to avoid conflicts at the approval of the Engineer. If foundation is located in 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.

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

CONCRETE FOUNDATION, TYPE E, 36" DIAMETER

This work shall consist installing a Concrete Foundation, Type E, 36" Diameter in accordance with Section 878 of the Standard Specifications for Road and Bridge Construction and State Standard 878001-09 with no exceptions.

The proposed location of the Concrete Foundation, Type E may be moved in the field to avoid conflicts at the approval of the Engineer. If foundation is located in 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.

Basis of Payment: This work will be paid for at the contract unit price per foot for CONCRETE FOUNDATION, TYPE E, 36" DIAMETER or CONCRETE FOUNDATION, TYPE E, 30" DIAMETER, which price shall be payment in full for all labor, material, and equipment necessary to perform the work described above.

LUMINAIRE, METAL HALIDE HORIZONTAL MOUNT 400 WATT

This work shall be in accordance with Section 821 of the Standard Specifications except as modified herein.

Luminaire shall be 400 Watt M-400 Luminaire with Cutoff Optics, by GE Lighting Systems, Inc. or approved equivalent.

Basis of Payment: This work shall be paid for at the contract unit price each for LUMINAIRE, METAL HALIDE HORIZONTAL MOUNT 400 WATT and shall be payment in full for all labor, equipment, and materials required to supply and install the luminaire described above, complete.

UTILITY RELOCATION SPECIFICATIONS

CONTROL OF THE WORK

The Standard Specifications for Water and Sewer Main Construction in Illinois shall govern the construction. Any subsequent reference to "Standard Specifications" in the "Utility Relocations Specifications" shall be meant to mean the Standard Specifications for Water and Sewer Main Construction in Illinois.

Contractor shall coordinate any potential disruptions in water and sewer service with the City of Galesburg and the Galesburg Sanitary District. The City or District shall be contacted at least 48 hours prior to connections being made.

Water services shall be installed after all mains have been placed into service.

Sanitary sewers shall be installed upgradient. Connections to the existing system shall be made under the supervision of the Galesburg Sanitary District. If sanitary services are disrupted during construction it is the contractors responsibility to maintain service until a permanent connection can be made or the service repaired.

WATER MAIN

This item of work shall comply with Sections 40 and 41 of the Standard Specifications.

This item of work shall consist of the furnishing and placement of the new 12-in. and 8-in. and 6-in water mains, as specified in the Plans.

Pipe Materials

≤12-in diameter shall conform to AWWA C-900, DR18 with a pressure rating of 150 PSI and push on joints.

Where noted on the plans, restrained joint pipe shall conform to AWWA C-905RJ, DR-18 with a pressure rating of 150 PSI.

All water main installed in steel or PVC casings shall be restrained joint pipe.

Water main bedding, haunching and initial backfill shall be FA-6. If trench conditions are wet and unstable, CA-7 shall be utilized for the bedding. If final backfill is CLSM, CA-7 shall be utilized for bedding and initial backfill. The bedding, haunching and initial backfill shall be included in the cost of the installation of the water main.

Water Main of the size, depth, location, and type specified shall be paid for at the contract unit price per lin. foot.

Testing

Pressure testing of water mains shall conform to Section 41-2.14B of the Standard Specifications. A minimum hydrostatic pressure of 100 psi shall be used if the hydrostatic pressure equal to 50 percent more than the operating pressure at the lowest elevation of the pipe section is less than 100 psi.

The pressure test period shall be 1 hour.

The leakage test period shall be 1 hour, and shall directly follow the pressure test. The allowable leakage rate shall be computed per Section 41-2.14C of the Standard Specifications.

Pressure testing and leakage testing of the water mains shall be included in the cost of the installation of the water main.

Disinfection

Disinfection shall be in conformance with Section 41-2.15 of the Standard Specifications. Satisfactory disinfection is demonstrated when two (2) consecutive samples, collected at least 24 hours apart, indicate no bacteriological contamination.

Disinfection of the water mains shall be included in the cost of the installation of the water main.

Tracer Wire

The Contractor shall furnish and install, along the entire route of the water transmission main, #12 AWG, THW single-conductor, copper locator wire. The wire shall be installed just above the crown of the pipe, shall be brought to the top outside of each valve box, and brought into the top of the valve box through a 3/8-in. drilled hole in the valve box. Any necessary splicing shall be made using a direct bury splice kit such as 3M Part No. 054007-09053, or equivalent. The tracer wire shall be tested for continuity prior to final acceptance by the Owner.

The cost of the locator wire, including installation and testing, shall be included in the cost of the installation of the water main.

STEEL CASING 24"

This item of work shall consist of the furnishing and installation of a steel casing at the location specified in the Plans in accordance with Section 23-3.02B of the Standard Specifications.

24-in steel casing shall have a minimum non-coated wall thickness of 0.375 inches.

The carrier pipe shall be center restrained by the use of casing spacers. The casing spacers shall be constructed of non-reactive material designed specifically for that purpose. The spacers shall be positioned within 6 in. from the end of the casing, on each side of joint in the carrier pipe, and at the midpoint of each pipe length. Spacers constructed of wood and steel banding are not acceptable.

The casing ends shall be sealed to the carrier pipe by the use of an APS Standard Model AC pull on casing end seal, or equivalent.

The casing spacers and casing end seals shall be considered included in the cost of the installation of the Steel Casing.

To install this casing, the Contractor will be required to bore under the railroad tracks shown on the Plans. The cost to bore under the railroad tracks for installation of this casing, including excavation of bore pit and receiving pit shall be considered included in the cost of the Steel Casing 24".

Steel signs shall be placed on both sides of the railroad right of way, along the casing alignment, stating "City of Galesburg Water Main."

Steel Casing, 24" shall be paid for at the contract unit price per foot of the size specified.

WATER SERVICE CASING 6"

This item of work shall consist of the installation of a 6-in. PVC C-905 casing at the locations and lengths specified in the Plans in accordance with Section 20 of the Standard Specifications. The casing pipe shall be constructed such that it extends 10 ft as measured perpendicular to the outside of the sanitary or storm sewer being crossed as depicted in Standard Drawing No. 22 of the Standard Specifications for Water and Sewer Construction in Illinois.

The carrier pipe shall be center restrained by the use of casing spacers. The casing spacers shall be constructed of non-reactive material designed specifically for that purpose. The spacers shall be positioned within 6 in. from the end of the casing, on each side of joint in the carrier pipe, and at the midpoint of each pipe length. Spacers constructed of wood and steel banding are not acceptable.

The casing ends shall be sealed to the carrier pipe by the use of an APS Standard Model AC pull on casing end seal, or equivalent.

The casing spacers and casing end seals shall be considered included in the cost of the installation of the Water Main Casing 6".

Water Service Casing 6" and installation shall be paid for at the contract unit price per foot of the size specified for PVC CASING PIPE 6".

WATER MAIN CASING 15"

This item of work shall consist of the installation of a 15-in. PVC C-905 casing at the locations and lengths specified in the Plans in accordance with Section 20 of the Standard Specifications. The casing pipe shall be constructed such that it extends 10 ft as measured perpendicular to the outside of the sanitary or storm sewer being crossed as depicted in Standard Drawing No. 22 of the Standard Specifications for Water and Sewer Construction in Illinois.

The carrier pipe shall be center restrained by the use of casing spacers. The casing spacers shall be constructed of non-reactive material designed specifically for that purpose. The spacers shall be positioned within 6 in. from the end of the casing, on each side of joint in the carrier pipe, and at the midpoint of each pipe length. Spacers constructed of wood and steel banding are not acceptable.

The casing ends shall be sealed to the carrier pipe by the use of an APS Standard Model AC pull on casing end seal, or equivalent.

The casing spacers and casing end seals shall be considered included in the cost of the installation of the Water Main Casing 15".

Water Main Casing 15" and installation shall be paid for at the contract unit price per foot of the size specified for PVC CASING PIPE 15".

WATER VALVES

All valves and boxes must be approved by the City of Galesburg, Department of Public Works before installation. Valves shall be Resilient Wedge Gate Valves meeting ANSI/AWWA C509, such as American Flow Control, U.S. Pipe and Foundry, or Clow Valve Company. Bonnet bolts, studs, and nuts shall be Series 304 stainless steel. Valve bodies, bonnets, and gates shall be ductile iron per ASTM A536. Valves shall close in the clockwise direction. Stem seals shall be O-ring. Valve shall have a non-rising bronze stem per ANSI B 16.1.

All valves shall be restrained with retainer glands or a manufactured pipe restraint system approved by the Engineer.

All Valve Boxes shall have not less than a 5¼-in. shaft. Valve Boxes shall be Tyler Pipe two piece, screw type, #6850 series with the word "water" cast on lid, or an approved equal. The valve box and extensions necessary to reach the ground elevation shall be included in the unit price per each for the water valve of the size specified.

Water Valves shall be paid for at the contract unit price per each of the size specified.

TAPPING VALVES SLEEVES

Pressure connections to existing water mains shall conform to Section 46 of the Standard Specifications for Water and Sewer Main Construction in Illinois.

Tapping sleeve shall be 304L stainless steel and shall provide 360 degree coverage of the pipe being tapped. The sleeve shall have an integral flange meeting all applicable requirements of ANSI B16.1, class 125 and in accordance with MSS-SP60. A waffle 360 degree gasket with integral gap bridge shall provide the seal for the sleeve. Contractor shall uncover and determine the OD of the pipe being tapped prior to ordering the sleeve.

All tapping valves and boxes must be approved by the City of Galesburg, Department of Public Works before installation. Valves shall be Resilient Wedge Gate Valves with one mechanical joint end and one flanged end meeting ANSI/AWWA C509, such as American Flow Control, U.S. Pipe and Foundary, or Clow Valve Company. Bonnet bolts, studs, and nuts shall be Series 304 stainless steel. Valve bodies, bonnets, and gates shall be ductile iron per ASTM A536. Valves shall close in the clockwise direction. Stem seals shall be O-ring. Valve shall have a non-rising bronze stem per ANSI B 16.1.

All valves shall be restrained with retainer glands or a manufactured pipe restraint system approved by the Engineer.

All Valve Boxes shall have not less than a 5¼-in. shaft. Valve Boxes shall be Tyler Pipe two piece, screw type, #6850 series with the word "water" cast on lid, or an approved equal. The valve box and extensions necessary to reach the ground elevation shall be included in the unit price per each for the Valve and Box.

Tapping valve and sleeve size indicated shall refer to the size of tap being made, not the carrier pipe being tapped.

Tapping Valve and Sleeves shall be paid for at the contract unit price per each of the size specified.

DUCTILE IRON FITTINGS

All pressure main fittings shall be flanged ductile iron for above ground service and mechanical joint (M.J.) ductile iron for buried service, unless otherwise indicated on the Plans.

All fittings shall conform to ANSI A21.10 (AWWA C110), or ANSI A21.53 (AWWA C153), where possible. Minimum pressure rating shall be 350 psi. If shown or specified fittings are unavailable in the above standards, the manufacturer's standard may be used upon approval of the ENGINEER. All rubber gaskets shall conform to ANSI A21.11 (AWWA C111). All fittings shall have cement mortar lining and seal coat per ANSI A21.40 (AWWA C104).

All fittings shall be equipped with retainer glands in lieu of standard glands.

Fittings shall be restrained in conformance with Section 41-2.10.

The cost of the Ductile Iron Fittings, including installation and testing, shall be included in the cost of the installation of the water main.

CONNECTIONS TO EXISTING WATER MAINS

It will be the responsibility of the Contractor to determine the exact location of the existing water main in the field.

All tees required to connect mains, all reducers required to connect different-sized mains, and all fittings required to change direction either horizontally or vertically in order to achieve the proposed alignment shall be included in the cost of the water main being constructed.

Removal of existing water main that is necessary to connect the proposed water main and plugging the end of the existing water main, as shown on the Plans or as directed by the Engineer, shall be included in the cost of the water main being constructed.

Before making any connection to existing water mains, the Contractor shall have all necessary tools, materials, pipe, and fittings on hand and sufficient experienced workmen available to preclude an unnecessary delay in making the connection due to adverse conditions or mishap. The actual work of cutting into a main or removal of a fitting shall not be done until all measurements, necessary pipe assembly, and other specified provisions have been completed.

Temporary blocking capable of withstanding the service pressure shall be provided for all existing valves, fittings, and pipe that could be affected by the proposed connection.

This work will not be paid for separately, but shall be considered included in the cost of the construction of the water main.

FIRE HYDRANT

This item of work shall comply with Section 45 of the Standard Specifications for Water and Sewer Main Construction in Illinois.

Hydrants shall conform to AWWA C-502, dry barrel. They shall be designed for a 500 psi hydrostatic test pressure and a 250 psi working pressure.

They shall include two (2) 2 ½" hose nozzles and one 4 ½" pumper nozzle. The threads shall conform to National Standard design.

Hydrants shall be provided with 2-piece breakaway barrels with fully revolving bonnets, removable and renewable valve sets. Hydrants shall be furnished with 304 stainless steel bolts and nuts between the barrel and the shoe. The hydrants shall be provided with six (6) inch pipe connections and 5 ¼ inch inside diameter valve openings.

Hydrant color shall match the currently installed existing hydrants in the owners system (yellow).

Set breakaway barrel 2 inches above finished grade. Set each hydrant on a large flat stone or concrete block and not less the ½ cubic Yard of coarse aggregate shall be provided at the base for drainage. Back or brace hydrants with concrete thrust block extending from the hydrant to the wall of excavation, and placed to permit the removal of the hydrant. All joints shall be restrained.

Lower barrel sections, flanges below grade shall be ductile iron only.

Allowable hydrant models are as follows:

- American Flow Control: Pacer Fire Hydrant (Model WB-67-250)
- Mueller Corp: Super Centurion (Model A423)
- Approved Equal

Hydrants shall be paid for at the contract price per each.

REMOVAL OF FIRE HYDRANTS

This item of work shall include the removal of existing fire hydrants. All removals shall be coordinated with the City of Galesburg to ensure isolation of the water mains. All hydrants shall be delivered to the City of Galesburg Water Department.

Removal of Fire Hydrants, as specified, shall be considered included in the cost of the construction of the water main.

REMOVAL OF WATER VALVE AND BOX

This item of work shall include the removal of existing valves and boxes. All removals shall be coordinated with the City of Galesburg to ensure isolation of the mains. All water valves and valve boxes shall be delivered to the City of Galesburg Water Department.

Removal of Water Valve and Box, as specified, shall be considered included in the cost of the construction of the water main.

CURB STOPS

All curb stops must be approved by the City of Galesburg, Department of Public Works and the Engineer before installation. Curb Stops shall meet the requirements of Section 40-2.06C and Standard Drawing No. 17 of the Standard Specifications. Curb Stops shall be located, furnished and installed in accordance with the requirements of the Special Provisions and the plans.

Curb Stops shall be paid for at the contract unit price per each of the size specified which work shall include installation and all materials.

SANITARY SEWER

This item of work shall comply with Sections 30 and 31 of the Standard Specifications for Water and Sewer Main Construction in Illinois and Section 550 of the Illinois Department of Transportation, "Standard Specifications for Road and Bridge Construction".

This item of work shall consist of the furnishing and placement of the new gravity sewer, as specified in the Plans.

All connections made between existing sewer and new sewer shall be made by use of a rubberized connection creating a water-tight seal. These connections shall be considered as included in the cost of the construction of the combined sewer. All fittings to be gasketed.

Pipe Materials

Gravity sewers 15-in and smaller shall be PVC SDR 35 meeting ASTM D-3034.

Gravity sewers 18-in and larger shall be PVC SDR 26 meeting ASTM F-679.

Sanitary Sewer of the size, depth, location, and type specified shall be paid for at the contract unit price per lin. foot.

BEDDING AND HAUNCHING MATERIALS

Foundation, Bedding, and Haunching Material shall meet the requirements of the Illinois Department of Transportation, "Standard Specifications for Road and Bridge Construction" for coarse aggregate or fine aggregate. The gradation shall be CA-7.

Bedding and Haunching Materials shall be considered included in the cost of the installation of the sewers.

ADJUST SANITARY SEWER SERVICE LINES

This item of work shall comply with Section 33 of the Standard Specifications for Water and Sewer Main Construction.

This work consists of the excavation and reconnection of active services. The Contractor shall notify the Engineer of all services encountered to determine which services are active. Service sewer connection sizes are approximate. They shall be verified in the field by the Engineer, and reconnection of the service to the sewer shall be the same diameter as the service sewer.

Service sewer connections shall be made using solid wall PVC fittings. The service connection shall include all necessary pipe fittings and connections to the service sewer to provide a water-tight reconnection.

Those services determined in the field by the Engineer as inactive shall be capped with concrete. This item of work shall be considered as included in the cost of the construction of the sewer.

Adjust Sanitary Sewer Service Lines will be paid for the lump sum price for each. The lump sum cost shall include labor, equipment and materials necessary to complete the work, including all necessary pipe, couplings, fittings, excavation and backfill.

TRENCH BACKFILL

Select Granular Material shall meet the requirements of the Illinois Department of Transportation, "Standards Specifications for Road and Bridge Construction" for fine aggregate in accordance with Article 208 and Article 1003.04. The select granular backfill shall be water jetted. Select granular material shall be installed at all locations, with the exception of the locations requiring flowable fill.

Select Granular Backfill volumes shall include the quantity per lin. ft for initial backfill and final backfill per Section 20-2.20A of the Standard Specifications.

MANHOLES, SANITARY, ALL DIAMETERS

This item of work shall comply with Section 32 of the Standard Specifications for Water and Sewer Main Construction in Illinois and Section 602 of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction.

This work shall consist of the construction of a precast manhole, steps, casting, and connection of proposed and existing sewers to provide a water-tight manhole. Material required for the connection of existing sewers shall be considered as included in the cost of the manhole. All pipe openings shall be required to be "A-Lok".

Manholes, Sanitary, 4'-Diameter, Type 1 Frame, Closed Lid, shall be paid for at the contract unit price per each.

Manholes, Sanitary, 5'-Diameter, Type 1 Frame, Closed Lid, shall be paid for at the contract unit price per each.

Drop Manhole Connection shall be paid for at the contract unit price per each.

Manhole, Additional Depth, 4 Foot Diameter shall be paid for at the contract unit price per foot.

Manhole, Additional Depth, 5 Foot Diameter shall be paid for at the contract unit price per foot.

ADJUST SEWER SERVICE CLEANOUT

Sewer cleanouts shall be adjusted in elevation utilizing solid wall PVC fittings. Cleanouts located in grass areas shall be adjusted flush with the surrounding grade and shall have a threaded PVC cap. For installations in pavement, the threaded cap shall be located 4 inches below finished grade. The cleanout shall be covered with a heavy duty rated cast iron cleanout frame and cover, East Jordan model V-8513 or equal.

Adjust Sewer Service Cleanout will be considered included in the cost of the Adjust Sanitary Sewer Service Lines.

STEEL CASING 42"

This item of work shall consist of the furnishing and installation of a steel casing at the location specified in the plans.

42-inch steel casing shall have a minimum non-coated wall thickness of 0.563 inches. The carrier pipe shall be center restrained by the use of casing spacers. The casing spacers shall be constructed of non-reactive material designed specifically for that purpose. The spacers shall be positioned within 6 inches from the end of the casing, on each side of joints in the carrier pipe, and at the midpoint of each pipe length. Spacers constructed of wood and steel banding are not acceptable.

The casing ends shall be sealed to the carrier pipe by the use of an APS Standard Model AC pull on casing end seal, or equivalent.

The casing spacers and casing end seals shall be considered included in the cost of the installation of the Steel Casing.

This casing shall be installed by open cut methods.

Steel Casing, 42" shall be paid for at the contract unit price per foot of the size specified.



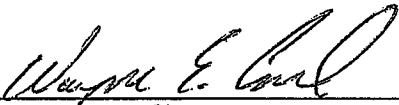
Route FAU 6800 and FAU 6801
Section 05-00501-21-GS
County Knox

Marked Rte. Main Street (US 150) and Seminary Street
Project No. HPP-M-1036(004)
Contract No. 89419

This plan has been prepared to comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Permit No. ILR10 (Permit ILR10), issued 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.

Wayne Carl
Print Name
City Engineer
Title
City of Galesburg
Agency


Signature
5/28/2013
Date

I. Site Description:

- A. Provide a description of the project location (include latitude and longitude):
Kellogg Street and Seminary Street from Main Street to Grove Street (40 deg - 57' N, 90 deg - 22' W)
- B. Provide a description of the construction activity which is the subject of this plan:
Construction of new single span bridge over the BNSF Railwa. The bridge approaches will be supported on MSE retaining walls. Additional construction items include the construction of full depth pavement, traffic signals at Mair Street, street lighting, and appurtenant roadway items.
- C. Provide the estimated duration of this project:
20 months
- D. The total area of the construction site is estimated to be 6 acres.
The total area of the site estimated to be disturbed by excavation, grading or other activities is 4.3 acres.
- E. The following is a weighted average of the runoff coefficient for this project after construction activities are completed:
0.7
- F. List all soils found within project boundaries. Include map unit name, slope information, and erosivity:
The type of surficial soil is Hulick Till. These deposits are silty glacial till intercalated with sand and gravel.
- G. Provide an aerial extent of wetland acreage at the site:
N/A
- H. Provide a description of potentially erosive areas associated with this project:

H. Provide a description of potentially erosive areas associated with this project:

The project site is fairly flat. There will be construction adjacent to the concrete lined Cedar Creek. The creek and storm sewer inlets will be protected to prevent siltation into the storm sewer system.

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 slopes, etc):

Building Demolition: Located at various locations throughout the project. The land is fairly flat and the parcel property is fairly small.

Pavement Removal: Located throughout project. The pavement will be removed to allow for installation of new utilities and proposed roadway, retaining wall and bridge. Approximately 2 acres of pavement will be removed, but not all at the same time.

Utility Relocation: Located at various locations throughout the project. This task will include removal of existing utility as required, and installation of proposed utility. This will occur after pavement removal, so the utility relocation task is not expected to disturb additional soil.

Retaining wall and bridge construction: The construction of these items will take place at locations of building removal and pavement removal.

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 offsite 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:

The storm sewer system is owned by the City of Galesburg. The ultimate outlet of the storm sewer is to the concrete lined Cedar Creek Channel and that is owned by the Galesburg Sanitary District.

L. 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:

Cedar Creek Channel

M. 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 areas denoted as protected sites. It can be assumed that all areas within Temporary Easement and Proposed ROW will be disturbed.

N. 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:
- 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:
- 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 that allocation:

O. The following pollutants of concern will be associated with this construction project:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Soil Sediment | <input checked="" type="checkbox"/> Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids) |
| <input checked="" type="checkbox"/> Concrete | <input checked="" type="checkbox"/> Antifreeze / Coolants |
| <input checked="" type="checkbox"/> Concrete Truck Waste | <input checked="" type="checkbox"/> Waste water from cleaning construction equipment |
| <input checked="" type="checkbox"/> Concrete Curing Compounds | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Solid Waste Debris | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Paints | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Solvents | <input type="checkbox"/> Other (specify) |
| <input checked="" type="checkbox"/> Fertilizers / Pesticides | <input type="checkbox"/> Other (specify) |

II. Controls:

This section of the plan addresses the controls that will be implemented for each of the major construction activities described in I.C. above and for all use areas, borrow sites, and waste sites. For each measure discussed, the Contractor will be responsible for its implementation as indicated. The Contractor shall provide to the Resident Engineer a plan for the implementation of the measures indicated. The Contractor, and subcontractors, will notify the Resident Engineer of any proposed changes, maintenance, or modifications to keep construction activities compliant with the Permit ILR10. Each such Contractor has signed the required certification on forms which are attached to, and are a part of, this plan:

A. Erosion and Sediment Controls

1. **Stabilized 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(A)(1)(a) and II(A)(3), stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than seven (7) days 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.

Where the initiation of stabilization measures by the seventh day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable thereafter.

The following stabilization practices will be used for this project:

- | | |
|---|--|
| <input type="checkbox"/> Preservation of Mature Vegetation | <input checked="" type="checkbox"/> Erosion Control Blanket / Mulching |
| <input type="checkbox"/> Vegetated Buffer Strips | <input type="checkbox"/> Sodding |
| <input checked="" type="checkbox"/> Protection of Trees | <input type="checkbox"/> Geotextiles |
| <input checked="" type="checkbox"/> Temporary Erosion Control Seeding | <input 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:

Upon completion of work in an area, if that area is to be left for a period of time in accordance with the IDOT Standard Specification, the Temporary Seeding will be applied. After completion of final grading, the permanent seeding and mulch will be applied.

Describe how the stabilization practices listed above will be utilized after construction activities have been completed:

After completion of activities, the site will be inspected to verify the permanent erosion control (seeding) has taken.

2. **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 structural 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 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:

The above noted structural practices will be applied to prevent the runoff of sediment from the site. Perimeter Erosion Barrier will prevent sheet flow sedimentation from leaving the site. The Temporary Ditch Check and Storm Drain Inlet Protection will prevent more concentrated flows and sedimentation from leaving the site.

Describe how the structural practices listed above will be utilized after construction activities have been completed:

The above noted items will be left in place until the permanent erosion protection has taken.

3. **Storm Water Management:** Provided below is a description of measures that will be installed during the construction process to control 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.

- a. 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 and 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.

- b. 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 storm water management controls:

All areas disturbed during the construction activities will be seeded and mulched in accordance with IDOT's Standard Specifications.

4. **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:

There are no additional procedures or requirements approved by the local officials.

5. **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.

- a. 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 timeframe
- 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
- Timeframe 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

- b. 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 – 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 Fueling – Identify equipment fueling locations for this project and what BMPs will be used to ensure containment and spill prevention.
- 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.
- 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 the Contractor's responsibility to attain maintenance guidelines for any manufactured BMPs which are to be installed and maintained per manufacture's specifications.

Temporary Ditch Checks will be maintained when the sediment has reached one-third the height of the ditch check. Perimeter Erosion Barrier will be maintained when the sediment has reached one-third the height of the barrier. Temporary Seedin will be applied to appropriate areas every seven days until those areas are stabilized.

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 that is 0.5 inch or greater or equivalent snowfall.

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 email at: epa.swnoncomp@illinois.gov, telephone or fax within twenty-four (24) hours of the incident. The Resident Engineer shall then complete and submit an "Incidence of Non-Compliance" (ION) report for the identified violation within five (5) days of the incident. The Resident Engineer shall use forms provided by IEPA and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of non-compliance shall be signed by a responsible authority in accordance with Part VI. G of the Permit ILR10.

The Incidence of Non-Compliance shall be mailed to the following address:

Illinois Environmental Protection Agency
 Division of Water Pollution Control
 Attn: Compliance Assurance Section
 1021 North Grand East
 Post Office Box 19276
 Springfield, Illinois 62794-9276

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.5 of the Storm Water Pollution Prevention Plan (SWPPP) which will be handled by the Contractor/subcontractor completing this form.

Route	<u>FAU 6800 and FAU 6801</u>	Marked Rte.	<u>Main Street (US 150) and Seminary Street</u>
Section	<u>05-00501-21-GS</u>	Project No.	<u>HPP-M-1036(004)</u>
County	<u>Knox</u>	Contract No.	<u>89419</u>

This certification statement is a part of the 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. ILR 10 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 the 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 this Contractor/subcontractor will be responsible for as required in Section II.5. of the SWPPP:

ATTACHMENT A
BUILDING DEMOLITION SPECIFICATIONS
AND
ASBESTOS SURVEY RESULTS

GENERAL BUREAU OF
2013 OCT - 9 11:02
STATE OF FLORIDA

PROJECT SPECIFICATIONS
FOR
RESIDENTIAL AND COMMERCIAL
BUILDING DEMOLITIONS
SEMINARY/KELLOGG STREET OVERPASS
CITY OF GALESBURG
KNOX COUNTY

Prepared For:

CITY OF GALESBURG
Galesburg, Illinois

Prepared By:

HANSON PROFESSIONAL SERVICES INC.
7625 N. University Street
Suite 200
Peoria, Illinois 61614

MAY 2013

**PROJECT MANUAL
FOR
RESIDENTIAL AND COMMERCIAL
BUILDING DEMOLITIONS
SEMINARY/KELLOGG STREET OVERPASS
GALESBURG, ILLINOIS**

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BIDDING & CONTRACT REQUIREMENTS
DOCUMENT 00110 - DEFINITIONS OF
ABBREVIATIONS AND TERMS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDE

- A. All bidders.

1.02 RELATED REQUIREMENTS

- A. Specified elsewhere:
1. Division 1 - General Requirements.
 2. Division 2 - Site Work.

1.03 ABBREVIATIONS

- A. Whenever the following abbreviations are used in these Specifications or on the Project Drawings, they are to be construed the same as the respective expressions represented:

ACM – Asbestos-Containing Material
AISC - American Institute of Steel Construction
ANSI - American National Standards Institute
API - American Petroleum Institute
ASME - American Society of Mechanical Engineers
ASTM - American Society for Testing and Materials
AWS - American Welding Society
CFR - Code of Federal Regulations
CQC - Contractor Quality Control
IEMA – Illinois Emergency Management Agency
IEPA – Illinois Environmental Protection Agency
NBFU - National Board of Fire Underwriters
NBS - National Bureau of Standards
NEC - National Electric Code
NEMA - National Electric Manufacturer's Association
NFPA - National Fire Protection Association
OSFM – Office of the State Fire Marshal
OSHA - Occupational Safety and Health Administration
UL - Underwriters Laboratories
USEPA - United States Environmental Protection Agency

1.04 TERMS DEFINED

- A. Wherever used in the Project Specifications or on the Project Drawings, the following terms have the meanings indicated (unless otherwise specified) which are applicable to both the singular and plural thereof:
1. Agreement: The written agreement between Owner and Contractor covering the Work to be performed; other Contract Documents are attached to the Agreement and made a part thereof as provided herein.
 2. Bid: The offer or proposal of the bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 3. Bidder: Any individual, firm, partnership or corporation submitting a proposal for the work contemplated, acting directly or through a duly authorized representative.
 4. Bonds: Bid, performance, and payment bonds and other instruments of security.
 5. Calendar Day: Every day shown on the Gregorian calendar.
 6. Change Order: The Contractor is obligated by the basic contract to proceed with the work outlined on a change order, showing the change in the Scope of Work.
 7. Change in Scope: Unknown, unforeseen, or unlisted classes of work, not specified in the contracted work items.
 8. Contract Documents: The Agreement, Addenda (which pertain to the Contract Documents), Contractor's Bid (including documentation accompanying the Bid and any Post-Bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Bonds, these General Conditions, the Special Conditions, the Specification and the Project Drawings as the same or more specifically identified in the Agreement, together with all amendments, modifications and supplements issued on or after the Effective Date of the Agreement.
 9. Contractor: The person, firm, or corporation with whom Owner has entered into the Agreement.
 10. Contract Time: The number of working days or calendar days allowed for completion of the Contract, including submittal of all required documents. The Contract Time includes authorized time extensions. In case a calendar date of completion is shown in the proposal in lieu of the number of working or calendar days, the Contract shall be completed on or before that date.
 11. Effective Date of Agreement: The date indicated in the Agreement on which it becomes effective. But if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two (2) parties to sign and deliver.
 12. Engineer: The person, firm, or corporation named as such in the Agreement or Specifications. The designated Engineer for this project is Hanson Professional Services Inc.
 13. Negotiable: An item of work, designated as negotiable, for which Contractor and Owner will discuss, if required, for the purpose of coming to an agreement or arrangement. After discussion, and if agreement of terms is expressed by Owner, Contractor shall submit a proposal, including all costs, to Owner for all work and prices which have been agreed upon. Owner has the right to accept or reject any or all proposals. Owner may, if no agreement can be reached, procure completion of said negotiable work items using interested parties who are not associated with the Contract.
 14. Notice of Award: The written notice by Owner to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the conditions precedent enumerated therein, within the time specified, Owner will sign and deliver the Agreement.

15. Notice to Proceed: A written notice given by Owner to Contractor (with a copy to Engineer) fixing the date on which the Contract Time will commence to run and on which Contractor shall start to perform Contractor's obligations under the Contract Documents.
16. Owner: The public body or authority, corporation, association, firm, or person with whom Contractor has entered into the Agreement and for whom the Work is to be provided. City of Galesburg is the Owner for this Project.
17. Pay Item: A specifically described unit of work for which a price is provided in the Contract.
18. Project Drawings: All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for Contractor to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by Contractor to illustrate material or equipment for some portion of the Work.
19. Responsible: The determination that the Contractor has the capacity to perform the Work, and the ability to comply with the Specifications and scheduled construction period, and the Contractor has the adequate financial resources (credit) to finance cost of the work until payment by the Owner is received.
20. Responsiveness: Providing information required from the Contractor for evaluation of the bid, an element essential to the promise of performance.
21. Shall: The word "shall" means "mandatory performance by the contracted party" to the task referred to and accompanying this word.
22. Subcontractor: An individual, firm, partnership, or corporation who assumes obligation for performing work or portions of work specified pay items.
23. Underground Facilities: All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, subterranean structures or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage transport, traffic or other control systems, or water.
24. Unit Price: A specified price for a specified measurable unit of work to be performed under agreement between Owner and Contractor.
25. Work: The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of performing services, furnishing labor, and furnishing and incorporating materials and equipment into the construction, all as required by the Contract Documents.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END DOCUMENT 00110

DIVISION 1 - GENERAL REQUIREMENTS
SECTION 01010 - PROJECT SUMMARY

The Contract Requirements and DIVISION 1 - GENERAL REQUIREMENTS are hereby made part of each division and section of the Project Specifications.

PART 1 - GENERAL

1.01 WORK INCLUDES

A. Work covered by the Contract Documents

<u>Pay Item</u>	<u>Work Covered</u>
1. Mobilization	Obtain all licenses and permits, pay all fees, attend all meetings, conduct project closeout activities including all submittals, submit all receipts, manifests, and documents for disposal of all waste materials and demolition debris, mobilization/demobilization, and other costs for work specified in Division 1.
2. Traffic Control and Protection	Maintain traffic control on roads adjacent to the demolition site including labor, materials, transportation, and incidental work necessary to furnish, install, maintain, and relocate traffic control devices and signs during periods where roads are obstructed by demolition activities in accordance with specifications in Section 01522 – Protective Measures During Demolition.
3. Building Demolition	<p>Demolition of one (1) commercial building identified as 311 East Water Street; and two (2) single-family residential properties identified as 370 East North Street and 364 North Seminary Street. Footings and foundations 4 ft below finished grade will remain for the building located at 370 East North Street. The floors of this basement will be broken to allow water drainage. Footings and foundations for the two other properties will be entirely removed.</p> <p>Demolition includes protection of nearby facilities, including public sidewalks. Demolition also includes identification, disconnection and capping of all abandoned and active site utilities for the structures to be demolished. Removal and disposal of all building contents including equipment, furnishings, rubbish, piping, electrical components, etc. is considered to be part of demolition. Demolition also includes removal and disposal of attached</p>

and detached garages and sheds including building contents, paved parking areas, private sidewalks, signs including sign posts, trees, shrubs, and existing fence. Salvage and/or recycle of the various components are encouraged.

Demolition will also include necessary excavation to remove foundations. Local cohesive material is to be used to backfill excavations up to 4 ft. below finished grade. CA-6 material is to be used to backfill excavations between 4 ft below finished grade and finished grade. The cost to provide, place, and compact the cohesive material and the CA-6 is to be included in the building demolition pay item.

4. Asbestos Removal
Removal and disposal of asbestos containing materials identified in Attachment C. The price for this work is to include all necessary containers, transport, labels, manifests, and waste profile sheet(s).

5. Collection and Disposal of Waste Materials
Collection and disposal of hazardous and special waste materials. Work will include collection and disposal of a central air conditioning unit; window air conditioning units; furnaces; electronics (televisions, stereos); batteries (smoke detectors); battery charger; fluorescent light bulbs; fluorescent ballasts; mercury switches (thermostats); tires; paint; stains; carpet adhesive; lap cement; small quantities of fuel, oil, antifreeze; adhesives; various cleaning products; and insect/rodent control chemicals. Also included is collection and disposal miscellaneous compressed gases and aerosol products; and white goods (dishwasher, refrigerators, water heaters). See attachment D for a list of specific items observed in each of the 3 structures to be demolished. The wastes will be collected separately for Owner inspection prior to appropriate disposal. The price for this work is to include all necessary containers, transport, labels, manifests, and waste acceptance certification.

1.02 WORK SEQUENCE

- A. The Contractor shall provide the Owner with a project schedule prior to initiating Work that reflects the major activities necessary to complete the project within the contract completion time.

Project-specific milestones to be addressed in the Contractor's project schedule should reflect the Scope of Work elements covered in the Contract Documents and listed in part 1.01.A. and/or of this section of the General Requirements.

1.03 DAILY WORK HOURS

- A. Work shall be conducted during regular business days (Monday through Friday).
- B. Work shall be conducted during routine working hours at the site (8:00 a.m. to 5:00 p.m.).
- C. All work performed during non-routine work hours shall be coordinated with the Owner.

1.04 CONTRACTORS USE OF PREMISES

- A. Confine operations at site to areas designated by Owner. Close coordination with Owner will be required throughout demolition.
- B. Do not unreasonably encumber site with materials or equipment.
- C. Assume full responsibility for protection and safekeeping of equipment and materials stored on the premises.
- D. Coordinate all uses of the site for work and storage with the Owner.
- E. The Contractor shall designate a Superintendent who will be available at the site at all times when Work is performed.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION 01010

DIVISION 1 - GENERAL REQUIREMENTS
SECTION 01060 - REGULATORY REQUIREMENTS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDE

- A. Contractor shall comply with all applicable relevant and appropriate Laws, Rules and Regulations governing the Work, and with all Federal, State and Local regulations and permit requirements pertaining to water, stormwater, air, soils, solid waste, ACM, and noise pollution during demolition operations.

1.02 RELATED REQUIREMENTS

- A. Specified elsewhere:
1. Section 01010 - Project Summary.
 2. Section 01400 - Quality Control.
 3. Division 2 - Site Work.

1.03 DEFINITIONS & ABBREVIATIONS

- A. Definitions:
1. Codes: Codes are rules, regulations or statutory requirements of government agencies or requirements developed by industry associations.
 2. Standards: Standards are requirements set by authorities, custom or general consent, and established as accepted criteria.

1.04 REGULATORY REQUIREMENTS

- A. Source and requirements:
1. USEPA:
 - a. 1976 Resource Conservation and Recovery Act (RCRA) as amended in 1980 and 1984:
 - 1) Subtitle C - Hazardous Waste Regulations (40 Code of Federal Regulations Parts 260-279).
 - b. Clean Water Act.
 - c. 40 Code of Federal Regulations, Part 61, Subpart M (NESHAP).
 - d. 40 Code of Federal Regulations, Part 763.
 - e. 49 Code of Federal Regulations, Parts 171-180.

2. Illinois Environmental Protection Agency:

- a. Environmental Protection Act.
- b. 77 Illinois Administrative Code, Part 855.

B. All other applicable Codes and Regulations governing the management of hazardous and special wastes.

PART 2 – PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 APPLICATION

A. The Contractor Responsibilities:

1. Obtain all required permits, if any, at their own expense.
2. Provide all necessary containers, vehicles, equipment, labels, and manifests at their own expense.
3. Report spills of waste immediately to the Owner, and implement immediate containment and cleanup action as necessary.
4. Inform the receiving waste facilities and secure the proper waste acceptance certification, and maintain a record documenting the hazardous and non-hazardous determination.
5. Comply with the State manifest system. The Owner will sign as a generator for all special and hazardous wastes.
6. Ensure that hazardous waste shipments are transported by a licensed hazardous waste hauler. The transporter must sign the appropriate portions of the manifest.
7. Ensure that the facilities accepting the waste for disposal or treatment have an EPA or State permit.

END OF SECTION 01060

DIVISION 1 - GENERAL REQUIREMENTS
SECTION 01300 - SUBMITTALS

PART 1 - GENERAL

1.01 WORK INCLUDES

A. Submittal Procedures:

1. Construction progress schedules.
2. Demolition Plan.
3. Project Record Documents.
4. Applications for Payment.

1.02 RELATED REQUIREMENTS

A. Specified elsewhere:

1. Section 01400 - Quality Control.
2. Section 01720 - Project Record Documents.
3. Section 02060 - Building Demolition.
4. Section 02080 - Asbestos Removal.
5. Section 02081 - Hazardous Waste and Special Waste.
6. Section 02220 - Backfilling and Compaction.
7. Attachment B - IDOT Special Provisions for Building Demolition.

1.03 SUBMITTAL PROCEDURES

- A. Transmit each submittal with Owner accepted form.
- B. Sequentially number the transmittal forms. Revise submittals with original number and a sequential alphabetic suffix.
- C. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate.
- D. Apply Contractor's stamp, signed or initialed, certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.
- E. Schedule submittals to expedite the Project, and deliver to Owner at 55 W. Tompkins, Galesburg, IL 61401. Coordinate submission of related items.
- F. For each submittal for review, allow fifteen (15) days excluding delivery time to and from the Owner.

- G. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
- H. Provide space for Contractor and Owner review stamps.
- I. When revised for resubmission, identify all changes made since previous submission.
- J. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.
- K. Submittals not requested will not be recognized or processed.

1.04 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit initial schedule in duplicate within five (5) days after date of Owner-Contractor Agreement.
- B. Revise and resubmit as required.
- C. Submit revised schedules with each Application for Payment, identifying changes since previous version.

1.05 PROJECT RECORD DOCUMENTS

- A. During the course of the project, the Contractor will submit to the Owner the following Project Record Documents:
 - 1. Records showing final destinations or disposal of all hazardous and non-hazardous waste materials, ACM, and demolition debris removed from the commercial properties.
 - 2. Records of all waste hauling operations.
 - 3. Waste acceptance certifications.
 - 4. Records, documents, receipts, etc. verifying disposal method of all waste materials.
 - 5. Copies of all permits (state and local).
- B. Prior to beginning asbestos work, the Contractor will submit to the Owner the following documents:
 - 1. Copy of Asbestos Professional License issued by the Illinois Department of Public Health for the individual designated as the Competent Person.
 - 2. Copy of Asbestos Worker License issued by the Illinois Department of Public Health for all Workers engaged in asbestos work.
 - 3. Copy of medical surveillance records for all workers engaged in asbestos work.

1.06 APPLICATIONS FOR PAYMENT

- A. Pay requests will be submitted monthly and will include a breakdown of the work included under each Pay Item. The breakdown should show the components, with costs, for each Pay Item and show the components or percentages of components that have been completed.
- B. Pay request will clearly delineate additions and deductions resulting from:
 - 1. Change orders.
 - 2. Deductions for uncorrected work.
- C. Pay requests will be accompanied by the following items:
 - 1. A current construction progress schedule.
 - 2. Partial lien waivers for subcontractors, suppliers, and others for Work included in the last monthly payment.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION 01300

DIVISION 1 - GENERAL REQUIREMENTS
SECTION 01400 - QUALITY CONTROL

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

A. Testing:

1. Contractor will cooperate with the Owner to provide samples and access to the demolition site.
2. Inspection and sampling requirements are left to the discretion of the Owner.

1.02 RELATED REQUIREMENTS

A. Specified elsewhere:

1. Division 2 - Site Work.
2. Attachment B - IDOT Special Provisions for Building Demolition.

1.03 CONTRACTOR'S RESPONSIBILITIES - TESTING SERVICES

- A. When field testing is required in individual sections of the Specifications, Contractor shall cooperate with Owner and provide access to the Work.
- B. Provide samples of the materials to be used for preliminary evaluation to the Owner prior to placement.
- C. Furnish verification of compliance with contract requirements for materials and equipment.
- D. Furnish casual labor and facilities:
 1. To provide access to work to be tested.
 2. To obtain and handle samples at site.
 3. To facilitate inspections and tests.
 4. For Owner's exclusive use for storage of test samples.
- E. Notify Owner sufficiently in advance of operations to allow for assignment of test personnel and scheduling of tests and to eliminate delays in the progress of the Work.
- F. Correct work which is defective or which fails to conform to the Contract Documents in accordance with the General Conditions. Corrective work shall not delay the project schedule or the work of other contractors.
- G. Pay all costs of retesting when test results indicate non-compliance with contract requirements.

H. Patch all surfaces and areas disturbed by testing operations.

1.04 CONTRACTOR'S RESPONSIBILITIES – OWNER ACCESS

A. Provide Owner with safe access to various areas of the commercial properties where demolition and/or asbestos abatement activities are underway as requested.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION 01400

DIVISION 1 - GENERAL REQUIREMENTS
SECTION 01522 - PROTECTIVE MEASURES
DURING DEMOLITION

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDE

A. Contractor:

1. Provide and maintain suitable barriers to prevent access of unauthorized personnel into work areas.
2. Provide fire protection and prevention measures in work areas.
3. Institute accident prevention procedures.
4. Maintain haul routes and equipment parking areas.
5. Responsibilities:
 - a. Assume full responsibility for complying with all rules and regulations of all Federal, State and Municipal authorities having jurisdiction, including those of the U.S. Environmental Protection Agency, the Occupational Safety and Health Administration, the Illinois Environmental Protection Agency, the Office of the State Fire Marshal, the Galesburg Fire Department, and the City of Galesburg.
 - b. The requirements outlined hereinafter are to be considered as minimal, and where the requirements of any of the above authorities having jurisdiction conflict with the requirements of this section, the maximum condition shall prevail.
 - c. Any items damaged due to failure to comply with these requirements shall be corrected or replaced to the satisfaction of the Owner without cost to the Owner.
 - d. Assume full responsibility for enforcing compliance with any protective measures indicated in specific sections of the Work.

1.02 RELATED REQUIREMENTS

A. Specified elsewhere:

1. Division 2 - Site Work.
2. Attachment B - Special Provisions for Building Demolition.

PART 2 - PRODUCTS

2.01 TEMPORARY FENCING

- A. The Contractor shall supply temporary fencing around the demolition.
- B. Materials may be new or used, suitable for purpose.

- C. Materials shall be approved by the Owner.

2.02 BARRICADES

- A. Necessary barricades, cones, drums, and lights for the warning and protection of traffic, as required by Sections 107 and 701 through 703 of the Standard Specifications for Road and Bridge Construction.

2.03 SIGNS

- A. "Road Construction Ahead" signs (W20-1(0)-48).
- B. Sign posts must 100 x 100 mm (4 in. x 4 in.) wood posts according to Article 1007.05 of the Standard Specifications. The use of metal posts will not be permitted.

PART 3 - EXECUTION

3.01 FENCING

- A. Barricades with warning flashers (for night use) and signs (for day use) and fencing shall be installed around all demolition areas.
- B. A securely erected "snow fence" shall be provided around all demolition areas during non-working hours. The fence is to be no closer than 10 ft to the limits of any demolition area.

3.02 BARRICADES

- A. The Contractor shall coordinate the items of work in order to keep hazards and traffic inconveniences to a minimum. During demolition at least one (1) lane shall remain open to traffic at all times.
- B. The Contractor shall erect and maintain all necessary barricades, cones, drums, and lights for the warning and protection of traffic, as required by Sections 107 and 701 through 703 of the Standard Specifications of Road and Bridge Construction.
- C. The Contractor shall erect and maintain "Road Construction Ahead" signs (W20-1(0)-48) at both ends of the project and the affected side road.

3.03 FIRE PROTECTION

- A. Contractor shall take all precautions to eliminate possible fire or explosion hazards at the site, including, but not limited to, enforcing the following requirements:
 - 1. Any waste oil shall be stored, handled, and maintained in accordance with the most recent

edition of the Uniform Fire Code and publications developed by the American Petroleum Institute and the National Fire Protection Association, and local, state, or federal regulations, whichever supersedes.

2. All combustible material shall be removed from the site storage areas on a daily basis, including oil rags, empty solvent or paint containers, etc.
 3. All tarpaulins and other covers for stored materials shall be flameproof.
 4. Solvents, paints, thinners, coatings, and other highly flammable materials shall be stored only in well-ventilated areas, and all mixing and preparation shall be restricted to such areas. All such materials shall be handled in accordance with safe practices and the requirements of authorities having jurisdiction.
 5. Containers containing flammable or combustible materials shall remain capped or closed at all times, unless in immediate use.
 6. No open fires on the site.
 7. Avoid storage of large quantities of flammable or combustible materials at the site.
 8. Gasoline may not be stored in any single quantity greater than 5 gallons on the site during any stage of construction.
- B. Provide and maintain at least one (1) fire extinguisher station on the site in a designated location within the Contract Limits. Additional fire extinguishers shall be furnished in each enclosed area used for storage. Each fire extinguisher station shall be located so as to be easily accessible while providing minimum interferences with operations, and shall contain one (1) standard UL listed, 10 pound, BC rated carbon-dioxide unit. Contractor shall check units frequently to maintain them in operable condition.
- C. Welding and flame cutting will be allowed only upon authority of the Owner. All such equipment, when used, shall be kept in a safe and functional condition and be of a type which will minimize hazards. Great care must be exercised in the use of the tools near adjacent properties.

3.04 ACCIDENT PREVENTION AND PROCEDURES

- A. Site Safety will be the Contractor's responsibility:
1. Safety responsibility will include supply and use of approved ventilation equipment, personal protection equipment, fire extinguishers, combustible gas/oxygen indicators, storage of hazardous materials, and other safety equipment required to complete the Work.
 2. All safety equipment will be stored in designated storage areas, and will be maintained in proper working order.
- B. Buried and aboveground utility location, identification, and marking are the sole responsibility of the Contractor. Utility locations must be cleared by the utility companies and the Owner. Rerouting, disconnection, protection, etc. of any utilities must be coordinated between the Contractor, utility company, and Owner. Site safety, including the avoidance of hazards associated with buried and aboveground utilities, remains the sole responsibility of the Contractor.
- C. Promptly report in writing to the Owner all accidents which cause death, personal injury, or property damages, arising out of or in connection with the performance of the Work, whether on or adjacent to the site. Where death, serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger to the Owner.

- D. If any claim is made by anyone against the Contractor or any subcontractor on account of any accident, promptly report the facts in writing to the Owner, giving full details of the claim.

3.05 HAUL ROUTES AND EQUIPMENT PARKING AREAS

- A. The Contractor will use only the haul routes and equipment parking areas designated during the preconstruction meeting. Contractor's personnel and equipment shall remain inside the designated routes and areas. The Contractor will restore haul routes and equipment parking areas upon completion of the project.

END OF SECTION 01522

DIVISION 1 - GENERAL REQUIREMENTS
SECTION 01710 - FINAL CLEANING

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDE

- A. The work in this section is required of the Contractor and all subcontractors unless otherwise specified:
1. Maintain premises and adjacent properties free of waste, debris and rubbish caused by project operations.
 2. Maintain pavements and sidewalks on premises, adjacent properties, and public roads free from mud and soil accumulations caused by project operations.
 3. Upon project completion, or at such other times as directed by the Owner, remove all waste, debris, rubbish, tools, equipment, machinery and surplus materials. Clean all exposed surfaces; leave work area clean and ready for occupancy.

1.02 RELATED REQUIREMENTS

- A. Specified elsewhere:
1. Section 01010 - Project Summary.

1.03 SAFETY REQUIREMENTS

- A. Standards: Maintain project in accordance with the following safety and insurance standards:
1. Applicable Federal and State requirements.
 2. National Fire Protection Association (NFPA).
- B. Hazards Control:
1. Prevent accumulation of wastes which create hazardous conditions.
- C. Conduct cleaning and disposal operations to comply with applicable Federal and State anti-pollution laws:
1. Do not burn or bury rubbish and waste materials on project site.
 2. Do not dispose of wastes into streams, waterways, their tributaries or shorelines.

PART 2 – PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 DURING PROJECT

- A. Execute cleaning to ensure that grounds and adjacent properties are maintained free of waste, debris and rubbish. Maintain pavement and sidewalks free of mud and soil accumulations.
- B. Provide on-site containers for collection of waste materials, debris and rubbish as required, and properly dispose of same.

3.02 FINAL CLEANING

- A. Employ experienced workmen for final cleaning.
- B. Maintain finally cleaned areas until project, or designated portion thereof, is accepted by Owner.

END OF SECTION 01710

DIVISION 1 - GENERAL REQUIREMENTS
SECTION 01720 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.01 WORK INCLUDES

- A. Contractor submittals (as a minimum): On or before the date of final observation the Contractor will submit to Owner the following Project Record Documents, which the Contractor will have accumulated and retained during the course of the project:
1. Records showing final destinations or disposal of all hazardous and non-hazardous waste materials, ACM, demolition debris, and salvageable items removed from the site.
 2. Waste acceptance certifications.
 3. Records of all waste hauling operations.
 4. Records, documents, receipts, etc. verifying disposal method of all waste materials, demolition debris, and salvageable items.
 5. Copies of all permits (state and local).
 6. Photographed documentation of work in progress.
 7. Written Project Warranty (one (1) year).
 8. Contractor's daily work logs.
 9. Drawings showing actual locations of capped utilities, subsurface obstructions, and portions of the structure and foundations to remain, with actual dimensions from buildings and burial depth (related to building finish floor). Drawings to be 8.5" x 11" or 11" x 17" in size.
 10. Names, addresses, and phone numbers of subcontractors involved during demolition.

1.02 RELATED REQUIREMENTS

- A. Specified elsewhere:
1. Section 01010 - Project Summary.
 2. Section 01400 - Quality Control.
 3. Division 2 - Site Work.
 4. Attachment B - IDOT Special Provisions for Building Demolition.

1.03 RECORDING

- A. Label each document "PROJECT RECORD DOCUMENTS."
- B. Keep record documents current.
- C. Do not permanently conceal any work until required information has been recorded.
- D. Documents: Legibly mark to record actual construction:

1. Field changes of dimension and detail.
2. Changes made by change order.
3. Details not on original contract drawings.

E. Specifications and addenda: Legibly mark up each section to record:

1. Changes made by change order or field order.
2. Other matters not originally specified.

1.04 SUBMITTALS

A. At completion of project, deliver Project Record Documents to Owner.

B. Accompany submittal with transmittal letter, in duplicate, containing:

1. Date.
2. Project title and number.
3. Contractor's name and address.
4. Title of each record document.
5. Certification that each document as submitted is complete and accurate.
6. Signature of Contractor, or their authorized representative.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END SECTION 01720

DIVISION 2 - SITE WORK
SECTION 02060 - BUILDING DEMOLITION

PART 1 - GENERAL

1.01 PROJECT INCLUDES

- A. Demolition of one (1) commercial building identified as 311 East Water Street and two (2) residential properties identified as 370 East North Street and 364 North Seminary Street. Removal and disposal of building contents and demolition debris. A site plan identifying the proposed buildings to be demolished is included in Attachment A.
- B. Removal and disposal of identified ACM as detailed in Attachment B - IDOT Special Provisions for Building Demolition.
- C. Removal and disposal of hazardous and special waste materials.
- D. Demolition and removal of buildings and structures; footings and foundation of the commercial building at 311 East Water Street and the residential property at 364 North Seminary Street are to be removed entirely; footings and foundations 4 ft. below finished grade will remain in place for the residential property at 370 East North Street. Bid will also include providing, placing, and compacting cohesive material and CA-6 used for backfill.
- E. Removal of existing site appurtenances, including but not limited to, sheds, garages, driveways, parking areas, private sidewalks, trees, shrubs, and existing fence.
- F. Protect nearby facilities, including public sidewalks.
- H. Removal and disposal of rubbish and debris resulting from own demolition operations.
- I. Provide protection for utilities that are to remain.
- J. Identification, disconnection, and capping of associated building and residential utilities.
- K. Signs as detailed in Attachment B - IDOT Special Provisions for Building Demolition.

1.02 RELATED REQUIREMENTS

- A. Specified elsewhere:
 - 1. Section 01300 - Submittals.
 - 2. Section 01522 - Protective Measures During Demolition.
 - 3. Section 01720 - Project Record Documents.
 - 4. Section 02080 - Asbestos Removal.
 - 5. Section 02081 - Hazardous Waste and Special Waste.
 - 6. Section 02218 - Excavation and Rough Grading.
 - 7. Section 02220 - Backfilling and Compaction.
 - 8. Attachment B - IDOT Special Provisions for Building Demolition.

1.03 APPLICABLE CODES AND PUBLICATIONS

- A. The Contractor shall comply with all codes and regulations including but not limited to the following:
 - 1. The BOCA National Building Code 2006.
 - 2. ANSI/ASSE A10.6 "Safety Requirements for Demolition Operations."
 - 3. National Association of Demolition Contractors "Demolition Safety Manual."
 - 4. OSHA Safety and Health Standards, 29 CFR 1926, Subpart T, "Demolition."

1.04 SUBMITTALS

- A. Demolition Plan: Indicate demolition and removal sequence and location of salvageable items; location of special and hazardous wastes; location and construction of fences, barricades, and temporary work. The Contractor shall submit a complete demolition plan to the Engineer detailing procedures and sequence for removing the entire structure including all features necessary to remove the structure in a safe and controlled manner to ensure stability of the structure at any given time. The structure shall be able to support its self-weight, lateral loads, debris, and any other demolition related loads as parts of the structure are demolished and no longer contribute to capacity. Elements of the structure made unstable by the demolition process prior to their removal shall be braced until they can be removed. The demolition plan shall consist of the following: the demolition sequence for the entire contract; staging of demolition; equipment locations; any required temporary support shoring; and details and locations of shields or other protective measures in sufficient numbers to assure that people and property will not be endangered.

Engineered demolition shall be required if an operator is on a structure, or within the collapse envelope of the structure, to be demolished. The Contractor shall submit to the Engineer additional working drawings (including engineering calculations) for the proposed demolition plan if an operator is on the structure or within the collapse envelope of the structure. The demolition plan shall be prepared by a licensed Structural Engineer with a current license in the State of Illinois. The engineer who prepares and seals the demolition plan will be considered the Engineer of Record. The engineering calculations shall be adequate to demonstrate the stability of the structure during all stages of the removal operation if an operator is on the structure or within the collapse envelope of the structure.

- B. Records of waste hauling operations and disposal for ACM, hazardous wastes, non-hazardous wastes, demolition debris, and salvageable items.

1.05 PROJECT RECORD DOCUMENTS

- A. Submit under provisions of Section 01720.
- B. Accurately record actual locations of capped utilities, subsurface obstructions, and portions of the structure and foundations to remain.

1.06 QUALIFICATIONS

- A. Demolition Firm: Company specializing in performing the Work of this Section.

1.07 REGULATORY REQUIREMENTS

- A. Conform to applicable codes for demolition of structures, safety of adjacent structures, dust control, vibration control, runoff control and disposal.
- B. Obtain required permits from authorities in accordance with Section 01060.
- C. Notify affected utility companies before starting work and comply with their requirements.
- D. Closure or obstruction of roadways shall be condition in accordance with Section 01522 and approved by Owner in advance.
- E. Notify Owner and conform to applicable regulatory procedures when hazardous or contaminated materials discovered.

PART 2 - PRODUCTS

2.01 FILL MATERIALS

- A. Fill Material: As specified in Section 02220.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Provide, erect, and maintain temporary barriers and security devices at locations indicated in accordance with Section 01522.
- B. Protect existing structures and utilities that are not to be demolished.
- C. Mark location of utilities that are not be demolished.

3.02 DEMOLITION REQUIREMENTS

- A. Contractor shall verify that ACM to be abated have in fact been removed prior to the onset of building demolition.
- B. Remove all hazardous and special waste materials from the one (1) commercial building and two (2) residential properties prior to the onset of demolition in accordance with Section 02081 – Hazardous Waste and Special Waste.

- C. Remove salvageable items for Contractor's reuse or sale prior to starting demolition activities.
- D. Disconnect and cap all utilities from the one (1) commercial building and two (2) residential properties as directed by utility owner. Should the contractor encounter previously unknown utilities on the site he shall proceed in accordance with the Owner's direction.
- E. Utility services to the one (1) commercial building and two (2) residential properties to be demolished are to be uncovered at the back of the curb stop, the service line cut, and capped.
- F. Wet building area to be demolished with water to minimize dust. Provide hoses and water connections for this purpose.

3.03 DEMOLITION

- A. All structures are to be demolished in a safe and controlled manner.
- B. Remove concrete slabs on grade, foundation walls, and footings of buildings to be demolished. Basement walls and floors, foundations and footings will be entirely removed at the commercial building at 311 East Water Street, and the residential building at 364 North Seminary Street. Footing and foundation removal at the residential property at 370 East North Street shall be to 4 ft below existing grade. Remaining basement floors shall be broken to allow drainage.
- C. Protect nearby buildings, structures and utilities throughout demolition activities.
- D. Backfill areas excavated as a result of demolition in accordance with Section 02220.
- E. Rough grade and compact areas affected by demolition to maintain site drainage in accordance with Section 02220.

3.04 REMOVAL AND DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolished materials from site.
- B. Do not burn or bury materials on site. Leave site in clean condition.
- C. Demolition debris or waste shall either be disposed of in a licensed landfill, or recycled, reused, or otherwise disposed of as allowed by State or Federal solid waste disposal laws and regulations and solid waste determinations of the Illinois Environmental Protection Agency (IEPA) and approved by the Owner.
- D. The Contractor shall provide to the Owner a network of City streets that will be used during the project by the Contractor, his Subcontractors, or material suppliers. The Owner and Contractor shall both examine the roads and streets to be used during construction, noting any areas of concern before construction starts.

- E. It will be the responsibility of the Contractor to insure that his subcontractors utilize only the designated roadways in their project related haul movements. Unless otherwise permitted by the agency having jurisdiction over the designated roadway, the roadway shall be restricted to legal weight and size loads.

END OF SECTION 02060

DIVISION 2 - SITE WORK
SECTION 02080 - ASBESTOS REMOVAL

PART 1 - GENERAL

1.01 WORK INCLUDES

- A. The Contractor shall furnish all labor, materials, equipment and services necessary for the proper execution of removal, disposal, and protection required for removal of Asbestos Containing Materials (ACM) identified in the 3 properties to be demolished. Asbestos survey results for the 3 properties, included in Attachment C, are summarized as follows:
1. Removal and disposal of **Duct Wrap and Seam Tape** located in the building located at 364 North Seminary Street. Details concerning the duct wrap and seam tape are listed in the asbestos survey.
 2. Removal and disposal of **Drywall Texture Coat** located in the ceiling throughout the building at 311 East Water Street (3,200 square feet). Details concerning the drywall texture coat are included in the asbestos survey.
 3. Removal and disposal of **Sheet Flooring** located in the east and west bedrooms on the 3rd floor in the building located at 364 North Seminary Street. Details concerning the sheet flooring are included in the asbestos survey.
 4. Removal and disposal of **Window Glazing** in thirteen windows of the building located at 364 North Seminary Street. Details concerning the window glazing are included in the asbestos survey.

1.02 RELATED REQUIREMENTS

- A. Specified elsewhere:
1. 01010 - Project Summary.
 2. 01300 - Submittals.
 3. 01522 - Protective Measures During Demolition.
 4. Attachment B - IDOT Special Provisions for Building Demolition.

1.03 REFERENCED STANDARDS

- A. National Emission Standards for Hazardous Air Pollutants (NESHAPS) 40 CFR Part 61 Subpart M.
- B. OSHA Construction Standard 29 CFR 1926.1101.
- C. Asbestos Abatement Public and Private Schools and Commercial and Public Buildings in Illinois 77 IAC Part 855.
- D. Asbestos -- Necessary and Practicable Safeguards 35 IAC 228.141.

1.04 DEFINITIONS

- A. Asbestos-Containing Building Materials (ACBM) means surfacing ACM, thermal system insulation ACM, or miscellaneous ACM that is found in or on interior structural members.
- B. Category I Non-friable ACM means asbestos-containing packing, gaskets, resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos as determined using Polarized Light Microscopy (PLM).
- C. Category II Non-friable ACM means any material, excluding Category I non-friable ACM, containing more than 1 percent asbestos as determined by PLM.
- D. Friable Asbestos Material means any material containing more than 1 percent asbestos as determined by PLM that can be crumbled, pulverized, or reduced to powder by hand pressure.
- E. Regulated Asbestos-Containing Material (RACM) means friable asbestos material; Category I non-friable ACM that has become friable; Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting or abrading; Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act as the material in the course of demolition or renovation operations.

1.05 HANDLING OF ACM

- A. Asbestos-Containing Surfacing Material: Removal of asbestos-containing surfacing material is considered a Class I asbestos work operation.
- B. Asbestos-Containing Thermal System Insulation: Removal of thermal system insulation is considered a Class I asbestos work operation.
- C. Asbestos-Containing, Floor Sheeting: Removal of asbestos-containing floor sheeting is considered to be a Class I asbestos work operation.
- D. Asbestos-Containing Caulking: Asbestos-containing caulking around window panes and exterior windows is considered Category I non-friable material, Removal of the windows including all caulking is considered to be Class II asbestos work. The windows including all caulk must be removed separately from the building.

1.06 SUBMITTALS

- A. Copy of Asbestos Professional License issued by the Illinois Department of Public Health for the individual designated as the Competent Person.
- B. Copy of Asbestos Worker License issued by the Illinois Department of Public Health for all workers engaged in asbestos work.
- C. Copy of medical surveillance records for all workers engaged in asbestos work.
- D. Plan for Negative Pressure Enclosures to be used during asbestos abatement activities.

- E. Waste manifests and landfill receipts.

PART 2 – PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 GENERAL WORK PRACTICES FOR ASBESTOS ABATEMENT

- A. All Asbestos abatement activities shall be conducted in accordance with Attachment B - IDOT Special Provisions for Building Demolition.

3.02 TRANSPORT AND DISPOSAL OF ASBESTOS

- A. All asbestos-containing waste generated in Project shall be collected and transported in a lined roll-off box with locking access. The asbestos-containing waste shall be disposed of at a landfill licensed to accept the waste that is approved by the Owner.

END OF SECTION 02080

DIVISION 2 – SITE WORK
SECTION 02081 – HAZARDOUS WASTE AND
SPECIAL WASTE

PART 1 - GENERAL

1.01 WORK INCLUDES

A. Collection, staging, and disposal of hazardous waste and special waste including, but not limited to:

- White goods (refrigerators, dishwasher, water heaters, humidifiers, dehumidifiers)
- Central air conditioning unit and window air conditioner
- Furnaces
- Electronics (televisions, stereos, microwaves)
- Batteries (12-volt car battery, smoke detectors)
- Fluorescent ballasts (likely to contain PCBs)
- Fluorescent light bulbs
- Mercury switches (thermostats with mercury component)
- Tires
- Compressed gas (compressed propane tanks, spray paint, aerosol Raid insect control)
- Paint, stain (5-gallon paint containers, 1-gallon paint containers, quart paint containers, quart oil stain)
- Adhesives (5-gallon carpet adhesive)
- Fuel (1-gallon gas cans)
- Oil, Transmission Fluid (≤ 1 quart size containers of oil, 1-gallon antifreeze)
- Miscellaneous Cleaning Supplies (Clorox bleach, toilet bowl cleaner, oven cleaner, etc.)

See Attachment D for a list of specific items observed in each of the three (3) structures to be demolished. Quantities presented in Attachment D are only approximations. The Contractor is responsible to identify and dispose of all materials remaining in structures at the bid price even if quantities are different than those presented.

The residential properties of 370 East North Street and 364 North Seminary Street were inhabited at the time the hazardous waste surveys were conducted. Therefore, some of the listed materials may still be removed by the residents prior to demolition activities.

- B. Packaging, labeling, and preparing manifests for waste transport.
- C. Transport and disposal of all hazardous waste and special waste.

1.02 RELATED REQUIREMENTS

A. Specified elsewhere:

1. Section 02060 - Building Demolition.
2. Section 02080 - Asbestos Removal.

3. Attachment B - IDOT Special Provisions for Building Demolition.

1.03 HANDLING OF HAZARDOUS AND SPECIAL WASTES

- A. Hazardous and special components shall be collected from the structures prior to demolition and staged in a secure area.
- B. Refrigerants shall be recovered from refrigeration and air conditioning units by a HVAC professional.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.01 HAZARDOUS WASTES

- A. Contractor shall collect and stage all hazardous wastes listed in paragraph 1.01A for Owner inspection.
- B. Contractor shall notify Owner of discovery of any other components that may be classified as hazardous waste (e.g., oil-containing electrical equipment, unknown chemicals, etc.).
- C. Prepare waste acceptance certification(s) for disposal.
- D. Package, label, and prepare manifest(s) for transport of the hazardous waste. (Owner will sign manifest as generator.)
- E. Transport and disposal of hazardous wastes shall be coordinated through Disposal Company approved by Owner.

3.02 SPECIAL WASTES

- A. Prepare waste acceptance certification(s) for disposal.
- B. Label and prepare manifest(s) for transport of waste if needed. (Owner will sign manifest as generator.)

1.03 SALVAGEABLE ITEMS

- A. Obtain a receipt to document sale of salvageable items.

END OF SECTION 02081

DIVISION 2 - SITE WORK
SECTION 02218 - EXCAVATION AND ROUGH
GRADING

PART 1 - GENERAL

1.01 WORK INCLUDES

- A. Strip 4 in. of existing topsoil and stockpile on-site.
- B. Excavate soils as required to remove building footings, and utilities.
- C. Removal of existing site appurtenances, including but not limited to, sheds, garages, driveways, parking areas, sidewalks, trees, shrubs, and existing fence. Trees to be removed are identified on the Demolition Contract Site Plan Sheet included as Attachment A.
- D. Remove all abandoned and active underground and aboveground utility lines associated with the buildings to be demolished.
- E. Stockpile excavated soils on site.
- F. Cut, grade, fill, and rough contour the site in accordance with construction plans.
- G. Protect portions of underground and aboveground utility lines which are to remain within excavated areas.
- H. Protect excavations.

1.02 RELATED WORK

- A. Specified elsewhere:
 - 1. Section 02100 - Site Preparation.
 - 2. Section 02220 - Backfilling and Compaction.

1.03 QUALITY ASSURANCE

- A. Perform all work in accordance with latest version of governing Codes and Regulations.

1.04 PROTECTION

- A. Protect trees, shrubs, lawns, areas to receive seeding and other features to remain.
- B. Protect bench marks, valves, piping, existing structures, retaining walls, fencing, roads, sidewalks, and paving which are designated to remain in place, against damage from equipment and vehicular or foot traffic.
- C. Protect excavations by shoring, bracing, sheet piling, underpinning, laying back slopes, or other methods, to prevent cave-ins or loose dirt from falling into excavations.
- D. Underpin adjacent structures which may be damaged by excavation work, including power poles and lighting.
- E. Promptly notify Owner immediately of unexpected conditions that may prohibit or delay progress of the Work. Discontinue work in area until Owner issues written notification to resume work. Confirm reception of notification in writing.
- F. Grade around excavation to prevent surface water runoff into excavated area.
- G. All material excavated and piled adjacent to the construction area shall be piled and maintained so that the toe of the slope is at least 2 ft from the edge of the excavation. Excavated material designated in the plans to be stockpiled for backfilling shall be piled in the location shown in the plans. All stockpiled material must be adequately contained so that the material is not washed or blown on adjacent paved and grassed areas or into water courses. Do not stockpile material where it will interfere with Owner's activities at the site.
- H. Excavated material not authorized for any on-site use by the Owner shall be removed from the project site by the Contractor and disposed of in a manner acceptable to Owner. This includes broken pavement, concrete chunks, asphaltic concrete, utility piping, conduits and other miscellaneous debris.

PART 2 – PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 PREPARATION AND LAYOUT

- A. Establish extent of excavated area by area and elevation. Designate and identify data elevation.
- B. Set specified lines and levels.
- C. Maintain bench marks, monuments, and other reference points.

3.02 UTILITIES

- A. Buried and aboveground utility location, identification, and marking are the sole responsibility of the contractor. Rerouting, disconnection, protection, etc. of any utilities must be coordinated between the contractor, utility company, and owner. Site safety, including the avoidance of hazards associated with buried and aboveground utilities, remains the sole responsibility of the contractor.
- B. Notify utility companies to remove lines for which they are responsible.
- C. Maintain, reroute, or extend existing utility lines which pass through work area and are to remain in service.
- D. Protect utility services uncovered by excavation that are to remain in place.
- E. Remove abandoned utility service lines from site; cap, plug, or seal service lines that are to remain in place.
- F. Accurately locate and record abandoned and active utility lines rerouted or extended, on Project Record Documents in accordance with Section 01720.

3.03 EXCAVATION

- A. Stockpile excavated topsoil and subsoil for reuse.
- B. Excavate subsoil in accordance with lines and levels established for the Work.
- C. Where existing pavement interferes with excavation, saw cut and remove pavement and granular base materials from the site. The pavement shall be removed a minimum of 2 ft beyond the perimeter of the excavation in such a manner that 2 ft of stable well-compacted granular base material is exposed.
- D. Perform additional excavation only by Owner's written authorization.
- E. Trim excavations and keep free from loose or organic matter.
- F. Correct unauthorized excavation in accordance with Engineer's written directions.
- G. Excavations shall not interfere within normal 45 degree bearing splay of any remaining foundation.
- H. Owner shall establish limits for the excavated area.

3.04 SHORING AND EXCAVATION SAFETY

- A. The Contractor shall provide all materials, labor, and equipment necessary to shore the excavation to protect the work, existing property, utilities, pavement, etc., and to provide safe working conditions in the excavation. Safety provisions shall be consistent with OSHA and

other applicable local, state or federal safety Codes or Regulations.

- B. Damages resulting from improper shoring or failure to shore shall be the sole responsibility of the Contractor.

END OF SECTION 02218

DIVISION 2 - SITE WORK
SECTION 02220 - BACKFILLING AND
COMPACTION

PART 1 - GENERAL

1.01 WORK INCLUDES

- A. Place and compact fills to rough grade elevations.
- B. Backfill in areas where impacted soils are identified will not proceed until directed by the Engineer.

1.02 RELATED WORK

- A. Specified elsewhere:
 - 1. 01010 - Project Summary.
 - 2. 01400 - Quality Control.
 - 3. 02060 - Building Demolition.
 - 4. 02100 - Site Preparation.
 - 5. 02218 - Excavation and Rough Grading.

1.03 SITE COMPACTION TESTING

- A. Testing of compacted fill materials will be performed by the Engineer and paid for by the Owner. Testing will be performed in manner to least encumber performance of work.
- B. When work, or portions of work, are completed, notify the Owner (at least twenty-four (24) hours in advance) to perform density tests. Do not proceed with additional portions of work until satisfactory results have been verified in writing.
- C. When, during progress of work, tests indicate that compacted materials do not meet specifications, remove defective work, replace and retest, as directed by Engineer. Contractor shall pay for all additional tests when initial tests show nonconformance work.
- D. Document that all compacted fills are tested before proceeding with placement of each lift of backfill and of surface materials.

1.04 PROTECTION

- A. Protect bench marks, existing structures, roads, sidewalks, and paving to remain in place against damage from equipment and vehicular or foot traffic.
- B. Notify Owner immediately of unexpected subsurface conditions and discontinue work in area until Owner issues written notification to resume work. Confirm notification in writing.

1.05 SUBMITTALS

- A. Cooperate with Owner in collection of samples of all backfill material for testing at least seventy-two (72) hours in advance of material placement.

PART 2 - PRODUCTS

2.01 FILL MATERIALS

- A. FA-2.
- B. CA-6.
- C. Locally obtained cohesive material.

2.02 EQUIPMENT

- A. Equipment used for mechanical compaction of the embankment shall be approved by the Owner, and shall be capable of producing the compaction densities specified herein.

PART 3 - EXECUTION

3.01 PREPARATION & LAYOUT

- A. Using the plans as shown, establish extent of backfilled areas by area and elevation. Designate and identify data elevation.
- B. Set specified lines and levels.
- C. Maintain bench marks, monuments and other reference points.

3.02 UTILITIES

- A. Maintain existing utility lines to remain which pass through work area.
- B. Protect utility services during backfilling and compaction.

3.03 BACKFILLING AND COMPACTION

- A. Sand having a FA-2 gradation will be used for backfilling areas of limited access (i.e., trenches having a width of 3 ft or less). A sample of the FA-2 proposed as backfill will be submitted to the Owner for approval prior to import to the site.

- B. Stone having a CA-6 gradation will be used for backfilling basement areas between 4 ft below final grade and final grade. A sample of the CA-6 proposed as backfill will be submitted to the Owner for approval prior to import to the site.
- C. Local cohesive material, obtained and transported by the contractor, shall be used for backfilling excavated areas up to 4 ft. below final grade. A sample of the cohesive material proposed as backfill will be submitted to the Owner for approval prior to import to the site.
- D. Mechanical Compaction: If the embankment or backfill depth is 3 ft or less, all lifts of material shall be compacted to 95 percent of the Standard Laboratory Density being the maximum dry density as determined by the Standard Proctor Compaction Test (ASTM D698). Embankment or backfill depths that are more than 3 ft shall be compacted to not less than 90 percent of the Standard Laboratory Density.
- E. Moisture Control: Prior to and during compaction operations the material in each layer shall have a moisture content of between a -2 percent and plus +3 percent greater than the optimum moisture content as determined by the Standard Proctor Compaction Test (ASTM D698). If the moisture content of embankment materials as placed is less than herein specified or required for compaction, then application of water for this purpose shall be done as required by sprinkling on the earth fill. The Contractor shall provide the necessary equipment with controls, devices or meters to accurately measure and apply water as required. If the moisture content of materials as placed is greater than that herein specified before compacting then the moisture content shall be reduced to within the limits specified above. The Contractor shall perform any or all work as may be necessary to aerate or otherwise dry the backfill materials to the required moisture content. No compacting shall be done until this has been accomplished.
- F. The general backfill shall be constructed in uniform layers not to exceed 8 in. in thickness, measured in the loose condition. Each layer of material shall extend for the entire length and width, be true to plan contours or guides and thoroughly compacted before the next layer is started. The backfill materials shall be leveled, and raked to break down oversized clods and to thoroughly mix the different soils or to obtain a uniform moisture content.
- G. All areas of limited access shall be built in continuous horizontal layers not more than 4 in. in thickness, loose measurement, and each layer shall be thoroughly compacted with a mechanical hand tamper weighing not less than twenty (20) pounds and having a tamping face not larger than 6 in. by 6 in. No extra compensation will be paid for hand compaction, but it will be considered incidental to the item of work being accomplished.
- H. Testing: The compacted density of each fill layer will be tested as determined by the Owner before the next layer of fill is placed. If the density is below that specified, then that layer shall receive additional compaction until the required density is achieved. The top of each layer of fill shall be lightly raked prior to the placement of the next layer of fill so as to assure a good bond between successive layers of fill. If the surface of a completed layer of fill becomes dry, then that surface shall be moistened and raked prior to the placement of the next layer of fill. The Contractor shall maintain the slopes in a manner satisfactory to the Engineer until the final completion and acceptance of all work under this contract.

END OF SECTION 02220

DIVISION 2 - SITE WORK
SECTION 02936 - SEEDING AND MULCHING

PART 1 - GENERAL

1.01 WORK INCLUDES

- A. Temporary seeding and mulching of disturbed areas resulting from the demolition activities.

1.02 RELATED REQUIREMENTS

- A. Specified elsewhere:
 - 1. Section 01300 - Submittals

1.03 REFERENCED STANDARDS

- A. Illinois Department of Transportation (IDOT): Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and Supplemental Specifications adopted January 1, 2011.

1.04 SPECIFICATIONS

- A. Work shall conform to the applicable requirements of Sections 250 and 251 of the IDOT Standard Specifications for Road and Bridge Construction and to the requirements hereinafter specified.
- B. Exceptions: All references in the IDOT specifications to methods of measurement and payment shall not apply.

1.05 WARRANTY

- A. Warranty for one (1) year plus one growing season from date of demolition completion shall be provided.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Temporary Erosion Control Seeding. Seeds shall consist of Oats from March 1 to July 31, and Winter Wheat from August 1 to November 15. Seed shall be delivered to the job site in unopened, labeled bags. A certification from the supplier stating the weight (mass) and contents of the bag shall be printed on or attached to each bag along with a certification stating

that the seed meets the requirements of Article 1081.04(c) of the IDOT Standard Specifications.

- B. Mulch material: Mulch material shall conform to Article 1081.06 of the IDOT Standard Specifications.

PART 3 - EXECUTION

3.01 CONSTRUCTION

- A. Seeding should be completed in all erodible/bare areas to minimize the amount of exposed surface area. Seed bed preparation will not be required in the soil is in a loose condition. Light disking shall be done if the soil is hard packed or caked.
- B. Seed shall be applied by hand broadcasting to achieve a reasonably uniform coverage at a rate of 100/lb/acre. Seed shall be applied to all bare areas every seven days, regardless of weather conditions or progress of work. The Owner may require that critical locations be seeded immediately and the Contractor shall seed these areas within 48 hours of such a directive.
- C. Areas identified to be temporarily seeded and mulched by Method 1 on the Demolition Contract Site Plan Sheet must be completed when necessary.

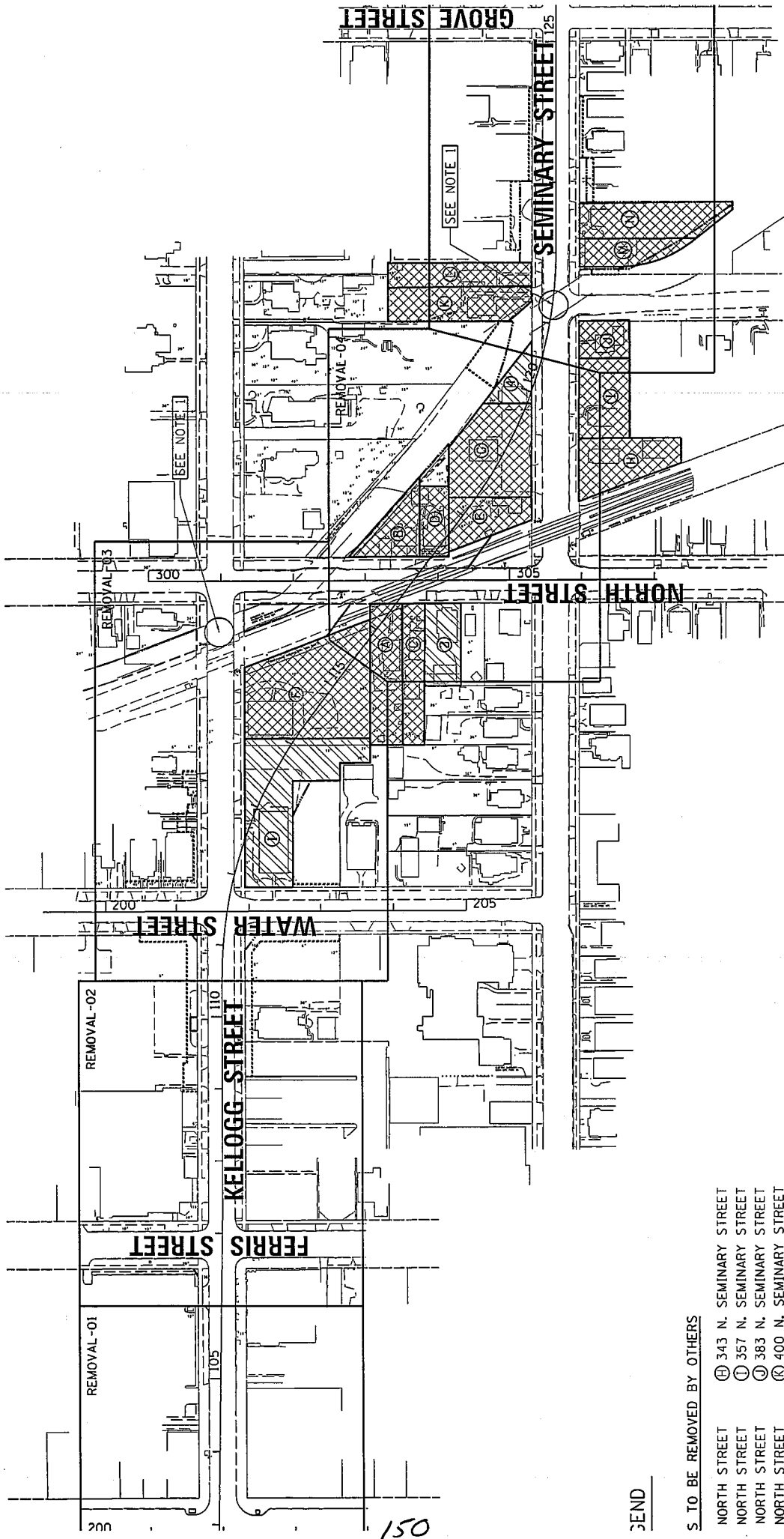
3.02 MAINTENANCE OF COMPLETED WORK

- A. All areas seeded and mulched shall be maintained by the Contractor during the period between the completion of such work and final completion of the project and with acceptance of the Contractor's work by the Owner. The maintenance shall be such that the completed work, at time of acceptance, complies in all aspects with the requirements herein specified.
- B. The areas seeded will be required to germinate. If the seed does not germinate, the Contractor will be required to regrade and reseed at no additional cost to the Owner.

END OF SECTION 02936

ATTACHMENT A

SITE PLAN OF BULDINGS TO BE DEMOLISHED



SEND

S. TO BE REMOVED BY OTHERS

- Ⓐ 343 N. SEMINARY STREET
- Ⓑ 357 N. SEMINARY STREET
- Ⓒ 383 N. SEMINARY STREET
- Ⓓ 400 N. SEMINARY STREET
- Ⓔ 410 N. SEMINARY STREET
- Ⓕ 413 N. SEMINARY STREET
- Ⓖ 427 N. SEMINARY STREET

IS TO BE REMOVED WITH THIS CONTRACT
ADDRESS
PAY ITEM

311 EAST WATER STREET

Table 1
Summary of Homogeneous Areas Sampled
by Hermann and Associates LLC

Site Address: 311 E Water St, Galesburg, IL Inspector: Steve Happ (IDPH license #100-00399)

Sample ID	Location/Description	Quantity	Asbestos Containing Material? (Y/N)	Asbestos Content	F - (Friable, RACM), NF-I (Non-friable, Category I) NF-II (Non-friable, Category II)
MMA 1 - 3	Drywall Texture Coat - located on ceilings throughout the building	3,200 Sq Ft	YES	PLM Point Count 1.5% Chrysotile	F
MDA - 1	Drywall and Joint Compound - located on ceilings throughout and walls of bathrooms and office walls		NO	PLM point Count 0.75% Chrysotile	
MFA 1 - 2	Sheet Flooring - tan color with 6" square pattern, located in south bathroom		NO		
MFB 1 - 2	Sheet Flooring - tan color with 9" square pattern, located in north bathroom		NO		
MMB 1 - 3	Carpet Mastic - located in office area		NO		
MCA 1 - 3	Ceiling Tile - 1x2 nailed-on type, located on 1st floor bathroom		NO		
MMC 1 - 2	Roof Shingles - brown color, located on roof of building		NO		
MMD 1 - 3	Roof Shingles - white color, located on roof of building under MCC shingles		NO		

Note: Quantities are estimated and contractor should verify quantities prior to bidding.

Sample MDA - 1 was further analyzed by PLM Point Count and results were less than 1% .

EPA NESHAP Regulations defines asbestos containing materials as any material that contains more than 1% asbestos.



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EMSL Order: 261302173
CustomerID: HERM62
CustomerPO:
ProjectID:

Attn: **Steve Happ**
Hermann & Associates,LL C
4603 North Galena Road
Peoria Heights, IL 61616

Phone: (309) 687-5566
Fax: (309) 687-0571
Received: 04/05/13 9:37 AM
Analysis Date: 4/12/2013
Collected:

Project: 311 E. Water St Galesburg, IL

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
MDA 1 261302173-0001		White Non-Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (other)	<1% Chrysotile
Composite analysis of Drywall, Tape, and Joint Compound.					
MDA 2 261302173-0002		White Non-Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (other)	None Detected
Composite analysis of Drywall, Tape, and Joint Compound.					
MDA 3 261302173-0003		White Non-Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (other)	None Detected
Composite analysis of Drywall, Tape, and Joint Compound.					
MFA 1 261302173-0004		White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MFA 2 261302173-0005		White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MFB 1 261302173-0006		White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MFB 2 261302173-0007		White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)
Dahlia Zyhowski (9)
Nick Neu (6)

James Hahn, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc, Chicago, IL NVLAP Lab Code 200399-0

Initial report from 04/12/2013 09:10:32



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Fax: (309) 687-0571
Received: 04/05/13 9:37 AM
Analysis Date: 4/12/2013
Collected:

Project: 311 E. Water St Galesburg, IL

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
MMA 1 261302173-0008		White Non-Fibrous Heterogeneous	3% Wollastonite	95% Non-fibrous (other)	2% Chrysotile
MMA 2 261302173-0009					Stop Positive (Not Analyzed)
MMA 3 261302173-0010					Stop Positive (Not Analyzed)
MMB 1 261302173-0011		Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MMB 2 261302173-0012		Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MMB 3 261302173-0013		Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MMC 1 261302173-0014		Black Non-Fibrous Homogeneous	10% Glass	90% Non-fibrous (other)	None Detected
MMC 2 261302173-0015		Black Non-Fibrous Homogeneous	10% Glass	90% Non-fibrous (other)	None Detected

Analyst(s)
Dahlia Zyhowski (9)
Nick Neu (6)

James Hahn, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Chicago, IL NVLAP Lab Code 200399-0

Initial report from 04/12/2013 09:10:32



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Fax: (309) 687-0571
Received: 04/05/13 9:37 AM
Analysis Date: 4/12/2013
Collected:

Project: 311 E. Water St Galesburg, IL

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
MMD 1 261302173-0016		Black Non-Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected
MMD 2 261302173-0017		Black Non-Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected

Analyst(s)
Dahlia Zyhowski (9)
Nick Neu (6)

James P. Hahn
James Hahn, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Chicago, IL NVLAP Lab Code 200399-0

Initial report from 04/12/2013 09:10:32

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Phone: (309) 687-5566
Fax: (309) 687-0571
Received: 04/05/13 9:37 AM
Analysis Date: 4/16/2013
Collected:

Project: 311 E. Water St Galesburg, IL

Test Report: Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 and/or EPA 600/M4-82-020. Quantitation using 400 Point Count Procedure

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
MDA 1 261302173-0001		White Non-Fibrous Homogeneous		99.25% Non-fibrous (other)	0.75% Chrysotile
MMA 1 261302173-0008		White Non-Fibrous Homogeneous		98.50% Non-fibrous (other)	1.50% Chrysotile

Analyst(s)
Alice Hillegass (2)


James Hahn, Laboratory Manager
or other approved signatory

Disclaimer: Some samples may contain asbestos fibers present in dimensions below PLM resolution limits. The limit of detection as stated in the method is 0.25%. EMSL Analytical Inc suggests that samples reported as <0.25% or none detected undergo additional analysis via TEM. The above test report relates only to the items tested. This report may not be reproduced, except in full, without written approval of EMSL Analytical Inc. This test report must not be used by the client to claim product endorsement by NVLAP or any agency of the United States Government. EMSL Analytical Inc., bears no responsibility for sample collection activities, analytical method limitations, or the accuracy of results when requested to separate layered samples. EMSL Analytical Inc., liability is limited to the cost of sample analysis. The test results contained within this report meet the requirements of NELAP unless otherwise noted. Samples received in good condition unless otherwise noted. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample.
Samples analyzed by EMSL Analytical, Inc. Chicago, IL NVLAP Lab Code 200399-0

Initial report from 04/16/2013 14:26:50

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370 EAST NORTH STREET

Table 1
Summary of Homogeneous Areas Sampled
by Hermann and Associates LLC

Site Address: 370 E. North St., Galesburg, IL

Inspector: Steve Happ (IDPH license #100-00399)

Sample ID	Location/Description	Quantity	Asbestos Containing Material? (Y/N)	Asbestos Content	F - (Friable, RACM), NF-I (Non-friable, Category I) NF-II (Non-friable, Category II)
SPA 1 - 2	Plaster - Located on wall of basement		NO		
MMA 1 - 2	Ceramic Tile Mortar Base - Located under ceramic tile at rear entry		NO		
MDA 1 - 3	Drywall and Joint Compound - Located on walls and ceiling of bathroom, kitchen, and dining room		NO		
MMB 1 - 3	Window Glazing - Located at the perimeter of glass on 7 windows		NO		
MCB 1 - 3	Ceiling Tile - 12"x12" nailed-on type with smooth texture tile, located in living room and bedroom		NO		
MCA 1 - 3	Ceiling Tile - 12x12 nailed-on type with light texture, located above storage room off kitchen, dining room & office		NO		
MMC 1 - 2	Carpet Mastic - Located in kitchen		NO		
MMD 1 - 3	Roof Shingles - White color, located on roof of house and garage		NO		
MME 1 - 2	Rolled Roofing - White color, located on kitchen addition		NO		

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Fax: (309) 687-0571
Received: 05/13/13 9:45 AM
Analysis Date: 5/18/2013
Collected:

Project: 370 E NORTH GALESBURG, IL

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
SPA-1-Skim Coat 261303340-0001		White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SPA-1-Base Coat 261303340-0001A		Tan Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
SPA-2-Skim Coat 261303340-0002		White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SPA-2-Base Coat 261303340-0002A		Gray Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
MMA-1 261303340-0003		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MMA-2 261303340-0004		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MDA-1 261303340-0005		White Non-Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected
MDA-2 261303340-0006		White Non-Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected

Analyst(s)
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Dahlia Zyhowski (10)

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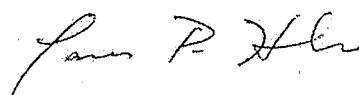
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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
MDA-3 261303340-0007		White Non-Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected
MMB-1 261303340-0008		White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MMB-2 261303340-0009		White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MMB-3 261303340-0010		White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MMC-1 261303340-0011		Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MMC-2 261303340-0012		Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MMD-1 261303340-0013		Black Non-Fibrous Heterogeneous	10% Glass	90% Non-fibrous (other)	None Detected
MMD-2 261303340-0014		Black Non-Fibrous Heterogeneous	10% Glass	90% Non-fibrous (other)	None Detected

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
MMD-3 261303340-0015		Black Non-Fibrous Homogeneous	10% Glass	90% Non-fibrous (other)	None Detected
MME-1 261303340-0016		Black Non-Fibrous Heterogeneous	10% Glass	90% Non-fibrous (other)	None Detected
MME-2 261303340-0017		Black Non-Fibrous Homogeneous	10% Glass	90% Non-fibrous (other)	None Detected
MCA-1 261303340-0018		White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (other)	None Detected
MCA-2 261303340-0019		White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (other)	None Detected
MCA-3 261303340-0020		White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (other)	None Detected
MCB-1 261303340-0021		White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (other)	None Detected
MCB-2 261303340-0022		White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (other)	None Detected

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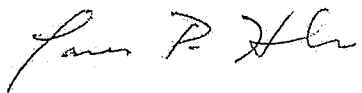
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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
MCB-3 261303340-0023		White Fibrous Homogeneous.	98% Cellulose	2% Non-fibrous (other)	None Detected

Analyst(s)

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364 NORTH SEMINARY STREET

Table 1
Summary of Homogeneous Areas Sampled
by Hermann and Associates LLC

Site Address: 364 N. Seminary St., Galesburg, IL

Inspector: Steve Happ (IDPH license #100-00399)

Sample ID	Location/Description	Quantity	Asbestos Containing Material? (Y/N)	Asbestos Content	F - (Friable, RACM), NF-I (Non-friable, Category I) NF-II (Non-friable, Category II)
TDA - 1	Duct Seam Tape - Located on east side of basement on seam of cold air return, on 6" pipe	6 Ft	YES	30% Chrysotile 20% Amosite	F
MFB 1 - 3	Sheet Flooring - Beige color, located in west bedroom on 2nd floor	200 Sq Ft.	YES	15% Chrysotile	F
MFC 1 - 3	Sheet Flooring - Green/tan color with pebble pattern, located in east bedroom on 2nd floor	200 Sq Ft	YES	15% Chrysotile	F
MMA 1 - 3	Window Glazing - Located at the perimeter of windows	13 windows	YES	2% Chrysotile	F
SPA 1 - 3	Plaster - Located on walls and ceilings throughout the house		NO		
MFA 1 - 3	Sheet Flooring - Red color with brick pattern, located in kitchen		NO		
MFC 1 - 3	Sheet Flooring - Green/tan color with pebble pattern, located in east bedroom on 2nd floor		NO		
MFD 1 - 3	Sheet Flooring - Green/tan color with large rock pattern, located in east closet of 2nd floor east bedroom		NO		
MCA 1 - 3	Ceiling Tile - 12x12 nailed-on type, located above throughout 1st floor		NO		
MMB 1 - 3	Shingle Siding - Red color, located on exterior of house		NO		
MMC 1 - 2	Roof Shingles - White color, located on roof of house		NO		

Note: Quantities are estimated and should be verified by contractor prior to bidding.



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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
TDA-1 261303338-0001		Gray Fibrous Homogeneous	10% Glass 10% Cellulose	30% Non-fibrous (other)	30% Chrysotile 20% Amosite
SPA-1-Skim Coat 261303338-0002		White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SPA-1-Base Coat 261303338-0002A		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SPA-1-Drywall 261303338-0002B		White Non-Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
SPA-2-Skim Coat 261303338-0003		White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SPA-2-Base Coat 261303338-0003A		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SPA-3-Skim Coat 261303338-0004		White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SPA-3-Base Coat 261303338-0004A		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)
Alice Hillegass (9)
Dahlia Zyhowski (19)

James Hahn, Laboratory Manager
or other approved signatory

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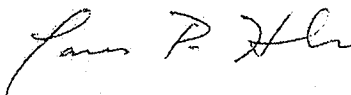
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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
MFA-1-Linoleum 261303338-0005		Red/Variou Fibrous Heterogeneous	40% Cellulose 10% Synthetic	50% Non-fibrous (other)	None Detected
MFA-1-Mastic 261303338-0005A		Beige Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MFA-2 261303338-0006		Red/Variou Fibrous Heterogeneous	40% Cellulose 5% Synthetic	55% Non-fibrous (other)	None Detected
No mastic present.					
MFA-3-Linoleum 261303338-0007		Red Fibrous Heterogeneous	40% Cellulose 10% Synthetic	50% Non-fibrous (other)	None Detected
MFA-3-Mastic 261303338-0007A		Beige Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MFB-1 261303338-0008		Beige Non-Fibrous Homogeneous	5% Cellulose	80% Non-fibrous (other)	15% Chrysotile
MFB-2 261303338-0009					Stop Positive (Not Analyzed)
MFB-3 261303338-0010					Stop Positive (Not Analyzed)

Analyst(s)
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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
MFC-1 261303338-0011		Yellow/Beige Non-Fibrous Heterogeneous	5% Cellulose	80% Non-fibrous (other)	15% Chrysotile
MFC-2 261303338-0012					Stop Positive (Not Analyzed)
MFC-3 261303338-0013					Stop Positive (Not Analyzed)
MFD-1 261303338-0014		Cream Fibrous Heterogeneous	50% Cellulose 10% Synthetic	40% Non-fibrous (other)	None Detected
MFD-2 261303338-0015		Green/Beige/Cream Fibrous Homogeneous	50% Cellulose 10% Synthetic	40% Non-fibrous (other)	None Detected
MMA-1 261303338-0016		Tan Non-Fibrous Homogeneous		98% Non-fibrous (other)	2% Chrysotile
Samples in group are nonhomogeneous.					
MMA-2 261303338-0017		White Non-Fibrous Homogeneous	3% Wollastonite	97% Non-fibrous (other)	<1% Chrysotile
Samples in group are nonhomogeneous.					

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
MMA-3 261303338-0018		Brown/White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
MMB-1 261303338-0019		Black Non-Fibrous Heterogeneous	25% Cellulose	75% Non-fibrous (other)	None Detected
MMB-2 261303338-0020		Black Non-Fibrous Heterogeneous	25% Cellulose	75% Non-fibrous (other)	None Detected
MMB-3 261303338-0021		Black Non-Fibrous Heterogeneous	25% Cellulose	75% Non-fibrous (other)	None Detected
MMC-1 261303338-0022		Black Non-Fibrous Homogeneous	15% Glass	85% Non-fibrous (other)	None Detected
MMC-2 261303338-0023		Black Non-Fibrous Homogeneous	10% Glass	90% Non-fibrous (other)	None Detected
MCA-1 261303338-0024		White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (other)	None Detected
MCA-2 261303338-0025		White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (other)	None Detected

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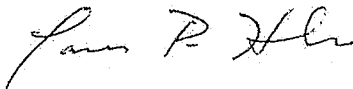
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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
MCA-3 261303338-0026		White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (other)	None Detected

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EXAMPLE

Attached are Appendixes A - D. These appendixes are examples of the information to be included in the proposal and referred to on page 3 of the Special Provision.

Appendix A are the sketches of the building(s) noted on page 1 of the Special Provision. These sketches show the location of asbestos on each floor of the building(s).

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

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

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

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

APPENDIX B

MATERIAL DESCRIPTION TABLE

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

Floor tile	10% chrysotile 12% chrysotile	First floor in the main hotel building. Floor tile is in poor condition. Sample AX561 and Sample AX662.
Transite Siding	25% chrysotile	Located on an out building in back of main hotel, 1st Floor. Debris on ground and in Basement area Sample AX666.

APPENDIX C

MATERIAL QUANTITIES TABLE

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

I. Ike and Swannies Tap

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

II. Peoria Hotel Building

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

APPENDIX D

SHIPPING MANIFEST

Generator

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

Transporter

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

Disposal Site

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

APPENDIX D

INSTRUCTIONS

Waste Generator Section (Items 1-9)

1. Enter the name of the facility at which asbestos waste is generated and the address where the facility is located. In the appropriate spaces, also enter the name of the owner of the facility and the owner's phone number.
2. If a demolition or renovation, enter the name and address of the Company and authorized agent responsible for performing the asbestos removal. In the appropriate spaces, also enter the phone number of the operator.
3. Enter the name, address, and physical site location of the waste disposal site (WDS) that will be receiving the asbestos materials. In the appropriate spaces, also enter the phone number of the WDS. Enter "on-site" if the waste will be disposed of on the generator's property.
4. Provide the name and address of the local, State, or EPA Regional Office responsible for administering the asbestos NESHAP program.
5. Indicate the types of asbestos waste materials generated. If from a demolition or renovation, indicate the amount of asbestos that is
 - Friable asbestos material
 - Nonfriable asbestos material
6. Enter the number of containers used to transport the asbestos materials listed in Item 5. Also enter one of the following container codes used in transporting each type of asbestos material (specify any other type of container used if not listed below):
 - DM - Metal drums, barrels
 - DP - Plastic drums, barrels
 - BA - 6 mil plastic bags or wrapping
7. Enter the quantities of each type of asbestos material removed in units of cubic meters (cubic yards).
8. Use this space to indicate special transportation, treatment, storage or disposal or Bill of Lading information. If an alternate waste disposal site is designated, note it here. Emergency response telephone numbers or similar information may be included here.
9. The authorized agent of the waste generator shall read and then sign and date this certification. The date is the date of receipt by transporter.

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

APPENDIX D

INSTRUCTIONS

Transporter Section (Items 10 & 11)

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

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

Disposal Site Section (Items 12 & 13)

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

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

APPENDIX E

Bldg. No.	Parcel No.	Location	Description
1	408D005	210-212 Franklin, Peoria	2 story 60'x40' brick & masonry, 50% basement 50% crawl space
2	408D010	203-211 Franklin, Peoria	Section 1: 1 story 30'x17'-4" brick & masonry slab Section 2: 2 story 36'x81' brick & masonry full basement Section 3: 3 story 50'x72' brick & masonry full basement Section 4: 2 story 134'x38' brick & masonry, partial basement

50261

ATTACHMENT D

HAZARDOUS WASTE SURVEY RESULTS

**HAZARDOUS WASTE SURVEY RESULTS
BUILDING DEMOLITIONS
SEMINARY/KELLOGG STREET OVERPASS
GALESBURG, ILLINOIS**

Note: Quantities presented in Attachment D are only approximations. The Contractor is responsible to identify and dispose of all materials remaining in structures at the bid price even if quantities are different than those presented.

The residential properties of 370 East North Street and 364 North Seminary Street were inhabited at the time the hazardous waste surveys were conducted. Therefore, some of the listed materials may be removed by the residents.

311 East Water Street (Commercial building)

- 8 - 4' Fluorescent light bulbs
- 4 - 4' Fluorescent ballasts
- 46 - 8' Fluorescent light bulbs
- 26 - 8' Fluorescent ballasts
- 1 - Water softener

370 East North Street

- 1 - Dishwasher (not operational)
- 1 - 1 gallon gas can (located in shed behind residence)
- 4 - 4' Fluorescent light bulbs
- 2 - 4' Fluorescent ballasts
- 1 - Mercury thermostat
- 11 - 1 gallon paint
- 2 - 1 quart paint
- 2 - Aerosol Raid containers
- 2 - 5 gallon carpet adhesive
- 1 - 5 gallon roof patch cement
- 1 - Water heater
- 1 - Furnace

Note: The following items from 370 East North Street are located in the garage.

- 8 - 4' Fluorescent light bulbs
- 5 - 4' Fluorescent ballasts
- 1 - Refrigerator
- 3 - Window unit air conditioners
- 1 - Television

- 2 - Stereo receivers
- 2 - 1 gallon gas cans

370 East North Street (continued)

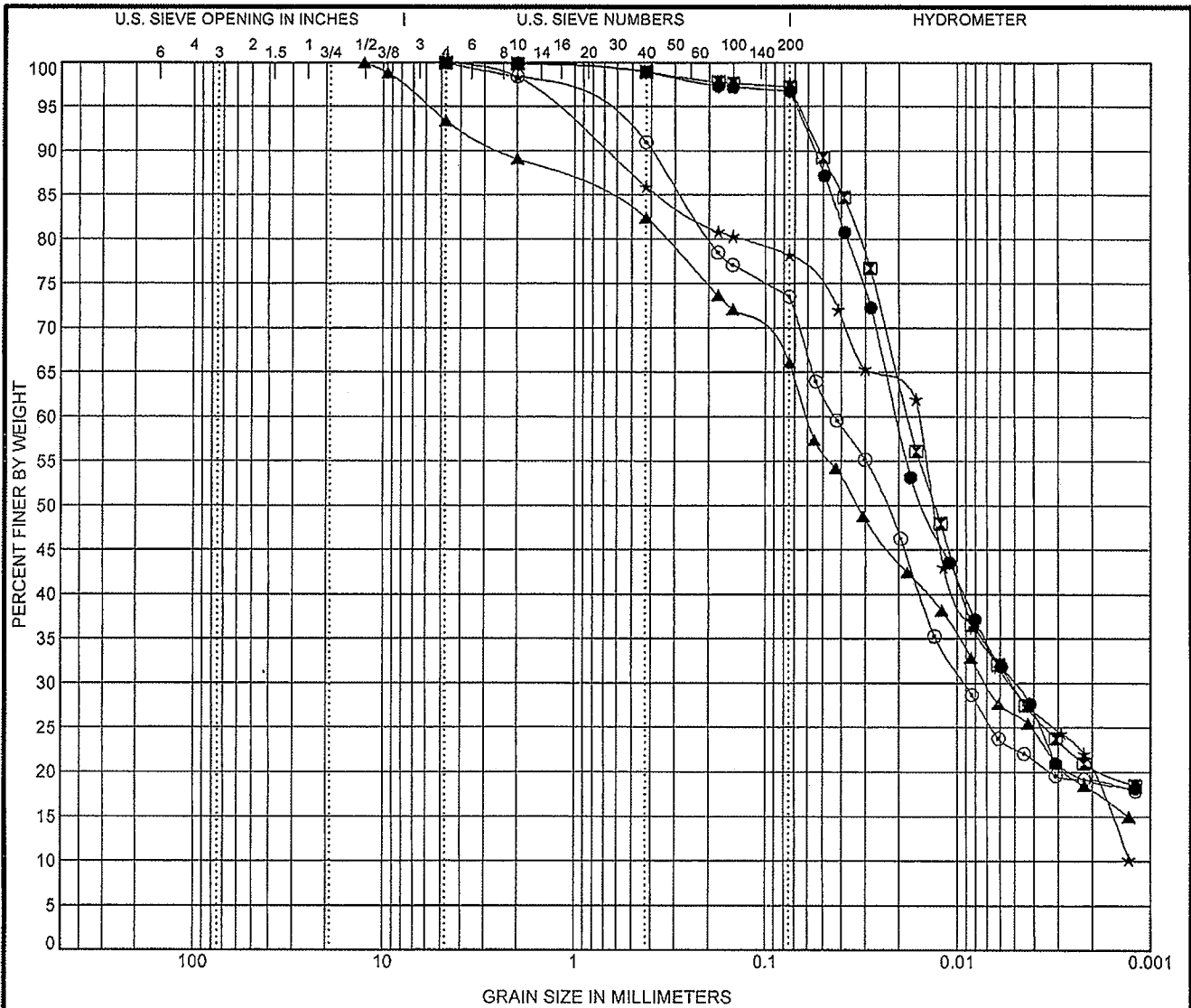
- 1 - 1 gallon antifreeze
- 1 - 5 gallon lap cement
- 1 - Battery charger
- 1 - Car battery
- 4 - 1 quart oil
- 4 - Small bottles of miscellaneous cleaning supplies

364 North Seminary Street

- 4 - 2' Fluorescent light bulbs
- 3 - 2' Fluorescent ballasts
- 1 - Mercury thermostat
- 1 - 1 pint wood stain
- 1 - Window air conditioner
- 1 - Water heater
- 1 - Furnace
- 1 - Tire

ATTACHMENT B

GEOTECHNICAL INVESTIGATION SOIL PARAMETERS



COBBLES	GRAVEL	SAND		SILT AND CLAY
		coarse	fine	

Specimen Identification	IDH Classification	LL	PL	PI	Cc	Cu
● SB-04 3.5	Silty Loam	47	23	24		
⊠ SB-10 3.5	Silty Clay Loam	42	22	20		
▲ SB-10 13.5	Silty Clay Loam	26	15	11		
★ SB-16 8.5	Silty Clay Loam	48	20	28		
⊙ SB-19 8.5	Silty Loam	37	15	22		

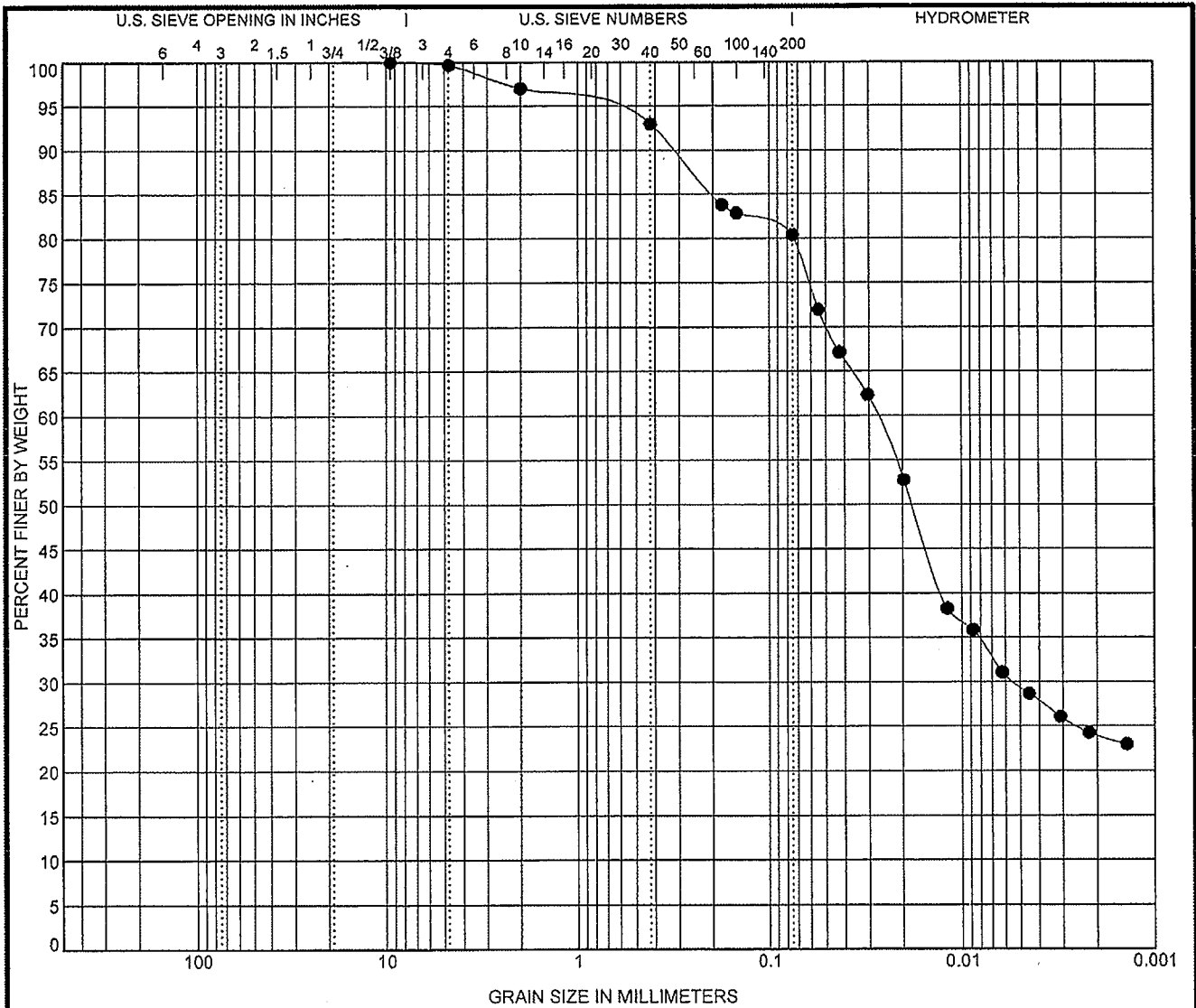
Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● SB-04 3.5	4.75	0.021	0.005		0.1	3.4	76.8	19.7
⊠ SB-10 3.5	4.75	0.018	0.005		0.1	2.9	76.4	20.6
▲ SB-10 13.5	12.7	0.061	0.007		10.9	23.4	47.9	17.9
★ SB-16 8.5	4.75	0.016	0.005		1.6	20.3	58.2	19.9
⊙ SB-19 8.5	4.75	0.043	0.009		1.6	25.3	54.2	19.0

WEI GRAIN SIZE IDH 4100502.GPJ US LAB.GDT 7/23/09



Wang Engineering, Inc.
 1145 N Main Street
 Lombard, IL 60148
 Telephone: 630 953-9928
 Fax: 630 953-9938

GRAIN SIZE DISTRIBUTION
 Project: N Seminary Street/N Kellogg Street Grade Separation
 Location: Section 05-00501-21-GS, Galesburg, Illinois
 Number: 410-05-02



COBBLES	GRAVEL	SAND		SILT AND CLAY
		coarse	fine	

Specimen Identification	IDH Classification	LL	PL	PI	Cc	Cu
● SB-20 8.5	Silty Clay Loam	47	20	27		

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● SB-20 8.5	9.5	0.027	0.005		3.0	17.0	56.1	24.0

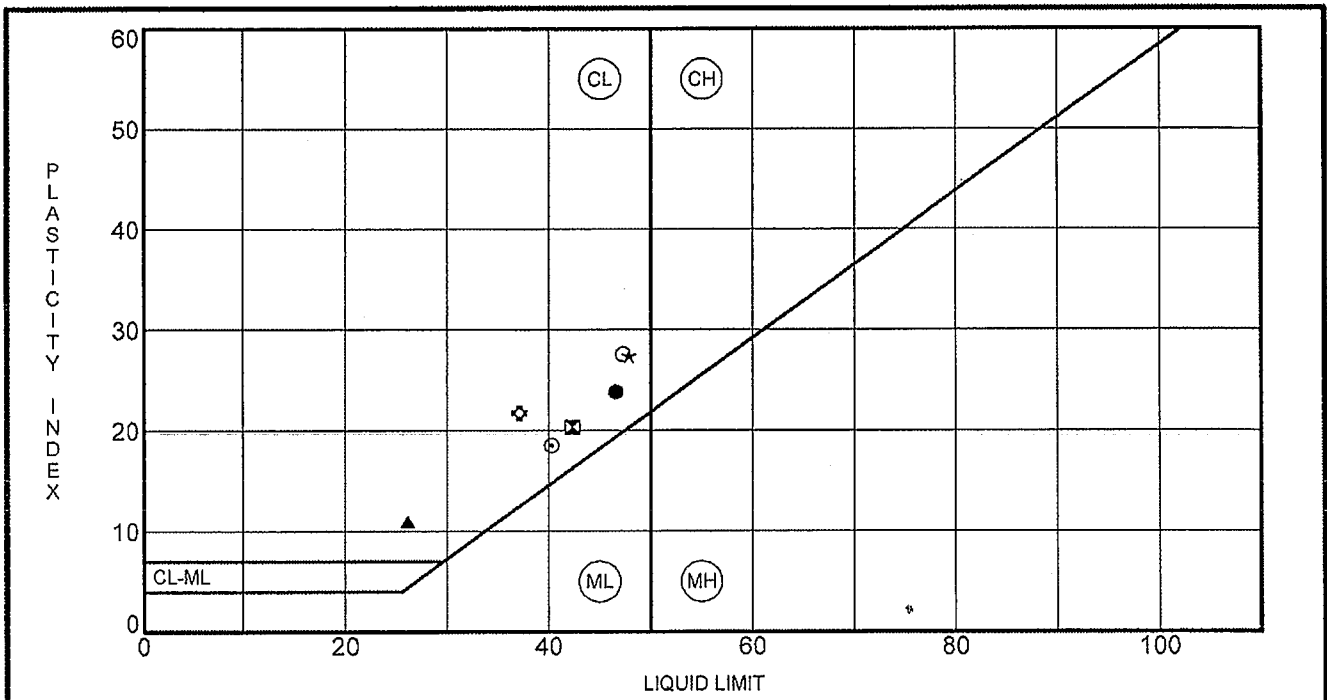
WEI GRAIN SIZE IDH 4100502.GPJ US LAB.GDT 7/23/09



Wang Engineering, Inc.
 1145 N Main Street
 Lombard, IL 60148
 Telephone: 630 953-9928
 Fax: 630 953-9938

GRAIN SIZE DISTRIBUTION

Project: N Seminary Street/N Kellogg Street Grade Separation
 Location: Section 05-00501-21-GS, Galesburg, Illinois
 Number: 410-05-02



Specimen Identification	LL	PL	PI	Fines	Classification	
● SB-04	3.5	47	23	24	97	LEAN CLAY(CL)
▣ SB-10	3.5	42	22	20	97	LEAN CLAY(CL)
▲ SB-10	13.5	26	15	11	66	SANDY LEAN CLAY(CL)
★ SB-16	8.5	48	20	28	78	LEAN CLAY with SAND(CL)
⊙ SB-17	13.5	40	22	18		
⊕ SB-19	8.5	37	15	22	74	LEAN CLAY with SAND(CL)
○ SB-20	8.5	47	20	27	80	LEAN CLAY with SAND(CL)

WEI ATTERBERG LIMITS 4100502.GPJ US_LAB.GDT 7/23/09



Wang Engineering, Inc.
 1145 N Main Street
 Lombard, IL 60148
 Telephone: 630 953-9928
 Fax: 630 953-9938

ATTERBERG LIMITS' RESULTS

Project: N Seminary Street/N Kellogg Street Grade Separation
 Location: Section 05-00501-21-GS, Galesburg, Illinois
 Number: 410-05-02

Exhibit C

EXHIBIT "C-1"

**Agreement Between
BNSF RAILWAY COMPANY
and the
CONTRACTOR**

Railway File: _____
Agency Project: _____

<%Contractor.LegalName%> [Insert contractor's legal name here](hereinafter called "Contractor"), has entered into an agreement (hereinafter called "Agreement") dated _____, 201_, [***Drafter's Note: insert the date of the contract between the Agency and the Contractor here] with **CITY OF GALESBURG** for the performance of certain work in connection with the following project: **SEMINARY ST OVERPASS** Performance of such work will necessarily require Contractor to enter **BNSF RAILWAY COMPANY** (hereinafter called "Railway") right of way and property (hereinafter called "Railway Property"). The Agreement provides that no work will be commenced within Railway Property until the Contractor employed in connection with said work for **CITY OF GALESBURG** (i) executes and delivers to Railway an Agreement in the form hereof, and (ii) provides insurance of the coverage and limits specified in such Agreement and Section 3 herein. If this Agreement is executed by a party who is not the Owner, General Partner, President or Vice President of Contractor, Contractor must furnish evidence to Railway certifying that the signatory is empowered to execute this Agreement on behalf of Contractor.

Accordingly, in consideration of Railway granting permission to Contractor to enter upon Railway Property and as an inducement for such entry, Contractor, effective on the date of the Agreement, has agreed and does hereby agree with Railway as follows:

1) RELEASE OF LIABILITY AND INDEMNITY

Contractor hereby waives, releases, indemnifies, defends and holds harmless Railway for all judgments, awards, claims, demands, and expenses (including attorneys' fees), for injury or death to all persons, including Railway's and Contractor's officers and employees, and for loss and damage to property belonging to any person, arising in any manner from Contractor's or any of Contractor's subcontractors' acts or omissions or any work performed on or about Railway's property or right-of-way. **THE LIABILITY ASSUMED BY**

CONTRACTOR WILL NOT BE AFFECTED BY THE FACT, IF IT IS A FACT, THAT THE DESTRUCTION, DAMAGE, DEATH, OR INJURY WAS OCCASIONED BY OR CONTRIBUTED TO BY THE NEGLIGENCE OF RAILWAY, ITS AGENTS, SERVANTS, EMPLOYEES OR OTHERWISE, EXCEPT TO THE EXTENT THAT SUCH CLAIMS ARE PROXIMATELY CAUSED BY THE INTENSIONAL MISCONDUCT OR GROSS NEGLIGENCE OF RAILWAY.

THE INDEMNIFICATION OBLIGATION ASSUMED BY CONTRACTOR INCLUDES ANY CLAIMS, SUITS OR JUDGMENTS BROUGHT AGAINST RAILWAY UNDER THE FEDERAL EMPLOYEE'S LIABILITY ACT, INCLUDING CLAIMS FOR STRICT LIABILITY UNDER THE SAFETY APPLIANCE ACT OR THE LOCOMOTIVE INSPECTION ACT, WHENEVER SO CLAIMED.

Contractor further agrees, at its expense, in the name and on behalf of Railway, that it will adjust and settle all claims made against Railway, and will, at Railway's discretion, appear and defend any suits or actions of law or in equity brought against Railway on any claim or cause of action arising or growing out of or in any manner connected with any liability assumed by Contractor under this Agreement for which Railway is liable or is alleged to be liable. Railway will give notice to Contractor, in writing, of the receipt or dependency of such claims and thereupon Contractor must proceed to adjust and handle to a conclusion such claims, and in the event of a suit being brought against Railway, Railway may forward summons and complaint or other process in connection therewith to Contractor, and Contractor, at Railway's discretion, must defend, adjust, or settle such suits and protect, indemnify, and save harmless Railway from and against all damages, judgments, decrees, attorney's fees, costs, and expenses growing out of or resulting from or incident to any such claims or suits.

In addition to any other provision of this Agreement, in the event that all or any portion of this Article shall be deemed to be inapplicable for any reason, including without limitation as a result of a decision of an applicable court, legislative enactment or regulatory order, the parties agree that this Article shall be interpreted as requiring Contractor to indemnify Railway to the fullest extent permitted by applicable law. **THROUGH THIS AGREEMENT THE PARTIES EXPRESSLY INTEND FOR CONTRACTOR TO INDEMNIFY RAILWAY FOR RAILWAY'S ACTS OF NEGLIGENCE.**

It is mutually understood and agreed that the assumption of liabilities and indemnification provided for in this Agreement survive any termination of this Agreement.

2) TERM

This Agreement is effective from the date of the Agreement until (i) the completion of the project set forth herein, and (ii) full and complete payment to Railway of any and all sums or other amounts owing and due hereunder.

3) INSURANCE

Contractor shall, at its sole cost and expense, procure and maintain during the life of this Agreement the following insurance coverage:

A. Commercial General Liability insurance. This insurance shall contain broad form contractual liability with a combined single limit of a minimum of \$5,000,000 each occurrence and an aggregate limit of at least \$10,000,000 but in no event less than the amount otherwise carried by the Contractor. Coverage must be purchased on a post 2004 ISO occurrence form or equivalent and include coverage for, but not limit to the following:

- ◆ Bodily Injury and Property Damage
- ◆ Personal Injury and Advertising Injury
- ◆ Fire legal liability
- ◆ Products and completed operations

This policy shall also contain the following endorsements, which shall be indicated on the certificate of insurance:

- ◆ The definition of insured contract shall be amended to remove any exclusion or other limitation for any work being done within 50 feet of railroad property.
- ◆ Waiver of subrogation in favor of and acceptable to Railway.
- ◆ Additional insured endorsement in favor of and acceptable to Railway.
- ◆ Separation of insureds.
- ◆ The policy shall be primary and non-contributing with respect to any insurance carried by Railway.

It is agreed that the workers' compensation and employers' liability related exclusions in the Commercial General Liability insurance policy(s) required herein are intended to apply to employees of the policy holder and shall not apply to **Railway** employees.

No other endorsements limiting coverage as respects obligations under this Agreement may be included on the policy with regard to the work being performed under this agreement.

B. Business Automobile Insurance. This insurance shall contain a combined single limit of at least \$1,000,000 per occurrence, and include coverage for, but not limited to the following:

- ◆ Bodily injury and property damage
- ◆ Any and all vehicles owned, used or hired

The policy shall also contain the following endorsements or language, which shall be indicated on the certificate of insurance:

- ◆ Waiver of subrogation in favor of and acceptable to Railway.
- ◆ Additional insured endorsement in favor of and acceptable to Railway.
- ◆ Separation of insureds.
- ◆ The policy shall be primary and non-contributing with respect to any insurance carried by Railway.

C. Workers Compensation and Employers Liability insurance including coverage for, but not limited to:

- ◆ Contractor's statutory liability under the worker's compensation laws of the state(s) in which the work is to be performed. If optional under State law, the insurance must cover all employees anyway.
- ◆ Employers' Liability (Part B) with limits of at least \$500,000 each accident, \$500,000 by disease policy limit, \$500,000 by disease each employee.

This policy shall also contain the following endorsements or language, which shall be indicated on the certificate of insurance:

- ◆ Waiver of subrogation in favor of and acceptable to Railway.

D. Railroad Protective Liability insurance naming only the **Railway** as the Insured with coverage of at least \$5,000,000 per occurrence and \$10,000,000 in the aggregate. The policy Must be issued on a standard ISO form CG 00 35 12 04 and include the following:

- ◆ Endorsed to include the Pollution Exclusion Amendment
- ◆ Endorsed to include the Limited Seepage and Pollution Endorsement.
- ◆ Endorsed to remove any exclusion for punitive damages.
- ◆ No other endorsements restricting coverage may be added.
- ◆ The original policy must be provided to the **Railway** prior to performing any work or services under this Agreement
- ◆ Definition of "Physical Damage to Property" shall be endorsed to read: "means direct and accidental loss of or damage to all property owned by any named insured and all property in any named insured' care,

custody, and control arising out of the acts or omissions of the contractor named on the Declarations.

In lieu of providing a Railroad Protective Liability Policy, Licensee may participate (if available) in Railway's Blanket Railroad Protective Liability Insurance Policy.

Other Requirements:

Where allowable by law, all policies (applying to coverage listed above) shall contain no exclusion for punitive damages.

Contractor agrees to waive its right of recovery against *Railway* for all claims and suits against *Railway*. In addition, its insurers, through the terms of the policy or policy endorsement, waive their right of subrogation against *Railway* for all claims and suits. Contractor further waives its right of recovery, and its insurers also waive their right of subrogation against *Railway* for loss of its owned or leased property or property under Contractor's care, custody or control.

Allocated Loss Expense shall be in addition to all policy limits for coverages referenced above.

Contractor is not allowed to self-insure without the prior written consent of *Railway*. If granted by *Railway*, any self-insured retention or other financial responsibility for claims shall be covered directly by Contractor in lieu of insurance. Any and all *Railway* liabilities that would otherwise, in accordance with the provisions of this Agreement, be covered by Contractor's insurance will be covered as if Contractor elected not to include a deductible, self-insured retention or other financial responsibility for claims.

Prior to commencing services, Contractor shall furnish to *Railway* an acceptable certificate(s) of insurance from an authorized representative evidencing the required coverage(s), endorsements, and amendments. The certificate should be directed to the following address:

BNSF Railway Company
c/o CertFocus
P.O. Box 140528
Kansas City, MO 64114
Toll Free: 877-576-2378
Fax number: 817-840-7487
Email: BNSF@certfocus.com
www.certfocus.com

Contractor shall notify **Railway** in writing at least 30 days prior to any cancellation, non-renewal, substitution or material alteration.

Any insurance policy shall be written by a reputable insurance company acceptable to **Railway** or with a current Best's Guide Rating of A- and Class VII or better, and authorized to do business in the state(s) in which the service is to be provided.

If coverage is purchased on a "claims made" basis, Contractor hereby agrees to maintain coverage in force for a minimum of three years after expiration, cancellation or termination of this Agreement. Annually Contractor agrees to provide evidence of such coverage as required hereunder.

Contractor represents that this Agreement has been thoroughly reviewed by Contractor's insurance agent(s)/broker(s), who have been instructed by Contractor to procure the insurance coverage required by this Agreement.

Not more frequently than once every five years, **Railway** may reasonably modify the required insurance coverage to reflect then-current risk management practices in the railroad industry and underwriting practices in the insurance industry.

If any portion of the operation is to be subcontracted by Contractor, Contractor shall require that the subcontractor shall provide and maintain insurance coverage(s) as set forth herein, naming **Railway** as an additional insured, and shall require that the subcontractor shall release, defend and indemnify **Railway** to the same extent and under the same terms and conditions as Contractor is required to release, defend and indemnify **Railway** herein.

Failure to provide evidence as required by this section shall entitle, but not require, **Railway** to terminate this Agreement immediately. Acceptance of a certificate that does not comply with this section shall not operate as a waiver of Contractor's obligations hereunder.

The fact that insurance (including, without limitation, self-insurance) is obtained by Contractor shall not be deemed to release or diminish the liability of Contractor including, without limitation, liability under the indemnity provisions of this Agreement. Damages recoverable by **Railway** shall not be limited by the amount of the required insurance coverage.

In the event of a claim or lawsuit involving **Railway** arising out of this agreement, Contractor will make available any required policy covering such claim or lawsuit.

These insurance provisions are intended to be a separate and distinct obligation on the part of the Contractor. Therefore, these provisions shall be enforceable and Contractor shall be bound thereby regardless of whether or not indemnity provisions are determined to be enforceable in the jurisdiction in which the work covered hereunder is performed.

For purposes of this section, **Railway** shall mean "Burlington Northern Santa Fe LLC", "BNSF Railway Company" and the subsidiaries, successors, assigns and affiliates of each.

4) EXHIBIT "C" CONTRACTOR REQUIREMENTS

The Contractor must observe and comply with all provisions, obligations, requirements and limitations contained in the Agreement, and the Contractor Requirements set forth on Exhibit "C" attached to the Agreement and this Agreement, including, but not be limited to, payment of all costs incurred for any damages to Railway roadbed, tracks, and/or appurtenances thereto, resulting from use, occupancy, or presence of its employees, representatives, or agents or subcontractors on or about the construction site.

5) TRAIN DELAY

Contractor is responsible for and hereby indemnifies and holds harmless Railway (including its affiliated railway companies, and its tenants) for, from and against all damages arising from any unscheduled delay to a freight or passenger train which affects Railway's ability to fully utilize its equipment and to meet customer service and contract obligations. Contractor will be billed, as further provided below, for the economic losses arising from loss of use of equipment, contractual loss of incentive pay and bonuses and contractual penalties resulting from train delays, whether caused by Contractor, or subcontractors, or by the Railway performing work under this Agreement. Railway agrees that it will not perform any act to unnecessarily cause train delay.

For loss of use of equipment, Contractor will be billed the current freight train hour rate per train as determined from Railway's records. Any disruption to train traffic may cause delays to multiple trains at the same time for the same period.

Additionally, the parties acknowledge that passenger, U.S. mail trains and certain other grain, intermodal, coal and freight trains operate under incentive/penalty contracts between Railway and its customer(s). Under these arrangements, if Railway does not meet its contract service commitments, Railway may suffer loss of performance or incentive pay and/or be subject to penalty payments. Contractor is responsible for any train performance and incentive penalties or other contractual economic losses actually incurred by Railway which are attributable to a train delay caused by Contractor or its subcontractors.

The contractual relationship between Railway and its customers is proprietary and confidential. In the event of a train delay covered by this Agreement, Railway will share information relevant to any train delay to the extent consistent with Railway confidentiality obligations. Damages for train delay are currently \$382.20 per hour per incident. The rate then in effect at the time of performance by the Contractor hereunder will be used to calculate the actual costs of train delay pursuant to this agreement.

Contractor and its subcontractors must give Railway's representative () weeks advance notice of the times and dates for proposed work windows. Railway and Contractor will establish mutually agreeable work windows for the project. Railway has the right at any time to revise or change the work windows due to train operations or service obligations. Railway will not be responsible for any additional costs or expenses resulting from a change in work windows. Additional costs or expenses resulting from a change in work windows shall be accounted for in Contractor's expenses for the project.

Contractor and subcontractors must plan, schedule, coordinate and conduct all Contractor's work so as to not cause any delays to any trains.

IN WITNESS WHEREOF, each of the parties hereto has caused this Agreement to be executed by its duly authorized officer the day and year first above written.

<%Contractor.LegalName%>

BNSF Railway Company

By: _____

By: _____

Printed Name: _____

Name: _____

Manager Public Projects

Title: _____

Contact Person: _____

Address: _____

City: _____

State: _____ Zip: _____

Fax: _____

Phone: _____

E-mail: _____

IDOT TRAINING PROGRAM GRADUATE ON-THE-JOB TRAINING SPECIAL PROVISION (TPG)

Effective: August 1, 2012

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's community college pre-apprenticeship programs outlined by this Special Provision.

It is the policy of IDOT to fund IDOT pre-apprenticeship training programs based at Illinois Community Colleges throughout Illinois, by Intergovernmental Agreement with the Illinois Community College Board, 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 state funded construction contracts shall include "Training Program Graduate (TPG) Special Provisions." To benefit from the incentives to encourage the participation in the additional on-the-job training under this Training Program Graduate (TPG) Special Provision, the Contractor shall make every reasonable effort to employ certified graduates of the IDOT funded Pre-apprenticeship Training Program 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 \$10.00 per hour for training given a certified graduate trainee 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 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 \$10.00 per hour for 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 1. 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 by Intergovernmental Agreement with the Illinois Community College Board 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 Illinois Community College Program 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 TPG Special Provision \$10.00 an hour incentive.

The Contractor or subcontractor shall provide each TPG with a certification 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 Galesburg

The entities listed above and their officers, employees, and agents shall be indemnified and held harmless in accordance with Article 107.26.

ABOVE GRADE INLET PROTECTION (BDE)

Effective: July 1, 2009
 Revised: January 1, 2012

Add the following to Article 280.02 of the Standard Specifications:

“(m) Above Grade Inlet Filter1081.15(j)”

Add the following paragraph after the second paragraph of Article 280.04(c) of the Standard Specifications:

“When above grade inlet filters are specified, they shall be of sufficient size to completely span and enclose the inlet structure. Prior to ordering materials, the Contractor shall determine the size of the various drainage structures being protected.”

Add the following paragraph after the second paragraph of Article 280.08(d) of the Standard Specifications:

“Protection of drainage structures with rigid inlet protection assemblies will be paid for at the contract unit price per each for ABOVE GRADE INLET FILTERS.”

Add the following to Article 1081.15 of the Standard Specifications:

“(j) Above Grade Inlet Filters. Above grade inlet filters shall consist of a rigid polyethylene frame covered with a fitted geotextile filter. A clean, used fitted filter and a used rigid polyethylene frame in good condition meeting the approval of the Engineer may be substituted for new materials. Materials for the above grade inlet filter assembly shall be according to the following.

(1) Frame Construction. Frame shall be constructed of a high density polyethylene copolymer. The design of the frame shall allow the structure to fit completely over the sewer inlet. The frame shall be a minimum of 26 in. (650 mm) tall and the top of the frame shall be designed with an opening to allow large volumes of water to pass through under high flow events. The frame shall conform to the following requirements:

Frame		
Material Property	Test Method	Value
Tensile Yield Strength	ASTM D 638	3600 psi (24.82 MPa)
Elongation at Break	ASTM D 638	>600%
Tensile-Impact Strength	ASTM D 1822	170 ft lb/sq in (230 J)
Brittleness Temperature	ASTM D 746	<-105°F (-76.11°C)
Environmental Stress Cracking	ASTM D 1693	>800 hours
Durometer Hardness,	ASTM D 2240	68

Shore A		
Vicat Softening Temperature	ASTM D 1525	254°F (123.33°C)
Deflection Temperature	ASTM D 648	157°F (69.44°C)
Coefficient of Linear Thermal Expansion	ASTM D 696	7x10 ⁻⁵ in/in/°F (12.6x10 ⁻⁵ m/m/°C)
Bulk Density	ASTM D 1895	37 lbs/cu ft (592.7 kg/cu m)

- (2) Fitted Geotextile Filter. The sides of the fitted geotextile filter shall be constructed of 100 percent continuous polyester needle-punched fabric. The filter shall be fabricated to provide a direct fit to the frame. The top of the filter shall integrate a coarse screening to allow large volumes of water to pass through in the event of heavy flows. This screening shall have a minimum apparent opening of 1/2 in. (13 mm). The filter shall have integrated anti-buoyancy pockets capable of holding no less than 3.0 cu ft (0.08 cu m) of stabilization material. Each filter shall have a label with the following information sewn to or otherwise permanently adhered to the outside: manufacturer's name, product name, and lot, model or serial number. The fitted geotextile filter shall conform to the following requirements:

Fitted Geotextile Filter		
Material Property	Test Method	Minimum Avg. Roll Value
Weight	ASTM D 3776	3.0 oz/sq yd +/- 10% (71.1 grams/sq m)
Grab Tensile Strength	ASTM D 4632	80 lb min. (36.29 kg)
Grab Tensile Elongation	ASTM D 4632	50%
Bursting Strength	ASTM D 3786	150 psi min. (1.03 MPa)
Puncture Resistance	ASTM D 4833	50 lb min. (22.68 kg)
Trapezoid Tearing Strength	ASTM D 4533	30 lb min. (13.61 kg)
Apparent Opening Size	ASTM D 4751	Sieve No. 70 (0.212 mm)
Permittivity	ASTM D 4491	2.0/sec
Water Permeability	ASTM D 4491	102 gal/min/sq ft (4150 liter/min/sq m)
UV Resistance	ASTM D 4355	70% at 500 hours

- (3) Certification. The manufacturer shall furnish a certificate with each shipment of above grade inlet filter assemblies, stating the amount of product furnished and that the material complies with these requirements."

AGGREGATE SUBGRADE IMPROVEMENT (BDE)

Effective: April 1, 2012
Revised: January 1, 2013

Add the following Section to the Standard Specifications:

“SECTION 303. AGGREGATE SUBGRADE IMPROVEMENT

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

303.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Coarse Aggregate	1004.06
(b) Reclaimed Asphalt Pavement (RAP) (Notes 1, 2, and 3)	1031

Note 1. Crushed RAP, from either full depth or single lift removal, may be mechanically blended with aggregate gradations CS 01, CS 02, and RR 01 but shall not exceed 40 percent of the total product. The top size of the RAP shall be less than 4 in. (100 mm) and well graded.

Note 2. RAP having 100 percent passing the 1 1/2 in. (37.5 mm) sieve and being well graded, may be used as capping aggregate in the top 3 in. (75 mm) when aggregate gradations CS 01, CS 02, or RR 01 are used in lower lifts.

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

303.03 Equipment. The vibratory machine shall be according to Article 1101.01, or as approved by the Engineer.

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

303.05 Placing Aggregate. The maximum nominal lift thickness of aggregate gradations CA 02, CA 06, or CA 10 shall be 12 in. (300 mm). The maximum nominal lift thickness of aggregate gradations CS 01, CS 02, and RR 01 shall be 24 in. (600 mm).

303.06 Capping Aggregate. The top surface of the aggregate subgrade shall consist of a minimum 3 in. (75 mm) of aggregate gradations CA 06 or CA 10. When the contract specifies that a granular subbase is to be placed on the aggregate subgrade improvement, the 3 in. (75 mm) of capping aggregate shall be the same gradation and may be placed with the underlying aggregate subgrade improvement material.

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

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

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

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

Add the following to Section 1004 of the Standard Specifications:

“1004.06 Coarse Aggregate for Aggregate Subgrade Improvement. The aggregate shall be according to Article 1004.01 and the following.

- (a) Description. The coarse aggregate shall be crushed gravel, crushed stone, or crushed concrete.
- (b) Quality. The coarse aggregate shall consist of sound durable particles reasonably free of deleterious materials.
- (c) Gradation.
 - (1) The coarse aggregate gradation for total subgrade thickness less than or equal to 12 in. (300 mm) shall be CA 2, CA 6, CA 10, or CS 01.

The coarse aggregate gradation for total subgrade thickness more than 12 in. (300 mm) shall be CS 01, CS 02 or RR 01(see Article 1005.01(c)).

COARSE AGGREGATE SUBGRADE GRADATIONS					
Grad No.	Sieve Size and Percent Passing				
	8"	6"	4"	2"	#4
CS 01	100	97 ± 3	90 ± 10	45 ± 25	20 ± 20
CS 02		100	80 ± 10	25 ± 15	

COARSE AGGREGATE SUBGRADE GRADATIONS (Metric)					
Grad No.	Sieve Size and Percent Passing				
	200 mm	150 mm	100 mm	50 mm	4.75 mm

CS 01	100	97 ± 3	90 ± 10	45 ± 25	20 ± 20
CS 02		100	80 ± 10	25 ± 15	

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

80274

ANCHOR BOLTS (BDE)

Effective: January 1, 2013

Revise the fourth sentence of the first paragraph of Article 1006.09 of the Standard Specifications to read:

“Stud bolts or fully threaded rods shall be according to either ASTM A 354 Grade BC, ASTM A 193 Grade B7, or ASTM F 1554 Grade 105.”

Revise the second paragraph of Article 1006.09 of the Standard Specifications to read:

“Washers and nuts shall match with the hardness of the anchor bolt, stud, or rod. For ASTM F 1554 Grade 36 (Grade 250) or Grade 55 (Grade 380) anchor rods or bolts, washers shall be according to ASTM F 844 or ASTM F 436, and nuts shall be according to AASHTO M 291 Grade A. For ASTM F 1554 Grade 105 (Grade 725) bolts, ASTM A 354, or ASTM A 193 stud bolts, washers shall be according to AASHTO M 293 Type 1 or Type 3, and nuts shall be according to AASHTO M 291 Grade DH or DH3.”

Revise the seventh paragraph of Article 1006.09 of the Standard Specifications to read:

“Anchor bolts, rods, studs, nuts, and washers requiring galvanizing shall be hot dipped, with zinc coatings conforming to the requirements of ASTM F 2329.”

Revise the fourth paragraph of Article 1070.01 of the Standard Specifications to read:

“Fully threaded and galvanized anchor rods or stud bolts with washers and nuts shall be furnished with the foundations and shall be according to Article 1006.09. Anchors furnished according to ASTM F 1554 shall be Grade 105 (Grade 725).”

Revise the second paragraph of Article 1070.03 of the Standard Specifications to read:

“Top anchor rod nuts for all towers shall be the self-locking type with nylon or steel inserts.”

80309

BUILDING REMOVAL - CASE III (FRIABLE ASBESTOS ABATEMENT) (BDE)

Effective: September 1, 1990
Revised: April 1, 2010

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

<u>Bldg. No.</u>	<u>Parcel No.</u>	<u>Location</u>	<u>Description</u>
1	99-10-495-024	311 E. WATER STREET	1-STORY COMMERCIAL BLDG. (NO BASEMENT)
3	99-10-431-025	364 N. SEMINARY STREET	2-STORY RESIDENCE WITH BASEMENT

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

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

PROPERTY ACQUIRED FOR
HIGHWAY CONSTRUCTION
TO BE DEMOLISHED BY THE

VANDALS WILL BE PROSECUTED

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

All friable asbestos shall be removed from the building(s) prior to demolition. Refer to the Special Provisions titled "Asbestos Abatement (General Conditions)" and "Removal and Disposal of Friable Asbestos Building No. 1 & 3" contained herein.

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

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

1. BUILDING REMOVAL NO. 1 & 3
2. REMOVAL AND DISPOSAL OF FRIABLE ASBESTOS, BUILDING NO. 1 & 3

ASBESTOS ABATEMENT (GENERAL CONDITIONS): This work consists of the removal and disposal of friable asbestos from the building(s) to be demolished. All work shall be done according to the requirements of the U.S. Environmental Protection Agency (USEPA), the Illinois Environmental Protection Agency (IEPA), the Occupational Safety and Health Administration (OSHA), the Special Provision for "Removal and Disposal of Friable Asbestos, Building No. 1 & 3" and as outlined herein.

~~Sketches indicating the location of Asbestos Containing Material (ACM) are included in the proposal on pages _____ thru _____. Also refer to the Materials Description Table on page C for a brief description and location of the various materials. Also included is a Materials Quantities Table on page C. This table states the ACM is friable and gives the approximate quantity. The quantities are given only for information and it shall be the Contractor's responsibility to determine the exact quantities prior to submitting his/her bid.~~

The work involved in the removal and disposal of friable asbestos shall be performed by a Contractor or Sub-Contractor prequalified with the Illinois Capital Development Board.

The Contractor shall provide a shipping manifest, similar to the one shown on page APPENDIX D ~~page EXAMPLE 6~~ to the Engineer for the disposal of all ACM wastes.

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

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

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

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

Submittals:

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

used during this work; a site safety plan, a disposal plan including the location of an approved disposal site, and a detailed description of the methods to be used to control pollution. The plan shall be submitted to the Engineer prior to the start of work.

8. Submit proof of written notification and compliance with the "Notifications" paragraph.
- C. Submittals that shall be made upon completion of abatement work:
1. Submit copies of all waste chain-of-custodies, trip tickets, and disposal receipts for all asbestos waste materials removed from the work area;
 2. Submit daily copies of work site entry logbooks with information on worker and visitor access;
 3. Submit logs documenting filter changes on respirators, HEPA vacuums, negative pressure ventilation units, and other engineering controls; and
 4. Submit results of any bulk material analysis and air sampling data collected during the course of the abatement including results of any on-site testing by any federal, state, or local agency.

Certificate of Insurance:

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

Asbestos Abatement Experience:

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

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

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

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

- A. Personal Monitoring: All personal monitoring shall be conducted per specifications listed in OSHA regulation, Title 29, Code of Federal Regulation 1926.58. All area sampling shall be conducted according to 40 CFR Part 763.90. All air monitoring equipment shall be calibrated and maintained in proper operating condition. Excursion limits will be monitored daily. Personal monitoring is the responsibility of the Contractor. Additional personal samples may be required by the Engineer at any time during the project.
- B. Contained Work Areas for Removal of Friable Asbestos: Area samples shall be collected for the department within the work area daily. A minimum of one sample shall be taken outside of the abatement area removal operations. The Engineer will also have the option to require additional personal samples and/or clearance samples during this type of work.
- C. Air Monitoring Professional
 1. All air sampling will be conducted by a qualified Air Sampling Professional supplied by the Contractor. The Air Sampling Professional shall submit documentation of successful completion of the National Institute for Occupational Safety and Health (NIOSH) course #582 - "Sampling and Evaluating Airborne Asbestos Dust".
 2. Air sampling will be conducted according to NIOSH Method 7400. The results of these tests shall be provided to the Engineer within 24 hours of the collection of air samples.

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

This work will be paid for at the contract unit price per lump sum for REMOVAL AND DISPOSAL OF FRIABLE ASBESTOS, BUILDING NO. 142, as shown.

50491

BUILDING REMOVAL - CASE IV (NO ASBESTOS) (BDE)

Effective: September 1, 1990

Revised: April 1, 2010

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

<u>Bldg. No.</u>	<u>Parcel No.</u>	<u>Location</u>	<u>Description</u>
2	99-10-485-005	370 E. NORTH STREET	1-STORY RESIDENCE WITH BASEMENT AND DETACHED GARAGE.

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

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

PROPERTY ACQUIRED FOR
HIGHWAY CONSTRUCTION
TO BE DEMOLISHED BY THE

VANDALS WILL BE PROSECUTED

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

Basis of Payment: This work will be paid for at the contract lump sum unit price for BUILDING REMOVAL, numbers as listed above, which price shall be payment in full for complete removal of the buildings and structures, including any necessary backfilling material as specified herein.

The lump sum unit price(s) for this work shall represent the cost of demolition. Any salvage value shall be reflected in the contract unit price for this item.

Notifications: The "Demolition/Renovation Notice" form, which can be obtained from the IEPA office, shall be completed and submitted to the address listed below at least ten days prior to commencement of any demolition activity.

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

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

Submittals:

- A. All submittals and notices shall be made to the Engineer except where otherwise specified herein.
- B. Prior to starting work, the Contractor shall submit proof of written notification and compliance with the "Notifications" paragraph.

50531

COARSE AGGREGATE IN BRIDGE APPROACH SLABS/FOOTINGS (BDE)

Effective: April 1, 2012

Revised: April 1, 2013

Revise the third paragraph of Article 1004.01(b) of the Standard Specifications to read:

“Aggregates used in Class BS concrete (except when poured on subgrade), Class PS concrete, and Class PC concrete (bridge superstructure products only, excluding the approach slab) shall contain no more than two percent by weight (mass) of deleterious materials. Deleterious materials shall include substances whose disintegration is accompanied by an increase in volume which may cause spalling of the concrete.”

Revise the first sentence of the first paragraph of Article 1004.02(f) of the Standard Specifications to read:

“(f) Freeze-Thaw Rating. When coarse aggregate is used to produce portland cement concrete for base course, base course widening, pavement (including precast), driveway pavement, sidewalk, shoulders, curb, gutter, combination curb and gutter, median, paved ditch, concrete superstructures on subgrade such as bridge approach slabs (excluding precast), concrete structures on subgrade such as bridge approach footings, or their repair using concrete, the gradation permitted will be determined from the results of the Department’s Freeze-Thaw Test (Illinois Modified AASHTO T 161).”

80292

CONCRETE BOX CULVERTS WITH SKEWS \leq 30 DEGREES REGARDLESS OF DESIGN FILL AND SKEWS $>$ 30 DEGREES WITH DESIGN FILLS $>$ 5 FEET (BDE)

Effective: April 1, 2012

Revise the second paragraph of Article 540.04 of the Standard Specifications to read:

“Unless otherwise noted on the plans, the Contractor shall have the option, when a cast-in-place concrete box culvert is specified, of constructing the box culvert using precast box culvert sections when the design cover is 6 in. (150 mm) minimum. The precast box culvert sections shall be designed for the same design cover shown on the plans for cast-in-place box culvert; shall be of equal or larger size opening, and shall satisfy the design requirements of ASTM C 1577.”

Revise the fourth paragraph of Article 540.06 of the Standard Specifications to read:

“The excavation and backfilling for precast concrete box culverts shall be according to the requirements of Section 502, except where the design fill is less than or equal to 8 ft (2.4 m), or the design fill is less than the clear span of the box. In these cases ASTM C 1577 requires a select granular backfill (porous granular material) over the box. If a porous granular backfill is required but is not detailed on the plans for the culvert(s), the Contractor shall have the option of either furnishing porous granular backfill where required to satisfy ASTM C 1577, or submitting an alternate design, sealed by an Illinois licensed Structural Engineer, which precludes the use of a porous granular backfill. In addition for all precast boxes a layer of porous granular material, at least 6 in. (150 mm) in thickness, shall be placed below the elevation of the bottom of the box. The porous granular material shall extend at least 2 ft (600 mm) beyond each side of the box. The precast concrete box culvert shall be laid according to the applicable requirements of Article 542.04(d). After installation, the interior and exterior joint gap between precast concrete box culvert sections shall be a maximum of 1 1/2 in. (38 mm).”

80294

CONCRETE MIX DESIGN – DEPARTMENT PROVIDED (BDE)

Effective: January 1, 2012

For the "Portland Cement Concrete (BDE)" special provision included in this project, specifically Article 1020.05(a), 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: August 2, 2011

FEDERAL OBLIGATION. The Department of Transportation, as a recipient of federal financial assistance, is required to take all necessary and reasonable steps to ensure nondiscrimination in the award and administration of contracts. Consequently, the federal regulatory provisions of 49 CFR Part 26 apply to this contract concerning the utilization of disadvantaged business enterprises. For the purposes of this Special Provision, a disadvantaged business enterprise (DBE) means a business certified by the Department in accordance with the requirements of 49 CFR Part 26 and listed in the Illinois Unified Certification Program (IL UCP) DBE Directory.

STATE OBLIGATION. This Special Provision will also be used by the Department to satisfy the requirements of the Business Enterprise for Minorities, Females, and Persons with Disabilities Act, 30 ILCS 575. When this Special Provision is used to satisfy state law requirements on 100 percent state-funded contracts, the federal government has no involvement in such contracts (not a federal-aid contract) and no responsibility to oversee the implementation of this Special Provision by the Department on those contracts. DBE participation on 100 percent state-funded contracts will not be credited toward fulfilling the Department's annual overall DBE goal required by the US Department of Transportation to comply with the federal DBE program requirements.

CONTRACTOR ASSURANCE. The Contractor makes the following assurance and agrees to include the assurance in each subcontract that the Contractor signs with a subcontractor.

The Contractor, subrecipient, or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of contracts funded in whole or in part with federal or state funds. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

OVERALL GOAL SET FOR THE DEPARTMENT. As a requirement of compliance with 49 CFR Part 26, the Department has set an overall goal for DBE participation in its federally assisted contracts. That goal applies to all federal-aid funds the Department will expend in its federally assisted contracts for the subject reporting fiscal year. The Department is required to make a good faith effort to achieve the overall goal. The dollar amount paid to all approved DBE companies performing work called for in this contract is eligible to be credited toward fulfillment of the Department's overall goal.

CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR. This contract includes a specific DBE utilization goal established by the Department. The goal has been included because the Department has determined that the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies. The determination is

based on an assessment of the type of work, the location of the work, and the availability of DBE companies to do a part of the work. The assessment indicates that, in the absence of unlawful discrimination, and in an arena of fair and open competition, DBE companies can be expected to perform 15.00 % of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will only award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set for in this Special Provision:

- (a) The bidder documents that enough DBE participation has been obtained to meet the goal: or
- (b) The bidder documents that a good faith effort has been made to meet the goal, even though the effort did not succeed in obtaining enough DBE participation to meet the goal.

DBE LOCATOR REFERENCES. Bidders shall consult the IL UCP DBE Directory as a reference source for DBE-certified companies. In addition, the Department maintains a letting and item specific DBE locator information system whereby DBE companies can register their interest in providing quotes on particular bid items advertised for letting. Information concerning DBE companies willing to quote work for particular contracts may be obtained by contacting the Department's Bureau of Small Business Enterprises at telephone number (217)785-4611, or by visiting the Department's website at www.dot.il.gov.

BIDDING PROCEDURES. Compliance with this Special Provision is a material bidding requirement. The failure of the bidder to comply will render the bid not responsive.

- (a) The bidder shall submit a Disadvantaged Business Utilization Plan on Department forms SBE 2025 and 2026 with the bid.
- (b) The Utilization Plan shall indicate that the bidder either has obtained sufficient DBE participation commitments to meet the contract goal or has not obtained enough DBE participation commitments in spite of a good faith effort to meet the goal. The Utilization Plan shall further provide the name, telephone number, and telefax number of a responsible official of the bidder designated for purposes of notification of plan approval or disapproval under the procedures of this Special Provision.
- (c) The Utilization Plan shall include a DBE Participation Commitment Statement, Department form SBE 2025, for each DBE proposed for the performance of work to achieve the contract goal. For bidding purposes, submission of the completed SBE 2025 forms, signed by the DBEs and faxed to the bidder will be acceptable as long as the original is available and provided upon request. All elements of information indicated on the said form shall be provided, including but not limited to the following:
 - (1) The names and addresses of DBE firms that will participate in the contract;

- (2) A description, including pay item numbers, of the work each DBE will perform;
- (3) The dollar amount of the participation of each DBE firm participating. The dollar amount of participation for identified work shall specifically state the quantity, unit price, and total subcontract price for the work to be completed by the DBE. If partial pay items are to be performed by the DBE, indicate the portion of each item, a unit price where appropriate and the subcontract price amount;
- (4) DBE Participation Commitment Statements, form SBE 2025, signed by the bidder and each participating DBE firm documenting the commitment to use the DBE subcontractors whose participation is submitted to meet the contract goal;
- (5) if the bidder is a joint venture comprised of DBE companies and non-DBE companies, the plan must also include a clear identification of the portion of the work to be performed by the DBE partner(s); and,
- (6) If the contract goal is not met, evidence of good faith efforts.

GOOD FAITH EFFORT PROCEDURES. The contract will not be awarded until the Utilization Plan submitted by the apparent successful bidder is approved. All information submitted by the bidder must be complete, accurate and adequately document that enough DBE participation has been obtained or document that good faith efforts of the bidder, in the event enough DBE participation has not been obtained, before the Department will commit to the performance of the contract by the bidder. The Utilization Plan will be approved by the Department if the Utilization Plan documents sufficient commercially useful DBE work performance to meet the contract goal or the bidder submits sufficient documentation of a good faith effort to meet the contract goal pursuant to 49 CFR Part 26, Appendix A. The Utilization Plan will not be approved by the Department if the Utilization Plan does not document sufficient DBE participation to meet the contract goal unless the apparent successful bidder documented in the Utilization Plan that it made a good faith effort to meet the goal. This means that the bidder must show that all necessary and reasonable steps were taken to achieve the contract goal. Necessary and reasonable steps are those which, by their scope, intensity and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not successful. The Department will consider the quality, quantity, and intensity of the kinds of efforts that the bidder has made. Mere *pro forma* efforts, in other words, efforts done as a matter of form, are not good faith efforts; rather, the bidder is expected to have taken genuine efforts that would be reasonably expected of a bidder actively and aggressively trying to obtain DBE participation sufficient to meet the contract goal.

- (a) The following is a list of types of action that the Department will consider as part of the evaluation of the bidder's good faith efforts to obtain participation. These listed factors are not intended to be a mandatory checklist and are not intended to be exhaustive. Other factors or efforts brought to the attention of the Department may be relevant in appropriate cases, and will be considered by the Department.

- (1) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBE companies that have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBE companies to respond to the solicitation. The bidder must determine with certainty if the DBE companies are interested by taking appropriate steps to follow up initial solicitations.
- (2) Selecting portions of the work to be performed by DBE companies in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime Contractor might otherwise prefer to perform these work items with its own forces.
- (3) Providing interested DBE companies with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
- (4)
 - a. Negotiating in good faith with interested DBE companies. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBE companies that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBE companies to perform the work.
 - b. A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBE companies is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also the ability or desire of a bidder to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from DBE companies if the price difference is excessive or unreasonable.
- (5) Not rejecting DBE companies as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.

- (6) Making efforts to assist interested DBE companies in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.
 - (7) Making efforts to assist interested DBE companies in obtaining necessary equipment, supplies, materials, or related assistance or services.
 - (8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBE companies.
- (b) If the Department determines that the apparent successful bidder has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided that it is otherwise eligible for award. If the Department determines that the bidder has failed to meet the requirements of this Special Provision or that a good faith effort has not been made, the Department will notify the responsible company official designated in the Utilization Plan that the bid is not responsive. The notification shall include a statement of reasons for the determination.
- (c) The bidder may request administrative reconsideration of a determination adverse to the bidder within the five working days after the receipt of the notification date of the determination by delivering the request to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764 (Telefax: (217)785-1524). Deposit of the request in the United States mail on or before the fifth business day shall not be deemed delivery. The determination shall become final if a request is not made and delivered. A request may provide additional written documentation and/or argument concerning the issues raised in the determination statement of reasons, provided the documentation and arguments address efforts made prior to submitting the bid. The request will be forwarded to the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person in order to consider all issues of documentation and whether the bidder made a good faith effort to meet the goal. After the review by the Reconsideration Officer, the bidder will be sent a written decision within ten working days after receipt of the request for consideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid not responsive.

CALCULATING DBE PARTICIPATION. The Utilization Plan values represent work anticipated to be performed and paid for upon satisfactory completion. The Department is only able to count toward the achievement of the overall goal and the contract goal the value of payments made for the work actually performed by DBE companies. In addition, a DBE must perform a commercially useful function on the contract to be counted. A commercially useful function is

generally performed when the DBE is responsible for the work and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. The Department and Contractor are governed by the provisions of 49 CFR Part 26.55(c) on questions of commercially useful functions as it affects the work. Specific counting guidelines are provided in 49 CFR Part 26.55, the provisions of which govern over the summary contained herein.

- (a) DBE as the Contractor: 100 percent goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE does not count toward the DBE goals.
- (b) DBE as a joint venture Contractor: 100 percent goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.
- (c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the prime Contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE does not count toward the DBE goal.
- (d) DBE as a trucker: 100 percent goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed, and insured by the DBE must be used on the contract. Credit will be given for the following:
 - (1) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
 - (2) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission is receives as a result of the lease arrangement.
- (e) DBE as a material supplier:
 - (1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.
 - (2) 100 percent goal credit for the cost of materials of supplies obtained from a DBE manufacturer.
 - (3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a regular dealer or manufacturer.

CONTRACT COMPLIANCE. Compliance with this Special Provision is an essential part of the contract. The Department is prohibited by federal regulations from crediting the participation of a DBE included in the Utilization Plan toward either the contract goal or the Department's overall goal until the amount to be applied toward the goals has been paid to the DBE. The following administrative procedures and remedies govern the compliance by the Contractor with the contractual obligations established by the Utilization Plan. After approval of the Utilization Plan and award of the contract, the Utilization Plan and individual DBE Participation Statements become part of the contract. If the Contractor did not succeed in obtaining enough DBE participation to achieve the advertised contract goal, and the Utilization Plan was approved and contract awarded based upon a determination of good faith, the total dollar value of DBE work calculated in the approved Utilization Plan as a percentage of the awarded contract value shall become the amended contract goal. All work indicated for performance by an approved DBE shall be performed, managed, and supervised by the DBE executing the Participation Statement.

- (a) NO AMENDMENT. No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be submitted to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764. Telephone number (217)785-4611. Telefax number (217)785-1524.
- (b) TERMINATION OR REPLACEMENT. The Contractor shall not terminate or replace a DBE listed on the approved Utilization Plan, or perform with other forces work designated for a listed DBE except as provided in the Special Provision.
- (c) CHANGES TO WORK. Any deviation from the DBE condition-of-award or contract plans, specifications, or special provisions must be approved, in writing, by the Department as provided elsewhere in the Contract. The Contractor shall notify affected DBEs in writing of any changes in the scope of work which result in a reduction in the dollar amount condition-of-award to the contract. Where the revision includes work committed to a new DBE subcontractor, not previously involved in the project, then a Request for Approval of Subcontractor, Department form BC 260A, must be signed and submitted. If the commitment of work is in the form of additional tasks assigned to an existing subcontract, 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.
- (d) ALTERNATIVE WORK METHODS. In addition to the above requirements for reductions in the condition of award, additional requirements apply to the two cases of Contractor-initiated work substitution proposals. Where the contract allows alternate work methods which serve to delete or create underruns in condition of award DBE work, and the Contractor selects that alternate method or, where the Contractor proposes a substitute work method or material that serves to diminish or delete work committed to a DBE and replace it with other work, then the Contractor must demonstrate one of the following:

- (1) That the replacement work will be performed by the same DBE (as long as the DBE is certified in the respective item of work) in a modification of the condition of award; or
- (2) That the DBE is aware that its work will be deleted or will experience underruns and has agreed in writing to the change. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so; or
- (3) That the DBE is not capable of performing the replacement work or has declined to perform the work at a reasonable competitive price. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so.

(e) TERMINATION AND REPLACEMENT PROCEDURES. The Contractor shall not terminate or replace a DBE subcontractor listed in the approved Utilization Plan without prior written consent. This includes, but is not limited to, instances in which the Contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm. Written consent will be granted only if the Bureau of Small Business Enterprises agrees, for reasons stated in its concurrence document, that the Contractor has good cause to terminate or replace the DBE firm. Before transmitting to the Bureau of Small Business Enterprises any request to terminate and/or substitute a DBE subcontractor, the Contractor shall give notice in writing to the DBE subcontractor, with a copy to the Bureau, of its intent to request to terminate and/or substitute, and the reason for the request. The Contractor shall give the DBE five days to respond to the Contractor's notice. The DBE so notified shall advise the Bureau and the Contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why the Bureau should not approve the Contractor's action. If required in a particular case as a matter of public necessity, the Bureau may provide a response period shorter than five days.

For purposes of this paragraph, good cause includes the following circumstances:

- (1) The listed DBE subcontractor fails or refuses to execute a written contract;
- (2) The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor;
- (3) The listed DBE subcontractor fails or refuses to meet the prime Contractor's reasonable, nondiscriminatory bond requirements;

- (4) The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;
- (5) The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1,200 or applicable state law.
- (6) You have determined that the listed DBE subcontractor is not a responsible contractor;
- (7) The listed DBE subcontractor voluntarily withdraws from the projects and provides to you written notice of its withdrawal;
- (8) The listed DBE is ineligible to receive DBE credit for the type of work required;
- (9) A DBE owner dies or becomes disabled with the result that the listed DBE contractor is unable to complete its work on the contract;
- (10) Other documented good cause that compels the termination of the DBE subcontractor. Provided, that good cause does not exist if the prime Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the prime Contractor can self-perform the work for which the DBE contractor was engaged or so that the prime Contractor can substitute another DBE or non-DBE contractor after contract award.

When a DBE is terminated, or fails to complete its work on the Contract for any reason the Contractor shall make a good faith effort to find another DBE to substitute for the original DBE to perform at least the same amount of work under the contract as the terminated DBE to the extent needed to meet the established Contract goal.

- (f) PAYMENT RECORDS. The Contractor shall maintain a record of payments for work performed to the DBE participants. The records shall be made available to the Department for inspection upon request. After the performance of the final item of work or delivery of material by a DBE and final payment therefore to the DBE by the Contractor, but not later than thirty calendar days after payment has been made by the Department to the Contractor for such work or material, the Contractor shall submit a DBE Payment Agreement on Department form SBE 2115 to the Regional Engineer. If full and final payment has not been made to the DBE, the DBE Payment Agreement shall indicate whether a disagreement as to the payment required exists between the Contractor and the DBE or if the Contractor believes that the work has not been satisfactorily completed. If the Contractor does not have the full amount of work indicated in the Utilization Plan performed by the BDE companies indicated in the Utilization Plan and after good faith efforts are reviewed, the Department may deduct from contract payments to the Contractor the amount of the goal not achieved as liquidated and ascertained damages. The Contractor may request an administrative

reconsideration of any amount deducted as damages pursuant to subsection (h) of this part.

(g) ENFORCEMENT. The Department reserves the right to withhold payment to the Contractor to enforce the provisions of this Special Provision. Final payment shall not be made on the contract until such time as the Contractor submits sufficient documentation demonstrating achievement of the goal in accordance with this Special Provision or after liquidated damages have been determined and collected.

(h) RECONSIDERATION. Notwithstanding any other provision of the contract, including but not limited to Article 109.09 of the Standard Specifications, the Contractor 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.

80029

FUEL COST ADJUSTMENT (BDE) (RETURN FORM WITH BID)

Effective: April 1, 2009

Revised: July 1, 2009

Description. Fuel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in fuel prices when optioned by the Contractor. The bidder shall indicate on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form or failure to indicate contract number, company name and sign and date the form shall make this contract exempt of fuel cost adjustments for all categories of work. Failure to indicate "Yes" for any category of work will make that category of work exempt from fuel cost adjustment.

General. The fuel cost adjustment shall apply to contract pay items as grouped by category. The adjustment shall only apply to those categories of work checked "Yes", and only when the cumulative plan quantities for a category exceed the required threshold. Adjustments to work items in a category, either up or down, and work added by adjusted unit price will be subject to fuel cost adjustment only when the category representing the added work was subject to the fuel cost adjustment. Added work paid for by time and materials will not be subject to fuel cost adjustment. Category descriptions and thresholds for application and the fuel usage factors which are applicable to each are as follows:

(a) Categories of Work.

- (1) Category A: Earthwork. Contract pay items performed under Sections 202, 204, and 206 including any modified standard or nonstandard items where the character of the work to be performed is considered earthwork. The cumulative total of all applicable item plan quantities shall exceed 25,000 cu yd (20,000 cu m). Included in the fuel usage factor is a weighted average 0.10 gal/cu yd (0.50 liters/cu m) factor for trucking.
- (2) Category B: Subbases and Aggregate Base Courses. Contract pay items constructed under Sections 311, 312 and 351 including any modified standard or nonstandard items where the character of the work to be performed is considered construction of a subbase or aggregate, stabilized or modified base course. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is a 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.
- (3) Category C: Hot-Mix Asphalt (HMA) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 355, 406, 407 and 482 including any modified standard or nonstandard items where the character of the work to be performed is considered HMA bases, pavements and shoulders. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.

- (4) Category D: Portland Cement Concrete (PCC) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 353, 420, 421 and 483 including any modified standard or nonstandard items where the character of the work to be performed is considered PCC base, pavement or shoulder. The cumulative total of all applicable item plan quantities shall exceed 7500 sq yd (6000 sq m). Included in the fuel usage factor is 1.20 gal/cu yd (5.94 liters/cu m) factor for trucking.
- (5) Category E: Structures. Structure items having a cumulative bid price that exceeds \$250,000 for pay items constructed under Sections 502, 503, 504, 505, 512, 516 and 540 including any modified standard or nonstandard items where the character of the work to be performed is considered structure work when similar to that performed under these sections and not included in categories A through D.

(b) Fuel Usage Factors.

English Units		
Category	Factor	Units
A - Earthwork	0.34	gal / cu yd
B – Subbase and Aggregate Base courses	0.62	gal / ton
C – HMA Bases, Pavements and Shoulders	1.05	gal / ton
D – PCC Bases, Pavements and Shoulders	2.53	gal / cu yd
E – Structures	8.00	gal / \$1000

Metric Units		
Category	Factor	Units
A - Earthwork	1.68	liters / cu m
B – Subbase and Aggregate Base courses	2.58	liters / metric ton
C – HMA Bases, Pavements and Shoulders	4.37	liters / metric ton
D – PCC Bases, Pavements and Shoulders	12.52	liters / cu m
E – Structures	30.28	liters / \$1000

(c) Quantity Conversion Factors.

Category	Conversion	Factor
B	sq yd to ton	0.057 ton / sq yd / in depth
	sq m to metric ton	0.00243 metric ton / sq m / mm depth
C	sq yd to ton	0.056 ton / sq yd / in depth
	sq m to metric ton	0.00239 m ton / sq m / mm depth
D	sq yd to cu yd	0.028 cu yd / sq yd / in depth
	sq m to cu m	0.001 cu m / sq m / mm depth

Method of Adjustment. Fuel cost adjustments will be computed as follows.

$$| CA = (FPI_P - FPI_L) \times FUF \times Q$$

Where: CA = Cost Adjustment, \$
FPI_P = Fuel Price Index, as published by the Department for the month the work is performed, \$/gal (\$/liter)
FPI_L = Fuel Price Index, as published by the Department for the month prior to the letting, \$/gal (\$/liter)
FUF = Fuel Usage Factor in the pay item(s) being adjusted
Q = Authorized construction Quantity, tons (metric tons) or cu yd (cu m)

The entire FUF indicated in paragraph (b) will be used regardless of use of trucking to perform the work.

Progress Payments. Fuel cost adjustments will be calculated for each calendar month in which applicable work is performed; and will be paid or deducted when all other contract requirements for the items of work are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Final Quantities. Upon completion of the work and determination of final pay quantities, an adjustment will be prepared to reconcile any differences between estimated quantities previously paid and the final quantities. The value for the balancing adjustment will be based on a weighted average of FPI_P and Q only for those months requiring the cost adjustment. The cost adjustment will be applicable to the final measured quantities of all applicable pay items.

Basis of Payment. Fuel cost adjustments may be positive or negative but will only be made when there is a difference between the FPI_L and FPI_P in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(FPI_L - FPI_P) \div FPI_L\} \times 100$$

Return With Bid

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**OPTION FOR
FUEL COST ADJUSTMENT**

The bidder shall submit this completed form with his/her bid. Failure to submit the form or properly complete contract number, company name, and sign and date the form shall make this contract exempt of fuel cost adjustments in all categories. Failure to indicate "Yes" for any category of work at the time of bid will make that category of work exempt from fuel cost adjustment. After award, this form, when submitted shall become part of the contract.

Contract No.: _____

Company Name: _____

Contractor's Option:

Is your company opting to include this special provision as part of the contract plans for the following categories of work?

- | | | |
|--|-----|--------------------------|
| Category A Earthwork. | Yes | <input type="checkbox"/> |
| Category B Subbases and Aggregate Base Courses | Yes | <input type="checkbox"/> |
| Category C HMA Bases, Pavements and Shoulders | Yes | <input type="checkbox"/> |
| Category D PCC Bases, Pavements and Shoulders | Yes | <input type="checkbox"/> |
| Category E Structures | Yes | <input type="checkbox"/> |

Signature: _____ **Date:** _____

80229

GRANULAR MATERIALS (BDE)

Effective: November 1, 2012

Revise the title of Article 1003.04 of the Standard Specifications to read:

“1003.04 Fine Aggregate for Bedding, Trench Backfill, Embankment, Porous Granular Backfill, Sand Backfill for Underdrains, and French Drains.”

Revise Article 1003.04(c) of the Standard Specifications to read:

“(c) Gradation. The fine aggregate gradations for granular embankment, granular backfill, bedding, and trench backfill for pipe culverts and storm sewers shall be FA 1, FA 2, or FA 6 through FA 21.

The fine aggregate gradation for porous granular embankment, porous granular backfill, french drains, and sand backfill for underdrains shall be FA 1, FA 2, or FA 20, except the percent passing the No. 200 (75 µm) sieve shall be 2±2.”

Revise Article 1004.05(c) of the Standard Specifications to read:

“(c) Gradation. The coarse aggregate gradations shall be as follows.

Application	Gradation
Blotter	CA 15
Granular Embankment, Granular Backfill, Bedding, and Trench Backfill for Pipe Culverts and Storm Sewers	CA 6, CA 9, CA 10, CA 12, CA17, CA18, and CA 19
Porous Granular Embankment, Porous Granular Backfill, and French Drains	CA 7, CA 8, CA 11, CA 15, CA 16 and CA 18”

80303

LIQUIDATED DAMAGES (BDE)

Effective: April 1, 2013

Revise the table in Article 108.09 of the Standard Specifications to read:

"Schedule of Deductions for Each Day of Overrun in Contract Time"			
Original Contract Amount		Daily Charges	
From More Than	To and Including	Calendar Day	Work Day
\$ 0	\$ 100,000	\$ 475	\$ 675
100,000	500,000	750	1,050
500,000	1,000,000	1,025	1,425
1,000,000	3,000,000	1,275	1,725
3,000,000	6,000,000	1,425	2,000
6,000,000	12,000,000	2,300	3,450
12,000,000	And over	6,775	9,525"

80320

MODIFIED URETHANE PAVEMENT MARKING (BDE)

Effective: April 1, 2012

Add the following to Article 780.02 of the Standard Specifications:

“(h) Modified Urethane Pavement Marking 1095.09”

Add the following to Article 780.03 of the Standard Specifications:

“(e) Modified Urethane 1105.04”

Revise Article 780.11 of the Standard Specifications to read:

“780.11 Modified Urethane. The pavement shall be cleaned of all dirt, grease, glaze, or any other material that would reduce the adhesion of the markings with minimum or no damage to the pavement. New PCC pavements shall be blast-cleaned to remove all curing compounds. New asphalt and seal coated shall be in place a minimum of two weeks prior to marking applications.

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

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

The Contractor shall notify the Engineer 72 hours prior to the placement of the markings in order than an inspector can be present during the operation. At the time of this notification, the Contractor shall indicate the manufacturer and lot numbers of urethane and reflective media that will be used. The Engineer will ensure that the approved lot numbers appear on the material package.

The pavement markings shall be applied during conditions of dry weather and subsequently dry pavement surfaces at a minimum uniform wet thickness of 25 mils (0.64 mm) according to the manufacturer’s installation instructions. The application and combination of reflective media (glass beads and/or reflective elements) shall be applied at a rate specified by the manufacturer. At the time of installation the pavement surface temperature shall be 40 °F (5 °C) and rising and the ambient temperature shall be 35 °F (2 °C) and rising. The pavement surface temperature and the ambient temperatures shall be determined and documented before the start of each of marking operation. The pavement markings shall not be applied if the pavement shows any visible signs of moisture or it is anticipated that moisture, such as rain showers, may occur during the installation and curing periods.”

Revise Article 780.12 of the Standard Specifications to read:

“780.12 Inspection. The epoxy, thermoplastic, preformed thermoplastic, preformed plastic Type B or C, polyurea, and modified urethane pavement markings will be inspected following installation, but no later than October 15 for preformed plastic markings, November 1 for thermoplastic and preformed thermoplastic markings, and December 15 for epoxy, polyurea, and modified urethane markings. In addition, they will be inspected following a winter performance period that extends 180 days from November 1.

Within 15 calendar days after the end of the winter performance period, a final performance inspection will be made. Final acceptance requirements are as follows.

- (a) Lane lines: 90 percent intact by area of each individual dashed line segment.
- (b) Crosswalks, stop lines, arrows, and words: 90 percent intact by area of each individual line, symbol, or letter.
- (c) Center lines, edge lines, gore markings, and channelizing lines: 90 percent intact by area measured over any 10 ft (3 m) length of any individual line regardless of width.
- (d) Entire project: measured in its entirety according to (a), (b), and (c) above, the entire project shall be 95 percent intact.

Upon completion of the final performance inspection, or after satisfactory completion of any necessary correction, the Engineer will notify the Contractor, in writing, of the date of such final performance inspection and release him/her from further performance responsibility.

If this inspection discloses any work, in whole or in part, which does not meet the inspection requirements, the Contractor shall, within 30 calendar days, completely repair or replace such work to the satisfaction of the Engineer.

This performance inspection and performance acceptance of the epoxy, thermoplastic, preformed thermoplastic, preformed plastic Type B and C pavement, polyurea, and modified urethane markings shall not delay acceptance of the entire project and final payment due if the Contractor requires and receives from the subcontractor a third party "performance" bond naming the Department as obligee in the full amount of all pavement marking quantities listed in the contract, multiplied by the contract unit price. The bond shall be executed prior to acceptance and final payment of the non-pavement marking items and shall be in full force and effect until final performance inspection and performance acceptance of the epoxy, thermoplastic, preformed thermoplastic, preformed plastic, polyurea, and modified urethane pavement markings. Execution of the third party bond shall be the option of the Contractor.”

Revise Article 780.13 of the Standard Specifications to read:

“780.13 Method of Measurement. This work will be measured for payment as follows.

- (a) Contract Quantities. The requirements for the use of contract quantities shall be according to Article 202.07(a).
- (b) Measured Quantities. Lines will be measured for payment in place in feet (meters). Double yellow lines will be measured as two separate lines.

Words and symbols shall conform to the sizes and dimensions specified in the Illinois Manual on Uniform Traffic Control Devices and Standard 780001 and will be measured based on the total areas indicated in Table 1 or as specified in the plans.

Removal of existing pavement markings will be measured for payment according to Article 783.05.”

Add the following to Section 780 of the Standard Specifications:

“780.14 Basis of Payment. This work will be paid for at the contract unit prices per foot (meter) of applied line width, as specified, for THERMOPLASTIC PAVEMENT MARKING - LINE; PAINT PAVEMENT MARKING - LINE; EPOXY PAVEMENT MARKING - LINE; PREFORMED PLASTIC PAVEMENT MARKING - LINE - TYPE B, C, or B - INLAID; PREFORMED THERMOPLASTIC PAVEMENT MARKING – LINE; POLYUREA PAVEMENT MARKING TYPE I – LINE; POLYUREA PAVEMENT MARKING TYPE II - LINE; MODIFIED URETHANE PAVEMENT MARKING – LINE; and/or per square foot (square meter) for THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS; PAINT PAVEMENT MARKING - LETTERS AND SYMBOLS; EPOXY PAVEMENT MARKING - LETTERS AND SYMBOLS; PREFORMED PLASTIC PAVEMENT MARKING - TYPE B, C, or B - INLAID - LETTERS AND SYMBOLS; PREFORMED THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS; MODIFIED URETHANE PAVEMENT MARKING – LETTERS AND SYMBOLS.

When the Contractor has the option of applying Permanent Pavement Marking it shall be Thermoplastic, Preformed Plastic (Type B, C, or B - Inlaid), Epoxy, Preformed Thermoplastic, Polyurea, or Modified Urethane Pavement Markings. It will be paid for at the contract unit price per foot (meter) of applied line for PERMANENT PAVEMENT MARKING - LINE 4 (100), 5 (125), 6 (150), 8 (200), 12 (300), 16 (400), or 24 in. (600 mm) and per square foot (square meter) for PERMANENT PAVEMENT MARKING - LETTERS AND SYMBOLS.

Temporary pavement markings placed in lieu of permanent will be paid for according to Article 703.07.

Removal of existing pavement markings will be paid for according to Article 783.06.

*TABLE 1

LETTERS
sq ft (sq m)

Size	A	B	C	D	E	F	G	H	I
6 ft (1.8 m)	3.1 (0.28)	4.0 (0.37)	2.7 (0.25)	3.4 (0.31)	3.3 (0.31)	2.6 (0.24)	3.3 (0.31)	3.4 (0.31)	1.5 (0.14)
8 ft (2.4 m)	5.5 (0.51)	7.1 (0.66)	4.8 (0.45)	6.1 (0.57)	5.9 (0.55)	4.7 (0.44)	5.8 (0.54)	6.0 (0.56)	2.6 (0.24)

Size	J	K	L	M	N	O	P	Q	R
6 ft (1.8 m)	2.1 (0.2)	3.1 (0.28)	2.2 (0.20)	4.2 (0.39)	4.0 (0.37)	3.4 (0.31)	3.0 (0.28)	3.6 (0.33)	3.6 (0.33)
8 ft (2.4 m)	3.7 (0.34)	5.7 (0.53)	3.8 (0.45)	7.4 (0.69)	7.1 (0.65)	6.0 (0.56)	5.3 (0.49)	6.3 (0.59)	6.3 (0.59)

Size	S	T	U	V	W	X	Y	Z
6 ft (1.8 m)	3.2 (0.30)	2.2 (0.20)	3.2 (0.30)	2.7 (0.25)	4.2 (0.39)	2.7 (0.25)	2.2 (0.20)	2.9 (0.26)
8 ft (2.4 m)	5.7 (0.53)	3.8 (0.35)	5.6 (0.52)	4.8 (0.45)	7.3 (0.68)	4.8 (0.45)	3.9 (0.36)	5.1 (0.47)

NUMBERS
sq ft (sq m)

Size	1	2	3	4	5
6 ft (1.8 m)	1.5 (0.14)	3.3 (0.31)	3.3 (0.31)	2.9 (0.26)	3.5 (0.33)
8 ft (2.4 m)	2.6 (0.24)	5.8 (0.54)	5.8 (0.54)	5.1 (0.47)	6.1 (0.57)

Size	6	7	8	9	0
6 ft (1.8 m)	3.5 (0.33)	2.2 (0.20)	3.8 (0.35)	3.5 (0.33)	3.4 (0.31)
8 ft (2.4 m)	6.2 (0.58)	3.8 (0.35)	6.7 (0.62)	6.2 (0.58)	6.0 (0.56)

SYMBOLS

Symbol	Large Size sq ft (sq m)	Small Size sq ft (sq m)
Through Arrow	11.5 (1.07)	6.5 (0.60)
Left or Right Arrow	15.6 (1.47)	8.8 (0.82)
2 Arrow Combination Left (or Right) and	26.0 (2.42)	14.7 (1.37)

Through		
3 Arrow Combination Left, Right, and Through	38.4 (3.56)	20.9 (1.94)
Lane Drop Arrow	41.5 (3.86)	--
Wrong Way Arrow	24.3 (2.26)	--
Railroad "R" 6 ft (1.8 m)	3.6 (0.33)	--
Railroad "X" 20 ft (6.1 m)	54.0 (5.02)	--
Handicapped Symbol	4.6 (0.43)	--

*Table applies to all types of pavement marking materials."

Add the following Section to Section 1095 of the Standard Specifications:

"1095.09 Modified Urethane Pavement Marking. The modified urethane pavement marking material shall consist of a homogenous blend of modified urethane resins and pigments designed to provide a simple volumetric mixing ratio of two components (must be two volumes of Part A to one volume of Part B). No volatile solvent or fillers will be allowed.

- (a) Pigmentation. The pigment content by weight (mass) of Part A shall be determined by low temperature ashing according to ASTM D 3723. The pigment content shall not vary more than \pm two percent from the pigment content of the original qualified paint.

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

Yellow pigment shall be Organic Yellow containing no heavy metals.

- (b) Environmental. Upon heating to application temperature, the material shall not exude fumes which are toxic or injurious persons or property when handled according to manufacturer specifications. The modified urethane pavement marking material compositions shall not contain free isocyanate functionality.

- (c) Daylight Reflectance. The daylight directional reflectance of the cured modified urethane material (without reflective media) shall be a minimum of 80 percent (white) and 50 percent (yellow) relative to magnesium oxide when tested using a color spectrophotometer with a 45 degree circumferential / zero degrees geometry, illuminant C, and two degrees observer angle. The color instrument shall measure the visible spectrum from 380 to 720 nm with a wavelength measurement interval and spectral bandpass of 10 nm. In addition, the color of the yellow modified urethane shall visually match Color Number 33538 of Federal Standard 595a with chromaticity limits as follows:

x	0.490	0.475	0.485	0.539
y	0.470	0.438	0.425	0.456

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

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

- (e) Drying Time. The modified urethane material, when mixed in the proper ratio and applied at 14 to 16 mils (0.35 to 0.41 mm) wet film thickness and with the proper saturation of glass beads, shall exhibit a no-tracking time of four minutes or less when tested according to ASTM D 711.
- (f) Adhesion. The catalyzed modified urethane pavement marking materials when applied to a 4 x 4 x 2 in. (100 x 100 x 50 mm) concrete block shall have a degree of adhesion which results in a 100 percent concrete failure in the performance of this test.

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

- (g) Hardness. The modified urethane marking materials, when tested according to ASTM D 2240, shall have a Shore D Hardness greater than 75. Films shall be cast on a rigid substrate at 14 to 16 mils (0.35 to 0.41 mm) in thickness and allowed to cure at room temperature for 72 hours before testing.
- (h) Abrasion. The abrasion resistance shall be evaluated according to ASTM D 4060 using a Taber Abrader with a 1,000 gram load and CS 17 wheels. The duration of test shall be 1,000 cycles. The loss shall be calculated by difference and be less than 80. The tests shall be run on cured samples of modified urethane material which have been applied at a film thickness of 14 to 16 mils (0.35 to 0.41) to code S-16 stainless steel plates. The films shall be allowed to cure at room temperature for at least 72 hours and not more than 96 hours before testing.
- (i) Tensile. When tested according to ASTM D 638, the modified urethane pavement marking materials shall have an average tensile strength of not less than 6000 psi

(41,300 kPa). The Type IV specimens shall be pulled at a rate of 1/4 in. (6.3 mm) per minute by a suitable dynamic testing machine. The samples shall be allowed to cure at 75 °F ± 2 °F (24 °C ± 1 °C) for a minimum of 24 hours and a maximum of 72 hours prior to performing the indicated tests.

- (j) Compressive Strength. When tested according to ASTM D 695, the catalyzed modified urethane pavement marking materials shall have a compressive strength of not less than 12,000 psi (83,000 kPa). The cast sample shall be conditioned at 75 °F ± 2 °F (24 °C ± 1 °C) for a minimum of 72 hours before performing the indicated tests. The rate of compression of these samples shall be no more than 1/4 in. (6.3 mm) per minute.
- (k) Glass Beads. The glass beads shall meet the requirements of Article 1095.04(m) and Article 1095.07 for first drop and second drop glass beads.
- (l) Packaging. The material shall be shipped to the jobsite in substantial containers and shall be plainly marked with the manufacturer's name and address, the name and color of the material, date of manufacture and batch number.
- (m) Verification. Prior to approval and use of the modified urethane pavement marking materials, the manufacturer shall submit a notarized certification of an independent laboratory, together with the results of all tests, stating these materials meet the requirements as set forth herein. The certification test report shall state the lot tested, manufacturer's name, brand name of modified urethane and date of manufacture. The certification shall be accompanied by 1 pt (1/2 L) samples each of Part A and Part B. Samples shall be sent in the appropriate volumes for complete mixing of Part A and Part B.

After approval by the Department, certification by the modified urethane manufacturer shall be submitted for each batch used. New independent laboratory certified test results and samples for testing by the Department shall be submitted any time the manufacturing process or paint formulation is changed.

- (n) Acceptance samples. Acceptance samples shall consist of 1 pt (1/2 L) samples of Part A and Part B, of each lot of paint. Samples shall be sent in the appropriate volumes for complete mixing of Part A and Part B. The samples shall be submitted to the Department for testing, together with a manufacturer's certification. The certification shall state the formulation for the lot represented is essentially identical to that used for qualification testing. All, acceptance samples will be taken by a representative of the Illinois Department of Transportation. The modified urethane pavement marking materials shall not be used until tests are completed and they have met the requirements as set forth herein.
- (o) Material Retainage. The manufacturer shall retain the test sample for a minimum of 18 months."

Add the following to Section 1105 of the Standard Specifications:

“1105.04 Modified Urethane. The modified urethane pavement marking compounds shall be applied through equipment specifically designed to precisely meter the two components in the ratio of 2:1 and approved by the manufacturer of the material. The equipment shall produce the required amount of heat at the mixing head and gun tip and maintain those temperatures within the tolerances specified. The equipment shall also have as an integral part of the gun carriage, a high pressure air spray capable of cleaning the pavement immediately prior to the marking application.

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

80297

PAVEMENT PATCHING (BDE)

Effective: January 1, 2010

Revise the first sentence of the second paragraph of Article 701.17(e)(1) of the Standard Specifications to read:

“In addition to the traffic control and protection shown elsewhere in the contract for pavement, two devices shall be placed immediately in front of each open patch, open hole, and broken pavement where temporary concrete barriers are not used to separate traffic from the work area.”

80254

PAVEMENT REMOVAL (BDE)

Effective: April 1, 2013

Revise Article 440.07(c) of the Standard Specifications to read:

“(c) Adjustment of Quantities. The quantity of pavement removal will be adjusted if the thickness of the existing pavement varies more than 15 percent from that shown on the plans. The quantity will be either increased or decreased according to the following table.

% change of thickness	% change of quantity
0 to less than 15	0
15 to less than 20	10
20 to less than 30	15
30 to less than 50	20

If the thickness of the existing pavement varies by 50 percent or more from that shown on the plans, the character of the work will be considered significantly changed and an adjustment to the contract will be made according to Article 104.02.

When an adjustment is made for variations in pavement thickness a resulting adjustment will also be made in the earthwork quantities when applicable.

No adjustment will be made for variations in the amount of reinforcement.”

80321

PAYMENTS TO SUBCONTRACTORS (BDE)

Effective: June 1, 2000

Revised: January 1, 2006

Federal regulations found at 49 CFR §26.29 mandate the Department to establish a contract clause to require Contractors to pay subcontractors for satisfactory performance of their subcontracts and to set the time for such payments.

State law also addresses the timing of payments to be made to subcontractors and material suppliers. Section 7 of the Prompt Payment Act, 30 ILCS 540/7, requires that when a Contractor receives any payment from the Department, the Contractor shall make corresponding, proportional payments to each subcontractor and material supplier performing work or supplying material within 15 calendar days after receipt of the Department payment. Section 7 of the Act further provides that interest in the amount of two percent per month, in addition to the payment due, shall be paid to any subcontractor or material supplier by the Contractor if the payment required by the Act is withheld or delayed without reasonable cause. The Act also provides that the time for payment required and the calculation of any interest due applies to transactions between subcontractors and lower-tier subcontractors and material suppliers throughout the contracting chain.

This Special Provision establishes the required federal contract clause, and adopts the 15 calendar day requirement of the State Prompt Payment Act for purposes of compliance with the federal regulation regarding payments to subcontractors. This contract is subject to the following payment obligations.

When progress payments are made to the Contractor according to Article 109.07 of the Standard Specifications, the Contractor shall make a corresponding payment to each subcontractor and material supplier in proportion to the work satisfactorily completed by each subcontractor and for the material supplied to perform any work of the contract. The proportionate amount of partial payment due to each subcontractor and material supplier throughout the contracting chain shall be determined by the quantities measured or otherwise determined as eligible for payment by the Department and included in the progress payment to the Contractor. Subcontractors and material suppliers shall be paid by the Contractor within 15 calendar days after the receipt of payment from the Department. The Contractor shall not hold retainage from the subcontractors. These obligations shall also apply to any payments made by subcontractors and material suppliers to their subcontractors and material suppliers; and to all payments made to lower tier subcontractors and material suppliers throughout the contracting chain. Any payment or portion of a payment subject to this provision may only be withheld from the subcontractor or material supplier to whom it is due for reasonable cause.

This Special Provision does not create any rights in favor of any subcontractor or material supplier against the State or authorize any cause of action against the State on account of any payment, nonpayment, delayed payment, or interest claimed by application of the State Prompt Payment Act. The Department will not approve any delay or postponement of the 15 day requirement except for reasonable cause shown after notice and hearing pursuant to Section

| 7(b) of the State Prompt Payment Act. State law creates other and additional remedies available to any subcontractor or material supplier, regardless of tier, who has not been paid for work properly performed or material furnished. These remedies are a lien against public funds set forth in Section 23(c) of the Mechanics Lien Act, 770 ILCS 60/23(c), and a recovery on the Contractor's payment bond according to the Public Construction Bond Act, 30 ILCS 550.

80022

PLACING AND CONSOLIDATING CONCRETE (BDE)

Effective: January 1, 2013

Revise the first paragraph of Article 503.06 of the Standard Specifications to read:

“503.06 Forms. Forms shall be set and maintained to the lines and grades shown on the plans, and shall be tight to prevent concrete leakage.”

Revise Article 503.07 of the Standard Specifications to read:

“503.07 Placing and Consolidating. No concrete shall be placed on ice, snow, or frozen foundation material.

The method and manner of placing concrete shall be such as to avoid segregation or separation of the aggregates or the displacement of the reinforcement. The external surface of all concrete shall be thoroughly worked during the operations of placing in such a manner as to work the mortar against the forms to produce a smooth finish free of honeycomb and with a minimum of water and air pockets.

Open troughs and chutes shall extend as nearly as practicable to the point of deposit. Dropping the concrete a distance of more than 5 ft (1.5 m) or depositing a large quantity at any point and running or working it along the forms will not be permitted. The concrete for walls with an average thickness of 12 in. (300 mm) or less shall be placed with tubes so that the drop is not greater than 5 ft (1.5 m).

For self-consolidating concrete, the maximum distance of horizontal flow from the point of deposit shall be 15 ft (4.6 m). The distance may be increased if the dynamic segregation index (DSI) at the maximum flow distance is 10.0 percent or less according to Illinois Test Procedure SCC-8 (Option C). The maximum distance using the DSI shall be 25 ft (7.6 m). In addition, this specified horizontal flow distance shall apply to precast products. In the case of precast prestressed concrete products, refer to the Department’s “Manual of Fabrication for Precast Prestressed Concrete Products” for the specified horizontal flow distance requirements.

When the form height for placing the self-consolidating concrete is greater than 10 ft (3.0 m), direct monitoring of form pressure shall be performed by the Contractor according to Illinois Test Procedure SCC-10. The monitoring requirement is a minimum, and the Contractor shall remain responsible for adequate design of the falsework and forms. The Contractor shall record the formwork pressure during concrete placement. This information shall be used by the Contractor to prevent the placement rate from exceeding the maximum formwork pressure allowed, to monitor the thixotropic change in the concrete during the pour, and to make appropriate adjustments to the mix design. This information shall be provided to the Engineer during the pour.

When concrete is pumped, the equipment shall be suitable in kind and adequate in capacity for the work and arranged so that vibrations will not damage freshly placed concrete. Aluminum

pipe or conduit will not be permitted in pumping or placing concrete. Mixed concrete shall be supplied to maintain continuous operation of the pumping equipment.

When air entrained concrete is pumped, an accessory or accessories shall be incorporated in the discharge components to minimize air loss. The maximum allowable air loss caused by the pumping operation shall be 3.0 percent with the minimum air content at the point of discharge meeting the requirements of Article 1020.04.

Placing of concrete shall be regulated so that the pressures caused by the wet concrete will not exceed those used in the design of the forms. Special care shall be taken to fill each part of the forms by depositing the concrete as near its final position as possible, to work the coarser aggregates back from the face, and to force the concrete under and around the reinforcement bars without displacing them. Leakage through forms onto beams or girders shall not be allowed to harden and shall be removed while in a plastic state.

The concrete shall be consolidated by internal vibration unless self-consolidating concrete is used. Self-consolidating concrete may be used for inaccessible locations where consolidation by internal vibration is not practicable. The self consolidating concrete shall be rodded with a piece of lumber, conduit, or vibrator if the material has lost its fluidity prior to placement of additional concrete. The vibrator may only be permitted if it can be used in a manner that does not cause segregation as determined by the Engineer. Any other method for restoring the fluidity of the concrete shall be approved by the Engineer.

The Contractor shall provide and use a sufficient number of vibrators to ensure that consolidation can be started immediately after the concrete has been deposited in the forms.

The vibrators shall be inserted into the concrete immediately after it is deposited and shall be moved throughout the mass so as to thoroughly work the concrete around the reinforcement, embedded fixtures, and into the corners and angles of the forms. Vibrators shall not be attached to the forms, reinforcement bars, or the surface of the concrete.

Application of vibrators shall be at points uniformly spaced and not farther apart than twice the radius over which the vibration is visibly effective. The duration of the vibration at the points of insertion shall be sufficient to thoroughly consolidate the concrete into place but shall not be continued so as to cause segregation. When consolidating concrete in bridge decks, the vibrator shall be vertically inserted into the concrete for 3 - 5 seconds or for a period of time determined by the Engineer. Vibration shall be supplemented by spading when required by the Engineer. In addition to the internal vibration required herein, formed surfaces which will be exposed to view after completion of the work shall be spaded with a spading tool approved by the Engineer.

Concrete shall be placed in continuous horizontal layers. When it is necessary by reason of an emergency to place less than a complete horizontal layer in one operation, such layer shall terminate in a vertical bulkhead. Separate batches shall follow each other closely and in no case shall the interval of time between the placing of successive batches be greater than 20 minutes.

If mix foaming or detrimental material is observed during placement or at the completion of a pour, the material shall be removed while the concrete is still plastic

After the concrete has taken its initial set, care shall be exercised to avoid jarring the forms or placing any strain on the ends of projecting reinforcement.”

Revise Article 516.12(a) of the Standard Specifications to read:

“(a) Free Fall Placement. The free fall placement shall only be permitted in shafts that can be dewatered to ensure less than 3 in. (75 mm) of standing water exist at the time of placement without causing side wall instability. The height of free fall placement shall be a maximum of 60 ft (18.3 m) as measured from the discharge end, but it shall be reduced to a maximum of 30 ft (9.1 m) when self-consolidating concrete is used. The Contractor shall obtain approval from the Engineer to place self-consolidating concrete by free fall.

Concrete placed by free fall shall fall directly to the base without contacting either the rebar cage or shaft sidewall. Drop chutes may be used to direct concrete to the base during free fall placement.

Drop chutes used to direct placement of free fall concrete shall consist of a smooth tube of either one continuous section or multiple pieces that can be added and removed. Concrete may be placed through either a hopper at the top of the tube or side openings as the drop chute is retrieved during concrete placement. The drop chute shall be supported so that free fall does not exceed the specified maximum 60 ft (18.3 m) or 30 ft (9.1 m) at all times from the discharge end, and to ensure the concrete does not strike the rebar cage. If placement cannot be satisfactorily accomplished by free fall in the opinion of the Engineer, either a tremie or pump shall be used to accomplish the pour.”

80316

PLANTING WOODY PLANTS (BDE)

Effective: January 1, 2012

Revised: August 1, 2012

Revise the second sentence of Article 253.01 of the Standard Specifications to read:

“This work shall consist of furnishing, transporting, and planting woody plants such as trees, shrubs, evergreens, vines, and seedlings.”

Revise Article 253.02(a) of the Standard Specifications to read:

“(a) Trees, Shrubs, Evergreens, Vines and Seedlings1081.01”

Revise the first sentence of Article 253.08(a) of the Standard Specifications to read:

“(a) Excavation for Deciduous Trees and Evergreen Trees.”

Revise the first sentence of Article 253.08(b) of the Standard Specifications to read:

“(b) Excavation for Deciduous Shrubs, Evergreen Shrubs, Vines, and Seedlings.”

Revise the first sentence of Article 253.13 of the Standard Specifications to read:

“All deciduous and evergreen trees, with the exception of multi-stem or clump form specimens, over 8 ft (2.5 m) in height shall require three 6 ft (2 m) long steel posts so placed that they are equidistant from each other and adjacent to the outside of the ball.”

Revise the first sentence of the second paragraph of Article 253.14 of the Standard Specifications to read:

“This period of establishment for the plants shall not delay acceptance of the entire project and final payment due if the contractor requires and receives from the subcontractor a third party performance bond naming the Department as obligee in the full amount of the planting quantities subject to this period of establishment, multiplied by their contract unit prices.”

Revise the third sentence of Article 253.16 of the Standard Specifications to read:

“Trees, shrubs, evergreens, and vines will be measured as each individual plant.”

Revise Article 253.17 of the Standard Specifications to read:

“**253.17 Basis of Payment.** This work will be paid for at the contract unit price per each for TREES, SHRUBS, EVERGREENS, or VINES, of the species, root type, and plant size specified; and per unit for SEEDLINGS. Payment will be made according to the following schedule.

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

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

Revise the first paragraph of Article 1081.01 of the Standard Specifications to read:

“1081.01 Trees, Shrubs, Evergreens, Vines, and Seedlings. Trees, shrubs, evergreens, vines, and seedlings shall be according to the current standards adopted by the ANLA.”

80278

PORTLAND CEMENT CONCRETE (BDE)

Effective: January 1, 2012

Revised: January 1, 2013

Revise Notes 1 and 2 of Article 312.24 of the Standard Specifications to read:

"Note 1. Coarse aggregate shall be gradation CA 6, CA 7, CA 9, CA 10, or CA 11, Class D quality or better. Article 1020.05(d) shall apply.

Note 2. Fine aggregate shall be FA 1 or FA 2. Article 1020.05(d) shall apply."

Revise the first paragraph of Article 312.26 of the Standard Specifications to read:

"312.26 Proportioning and Mix Design. At least 60 days prior to start of placing CAM II, the Contractor shall submit samples of materials for proportioning and testing. The mixture shall contain a minimum of 200 lb (90 kg) of cement per cubic yard (cubic meter). Portland cement may be replaced with fly ash according to Article 1020.05(c)(1), however the minimum portland cement content in the mixture shall be 170 lbs/cu yd (101 kg/cu m). Blends of coarse and fine aggregates will be permitted, provided the volume of fine aggregate does not exceed the volume of coarse aggregate. The Engineer will determine the proportions of materials for the mixture. However, the Contractor may substitute their own mix design. Article 1020.05(a) shall apply and a Level III PCC Technician shall develop the mix design."

Revise the second paragraph of Article 503.22 of the Standard Specifications to read:

Other cast-in-place concrete for structures will be paid for at the contract unit price per cubic yard (cubic meter) for CONCRETE HANDRAIL, CONCRETE ENCASEMENT, and SEAL COAT CONCRETE."

Add the following to Article 1003.02 of the Standard Specifications:

(e) Alkali Reaction.

- (1) ASTM C 1260. Each fine aggregate will be tested by the Department for alkali reaction according to ASTM C 1260. The test will be performed with Type I or II portland cement having a total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.90 percent or greater. The Engineer will determine the assigned expansion value for each aggregate, and these values will be made available on the Department's Alkali-Silica Potential Reactivity Rating List. The Engineer may differentiate aggregate based on ledge, production method, gradation number, or other factors. An expansion value of 0.03 percent will be assigned to limestone or dolomite fine

aggregates (manufactured stone sand). However, the Department reserves the right to perform the ASTM C 1260 test.

- (2) ASTM C 1293 by Department. In some instances, such as chert natural sand or other fine aggregates, testing according to ASTM C 1260 may not provide accurate test results. In this case, the Department may only test according to ASTM C 1293.
- (3) ASTM C 1293 by Contractor. If an individual aggregate has an ASTM C 1260 expansion value that is unacceptable to the Contractor, an ASTM C 1293 test may be performed by the Contractor to evaluate the Department's ASTM C 1260 test result. The laboratory performing the ASTM C 1293 test shall be approved by the Department according to the current Bureau of Materials and Physical Research Policy Memorandum "Minimum Laboratory Requirements for Alkali-Silica Reactivity (ASR) Testing".

The ASTM C 1293 test shall be performed with Type I or II portland cement having a total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.80 percent or greater. The interior vertical wall of the ASTM C 1293 recommended container (pail) shall be half covered with a wick of absorbent material consisting of blotting paper. If the testing laboratory desires to use an alternate container, wick of absorbent material, or amount of coverage inside the container with blotting paper, ASTM C 1293 test results with an alkali-reactive aggregate of known expansion characteristics shall be provided to the Engineer for review and approval. If the expansion is less than 0.040 percent after one year, the aggregate will be assigned an ASTM C 1260 expansion value of 0.08 percent that will be valid for two years, unless the Engineer determines the aggregate has changed significantly. If the aggregate is manufactured into multiple gradation numbers, and the other gradation numbers have the same or lower ASTM C 1260 value, the ASTM C 1293 test result may apply to multiple gradation numbers.

The Engineer reserves the right to verify a Contractor's ASTM C 1293 test result. When the Contractor performs the test, a split sample shall be provided to the Engineer. The Engineer may also independently obtain a sample at any time. The aggregate will be considered reactive if the Contractor or Engineer obtains an expansion value of 0.040 percent or greater.

Revise the first paragraph of Article 1004.01(e)(5) of the Standard Specifications to read:

"Crushed concrete, crushed slag, or lightweight aggregate for portland cement concrete shall be stockpiled in a moist condition (saturated surface dry or greater) and the moisture content shall be maintained uniformly throughout the stockpile by periodic sprinkling."

Revise Article 1004.02(d) of the Standard Specifications to read:

“(d)Combining Sizes. Each size shall be stored separately and care shall be taken to prevent them from being mixed until they are ready to be proportioned. Separate compartments shall be provided to proportion each size.

- (1) When Class BS concrete is to be pumped, the coarse aggregate gradation shall have a minimum of 45 percent passing the 1/2 in. (12.5 mm) sieve. The Contractor may combine two or more coarse aggregate sizes, consisting of CA 7, CA 11, CA 13, CA 14, and CA 16, provided a CA 7 or CA 11 is included in the blend.
- (2) If the coarse aggregate is furnished in separate sizes, they shall be combined in proportions to provide a uniformly graded coarse aggregate grading within the following limits.

Class of Concrete ^{1/}	Combined Sizes	Sieve Size and Percent Passing						
		2 1/2 in.	2 in.	1 3/4 in.	1 1/2 in.	1 in.	1/2 in.	No. 4
PV ^{2/}	CA 5 & CA 7	---	---	100	98±2	72±22	22±12	3±3
	CA 5 & CA 11	---	---	100	98±2	72±22	22±12	3±3
SI and SC ^{2/}	CA 3 & CA 7	100	95±5	---	---	55±25	20±10	3±3
	CA 3 & CA 11	100	95±5	---	---	55±25	20±10	3±3
	CA 5 & CA 7	---	---	100	98±2	72±22	22±12	3±3
	CA 5 & CA 11	---	---	100	98±2	72±22	22±12	3±3

Class of Concrete ^{1/}	Combined Sizes	Sieve Size (metric) and Percent Passing						
		63 mm	50 mm	45 mm	37.5 mm	25 mm	12.5 mm	4.75 mm
PV ^{2/}	CA 5 & CA 7	---	---	100	98±2	72±22	22±12	3±3
	CA 5 & CA 11	---	---	100	98±2	72±22	22±12	3±3
SI and SC ^{2/}	CA 3 & CA 7	100	95±5	---	---	55±25	20±10	3±3
	CA 3 & CA 11	100	95±5	---	---	55±25	20±10	3±3
	CA 5 & CA 7	---	---	100	98±2	72±22	22±12	3±3
	CA 5 & CA 11	---	---	100	98±2	72±22	22±12	3±3

1/ See Table 1 of Article 1020.04.

2/ Any of the listed combination of sizes may be used.”

Add the following to Article 1004.02 of the Standard Specifications:

(g) Alkali Reaction.

- (1) ASTM C 1260. Each coarse aggregate will be tested by the Department for alkali reaction according to ASTM C 1260. The test will be performed with Type I or II portland cement having a total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.90 percent or greater. The Engineer will determine the assigned expansion value for each aggregate, and these values will be made available on the Department's Alkali-Silica Potential Reactivity Rating List. The Engineer may differentiate aggregate based on ledge, production method, gradation number, or other factors. An expansion value of 0.05 percent will be assigned to limestone or dolomite coarse aggregates. However, the Department reserves the right to perform the ASTM C 1260 test.
- (2) ASTM C 1293 by Department. In some instances testing a coarse aggregate according to ASTM C 1260 may not provide accurate test results. In this case, the Department may only test according to ASTM C 1293.
- (3) ASTM C 1293 by Contractor. If an individual aggregate has an ASTM C 1260 expansion value that is unacceptable to the Contractor, an ASTM C 1293 test may be performed by the Contractor according to Article 1003.02(e)(3).

Revise the first paragraph of Article 1019.06 of the Standard Specifications to read:

“1019.06 Contractor Mix Design. A Contractor may submit their own mix design and may propose alternate fine aggregate materials, fine aggregate gradations, or material proportions. Article 1020.05(a) shall apply and a Level III PCC Technician shall develop the mix design.”

Revise Section 1020 of the Standard Specifications to read:

“SECTION 1020. PORTLAND CEMENT CONCRETE

1020.01 Description. This item shall consist of the materials, mix design, production, testing, curing, low air temperature protection, and temperature control of concrete.

1020.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Cement	1001
(b) Water	1002
(c) Fine Aggregate	1003
(d) Coarse Aggregate	1004

(e) Concrete Admixtures	1021
(f) Finely Divided Minerals	1010
(g) Concrete Curing Materials	1022
(h) Straw	1081.06(a)(1)
(i) Calcium Chloride	1013.01

1020.03 Equipment. Equipment shall be according to the following.

Item	Article/Section
(a) Concrete Mixers and Trucks	1103.01
(b) Batching and Weighing Equipment	1103.02
(c) Automatic and Semi-Automatic Batching Equipment	1103.03
(d) Water Supply Equipment	1103.11
(e) Membrane Curing Equipment	1101.09
(f) Mobile Portland Cement Concrete Plants	1103.04

1020.04 Concrete Classes and General Mix Design Criteria. The classes of concrete shown in Table 1 identify the various mixtures by the general uses and mix design criteria. If the class of concrete for a specific item of construction is not specified, Class SI concrete shall be used.

For the minimum cement factor in Table 1, it shall apply to portland cement, portland-pozzolan cement, and portland blast-furnace slag except when a particular cement is specified in the Table.

The Contractor shall not assume that the minimum cement factor indicated in Table 1 will produce a mixture that will meet the specified strength. In addition, the Contractor shall not assume that the maximum finely divided mineral allowed in a mix design according to Article 1020.05(c) will produce a mixture that will meet the specified strength. The Contractor shall select a cement factor within the allowable range that will obtain the specified strength. The Contractor shall take into consideration materials selected, seasonal temperatures, and other factors which may require the Contractor to submit multiple mix designs.

For a portland-pozzolan cement, portland blast-furnace slag cement, or when replacing portland cement with finely divided minerals per Articles 1020.05(c) and 1020.05(d), the portland cement content in the mixture shall be a minimum of 375 lbs/cu yd (222 kg/cu m). When the total of organic processing additions, inorganic processing additions, and limestone exceed 5.0 percent in the cement, the minimum portland cement content in the mixture shall be 400 lbs/cu yd (237 kg/cu m). When calculating the portland cement portion in the portland-pozzolan or portland blast-furnace slag cement, the AASHTO M 240 tolerance may be ignored.

Special classifications may be made for the purpose of including the concrete for a particular use or location as a separate pay item in the contract. The concrete used in such cases shall conform to this section.

TABLE 1. CLASSES OF CONCRETE AND MIX DESIGN CRITERIA

Class of Conc.	Use	Specification Section Reference	Cement Factor cwt/cu yd (3)		Water / Cement Ratio lb/lb	Sump in. (4)	Mix Design Compressive Strength (Flexural Strength)			Air Content %	Coarse Aggregate Gradations (14)
			Min.	Max			psi, minimum	Days			
								3	14		
PV	Pavement	420 or 421									
	Base Course	353									
	Base Course Widening	354	5.65 (1)	7.05	0.32 - 0.42	2 - 4				5.0 - 8.0 (5)	CA 5 & CA 7, CA 5 & CA 11, CA 7, CA 11, or CA 14
	Driveway Pavement	423	6.05 (2)			(5)					
	Shoulders	483									
	Shoulder Curb	662									
PP	Pavement Patching										
	Bridge Deck Patching (10)	442									
	PP-1		6.50 (Ty III)	7.50 (Ty III)	0.32 - 0.44	2 - 4					CA 7, CA 11, CA 13, CA 14, or CA 16
	PP-2		7.35 (Ty III) (8)	8.20	0.32 - 0.38	2 - 6					
	PP-3		7.35 (Ty III) (8)	7.35 (Ty III) (8)	0.32 - 0.35	2 - 4					
	PP-4		6.00 (9)	6.25 (9)	0.32 - 0.50	2 - 6					
RR	PP-5		6.75 (9)	6.75 (9)	0.32 - 0.40	2 - 8					
	Railroad Crossing	422	6.50 (Ty III)	7.50 (Ty III)	0.32 - 0.44	2 - 4					CA 7, CA 11, or CA 14
	Bridge Superstructure		6.20 (Ty III)	7.20 (Ty III)	0.32 - 0.44	2 - 4					
	Bridge Approach Slab	503	6.05	7.05	0.32 - 0.44	(5)					CA 7, CA 11, or CA 14 (7)
	Various Precast Concrete Items										
PC	Wet Cast	1042	5.65 (TY III)	7.05 (TY III)	0.32 - 0.44	1 - 4					CA 7, CA 11, CA 13, CA 14, CA 16, or CA 7 & CA 16
	Dry Cast		5.65 (TY III)	7.05 (TY III)	0.25 - 0.40	0 - 1					
PS	Precast Prestressed Members	504	5.65 (TY III)	7.05 (TY III)	0.32 - 0.44	1 - 4					CA 11 (11), CA 13, CA 14 (11), or CA 16
	Precast Prestressed Piles and Extensions	512	5.65 (TY III)	7.05 (TY III)	0.32 - 0.44	1 - 4					
	Precast Prestressed Sight Screen	639									

TABLE 1. CLASSES OF CONCRETE AND MIX DESIGN CRITERIA

Class of Conc.	Use	Specification Section Reference	Cement Factor cw/cu yd (3)		Water / Cement Ratio lb/lb	Slump in. (4)	Mix Design Compressive Strength (Flexural Strength) psi, minimum			Air Content %	Coarse Aggregate Gradations (14)																			
			Min.	Max			3	14	28																					
DS	Drilled Shaft (12) Metal Shell Piles (12) Sign Structures Drilled Shaft (12) Light Tower Foundation (12)	516 512 734 837	6.65	7.05	0.32 - 0.44	6 - 8 (6)	4000 (675)		5.0 - 8.0	CA 13, CA 14, CA 16, or a blend of these gradations.																				
											SC	Seal Coat	503	5.65 (1) 6.05 (2)	7.05	0.32 - 0.44	3 - 5	3500 (650)	Optional 6.0 max.	CA 3 & CA 7, CA 3 & CA 11, CA 5 & CA 7, CA 5 & CA 11, CA 7, or CA 11										
																					SI	Structures (except Superstructure) Sidewalk Slope Wall Encasement Box Culverts End Section and Collar Curb, Gutter, Curb & Gutter, Median, and Paved Ditch Concrete Barrier Sign Structures Spread Footing Concrete Foundation Pole Foundation (12) Traffic Signal Foundation Drilled Shaft (12) Square or Rectangular	503 424 511 512 540 542 606 637 734	5.65 (1) 6.05 (2)	7.05	0.32 - 0.44	2 - 4 (5)	3500 (650)	5.0 - 8.0 (5)	CA 3 & CA 7, CA 3 & CA 11, CA 5 & CA 7, CA 5 & CA 11, CA 7, CA 11, CA 13, CA 14, or CA 16 (13)

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- Notes:
- (1) Central-mixed.
 - (2) Truck-mixed or shrink-mixed.
 - (3) For Class SC concrete and for any other class of concrete that is to be placed underwater, except Class DS concrete, the cement factor shall be increased by ten percent.
 - (4) The maximum slump may be increased to 7 in. when a high range water-reducing admixture is used for all classes of concrete, except Class PV, SC, and PP. For Class SC, the maximum slump may be increased to 8 in. For Class PP-1, the maximum slump may be increased to 6 in. For Class PS, the 7 in. maximum slump may be increased to 8 1/2 in. if the high range water-reducing admixture is the polycarboxylate type.
 - (5) The slump range for slipform construction shall be 1/2 to 2 1/2 in. and the air content range shall be 5.5 to 8.0 percent.
 - (6) If concrete is placed to displace drilling fluid, or against temporary casing, the slump shall be 8 - 10 in. at the point of placement. If a water-reducing admixture is used in lieu of a high range water-reducing admixture according to Article 1020.05(b)(7), the slump shall be 2 - 4 in.
 - (7) For Class BS concrete used in bridge deck patching, the coarse aggregate gradation shall be CA 13, CA 14, or CA 16, except CA 11 may be used for full-depth patching.
 - (8) In addition to the Type III portland cement, 100 lb/cu yd of ground granulated blast-furnace slag and 50 lb/cu yd of microsilica (silica fume) shall be used. For an air temperature greater than 85 °F, the Type III portland cement may be replaced with Type I or II portland cement.
 - (9) The cement shall be a rapid hardening cement from the Department's "Approved List of Packaged, Dry, Rapid Hardening Cementitious Materials for Concrete Repairs" for PP-4 and calcium aluminate cement for PP-5.
 - (10) For Class PP concrete used in bridge deck patching, the coarse aggregate gradation shall be CA 13, CA 14, or CA 16, except CA 11 may be used for full-depth patching. In addition, the mix design shall have 72 hours to obtain a 4,000 psi compressive or 675 psi flexural strength for all PP mix designs.
 - (11) The nominal maximum size permitted is 3/4 in. Nominal maximum size is defined as the largest sieve which retains any of the aggregate sample particles.
 - (12) The concrete mix shall be designed to remain fluid throughout the anticipated duration of the pour plus one hour. At the Engineer's discretion, the Contractor may be required to conduct a minimum 2 cu yd trial batch to verify the mix design.
 - (13) CA 3 or CA 5 may be used when the nominal maximum size does not exceed two-thirds the clear distance between parallel reinforcement bars, or between the reinforcement bar and the form. Nominal maximum size is defined in Note 11.
 - (14) Alternate combinations of gradation sizes may be used with the approval of the Engineer. Refer also to Article 1004.02(d) for additional information on combining sizes.

TABLE 1. CLASSES OF CONCRETE AND MIX DESIGN CRITERIA (metric)

Class of Conc.	Use	Specification Section Reference	Cement Factor kg/cu m (3)		Water / Cement Ratio kg/kg	Sump mm (4)	Mix Design Compressive Strength (Flexural Strength) kPa, minimum			Air Content %	Coarse Aggregate Gradations (14)	
			Min.	Max			Days	Days				
								3	14			28
PV	Pavement	420 or 421										
	Base Course	353										
	Base Course Widening	354	335 (1)	418	0.32 - 0.42	50 - 100	Ty III	24,000		5.0 - 8.0	CA 5 & CA 7,	
	Driveway Pavement	423	360 (2)			(5)	24,000	(4500)		(5)	CA 5 & CA 11,	
	Shoulders	483									CA 7, CA 11, or CA 14	
PP	Shoulder Curb	662										
	Pavement Patching											
	Bridge Deck Patching (10)	442										
	PP-1		385	445	0.32 - 0.44	50 - 100		22,100	Article 701.17(e)(3)b.		CA 7, CA 11,	
	PP-2		365 (Ty III)	425 (Ty III)				(4150)			CA 13, CA 14, or CA 16	
RR	PP-3		435	485	0.32 - 0.38	50 - 150		at 48 hours		4.0 - 7.0		
	PP-4		435 (Ty III) (8)	435 (Ty III) (8)	0.32 - 0.35	50 - 100		at 24 hours		4.0 - 6.0		
	PP-5		355 (9)	370 (9)	0.32 - 0.50	50 - 150		at 16 hours		4.0 - 6.0		
			400 (9)	400 (9)	0.32 - 0.40	50 - 200		at 8 hours			4.0 - 6.0	
			385	445	0.32 - 0.44	50 - 100		at 4 hours			4.0 - 6.0	
BS	Railroad Crossing	422	365 (Ty III)	425 (Ty III)				24,000 (4500)		4.0 - 7.0	CA 7, CA 11, or CA 14	
	Bridge Superstructure	503	360	418	0.32 - 0.44	50 - 100		at 48 hours		5.0 - 8.0	CA 7, CA 11, or CA 14 (7)	
PC	Bridge Approach Slab							27,500		(5)		
	Various Precast Concrete Items	1042	335	418	0.32 - 0.44	25 - 100		See Section 1042		5.0 - 8.0	CA 7, CA 11, CA 13, CA 14, CA 16, or CA 7 & CA 16	
	Wet Cast Dry Cast		335 (Ty III)	418 (Ty III)	0.25 - 0.40	0 - 25				N/A		
PS	Precast Prestressed Members	504	335	418	0.32 - 0.44	25 - 100			Plans	5.0 - 8.0	CA 11 (11), CA 13, CA 14 (11), or CA 16	
	Precast Prestressed Piles and Extensions	512	335 (Ty III)	418 (Ty III)					34,500			
	Precast Prestressed Sight Screen	639							24,000			

TABLE 1. CLASSES OF CONCRETE AND MIX DESIGN CRITERIA (metric)

Class of Conc.	Use	Specification Section Reference	Cement Factor kg/cu m (3)		Water / Cement Ratio kg/kg	Sump mm (4)	Mix Design Compressive Strength (Flexural Strength) kPa, minimum			Air Content %	Coarse Aggregate Gradations (14)
			Min.	Max			3	14	28		
DS	Drilled Shaft (12)	516	395	418	0.32 - 0.44	150 - 200 (6)	27,500 (4650)		5.0 - 8.0	CA 13, CA 14, CA 16, or a blend of these gradations.	
	Metal Shell Piles (12)	512									
	Sign Structures	734									
	Drilled Shaft (12)										
	Light Tower Foundation (12)	837									
SC	Seal Coat	503	335 (1) 360 (2)	418	0.32 - 0.44	75 - 125	24,000 (4500)		Optional 6.0 max.	CA 3 & CA 7, CA 3 & CA 11, CA 5 & CA 7, CA 5 & CA 11, CA 7, or CA 11	
SI	Structures (except Superstructure)	503									
	Sidewalk	424									
	Slope Wall	511									
	Encasement	512									
	Box Culverts	540									
	End Section and Collar	542	335 (1) 360 (2)	418	0.32 - 0.44	50 - 100 (5)	24,000 (4500)		5.0 - 8.0 (5)	CA 3 & CA 7, CA 3 & CA 11, CA 5 & CA 7, CA 5 & CA 11, CA 7, CA 11, CA 13, CA 14, or CA 16 (13)	
	Curb, Gutter, Curb & Gutter, Median, and Paved Ditch										
	Concrete Barrier	606									
	Sign Structures	637									
	Concrete Barrier	734									
	Spread Footing										
	Concrete Foundation										
	Pole Foundation (12)	836									
Traffic Signal Foundation	878										
Drilled Shaft (12)											
Square or Rectangular											

- Notes:
- (1) Central-mixed.
 - (2) Truck-mixed or shrink-mixed.
 - (3) For Class SC concrete and for any other class of concrete that is to be placed underwater, except Class DS concrete, the cement factor shall be increased by ten percent.
 - (4) The maximum slump may be increased to 175 mm when a high range water-reducing admixture is used for all classes of concrete except Class PV, SC, and PP. For Class SC, the maximum slump may be increased to 200 mm. For Class PP-1, the maximum slump may be increased to 150 mm. For Class PS, the 175 mm maximum slump may be increased to 215 mm if the high range water-reducing admixture is the polycarboxylate type.
 - (5) The slump range for slipform construction shall be 13 to 64 mm and the air content range shall be 5.5 to 8.0 percent.
 - (6) If concrete is placed to displace drilling fluid, or against temporary casing, the slump shall be 200 - 250 mm at the point of placement. If a water-reducing admixture is used in lieu of a high range water-reducing admixture according to Article 1020.05(b)(7), the slump shall be 50 - 100 mm.
 - (7) For Class BS concrete used in bridge deck patching, the coarse aggregate gradation shall be CA 13, CA 14, or CA 16, except CA 11 may be used for full-depth patching.
 - (8) In addition to the Type III portland cement, 60 kg/cu m of ground granulated blast-furnace slag and 30 kg/cu m of microsilica (silica fume) shall be used. For an air temperature greater than 30 °C, the Type III portland cement may be replaced with Type I or II portland cement.
 - (9) The cement shall be a rapid hardening cement from the Department's "Approved List of Packaged, Dry, Rapid Hardening Cementitious Materials for Concrete Repairs" for PP-4 and calcium aluminate cement for PP-5.
 - (10) For Class PP concrete used in bridge deck patching, the coarse aggregate gradation shall be CA 13, CA 14, or CA 16, except CA 11 may be used for full-depth patching. In addition, the mix design shall have 72 hours to obtain a 27,500 kPa compressive or 4,650 kPa flexural.
 - (11) The nominal maximum size permitted is 19 mm. Nominal maximum size is defined as the largest sieve which retains any of the aggregate sample particles.
 - (12) The concrete mix shall be designed to remain fluid throughout the anticipated duration of the pour plus one hour. At the Engineer's discretion, the Contractor may be required to conduct a minimum 1.5 cu m trial batch to verify the mix design.
 - (13) CA 3 or CA 5 may be used when the nominal maximum size does not exceed two-thirds the clear distance between parallel reinforcement bars, or between the reinforcement bar and the form. Nominal maximum size is defined in Note 11.
 - (14) Alternate combinations of gradation sizes may be used with the approval of the Engineer. Refer also to Article 1004.02(d) for additional information on combining sizes.

Self-consolidating concrete is a flowable mixture that does not require mechanical vibration for consolidation. Self-consolidating concrete mix designs may be developed for Class BS, PC, PS, DS, and SI concrete. Self-consolidating concrete mix designs may also be developed for precast concrete products that are not subjected to Class PC concrete requirements according to Section 1042. The mix design criteria for the concrete mixture shall be according to Article 1020.04 with the following exceptions.

- (a) The slump requirements shall not apply.
- (b) The concrete mixture should be uniformly graded, and information in the "Portland Cement Concrete Level III Technician Course – Manual of Instructions for Design of Concrete Mixtures" may be used to develop the uniformly graded mix design. The coarse aggregate gradations shall be CA 11, CA 13, CA 14, CA 16, or a blend of these gradations. However, the final gradation when using a single coarse aggregate or combination of coarse aggregates shall have 100 percent pass the 1 in. (25 mm) sieve, and minimum 95 percent pass the 3/4 in. (19 mm) sieve. The fine aggregate proportion shall be a maximum 50 percent by weight (mass) of the total aggregate used.
- (c) The slump flow range shall be 22 in. (560 mm) minimum to 28 in. (710 mm) maximum and tested according to Illinois Test Procedure SCC-2.
- (d) The visual stability index shall be a maximum of 1 and tested according to Illinois Test Procedure SCC-2.
- (e) The J-Ring value shall be a maximum of 2 in. (50 mm) and tested according to Illinois Test Procedure SCC-3. The L-Box blocking ratio shall be a minimum of 80 percent and tested according to Illinois Test Procedure SCC-3. The Contractor has the option to select either test.
- (f) The hardened visual stability index shall be a maximum of 1 and tested according to Illinois Test Procedure SCC-6.
- (g) If Class PC concrete requirements do not apply to the precast concrete product according to Section 1042, the maximum cement factor shall be 7.05 cwt/cu yd (418 kg/cu m) and the maximum allowable water/cement ratio shall be 0.44.
- (h) If the measured slump flow, visual stability index, J-Ring value, or L-Box blocking ratio fall outside the limits specified, a check test will be made. In the event of a second failure, the Engineer may refuse to permit the use of the batch of concrete represented.

The Contractor may use water or self-consolidating admixtures at the jobsite to obtain the specified slump flow, visual stability index, J-ring value, or L-box blocking ratio. The maximum design water/cement ratio shall not be exceeded.

1020.05 Other Concrete Criteria. The concrete shall be according to the following.

- (a) Proportioning and Mix Design. For all Classes of concrete, it shall be the Contractor's responsibility to determine mix design material proportions and to proportion each batch of concrete. A Level III PCC Technician shall develop the mix design for all Classes of concrete, except Classes PC and PS. The mix design, submittal information, trial batch, and Engineer verification shall be according to the "Portland Cement Concrete Level III Technician" course material.

The Contractor shall provide the mix designs a minimum of 45 calendar days prior to production. More than one mix design may be submitted for each class of concrete.

The Engineer will verify the mix design submitted by the Contractor. Verification of a mix design shall in no manner be construed as acceptance of any mixture produced. Once a mix design has been verified, the Engineer shall be notified of any proposed changes.

Tests performed at the jobsite will determine if a mix design can meet specifications. If the tests indicate it cannot, the Contractor shall make adjustments to a mix design, or submit a new mix design if necessary, to comply with the specifications.

- (b) Admixtures. The Contractor shall be responsible for using admixtures and determining dosages for all Classes of concrete, cement aggregate mixture II, and controlled low-strength material that will produce a mixture with suitable workability, consistency, and plasticity. In addition, admixture dosages shall result in the mixture meeting the specified plastic and hardened properties. The Contractor shall obtain approval from the Engineer to use an accelerator when the concrete temperature is greater than 60 °F (16 °C). However, this accelerator approval by the Engineer will not be required for Class PP, RR, PC, and PS concrete. The accelerator shall be the non-chloride type unless otherwise specified in the contract plans.

The Department will maintain an Approved List of Corrosion Inhibitors. Corrosion inhibitor dosage rates shall be according to Article 1020.05(b)(10). For information on approved controlled low-strength material air-entraining admixtures, refer to Article 1019.02. The Department will also maintain an Approved List of Concrete Admixtures, and an admixture technical representative shall be consulted by the Contractor prior to the pour when determining an admixture dosage from this list or when making minor admixture dosage adjustments at the jobsite. The dosage shall be within the range indicated on the approved list unless the influence by other admixtures, jobsite conditions (such as a very short haul time), or other circumstances warrant a dosage outside the range. The Engineer shall be notified when a dosage is proposed outside the range. To determine an admixture dosage, air temperature, concrete temperature, cement source and quantity, finely divided mineral sources and quantity, influence of other admixtures, haul time, placement conditions, and other factors as appropriate shall be considered. The Engineer may request the Contractor to have a batch of concrete mixed in the lab or field to verify the admixture dosage is correct. An admixture dosage or combination of admixture dosages shall not delay the initial set of concrete by more than one hour. When a retarding admixture is required or appropriate for a bridge deck or bridge deck overlay pour, the initial set time shall be delayed until the deflections due

to the concrete dead load are no longer a concern for inducing cracks in the completed work. However, a retarding admixture shall not be used to further extend the pour time and justify the alteration of a bridge deck pour sequence.

When determining water in admixtures for water/cement ratio, the Contractor shall calculate 70 percent of the admixture dosage as water, except a value of 50 percent shall be used for a latex admixture used in bridge deck latex concrete overlays.

The sequence, method, and equipment for adding the admixtures shall be approved by the Engineer. Admixtures shall be added to the concrete separately. An accelerator shall always be added prior to a high range water-reducing admixture, if both are used.

Admixture use shall be according to the following.

- (1) When the atmosphere or concrete temperature is 65 °F (18 °C) or higher, a retarding admixture shall be used in the Class BS concrete and concrete bridge deck overlays. The proportions of the ingredients of the concrete shall be the same as without the retarding admixture, except that the amount of mixing water shall be reduced, as may be necessary, in order to maintain the consistency of the concrete as required. In addition, a high range water-reducing admixture shall be used in bridge deck concrete. At the option of the Contractor, a water-reducing admixture may be used with the high range water-reducing admixture in Class BS concrete.
- (2) At the Contractor's option, admixtures in addition to an air-entraining admixture may be used for Class PP-1 or RR concrete. When the air temperature is less than 55 °F (13 °C) and an accelerator is used, the non-chloride accelerator shall be calcium nitrite.
- (3) When Class C fly ash or ground granulated blast-furnace slag is used in Class PP-1 or RR concrete, a water-reducing or high range water-reducing admixture shall be used.
- (4) For Class PP-2 or PP-3 concrete, a non-chloride accelerator followed by a high range water-reducing admixture shall be used, in addition to the air-entraining admixture. The Contractor has the option to use a water-reducing admixture with the high range water-reducing admixture. For Class PP-3 concrete, the non-chloride accelerator shall be calcium nitrite. For Class PP-2 concrete, the non-chloride accelerator shall be calcium nitrite when the air temperature is less than 55 °F (13 °C).
- (5) For Class PP-4 concrete, a high range water-reducing admixture shall be used in addition to the air-entraining admixture. The Contractor has the option to use a water-reducing admixture with the high range water-reducing admixture. An accelerator shall not be used. For stationary or truck-mixed concrete, a retarding admixture shall be used to allow for haul time. The Contractor has the option to use

a mobile portland cement concrete plant, but a retarding admixture shall not be used unless approved by the Engineer.

For PP-5 concrete, a non-chloride accelerator, high range water-reducing admixture, and air-entraining admixture shall be used. The accelerator, high range water-reducing admixture, and air-entraining admixture shall be per the Contractor's recommendation and dosage. The approved list of concrete admixtures shall not apply. A mobile portland cement concrete plant shall be used to produce the patching mixture.

- (6) When a calcium chloride accelerator is specified in the contract, the maximum chloride dosage shall be 1.0 quart (1.0 L) of solution per 100 lb (45 kg) of cement. The dosage may be increased to a maximum 2.0 quarts (2.0 L) per 100 lb (45 kg) of cement if approved by the Engineer. When a calcium chloride accelerator for Class PP-2 concrete is specified in the contract, the maximum chloride dosage shall be 1.3 quarts (1.3 L) of solution per 100 lb (45 kg) of cement. The dosage may be increased to a maximum 2.6 quarts (2.6 L) per 100 lb (45 kg) of cement if approved by the Engineer.
- (7) For Class DS concrete a retarding admixture and a high range water-reducing admixture shall be used. For dry excavations that are 10 ft (3 m) or less, the high range water-reducing admixture may be replaced with a water-reducing admixture if the concrete is vibrated. The use of admixtures shall take into consideration the slump loss limits specified in Article 516.12 and the fluidity requirement in Article 1020.04 (Note 12).
- (8) At the Contractor's option, when a water-reducing admixture or a high range water-reducing admixture is used for Class PV, PP-1, RR, SC, and SI concrete, the cement factor may be reduced a maximum 0.30 hundredweight/cu yd (18 kg/cu m). However, a cement factor reduction will not be allowed for concrete placed underwater.
- (9) When Type F or Type G high range water-reducing admixtures are used, the initial slump shall be a minimum of 1 1/2 in. (40 mm) prior to addition of the Type F or Type G admixture, except as approved by the Engineer.
- (10) When specified, a corrosion inhibitor shall be added to the concrete mixture utilized in the manufacture of precast, prestressed concrete members and/or other applications. It shall be added, at the same rate, to all grout around post-tensioning steel when specified.

When calcium nitrite is used, it shall be added at the rate of 4 gal/cu yd (20 L/cu m), and shall be added to the mix immediately after all compatible admixtures have been introduced to the batch.

When Rheocrete 222+ is used, it shall be added at the rate of 1.0 gal/cu yd (5.0 L/cu m), and the batching sequence shall be according to the manufacturer's instructions.

(c) Finely Divided Minerals. Use of finely divided minerals shall be according to the following.

(1) Fly Ash. At the Contractor's option, fly ash from approved sources may partially replace portland cement in cement aggregate mixture II, Class PV, PP-1, PP-2, RR, BS, PC, PS, DS, SC, and SI concrete.

The use of fly ash shall be according to the following.

- a. Measurements of fly ash and portland cement shall be rounded up to the nearest 5 lb (2.5 kg).
- b. When Class F fly ash is used in cement aggregate mixture II, Class PV, BS, PC, PS, DS, SC, and SI concrete, the amount of portland cement replaced shall not exceed 25 percent by weight (mass).
- c. When Class C fly ash is used in cement aggregate mixture II, Class PV, PP-1, PP-2, RR, BS, PC, PS, DS, SC, and SI concrete, the amount of portland cement replaced shall not exceed 30 percent by weight (mass).
- d. Fly ash may be used in concrete mixtures when the air temperature is below 40 °F (4 °C), but the Engineer may request a trial batch of the concrete mixture to show the mix design strength requirement will be met.

(2) Ground Granulated Blast-Furnace (GGBF) Slag. At the Contractor's option, GGBF slag may partially replace portland cement in Class PV, PP-1, PP-2, RR, BS, PC, PS, DS, SC, and SI concrete. For Class PP-3 concrete, GGBF slag shall be used according to Article 1020.04.

The use of GGBF slag shall be according to the following.

- a. Measurements of GGBF slag and portland cement shall be rounded up to the nearest 5 lb (2.5 kg).
- b. When GGBF slag is used in Class PV, PP-1, PP-2, RR, BS, PC, PS, DS, SC and SI concrete, the amount of portland cement replaced shall not exceed 35 percent by weight (mass).
- c. GGBF slag may be used in concrete mixtures when the air temperature is below 40 °F (4 °C), but the Engineer may request a trial batch of the concrete mixture to show the mix design strength requirement will be met.

- (3) Microsilica. At the Contractor's option, microsilica may be added at a maximum of 5.0 percent by weight (mass) of the cement and finely divided minerals summed together.

Microsilica shall be used in Class PP-3 concrete according to Article 1020.04.

- (4) High Reactivity Metakaolin (HRM). At the Contractor's option, HRM may be added at a maximum of 5.0 percent by weight (mass) of the cement and finely divided minerals summed together.

- (5) Mixtures with Multiple Finely Divided Minerals. Except as specified for Class PP-3 concrete, the Contractor has the option to use more than one finely divided mineral in Class PV, PP-1, PP-2, RR, BS, PC, PS, DS, SC, and SI concrete as follows.

- a. The mixture shall contain a maximum of two finely divided minerals. The finely divided mineral in portland-pozzolan cement or portland blast-furnace slag cement shall count toward the total number of finely divided minerals allowed. The finely divided minerals shall constitute a maximum of 35.0 percent of the total cement plus finely divided minerals. The fly ash portion shall not exceed 30.0 percent for Class C fly ash or 25.0 percent for Class F fly ash. The Class C and F fly ash combination shall not exceed 30.0 percent. The ground granulated blast-furnace slag portion shall not exceed 35.0 percent. The microsilica or high-reactivity metakaolin portion used together or separately shall not exceed ten percent. The finely divided mineral in the portland-pozzolan cement or portland blast-furnace slag blended cement shall apply to the maximum 35.0 percent.
- b. Central Mixed. For Class PV, SC, and SI concrete, the mixture shall contain a minimum of 565 lbs/cu yd (335 kg/cu m) of cement and finely divided minerals summed together. If a water-reducing or high-range water-reducing admixture is used, the Contractor has the option to use a minimum of 535 lbs/cu yd (320 kg/cu m).
- c. Truck-Mixed or Shrink-Mixed. For Class PV, SC, and SI concrete, the mixture shall contain a minimum of 605 lbs/cu yd (360 kg/cu m) of cement and finely divided minerals summed together. If a water-reducing or high-range water-reducing admixture is used, the Contractor has the option to use a minimum of 575 lbs/cu yd (345 kg/cu m).
- d. Central-Mixed, Truck-Mixed or Shrink-Mixed. For Class PP-1 and RR concrete, the mixture shall contain a minimum of 650 lbs/cu yd (385 kg/cu m) of cement and finely divided minerals summed together. For Class PP-1 and RR concrete using Type III portland cement, the mixture shall contain a minimum of 620 lbs/cu yd (365 kg/cu m).

For Class PP-2 concrete, the mixture shall contain a minimum of 735 lbs/cu yd (435 kg/cu m) of cement and finely divided minerals summed together. For Class BS concrete, the mixture shall contain a minimum of 605 lbs/cu yd (360 kg/cu m). For Class DS concrete, the mixture shall contain a minimum of 665 lbs/cu yd (395 kg/cu m).

If a water-reducing or high range water-reducing admixture is used in Class PP-1 and RR concrete, the Contractor has the option to use a minimum of 620 lbs/cu yd (365 kg/cu m) of cement and finely divided minerals summed together. If a water-reducing or high-range water-reducing admixture is used with Type III portland cement in Class PP-1 and RR concrete, the Contractor has the option to use a minimum of 590 lbs/cu yd (350 kg/cu m).

- e. Central-Mixed or Truck-Mixed. For Class PC and PS concrete, the mixture shall contain a minimum of 565 lbs/cu yd (335 kg/cu m) of cement and finely divided minerals summed together.
- f. The mixture shall contain a maximum of 705 lbs/cu yd (418 kg/cu m) of cement and finely divided mineral(s) summed together for Class PV, BS, PC, PS, DS, SC, and SI concrete. For Class PP-1 and RR concrete, the mixture shall contain a maximum of 750 lbs/cu yd (445 kg/cu m). For Class PP-1 and RR concrete using Type III portland cement, the mixture shall contain a maximum of 720 lbs/cu yd (425 kg/cu m). For Class PP-2 concrete, the mixture shall contain a maximum of 820 lbs/cu yd (485 kg/cu m).
- g. For Class SC concrete and for any other class of concrete that is to be placed underwater, except Class DS concrete, the allowable cement and finely divided minerals summed together shall be increased by ten percent.
- h. The combination of cement and finely divided minerals shall comply with Article 1020.05(d).

(d) Alkali-Silica Reaction. For cast-in-place (includes cement aggregate mixture II and latex mixtures), precast, and precast prestressed concrete, one of the mixture options provided in Article 1020.05(d)(2) shall be used to reduce the risk of a deleterious alkali-silica reaction in concrete exposed to humid or wet conditions. The mixture options are not intended or adequate for concrete exposed to potassium acetate, potassium formate, sodium acetate, or sodium formate. The mixture options will not be required for the dry environment (humidity less than 60 percent) found inside buildings for residential or commercial occupancy.

The mixture options shall not apply to concrete revetment mats, insertion lining of pipe culverts, portland cement mortar fairing course, controlled low-strength material, miscellaneous grouts that are not prepackaged, Class PP-3 concrete, Class PP-4 concrete, and Class PP-5 concrete.

- (1) Aggregate Groups. Each combination of aggregates used in a mixture will be assigned to an aggregate group. The point at which the coarse aggregate and fine aggregate expansion values intersect in the following table will determine the group.

Aggregate Groups			
Coarse Aggregate or Coarse Aggregate Blend ASTM C 1260 Expansion	Fine Aggregate Or Fine Aggregate Blend ASTM C 1260 Expansion		
	≤0.16%	>0.16% - 0.27%	>0.27%
≤0.16%	Group I	Group II	Group III
>0.16% - 0.27%	Group II	Group II	Group III
>0.27%	Group III	Group III	Group IV

- (2) Mixture Options. Based upon the aggregate group, the following mixture options shall be used. However, the Department may prohibit a mixture option if field performance shows a deleterious alkali-silica reaction or Department testing indicates the mixture may experience a deleterious alkali-silica reaction.

Reduction of Risk for Deleterious Alkali-Silica Reaction					
Aggregate Groups	Mixture Options				
	Option 1	Option 2	Option 3	Option 4	Option 5
Group I	Mixture options are not applicable. Use any cement or finely divided mineral.				
Group II	X	X	X	X	X
Group III	X	Combine Option 2 with Option 3	Combine Option 2 with Option 3	X	X
Group IV	X	Combine Option 2 with Option 4	Invalid Option	Combine Option 2 with Option 4	X

"X" denotes valid mixture option for aggregate group.

- a. Mixture Option 1. The coarse or fine aggregates shall be blended to place the material in a group that will allow the selected cement or finely divided mineral to be used. Coarse aggregate may only be blended with another coarse aggregate. Fine aggregate may only be blended with another fine aggregate. Blending of

coarse with fine aggregate to place the material in another group will not be permitted.

When a coarse or fine aggregate is blended, the weighted expansion value shall be calculated separately for the coarse and fine aggregate as follows:

$$\text{Weighted Expansion Value} = (a/100 \times A) + (b/100 \times B) + (c/100 \times C) + \dots$$

Where: a, b, c... = percentage of aggregate in the blend;
A, B, C... = expansion value for that aggregate.

- b. Mixture Option 2. A finely divided mineral shall be used as described in 1), 2), 3), or 4) that follow. In addition, a blended cement with a finely divided mineral may be added to a separate finely divided mineral to meet the following requirements, provided the finely divided minerals are the same material. However, adding together two different finely divided minerals to obtain the specified minimum percentage of one material will not be permitted for 1), 2), 3), and 4). Refer to Mixture Option 5 to address this situation.

1. Class F Fly Ash. For cement aggregate mixture II, Class PV, BS, PC, PS, MS, DS, SC and SI concrete, the Class F fly ash shall be a minimum 25.0 percent by weight (mass) of the cement and finely divided minerals summed together.

If the maximum total equivalent available alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) exceeds 4.50 percent for the Class F fly ash, it may be used only if it complies with Mixture Option 5.

2. Class C Fly Ash. For cement aggregate mixture II, Class PV, PP-1, PP-2, RR, BS, PC, PS, DS, SC, and SI concrete, Class C fly ash shall be a minimum of 25.0 percent by weight (mass) of the cement and finely divided minerals summed together.

If the maximum total equivalent available alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) exceeds 4.50 percent or the calcium oxide exceeds 26.50 percent for the Class C fly ash, it may be used only per Mixture Option 5.

3. Ground Granulated Blast-Furnace Slag. For Class PV, PP-1, PP-2, RR, BS, PC, PS, DS, SC, and SI concrete, ground granulated blast-furnace slag shall be a minimum of 25.0 percent by weight (mass) of the cement and finely divided minerals summed together.

If the maximum total equivalent available alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) exceeds 1.00 percent for the ground granulated blast-furnace slag, it may be used only per Mixture Option 5.

4. Microsilica or High Reactivity Metakaolin, Microsilica solids or high reactivity metakaolin shall be a minimum 5.0 percent by weight (mass) of the cement and finely divided minerals summed together.

If the maximum total equivalent available alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) exceeds 1.00 percent for the Microsilica or High Reactivity Metakaolin, it may be used only if it complies with Mixture Option 5.

- c. Mixture Option 3. The cement used shall have a maximum total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.60 percent. When aggregate in Group II is involved and the Contractor desires to use a finely divided mineral, any finely divided mineral may be used with the cement unless the maximum total equivalent available alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) exceeds 4.50 percent for the fly ash; or 1.00 percent for the ground granulated blast-furnace slag, microsilica or high reactivity metakaolin. If the alkali content is exceeded, the finely divided mineral may be used only per Mixture Option 5.
- d. Mixture Option 4. The cement used shall have a maximum total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.45 percent. When aggregate in Group II or III is involved and the Contractor desires to use a finely divided mineral, any finely divided mineral may be used with the cement unless the maximum total equivalent available alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) exceeds 4.50 percent for the fly ash; or 1.00 percent for the ground granulated blast-furnace slag, microsilica, or high reactivity metakaolin. If the alkali content is exceeded, the finely divided mineral may be used only per Mixture Option 5.
- e. Mixture Option 5. The proposed cement or finely divided mineral may be used if the ASTM C 1567 expansion value is ≤ 0.16 percent when performed on the aggregate in the concrete mixture with the highest ASTM C 1260 test result. The laboratory performing the ASTM C 1567 test shall be approved by the Department according to the current Bureau of Materials and Physical Research Policy Memorandum "Minimum Laboratory Requirements for Alkali-Silica Reactivity (ASR) Testing". The ASTM C 1567 test will be valid for two years, unless the Engineer determines the materials have changed significantly.

For latex concrete, the ASTM C 1567 test shall be performed without the latex.

The 0.20 percent autoclave expansion limit in ASTM C 1567 shall not apply.

If during the two year time period the Contractor needs to replace the cement, and the replacement cement has an equal or lower total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$), a new ASTM C 1567 test will not be required.

The Engineer reserved the right to verify a Contractor's ASTM C 1567 test result. When the Contractor performs the test, a split sample may be requested by the Engineer. The Engineer may also independently obtain a sample at any time.

The proposed cement or finely divided mineral will not be allowed for use if the Contractor or Engineer obtains an expansion value greater than 0.16 percent.

1020.06 Water/Cement Ratio. The water/cement ratio shall be determined on a weight (mass) basis. When a maximum water/cement ratio is specified, the water shall include mixing water, water in admixtures, free moisture on the aggregates, and water added at the jobsite. The quantity of water may be adjusted within the limit specified to meet slump requirements.

When fly ash, ground granulated blast-furnace slag, high-reactivity metakaolin, or microsilica (silica fume) are used in a concrete mix, the water/cement ratio will be based on the total cement and finely divided minerals contained in the mixture.

1020.07 Slump. The slump shall be determined according to Illinois Modified AASHTO T 119.

If the measured slump falls outside the limits specified, a check test will be made. In the event of a second failure, the Engineer may refuse to permit the use of the batch of concrete represented.

If the Contractor is unable to add water to prepare concrete of the specified slump without exceeding the maximum design water/cement ratio, a water-reducing admixture shall be added.

1020.08 Air Content. The air content shall be determined according to Illinois Modified AASHTO T 152 or Illinois Modified AASHTO T 196. The air-entrainment shall be obtained by the use of cement with an approved air-entraining admixture added during the mixing of the concrete or the use of air-entraining cement.

If the air-entraining cement furnished is found to produce concrete having air content outside the limits specified, its use shall be discontinued immediately and the Contractor shall provide other air-entraining cement which will produce air contents within the specified limits.

If the air content obtained is above the specified maximum limit at the jobsite, the Contractor may have the concrete further mixed, within the limits of time and revolutions specified, to reduce the air content. If the air content obtained is below the specified minimum limit, the Contractor may add to the concrete a sufficient quantity of an approved air-entraining admixture at the jobsite to bring the air content within the specified limits.

1020.09 Strength Tests. The specimens shall be molded and cured according to Illinois Modified AASHTO T 23. Specimens shall be field cured with the construction item as specified in Illinois Modified AASHTO T 23. The compressive strength shall be determined according to Illinois Modified AASHTO T 22. The flexural strength shall be determined according to Illinois Modified AASHTO T 177.

Except for Class PC and PS concrete, the Contractor shall transport the strength specimens from the site of the work to the field laboratory or other location as instructed by the Engineer. During transportation in a suitable light truck, the specimens shall be embedded in straw,

burlap, or other acceptable material in a manner meeting with the approval of the Engineer to protect them from damage; care shall be taken to avoid impacts during hauling and handling. For strength specimens, the Contractor shall provide a field curing box for initial curing and a water storage tank for final curing. The field curing box will be required when an air temperature below 60 °F (16 °C) is expected during the initial curing period. The device shall maintain the initial curing temperature range specified in Illinois Modified AASHTO T 23, and may be insulated or power operated as appropriate.

1020.10 Handling, Measuring, and Batching Materials. Aggregates shall be handled in a manner to prevent mixing with soil and other foreign material.

Aggregates shall be handled in a manner which produces a uniform gradation, before placement in the plant bins. Aggregates delivered to the plant in a nonuniform gradation condition shall be stockpiled. The stockpiled aggregate shall be mixed uniformly before placement in the plant bins.

Aggregates shall have a uniform moisture content before placement in the plant bins. This may require aggregates to be stockpiled for 12 hours or more to allow drainage, or water added to the stockpile, or other methods approved by the Engineer. Moisture content requirements for crushed concrete, crushed slag or lightweight aggregate shall be according to Article 1004.01(e)(5).

Aggregates, cement, and finely divided minerals shall be measured by weight (mass). Water and admixtures shall be measured by volume or weight (mass).

The Engineer may permit aggregates, cement, and finely divided minerals to be measured by volume for small isolated structures and for miscellaneous items. Aggregates, cement, and finely divided minerals shall be measured individually. The volume shall be based upon dry, loose materials.

1020.11 Mixing Portland Cement Concrete. The mixing of concrete shall be according to the following.

(a) Ready-Mixed Concrete. Ready-mixed concrete is central-mixed, truck-mixed, or shrink-mixed concrete transported and delivered in a plastic state ready for placement in the work and shall be according to the following.

(1) Central-Mixed Concrete. Central-mixed concrete is concrete which has been completely mixed in a stationary mixer and delivered in a truck agitator, a truck mixer operating at agitating speed, or a nonagitator truck.

The stationary mixer shall operate at the drum speed for which it was designed. The batch shall be charged into the drum so that some of the water shall enter in advance of the cement, finely divided minerals, and aggregates. The flow of the water shall be uniform and all water shall be in the drum by the end of the first 15 seconds of the mixing period. Water shall begin to enter the drum from zero to

two seconds in advance of solid material and shall stop flowing within two seconds of the beginning of mixing time.

Some coarse aggregate shall enter in advance of other solid materials. For the balance of the charging time for solid materials, the aggregates, finely divided minerals, and cement (to assure thorough blending) shall each flow at acceptably uniform rates, as determined by visual observation. Coarse aggregate shall enter two seconds in advance of other solid materials and a uniform rate of flow shall continue to within two seconds of the completion of charging time.

The entire contents of the drum, or of each single compartment of a multiple-drum mixer, shall be discharged before the succeeding batch is introduced.

The volume of concrete mixed per batch shall not exceed the mixer's rated capacity as shown on the standard rating plate on the mixer by more than ten percent.

The minimum mixing time shall be 75 seconds for a stationary mixer having a capacity greater than 2 cu yd (1.5 cu m). For a mixer with a capacity equal to or less than 2 cu yd (1.5 cu m) the mixing time shall be 60 seconds. Transfer time in multiple drum mixers is included in the mixing time. Mixing time shall begin when all materials are in the mixing compartment and shall end when the discharge of any part of the batch is started. The required mixing times will be established by the Engineer for all types of stationary mixers.

When central-mixed concrete is to be transported in a truck agitator or a truck mixer, the stationary-mixed batch shall be transferred to the agitating unit without delay and without loss of any portion of the batch. Agitating shall start immediately thereafter and shall continue without interruption until the batch is discharged from the agitator. The ingredients of the batch shall be completely discharged from the agitator before the succeeding batch is introduced. Drums and auxiliary parts of the equipment shall be kept free from accumulations of materials.

The vehicles used for transporting the mixed concrete shall be of such capacity, or the batches shall be so proportioned, that the entire contents of the mixer drum can be discharged into each vehicle load.

- (2) Truck-Mixed Concrete. Truck-mixed concrete is completely mixed and delivered in a truck mixer. When the mixer is charged with fine and coarse aggregates simultaneously, not less than 60 nor more than 100 revolutions of the drum or blades at mixing speed shall be required, after all of the ingredients including water are in the drum. When fine and coarse aggregates are charged separately, not less than 70 revolutions will be required. For self-consolidating concrete, a minimum of 100 revolutions is required in all cases. Additional mixing beyond 100 revolutions shall be at agitating speed unless additions of water, admixtures, or other materials are made at the jobsite. The mixing operation shall begin immediately after the cement and water, or the cement and wet aggregates, come in contact. The

ingredients of the batch shall be completely discharged from the drum before the succeeding batch is introduced. The drum and auxiliary parts of the equipment shall be kept free from accumulations of materials. If additional water or an admixture is added at the jobsite, the concrete batch shall be mixed a minimum of 40 additional revolutions after each addition.

- (3) Shrink-Mixed Concrete. Shrink-mixed concrete is mixed partially in a stationary mixer and completed in a truck mixer for delivery. The mixing time of the stationary mixer may be reduced to a minimum of 30 seconds to intermingle the ingredients, before transferring to the truck mixer. All ingredients for the batch shall be in the stationary mixer and partially mixed before any of the mixture is discharged into the truck mixer. The partially mixed batch shall be transferred to the truck mixer without delay and without loss of any portion of the batch, and mixing in the truck mixer shall start immediately. The mixing time in the truck mixer shall be not less than 50 nor more than 100 revolutions of the drum or blades at mixing speed. For self-consolidating concrete, a minimum of 100 revolutions is required in the truck mixer. Additional mixing beyond 100 revolutions shall be at agitating speed, unless additions of water, admixtures, or other materials are made at the jobsite. Units designed as agitators shall not be used for shrink mixing. The ingredients of the batch shall be completely discharged from the drum before the succeeding batch is introduced. The drum and auxiliary parts of the equipment shall be kept free from accumulations of materials. If additional water or an admixture is added at the jobsite, the concrete batch shall be mixed a minimum of 40 additional revolutions after each addition.
- (4) Mixing Water. Wash water shall be completely discharged from the drum or container before a batch is introduced. All mixing water shall be added at the plant and any adjustment of water at the jobsite by the Contractor shall not exceed the specified maximum water/cement ratio or slump. If strength specimens have been made for a batch of concrete, and subsequently during discharge there is more water added, additional strength specimens shall be made for the batch of concrete. No additional water may be added at the jobsite to central-mixed concrete if the mix design has less than 565 lbs/cu yd (335 kg/cu m) of cement and finely divided minerals summed together.
- (5) Mixing and Agitating Speeds. The mixing or agitating speeds used for truck mixers or truck agitators shall be per the manufacturer's rating plate.
- (6) Capacities. The volume of plastic concrete in a given batch will be determined according to AASHTO T 121, based on the total weight (mass) of the batch, determined either from the weight (masses) of all materials, including water, entering the batch or directly from the net weight (mass) of the concrete in the batch as delivered.

The volume of mixed concrete in truck mixers or truck agitators shall in no case be greater than the rated capacity determined according to the Truck Mixer, Agitator,

and Front Discharge Concrete Carrier Standards of the Truck Mixer Manufacturer's Bureau, as shown by the rating plate attached to the truck. If the truck mixer does not have a rating plate, the volume of mixed concrete shall not exceed 63 percent of the gross volume of the drum or container, disregarding the blades. For truck agitators, the value is 80 percent.

- (7) Time of Haul. Haul time shall begin when the delivery ticket is stamped. The delivery ticket shall be stamped no later than five minutes after the addition of the mixing water to the cement, or after the addition of the cement to the aggregate when the combined aggregates contain free moisture in excess of two percent by weight (mass). If more than one batch is required for charging a truck using a stationary mixer, the time of haul shall start with mixing of the first batch. Haul time shall end when the truck is emptied for incorporation of the concrete into the work.

The time elapsing from when water is added to the mix until it is deposited in place at the site of the work shall not exceed 30 minutes when the concrete is transported in nonagitating trucks.

The maximum haul time for concrete transported in truck mixers or truck agitators shall be according to the following.

Concrete Temperature at Point of Discharge °F (°C)	Haul Time	
	Hours	Minutes
50-64 (10-17.5)	1	30
>64 (>17.5) - without retarder	1	0
>64 (>17.5) - with retarder	1	30

To encourage start-up testing for mix adjustments at the plant, the first two trucks will be allowed an additional 15 minutes haul time whenever such testing is performed.

For a mixture which is not mixed on the jobsite, a delivery ticket shall be required for each load. The following information shall be recorded on each delivery ticket: (1) ticket number; (2) name of producer and plant location; (3) contract number; (4) name of Contractor; (5) stamped date and time batched; (6) truck number; (7) quantity batched; (8) amount of admixture(s) in the batch; (9) amount of water in the batch; and (10) Department mix design number.

For concrete mixed in jobsite stationary mixers, the above delivery ticket may be waived, but a method of verifying the haul time shall be established to the satisfaction of the Engineer.

- (8) Production and Delivery. The production of ready-mixed concrete shall be such that the operations of placing and finishing will be continuous insofar as the job operations require. The Contractor shall be responsible for producing concrete that will have the required workability, consistency, and plasticity when delivered to the work. Concrete which is unsuitable for placement as delivered will be rejected. The

Contractor shall minimize the need to adjust the mixture at the jobsite, such as adding water and admixtures prior to discharging.

- (9) Use of Multiple Plants in the Same Construction Item. The Contractor may simultaneously use central-mixed, truck-mixed, and shrink-mixed concrete from more than one plant, for the same construction item, on the same day, and in the same pour. However, the following criteria shall be met.
- a. Each plant shall use the same cement, finely divided minerals, aggregates, admixtures, and fibers.
 - b. Each plant shall use the same mix design. However, material proportions may be altered slightly in the field to meet slump and air content criteria. Field water adjustments shall not result in a difference that exceeds 0.02 between plants for water/cement ratio. The required cement factor for central-mixed concrete shall be increased to match truck-mixed or shrink-mixed concrete, if the latter two types of mixed concrete are used in the same pour.
 - c. The maximum slump difference between deliveries of concrete shall be 3/4 in. (19 mm) when tested at the jobsite. If the difference is exceeded, but test results are within specification limits, the concrete may be used. The Contractor shall take immediate corrective action and shall test subsequent deliveries of concrete until the slump difference is corrected. For each day, the first three truck loads of delivered concrete from each plant shall be tested for slump by the Contractor. Thereafter, when a specified test frequency for slump is to be performed, it shall be conducted for each plant at the same time.
 - d. The maximum air content difference between deliveries of concrete shall be 1.5 percent when tested at the jobsite. If the difference is exceeded, but test results are within specification limits, the concrete may be used. The Contractor shall take immediate corrective action and shall test subsequent deliveries of concrete until the air content difference is corrected. For each day, the first three truck loads of delivered concrete from each plant shall be tested for air content by the Contractor. Thereafter, when a specified test frequency for air content is to be performed, it shall be conducted for each plant at the same time.
 - e. Strength tests shall be performed and taken at the jobsite for each plant. When a specified strength test is to be performed, it shall be conducted for each plant at the same time. The difference between plants for strength shall not exceed 900 psi (6200 kPa) compressive and 90 psi (620 kPa) flexural. If the strength difference requirements are exceeded, the Contractor shall take corrective action.
 - f. The maximum haul time difference between deliveries of concrete shall be 15 minutes. If the difference is exceeded, but haul time is within specification

limits, the concrete may be used. The Contractor shall take immediate corrective action and check subsequent deliveries of concrete.

- (b) Class PC Concrete. The concrete shall be central-mixed or truck-mixed. Variations in plastic concrete properties shall be minimized between batches.
- (c) Class PV Concrete. The concrete shall be central-mixed, truck-mixed, or shrink-mixed.

The required mixing time for stationary mixers with a capacity greater than 2 cu yd (1.5 cu m) may be less than 75 seconds upon satisfactory completion of a mixer performance test. Mixer performance tests may be requested by the Contractor when the quantity of concrete to be placed exceeds 50,000 sq yd (42,000 sq m). The testing shall be conducted according to the current Bureau of Materials and Physical Research's Policy Memorandum, "Field Test Procedures for Mixer Performance and Concrete Uniformity Tests".

The Contractor will be allowed to test two mixing times within a range of 50 to 75 seconds. If satisfactory results are not obtained from the required tests, the mixing time shall continue to be 75 seconds for the remainder of the contract. If satisfactory results are obtained, the mixing time may be reduced. In no event will mixing time be less than 50 seconds.

The Contractor shall furnish the labor, equipment, and material required to perform the testing according to the current Bureau of Materials and Physical Research's Policy Memorandum, "Field Test Procedures for Mixer Performance and Concrete Uniformity Tests".

A contract which has 12 ft (3.6 m) wide pavement or base course, and a continuous length of 1/2 mile (0.8 km) or more, shall have the following additional requirements.

- (1) The plant and truck delivery operation shall be able to provide a minimum of 50 cu yd (38 cu m) of concrete per hour.
- (2) The plant shall have automatic or semi-automatic batching equipment.

- (d) All Other Classes of Concrete. The concrete shall be central-mixed, truck-mixed, or shrink-mixed concrete.

1020.12 Mobile Portland Cement Concrete Plants. The use of a mobile portland cement concrete plant may be approved under the provisions of Article 1020.10 for volumetric proportioning in small isolated structures, thin overlays, and for miscellaneous and incidental concrete items.

The first 1 cu ft (0.03 cu m) of concrete produced may not contain sufficient mortar and shall not be incorporated in the work. The side plate on the cement feeder shall be removed

periodically (normally the first time the mixer is used each day) to see if cement is building up on the feed drum.

Sufficient mixing capacity of mixers shall be provided to enable continuous placing and finishing insofar as the job operations and the specifications require.

Slump and air tests made immediately after discharge of the mix may be misleading, since the aggregates may absorb a significant amount of water for four or five minutes after mixing.

1020.13 Curing and Protection. The method of curing, curing period, and method of protection for each type of concrete construction is included in the following Index Table.

INDEX TABLE OF CURING AND PROTECTION OF CONCRETE CONSTRUCTION			
TYPE OF CONSTRUCTION	CURING METHODS	CURING PERIOD DAYS	LOW AIR TEMPERATURE PROTECTION METHODS
Cast-in-Place Concrete ^{11/}			
Pavement			
Shoulder	1020.13(a)(1)(2)(3)(4)(5) ^{3/ 5/}	3	1020.13(c)
Base Course			
Base Course Widening	1020.13(a)(1)(2)(3)(4)(5) ^{2/}	3	1020.13(c)
Driveway			
Median			
Barrier			
Curb			
Gutter	1020.13(a)(1)(2)(3)(4)(5) ^{4/ 5/}	3	1020.13(c) ^{16/}
Curb & Gutter			
Sidewalk			
Slope Wall			
Paved Ditch			
Catch Basin			
Manhole	1020.13(a)(1)(2)(3)(4)(5) ^{4/}	3	1020.13(c)
Inlet			
Valve Vault			
Pavement Patching	1020.13(a)(1)(2)(3)(4)(5) ^{2/}	3 ^{12/}	1020.13(c)
Bridge Deck Patching	1020.13(a)(3)(5)	3 or 7 ^{12/}	1020.13(c)
Railroad Crossing	1020.13(a)(3)(5)	1	1020.13(c)
Piles and Drilled Shafts	1020.13(a)(3)(5)	7	1020.13(d)(1)(2)(3)
Foundations & Footings			
Seal Coat	1020.13(a)(1)(2)(3)(4)(5) ^{4/ 6/}	7	1020.13(d)(1)(2)(3)
Substructure	1020.13(a)(1)(2)(3)(4)(5) ^{1/ 7/}	7	1020.13(d)(1)(2)(3)
Superstructure (except deck)	1020.13(a)(1)(2)(3)(5) ^{8/}	7	1020.13(d)(1)(2)
Deck			
Bridge Approach Slab	1020.13(a)(5)	7	1020.13(d)(1)(2) ^{17/}
Retaining Walls	1020.13(a)(1)(2)(3)(4)(5) ^{1/ 7/}	7	1020.13(d)(1)(2)
Pump Houses	1020.13(a)(1)(2)(3)(4)(5) ^{1/}	7	1020.13(d)(1)(2)
Culverts	1020.13(a)(1)(2)(3)(4)(5) ^{4/ 6/}	7	1020.13(d)(1)(2) ^{18/}
Other Incidental Concrete	1020.13(a)(1)(2)(3)(5)	3	1020.13(c)
Precast Concrete ^{11/}			
Bridge Slabs			
Piles and Pile Caps	1020.13(a)(3)(5) ^{9/ 10/}	As ^{13/}	9/
Other Structural Members		Required	
All Other Precast Items	1020.13(a)(3)(4)(5) ^{2/ 9/ 10/}	As ^{14/}	9/
		Required	
Precast, Prestressed Concrete ^{11/}			
All Items	1020(a)(3)(5) ^{9/ 10/}	Until Strand Tensioning is Released ^{15/}	9/

Notes-General:

- 1/ Type I, membrane curing only
- 2/ Type II, membrane curing only
- 3/ Type III, membrane curing only

- 4/ Type I, II and III membrane curing
- 5/ Membrane Curing will not be permitted between November 1 and April 15.
- 6/ The use of water to inundate foundations and footings, seal coats or the bottom slab of culverts is permissible when approved by the Engineer, provided the water temperature can be maintained at 45 °F (7 °C) or higher.
- 7/ Asphalt emulsion for waterproofing may be used in lieu of other curing methods when specified and permitted according to Article 503.18.
- 8/ On non-traffic surfaces which receive protective coat according to Article 503.19, a linseed oil emulsion curing compound may be used as a substitute for protective coat and other curing methods. The linseed oil emulsion curing compound will be permitted between April 16 and October 31 of the same year, provided it is applied with a mechanical sprayer according to Article 1101.09(b).
- 9/ Steam, supplemental heat, or insulated blankets (with or without steam/supplemental heat) are acceptable and shall be according to the Bureau of Materials and Physical Research's Policy Memorandum "Quality Control/Quality Assurance Program for Precast Concrete Products" and the "Manual for Fabrication of Precast, Prestressed Concrete Products".
- 10/ A moist room according to AASHTO M 201 is acceptable for curing.
- 11/ If curing is required and interrupted because of form removal for cast-in-place concrete items, precast concrete products, or precast prestressed concrete products, the curing shall be resumed within two hours from the start of the form removal.
- 12/ Curing maintained only until opening strength is attained for pavement patching, with a maximum curing period of three days. For bridge deck patching the curing period shall be three days if Class PP concrete is used and 7 days if Class BS concrete is used.
- 13/ The curing period shall end when the concrete has attained the mix design strength. The producer has the option to discontinue curing when the concrete has attained 80 percent of the mix design strength or after seven days. All strength test specimens shall remain with the units and shall be subjected to the same curing method and environmental condition as the units, until the time of testing.
- 14/ The producer shall determine the curing period or may elect to not cure the product. All strength test specimens shall remain with the units and shall be subjected to the same curing method and environmental condition as the units, until the time of testing.

- 15/ The producer has the option to continue curing after strand release.
- 16/ When structural steel or structural concrete is in place above slope wall, Article 1020.13(c) shall not apply. The protection method shall be according to Article 1020.13(d)(1).
- 17/ When Article 1020.13(d)(2) is used to protect the deck, the housing may enclose only the bottom and sides. The top surface shall be protected according to Article 1020.13(d)(1).
- 18/ For culverts having a waterway opening of 10 sq ft (1 sq m) or less, the culverts may be protected according to Article 1020.13(d)(3).
- (a) Methods of Curing. Except as provided for in the Index Table of Curing and Protection of Concrete Construction, curing shall be accomplished by one of the following described methods. When water is required to wet the surface, it shall be applied as a fine spray so that it will not mar or pond on the surface. Except where otherwise specified, the curing period shall be at least 72 hours.

- (1) Waterproof Paper Method. The surface of the concrete shall be covered with waterproof paper as soon as the concrete has hardened sufficiently to prevent marring the surface. The surface of the concrete shall be wetted immediately before the paper is placed. The blankets shall be lapped at least 12 in. (300 mm) end to end, and these laps shall be securely weighted with a windrow of earth, or other approved method, to form a closed joint. The same requirements shall apply to the longitudinal laps where separate strips are used for curing edges, except the lap shall be at least 9 in. (225 mm). The edges of the blanket shall be weighted securely with a continuous windrow of earth or any other means satisfactory to the Engineer to provide an air-tight cover. Any torn places or holes in the paper shall be repaired immediately by patches cemented over the openings, using a bituminous cement having a melting point of not less than 180 °F (82 °C). The blankets may be reused, provided they are air-tight and kept serviceable by proper repairs.

A longitudinal pleat shall be provided in the blanket to permit shrinkage where the width of the blanket is sufficient to cover the entire surface. The pleat will not be required where separate strips are used for the edges. Joints in the blanket shall be sewn or cemented together in such a manner that they will not separate during use.

- (2) Polyethylene Sheeting Method. The surface of the concrete shall be covered with white polyethylene sheeting as soon as the concrete has hardened sufficiently to prevent marring the surface. The surface of the concrete shall be wetted immediately before the sheeting is placed. The edges of the sheeting shall be weighted securely with a continuous windrow of earth or any other means satisfactory to the Engineer to provide an air-tight cover. Adjoining sheets shall overlap not less than 12 in. (300 mm) and the laps shall be securely weighted with earth, or any other means satisfactory to the Engineer, to provide an air tight cover.

For surface and base course concrete, the polyethylene sheets shall be not less than 100 ft (30 m) in length nor longer than can be conveniently handled, and shall be of such width that, when in place, they will cover the full width of the surface, including the edges, except that separate strips may be used to cover the edges. Any tears or holes in the sheeting shall be repaired. When sheets are no longer serviceable as a single unit, the Contractor may select from such sheets and reuse those which will serve for further applications, provided two sheets are used as a single unit; however, the double sheet units will be rejected when the Engineer deems that they no longer provide an air tight cover.

- (3) Wetted Burlap Method. The surface of the concrete shall be covered with wetted burlap blankets as soon as the concrete has hardened sufficiently to prevent marring the surface. The blankets shall overlap 6 in. (150 mm). At least two layers of wetted burlap shall be placed on the finished surface. The burlap shall be kept saturated by means of a mechanically operated sprinkling system. In place of the sprinkling system, at the Contractor's option, two layers of burlap covered with impermeable covering shall be used. The burlap shall be kept saturated with water. Plastic coated burlap may be substituted for one layer of burlap and impermeable covering.

The blankets shall be placed so that they are in contact with the edges of the concrete, and that portion of the material in contact with the edges shall be kept saturated with water.

- (4) Membrane Curing Method. Membrane curing will not be permitted where a protective coat, concrete sealer, or waterproofing is to be applied, or at areas where rubbing or a normal finish is required, or at construction joints other than those necessary in pavement or base course. Concrete at these locations shall be cured by another method specified in Article 1020.13(a).

After all finishing work to the concrete surface has been completed, it 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 apart, each at the rate of not less than 1 gal/250 sq ft (0.16 L/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.

At locations where the coating is discontinuous or where pin holes show or where the coating is damaged due to any cause and on areas adjacent to sawed joints, immediately after sawing is completed, an additional coating of membrane curing compound shall be applied at the above specified rate. The equipment used may be of the same type as that used for coating variable widths of pavement. Before the additional coating is applied adjacent to sawed joints, the cut faces of the joint shall be protected by inserting a suitable flexible material in the joint, or placing an

adhesive width of impermeable material over the joint, or by placing the permanent sealing compound in the joint. Material, other than the permanent sealing compound, used to protect cut faces of the joint, shall remain in place for the duration of the curing period. In lieu of applying the additional coating, the area of the sawed joint may be cured according to any other method permitted.

When rain occurs before an application of membrane curing compound has dried, and the coating is damaged, the Engineer may require another application be made in the same manner and at the same rate as the original coat. The Engineer may order curing by another method specified, if unsatisfactory results are obtained with membrane curing compound.

- (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. The cotton mats shall be placed in a manner which will not mar the concrete surface. A texture resulting from the cotton mat material is acceptable. The cotton mats shall then be wetted immediately and thoroughly soaked with a gentle spray of water. 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 marring 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.

After placement of the soaker hoses, the cotton mats shall be covered with white polyethylene sheeting or burlap-polyethylene blankets.

For construction items other than bridge decks, soaker hoses or a continuous wetting system will not be required if the alternative method keeps the cotton mats wet. Periodic wetting of the cotton mats is acceptable.

For areas inaccessible to the cotton mats on bridge decks, curing shall be according to Article 1020.13(a)(3).

- (b) **Removing and Replacing Curing Covering.** When curing methods specified above in Article 1020.13(a), (1), (2), or (3) are used for concrete pavement, the curing covering for each day's paving shall be removed to permit testing of the pavement surface with a profilograph or straightedge, as directed by the Engineer.

Immediately after testing, the surface of the pavement shall be wetted thoroughly and the curing coverings replaced. The top surface and the edges of the concrete shall not be left unprotected for a period of more than 1/2 hour.

- (c) Protection of Concrete, Other Than Structures, From Low Air Temperatures. When the official National Weather Service forecast for the construction area predicts a low of 32 °F (0 °C), or lower, or if the actual temperature drops to 32 °F (0 °C), or lower, concrete less than 72 hours old shall be provided at least the following protection.

Minimum Temperature	Protection
25 – 32 °F (-4 – 0 °C)	Two layers of polyethylene sheeting, one layer of polyethylene and one layer of burlap, or two layers of waterproof paper.
Below 25 °F (-4 °C)	6 in. (150 mm) of straw covered with one layer of polyethylene sheeting or waterproof paper.

These protective covers shall remain in place until the concrete is at least 96 hours old. When straw is required on pavement cured with membrane curing compound, the compound shall be covered with a layer of burlap, polyethylene sheeting or waterproof paper before the straw is applied.

After September 15, there shall be available to the work within four hours, sufficient clean, dry straw to cover at least two days production. Additional straw shall be provided as needed to afford the protection required. Regardless of the precautions taken, the Contractor shall be responsible for protection of the concrete placed and any concrete damaged by cold temperatures shall be removed and replaced.

- (d) Protection of Concrete Structures From Low Air Temperatures. When the official National Weather Service forecast for the construction area predicts a low below 45 °F (7 °C), or if the actual temperature drops below 45 °F (7 °C), concrete less than 72 hours old shall be provided protection. Concrete shall also be provided protection when placed during the winter period of December 1 through March 15. Concrete shall not be placed until the materials, facilities, and equipment for protection are approved by the Engineer.

When directed by the Engineer, the Contractor may be required to place concrete during the winter period. When winter construction is specified, the Contractor shall proceed with the construction, including excavation, pile driving, concrete, steel erection, and all appurtenant work required for the complete construction of the item, except at times when weather conditions make such operations impracticable.

Regardless of the precautions taken, the Contractor shall be responsible for protection of the concrete placed and any concrete damaged by cold temperatures shall be removed and replaced.

- (1) Protection Method I. The concrete shall be completely covered with insulating material such as fiberglass, rock wool, or other approved commercial insulating material having the minimum thermal resistance R, as defined in ASTM C 168, for

the corresponding minimum dimension of the concrete unit being protected as shown in the following table.

Minimum Pour Dimension		Thermal Resistance R
in.	(mm)	
6 or less	(150 or less)	R=16
> 6 to 12	(> 150 to 300)	R=10
> 12 to 18	(> 300 to 450)	R=6
> 18	(> 450)	R=4

The insulating material manufacturer shall clearly mark the insulating material with the thermal resistance R value.

The insulating material shall be completely enclosed on sides and edges with an approved waterproof liner and shall be maintained in a serviceable condition. Any tears in the liner shall be repaired in a manner approved by the Engineer. The Contractor shall provide means for checking the temperature of the surface of the concrete during the protection period.

On formed surfaces, the insulating material shall be attached to the outside of the forms with wood cleats or other suitable means to prevent any circulation of air under the insulation and shall be in place before the concrete is placed. The blanket insulation shall be applied tightly against the forms. The edges and ends shall be attached so as to exclude air and moisture. If the blankets are provided with nailing flanges, the flanges shall be attached to the studs with cleats. Where tie rods or reinforcement bars protrude, the areas adjacent to the rods or bars shall be adequately protected in a manner satisfactory to the Engineer. Where practicable, the insulation shall overlap any previously placed concrete by at least 1 ft (300 mm). Insulation on the underside of floors on steel members shall cover the top flanges of supporting members. On horizontal surfaces, the insulating material shall be placed as soon as the concrete has set, so that the surface will not be marred and shall be covered with canvas or other waterproof covering. The insulating material shall remain in place for a period of seven days after the concrete is placed.

The Contractor may remove the forms, providing the temperature is 35 °F (2 °C) and rising and the Contractor is able to wrap the particular section within two hours from the time of the start of the form removal. The insulation shall remain in place for the remainder of the seven days curing period.

- (2) Protection Method II. The concrete shall be enclosed in adequate housing and the air surrounding the concrete kept at a temperature of not less than 50 °F (10 °C) nor more than 80 °F (27 °C) for a period of seven days after the concrete is placed. The Contractor shall provide means for checking the temperature of the surface of the concrete or air temperature within the housing during the protection period. All exposed surfaces within the housing shall be cured according to the Index Table.

The Contractor shall provide adequate fire protection where heating is in progress and such protection shall be accessible at all times. The Contractor shall maintain labor to keep the heating equipment in continuous operation.

At the close of the heating period, the temperature shall be decreased to the approximate temperature of the outside air at a rate not to exceed 15 °F (8 °C) per 12 hour period, after which the housing maybe removed. The surface of the concrete shall be permitted to dry during the cooling period.

- (3) Protection Method III. As soon as the surface is sufficiently set to prevent marring, the concrete shall be covered with 12 in. (300 mm) of loose, dry straw followed by a layer of impermeable covering. The edges of the covering shall be sealed to prevent circulation of air and prevent the cover from flapping or blowing. The protection shall remain in place until the concrete is seven days old. If construction operations require removal, the protection removed shall be replaced immediately after completion or suspension of such operations.

1020.14 Temperature Control for Placement. Temperature control for concrete placement shall be according to the following.

- (a) Concrete other than Structures. Concrete may be placed when the air temperature is above 35 °F (2 °C) and rising, and concrete placement shall stop when the falling temperature reaches 40 °F (4 °C) or below, unless otherwise approved by the Engineer.

The temperature of concrete immediately before placement shall be a minimum of 50 °F (10 °C) and a maximum of 90 °F (32 °C). If concrete is pumped, the temperature of the concrete at point of placement shall be a minimum of 50 °F (10 °C) and a maximum of 90 °F (32 °C). A maximum concrete temperature shall not apply to Class PP concrete.

- (b) Concrete in Structures. Concrete may be placed when the air temperature is above 40 °F (4 °C) and rising, and concrete placement shall stop when the falling temperature reaches 45 °F (7 °C) or below, unless otherwise approved by the Engineer.

The temperature of the concrete immediately before placement shall be a minimum of 50 °F (10 °C) and a maximum of 90 °F (32 °C). If concrete is pumped, the temperature of the concrete at point of placement shall be a minimum of 50 °F (10 °C) and a maximum of 90 °F (32 °C).

When insulated forms are used according to Article 1020.13(d)(1), the maximum temperature of the concrete mixture immediately before placement shall be 80 °F (25 °C).

When concrete is placed in contact with previously placed concrete, the temperature of the freshly mixed concrete may be increased to 80 °F (25 °C) by the Contractor to offset anticipated heat loss.

- (c) All Classes of Concrete. Aggregates and water shall be heated or cooled uniformly and as necessary to produce concrete within the specified temperature limits. No frozen aggregates shall be used in the concrete.
- (d) Temperature. The concrete temperature shall be determined according to Illinois Modified AASHTO T 309.

1020.15 Heat of Hydration Control for Concrete Structures. The Contractor shall control the heat of hydration for concrete structures when the least dimension for a drilled shaft, foundation, footing, substructure, or superstructure concrete pour exceeds 5.0 ft (1.5 m). The work shall be according to the following.

- (a) Temperature Restrictions. The maximum temperature of the concrete after placement shall not exceed 150 °F (66 °C). The maximum temperature differential between the internal concrete core and concrete 2 to 3 in. (50 to 75 mm) from the exposed surface shall not exceed 35 °F (19 °C). The Contractor shall perform temperature monitoring to ensure compliance with the temperature restrictions.
- (b) Thermal Control Plan. The Contractor shall provide a thermal control plan a minimum of 28 calendar days prior to concrete placement for review by the Engineer. Acceptance of the thermal control plan by the Engineer shall not preclude the Contractor from specification compliance, and from preventing cracks in the concrete. At a minimum, the thermal control plan shall provide detailed information on the following requested items and shall comply with the specific specifications indicated for each item.
 - (1) Concrete mix design(s) to be used. Grout mix design if post-cooling with embedded pipe.

The mix design requirements in Articles 1020.04 and 1020.05 shall be revised to include the following additional requirements to control the heat of hydration.

- a. The concrete mixture should be uniformly graded and preference for larger size aggregate should be used in the mix design. Article 1004.02(d)(2) shall apply and information in the "Portland Cement Concrete Level III Technician Course – Manual of Instructions for Design of Concrete Mixtures" may be used to develop the uniformly graded mixture.
- b. The following shall apply to all concrete except Class DS concrete or when self-consolidating concrete is desired. For central-mixed concrete, the Contractor shall have the option to develop a mixture with a minimum of 520 lbs/cu yd (309 kg/cu m) of cement and finely divided minerals summed together. For truck-mixed or shrink-mixed concrete, the Contractor shall have the option to develop a mixture with a minimum of 550 lbs/cu yd (326 kg/cu m) of cement and finely divided minerals summed together. A water-reducing or high range water-reducing admixture shall be used in the central mixed, truck-mixed or shrink-

mixed concrete mixture. For any mixture to be placed underwater, the minimum cement and finely divided minerals shall be 550 lbs/cu yd (326 kg/cu m) for central-mixed concrete, and 580 lbs/cu yd (344 kg/cu m) for truck-mixed or shrink-mixed concrete.

For Class DS concrete, CA 11 may be used. If CA 11 is used, the Contractor shall have the option to develop a mixture with a minimum cement and finely divided minerals of 605 lbs/cu yd (360 kg/cu m) summed together. If CA 11 is used and either Class DS concrete is placed underwater or a self-consolidating concrete mixture is desired, the Contractor shall have the option to develop a mixture with a minimum cement and finely divided minerals of 635 lbs/cu yd (378 kg/cu m) summed together.

- c. The minimum portland cement content in the mixture shall be 375 lbs/cu yd (222 kg/cu m). When the total of organic processing additions, inorganic processing additions, and limestone addition exceed 5.0 percent in the cement, the minimum portland cement content in the mixture shall be 400 lbs/cu yd (237 kg/cu m). For a drilled shaft, foundation, footing, or substructure, the minimum portland cement may be reduced to as low as 330 lbs/cu yd (196 kg/cu m) if the concrete has adequate freeze/thaw durability. The Contractor shall provide freeze/thaw test results according to AASHTO T 161 Procedure A or B, and the relative dynamic modulus of elasticity of the mix design shall be a minimum of 80 percent. Freeze/thaw testing will not be required for concrete that will not be exposed to freezing and thawing conditions as determined by the Engineer.
- d. The maximum cement replacement with fly ash shall be 40.0 percent. The maximum cement replacement with ground granulated blast-furnace slag shall be 65.0 percent. When cement replacement with ground granulated blast-furnace slag exceeds 35.0 percent, only Grade 100 shall be used.
- e. The mixture may contain a maximum of two finely divided minerals. The finely divided mineral in portland-pozzolan cement or portland blast-furnace slag cement shall count toward the total number of finely divided minerals allowed. The finely divided minerals shall constitute a maximum of 65.0 percent of the total cement plus finely divided minerals. The fly ash portion shall not exceed 40.0 percent. The ground granulated blast-furnace slag portion shall not exceed 65.0 percent. The microsilica or high-reactivity metakaolin portion used together or separately shall not exceed 5.0 percent.
- f. The time to obtain the specified strength may be increased to a maximum 56 days, provided the curing period specified in Article 1020.13 is increased to a minimum of 14 days.

The minimum grout strength for filling embedded pipe shall be as specified for the concrete, and testing shall be according to AASHTO T 106.

- (2) The selected mathematical method for evaluating heat of hydration thermal effects, which shall include the calculated adiabatic temperature rise, calculated maximum concrete temperature, and calculated maximum temperature differential between the internal concrete core and concrete 2 to 3 in. (50 to 75 mm) from the exposed surface. The time when the maximum concrete temperature and maximum temperature differential will occur is required.

Acceptable mathematical methods include ACI 207.2R "Report on Thermal and Volume Change Effects on Cracking of Mass Concrete" as well as other proprietary methods. The Contractor shall perform heat of hydration testing on the cement and finely divided minerals to be used in the concrete mixture. The test shall be according to ASTM C 186 or other applicable test methods, and the result for heat shall be used in the equation to calculate adiabatic temperature rise. Other required test parameters for the mathematical model may be assumed if appropriate.

The Contractor has the option to propose a higher maximum temperature differential between the internal concrete core and concrete 2 to 3 in. (50 to 75 mm) from the exposed surface, but the proposed value shall not exceed 50 °F (28 °C). In addition, based on strength gain of the concrete, multiple maximum temperature differentials at different times may be proposed. The proposed value shall be justified through a mathematical method.

- (3) Proposed maximum concrete temperature or temperature range prior to placement.

Article 1020.14 shall apply except a minimum 40 °F (4 °C) concrete temperature will be permitted.

- (4) Pre-cooling, post-cooling, and surface insulation methods that will be used to ensure the concrete will comply with the specified maximum temperature and specified or proposed temperature differential. For reinforcement that extends beyond the limits of the pour, the Contractor shall indicate if the reinforcement is required to be covered with insulation.

Refer to ACI 207.4R "Cooling and Insulating Systems for Mass Concrete" for acceptable methods that will be permitted. If embedded pipe is used for post-cooling, the material shall be polyvinyl chloride or polyethylene. The embedded pipe system shall be properly supported, and the Contractor shall subsequently inspect glued joints to ensure they are able to withstand free falling concrete. The embedded pipe system shall be leak tested after inspection of the glued joints, and prior to the concrete placement. The leak test shall be performed at maximum service pressure or higher for a minimum of 15 minutes. All leaks shall be repaired. The embedded pipe cooling water may be from natural sources such as streams and rivers, but shall be filtered to prevent system stoppages. When the embedded pipe is no longer needed, the surface connections to the pipe shall be removed to a depth of 4 in. (100 mm) below the surface of the concrete. The remaining pipe shall be

completely filled with grout. The 4 in. (100 mm) deep concrete hole shall be filled with nonshrink grout. Form and insulation removal shall be done in a manner to prevent cracking and ensure the maximum temperature differential is maintained. Insulation shall be in good condition as determined by the Engineer and properly attached.

- (5) Dimensions of each concrete pour, location of construction joints, placement operations, pour pattern, lift heights, and time delays between lifts.

Refer to ACI 207.1R "Guide to Mass Concrete" for acceptable placement operations that will be permitted.

- (6) Type of temperature monitoring system, the number of temperature sensors, and location of sensors.

A minimum of two independent temperature monitoring systems and corresponding sensors shall be used.

The temperature monitoring system shall have a minimum temperature range of 32 °F (0 °C) to 212 °F (100 °C), an accuracy of ± 2 °F (± 1 °C), and be able to automatically record temperatures without external power. Temperature monitoring shall begin once the sensor is encased in concrete, and with a maximum interval of one hour. Temperature monitoring may be discontinued after the maximum concrete temperature has been reached, post-cooling is no longer required, and the maximum temperature differential between the internal concrete core and the ambient air temperature does not exceed 35 °F (19 °C). The Contractor has the option to select a higher maximum temperature differential, but the proposed value shall not exceed 50 °F (28 °C). The proposed value shall be justified through a mathematical method.

At a minimum, a temperature sensor shall be located at the theoretical hottest portion of the concrete, normally the geometric center, and at the exterior face that will provide the maximum temperature differential. At the exterior face, the sensor shall be located 2 to 3 in. (50 to 75 mm) from the surface of the concrete. Sensors shall also be located a minimum of 1 in. (25 mm) away from reinforcement, and equidistant between cooling pipes if either applies. A sensor will also be required to measure ambient air temperature. The entrant/exit cooling water temperature for embedded pipe shall also be monitored.

Temperature monitoring results shall be provided to the Engineer a minimum of once each day and whenever requested by the Engineer. The report may be electronic or hard copy. The report shall indicate the location of each sensor, the temperature recorded, and the time recorded. The report shall be for all sensors and shall include ambient air temperature and entrant/exit cooling water temperatures. The temperature data in the report may be provided in tabular or graphical format, and the report shall indicate any corrective actions during the monitoring period. At the

completion of the monitoring period, the Contractor shall provide the Engineer a final report that includes all temperature data and corrective actions.

(7) Indicate contingency operations to be used if the maximum temperature or temperature differential of the concrete is reached after placement.

(c) Temperature Restriction Violations. If the maximum temperature of the concrete after placement exceeds 150 °F (66 °C), but is equal to or less than 158 °F (70 °C), the concrete will be accepted if no cracking or other unacceptable defects are identified. If cracking or unacceptable defects are identified, Article 105.03 shall apply. If the concrete temperature exceeds 158 °F (70 °C), Article 105.03 shall apply.

If a temperature differential between the internal concrete core and concrete 2 to 3 in. (50 to 75 mm) from the exposed surface exceeds the specified or proposed maximum value allowed, the concrete will be accepted if no cracking or other unacceptable defects are identified. If unacceptable defects are identified, Article 105.03 shall apply.

When the maximum 150 °F (66 °C) concrete temperature or the maximum allowed temperature differential is violated, the Contractor shall implement corrective action prior to the next pour. In addition, the Engineer reserves the right to request a new thermal control plan for acceptance before the Contractor is allowed to pour again.

(d) Inspection and Repair of Cracks. The Engineer will inspect the concrete for cracks after the temperature monitoring is discontinued, and the Contractor shall provide access for the Engineer to do the inspection. A crack may require repair by the Contractor as determined by the Engineer. The Contractor shall be responsible for the repair of all cracks. Protective coat or a concrete sealer shall be applied to a crack less than 0.007 in. (0.18 mm) in width. A crack that is 0.007 in. (0.18 mm) or greater shall be pressure injected with epoxy according to Section 590.

80279

QUALITY CONTROL/QUALITY ASSURANCE OF CONCRETE MIXTURES (BDE)

Effective: January 1, 2012

Revised: January 1, 2013

Add the following to Section 1020 of the Standard Specifications:

“1020.16 Quality Control/Quality Assurance of Concrete Mixtures. This Article specifies the quality control responsibilities of the Contractor for concrete mixtures (except Class PC and PS concrete), cement aggregate mixture II, and controlled low-strength material incorporated in the project, and defines the quality assurance and acceptance responsibilities of the Engineer.

A list of quality control/quality assurance (QC/QA) documents is provided in Article 1020.16(g), Schedule D.

A Level I Portland Cement Concrete (PCC) Technician shall be defined as an individual who has successfully completed the Department's training for concrete testing.

A Level II Portland Cement Concrete (PCC) Technician shall be defined as an individual who has successfully completed the Department's training for concrete proportioning.

A Level III Portland Cement Concrete (PCC) Technician shall be defined as an individual who has successfully completed the Department's training for concrete mix design.

A Concrete Tester shall be defined as an individual who has successfully completed the Department's training to assist with concrete testing and is monitored on a daily basis.

Aggregate Technician shall be defined as an individual who has successfully completed the Department's training for gradation testing involving aggregate production and mixtures.

Mixture Aggregate Technician shall be defined as an individual who has successfully completed the Department's training for gradation testing involving mixtures.

Gradation Technician shall be defined as an individual who has successfully completed the Department's training to assist with gradation testing and is monitored on a daily basis.

- (a) Equipment/Laboratory. The Contractor shall provide a laboratory and test equipment to perform their quality control testing.

The laboratory shall be of sufficient size and be furnished with the necessary equipment, supplies, and current published test methods for adequately and safely performing all required tests. The laboratory will be approved by the Engineer according to the current Bureau of Materials and Physical Research Policy Memorandum "Minimum Private Laboratory Requirements for Construction Materials Testing or Mix Design". Production of a mixture shall not begin until the Engineer provides written approval of the laboratory.

The Contractor shall refer to the Department's "Required Sampling and Testing Equipment for Concrete" for equipment requirements.

Test equipment shall be maintained and calibrated as required by the appropriate test method, and when required by the Engineer. This information shall be documented on the Department's "Calibration of Concrete Testing Equipment" form.

Test equipment used to determine compressive or flexural strength shall be calibrated each 12 month period by an independent agency, using calibration equipment traceable to the National Institute of Standards and Technology (NIST). The Contractor shall have the calibration documentation available at the test equipment location.

The Engineer will have unrestricted access to the plant and laboratory at any time to inspect measuring and testing equipment, and will notify the Contractor of any deficiencies. Defective equipment shall be immediately repaired or replaced by the Contractor.

- (b) Quality Control Plan. The Contractor shall submit, in writing, a proposed Quality Control (QC) Plan to the Engineer. The QC Plan shall be submitted a minimum of 45 calendar days prior to the production of a mixture. The QC Plan shall address the quality control of the concrete, cement aggregate mixture II, and controlled low-strength material incorporated in the project. The Contractor shall refer to the Department's "Model Quality Control Plan for Concrete Production" to prepare a QC Plan. The Engineer will respond in writing to the Contractor's proposed QC Plan within 15 calendar days of receipt.

Production of a mixture shall not begin until the Engineer provides written approval of the QC Plan. The approved QC Plan shall become a part of the contract between the Department and the Contractor, but shall not be construed as acceptance of any mixture produced.

The QC Plan may be amended during the progress of the work, by either party, subject to mutual agreement. The Engineer will respond in writing to a Contractor's proposed QC Plan amendment within 15 calendar days of receipt. The response will indicate the approval or denial of the Contractor's proposed QC Plan amendment.

- (c) Quality Control by Contractor. The Contractor shall perform quality control inspection, sampling, testing, and documentation to meet contract requirements. Quality control includes the recognition of obvious defects and their immediate correction. Quality control also includes appropriate action when passing test results are near specification limits, or to resolve test result differences with the Engineer. Quality control may require increased testing, communication of test results to the plant or the jobsite, modification of operations, suspension of mixture production, rejection of material, or other actions as appropriate. The Engineer shall be immediately notified of any failing tests and subsequent remedial action. Passing tests shall be reported no later than the start of the next work day.

When a mixture does not comply with specifications, the Contractor shall reject the material; unless the Engineer accepts the material for incorporation in the work, according to Article 105.03.

- (1) Personnel Requirements. The Contractor shall provide a Quality Control (QC) Manager who will have overall responsibility and authority for quality control. The jobsite and plant personnel shall be able to contact the QC Manager by cellular phone, two-way radio or other methods approved by the Engineer.

The QC Manager shall visit the jobsite a minimum of once a week. A visit shall be performed the day of a bridge deck pour, the day a non-routine mixture is placed as determined by the Engineer, or the day a plant is anticipated to produce more than 1000 cu yd (765 cu m). Any of the three required visits may be used to meet the once per week minimum requirement.

The Contractor shall provide personnel to perform the required inspections, sampling, testing and documentation in a timely manner. The Contractor shall refer to the Department's "Qualifications and Duties of Concrete Quality Control Personnel" document.

A Level I PCC Technician shall be provided at the jobsite during mixture production and placement, and may supervise concurrent pours on the project. For concurrent pours, a minimum of one Concrete Tester shall be required at each pour location. If the Level I PCC Technician is at one of the pour locations, a Concrete Tester is still required at the same location. Each Concrete Tester shall be able to contact the Level I PCC Technician by cellular phone, two-way radio or other methods approved by the Engineer. A single Level I PCC Technician shall not supervise concurrent pours for multiple contracts.

A Level II PCC Technician shall be provided at the plant, or shall be available, during mixture production and placement. A Level II PCC Technician may supervise a maximum of three plants. Whenever the Level II PCC Technician is not at the plant during mixture production and placement, a Concrete Tester or Level I PCC Technician shall be present at the plant to perform any necessary concrete tests. The Concrete Tester, Level I PCC Technician, or other individual shall also be trained to perform any necessary aggregate moisture tests, if the Level II PCC Technician is not at the plant during mixture production and placement. The Concrete Tester, Level I PCC Technician, plant personnel, and jobsite personnel shall have the ability to contact the Level II PCC Technician by cellular phone, two-way radio, or other methods approved by the Engineer.

For a mixture which is produced and placed with a mobile portland cement concrete plant as defined in Article 1103.04, a Level II PCC Technician shall be provided. The Level II PCC Technician shall be present at all times during mixture production and placement. However, the Level II PCC Technician may request to be available if

operations are satisfactory. Approval shall be obtained from the Engineer, and jobsite personnel shall have the ability to contact the Level II PCC Technician by cellular phone, two-way radio, or other methods approved by the Engineer.

A Concrete Tester, Mixture Aggregate Technician, and Aggregate Technician may provide assistance with sampling and testing. A Gradation Technician may provide assistance with testing. A Concrete Tester shall be supervised by a Level I or Level II PCC Technician. A Gradation Technician shall be supervised by a Level II PCC Technician, Mixture Aggregate Technician, or Aggregate Technician.

- (2) Required Plant Tests. Sampling and testing shall be performed at the plant, or at a location approved by the Engineer, to control the production of a mixture. The required minimum Contractor plant sampling and testing is indicated in Article 1020.16(g) Schedule A.
 - (3) Required Field Tests. Sampling and testing shall be performed at the jobsite to control the production of a mixture, and to comply with specifications for placement. For standard curing, after initial curing, and for strength testing; the location shall be approved by the Engineer. The required minimum Contractor jobsite sampling and testing is indicated in Article 1020.16(g), Schedule B.
- (d) Quality Assurance by Engineer. The Engineer will perform quality assurance tests on independent samples and split samples. An independent sample is a field sample obtained and tested by only one party. A split sample is one of two equal portions of a field sample, where two parties each receive one portion for testing. The Engineer may request the Contractor to obtain a split sample. Aggregate split samples and any failing strength specimen shall be retained until permission is given by the Engineer for disposal. The results of all quality assurance tests by the Engineer will be made available to the Contractor. However, Contractor split sample test results shall be provided to the Engineer before Department test results are revealed. The Engineer's quality assurance independent sample and split sample testing is indicated in Article 1020.16(g), Schedule C.
- (1) Strength Testing. For strength testing, Article 1020.09 shall apply, except the Contractor and Engineer strength specimens may be placed in the same field curing box for initial curing and may be cured in the same water storage tank for final curing.
 - (2) Comparing Test Results. Differences between the Engineer's and the Contractor's split sample test results will be considered reasonable if within the following limits:

Test Parameter	Acceptable Limits of Precision
Slump	0.75 in. (20 mm)
Air Content	0.9%
Compressive Strength	900 psi (6200 kPa)

Flexural Strength	90 psi (620 kPa)
Slump Flow (Self-Consolidating Concrete (SCC))	1.5 in. (40 mm)
Visual Stability Index (SCC)	Not Applicable
J-Ring (SCC)	1.5 in. (40 mm)
L-Box (SCC)	10 %
Hardened Visual Stability Index (SCC)	Not Applicable
Dynamic Segregation Index (SCC)	1.0 %
Flow (Controlled Low-Strength Material (CLSM))	1.5 in. (40 mm)
Strength (Controlled Low-Strength Material (CLSM))	40 psi (275 kPa)
Aggregate Gradation	See "Guideline for Sample Comparison" in Appendix "A" of the Manual of Test Procedures for Materials.

When acceptable limits of precision have been met, but only one party is within specification limits, the failing test shall be resolved before the material may be considered for acceptance.

(3) Test Results and Specification Limits.

a. Split Sample Testing. If either the Engineer's or the Contractor's split sample test result is not within specification limits, and the other party is within specification limits; immediate retests on a split sample shall be performed for slump, air content, slump flow, visual stability index, J-Ring, L-Box, dynamic segregation index, flow (CLSM), or aggregate gradation. A passing retest result by each party will require no further action. If either the Engineer's or Contractor's slump, air content, slump flow, visual stability index, J-Ring, L-Box, dynamic segregation index, flow (CLSM), or aggregate gradation split sample retest result is a failure; or if either the Engineer's or Contractor's strength or hardened visual stability index test result is a failure, and the other party is within specification limits; the following actions shall be initiated to investigate the test failure:

1. The Engineer and the Contractor shall investigate the sampling method, test procedure, equipment condition, equipment calibration, and other factors.
2. The Engineer or the Contractor shall replace test equipment, as determined by the Engineer.
3. The Engineer and the Contractor shall perform additional testing on split samples, as determined by the Engineer.

For aggregate gradation, jobsite slump, jobsite air content, jobsite slump flow, jobsite visual stability index, jobsite J-Ring, jobsite L-Box, jobsite dynamic segregation index, and jobsite flow (CLSM); if the failing split sample test result is not resolved according to 1., 2., or 3., and the mixture has not been placed, the Contractor shall reject the material; unless the Engineer accepts the material for

incorporation in the work according to Article 105.03. If the mixture has already been placed, or if a failing strength or hardened visual stability index test result is not resolved according to 1., 2., or 3., the material will be considered unacceptable.

If a continued trend of difference exists between the Engineer's and the Contractor's split sample test results, or if split sample test results exceed the acceptable limits of precision, the Engineer and the Contractor shall investigate according to items 1., 2., and 3.

b. Independent Sample Testing. For aggregate gradation, jobsite slump, jobsite air content jobsite slump flow, jobsite visual stability index, jobsite J-Ring, jobsite L-Box, jobsite dynamic segregation index, jobsite flow (CLSM); if the result of a quality assurance test on a sample independently obtained by the Engineer is not within specification limits, and the mixture has not been placed, the Contractor shall reject the material, unless the Engineer accepts the material for incorporation in the work according to Article 105.03. If the mixture has already been placed or the Engineer obtains a failing strength or hardened visual stability index test result, the material will be considered unacceptable.

(e) Acceptance by the Engineer. Final acceptance will be based on the Standard Specifications and the following:

- (1) The Contractor's compliance with all contract documents for quality control.
- (2) Validation of Contractor quality control test results by comparison with the Engineer's quality assurance test results using split samples. Any quality control or quality assurance test determined to be flawed may be declared invalid only when reviewed and approved by the Engineer. The Engineer will declare a test result invalid only if it is proven that improper sampling or testing occurred. The test result is to be recorded and the reason for declaring the test invalid will be provided by the Engineer.
- (3) Comparison of the Engineer's quality assurance test results with specification limits using samples independently obtained by the Engineer.

The Engineer may suspend mixture production, reject materials, or take other appropriate action if the Contractor does not control the quality of concrete, cement aggregate mixture II, or controlled low-strength material for acceptance. The decision will be determined according to (1), (2), or (3).

(f) Documentation.

- (1) Records. The Contractor shall be responsible for documenting all observations, inspections, adjustments to the mix design, test results, retest results, and corrective actions in a bound hardback field book, bound hardback diary, or appropriate

Department form, which shall become the property of the Department. The documentation shall include a method to compare the Engineer's test results with the Contractor's results. The Contractor shall be responsible for the maintenance of all permanent records whether obtained by the Contractor, the consultants, the subcontractors, or the producer of the mixture. The Contractor shall provide the Engineer full access to all documentation throughout the progress of the work.

The Department's form MI 504M, form BMPR MI654, and form BMPR MI655 shall be completed by the Contractor, and shall be submitted to the Engineer weekly or as required by the Engineer. A correctly completed form MI 504M, form BMPR MI654, and form BMPR MI655 are required to authorize payment by the Engineer, for applicable pay items.

(2) Delivery Truck Ticket. The following information shall be recorded on each delivery ticket or in a bound hardback field book: initial revolution counter reading (final reading optional) at the jobsite, if the mixture is truck-mixed; time discharged at the jobsite; total amount of each admixture added at the jobsite; and total amount of water added at the jobsite.

(g) Basis of Payment and Schedules. Quality Control/Quality Assurance of portland cement concrete mixtures will not be paid for separately, but shall be considered as included in the cost of the various concrete contract items.

SCHEDULE A

CONTRACTOR PLANT SAMPLING AND TESTING			
Item	Test	Frequency	IL Modified AASHTO or Department Test Method ^{1/}
Aggregates (Arriving at Plant)	Gradation ^{2/}	As needed to check source for each gradation number	2, 11, 27, and 248
Aggregates (Stored at Plant in Stockpiles or Bins)	Gradation ^{2/}	2,500 cu yd (1,900 cu m) for each gradation number ^{3/}	2, 11, 27, and 248
Aggregates (Stored at Plant in Stockpiles or Bins)	Moisture ^{4/} : Fine Aggregate	Once per week for moisture sensor, otherwise daily for each gradation number	Flask, Dunagan, Pycnometer Jar, or 255
	Moisture ^{4/} : Coarse Aggregate	As needed to control production for each gradation number	Dunagan, Pycnometer Jar, or 255
Mixture ^{5/}	Slump Air Content Unit Weight / Yield Slump Flow (SCC) Visual Stability Index (SCC) J-Ring (SCC) ^{6/} L-Box (SCC) ^{6/} Temperature	As needed to control production	T 141 and T 119 T 141 and T 152 or T 196 T 141 and T 121 SCC-1 and SCC-2 SCC-1 and SCC-2 SCC-1 and SCC-3 SCC-1 and SCC-4 T 141 and T 309
Mixture (CLSM) ^{7/}	Flow Air Content Temperature	As needed to control production	Illinois Test Procedure 307

1/ Refer to the Department's "Manual of Test Procedures for Materials".

2/ All gradation tests shall be washed. Testing shall be completed no later than 24 hours after the aggregate has been sampled.

3/ One per week (Sunday through Saturday) minimum unless the stockpile has not received additional aggregate material since the previous test.

One per day minimum for a bridge deck pour unless the stockpile has not received additional aggregate material since the previous test. The sample shall be taken and testing completed prior to the pour. The bridge deck aggregate sample may be taken the day before the pour or as approved by the Engineer.

4/ If the moisture test and moisture sensor disagree by more than 0.5 percent, retest. If the difference remains, adjust the moisture sensor to an average of two or more moisture tests. The Department's "Water/Cement Ratio Worksheet" form shall be completed when applicable.

- 5/ The Contractor may also perform strength testing according to Illinois Modified AASHTO T 141, T 23, and T 22 or T 177; or water content testing according to Illinois Modified AASHTO T 318.

The Contractor may also perform other available self-consolidating concrete (SCC) tests at the plant to control mixture production.

- 6/ The Contractor shall select the J-Ring or L-Box test for plant sampling and testing.
- 7/ The Contractor may also perform strength testing according to Illinois Test Procedure 307.

SCHEDULE B

CONTRACTOR JOBSITE SAMPLING & TESTING ^{1/}			
Item	Measured Property	Random Sample Testing Frequency per Mix Design and per Plant ^{2/}	IL Modified AASHTO Test Method
Pavement, Shoulder, Base Course, Base Course Widening, Driveway Pavement, Railroad Crossing, Cement Aggregate Mixture II	Slump ^{3/4/}	1 per 500 cu yd (400 cu m) or minimum 1/day	T 141 and T 119
	Air Content ^{3/5/} _{6/}	1 per 100 cu yd (80 cu m) or minimum 1/day	T 141 and T 152 or T 196
	Compressive Strength ^{7/8/} or Flexural Strength ^{7/8/}	1 per 1250 cu yd (1000 cu m) or minimum 1/day	T 141, T 22 and T 23 or T 141, T 177 and T 23
Bridge Approach Slab ^{9/} , Bridge Deck ^{9/} , Bridge Deck Overlay ^{9/} , Superstructure ^{9/} , Substructure, Culvert, Miscellaneous Drainage Structures, Retaining Wall, Building Wall, Drilled Shaft Pile & Encasement Footing, Foundation, Pavement Patching, Structural Repairs	Slump ^{3/4/}	1 per 50 cu yd (40 cu m) or minimum 1/day	T 141 and T 119
	Air Content ^{3/5/} _{6/}	1 per 50 cu yd (40 cu m) or minimum 1/day	T 141 and T 152 or T 196
	Compressive Strength ^{7/8/} or Flexural Strength ^{7/8/}	1 per 250 cu yd (200 cu m) or minimum 1/day	T 141, T 22 and T 23 or T 141, T 177 and T 23
Seal Coat	Slump ^{3/}	1 per 250 cu yd (200 cu m) or minimum 1/day	T 141 and T 119
	Air Content ^{3/5/8/}	1 per 250 cu yd (200 cu m) or minimum 1/day when air is entrained	T 141 and T 152 or T 196
	Compressive Strength ^{7/8/} or Flexural Strength ^{7/8/}	1 per 250 cu yd (200 cu m) or minimum 1/day	T 141, T 22 and T 23 or T 141, T 177 and T 23

CONTRACTOR JOBSITE SAMPLING & TESTING ^{1/}			
Curb, Gutter, Median, Barrier, Sidewalk, Slope Wall, Paved Ditch, Fabric Formed Concrete Revetment Mat ^{10/} , Miscellaneous Items, Incidental Items	Slump ^{3/ 4/}	1 per 100 cu yd (80 cu m) or minimum 1/day	T 141 and T 119
	Air Content ^{3/ 5/ 6/}	1 per 50 cu yd (40 cu m) or minimum 1/day	T 141 and T 152 or T 196
	Compressive Strength ^{7/ 8/} or Flexural Strength ^{7/ 8/}	1 per 400 cu yd (300 cu m) or minimum 1/day	T 141, T 22 and T 23 or T 141, T 177 and T 23
The Item will use a Self-Consolidating Concrete Mixture	Slump Flow ^{3/} VSI ^{3/} J-Ring ^{3/ 11/} L-Box ^{3/ 11/}	Perform at same frequency that is specified for the Item's slump	SCC-1 & SCC-2 SCC-1 & SCC-2 SCC-1 & SCC-3 SCC-1 & SCC-4
The Item will use a Self-Consolidating Concrete Mixture	HVSI ^{12/}	Minimum 1/day at start of production for that day	SCC-1 and SCC-6
The Item will use a Self-Consolidating Concrete Mixture	Dynamic Segregation Index (DSI)	Minimum 1/week at start of production for that week	SCC-1 and SCC-8 (Option C)
The Item will use a Self-Consolidating Concrete Mixture	Air Content ^{3/ 5/ 6/}	Perform at same frequency that is specified for the Item's air content	SCC-1 and T 152 or T 196
The Item will use a Self-Consolidating Concrete Mixture	Compressive Strength ^{7/ 8/} or Flexural Strength ^{7/ 8/}	Perform at same frequency that is specified for the Item's strength	SCC-1, T 22 and T 23 or SCC-1, T 177 and T 23
All	Temperature ^{3/}	As needed to control production	T 141 and T 309
Controlled Low-Strength Material (CLSM)	Flow, Air Content, Compressive Strength (28-day) ^{13/} , and Temperature	First truck load delivered and as needed to control production thereafter	Illinois Test Procedure 307

1/ Sampling and testing of small quantities of curb, gutter, median, barrier, sidewalk, slope wall, paved ditch, miscellaneous items, and incidental items may be waived by the Engineer if requested by the Contractor. However, quality control personnel are still required according to Article 1020.16(c)(1) The Contractor shall also provide recent evidence that similar material has been found to be satisfactory under normal sampling and testing procedures. The total quantity that may be waived for testing shall not exceed 100 cu yd (76 cu m) per contract.

If the Contractor's or Engineer's test result for any jobsite mixture test is not within the specification limits, all subsequent truck loads delivered shall be tested by the Contractor until the problem is corrected.

- 2/ If one mix design is being used for several construction items during a day's production, one testing frequency may be selected to include all items. The construction items shall have the same slump, air content, and water/cement ratio specifications. For self-consolidating concrete, the construction items shall have the same slump flow, visual stability index, J-Ring, L-Box, air content, and water/cement ratio specifications. The frequency selected shall equal or exceed the testing required for the construction item.

One sufficiently sized sample shall be taken to perform the required test(s). Random numbers shall be determined according to the Department's "Method for Obtaining Random Samples for Concrete". The Engineer will provide random sample locations.

- 3/ The temperature, slump, and air content tests shall be performed on the first truck load delivered, for each pour. For self consolidating concrete, the temperature, slump flow, visual stability index, J-Ring or L-Box, and air content tests shall be performed on the first truck load delivered, for each pour. Unless a random sample is required for the first truck load, testing the first truck load does not satisfy random sampling requirements.
- 4/ The slump random sample testing frequency shall be a minimum 1/day for a construction item which is slipformed.
- 5/ If a pump or conveyor is used for placement, a correction factor shall be established to allow for a loss of air content during transport. The first three truck loads delivered shall be tested, before and after transport by the pump or conveyor, to establish the correction factor. Once the correction is determined, it shall be re-checked after an additional 50 cu yd (40 cu m) is pumped, or an additional 100 cu yd (80 cu m) is conveyed. This shall continue throughout the pour. If the re-check indicates the correction factor has changed, a minimum of two truckloads is required to re-establish the correction factor. The correction factor shall also be re-established when significant changes in temperature, distance, pump or conveyor arrangement, and other factors have occurred. If the correction factor is >3.0 percent, the Contractor shall take corrective action to reduce the loss of air content during transport by the pump or conveyor. The Contractor shall record all air content test results, correction factors and corrected air contents. The corrected air content shall be reported on form BMPR MI654.
- 6/ If the Contractor's or Engineer's air content test result is within the specification limits, and 0.2 percent or closer to either limit, the next truck load delivered shall be tested by the Contractor. For example, if the specified air content range is 5.0 to 8.0 percent and the test result is 5.0, 5.1, 5.2, 7.8, 7.9 or 8.0 percent, the next truck shall be tested by the Contractor.
- 7/ The test of record for strength shall be the day indicated in Article 1020.04. For cement aggregate mixture II, a strength requirement is not specified and testing is not required. Additional strength testing to determine early falsework and form removal, early pavement or bridge opening to traffic, or to monitor strengths is at the discretion of the Contractor. Strength shall be defined as the average of at least two cylinder or two beam breaks for field tests.

- 8/ In addition to the strength test, a slump test, air content test, and temperature test shall be performed on the same sample. For self-consolidating concrete, a slump flow test, visual stability index test, J-Ring or L-Box test, air content test, and temperature test shall be performed on the same sample as the strength test. For mixtures pumped or conveyed, the Contractor shall sample according to Illinois Modified AASHTO T 141.
- 9/ The air content test will be required for each delivered truck load.
- 10/ For fabric formed concrete revetment mat, the slump test is not required and the flexural strength test is not applicable.
- 11/ The Contractor shall select the J-Ring or L-Box test for jobsite sampling and testing.
- 12/ In addition to the hardened visual stability index (HVSI) test, a slump flow test, visual stability index (VSI) test, J-Ring or L-Box test, air content test, and temperature test shall be performed on the same sample. The Contractor shall retain all hardened visual stability index cut cylinder specimens until the Engineer notifies the Contractor that the specimens may be discarded.
- 13/ The test of record for strength shall be the day indicated in Article 1019.04. In addition to the strength test, a flow test, air content test, and temperature test shall be performed on the same sample. The strength test may be waived by the Engineer if future removal of the material is not a concern.

SCHEDULE C

ENGINEER QUALITY ASSURANCE INDEPENDENT SAMPLE TESTING		
Location	Measured Property	Testing Frequency ^{1/}
Plant	Gradation of aggregates stored in stockpiles or bins, Slump and Air Content	As determined by the Engineer.
Jobsite	Slump, Air Content, Slump Flow, Visual Stability Index, J-Ring, L-Box, Hardened Visual Stability Index, Dynamic Segregation Index and Strength	As determined by the Engineer.
	Flow, Air Content, Strength (28-day), and Dynamic Cone Penetration for Controlled Low-Strength Material (CLSM)	As determined by the Engineer

ENGINEER QUALITY ASSURANCE SPLIT SAMPLE TESTING		
Location	Measured Property	Testing Frequency ^{1/}
Plant	Gradation of aggregates stored in stockpiles or bins ^{2/}	At the beginning of the project, the first test performed by the Contractor. Thereafter, a minimum of 10% of total tests required of the Contractor will be performed per aggregate gradation number and per plant.
	Slump and Air Content	As determined by the Engineer.
Jobsite	Slump ^{2/} , Air Content ^{2/ 3/} , Slump Flow ^{2/} , Visual Stability Index ^{2/} , J-Ring ^{2/} and L-box ^{2/}	At the beginning of the project, the first three tests performed by the Contractor. Thereafter, a minimum of 20% of total tests required of the Contractor will be performed per plant, which will include a minimum of one test per mix design.
	Hardened Visual Stability Index ^{2/}	As determined by the Engineer.
	Dynamic Segregation Index ^{2/}	As determined by the Engineer.
	Strength ^{2/}	At the beginning of the project, the first test performed by the Contractor. Thereafter, a minimum of 20% of total tests required of the Contractor will be performed per plant, which will include a minimum of one test per mix design.
	Flow, Air Content, and Strength (28-day) for Controlled Low-Strength Material (CLSM)	As determined by the Engineer.

- 1/ The Engineer will perform the testing throughout the period of quality control testing by the Contractor.
- 2/ The Engineer will witness and take immediate possession of or otherwise secure the Department's split sample obtained by the Contractor.
- 3/ Before transport by pump or conveyor, a minimum of 20 percent of total tests required of the Contractor will be performed per mix design and per plant. After transport by pump or conveyor, a minimum of 20 percent of total tests required of the Contractor will be performed per mix design and per plant.

SCHEDULE D

CONCRETE QUALITY CONTROL AND QUALITY ASSURANCE DOCUMENTS

- (a) Model Quality Control Plan for Concrete Production (*)
- (b) Qualifications and Duties of Concrete Quality Control Personnel (*)
- (c) Development of Gradation Bands on Incoming Aggregate at Mix Plants (*)
- (d) Required Sampling and Testing Equipment for Concrete (*)
- (e) Method for Obtaining Random Samples for Concrete (*)
- (f) Calibration of Concrete Testing Equipment (BMPR PCCQ01 through BMPR PCCQ09) (*)
- (g) Water/Cement Ratio Worksheet (BMPR PCCW01) (*)
- (h) Field/Lab Gradations (MI 504M) (*)
- (i) Concrete Air, Slump and Quantity (BMPR MI654) (*)
- (j) P.C. Concrete Strengths (BMPR MI655) (*)
- (k) Aggregate Technician Course or Mixture Aggregate Technician Course (*)
- (l) Portland Cement Concrete Tester Course (*)
- (m) Portland Cement Concrete Level I Technician Course - Manual of Instructions for Concrete Testing (*)
- (n) Portland Cement Concrete Level II Technician Course - Manual of Instructions for Concrete Proportioning (*)
- (o) Portland Cement Concrete Level III Technician Course - Manual of Instructions for Design of Concrete Mixtures (*)
- (p) Manual of Test Procedures for Materials

* Refer to Appendix C of the Manual of Test Procedures for Materials for more information."

RAILROAD PROTECTIVE LIABILITY INSURANCE (5 and 10) (BDE)

Effective: January 1, 2006

Description. Railroad Protective Liability and Property Damage Liability Insurance shall be carried according to Article 107.11 of the Standard Specifications, except the limits shall be a minimum of \$5,000,000 combined single limit per occurrence for bodily injury liability and property damage liability with an aggregate limit of \$10,000,000 over the life of the policy. A separate policy is required for each railroad unless otherwise noted.

NAMED INSURED & ADDRESS	NUMBER & SPEED OF PASSENGER TRAINS	NUMBER & SPEED OF FREIGHT TRAINS
BNSF RAILWAY COMPANY 80 - 44TH AVE. NE Minneapolis, MN 55421		60 @ 30 MPH
DOT/AAR No.: 004 656K RR Division: Illinois	RR Mile Post: 177.10 RR Sub-Division: Second	
For Freight/Passenger Information Contact: David Johnson For Insurance Information Contact: Rosa Martinez		Phone: 763-782-3495 Phone: 214-303-8519

DOT/AAR No.:	RR Mile Post:	
RR Division:	RR Sub-Division:	
For Freight/Passenger Information Contact:		Phone:
For Insurance Information Contact:		Phone:

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

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

The Contractor will be advised when the Department has received approval of the insurance from the railroad(s). Before any work begins on railroad right-of-way, the Contractor shall submit to the Engineer evidence that the required insurance has been approved by the railroad(s). The Contractor shall also provide the Engineer with the expiration date of each required policy.

Basis of Payment. Providing Railroad Protective Liability and Property Damage Liability Insurance will be paid for at the contract unit price per Lump Sum for RAILROAD PROTECTIVE LIABILITY INSURANCE.

80157

RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (BDE)

Effective: November 1, 2012

Revise: January 1, 2013

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 the FRAP will be incorporated.

Mixture FRAP will be used in:	Sieve Size that 100% of FRAP Shall Pass
IL-25.0	2 in. (50 mm)
IL-19.0	1 1/2 in. (40 mm)
IL-12.5	1 in. (25 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 "homogenous" 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) Conglomerate "D" Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP from Class I, HMA (High or Low ESAL), or "All Other" (as defined by Article 1030.04(a)(3)) mixtures. The coarse aggregate in this RAP may be crushed or round but shall be at least D quality. This RAP may have an inconsistent gradation and/or asphalt binder content. Conglomerate DQ RAP stockpiles shall not contain steel slag.
- (5) 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 approved 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 Illinois Department of Transportation 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 ≤ 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 tests 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	Conglomerate "D" Quality
1 in. (25 mm)		$\pm 5 \%$
1/2 in. (12.5 mm)	$\pm 8 \%$	$\pm 15 \%$
No. 4 (4.75 mm)	$\pm 6 \%$	$\pm 13 \%$
No. 8 (2.36 mm)	$\pm 5 \%$	
No. 16 (1.18 mm)		$\pm 15 \%$
No. 30 (600 μm)	$\pm 5 \%$	
No. 200 (75 μm)	$\pm 2.0 \%$	$\pm 4.0 \%$
Asphalt Binder	$\pm 0.4 \%$ ^{1/}	$\pm 0.5 \%$
G_{mm}	± 0.03	

1/ The tolerance for FRAP shall be $\pm 0.3 \%$.

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 Illinois Test Procedure, "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 homogenous, conglomerate, and conglomerate "D" quality stockpiles shall be set by the lowest quality of coarse aggregate in the RAP stockpile and are designated as follows.

- (1) RAP from Class I, Superpave/HMA (High ESAL), or (Low ESAL) IL-9.5L surface mixtures are designated as containing Class B quality coarse aggregate.
- (2) RAP from Superpave/HMA (Low ESAL) IL-19.0L binder mixture is designated as Class D quality coarse aggregate.
- (3) RAP from Class I, Superpave/HMA (High ESAL) binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate.
- (4) RAP from bituminous stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate.

- (b) FRAP. If the Engineer has documentation of the quality of the FRAP aggregate, the Contractor shall use the assigned quality provided by the Engineer.

If the quality is not known, the quality shall be determined as follows. Coarse and fine FRAP stockpiles containing plus #4 (4.75 mm) sieve coarse aggregate shall have a maximum tonnage of 5,000 tons (4,500 metric tons). The Contractor shall obtain a representative sample witnessed by the Engineer. The sample shall be a minimum of 50 lb (25 kg). The sample shall be extracted according to Illinois Modified AASHTO T 164 by a consultant prequalified by the Department for the specified testing. The consultant 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 BMPR Aggregate Lab for MicroDeval Testing, according to Illinois Modified AASHTO T 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 a 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, conglomerate, or conglomerate DQ.
- (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 N Design.

(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% 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 ^{1/, 2/}	RAP/RAS Maximum ABR %		
Ndesign	Binder/Leveling Binder	Surface	Polymer Modified
30	30	30	10
50	25	15	10
70	15	10	10
90	10	10	10
105	10	10	10

1/ For HMA "All Other" (shoulder and stabilized subbase) N-30, 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 PG64-22 to be reduced to a PG58-28). 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 PG64-22 to be reduced to a PG58-28).

(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 tables listed below for the given N design.

Level 1 - FRAP/RAS Maximum Asphalt Binder Replacement (ABR) Percentage

HMA Mixtures ^{1/, 2/}	Level 1 - FRAP/RAS Maximum ABR %		
Ndesign	Binder/Leveling Binder	Surface	Polymer Modified ^{3/, 4/}
30	35	35	10

50	30	25	10
70	25	20	10
90	20	15	10
105	10	10	10

- 1/ For HMA "All Other" (shoulder and stabilized subbase) N30, 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 PG64-22 to be reduced to a PG58-28). 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 PG64-22 to be reduced to a PG58-28).
- 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 20 percent.

Level 2 – FRAP/RAS Maximum Asphalt Binder Replacement (ABR) Percentage

HMA Mixtures <small>1/, 2/</small>	Level 2 – FRAP/RAS Maximum ABR %		
	Binder/Leveling Binder	Surface	Polymer Modified ^{3/} _{4/}
Ndesign			
30	40	40	10
50	40	30	10
70	30	20	10
90	30	20	10
105	30	15	10

- 1/ For HMA "All Other" (shoulder and stabilized subbase) N30, 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 PG64-22 to be reduced to a PG58-28). 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 PG64-22 to be reduced to a PG58-28).

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 above detailed requirements.

FRAP/RAS mix designs exceeding the Level 1 FRAP/RAS Maximum ABR percentages shall be tested prior to submittal for verification, according to Illinois Modified AASHTO T 324 (Hamburg Wheel) and shall meet the following requirements.

Asphalt Binder Grade	# Repetitions	Max. Rut Depth in. (mm)
PG76-XX	20,000	1/2 (12.5)
PG70-XX	15,000	1/2 (12.5)
PG64-XX	7,500	1/2 (12.5)
PG58-XX	5,000	1/2 (12.5)

- (a) RAP/FRAP and/or RAS. RAP/FRAP and/or RAS designs shall be submitted for volumetric verification. If additional RAP/FRAP 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 stockpile and HMA mix design, and meets all of the requirements herein, the additional RAP/FRAP 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 2.500 shall be used for mix design purposes.

1031.08 HMA Production. Mixture production where the FRAP/RAS ABR percentage exceeds the Level 1 limits, shall be sampled within the first 500 tons (450 metric tons) on the first day of production with a split reserved for the Department. The mix sample shall be tested according to the Illinois Modified AASHTO T 324 and shall meet the requirements specified herein. Mix production shall not exceed 1500 tons (1350 metric tons) or one day's production, whichever comes first, until the testing is completed and the mixture is found to be in conformance. The requirement to cease mix production may be waived if the plant produced mixture conformance is demonstrated prior to start of mix production for a State contract.

- (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 ± 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.

When producing HMA containing RAS, a positive dust control system shall be utilized.

- (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).
- f. RAP/FRAP/RAS weight to the nearest pound (kilogram).
- g. Virgin asphalt binder weight to the nearest pound (kilogram).
- h. 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 Shoulders. 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 to construct aggregate surface course and aggregate shoulders shall be according to the current Bureau of Materials and Physical Research's 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

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (BDE)

Effective: January 1, 2012

Revised: November 2, 2012

Revise Article 669.01 of the Standard Specifications to read:

“669.01 Description. This work shall consist of the transportation and proper disposal of contaminated soil and water. This work shall also consist of the removal, transportation, and proper disposal of underground storage tanks (UST), their content and associated underground piping to the point where the piping is above the ground, including determining the content types and estimated quantities.”

Revise Article 669.08 of the Standard Specifications to read:

“669.08 Contaminated Soil and/or Groundwater Monitoring. The Contractor shall hire a qualified environmental firm to monitor the area containing the regulated substances. The affected area shall be monitored with a photoionization detector (PID) utilizing a lamp of 10.6eV or greater or a flame ionization detector (FID). Any field screen reading on the PID or FID in excess of background levels indicates the potential presence of contaminated material requiring handling as a non-special waste, special waste, or hazardous waste. No excavated soils can be taken to a clean construction and demolition debris (CCDD) facility or an uncontaminated soil fill operation with detectable PID or FID meter readings that are above background. The PID or FID meter shall be calibrated on-site and background level readings taken and recorded daily. All testing shall be done by a qualified engineer/technician. Such testing and monitoring shall be included in the work. The Contractor shall identify the exact limits of removal of non-special waste, special waste, or hazardous waste. All limits shall be approved by the Engineer prior to excavation. The Contractor shall take all necessary precautions.

Based upon the land use history of the subject property and/or PID or FID readings indicating contamination, a soil or groundwater sample shall be taken from the same location and submitted to an approved laboratory. Soil or groundwater samples shall be analyzed for the contaminants of concern, including pH, based on the property's land use history or the parameters listed in the maximum allowable concentration (MAC) for chemical constituents in uncontaminated soil established pursuant to Subpart F of 35 Illinois Administrative Code 1100.605. The analytical results shall serve to document the level of soil contamination. Soil and groundwater samples may be required at the discretion of the Engineer to verify the level of soil and groundwater contamination.

Samples shall be grab samples (not combined with other locations). The samples shall be taken with decontaminated or disposable instruments. The samples shall be placed in sealed containers and transported in an insulated container to the laboratory. The container shall maintain a temperature of 39 °F (4 °C). All samples shall be clearly labeled. The labels shall indicate the sample number, date sampled, location and elevation, and any other observations.

The laboratory shall use analytical methods which are able to meet the lowest appropriate practical quantitation limits (PQL) or estimated quantitation limit (EQL) specified in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods", EPA Publication No. SW-846 and "Methods for the Determination of Organic Compounds in Drinking Water", EPA, EMSL, EPA-600/4-88/039. For parameters where the specified cleanup objective is below the acceptable detection limit (ADL), the ADL shall serve as the cleanup objective. For other parameters the ADL shall be equal to or below the specified cleanup objective."

Replace the first two paragraphs of Article 669.09 of the Standard Specifications with the following:

"669.09 Contaminated Soil and/or Groundwater Management and Disposal. The management and disposal of contaminated soil and/or groundwater shall be according to the following:

- (a) Soil Analytical Results Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels exceed the most stringent maximum allowable concentration (MAC) for chemical constituents in uncontaminated soil established pursuant to Subpart F of 35 Illinois Administrative Code 1100.605, the soil shall be managed as follows:
 - (1) When analytical results indicate inorganic chemical constituents exceed the most stringent MAC but they are still considered within area background levels by the Engineer, the excavated soil can be utilized within the construction limits as fill, when suitable. Such soil excavated for storm sewers can be placed back into the excavated trench as backfill, when suitable, unless trench backfill is specified. If the soils cannot be utilized within the construction limits, they shall be managed and disposed of off-site as a non-special waste, special waste, or hazardous waste as applicable.
 - (2) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for a Metropolitan Statistical Area (MSA) County, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an uncontaminated soil fill operation within an MSA County provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
 - (3) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, or the MAC within the Chicago corporate limits, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an uncontaminated soil fill operation within an MSA County excluding Chicago or within the Chicago corporate limits provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.

- (4) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an uncontaminated soil fill operation within an MSA County excluding Chicago provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
- (5) When the Engineer determines soil cannot be managed according to Articles 669.09(a)(1) through (a)(4) above, the soil shall be managed and disposed of off-site as a non-special waste, special waste, or hazardous waste as applicable.
- (b) Soil Analytical Results Do Not Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels do not exceed the most stringent MAC but the pH of the soil is less than 6.25 or greater than 9.0, the excavated soil can be utilized within the construction limits or managed and disposed of off-site as "uncontaminated soil" according to Article 202.03. However the excavated soil cannot be taken to a CCDD facility or an uncontaminated soil fill operation.
- (c) Groundwater. When groundwater analytical results indicate the detected levels are above Appendix B, Table E of 35 Illinois Administrative Code 742, the most stringent Tier 1 Groundwater Remediation Objectives for Groundwater Component of the Groundwater Ingestion Route for Class 1 groundwater, the groundwater shall be managed off-site as a special waste.

All groundwater encountered within lateral trenches may be managed within the trench and allowed to infiltrate back into the ground. If the groundwater cannot be managed within the trench it must be removed as a special or hazardous waste. The Contractor is prohibited from managing groundwater within the trench by discharging it through any existing or new storm sewer. The Contractor shall install backfill plugs within the area of groundwater contamination.

One backfill plug shall be placed down gradient to the area of groundwater contamination. Backfill plugs shall be installed at intervals not to exceed 50 ft (15 m). Backfill plugs are to be 4 ft (1.2 m) long, measured parallel to the trench, full trench width and depth. Backfill plugs shall not have any fine aggregate bedding or backfill, but shall be entirely cohesive soil or any class of concrete. The Contractor shall provide test data that the material has a permeability of less than 10^{-7} cm/sec according to ASTM D 5084, Method A or per another test method approved by the Engineer."

Revise Article 669.14 of the Standard Specifications to read:

"669.14 Final Environmental Construction Report. At the end of the project, the Contractor will prepare and submit three copies of the Environmental Construction Report on the activities conducted during the life of the project, one copy shall be submitted to the Resident Engineer, one copy shall be submitted to the District's Environmental Studies Unit, and one copy shall be submitted with an electronic copy in Adode.pdf format to the Geologic

and Waste Assessment Unit, Bureau of Design and Environment, IDOT, 2300 South Dirksen Parkway, Springfield, Illinois 62764. The technical report shall include all pertinent information regarding the project including, but not limited to:

- (a) Measures taken to identify, monitor, handle, and dispose of soil or groundwater containing regulated substances, to prevent further migration of regulated substances, and to protect workers,
- (b) Cost of identifying, monitoring, handling, and disposing of soil or groundwater containing regulated substances, the cost of preventing further migration of regulated substances, and the cost for worker protection from the regulated substances. All cost should be in the format of the contract pay items listed in the contract plans (identified by the preliminary environmental site investigation (PESA) site number),
- (c) Plan sheets showing the areas containing the regulated substances,
- (d) Field sampling and testing results used to identify the nature and extent of the regulated substances,
- (e) Waste manifests (identified by the preliminary environmental site investigation (PESA) site number) for special or hazardous waste disposal, and
- (f) Landfill tickets (identified by the preliminary environmental site investigation (PESA) site number) for non-special waste disposal."

Revise the second paragraph of Article 669.16 of the Standard Specifications to read:

"The transportation and disposal of soil and other materials from an excavation determined to be contaminated will be paid for at the contract unit price per cubic yard (cubic meter) for NON-SPECIAL WASTE DISPOSAL, SPECIAL WASTE DISPOSAL, or HAZARDOUS WASTE DISPOSAL."

80283

REMOVAL AND DISPOSAL OF SURPLUS MATERIALS (BDE)

Effective: November 2, 2012

Revise the first four paragraphs of Article 202.03 of the Standard Specifications to read:

"202.03 Removal and Disposal of Surplus, Unstable, Unsuitable, and Organic Materials. Suitable excavated materials shall not be wasted without permission of the Engineer. The Contractor shall dispose of all surplus, unstable, unsuitable, and organic materials, in such a manner that public or private property will not be damaged or endangered.

Suitable earth, stones and boulders naturally occurring within the right-of-way may be placed in fills or embankments in lifts and compacted according to Section 205. Broken concrete without protruding metal bars, bricks, rock, stone, reclaimed asphalt pavement with no expansive aggregate, or uncontaminated dirt and sand generated from construction or demolition activities may be used in embankment or in fill. If used in fills or embankments, these materials shall be placed and compacted to the satisfaction of the Engineer; shall be buried under a minimum of 2 ft (600 mm) of earth cover (except when the materials include only uncontaminated dirt); and shall not create an unsightly appearance or detract from the natural topographic features of an area. Broken concrete without protruding metal bars, bricks, rock, or stone may be used as riprap as approved by the Engineer. If the materials are used for fill in locations within the right-of-way but outside project construction limits, the Contractor must specify to the Engineer, in writing, how the landscape restoration of the fill areas will be accomplished. Placement of fill in such areas shall not commence until the Contractor's landscape restoration plan is approved by the Engineer.

Aside from the materials listed above, all other construction and demolition debris or waste shall be disposed of in a licensed landfill, recycled, reused, or otherwise disposed of as allowed by State or Federal laws and regulations. When the Contractor chooses to dispose of uncontaminated soil at a clean construction and demolition debris (CCDD) facility or at an uncontaminated soil fill operation, it shall be the Contractor's responsibility to have the pH of the material tested to ensure the value is between 6.25 and 9.0, inclusive. A copy of the pH test results shall be provided to the Engineer.

A permit shall be obtained from IEPA and made available to the Engineer prior to open burning of organic materials (i.e., plant refuse resulting from pruning or removal of trees or shrubs) or other construction or demolition debris. Organic materials originating within the right-of-way limits may be chipped or shredded and placed as mulch around landscape plantings within the right-of-way when approved by the Engineer. Chipped or shredded material to be placed as mulch shall not exceed a depth of 6 in. (150 mm)."

80319

STEEL COST ADJUSTMENT (BDE) (RETURN FORM WITH BID)

Effective: April 2, 2004

Revised: April 1, 2009

Description. Steel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in steel prices when optioned by the Contractor. The bidder shall indicate on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form or failure to indicate contract number, company name, and sign and date the form shall make this contract exempt of steel cost adjustments for all items of steel. Failure to indicate "Yes" for any item of work will make that item of steel exempt from steel cost adjustment.

Types of Steel Products. An adjustment will be made for fluctuations in the cost of steel used in the manufacture of the following items:

Metal Piling (excluding temporary sheet piling)
Structural Steel
Reinforcing Steel

Other steel materials such as dowel bars, tie bars, mesh reinforcement, guardrail, steel traffic signal and light poles, towers and mast arms, metal railings (excluding wire fence), and frames and grates will be subject to a steel cost adjustment when the pay items they are used in has a contract value of \$10,000 or greater.

Documentation. Sufficient documentation shall be furnished to the Engineer to verify the following:

- (a) The dates and quantity of steel, in lb (kg), shipped from the mill to the fabricator.
- (b) The quantity of steel, in lb (kg), incorporated into the various items of work covered by this special provision. The Department reserves the right to verify submitted quantities.

Method of Adjustment. Steel cost adjustments will be computed as follows:

$$SCA = Q \times D$$

Where: SCA = steel cost adjustment, in dollars
Q = quantity of steel incorporated into the work, in lb (kg)
D = price factor, in dollars per lb (kg)

$$D = MPI_M - MPI_L$$

Where: MPI_M = The Materials Cost Index for steel as published by the Engineering News-Record for the month the steel is shipped from the mill. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

$MPI_L =$ The Materials Cost Index for steel as published by the Engineering News-Record for the month prior to the letting. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

The unit weights (masses) of steel that will be used to calculate the steel cost adjustment for the various items are shown in the attached table.

No steel cost adjustment will be made for any products manufactured from steel having a mill shipping date prior to the letting date.

If the Contractor fails to provide the required documentation, the method of adjustment will be calculated as described above; however, the MPI_M will be based on the date the steel arrives at the job site. In this case, an adjustment will only be made when there is a decrease in steel costs.

Basis of Payment. Steel cost adjustments may be positive or negative but will only be made when there is a difference between the MPI_L and MPI_M in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(MPI_L - MPI_M) \div MPI_L\} \times 100$$

Steel cost adjustments will be calculated by the Engineer and will be paid or deducted when all other contract requirements for the items of work are satisfied. Adjustments will only be made for fluctuations in the cost of the steel as described herein. No adjustment will be made for changes in the cost of manufacturing, fabrication, shipping, storage, etc.

The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Attachment

Item	Unit Mass (Weight)
Metal Piling (excluding temporary sheet piling)	
Furnishing Metal Pile Shells 12 in. (305 mm), 0.179 in. (3.80 mm) wall thickness)	23 lb/ft (34 kg/m)
Furnishing Metal Pile Shells 12 in. (305 mm), 0.250 in. (6.35 mm) wall thickness)	32 lb/ft (48 kg/m)
Furnishing Metal Pile Shells 14 in. (356 mm), 0.250 in. (6.35 mm) wall thickness)	37 lb/ft (55 kg/m)
Other piling	See plans
Structural Steel	See plans for weights (masses)
Reinforcing Steel	See plans for weights (masses)
Dowel Bars and Tie Bars	6 lb (3 kg) each
Mesh Reinforcement	63 lb/100 sq ft (310 kg/sq m)
Guardrail	
Steel Plate Beam Guardrail, Type A w/steel posts	20 lb/ft (30 kg/m)
Steel Plate Beam Guardrail, Type B w/steel posts	30 lb/ft (45 kg/m)
Steel Plate Beam Guardrail, Types A and B w/wood posts	8 lb/ft (12 kg/m)
Steel Plate Beam Guardrail, Type 2	305 lb (140 kg) each
Steel Plate Beam Guardrail, Type 6	1260 lb (570 kg) each
Traffic Barrier Terminal, Type 1 Special (Tangent)	730 lb (330 kg) each
Traffic Barrier Terminal, Type 1 Special (Flared)	410 lb (185 kg) each
Steel Traffic Signal and Light Poles, Towers and Mast Arms	
Traffic Signal Post	11 lb/ft (16 kg/m)
Light Pole, Tenon Mount and Twin Mount, 30 - 40 ft (9 - 12 m)	14 lb/ft (21 kg/m)
Light Pole, Tenon Mount and Twin Mount, 45 - 55 ft (13.5 - 16.5 m)	21 lb/ft (31 kg/m)
Light Pole w/Mast Arm, 30 - 50 ft (9 - 15.2 m)	13 lb/ft (19 kg/m)
Light Pole w/Mast Arm, 55 - 60 ft (16.5 - 18 m)	19 lb/ft (28 kg/m)
Light Tower w/Luminaire Mount, 80 - 110 ft (24 - 33.5 m)	31 lb/ft (46 kg/m)
Light Tower w/Luminaire Mount, 120 - 140 ft (36.5 - 42.5 m)	65 lb/ft (97 kg/m)
Light Tower w/Luminaire Mount, 150 - 160 ft (45.5 - 48.5 m)	80 lb/ft (119 kg/m)
Metal Railings (excluding wire fence)	
Steel Railing, Type SM	64 lb/ft (95 kg/m)
Steel Railing, Type S-1	39 lb/ft (58 kg/m)
Steel Railing, Type T-1	53 lb/ft (79 kg/m)
Steel Bridge Rail	52 lb/ft (77 kg/m)
Frames and Grates	
Frame	250 lb (115 kg)
Lids and Grates	150 lb (70 kg)

Return With Bid

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**OPTION FOR
STEEL COST ADJUSTMENT**

The bidder shall submit this completed form with his/her bid. Failure to submit the form or properly complete contract number, company name, and sign and date the form shall make this contract exempt of steel cost adjustments for all items of steel. Failure to indicate "Yes" for any item of work will make that item of steel exempt from steel cost adjustment. After award, this form, when submitted shall become part of the contract.

Contract No.: _____

Company Name: _____

Contractor's Option:

Is your company opting to include this special provision as part of the contract plans for the following items of work?

- | | | |
|--|-----|--------------------------|
| Metal Piling | Yes | <input type="checkbox"/> |
| Structural Steel | Yes | <input type="checkbox"/> |
| Reinforcing Steel | Yes | <input type="checkbox"/> |
| Dowel Bars, Tie Bars and Mesh Reinforcement | Yes | <input type="checkbox"/> |
| Guardrail | Yes | <input type="checkbox"/> |
| Steel Traffic Signal and Light Poles, Towers and Mast Arms | Yes | <input type="checkbox"/> |
| Metal Railings (excluding wire fence) | Yes | <input type="checkbox"/> |
| Frames and Grates | Yes | <input type="checkbox"/> |

Signature: _____ **Date:** _____

80127

SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)

Effective: April 2, 2005

Revised: April 1, 2011

To account for the preparatory work and operations necessary for the movement of subcontractor personnel, equipment, supplies, and incidentals to the project site and for all other work or operations that must be performed or costs incurred when beginning work approved for subcontracting according to Article 108.01 of the Standard Specifications, the Contractor shall make a mobilization payment to each subcontractor.

This mobilization payment shall be made at least 14 days prior to the subcontractor starting work. The amount paid shall be equal to 3 percent of the amount of the subcontract reported on form BC 260A submitted for the approval of the subcontractor's work.

The mobilization payment to the subcontractor is an advance payment of the reported amount of the subcontract and is not a payment in addition to the amount of the subcontract; therefore, the amount of the advance payment will be deducted from future progress payments.

This provision shall be incorporated directly or by reference into each subcontract approved by the Department.

80143

TEMPORARY EROSION AND SEDIMENT CONTROL (BDE)

Effective: January 1, 2012

Revise the first paragraph of Article 280.04(f) of the Standard Specifications to read:

- “(f) Temporary Erosion Control Seeding. This system consists of seeding all erodible/bare areas to minimize the amount of exposed surface area. Seed bed preparation will not be required if the surface of the soil is uniformly smooth and in a loose condition. Light disking shall be done if the soil is hard packed or caked. Erosion rills greater than 1 in. (25 mm) in depth shall be filled and area blended with the surrounding soil. Fertilizer nutrients will not be required.”

Delete the last sentence of Article 280.08(e) of the Standard Specifications.

80286

TRAFFIC CONTROL DEFICIENCY DEDUCTION (BDE)

Effective: August 1, 2011

Revise the third sentence of the third paragraph of Article 105.03(b) of the Standard Specifications to read:

“The daily monetary deduction will be \$2,500.”

80273

TRAINING SPECIAL PROVISIONS (BDE) This Training Special Provision supersedes Section 7b of the Special Provision entitled "Specific Equal Employment Opportunity Responsibilities," and is in implementation of 23 U.S.C. 140(a).

As part of the contractor's equal employment opportunity affirmative action program, training shall be provided as follows:

The contractor shall provide on-the-job training aimed at developing full journeyman in the type of trade or job classification involved. The number of trainees to be trained under this contract will be 1. In the event the contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this Training Special Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the contractor's needs and the availability of journeymen in the various classifications within the reasonable area of recruitment. Prior to commencing construction, the contractor shall submit to the Illinois Department of Transportation for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the contractor shall specify the starting time for training in each of the classifications. The contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g. by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent such persons are available within a reasonable area of recruitment. The contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a journeyman. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used the contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the contractor and approved by the Illinois Department of Transportation and the Federal Highway Administration. The Illinois Department of Transportation and the Federal Highway Administration shall approve a program, if it is reasonably calculated to meet the equal employment opportunity obligations of the contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved by not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the Illinois Department of Transportation and the Federal Highway Administration. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the contractor will be reimbursed 80 cents per hour of training given an employee on this contract in accordance with an approved training program. As approved by the Engineer, reimbursement will be made for training of persons in excess of the number specified herein. This reimbursement will be made even though the contractor receives additional training program funds from other sources, provided such other source does not specifically prohibit the contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the contractor where he does one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the offsite training period.

No payment shall be made to the contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the contractor and evidences a lack of good faith on the part of the contractor in meeting the requirement of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program.

It is not required that all trainees be on board for the entire length of the contract. A contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The contractor shall furnish the trainee a copy of the program he will follow in providing the training. The contractor shall provide each trainee with a certification showing the type and length of training satisfactorily complete.

The contractor will provide for the maintenance of records and furnish periodic reports documenting his performance under this Training Special Provision.

METHOD OF MEASUREMENT The unit of measurement is in hours.

BASIS OF PAYMENT This work will be paid for at the contract unit price of 80 cents per hour for TRAINEES. The estimated total number of hours, unit price and total price have been included in the schedule of prices.

20338

UTILITY COORDINATION AND CONFLICTS (BDE)

Effective: April 1, 2011

Revised: January 1, 2012

Revise Article 105.07 of the Standard Specifications to read:

“105.07 Cooperation with Utilities. The Department reserves the right at any time to allow work by utilities on or near the work covered by the contract. The Contractor shall conduct his/her work so as not to interfere with or hinder the progress or completion of the work being performed by utilities. The Contractor shall also arrange the work and shall place and dispose of the materials being used so as not to interfere with the operations of utility work in the area.

The Contractor shall cooperate with the owners of utilities in their removal and rearrangement operations so work may progress in a reasonable manner, duplication or rearrangement of work may be reduced to a minimum, and services rendered by those parties will not be unnecessarily interrupted.

The Contractor shall coordinate with any planned utility adjustment or new installation and the Contractor shall take all precautions to prevent disturbance or damage to utility facilities. Any failure on the part of the utility owner, or their representative, to proceed with any planned utility adjustment or new installation shall be reported promptly by the Contractor to the Engineer.”

Revise the first sentence of the last paragraph of Article 107.19 of the Standard Specifications to read:

“When the Contractor encounters unexpected regulated substances due to the presence of utilities in unanticipated locations, the provisions of Article 107.40 shall apply; otherwise, if the Engineer does not direct a resumption of operations, the provisions of Article 108.07 shall apply.”

Revise Article 107.31 of the Standard Specification to read:

“107.31 Reserved.”

Add the following four Articles to Section 107 of the Standard Specifications:

“107.37 Locations of Utilities within the Project Limits. All known utilities existing within the limits of construction are either indicated on the plans or visible above ground. For the purpose of this Article, the limits of proposed construction are defined as follows:

(a) Limits of Proposed Construction for Utilities Paralleling the Roadway.

- (1) The horizontal limits shall be a vertical plane, outside of, parallel to, and 2 ft (600 mm) distant at right angles from the plan or revised slope limits.

In cases where the limits of excavation for structures are not shown on the plans, the horizontal limits shall be a vertical plane 4 ft (1.2 m) outside the edges of structure footings or the structure where no footings are required.

- (2) The upper vertical limits shall be the regulations governing the roadbed clearance for the specific utility involved.
 - (3) The lower vertical limits shall be either the top of the utility at the depth below the proposed grade as prescribed by the governing agency or the limits of excavation, whichever is less.
- (b) Limits of Proposed Construction for Utilities Crossing the Roadway in a Generally Transverse Direction.
- (1) Utilities crossing excavations for structures that are normally made by trenching such as sewers, underdrains, etc. and all minor structures such as manholes, inlets, foundations for signs, foundations for traffic signals, etc., the limits shall be the space to be occupied by the proposed permanent construction, unless otherwise required by the regulations governing the specific utility involved.
 - (2) For utilities crossing the proposed site of major structures such as bridges, sign trusses, etc., the limits shall be as defined above for utilities extending in the same general direction as the roadway.

It is understood and agreed that the Contractor has considered in the bid all of the permanent and temporary utilities in their present and/or adjusted positions as indicated in the contract. It is further understood the actual location of the utilities may be located anywhere within the tolerances provided in 220 ILCS 50/2.8 or Administrative Code Title 92 Part 530.40(c), and the proximity of some utilities to construction may require extraordinary measures by the Contractor to protect those utilities.

No additional compensation will be allowed for any delays, inconveniences, or damages sustained by the Contractor due to the presence of or any claimed interference from known utility facilities or any adjustment of them, except as specifically provided in the contract.

107.38 Adjustments of Utilities within the Project Limits. The adjustment of utilities consists of the relocation, removal, replacement, rearrangements, reconstruction, improvement, disconnection, connection, shifting, new installation, or altering of an existing utility facility in any manner.

Utilities which are to be adjusted shall be adjusted by the utility owner or the owner's representative or by the Contractor as a contract item. Generally, arrangements for adjusting known utilities will be made by the Department prior to project construction; however, utilities will not necessarily be adjusted in advance of project construction and, in some cases, utilities will not be removed from the proposed construction limits as described in Article 107.37. When

utility adjustments must be performed in conjunction with construction, the utility adjustment work will be indicated in the contract.

The Contractor may make arrangements for adjustment of utilities indicated in the contract, but not scheduled by the Department for adjustment, provided the Contractor furnishes the Department with a signed agreement with the utility owner covering the adjustments to be made. The cost of any such adjustments shall be the responsibility of the Contractor.

107.39 Contractor's Responsibility for Locating and Protecting Utility Property and Services. At points where the Contractor's operations are adjacent to properties or facilities of utility companies, or are adjacent to other property, damage to which might result in considerable expense, loss, or inconvenience, work shall not be commenced until all arrangements necessary for the protection thereof have been made.

Within the State of Illinois, a State-Wide One Call Notice System has been established for notifying utilities. Outside the city limits of the City of Chicago, the system is known as the Joint Utility Locating Information for Excavators (JULIE) System. Within the city limits of the City of Chicago the system is known as DIGGER. All utility companies and municipalities which have buried utility facilities in the State of Illinois are a part of this system.

The Contractor shall call JULIE (800-892-0123) or DIGGER (312-744-7000), a minimum of 48 hours in advance of work being done in the area, and they will notify all member utility companies involved their respective utility should be located.

For utilities which are not members of JULIE or DIGGER, the Contractor shall contact the owners directly. The plan general notes will indicate which utilities are not members of JULIE or DIGGER.

The following table indicates the color of markings required of the State-Wide One Call Notification System.

Utility Service	Color
Electric Power, Distribution and Transmission	Safety Red
Municipal Electric Systems	Safety Red
Gas Distribution and Transmission	High Visibility Safety Yellow
Oil Distribution and Transmission	High Visibility Safety Yellow
Telephone and Telegraph System	Safety Alert Orange
Community Antenna Television Systems	Safety Alert Orange
Water Systems	Safety Precaution Blue
Sewer Systems	Safety Green
Non-Potable Water and Slurry Lines	Safety Purple
Temporary Survey	Safety Pink
Proposed Excavation	Safety White (Black when snow is on the ground)

The State-Wide One Call Notification System will provide for horizontal locations of utilities. When it is determined that the vertical location of the utility is necessary to facilitate construction, the Engineer may make the request for location from the utility after receipt of notice from the Contractor. If the utility owner does not field locate their facilities to the satisfaction of the Engineer, the Engineer will authorize the Contractor in writing to proceed to locate the facilities in the most economical and reasonable manner, subject to the approval of the Engineer, and be paid according to Article 109.04.

The Contractor shall be responsible for maintaining the excavations or markers provided by the utility owners.

The Contractor shall take all necessary precautions for the protection of the utility facilities. The Contractor shall be responsible for any damage or destruction of utility facilities resulting from neglect, misconduct, or omission in the Contractor's manner or method of execution or nonexecution of the work, or caused by defective work or the use of unsatisfactory materials. Whenever any damage or destruction of a utility facility occurs as a result of work performed by the Contractor, the utility company will be immediately notified. The utility company will make arrangements to restore such facility to a condition equal to that existing before any such damage or destruction was done.

In the event of interruption of utility services as a result of accidental breakage or as a result of being exposed or unsupported, the Contractor shall promptly notify the proper authority and shall cooperate with the said authority in the restoration of service. If water service is interrupted, repair work shall be continuous until the service is restored. No work shall be undertaken around fire hydrants until provisions for continued service have been approved by the local fire authority.

107.40 Conflicts with Utilities. Except as provided hereinafter, the discovery of a utility in an unanticipated location will be evaluated according to Article 104.03. It is understood and agreed that the Contractor has considered in the bid all facilities not meeting the definition of a utility in an unanticipated location and no additional compensation will be allowed for any delays, inconveniences, or damages sustained by the Contractor due to the presence of or any claimed interference from such facilities.

When the Contractor discovers a utility in an unanticipated location, the Contractor shall not interfere with said utility, shall take proper precautions to prevent damage or interruption of the utility, and shall promptly notify the Engineer of the nature and location of said utility.

(a) Definition. A utility in an unanticipated location is defined as an active or inactive utility, which is either:

- (1) Located underground and (a) not shown in any way in any location on the contract documents; (b) not identified in writing by the Department to the Contractor prior to the letting; or (c) not located relative to the location shown in the contract within the tolerances provided in 220 ILCS 50/2.8 or Administrative Code Title 92 Part 530.40(c); or

(2) Located above ground or underground and not relocated as provided in the contract.

Service connections shall not be considered to be utilities in unanticipated locations.

(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 applicable to the utility 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 Contractor's operation is completely stopped by a utility in an unanticipated location for more than two hours, but not to exceed three weeks.

(2) Major Delay. A major delay occurs when the Contractor's operation is completely stopped by a utility in an unanticipated location for more than three weeks.

(3) Reduced Rate of Production Delay. A reduced rate of production delay occurs when the contractor's rate of production decreases by more than 25 percent and lasts longer than seven days.

(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 three weeks plus the cost of move-out to either the Contractor's yard or another job, whichever is less. Rental equipment may be paid for longer than three 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 days. Determination of compensation will be in accordance with Article 104.02, except labor and material additives will not be permitted.

Whether covered by (1), (2) or (3) above, additional traffic control required as a result of the operation(s) delayed will be paid for according to Article 109.04 for the total length of the delay.

If the delay is clearly shown to have caused work, which would have otherwise been completed, to be done after material or labor costs have increased, such increases may be paid. Payment for materials will be limited to increased cost substantiated by documentation furnished by the Contractor. Payment for increased labor rates will include those items in Article 109.04(b)(1) and (2), except the 35 percent and ten percent additives will not be permitted. On a working day contract, a delay occurring between November 30 and May 1, when work has not started, will not be considered as eligible for payment of measured labor and material costs.

Project overhead (not including interest) will be allowed when all progress on the contract has been delayed, and will be calculated as 15 percent of the delay claim.

(d) Other Obligations of Contractor. Upon payment of a claim 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."

80270

WEEKLY DBE TRUCKING REPORTS (BDE)

Effective: June 2, 2012

The Contractor shall provide a weekly report of Disadvantaged Business Enterprise (DBE) trucks hired by the Contractor or subcontractors (i.e. not owned by the Contractor or subcontractors) that are used on the jobsite; or used for the delivery and/or removal of equipment/material to and from the jobsite. The jobsite shall also include offsite locations, such as plant sites or storage sites, when those locations are used solely for this contract.

The report shall be submitted on the form provided by the Department within ten business days following the reporting period. The reporting period shall be Monday through Sunday for each week reportable trucking activities occur. The report shall be submitted to the Engineer and a copy shall be provided to the district EEO Officer.

Any costs associated with providing weekly DBE trucking reports shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed.

80302

DRAINAGE SYSTEM

Effective : June 10, 1994

Revised: January 1, 2007

Description. This work shall consist of furnishing and installing a bridge drainage system as shown on the plans, including all piping, fittings, support brackets, inserts, bolts, and splash blocks when specified.

Material. The pipe and fittings shall be reinforced fiberglass according to ASTM D 2996 RTRP with a 30,000 psi (207 MPa) minimum short-time rupture strength hoop tensile stress. The reinforced fiberglass shall also have an apparent stiffness factor at 5 percent deflection exceeding 200 cu in.-lbf/sq. in. (22.6 cu mm-kPa) and a minimum wall thickness of 0.10 in. (2.54 mm). All pipe supports and associated hardware shall be hot dip galvanized according to AASHTO M 232 (M 232M). The fiberglass pipe and fittings furnished shall be pigmented through out, or have a resin-rich pigmented exterior coat, specifically designed for overcoating fiberglass, as recommended by the manufacturer. The color shall be as specified by the Engineer. The resin in either case shall have an ultraviolet absorber designed to prevent ultraviolet degradation. The supplier shall certify the material supplied meets or exceeds these requirements.

Design. The drainage system shall be designed as an open system with allowances for the differential expansion and contraction expected between the superstructure and the substructure to which the drainage system is attached.

Installation. All connections of pipes and fittings shown on the plans to facilitate future removal for maintenance cleanout or flushing shall be made with a threaded, gasketed coupler or a bolted gasketed flange system. Adhesive bonded joints will be permitted for runs of pipe between such connections. The end run connection shall feature a minimum nominal 6 in. (150 mm) female threaded fiberglass outlet. Straight runs may utilize a 45 degree reducing saddle bonded to the pipe. The female outlet shall be filled with a male threaded PVC plug.

Runs of pipe shall be supported at spacings not exceeding those recommended by the manufacturer of the pipe. Supports that have point contact or narrow supporting areas shall be avoided. Standard slings, clamps, clevis hangers and shoe supports designed for use with steel pipe may be used. A minimum strap width for hangers shall be 1 1/2 in. (40 mm) for all pipe under 12 in. (300 mm) in diameter and 2 in. (50 mm) for diameters 12 in. (300 mm) or greater. Straps shall have 120 degrees of contact with the pipe. Pipes supported on less than 120 degrees of contact shall have a split fiberglass pipe protective sleeve bonded in place with adhesive.

All reinforced fiberglass pipe, fittings, and expansion joints shall be handled and installed according to guidelines and procedures recommended by the manufacturer or supplier of the material.

Basis of Payment. This work will be paid for at the contract lump sum price for DRAINAGE SYSTEM.

MECHANICALLY STABILIZED EARTH RETAINING WALLS

Effective: February 3, 1999

Revised: February 6, 2013

Description. This work shall consist of preparing the design, furnishing the materials, and constructing the mechanically stabilized earth (MSE) retaining wall to the lines, grades and dimensions shown in the contract plans and as directed by the Engineer.

General. The MSE wall consists of a concrete leveling pad, precast concrete face panels, a soil reinforcing system, select fill and concrete coping (when specified). The soil reinforcement shall have sufficient strength, quantity, and pullout resistance, beyond the failure surface within the select fill, as required by design. The material, fabrication, and construction shall comply with this Special Provision and the requirements specified by the supplier of the wall system selected by the Contractor for use on the project.

The MSE retaining wall shall be one of the following pre-approved wall systems:

Company Name: Wall System

Earth Tec International, LLC: EarthTrac HA

Sanders Pre-Cast Concrete Systems Company: Sanders MSE Wall

Shaw Technologies: Strengthened Soil

Sine Wall, LLC: Sine Wall

SSL Construction Products: MSE Plus

T&B Structural Systems: Stabilized Earth

Tensar Earth Technologies : ARES Wall

The Reinforced Earth Company: GeoMega System

The Reinforced Earth Company: Reinforced Earth

The Reinforced Earth Company: Retained Earth

Tricon Precast: Tricon Retained Soil

Tricon Precast: Tri-Web Retained Soil

Pre-approval of the wall system does not include material acceptance at the jobsite.

Submittals. The wall system supplier shall submit complete design calculations and shop drawings to the Engineer according to Article 1042.03(b) of the Standard Specifications no later than 90 days prior to beginning construction of the wall. No work or ordering of materials for the structure shall be done by the Contractor until the submittal has been approved in writing by the Engineer. All submittals shall be sealed by an Illinois Licensed Structural Engineer and shall include all details, dimensions, quantities and cross sections necessary to construct the wall and shall include, but not be limited to, the following items:

- (a) Plan, elevation and cross section sheet(s) for each wall showing the following:
 - (1) A plan view of the wall indicating the offsets from the construction centerline to the face of the wall at all changes in horizontal alignment. The plan view shall show the limits of soil reinforcement and stations where changes in length and/or size of

reinforcement occur. The centerline shall be shown for all drainage structures or pipes behind or passing through and/or under the wall.

- (2) An elevation view of the wall indicating the elevations of the top of the panels. These elevations shall be at or above the top of exposed panel line shown on the contract plans. This view shall show the elevations of the top of the leveling pads, all steps in the leveling pads and the finished grade line. Each panel type, the number, size and length of soil reinforcement connected to the panel shall be designated. The equivalent uniform applied service (unfactored) nominal bearing pressure shall be shown for each designed wall section.
 - (3) A listing of the summary of quantities shall be provided on the elevation sheet of each wall.
 - (4) Typical cross section(s) showing the limits of the reinforced select fill volume included within the wall system, soil reinforcement, embankment material placed behind the select fill, precast face panels, and their relationship to the right-of-way limits, excavation cut slopes, existing ground conditions and the finished grade line.
 - (5) All general notes required for constructing the wall.
- (b) All details for the concrete leveling pads, including the steps, shall be shown. The top of the leveling pad shall be located at or below the theoretical top of the leveling pad line shown on the contract plans. The theoretical top of leveling pad line shall be 3.5 ft. (1.1 m) below finished grade line at the front face of the wall, unless otherwise shown on the plans.
 - (c) Where concrete coping or barrier is specified, the panels shall extend up into the coping or barrier as shown in the plans. The top of the panels may be level or sloped to satisfy the top of exposed panel line shown on the contract plans. Cast-in-place concrete will not be an acceptable replacement for panel areas below the top of exposed panel line. As an alternative to cast in place coping, the Contractor may substitute a precast coping, the details of which must be included in the shop drawings and approved by the Engineer.
 - (d) All panel types shall be detailed. The details shall show all dimensions necessary to cast and construct each type of panel, all reinforcing steel in the panel, and the location of soil reinforcement connection devices embedded in the panels. These panel embed devices shall not be in contact with the panel reinforcement steel.
 - (e) All details of the wall panels and soil reinforcement placement around all appurtenances located behind, on top of, or passing through the soil reinforced wall volume such as parapets with anchorage slabs, coping, foundations, and utilities etc. shall be clearly indicated. Any modifications to the design of these appurtenances to accommodate a particular system shall also be submitted.

- (f) When specified on the contract plans, all details of architectural panel treatment, including color, texture and form liners shall be shown.
- (g) The details for the connection between concrete panels, embed devices, and soil reinforcement shall be shown.
- (h) When pile sleeves are specified, the pile sleeve material, shape, and wall thickness shall be submitted to the Engineer for approval. It shall have adequate strength to withstand the select fill pressures without collapse until after completion of the wall settlement. The annulus between the pile and the sleeve shall be as small as possible while still allowing it to be filled with loose dry sand after wall erection.

The initial submittal shall include three sets of shop drawings and one set of calculations. One set of drawings will be returned to the Contractor with any corrections indicated. After approval, the Contractor shall furnish the Engineer with ten (10) sets of corrected plan prints for distribution by the Department. No work or ordering of materials for the structure shall be done until the submittal has been approved by the Engineer.

Materials. The MSE walls shall conform to the supplier's standards as previously approved by the Department, and the following:

- (a) The soil reinforcing system, which includes the soil reinforcement, and all connection devices, shall be according to the following:
 - (1) Inextensible Soil Reinforcement. Steel reinforcement shall be according ASTM A 572 Grade 65 (450), ASTM A 1011 or ASTM A 463 Grade 50 (345). The steel strips shall be either epoxy coated, aluminized Type 2, or galvanized. Epoxy coatings shall be according to Article 1006.10(a)(2), except the minimum thickness of epoxy coating shall be 18 mils (457 microns). No bend test will be required. Aluminized Type 2-100 shall be according to ASTM A 463. Galvanizing shall be according to AASHTO M 111 or ASTM A 653 with touch up of damage according to ASTM A 780.
 - (2) Extensible Soil Reinforcement. Geosynthetic reinforcement shall be monolithically fabricated from virgin high density polyethylene (HDPE) or high tenacity polyester (HTPET) resins having the following properties verified by mill certifications:

<u>Property for Geosynthetic Reinforcement</u>	<u>Value</u>	<u>Test</u>
Minimum Tensile Strength	**	ASTM D 6637

** as specified in the approved design calculations and shown on the shop drawings.

<u>Property for HDPE</u>	<u>Value</u>	<u>Test</u>
Melt Flow Rate (g/cm)	0.060 – 0.150	ASTM D 1238, Procedure B
Density (g/cu m)	0.941 – 0.965	ASTM D 792
Carbon Black	2% (min)	ASTM D 4218

<u>Property for HTPET</u>	<u>Value</u>	<u>Test</u>
Carboxyl End Group (max) (mmol/kg)	<30	GRI-GG7
Molecular Weight (Mn)	>25,000	GRI-GG8

(3) Panel Embed/Connection Devices. Panel embeds and connection devices shall be according to the following.

a. Metallic panel embed/connection devices and connection hardware shall be galvanized according to AASHTO M 232 and shall be according to the following.

Mesh and Loop Embeds	ASTM A 706 (A 706M)
Tie Strip Embeds	AASHTO M 270/M 270M Grade 50 (345) or ASTM A 1011 HSLAS Grade 50 (345) Class 2

b. Non metallic panel embed/connection devices typically used with geosynthetic soil reinforcement shall be manufactured from virgin or recycled polyvinyl chloride having the following properties:

<u>Property for Polyvinyl Chloride</u>	<u>Value</u>	<u>Test</u>
Heat Deflection Temperature (°F)	155 - 164	ASTM D 1896
Notched IZOD 1/8 inch @ 73°F (ft-lb/in)	4 - 12	ASTM D 256
Coefficient of Linear Exp. (in/in/°F)	3.5 - 4.5	ASTM D 696
Hardness, Shore D	79	ASTM D 2240

<u>Property for Polypropylene</u>	<u>Value</u>	<u>Test</u>
Melt Flow Rate (g/cm)	0.060 - 0.150	ASTM D 1238, Procedure B
Density (g/cu m)	0.88 - 0.92	ASTM D 792

(b) The select fill, defined as the material placed in the reinforced volume behind the wall, shall be according to Sections 1003 and 1004 of the Standard Specifications and the following:

(1) Select Fill Gradation. Either a coarse aggregate or a fine aggregate may be used. For coarse aggregate, gradations CA 6 thru CA 16 may be used. If an epoxy coated reinforcing is used, the coarse aggregate gradations shall be limited to CA 12 thru CA 16. For fine aggregate, gradations FA 1, FA 2, or FA 20 may be used.

(2) Select Fill Quality. The coarse or fine aggregate shall have a maximum sodium sulfate (Na₂SO₄) loss of 15 percent according to Illinois Modified AASHTO T 104.

(3) Select Fill Internal Friction Angle. The effective internal friction angle for the coarse or fine aggregate shall be a minimum 34 degrees according to AASHTO T 236 on samples compacted to 95 percent density according to Illinois Modified AASHTO T 99. The AASHTO T 296 test with pore pressure measurement may be used in lieu of AASHTO T

236. If the vendor's design uses a friction angle higher than 34 degrees, as indicated on the approved shop drawings, this higher value shall be taken as the minimum required.

- (4) Select Fill and Steel Reinforcing. When steel reinforcing is used, the select fill shall meet the following requirements.
 - a. The pH shall be 5.0 to 10.0 according to Illinois Modified AASHTO T 289.
 - b. The resistivity according to Illinois Modified AASHTO T 288 shall be greater than 3000 ohm centimeters for epoxy coated and galvanized reinforcement, and 1500 ohm centimeters for Aluminized Type 2. However, the resistivity requirement is not applicable to CA 7, CA 8, CA 11, CA 12, CA 13, CA 14, CA 15, and CA 16.
 - c. The chlorides shall be less than 100 parts per million according to Illinois Modified AASHTO T 291 or ASTM D 4327. For either test, the sample shall be prepared according to Illinois Modified AASHTO T 291.
 - d. The sulfates shall be less than 200 parts per million according to Illinois Modified AASHTO T 290 or ASTM D 4327. For either test, the sample shall be prepared according to Illinois Modified AASHTO T 290.
 - e. The organic content shall be a maximum 1.0 percent according to Illinois Modified AASHTO T 267.
 - (5) Select Fill and Geosynthetic Reinforcing. When geosynthetic reinforcing is used, the select fill pH shall be 4.5 to 9.0 according to Illinois Modified AASHTO T 289.
 - (6) Test Frequency. Prior to start of construction, the Contractor shall provide internal friction angle and pH test results, to show the select fill material meets the specification requirements. In addition, resistivity, chlorides, sulfates, and organic content test results will be required if steel reinforcing is used. The laboratory performing the Illinois Modified AASHTO T 288 test shall be approved by the Department according to the current Bureau of Materials and Physical Research Policy Memorandum "Minimum Laboratory Requirements for Resistivity Testing". All test results shall not be older than 12 months. In addition, a sample of select fill material will be obtained for testing and approval by the Department. Thereafter, the minimum frequency of sampling and testing by the department at the jobsite will be one per 40,000 tons (36,300 metric tons) of select fill material. Testing to verify the internal friction angle will be required when the wall design utilizes a minimum effective internal friction angle greater than 34 degrees, or when crushed coarse aggregate is not used.
- (c) The embankment material behind the select fill shall be according to Section 202 and/or Section 204. An embankment unit weight of 120 lbs/cubic foot (1921 kg/cubic meter) and an effective friction angle of 30 degrees shall be used in the wall system design, unless otherwise indicated on the plans.
 - (d) The geosynthetic filter material used across the panel joints shall be either a non-woven needle punch polyester or polypropylene or a woven monofilament polypropylene with a minimum width of 12 in. (300 mm) and a minimum non-sewn lap of 6 in. (150 mm) where necessary.

- (e) The bearing pads shall be rubber, neoprene, polyvinyl chloride, or polyethylene of the type and grade as recommended by the wall supplier.
- (f) All precast panels shall be manufactured with Class PC concrete according to Section 504, Article 1042.02, Article 1042.03, and the following requirements:
- (1) The minimum panel thickness shall be 5 1/2 in. (140 mm).
 - (2) The minimum reinforcement bar cover shall be 1 1/2 in. (38 mm).
 - (3) The panels shall have a ship lap or tongue and groove system of overlapping joints between panels designed to conceal joints and bearing pads.
 - (4) The panel reinforcement shall be according to Article 1006.10 (a)(2).
 - (5) All dimensions shall be within 3/16 in. (5 mm).
 - (6) Angular distortion with regard to the height of the panel shall not exceed 0.2 inches in 5 ft (5 mm in 1.5 m).
 - (7) Surface defects on formed surfaces measured on a length of 5 ft. (1.5 m) shall not be more than 0.1 in. (2.5 mm).
 - (8) The panel embed/connection devices shall be cast into the facing panels with a tolerance not to exceed 1 in. (25 mm) from the locations specified on the approved shop drawings.

Unless specified otherwise, concrete surfaces exposed to view in the completed wall shall be finished according to Article 503.15(a). The back face of the panel shall be roughly screeded to eliminate open pockets of aggregate and surface distortions in excess of 1/4 in. (6 mm).

Design Criteria. The design shall be according to the appropriate AASHTO Design Specifications noted on the plans for Mechanically Stabilized Earth Walls except as modified herein. The wall supplier shall be responsible for all internal stability aspects of the wall design and shall supply the Department with computations for each designed wall section. The analyses of settlement, bearing capacity and overall slope stability will be the responsibility of the Department.

External loads, such as those applied through structure foundations, from traffic or railroads, slope surcharge etc., shall be accounted for in the internal stability design. The presence of all appurtenances behind, in front of, mounted upon, or passing through the wall volume such as drainage structures, utilities, structure foundation elements or other items shall be accounted for in the internal stability design of the wall.

The design of the soil reinforcing system shall be according to the applicable AASHTO or AASHTO LRFD Design Specifications for "Inextensible" steel or "Extensible" geosynthetic reinforcement criteria. The reduced section of the soil reinforcing system shall be sized to allowable stress levels at the end of a 75 year design life.

Steel soil reinforcing systems shall be protected by one of the following; epoxy coating, galvanizing or aluminizing. The design life for epoxy shall be 16 years. The corrosion protection for the balance of the 75 year total design life shall be provided using a sacrificial steel thickness computed for all exposed surfaces according to the applicable AASHTO or AASHTO LRFD Design Specifications.

Geosynthetic soil reinforcing systems shall be designed to account for the strength reduction due to long-term creep, chemical and biological degradation, as well as installation damage.

To prevent out of plane panel rotations, the soil reinforcement shall be connected to the standard panels in at least two different elevations, vertically spaced no more than 30 in. (760 mm) apart.

The panel embed/soil reinforcement connection capacity shall be determined according to the applicable AASHTO or AASHTO LRFD Design Specifications.

The factor of safety for pullout resistance in the select fill shall not be less than 1.5, based on the pullout resistance at 1/2 in. (13 mm) deformation. Typical design procedures and details, once accepted by the Department, shall be followed. All wall system changes shall be submitted in advance to the Department for approval.

For aesthetic considerations and differential settlement concerns, the panels shall be erected in such a pattern that the horizontal panel joint line is discontinuous at every other panel. This shall be accomplished by alternating standard height and half height panel placement along the leveling pad. Panels above the lowest level shall be standard size except as required to satisfy the top of exposed panel line shown on the contract plans.

At locations where the plans specify a change of panel alignment creating an included angle of 150 degrees or less, precast corner joint elements will be required. This element shall separate the adjacent panels by creating a vertical joint secured by means of separate soil reinforcement.

Isolation or slip joints, which are similar to corner joints in design and function, may be required to assist in differential settlements at locations indicated on the plans or as recommended by the wall supplier. Wall panels with areas greater than 30 sq. ft. (2.8 sq. m) may require additional slip joints to account for differential settlements. The maximum standard panel area shall not exceed 60 sq. ft. (5.6 sq. m).

Construction. The Contractor shall obtain technical assistance from the supplier during wall erection to demonstrate proper construction procedures and shall include any costs related to this technical assistance in the unit price bid for this item.

The foundation soils supporting the structure shall be graded for a width equal to or exceeding the length of the soil reinforcement. Prior to wall construction, the foundation shall be compacted with a smooth wheel vibratory roller. Any foundation soils found to be unsuitable shall be removed and replaced, as directed by the Engineer, and shall be paid for separately according to Section 202.

When structure excavation is necessary, it shall be made and paid for according to Section 502 except that the horizontal limits for structure excavation shall be from the rear limits of the soil reinforcement to a vertical plane 2 ft. (600 mm) from the finished face of the wall. The depth shall be from the top of the original ground surface to the top of the leveling pad. The additional excavation necessary to place the concrete leveling pad will not be measured for payment but shall be included in this work.

The concrete leveling pads shall have a minimum thickness of 6 in. (150 mm) and shall be placed according to Section 503.

As select fill material is placed behind a panel, the panel shall be maintained in its proper inclined position according to the supplier specifications and as approved by the Engineer. Vertical tolerances and horizontal alignment tolerances shall not exceed 3/4 in. (19 mm) when measured along a 10 ft. (3 m) straight edge. The maximum allowable offset in any panel joint shall be 3/4 in. (19 mm). The overall vertical tolerance of the wall, (plumbness from top to bottom) shall not exceed 1/2 in. per 10 ft. (13 mm per 3 m) of wall height. The precast face panels shall be erected to insure that they are located within 1 in. (25 mm) from the contract plan offset at any location to insure proper wall location at the top of the wall. Failure to meet this tolerance may cause the Engineer to require the Contractor to disassemble and re-erect the affected portions of the wall. A 3/4 in. (19 mm) joint separation shall be provided between all adjacent face panels to prevent direct concrete to concrete contact. This gap shall be maintained by the use of bearing pads and/or alignment pins.

The back of all panel joints shall be covered by a geotextile filter material attached to the panels with a suitable adhesive. No adhesive will be allowed directly over the joints.

The select fill and embankment placement shall closely follow the erection of each lift of panels. At each soil reinforcement level, the fill material should be roughly leveled and compacted before placing and attaching the soil reinforcing system. The soil reinforcement and the maximum lift thickness shall be placed according to the supplier's recommended procedures except, the lifts for select fill shall not exceed 10 in. (255 mm) loose measurement or as approved by the Engineer. Embankment shall be constructed according to Section 205.

At the end of each day's operations, the Contractor shall shape the last level of select fill to permit runoff of rainwater away from the wall face. Select fill shall be compacted according to the project specifications for embankment except the minimum required compaction shall be 95 percent of maximum density as determined by AASHTO T 99. Select fill compaction shall be accomplished without disturbance or distortion of soil reinforcing system and panels. Compaction in a strip 3 ft. (1 m) wide adjacent to the backside of the panels shall be achieved using a minimum of 3 passes of a light weight mechanical tamper, roller or vibratory system.

The Engineer will perform one density test per 5000 cu yd (3800 cu m) and not less than one test per 2 ft (0.6 m) of lift.

Method of Measurement. Mechanically Stabilized Earth Retaining Wall will be measured for payment in square feet (square meters). The MSE retaining wall will be measured from the top of exposed panel line to the theoretical top of leveling pad line for the length of the wall as shown on the contract plans.

Basis of Payment. This work, including placement of the select fill within the soil reinforced wall volume shown on the approved shop drawings, precast face panels, soil reinforcing system, concrete leveling pad and accessories will be paid for at the contract unit price per square foot (square meter) for MECHANICALLY STABILIZED EARTH RETAINING WALL.

Concrete coping when specified on the contract plans will be included for payment in this work. Other concrete appurtenances such as anchorage slabs, parapets, abutment caps, etc. will not be included in this work, but will be paid for as specified elsewhere in this contract, unless otherwise noted on the plans.

Excavation necessary to place the select fill for the MSE wall shall be paid for as STRUCTURE EXCAVATION and/or ROCK EXCAVATION FOR STRUCTURES as applicable, according to Section 502.

Embankment placed outside of the select fill volume will be measured and paid for according to Sections 202 and/or 204 as applicable.

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 ASSESSMENT REPORTS FOR CONTRACTOR'S MEANS AND METHODS

Effective: March 6, 2009

DESCRIPTION

This item shall consist of preparing and submitting, to the Engineer for approval, Structural Assessment Reports (SARs) for proposed work on structure(s) or portions thereof. Unless noted otherwise, a SAR shall be required when the Contractor's means and methods apply loads to the structure or change its structural behavior. A SAR shall be submitted and approved prior to beginning the work covered by that SAR. Separate portions of the work may be covered by separate SARs which may be submitted at different times or as dictated by the Contractor's schedule.

Existing Conditions. An Existing Structure Information Package (ESIP) will be provided by the Department to the Contractor upon request. This package will typically include existing or "As-Built" plans, and the latest National Bridge Inspection Standards (NBIS) inspection report. The availability of structural information from the Department is solely for the convenience and information of the Contractor and shall not relieve the Contractor of the duty to make, and the risk of making, examinations and investigations as required to assess conditions affecting the work. Any data furnished in the ESIP is for information only and does not constitute a part of the Contract. The Department makes no representation or warranty, express or implied, as to the information conveyed or as to any interpretations made from the data.

Removal SARs. A SAR for removal of existing structures, or portions thereof, shall demonstrate that the Contractor's proposed means and methods to accomplish the work do not compromise the structural adequacy of the bridge, or portions thereof that are to remain in service, at any time during the work activities being performed. Each phase of the operation shall be accounted for, as well as the existing condition of the structure.

Construction SARs. A SAR for new construction or for construction utilizing existing components shall demonstrate that the Contractor's proposed means and methods to accomplish the work do not compromise the structural adequacy of the bridge or portions thereof at any time during the work activities being performed. For construction activities applying less than 10 tons (9 metric tons) of total combined weight of equipment and stockpiled materials on the structure at any one time, a SAR submittal shall not be required provided the Contractor submits written verification to the Engineer stating the applied loads do not exceed this threshold. The verification shall be submitted prior to the start of the activity. This SAR exemption shall not relieve the Contractor from responsibility for the structure. A SAR shall be submitted in all cases where the existing structure is posted for less than legal loads or the Contract plans indicate a live load restriction is in place.

REQUIREMENTS

a) **General.** All work specified shall be performed according to the Contract plans, Special Provisions and/or Standard Specifications governing that work.

Submittals for falsework and forming for concrete construction shall be according to Articles 503.05 and 503.06 and does not require a SAR. Moving construction equipment across a structure, or portions thereof, open to traffic shall be addressed according to Article 107.16 and does not require a SAR. Operating equipment on an in-service structure and/or using a portion of an in-service structure as a work platform shall require a SAR and Article 107.16 shall not apply.

The Contractor may move vehicles across the existing bridge without a SAR after closure and prior to removal of any portion of the structure provided:

- The vehicles satisfy the requirements of Section 15-111 of the Illinois Vehicle Code (described in the IDOT document "Understanding the Illinois Size & Weight Laws") or of the Federal Highway Administration document "Bridge Formula Weights" (available at: http://ops.fhwa.dot.gov/freight/publications/brdg_frm_wghts/bridge_formula_all.pdf)
- The Contractor submits written verification to the Engineer stating the vehicles meet these requirements. The verification shall be submitted prior to allowing the vehicles on the structure.

This SAR exemption shall not relieve the Contractor from responsibility for the structure. This SAR exemption shall not be allowed where the existing structure is posted for less than legal loads or the Contract plans indicate a live load restriction is in place. No stockpiling of material is allowed under this exemption.

All SARs shall detail the procedures and sequencing necessary to complete the work in a safe and controlled manner. When appropriate, supporting design calculations shall be provided verifying the following:

- The effects of the applied loads do not exceed the capacity at Operating level for any portions of the structure being utilized in the demolition of the structure provided those portions are not to be reused.
- The effects of the applied loads do not exceed the capacity at Inventory level for new construction or for portions of the existing structure that are to be reused.
- The condition of the structure and/or members has been considered.

See AASHTO Manual for Bridge Evaluation for further information on determining the available capacities at the Operating and Inventory levels.

b) Confidential Documents. Due to the sensitivity of the inspection reports and bridge condition reports to bridge security, the following confidentiality statement applies to these reports:

"Reports used by the Contractor and the contents thereof are the property of the Department, and are subject to the control of the Department in accordance with State and Federal law. The distribution, dissemination, disclosure, duplication or release of these reports or the content thereof in any manner, form or format without the express permission of the keeper of

this record is prohibited. The owner is the official keeper of these records, except for state owned bridges, where the official keeper of these records is the Regional Engineer.”

c) Submittals. The Contractor shall be pre-approved to prepare SAR(s) or shall retain the services of a pre-qualified engineering firm to provide these services. Pre-approval of the Contractor will be determined by the Illinois Department of Transportation and will allow SAR(s) preparation by the Contractor unless otherwise noted on the plans. For engineering firms, pre-qualification shall be according to the Department in the category of “Highway Bridges-Typical” unless otherwise noted on the plans. Firms involved in any part of the project (plan development or project management) will not be eligible to provide these services. Evidence of pre-approval/pre-qualification shall be submitted with all SAR(s). The SAR(s) shall be prepared and sealed by an Illinois Licensed Structural Engineer. The Contractor shall submit SAR(s), complete with working drawings and supporting design calculations, to the Engineer for approval, at least 30 calendar days prior to start of that portion of the work.

At a minimum a Structural Assessment Report shall include the following:

1. A plan outlining the procedures and sequence for the work, including staging when applicable.
2. A demolition plan (when removal is included as an item of work in the contract) including details of the proposed methods of removal.
3. A beam erection plan (when beam erection is included as an item of work in the contract) including details of the proposed methods of erection.
4. Pertinent specifications for equipment used during the work activity.
5. The allowable positions for that equipment during the work activity.
6. The allowable positions and magnitudes of stockpiled materials and/or spoils, if planned to be located on the structure.
7. Design and details for temporary shoring and/or bracing, if required by the Contractor's means and methods.

Approval or acceptance of a Structural Assessment Report shall not relieve the Contractor of any responsibility for the successful completion of the work.

Revisions to the Contractor's means and methods resulting in no increased load effects to the structure, as determined by the Contractor's Structural Engineer, shall not require a SAR resubmittal. However, the Contractor's Structural Engineer shall submit to the Engineer written verification that there is no increased load effect. The written verification shall specify the revisions and shall be submitted prior to the start of the revised activities.

The Contractor shall be responsible for following the approved SAR related to the work involved.

METHOD OF MEASUREMENT

Structural Assessment Reports will not be measured for payment.

BASIS OF PAYMENT

Structural Assessment Reports will not be paid for separately but shall be considered as included in the contract unit price(s) for the work item(s) specified.

AGGREGATE COLUMN GROUND IMPROVEMENT

Effective: January 15, 2009

Revised: October 15, 2011

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

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

- (a) Evidence of the selected subcontractor's successful installation of their aggregate column system on five projects under similar site conditions using the same installation technique. The documentation to be submitted shall include a description of the project, aggregate column installation technique, soil conditions and name and phone number of contracting authority.
- (b) Evidence that the proposed project superintendent for the ground improvement installation has a minimum of three years of method specific experience.
- (c) Shop Drawings sealed by an Illinois Licensed Professional Engineer showing aggregate column horizontal limits, locations, pattern, spacing, diameters, top and bottom elevations, and identification numbers. If an aggregate drainage layer is specified on the plans or a working platform proposed by the Contractor, the thickness, aggregate gradation, and plan dimensions shall be shown in addition to any other details needed to describe the work.
- (d) A description of the equipment, installation technique and construction procedures to be used, including a plan to address any water or spoils.
- (e) The source and gradation of the aggregate proposed for the aggregate columns.
- (f) Design computations, sealed by an Illinois Licensed Professional Engineer, demonstrating the proposed ground improvement plan satisfies the minimum global stability, settlement, and bearing capacity performance requirements stated in the Contract Plans and those contained in this Special Provision.
- (g) The proposed verification program methods to monitor and verify the aggregate column installation is satisfying the design and performance requirements. Also required is a sample of the daily report form to be used by the Contractor to documents the adequacy of that day's work.

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

requested by the Contractor to be used as either a drainage layer or working platform shall be approved by the Engineer.

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

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

The design shall use short term strength parameters for the soil, obtained from the soil boring logs and any geotechnical laboratory testing data provided in the Contract Plans and specifications for stability and bearing capacity analyses. Settlement shall be assessed using appropriate soil parameters. Any additional subsurface information needed to design the aggregate columns shall be the responsibility of the Contractor.

The aggregate column ground improvement design need not consider seismic loadings unless otherwise required as part of the performance requirements shown on the plans.

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

- (a) The site shall be graded as needed for proper installation of the aggregate column system. Any grading and excavation below the improvement limits shown on the plans shall be incidental to aggregate column installation.
- (b) Any granular base drainage layer or working platform shall be considered incidental to the improvement. Contractor requested drainage layers or working platforms will only be allowed if approved as part of the shop drawings.
- (c) The aggregate column material shall be placed in a manner that allows measurement of the tonnage or quantity of aggregate placed down the hole.
- (d) Columns shall be installed in a sequence that will minimize ground heave. Any heaving shall be re-compacted or excavated as directed by the Engineer prior to wall or embankment construction and be considered incidental to aggregate column improvement.

- (e) The Contractor shall provide a full-time qualified representative to verify all installation procedures and provide the verification program.
- (f) Disposal of any spoils generated shall be according to Article 202.03.
- (g) If an obstruction is encountered that cannot be penetrated with reasonable effort, the Contractor shall construct the element from the depth of obstruction to its design top elevation. Depending on the depth of the completed column, column location, and design requirements, the Engineer may require the construction of a replacement aggregate column at an adjacent location. Construction of additional columns will be considered extra work and paid for according to Article 109.04.
- (h) Specific Requirements for Vibrator Compacted Aggregate Columns:
 - i. Vibrator compacted aggregate columns shall be constructed with a down-hole vibrator, probe and follower tubes of sufficient size to install the columns to the diameter and bottom elevation(s) shown on the approved shop drawings. Pre-boring is permitted if approved as part of the shop drawing submittal.
 - ii. The probe and follower tubes shall have visible markings at regular increments to enable measurement of penetration and re-penetration depths.
 - iii. Provide methods for supplying to the tip of the probe a sufficient quantity of air or water to widen the probe hole to allow adequate space for aggregate placement around the probe.
 - iv. The vibrator shall be withdrawn in 12 to 36 inch (300 to 900 mm) increments, to allow placement of the aggregate.
 - v. Lift thickness shall not exceed 4 ft (1.2 m). After penetration to the treatment depth, slowly retrieve the vibrator in 12 to 18 inch (300 to 450 mm) increments to allow aggregate placement.
 - vi. Compact the aggregate in each lift by re-penetrating it as needed with the vibrating probe to densify and force the aggregate radially into the surrounding soil. Re-penetrate the aggregate in each increment a sufficient number of times to construct the columns as specified in the approved shop drawings and to meet the verification program requirements.
- (i) Specific Requirements for Tamper Compacted (Rammed) Aggregate Columns:
 - i. Tamper compacted (rammed) aggregate columns shall be installed by either drilling or displacement methods, capable of constructing columns to the diameters and bottom elevation(s) shown on the approved shop drawings.
 - ii. If temporary casing is needed to limit the sloughing of subsurface soils, the casing should be inserted to at least 2 ft (600 mm) beyond any sloughing strata. Upon extraction, the bottom of the casing shall be maintained at not more than 2 feet (600 mm) above the level of aggregate.

- iii. Aggregate placement shall closely follow the excavation of each column. The aggregate shall be placed in 1 to 2 ft (300 to 600 mm) thick lifts. Each lift should be rammed with a high-energy impact tamper as specified in the approved shop drawings and to meet the verification program requirements.

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

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

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

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

- (a) Quality control procedures to allow verification that each aggregate column is being installed according to the designer's specifications and the requirements in this Special Provision. This will typically include observations of items such as electrical current or hydraulic pressure, number of high-energy impact tamps, aggregate quantity, etc. that must be obtained to achieve the performance requirements.

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

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

GRANULAR BACKFILL FOR STRUCTURES

Effective: April 19, 2012

Revised: October 30, 2012

Revise Section 586 of the Standard Specifications to read:

SECTION 586. GRANULAR BACKFILL FOR STRUCTURES

586.01 Description. This work shall consist of furnishing, transporting and placing granular backfill for abutment structures.

586.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Fine Aggregate.....	1003.04
(b) Coarse Aggregates	1004.05

CONSTRUCTION REQUIREMENTS

586.03 General. This work shall be done according to Article 502.10 except as modified below. The backfill volume shall be backfilled, with granular material as specified in Article 586.02, to the required elevation as shown in the contract plans. The backfill volume shall be placed in convenient lifts for the full width to be backfilled. Unless otherwise specified in the contract plans, mechanical compaction will not be required. A deposit of gravel or crushed stone placed behind drain holes shall not be required. All drains not covered by geocomposite wall drains or other devices to prevent loss of backfill material shall be covered by sufficient filter fabric material meeting the requirements of Section 1080 and Section 282 with either 6 or 8 oz/sq yd (200 or 270 g/sq m) material allowed, with free edges overlapping the drain hole by at least 12 in. (300 mm) in all directions.

The granular backfill shall be brought to the finished grade as shown in the contract plans. When concrete is to be cast on top of the granular backfill, the Contractor, subject to approval of the Engineer, may prepare the top surface of the fill to receive the concrete as he/she deems necessary for satisfactory placement at no additional cost to the Department.

586.04 Method of Measurement. This work will be measured for payment as follows.

(a) Contract Quantities. The requirements for the use of contract quantities shall conform to Article 202.07(a).

(b) Measured Quantities. This work will be measured for payment in place and the volume computed in cubic yards (cubic meters). The volume will be determined by the method of average end areas behind the abutment.

586.05 Basis of Payment. This work will be paid for at the contract unit price per cubic yard (cubic meter) for GRANULAR BACKFILL FOR STRUCTURES.

**WEEP HOLE DRAINS FOR ABUTMENTS, WINGWALLS, RETAINING WALLS AND
CULVERTS**

Effective: April 19, 2012

Delete the last paragraphs of 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 title of 1040.07 to Geocomposite Wall Drains and Strip Drains.

ILLINOIS DEPARTMENT OF LABOR

**PREVAILING WAGES FOR
?BCL COUNTY
EFFECTIVE >I @M2013**

The Prevailing rates of wages are included in the Contract proposals which are subject to Check Sheet #5 of the Supplemental Specifications and Recurring Special Provisions. The rates have been ascertained and certified by the Illinois Department of Labor for the locality in which the work is to be performed and for each craft or type of work or mechanic needed to execute the work of the Contract. As required by Prevailing Wage Act (820 ILCS 130/0.01, et seq.) and Check Sheet #5 of the Contract, not less than the rates of wages ascertained by the Illinois Department of Labor and as revised during the performance of a Contract shall be paid to all laborers, workers and mechanics performing work under the Contract. Post the scale of wages in a prominent and easily accessible place at the site of work.

If the Illinois Department of Labor revises the prevailing rates of wages to be paid as listed in the specification of rates, the contractor shall post the revised rates of wages and shall pay not less than the revised rates of wages. Current wage rate information shall be obtained by visiting the Illinois Department of Labor web site at <http://www.state.il.us/agency/idol/> or by calling 312-793-2814. It is the responsibility of the contractor to review the rates applicable to the work of the contract at regular intervals in order to insure the timely payment of current rates. Provision of this information to the contractor by means of the Illinois Department of Labor web site satisfies the notification of revisions by the Department to the contractor pursuant to the Act, and the contractor agrees that no additional notice is required. The contractor shall notify each of its subcontractors of the revised rates of wages.

Knox County Prevailing Wage for July 2013

(See explanation of column headings at bottom of wages)

Trade Name	RG	TYP	C	Base	FRMAN	M-F>8	OSA	OSH	H/W	Pensn	Vac	Trng
=====	==	===	=	=====	=====	=====	===	===	=====	=====	=====	=====
ASBESTOS ABT-GEN		BLD		28.370	29.370	1.5	1.5	2.0	8.240	10.44	0.000	0.800
ASBESTOS ABT-GEN		HWY		27.060	27.560	1.5	1.5	2.0	8.240	10.15	0.000	0.800
ASBESTOS ABT-MEC		BLD		20.500	21.500	1.5	1.5	2.0	6.250	3.500	0.000	0.000
BOILERMAKER		BLD		35.010	38.010	2.0	2.0	2.0	7.070	13.83	0.000	0.300
BRICK MASON		BLD		32.060	33.560	1.5	1.5	2.0	8.300	9.500	0.000	0.580
CARPENTER		BLD		29.330	31.580	1.5	1.5	2.0	7.700	14.66	0.000	0.520
CARPENTER		HWY		30.820	33.070	1.5	1.5	2.0	7.700	15.14	0.000	0.520
CEMENT MASON		ALL		25.030	26.530	1.5	1.5	2.0	5.750	11.50	0.000	0.500
CERAMIC TILE FNSHER		BLD		29.750	0.000	1.5	1.5	2.0	8.300	9.500	0.000	0.580
ELECTRIC PWR EQMT OP		ALL		35.440	0.000	1.5	1.5	2.0	5.000	10.98	0.000	0.270
ELECTRIC PWR GRNDMAN		ALL		24.320	0.000	1.5	1.5	2.0	5.000	7.540	0.000	0.180
ELECTRIC PWR LINEMAN		ALL		39.370	41.910	1.5	1.5	2.0	5.000	12.20	0.000	0.300
ELECTRIC PWR TRK DRV		ALL		25.510	0.000	1.5	1.5	2.0	5.000	7.920	0.000	0.190
ELECTRICIAN		BLD		30.190	32.690	1.5	1.5	2.0	5.600	10.38	0.000	0.400
ELECTRONIC SYS TECH		BLD		27.480	29.230	1.5	1.5	2.0	5.600	9.820	0.000	0.400
ELEVATOR CONSTRUCTOR		BLD		40.520	45.585	2.0	2.0	2.0	11.88	12.71	3.240	0.600
GLAZIER		BLD		26.360	27.860	1.5	1.5	2.0	6.940	6.520	0.000	0.350
HT/FROST INSULATOR		BLD		29.190	30.390	1.5	1.5	2.0	5.420	12.05	0.000	0.900
IRON WORKER	NW	ALL		28.000	30.240	1.5	1.5	2.0	9.390	10.68	0.000	0.620
IRON WORKER	SE	BLD		31.010	32.910	1.5	1.5	2.0	9.390	12.26	0.000	0.540
IRON WORKER	SE	HWY		34.020	36.020	1.5	1.5	2.0	9.390	11.56	0.000	0.390
IRON WORKER	SW	ALL		24.440	25.690	1.5	1.5	2.0	7.010	9.890	0.000	0.570
LABORER		BLD		27.370	28.370	1.5	1.5	2.0	8.240	10.44	0.000	0.800
LABORER		HWY		26.060	26.560	1.5	1.5	2.0	8.240	10.15	0.000	0.800
LABORER, SKILLED		BLD		27.370	28.370	1.5	1.5	2.0	8.240	10.44	0.000	0.800
LABORER, SKILLED		HWY		26.360	26.860	1.5	1.5	2.0	8.240	10.15	0.000	0.800
LATHER		BLD		29.330	31.580	1.5	1.5	2.0	7.700	14.66	0.000	0.520
MACHINERY MOVER	SE	HWY		34.020	36.020	1.5	1.5	2.0	9.390	11.56	0.000	0.390
MACHINIST		BLD		43.920	46.420	1.5	1.5	2.0	6.760	8.950	1.850	0.000
MARBLE FINISHERS		BLD		29.750	0.000	1.5	1.5	2.0	8.300	9.500	0.000	0.580
MARBLE MASON		BLD		31.510	32.760	1.5	1.5	2.0	8.300	9.500	0.000	0.580
MILLWRIGHT		BLD		30.240	32.490	1.5	1.5	2.0	7.700	14.09	0.000	0.520
MILLWRIGHT		HWY		31.820	34.070	1.5	1.5	2.0	7.700	14.64	0.000	0.520
OPERATING ENGINEER		BLD	1	36.000	39.000	1.5	1.5	2.0	9.750	13.60	0.000	3.000
OPERATING ENGINEER		BLD	2	33.490	39.000	1.5	1.5	2.0	9.750	13.60	0.000	3.000
OPERATING ENGINEER		BLD	3	29.340	39.000	1.5	1.5	2.0	9.750	13.60	0.000	3.000
OPERATING ENGINEER		HWY	1	36.000	39.500	1.5	1.5	2.0	9.750	13.60	0.000	3.000
OPERATING ENGINEER		HWY	2	33.490	39.500	1.5	1.5	2.0	9.750	13.60	0.000	3.000
OPERATING ENGINEER		HWY	3	29.340	39.500	1.5	1.5	2.0	9.750	13.60	0.000	3.000
PAINTER		ALL		27.320	28.320	1.5	1.5	1.5	5.000	6.100	0.000	0.600
PAINTER OVER 30FT		ALL		28.570	29.570	1.5	1.5	1.5	5.000	6.100	0.000	0.600
PAINTER PWR EQMT		ALL		27.820	28.820	1.5	1.5	1.5	5.000	6.100	0.000	0.600
PILEDRIVER		BLD		29.830	32.080	1.5	1.5	2.0	7.700	14.66	0.000	0.520
PILEDRIVER		HWY		31.820	34.070	1.5	1.5	2.0	7.700	15.14	0.000	0.520
PIPEFITTER		ALL		36.650	40.320	1.5	1.5	2.0	5.800	12.35	0.000	1.050
PLASTERER		BLD		27.770	28.770	1.5	1.5	2.0	8.140	12.76	0.000	0.600
PLUMBER		ALL		36.650	40.320	1.5	1.5	2.0	5.800	12.35	0.000	1.050
ROOFER		BLD		25.130	26.380	1.5	1.5	2.0	8.610	5.620	0.000	0.260
SHEETMETAL WORKER		BLD		30.070	32.070	1.5	1.5	2.0	7.140	10.54	0.000	0.540
SIGN HANGER	SE	HWY		34.020	36.020	1.5	1.5	2.0	9.390	11.56	0.000	0.390
SPRINKLER FITTER		BLD		36.390	39.140	1.5	1.5	2.0	8.420	8.500	0.000	0.450
STEEL ERECTOR	SE	HWY		34.020	36.020	1.5	1.5	2.0	9.390	11.56	0.000	0.390
STONE MASON		BLD		32.060	33.560	1.5	1.5	2.0	8.300	9.500	0.000	0.580
TERRAZZO FINISHER		BLD		29.750	0.000	1.5	1.5	2.0	8.300	9.500	0.000	0.580
TERRAZZO MASON		BLD		31.510	32.760	1.5	1.5	2.0	8.300	9.500	0.000	0.580
TILE MASON		BLD		31.510	32.760	1.5	1.5	2.0	8.300	9.500	0.000	0.580
TRUCK DRIVER		ALL	1	31.230	0.000	1.5	1.5	2.0	10.30	4.840	0.000	0.250

TRUCK DRIVER	ALL	2	31.680	0.000	1.5	1.5	2.0	10.30	4.840	0.000	0.250
TRUCK DRIVER	ALL	3	31.890	0.000	1.5	1.5	2.0	10.30	4.840	0.000	0.250
TRUCK DRIVER	ALL	4	32.180	0.000	1.5	1.5	2.0	10.30	4.840	0.000	0.250
TRUCK DRIVER	ALL	5	33.020	0.000	1.5	1.5	2.0	10.30	4.840	0.000	0.250
TRUCK DRIVER	O&C	1	24.980	0.000	1.5	1.5	2.0	10.30	4.840	0.000	0.250
TRUCK DRIVER	O&C	2	25.340	0.000	1.5	1.5	2.0	10.30	4.840	0.000	0.250
TRUCK DRIVER	O&C	3	25.510	0.000	1.5	1.5	2.0	10.30	4.840	0.000	0.250
TRUCK DRIVER	O&C	4	25.740	0.000	1.5	1.5	2.0	10.30	4.840	0.000	0.250
TRUCK DRIVER	O&C	5	26.420	0.000	1.5	1.5	2.0	10.30	4.840	0.000	0.250
TUCK POINTER	BLD		32.060	33.560	1.5	1.5	2.0	8.300	9.500	0.000	0.580

Legend :

RG (Region)

TYP (Trade Type - All,Highway,Building,Floating,Oil & Chip,Rivers)

C (Class)

Base (Base Wage Rate)

FRMAN (Foreman Rate)

M-F>8 (OT required for any hour greater than 8 worked each day, Mon through Fri.

OSA (Overtime (OT) is required for every hour worked on Saturday)

OSH (Overtime is required for every hour worked on Sunday and Holidays)

H/W (Health & Welfare Insurance)

Pensn (Pension)

Vac (Vacation)

Trng (Training)

Explanations

KNOX COUNTY

IRONWORKERS (SOUTHWEST) - That part of the county West of Rt. 41.

IRONWORKERS (SOUTHEAST) - That part of the county South and East of a line from Tolona (Stark County) North of Victoria to (but excluding) Galesburg looping East and South of the city to Rt. 41 South to the county line.

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day and Veterans Day in some classifications/counties. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration. If in doubt, please check with IDOL.

Oil and chip resealing (O&C) means the application of road oils and liquid asphalt to coat an existing road surface, followed by application of aggregate chips or gravel to coated surface, and subsequent rolling of material to seal the surface.

EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date.

ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

CERAMIC TILE FINISHER, MARBLE FINISHER, TERRAZZO FINISHER

Assisting, helping or supporting the tile, marble and terrazzo mechanic by performing their historic and traditional work assignments required to complete the proper installation of the work covered by said crafts. The term "Ceramic" is used for naming the classification only and is in no way a limitation of the product handled. Ceramic takes into consideration most hard tiles.

ELECTRONIC SYSTEMS TECHNICIAN

Installation, service and maintenance of low-voltage systems which utilizes the transmission and/or transference of voice, sound, vision, or digital for commercial, education, security and entertainment purposes for the following: TV monitoring and surveillance, background/foreground music, intercom and telephone interconnect, field programming, inventory control systems, microwave transmission, multi-media, multiplex, radio page, school, intercom and sound burglar alarms and low voltage master clock systems.

Excluded from this classification are energy management systems, life safety systems, supervisory controls and data acquisition systems not intrinsic with the above listed systems, fire alarm systems, nurse call systems and raceways exceeding fifteen feet in length.

LABORER, SKILLED - BUILDING

The skilled laborer building (BLD) classification shall encompass the following types of work, irrespective of the site of the work: tending of carpenters in unloading, handling, stockpiling and distribution operations, also other building crafts, mixing, handling, and conveying of all materials used by masons, plasterers and other building construction crafts, whether done by hand or by any process. The drying of plastering when done by salamander heat, and the cleaning and clearing of all debris. All work pertaining to and in preparation of asbestos abatement and removal. The building of scaffolding and staging for masons and plasterers. The excavations for buildings and all other construction, digging, of trenches, piers, foundations and holes, digging, lagging, sheeting, cribbing, bracing and propping of foundations, holes, caissons, cofferdams, and dikes, the setting of all guidelines for machine or hand excavation and subgrading. The mixing, handling, conveying, pouring, vibrating, gunniting and otherwise applying of concrete, whether by hand or other method of concrete for any walls, foundations, floors, or for other construction concrete sealant men. The wrecking, stripping,

dismantling, and handling of concrete forms and false work, and the building of centers for fireproofing purposes. Boring machine, gas, electric or air in preparation for shoving pipe, telephone cable, and so forth, under highways, roads, streets and alleys. All hand and power operating cross cut saws when used for clearing. All work in compressed air construction. All work on acetylene burners in salvaging. The blocking and tamping of concrete. The laying of sewer tile and conduit, and pre-cast materials. The assembling and dismantling of all jacks and sectional scaffolding, including elevator construction and running of slip form jacks. The work of drill running and blasting, including wagon drills. The wrecking, stripping, dismantling, cleaning, moving and oiling of forms. The cutting off of concrete piles. The loading, unloading, handling and carrying to place of installation of all rods, (and materials for use in reinforcing) concrete and the hoisting of same and all signaling where hoist is used in this type of construction coming under the jurisdiction of the Laborers' Union. And, all other labor work not awarded to any other craft. Mortar mixers, kettlemen and carrier of hot stuff, tool crib men, watchmen (Laborer), firemen or salamander tenders, flagmen, deck hands, installation and maintenance of temporary gas-fired heating units, gravel box men, dumpmen and spotters, fencing Laborers, cleaning lumber, pit men, material checkers, dispatchers, unloading explosives, asphalt plant laborers, writer of scale tickets, fireproofing laborers, janitors, asbestos abatement and removal laborers, handling of materials treated with oil, creosote, chloride, asphalt, and/or foreign material harmful to skin or clothing, Laborers with de-watering systems, gunnite nozzle men, laborers tending masons with hot material or where foreign materials are used, Laborers handling masterplate or similar materials, laser beam operator, concrete burning machine operator, material selector men working with firebrick or combustible material, dynamite men, track laborers, cement handlers, chloride handlers, the unloading and laborers with steel workers and re-bars, concrete workers (wet), luteman, asphalt raker, curb asphalt machine operator, ready mix scalemen, permanent, portable or temporary plant drilling machine operator, plaster tenders, underpinning and shoring of buildings, fire watch, signaling of all power equipment, to include trucks excavating equipment, etc., tree topper or trimmer when in connection to construction, tunnel helpers in free air, batch dumpers, kettle and tar men, tank cleaners, plastic installers, scaffold workers, motorized buggies or motorized unit used for wet concrete or handling of building materials, sewer workers, rod and chain men, vibrator operators, mortar mixer operator, cement silica, clay, fly ash, lime and plasters, handlers (bulk or bag), cofferdam workers, on concrete paving, placing, cutting and tying of reinforcing, deck hand, dredge hand and shore laborers, bankmen on floating plant, asphalt workers with machine & layers, grade checker, power tools, caisson workers, lead man on sewer work, welders, cutters, burners and torch men, chain saw operators, paving breaker, jackhammer and drill operator, layout man and/or drainage tile layer, steel form setters -- street and highway, air tamping hammerman, signal man on crane, concrete saw operator, screen man on asphalt pavers, front end man on chip spreader, multiple concrete duct -- lead man.

LABORER, SKILLED - HIGHWAY

The skilled laborer heavy and highway (HWY) classification shall encompass the following types of work, irrespective of the site of the work: handling of materials treated with oil, creosote, asphalt and/or any foreign materials harmful to skin or clothing, track laborers, chloride handlers, the unloading and loading with steel workers and re-bars, concrete workers (wet), tunnel helpers in free air, batch dumpers, mason tenders, kettle and tar men, plastic

installers, scaffold workers, motorized buggies or motorized unit used for wet concrete or handling of building materials, laborers with de-watering systems, sewer workers plus depth, rod and chainmen, vibrator operators, mortar mixer operators, cement silica, clay, fly ash, lime and plasters, handlers (bulk or bag), cofferdam workers plus depth, on concrete paving, placing, cutting and tying or reinforcing, deck hand, dredge hand shore laborers, bankmen on floating plant, asphalt workers with machine, and layers, grade checker, power tools, stripping of all concrete forms excluding paving forms, dumpmen and spotters, when necessary, caisson workers plus depth, gunnite nozzle men, welders, cutters, burners and torchmen, chain saw operators, paving breaker, jackhammer and drill operators, layout man and/or drainage tile layer, steel form setters - street and highway, air tamping hammerman, signal man on crane, concrete saw operator, screedman on asphalt pavers, front end man on chip spreader, multiple concrete duct, luteman, asphalt raker, curb asphalt machine operator, ready mix scalemen (portable or temporary plant), laser beam operator, concrete burning machine operator, and coring machine operator.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION

Class 1. Drivers on 2 axle trucks hauling less than 9 ton. Air compressor and welding machines and brooms, including those pulled by separate units, truck driver helpers, warehouse employees, mechanic helpers, greasers and tiremen, pickup trucks when hauling materials, tools, or workers to and from and on-the-job site, and fork lifts up to 6,000 lb. capacity.

Class 2. Two or three axle trucks hauling more than 9 ton but hauling less than 16 ton. A-frame winch trucks, hydrolift trucks, vector trucks or similar equipment when used for transportation purposes. Fork lifts over 6,000 lb. capacity, winch trucks, four axle combination units, and ticket writers.

Class 3. Two, three or four axle trucks hauling 16 ton or more. Drivers on water pulls, articulated dump trucks, mechanics and working forepersons, and dispatchers. Five axle or more combination units.

Class 4. Low Boy and Oil Distributors.

Class 5. Drivers who require special protective clothing while employed on hazardous waste work.

TRUCK DRIVER - OIL AND CHIP RESEALING ONLY.

This shall encompass laborers, workers and mechanics who drive contractor or subcontractor owned, leased, or hired pickup, dump, service, or oil distributor trucks. The work includes transporting materials and equipment (including but not limited to, oils, aggregate supplies, parts, machinery and tools) to or from the job site; distributing oil or liquid asphalt and aggregate; stock piling material when in connection with the actual oil and chip contract. The Truck Driver (Oil & Chip Resealing) wage classification does not include supplier delivered materials.

OPERATING ENGINEERS - BUILDING

Class 1. Cranes; Overhead Cranes; Gradall; All Cherry Pickers; Mechanics; Central Concrete Mixing Plant Operator; Road Pavers (27E - Dual Drum - Tri Batchers); Blacktop Plant Operators and Plant Engineers; 3 Drum Hoist; Derricks; Hydro Cranes; Shovels; Skimmer Scoops; Koehring Scooper; Drag Lines; Backhoe; Derrick Boats; Pile Drivers and Skid Rigs; Clamshells; Locomotive Cranes; Dredge (all

types) Motor Patrol; Power Blades - Dumore - Elevating and similar types; Tower Cranes (Crawler-Mobile) and Stationary; Crane-type Backfiller; Drott Yumbo and similar types considered as Cranes; Caisson Rigs; Dozer; Tournadozer; Work Boats; Ross Carrier; Helicopter; Tournapulls - all and similar types; Scoops (all sizes); Pushcats; Endloaders (all types); Asphalt Surfacing Machine; Slip Form Paver; Rock Crusher; Heavy Equipment Greaser; CMI, CMI Belt Placer, Auto Grade & 3 Track and similar types; Side Booms; Multiple Unit Earth Movers; Creter Crane; Trench Machine; Pump-crete-Belt Crete-Squeeze Cretes-Screw-type Pumps and Gypsum; Bulker & Pump - Operator will clean; Formless Finishing Machine; Flaherty Spreader or similar types; Screed Man on Laydown Machine; Wheel Tractors (industrial or Farm-type w/Dozer-Hoe-Endloader or other attachments); F.W.D. & Similar Types; Vermeer Concrete Saw.

Class 2. Dinkeys; Power Launches; PH One-pass Soil Cement Machine (and similar types); Pugmill with Pump; Backfillers; Euclid Loader; Forklifts; Jeeps w/Ditching Machine or other attachments; Tuneluger; Automatic Cement and Gravel Batching Plants; Mobile Drills (Soil Testing) and similar types; Gurries and Similar Types; (1) and (2) Drum Hoists (Buck Hoist and Similar Types); Chicago Boom; Boring Machine & Pipe Jacking Machine; Hydro Boom; Dewatering System; Straw Blower; Hydro Seeder; Assistant Heavy Equipment Greaser on Spread; Tractors (Track type) without Power Unit pulling Rollers; Rollers on Asphalt -- Brick Macadem; Concrete Breakers; Concrete Spreaders; Mule Pulling Rollers; Center Stripper; Cement Finishing Machines & CMI Texture & Reel Curing Machines; Cement Finishing Machine; Barber Green or similar loaders; Vibro Tamper (All similar types) Self-propelled; Winch or Boom Truck; Mechanical Bull Floats; Mixers over 3 Bag to 27E; Tractor pulling Power Blade or Elevating Grader; Porter Rex Rail; Clary Screed; Truck Type Hoptoe Oilers; Fireman; Spray Machine on Paving; Curb Machines; Truck Crane Oilers; Oil Distributor; Truck-Mounted Saws.

Class 3. Air Compressor; Power Subgrader; Straight Tractor; Trac Air without attachments; Herman Nelson Heater, Dravo, Warner, Silent Glo, and similar types; Roller: Five (5) Ton and under on Earth or Gravel; Form Grader; Crawler Crane & Skid Rig Oilers; Freight Elevators - permanently installed; Pump; Light Plant; Generator; Conveyor (1) or (2) - Operator will clean; Welding Machine; Mixer (3) Bag and Under (Standard Capacity with skip); Bulk Cement Plant; Oiler on Central Concrete Mixing Plant.

OPERATING ENGINEERS - HEAVY AND HIGHWAY CONSTRUCTION

CLASS 1. Cranes; Hydro Cranes; Shovels; Crane Type Backfiller; Tower, Mobile, Crawler, & Stationary Cranes; Derricks; Hoists (3 Drum); Draglines; Drott Yumbo & Similar Types considered as Cranes; 360 Degree Swing Excavator (Shears, Grapples, Movacs, etc.); Back Hoe; Derrick Boats; Pile Driver and Skid Rigs; Clam Shell; Locomotive - Cranes; Road Pavers - Single Drum - Dual Drum - Tri Batcher; Motor Patrols & Power Blades - Dumore - Elevating & Similar Types; Mechanics; Central Concrete Mixing Plant Operator; Asphalt Batch Plant Operators and Plant Engineers; Gradall; Caisson Rigs; Skimmer Scoop - Koering Scooper; Dredges (all types); Hoptoe; All Cherry Pickers; Work Boat; Ross Carrier; Helicopter; Dozer; Tournadozer; Tournapulls - all and similar types; Operation of Concrete and all Recycle Machines; Multiple Unit Earth Movers; Scoops (all sizes); Pushcats; Endloaders (all types); Asphalt Surfacing Machine; Slip Form Paver; Rock Crusher; Operation of Material Crusher, Screening Plants, and Tunnel Boring Machine; Heavy Equipment Greaser (top greaser on spread); CMI, Auto Grade, CMI Belt Placer & 3 Track and Similar Types; Side Booms; Asphalt Heater & Planer Combination (used to plane

streets); Wheel Tractors (with Dozer, Hoe or Endloader Attachments); CAT Earthwork Compactors and Similar Types; Blaw Knox Spreader and Similar Types; Trench Machines; Pump Crete - Belt Crete - Squeeze Crete - Screw Type Pumps and Gypsum (operator will clean); Creter Crane; Operation of Concrete Pump Truck; Formless Finishing Machines; Flaherty Spreader or Similar Types; Screed Man on Laydown Machine; Vermeer Concrete Saw; Operation of Laser Screed; Span Saw; Dredge Leverman; Dredge Engineer; Lull or Similar Type; Hydro-Boom Truck; Operation of Guard Rail Machine; and Starting Engineer on Pipeline or Construction (11 or more pieces) including: Air Compressor (Trailer Mounted), All Forced Air Heaters (regardless of Size), Water Pumps (Greater than 4-1/2" or Total Discharge Over 4-1/2"), Light Plants, Generators (Trailer Mounted - Excluding Decontamination Trailer), Welding Machines (Any Size or Mode of Power), Conveyor, Mixer (any size), Stud Welder, Power Pac, etc, and Ground Heater (Trailer Mounted).

CLASS 2. Bulker & Pump; Power Launches; Boring Machine & Pipe Jacking Machine; Dinkeys; Operation of Carts, Powered Haul Unit for a Boring Machine; P & H One Pass Soil Cement Machines and Similar Types; Wheel Tractors (Industry or Farm Type - Other); Back Fillers; Euclid Loader; Fork Lifts; Jeep w/Ditching Machine or Other Attachments; Tunneluger; Automatic Cement & Gravel Batching Plants; Mobile Drills - Soil Testing and Similar Types; Pugmill with Pump; All (1) and (2) Drum Hoists; Dewatering System; Straw Blower; Hydro-Seeder; Bump Grinders (self-propelled); Assistant Heavy Equipment Greaser; Apsco Spreader; Tractors (Track-Type) without Power Units Pulling Rollers; Rollers on Asphalt - Brick or Macadam; Concrete Breakers; Concrete Spreaders; Cement Strippers; Cement Finishing Machines & CMI Texture & Reel Curing Machines; Vibro-Tampers (All Similar Types Self-Propelled); Mechanical Bull Floats; Self-Propelled Concrete Saws; Truck Mounted Power Saws; Operation of Curb Cutters; Mixers - Over Three (3) Bags; Winch and Boom Trucks; Tractor Pulling Power Blade or Elevating Grader; Porter Rex Rail; Clary Screed; Mule Pulling Rollers; Pugmill without Pump; Barber Greene or Similar Loaders; Track Type Tractor w/Power Unit attached (minimum); Fireman; Spray Machine on Paving; Curb Machines; Paved Ditch Machine; Power Broom; Self-Propelled Sweepers; Self-Propelled Conveyors; Power Subgrader; Oil Distributor; Straight Tractor; Truck Crane Oiler; Truck Type Oilers; Directional Boring Machine; Horizontal Directional Drill; Articulating End Dump Vehicles; Starting Engineer on Pipeline or Construction (6 -10 pieces) including: Air Compressor (Trailer Mounted), All Forced Air Heaters (regardless of Size), Water Pumps (Greater than 4-1/2" or Total Discharge Over 4-1/2"), Light Plants, Generators (Trailer Mounted - Excluding Decontamination Trailer), Welding Machines (Any Size or Mode of Power), Conveyor, Mixer (any size), Stud Welder, Power Pac, etc., and Ground Heater (Trailer Mounted).

CLASS 3. Straight Framed Truck Mounted Vac Unit (separately powered); Trac Air Machine (without attachments); Rollers - Five Ton and Under on Earth and Gravel; Form Graders; Bulk Cement Plant; Oilers; and Starting Engineer on Pipeline or Construction (3 - 5 pieces) including: Air Compressor (Trailer Mounted), All Forced Air Heaters (regardless of Size), Water Pumps (Greater than 4-1/2" or Total Discharge Over 4-1/2"), Light Plants, Generators (Trailer Mounted - Excluding Decontamination Trailer), Welding Machines (Any Size or Mode of Power), Conveyor, Mixer (any size), Stud Welder, Power Pac, etc., and Ground Heater (Trailer Mounted).

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available.

If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 217-782-1710 for wage rates or clarifications.

LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.